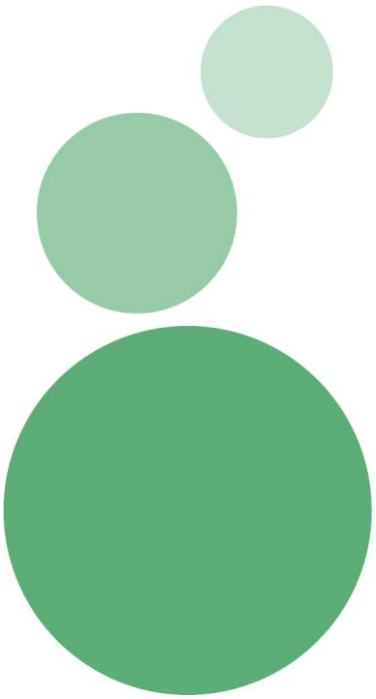
Executive Agency for Health and Consumers

EU level Collaboration on Forecasting Health Workforce Needs, Workforce Planning and Health Workforce Trends – A Feasibility Study

APPENDICES – Revised Final Report



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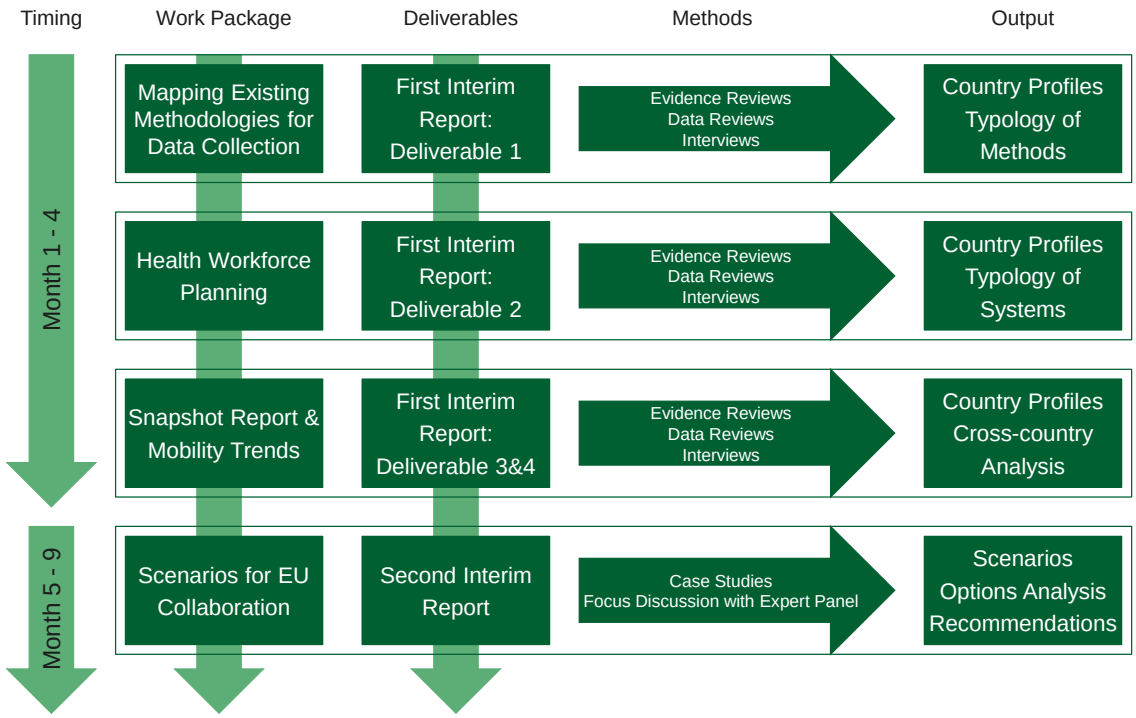
2.0 Methodological Approach

The diagram below (from the proposal) outlines in broad terms the methodological approach for the study.

Figure 1 - Overview of Methodological Approach



The first four Deliverables above correspond to deliverables 1, 2, 3 and 4. As part of the first four Deliverables, we have tried to produce a typology of planning systems across countries which draws a picture of the variation in depth and breadth of workforce planning systems across Europe.[1] Workforce planning in this sense includes both data collection and modelling health needs and health supply. The objective of this typology is to:

1. describe the baseline situation in terms of both the state and quality of workforce planning data and systems[2]; and
2. set out the minimum criteria for an effective health workforce planning system.

[1] Consultation with our expert panel has identified the need to define a set of terms to inform the study consistently across countries (e.g. *workforce planning or* the different professions that make up the health workforce). Where available, we propose to draw on the work of international bodies such as WHO, ILO or OECD in developing these definitions.

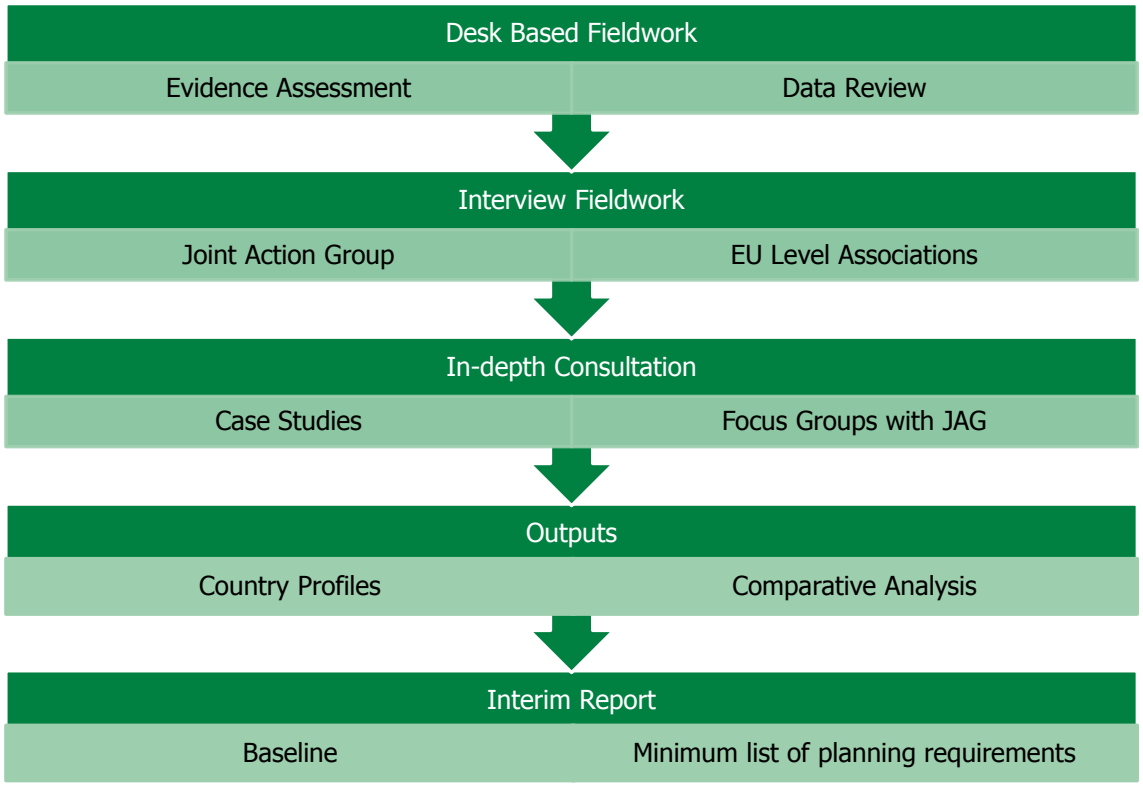
[2] Given the primary objective to feed into EU Joint ActionEU Joint Actions, the main focus of the study will be on collection and use of demand and supply data on the health workforce rather than a more comprehensive view of workforce planning that would include (e.g. care pathways).

The typology was then used to identify a long list of feasible options for an EU Joint Action (or other types of collaboration within a time span that is similar to a EU Joint Action), as part of Deliverable 5 (Scenarios for EU Collaboration).

Phase 2: Data collection

The first phase of the study consisted of a large data collection exercise that formed the evidence base for the development of collaboration scenarios. The diagram below shows the different steps involved in the data collection phase.

Figure 2 - Data collection steps



The first step in this phase consisted of desk based research covering all 4 Deliverables. The desk research was split into two parallel activities:

1. An "evidence assessment" to compile information from grey and academic literature across the 34 countries covered by the study and with a focus on Deliverables 1 and 2.
2. A data review focussing on workforce numbers, mobility and trends over time (Deliverables 3 and 4). The team has drawn on the full list of EU-level activities in the field of health workforce including FP6 and FP7 sponsored research activities, such as Prometheus and RN4cast. The team has engaged directly with the organisations in charge of these projects in order to get access to the data.

The second step consisted of interviews in all of the countries covered by the study to fill gaps in the evidence base and validate information gathered through desk research. In order to carry out these interviews as efficiently and effectively as possible we have used two "routes" to identifying and eliciting participation from stakeholders:

1. We have contacted **members of the EU Joint Action Group** who already have an interest in the success of the feasibility study to either participate themselves directly in the study and/or to nominate relevant interviewees.
2. Where participation is not forthcoming or where we did not have contact details of a EU Joint Action Group member (e.g. for candidate countries), we have contacted European **professional associations (employers and professionals)** to identify the relevant contact persons in these countries. Alternatively, we have used desk research to identify the contacts of people involved in the monitoring and evaluation of workforce planning in the specific country.

The country profiles have then undergone multiple rounds of validation. A first round of validation has been performed following the Second Preparatory JAG Meeting (19 September 2011). Stakeholders participating in the meeting were given the opportunity to comment on a presentation outlining the key findings of the country profiles. Comments were sent via email. A second round of validation involved the people contacted in order to inform the country profiles. Our contacts were asked to read and comment the latest version of the country profiles. Feedbacks received from both rounds of validation were incorporated in the country profiles. The country profiles are now completed.

The third (analytical) step in phase 2 of the study was to draw together the information and data collected to develop a set of country profiles and to undertake a cross-analysis of these profiles. The cross-analysis has formed part of the baseline analysis and the analysis of the key issues in this report.

The first interim report was the final output of phase 2 of the study. It contained a description of the baseline situation across Europe in terms of the four Deliverables described in the terms of reference:

- Snapshot of the health workforce
- Mapping of data collection on health workforce planning
- Mapping of planning systems
- Health workforce mobility

Phase 3: Develop collaboration scenarios

The third phase of the study related to Deliverable 5, the development of scenarios of collaboration among countries either in an EU Joint Action or through another collaboration tool.

In order to identify criteria that need to be fulfilled to overcome current challenges in health workforce planning, we carried out a set of case studies. The objective of the case studies was thus two-fold:

- **Develop scenarios for collaboration:** The case studies aimed to further develop the main priorities for collaboration within each Work Package proposed as part of the EU Joint Action. For this reason, during the case studies we had discussions with actors participating and contributing to national health workforce planning system, in order to obtain information on drivers and obstacles to the development of an integrated and sustainable system for workforce planning. In addition, we asked them what type of EU level collaboration would allow them to tackle some of the existing issues and reach some of their objectives.
- **Inform a list of potential options for sustainable collaboration:** We discussed in more details with the stakeholders the longer term institutional setup of potential collaboration, (e.g.

a network of workforce planning institutions, bilateral collaboration at regional or national level, etc.). We also explored with them some of the possible costs and benefits of these institutional set-ups.

The list of case study countries has been based on preliminary insights from desk research and country interviews above. This selection aims to ensure that the case studies effectively inform scenario for collaboration, taking into account:

a) **Differences among countries:** We believe that the selected countries are sufficiently different among each other, in terms of health workforce planning; this allowed us to develop scenarios for collaboration that are applicable to all European countries.
b) **Key workforce planning dimensions:** We believe that carrying out case studies in the selected countries allowed us to explore the key dimensions of workforce planning, namely capacity, drivers, objectives and state of development.

Case study countries have been selected on the basis of different criteria:

- **Workforce planning capacity:** European countries can have both centralised and decentralised health care systems. This usually influences the workforce planning system and its structure.
- **Drivers:** The need for health workforce planning varies among countries, depending on the structure of size of the health workforce. For this reason, we have decided to include both countries with small and large proportion of workforce employed in the health sector.
- **Position on planning pathways:** The state of development of the health workforce planning system varies across countries and across the three main dimensions of workforce planning, namely monitoring, analysis and governance.
- **Strategic objective:** Depending on the state of development and depending on capacity and drivers, different European countries have different strategic objectives with respect to health workforce planning.

Table 1 - Health Workforce Planning Dimensions

Planning Dimensions	Definition	Scoring
Monitoring	Monitoring the composition of the health workforce (current supply)	1
	Assessing health workforce needs	2
Analysis	Analysis of gaps and developing scenarios	1
	Balancing demand and supply	2
	Horizon scanning	3
Governance	Institutionalised workforce planning	1
	Stakeholders involvement	2
	Sustainable workforce planning system	3

Table 2 - Preliminary Case Study Selection

Case study countries	Criterion 1: Capacity	Criterion 2: Drivers	Criterion 3: Position on planning pathway			Criterion 4: Strategic objective
	Degree of centralisation	Proportion of those	Monitoring	Analysis	Governance	Objective

		employed in the health system				
BE	Decentralised	6.91%	2	2	2	Horizon scanning
RO	Decentralised	4.7%	2	1	2	Balancing demand and supply
ES	Decentralised	4.88%	2	2	1	Stakeholders involvement
FI	Centralised	7.34%	2	3	3	Sustainable workforce planning
HU	Centralised	4.3%	1	1	1	Balancing demand and supply
IE	Centralised	8.35%	2	2	2	Sustainable workforce planning
IS	Centralised	6.49%	2	2	2	Horizon scanning
IT	Decentralised	5.31%	2	2	1	Stakeholders involvement
LT	Centralised	5.71%	2	2	0	Institutionalising workforce planning
NL	Centralised	7.24%	2	3	2	Sustainable workforce planning
SI	Centralised	4.17%	1	1	2	Balancing demand and supply
UK	Decentralised	7%	2	2	2	Horizon scanning

Stakeholders interviewed during the case studies included:

- Ministry of Health
- Ministry of Education
- Health Providers
- Professional Associations
- Data Collection Institutions

Second Interim Report

The second interim report presented preliminary outcomes of the case studies, in particular with respect to the list of scenarios for collaboration. Options include both collaboration between all countries and bilateral agreements.

The Second Interim Report was submitted to the Commission at the end of December and it has been revised in mid-January.

Focus Discussion with Experts

The preliminary outcome of the case studies has been a list of scenarios for collaboration at the European level. In order to further develop the scenarios for collaboration and identify areas where EU Joint Action or collaboration among several countries could be valuable, we had a focus discussion with our expert panel. The purpose of the focus discussion was to short-list relevant scenarios for collaboration starting from the list developed as a result of the case studies and to further identify benefits, risks and limits of each scenario for collaboration.

Draft Final Report

The draft final report presented the findings from deliverables 1 to 5 of the feasibility study. It took into consideration the outcomes of the country profiles, the case studies and the focus discussion with the experts' panel. The appendices to the draft final report contain the draft case study reports, which have now been validated and completed.

3.0 Joint Data Collection on Non-Monetary Health Care Statistics

Common Modules

Table 3 - List of Common Variables included in the Joint Questionnaire

Human Resources	Physical and Technical Resources
Physicians (head counts) Practising Physicians Professionally active physicians Physicians licensed to practice Physicians by age and gender Practising physicians by categories (General practice, ...)	**Hospitals** Hospitals General hospitals
	Hospital beds Total hospital beds
Nurses (head counts) Practising nurses Professionally active nurses Nurses licensed to practice	**Beds in nursing care facilities** Beds in nursing and residential care facilities
Caring personnel (Personal care workers) Practising caring personnel (personal care workers) Professionally active caring personnel (personal care workers)	**Medical technology (HP.1, HP.3 and HP.1+HP.3)b** Computed Tomography Scanners Magnetic Resonance Imaging Units Positron Emission Tomography scanners Gamma cameras Digital subtraction angiography units Mammographs Radiation therapy equipment Lithotriptors
Dentists (head counts) Practising dentists Professionally active dentists Dentists licensed to practice	
Pharmacists (head counts) Practising pharmacists Professionally active dentists Pharmacists licensed to practice	
Physiotherapists (head counts) Practising physiotherapists	

Hospital employment (head counts and FTE) Total hospital employment	
Graduates Medical graduates Dentists graduates Pharmacists graduates Midwives graduates Nursing graduates	

Additional Modules

Table 4 – List of Eurostat Additional Variables included in the Joint Questionnaire

Practising physicians by categories (head counts, of which physicians in training)
General Practice
General paediatrics
Obstetrics and gynaecology
Psychiatry
Internal medicine
Cardiology
Endocrinology
Gastroenterology
Respiratory medicine
Oncology
Immunology
Neurology
Oto-rhino-laringology
Radiology
Micryobiology-bacteriology
Haematology
Dermatology
Pathology
General surgery
Neurrological surgery
Plastic surgery
Ophthalmology
Orthopaedics
Thoracic surgery
Vascular surgery
Intensive care & anaesthesiology
Urology
Accident and emergency medicine
Occupational medicine
All other categories
Physicians in training
Health workers at regional level
Physicians
Dentists
Nursing professionals
Pharmacists
Physiotherapists
Hospital beds at regional level
Total hospital beds
Beds in nursing and residential care facilities at regional level
Beds in nursing and residential care facilities
Hospitals at regional level

Hospitals
Hospital technical resources
Operation theatres in hospital
Day care places altogether
Surgical day care places
Oncological day care places
Psychiatric day care places
Geriatric day care places

4.0 Trends in the Number of Graduates

The tables below report the number of graduates across different health professions per 100,000 population over 9 years.

4.1 Trends in Graduate Physicians per 100,000 Population

Countries	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	24.02	19.7	21.19	20.56	19.37	23.76	23.61	n/a	n/a
Belgium	10.22	11.5	8.01	7.28	6.46	6.89	7.08	7.88	9.15
Bulgaria	9.85	7.73	6.97	6.06	5.53	5.94	7.61	6.63	n/a
Cyprus	58.34	56.9	65.53	56.46	58.5	55.51	59.52	n/a	n/a
Czech Republic	8.29	9.87	9.98	10.45	10.14	10.73	11.15	12.57	n/a
Denmark	11.83	13.2	14.31	15.1	15.79	16.03	14.72	15.35	16.34
Estonia	11.56	13.74	7.78	9.21	9.53	7.9	8.35	8.95	n/a
Finland	7	8.59	6.6	6.42	7.5	6.94	10.28	9.37	10.61
France	5.42	6.36	5.87	5.64	5.45	6.2	n/a	n/a	n/a
Germany	10.71	10.79	10.71	10.7	10.56	11.58	12.09	12.47	n/a
Greece	n/a	n/a	n/a	13.26	14.67	14.29	n/a	n/a	n/a
Hungary	10.21	9.63	11.12	11.41	10.61	9.99	9.19	n/a	n/a
Iceland	13.21	10.37	11.96	14.87	13.14	11.56	15.34	11.59	n/a
Ireland	14.5	15.28	15.78	14.38	15.12	16.73	15.22	16.17	n/a
Italy	12.25	12.64	11.37	10.95	10.42	11.48	11.36	11.1	n/a
Latvia	4.62	4.47	3.68	4.09	5.42	4.88	6.18	7.14	n/a
Lithuania	8.62	7.64	7.13	6.33	7.63	7.82	9.59	11.83	n/a
Luxembourg	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Malta	n/a	9.28	11.96	11.9	14.76	14.67	12.14	14.73	14.18
Montenegro	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Netherlands	10.2	10.05	9.8	9.45	9.3	10.15	10.43	9.79	n/a
Norway	8.33	10.12	10.13	10.1	9.89	10.55	10.4	10.69	n/a
Poland	6.63	6.57	6.82	6.16	6.05	6.69	7.15	7.31	n/a
Portugal	5.31	5.76	6.61	6.98	7.67	9.7	10.36	n/a	n/a
Romania	14.56	15.04	15.56	14.78	13.53	12.75	11.82	12.92	n/a
Slovakia	9.93	10.65	10.59	10.34	9.44	9.91	9.01	8.49	n/a
Slovenia	7.57	8.16	7.61	8.1	6.37	6.39	8.53	7.93	n/a
Spain	9.92	9.54	9.86	9.36	8.97	8.56	8.6	8.45	n/a
Sweden	8.68	9.34	8.86	8.89	10.01	10.16	10.25	10.66	n/a
TFYR Macedonia	5.4	8.19	11.43	8.11	9.12	8.42	12.5	n/a	n/a
Turkey	7.2	6.55	6.63	6.55	6.53	6.9	6.65	7.01	n/a
United Kingdom	7.5	7.79	8.03	8.59	9.2	10.18	9.07	9.2	n/a
EU	9.64	9.82	9.73	9.55	9.46	10.12	10.12	12024	n/a

4.2 Trends in Graduate Nurses per 100,000 Population

Countries	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	n/a	n/a	n/a	n/a	57.45	58.9	58.66	n/a	n/a
Belgium	43.3	42	38.22	37.08	n/a	n/a	n/a	n/a	n/a
Bulgaria	7.21	5.23	4.59	3.81	3.61	1.08	4.39	4.93	n/a
Cyprus	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Czech Republic	43.34	46.42	50.51	47.32	48.98	35.29	15.46	13.89	n/a
Denmark	103.46	77.33	81.95	78.14	80.34	78.85	78.27	n/a	n/a
Estonia	29.74	32.21	28.9	35.88	34.98	44.05	28.12	35.22	n/a
Finland	59.3	51.43	47.84	44.78	46.58	49.79	56.1	57.62	58.73
France	25.57	28.66	32.27	34.4	34.06	34.94	34.71	35.48	n/a
Germany	28.43	28.12	28.42	28.27	28.98	26.81	27.08	27.49	n/a
Greece	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hungary	42.17	41.81	43.92	41.77	40.02	36.64	31.46	n/a	n/a
Iceland	53.21	57.39	81.69	67.6	90.69	71.93	102.39	64.84	n/a
Ireland	31.4	30.41	44.44	34.5	35.57	32.5	35.55	33.05	n/a
Italy	10.01	12.18	15.24	15.44	15.93	17.67	16.87	17.98	n/a
Latvia	13.85	14.36	16.34	17.26	18.75	24.34	20.74	18.98	n/a
Lithuania	11.42	18.67	14.52	20.47	19.5	27.64	20.49	19.22	n/a
Luxembourg	30.03	28.23	21.17	19.35	18.83	18.33	16.58	17.88	19.92
Malta	20.46	16.81	25.67	12.14	8.37	7.82	16.5	12.32	11.54
Montenegro	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Netherlands	39.64	39.06	36.46	34.15	35.04	36.84	38.41	39.08	n/a
Norway	75.85	75.91	75.18	78.99	77.09	78.49	68.83	72.23	n/a
Poland	2.42	2.47	4.31	7.08	18.19	20.77	24.1	22.09	n/a
Portugal	4.04	17.51	21.01	28	32.5	33.4	32.87	n/a	n/a
Romania	58.22	55.6	57.97	50.6	48.19	44.75	53.44	57.7	n/a
Slovakia	51.77	41.23	61	32.12	69.22	85.63	114.3	152	n/a
Slovenia	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Spain	20.32	20.78	19.96	20.04	19.89	19.49	19.71	20.62	n/a
Sweden	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TFYR Macedonia	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Turkey	3.92	4.49	4.85	6.63	7.95	8.56	9.48	5.97	n/a
United Kingdom	24.51	30.38	32.52	33.17	34.56	35.08	33.23	29.56	n/a
EU	28.32	28.42	29.88	29.35	31.36	30.95	31.72	32.7	n/a

4.3 Trends in Graduate Midwives per 100,000 Population

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria (2008)	0.87	0.02	0.94	0.61	0.33	0.96	0.54	n/a	n/a
Belgium	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulgaria	1.26	1.3	1.39	1.06	1.13	0.54	1.5	1.54	n/a

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cyprus	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Czech Republic	1.7	0.99	1.36	2.92	2.14	1.6	1.94	1.92	n/a
Denmark	1.45	1.36	0.76	1.2	1.8	1.76	1.84	2.41	2.85
Estonia	1.4	1.26	2.82	3.94	5.06	4.25	2.83	2.84	n/a
Finland	3.23	2.86	2.75	2.92	2.45	3.1	2.71	3.33	3.32
France	1.09	1.15	1.07	1.2	1.3	1.3	1.4	1.51	n/a
Germany	0.82	0.73	0.68	0.75	0.71	0.8	0.71	0.7	n/a
Greece	2.05	1.89	2.43	1.98	2.14	n/a	n/a	n/a	n/a
Hungary (2008)	1.17	0	0.49	0.65	0.52	0.72	0.44	n/a	n/a
Iceland	3.48	2.77	3.42	3.72	3.61	3.21	2.82	3.76	n/a
Ireland	4.54	4.98	4.06	3.8	3.92	3.64	3.8	3.92	n/a
Italy	0.93	1.38	1.3	1.54	1.63	1.51	1.41	1.38	n/a
Latvia	0.73	0.69	0.61	0.83	0.61	0.35	0.4	0.4	n/a
Lithuania	0	0	1.54	1.7	0	2.49	2.41	0.69	n/a
Luxembourg	2.02	0	1.75	0	1.27	0	0.82	0	0.79
Malta	0.76	0	0	1.73	4.67	4.64	0.24	2.17	4.57
Montenegro	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Netherlands	0.61	0.59	0.72	1.02	1.01	0.91	0.82	0.88	n/a
Norway	2.27	1.82	1.7	1.71	1.07	2.08	1.91	2.28	n/a
Poland	n/a	0.15	0.57	1.59	3.2	3.27	3.64	4.73	n/a
Portugal (2008)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Romania	n/a	n/a	n/a	n/a	0.04	0.13	0.78	0.67	n/a
Slovakia	2.32	1.77	1.47	1.15	2.17	2.5	1.41	2.14	n/a
Slovenia	1.8	1	1.2	1.4	0.85	1.49	0.44	1.37	n/a
Spain	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sweden	1.59	1.69	2.23	2.2	2.14	2.32	2.86	2.94	n/a
Macedonia (FYROM)	5.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Turkey	0.83	1.26	1.45	3.85	4.45	3.24	3.72	1.73	n/a
United Kingdom	n/a	n/a	1.68	1.88	1.92	2.15	2.18	2.12	n/a
EU Average	**1.13**	**1.1**	**1.15**	**1.29**	**1.3**	**1.32**	**1.29**	**1.34**	**n/a**

4.4 Trends in Graduate Pharmacists per 100,000 Population

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria (2008)	3.33	3.1	3.12	3.13	2.35	2.1	2.65	n/a	n/a
Belgium	4.15	4.44	3.66	4.37	4.57	n/a	n/a	n/a	n/a
Bulgaria	1.88	2.38	2.65	2.75	1.95	2.28	1.8	2.81	n/a
Cyprus	22.69	17.76	19.54	19	n/a	n/a	n/a	n/a	n/a
Czech	2.7	2.71	2.71	2.48	2.66	2.77	2.92	3.01	n/a

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010
Republic									
Denmark	2.4	2.67	3.41	2.71	3.07	2.24	2.71	n/a	n/a
Estonia	2.8	4.21	7.41	4.61	5.06	4.7	5.3	3.95	n/a
Finland	5.36	9.69	7.86	6.16	7.6	7.03	8.17	7.55	8.02
France	3.12	3.94	3.24	4.16	4.05	4.03	n/a	n/a	n/a
Germany	2.29	2.62	2.12	2.21	2.18	2.16	2.19	2.27	n/a
Greece	2.2	1.93	2.55	1.75	2.64	2.82	n/a	n/a	n/a
Hungary (2008)	2.95	2.79	2.36	2.87	2.56	2.39	2.74	n/a	n/a
Iceland	5.56	3.11	5.13	1.35	3.94	4.5	6.58	7.2	n/a
Ireland	1.89	1.86	1.58	1.69	2.95	3.32	3.89	3.52	n/a
Italy	4.21	5.49	4.49	4.3	4.17	4.1	4.13	4.27	n/a
Latvia	0.9	1.85	3.72	2.3	3.54	4.04	4.77	4.35	n/a
Lithuania	2.36	2.29	2.44	2.28	2.42	2.87	4.47	4.46	n/a
Luxembourg	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Malta	9.09	6.02	10.97	5.7	8.37	8.31	6.31	6.76	7.45
Montenegro	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Netherlands	1.79	1.47	1.22	0.97	0.69	0.58	0.65	0.78	n/a
Norway	1.43	1.53	1.83	1.54	1.78	1.87	3.23	3.83	n/a
Poland	2.65	2.83	n/a	2.55	3.05	3.22	3.29	3.24	n/a
Portugal (2008)	4.61	4.74	4.22	4.9	4.89	5.01	7.55	n/a	n/a
Romania	2.58	3.41	3.62	3.76	3.06	3.42	3.66	4.31	n/a
Slovakia	2.86	3.05	3.05	2.8	3.28	3.08	3.51	4.69	n/a
Slovenia	5.41	5.11	6.01	6	6.12	5.89	5.84	4.65	n/a
Spain	6.85	6.19	6.19	5.62	5.09	5.02	4.52	4.89	n/a
Sweden	3	3.52	3.56	4.62	5.35	4.97	4.35	4.32	n/a
Macedonia (FYROM)	2.92	2.81	3.74	4.23	4.61	5.09	3.92	n/a	n/a
Turkey	1.39	1.18	1.31	1.14	1.29	1.39	1.35	0.52	n/a
United Kingdom	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EU Average	3.37	3.78	3.45	3.48	3.45	3.44	3.54	3.66	n/a

4.5 Trends in Graduate Dentists per 100,000 Population

Countries	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	2.04	0.89	0.82	1.13	1.22	1.33	1.42	n/a	n/a
Belgium	1.62	1.29	1.11	1.02	1.37	1.13	1.14	1.44	1.6
Bulgaria	4.21	2.77	2.54	3.17	2.74	2.86	2.91	3.06	n/a
Croatia	3.56	3.51	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cyprus	22.27	21.65	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Czech Republic	1.35	1.26	1.4	1.32	1.32	1.51	1.58	3.88	n/a
Denmark	2.49	2.15	2.07	2.4	2.36	3.85	3.57	2.5	2.7

Countries	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estonia	2.43	2.88	2.45	2.53	2.61	2.91	3.06	2.16	n/a
Finland	1.06	0.67	0.25	0.97	1.01	0.98	1.34	1.35	1.64
France	1.34	1.64	1.42	1.42	1.52	1.35	n/a	n/a	n/a
Germany	2.16	2.16	2.22	2.01	1.91	2.14	2.24	n/a	n/a
Greece	2.66	1.87	2.36	1.99	3.21	3.17	n/a	n/a	n/a
Hungary	1.71	1.72	1.68	1.62	1.72	1.91	2.18	n/a	n/a
Iceland	1.39	2.42	1.37	2.03	1.31	2.57	1.88	1.88	n/a
Ireland	1.84	1.88	1.71	1.91	1.72	1.5	1.7	1.7	n/a
Italy	2.61	3.05	3.31	3.11	2.76	2.68	2.53	2.56	n/a
Latvia	1.07	1.38	1.82	1.87	1.92	1.45	1.28	1.51	n/a
Lithuania	2.85	2.69	2.85	2.96	3.3	3.44	4.2	4.4	n/a
Luxembourg	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Malta	n/a	3.26	3.24	1.73	1.97	1.96	1.21	1.45	1.44
Montenegro	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Netherlands	1.11	1.08	1.15	1.24	1.49	1.04	0.99	0.73	n/a
Norway	2.18	1.8	2.13	2.03	2.4	2.21	2.24	2.69	n/a
Poland	2.46	2.31	2.05	2.31	2.29	1.89	2.2	2.47	n/a
Portugal	3.32	2.21	2.78	3.06	3.18	3.64	5.66	n/a	n/a
Romania	4.56	4.66	5.37	4.58	4.72	4.09	4.32	4.94	n/a
Slovakia	0.87	1	0.93	1.13	0.87	0.91	0.85	0.98	n/a
Slovenia	1.5	1.65	1.95	1.65	2.09	2.38	2.06	1.71	n/a
Spain	2.31	2.71	2.6	2.46	2.43	2.54	3.24	2.81	n/a
Sweden	1.24	1.94	1.48	1.94	2.31	1.6	1.96	2.11	n/a
TFYR Macedonia	5.4	4.05	4.24	5.01	5	5.68	8.58	n/a	n/a
Turkey	1.23	1.28	1.25	1.25	1.1	1.39	1.39	1.28	n/a
United Kingdom	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EU	2.25	2.28	2.31	2.25	2.25	2.21	2.39	2.45	n/a

5.0 Details on National Health Workforce Planning Models

Country	Models used	S Timeframe	D/N Timeframe	S Indicators	D/N Indicators	S Professions	D Professions
BE	S, D	Projections are currently modelled up until 2018.		Stock and flow model. Indicators include starting stock, education, inflow, migration, internal flows, sideflows, bridge flows, activity.	Utilisation of services according to age, sex and region, population growth, health consumption, supply induced demand, societal evolution	Physicians, dentists & physiotherapists. Nurses & midwives will soon be included in quota mechanism.	
DE	S, D	No real projection into the future.		Ratio of doctors per inhabitants.	Past and current population & age structure.	Doctors (including psychotherapists).	
DK	S	Doctor specialisation forecast based on 5-year plans, setting down education targets in each specialisation. Current plan expires in 2012.	-	Factors such as number of workers, unemployment, geographical / public / private distribution, deaths, outflows, migration patterns, age of doctors.	-	Doctors, dentists, dental hygienists and clinical dental technicians. Other planning more informal.	-
EE	S	Model devised in 2005 projected supply up until 2015.	-	Age profile, migration, existing hospital network & planned capability for providing healthcare services.	-	Physicians, dentists, nurses, midwives.	-
ES	S	Studies have forecast scenarios up until 2025.	-	Number of physicians, professional college enrolment, professional registration, job offer reserve lists, training positions, foreign qualifications	-	Physicians and nurses.	-
FI	S, N	Entrant targets are adopted on the basis of model proposals, as part of a development plan for education and research 2011-2016. Projections have been made up until 2020.		Calculation model Mitenna (forecasting of educational needs) developed by National Board of Education converts labour demand into education planning of each occupational group. The calculations also include drop-outs, completed qualifications, transfer of graduates to the labour market & unemployed labour supply.	VATTAGE model (used in forecasting labour demand) is an applied general equilibrium economic model, which considers economic structural changes, employment, demographics etc. 2 or 3 workforce demand forecasts provided.	All professional and occupational groups in social and health care are included.	
IE	S, D	Forecasting 20 years in advance		Workforce supply and forecasting, availability of staff to deliver services required, skill mix	Care pathways and demographics monitored and evaluated at the level of clinical programmes. Takes working hours and gender into account.	Physicians. It has recently been proposed that nurses are covered, too.	
LT	S, N	Supply and demand have been projected up until 2015.		Age, gender, size of workforce, enrolment, drop out numbers, out-migration, retirement, partial retirement	Age, gender, demographic changes, projected future GP requirements based on past values	Physicians, nurses, pharmacists, dentists	
MT	S	Projections are generally ten years into the future.	-	Demographics, migration, profession trends, medicinal advances, technological development, retirement, service changes	-	Primarily physicians and, to a lesser extent, nurses.	-
NL	S, N	Forecast over the next 12 to 18 years		Labour market, efficiency, ICT, changes in working hours, gender/age of professionals, retention rates, substitution technology	Demographics, social/cultural development, epidemiologic developments.	Physicians. Models for other professions are under construction.	

NO	S, N	Forecast over the next 25 years.		Educational capacity, mortality, leave patterns, retirement patterns, new healthcare technologies, etc.	Mortality, sickness patterns, health policy initiatives/priorities, GNP growth, societal preferences, etc.	All publicly employed health personnel.	
SE	S	Projections have been made up until 2015.	-	Graduates from educational institutions, inflows to and outflows from health sector from/to other sectors, migration patterns, death, retirement, skill changes, occupation changes	-	Physicians, dentists, nurses, support staff.	-
UK	S, N	Usually 5-10 years into the future		Profiling of regional variations, scenario modelling, skills mix, competence models, cost profiles.	Future demand is primarily forecast using care pathway models.	Physicians, nurses, midwives, therapists	

S = supply-projection model; D = demand-based model; N = needs-based model.

6.0 Country Profiles

6.1 List of Contacts

Country	Name	Surname	Organisation
AT	Ulrike	Schermann	Ministry of Health
AT	Silva	Türk	Ministry of Health
AT	Heidi	Sturzingler	Gesundheit Oesterreich
AT	Ingrid	Rottenhofer	Gesundheit Oesterreich
BE	Nadia	Seurynck Benahmed	Université Libre of Brussels
BE	Henk	Vandenbroele	Medical Workforce Planning Committee
BG	Emanuela	Moutafova	Medical University of varna
CY	Despo	Chrysostomou	Ministry of Health
CZ	Ilona	Baculikova	Ministry of Health. Recognition Unit
DE	Corinna	Kleinschmidt	Ministry of Health
DE	Matthias	Gruhl	Ministry of Education, Science and Health of the German Land Bremen
DE	Thomas	Kopetsch	Association of Statutory Health Insurance Physicians
DK	Anders A.	Haard	National board of health
EE	Pille	Saar	Ministry of Social Affairs
ES	Pilar	Carbajo	Ministry of Health, Social Affairs and Equality
ES	Ana	Giménez Maroto	Ministry of Health, Social Affairs and Equality
FI	Reijo	Ailasmaa	Ministry of Social Affairs and Health
FI	Marjukka	Vallimies-Patomäki	Ministry of Health
FR	Marc	Boisnel	Ministry of Health
HR	Marija	Pederin	Ministry of Health
HU	Edmond	Girasek	Semmelweis University
HU	Reka	Kovacs	Ministry of Health
IE	Brendan	Murphy	Department of Health
IE	John	Brehony	Health Service Executive
IS	Gunnar Alexander	Olafsson	Ministry of Welfare
IS	Valgedur	Gunnarsdottir	Ministry of Welfare
IS	Anna Bjork	Aradottir	Directorate of Health
IT	Annalisa	Malgieri	Ministry of Health
LI	Wendula	Matt	Ministry of Health
LT	Liudvika	Starkiene	Lithuanian University of Sciences, Medical Academy

Country	Name	Surname	Organisation
LU	Léa	Hemmer-Nies	Ministry of Heath
LV	Silvija	Pablaka	Ministry of Health Head of Health Care Organisation Division of Health Care Department
MT	Jesmond	Sharples	Ministry of Health, Director Nursing Services
MT	Joana	Chetcuti	Ministry of Health, Allied Healthcare
MT	Neville	Calleja	Ministry of Health, Director Health Information and Research
NL	Leon	Van Berkel	Ministry of Health, Welfare and Sport
NL	Lud	van der Velden	NIVEL
NO	Otto Christian	Rø	Norwegian Health Directorate
PL	Arleta	Zaremba	Ministry of Health
RO	Raed	Arafat	Ministry of health
SE	Hans	Schwarz	National Board of Health and Welfare
SI	Dušanka	Petrič	Ministry of Health, Development Sector of the Health Care System
SI	Dr. Vesna-Kerstin	Petrič	Ministry of Health, former WHO liaison officer
SK	Miloslava	Kovacova	Ministry of Health
UK	Peter	Sharp	Centre for Workforce Intelligence

6.2 Country Profiles

Country Profile Austria

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

8,394,000 (2010)

Health Expenditure

10.1% of GDP (2009)

Health System Type #1

Federal
Decentralised (at the Länder level)

The Federal Ministry of Health and Women is the main policy-maker in health care; it is responsible for supervising the Statutory Health Insurance (SHI) actors and issuing nationwide regulations for example on drug licensing and pricing. The nine Länder governments deliver public health services and have strong competences to finance and regulate inpatient care.

Health System Type #2

Since 1997 hospital care has been financed from funds at Länder level with separate divisions for recurring and investment expenditure. The funds are financed by federal, Länder and district governments and, most importantly, by lump sums from health insurance funds.

Public and not-for-profit hospitals that are accredited in hospital plans for acute care at Länder level ("fund hospitals") are eligible for investments and reimbursement of services for individuals covered by SHI.

Private for-profit hospitals may contract selectively with health insurance funds and then be reimbursed.

The financing of the health care system is pluralistic in accordance with the constitution and social insurance laws. The SHI system is the most important source of financing (45.3% of total health care expenditure, 2004). Mandatory insurance is based on membership of an occupational group or place of residence; thus there is no competition between health insurance funds.

Overview of Supply Side

General trend in supply of healthcare workforce

The number of physicians and nurses per 1,000 population has increased, on average, by 13.52% in the last 10 years.
Under supply of care professions both in the hospitals and mobile care.
General personnel supply at 110% in hospitals between 1980 and 2008.
Continuous increase in the number of doctors (hospital doctors, contracted doctors as well as private practitioners (Wahlärzte - particularly large increase which may be explained by the restrictions in place for the number of contracted doctors)).
With regards to the gender mix, the percentage of women health care professionals is high: 86.6% for care professionals (Pflegebereich) and over 50% for younger doctors (exception here is the specialisations where 57.3% are male).

Proportion of those employed in the health care system

6.57% (2010)

Gender Distribution

23.11% Males; 76.89% Females (2010)

Is there a training quota?

No.

Universities are authorised to restrict access to degree courses. This takes the form of admission procedure or the selection of students during a period of a maximum of two semesters after admission.

Whilst there is no numerous clausus as such, a restriction on the number of study places has been in place since 2005 (for doctors) and there are yearly entrance exams at the three public universities. The number of study places is based on home many places have previously been financed (previous capacity).

What are the practices for registration/licensing of health personnel?
Registration via statutory interest representation: Pharmacists, doctors, midwives, dentists Registration via Ministry of Health: Perfusionists, music therapists, health psychologists, clinical psychologists, psychotherapists. No registration: Professional health and nursing care personnel, medical-technical professions, nursing assistants, paramedic assistants (Sanitätshilfsdienste), paramedics, dental assistants. Doctors: Doctors must be registered on the Austrian doctor's list (Österreichische Ärzteliste) which is run by the Austrian doctors chamber (Österreichische Ärztekammer). Doctors must register with the regional doctor's chambers (documentation in written/paper form, no electronic system). Registration is mandatory.
Overview of Demand Side
Population ages 0-14 years
14.9% (2010)
Population ages 65 and above
17.6% (2010)
Population ages 80 and above
4.8% (2010)
Major issues in current health policy
Not available

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
The amount of data available on the different health care professions varies considerably depending on profession. Whereas, for example, data collected on doctors is comprehensive, statistics on the care professions is lacking given that there is no registration process. Doctors: The doctor's list contains information about all doctors including: name, gender, age, address, type of employment - i.e. whether they are working in a hospital or a resident doctor.
What is the scope of this data?
The data covers all professions for which there is a registration process (see above).
Does it cover students/trainees?
Yes.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National and regional
Who collects the data?
Sources of data include: • The doctor's list run by the Austrian doctor's chamber; • Hospital statistics ('Krankenanstaltungsstatistik') - which is collected for accounting purposes; • For resident doctors - the Austrian health insurers. MoH collecting yearly data on hospital resources for many years, of which the workforce in hospitals (FTE, subdivided into several professional groups) is a part. This data collection is statutory and compulsory. Data are collected on hospital level and are being reported by the hospitals or hospital owners/responsible bodies. The data collection process is standardised as the ministry provides handbooks and a software tool (which includes all hospital data that are supposed to be reported). The data of the publicly funded acute hospitals have to be forwarded by the hospitals to the responsible units on Bundesländer (province) level (as the Bundesländer are responsible for hospitals and hospital care). After having been reviewed and released by the Bundesländer, the data are being submitted to the ministry and are included in a data warehouse which is accessible to selected institutions (on federal and provincial levels) who are involved in decision making and hospital funding issues. The data of not publicly funded acute hospitals as well as not-acute hospitals (e.g. rehabilitation and long-term hospitals) are forwarded directly to the ministry and are reviewed here. Of course, the data are also made available for educational, research and planning purposes and for contributing to international data bases (Eurostat, WHO, OECD).

Who reports the data?

Gesundheit Österreich Gmbh (GÖG), doctors' chambers, Ministry of Health

Challenges

What are the main data gaps?

Mobility: The number of data sources makes comparability difficult. Data on mobility has not been collected systematically in the past and is not very recent. Data on nurses does not indicate if those applying for diploma validation are still working in Austria. Also, nurses are not registered in the same way and therefore there is less reliable data available. Data is by nationality, not by country of birth.

A (or the) fundamental weakness has to be seen in not having available comparable data on the health workforce in total (due to various reasons). Therefore it is a main challenge to close this gap. However, there is work in progress to establish a compulsory central registry of healthcare workers (but it seems that this will take some more years to come into effect and provide a complete overview).

Doctors: Full-time/part-time distinction not captured by the doctor's list and the hospital statistics are not always complete; Immigration is captured by the doctor's list but there is no direct data regarding emigration.
Other professions: The lists compiled are very different.

There is no registration and hence no data for care professionals.

What are the barriers obstructing better workforce data collection?

Because registration (for doctors) is not electronic, time is required for data to be collated and there is a danger of inaccuracies and contradictions in the data arising.

How might these challenges be overcome?

Online registration.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

National and regional

Does the country have a workforce planning institution?

Whilst there is no one specific workforce planning in Austria, GÖG has various projects (on request) running on health workforce planning and the health insurers together with the regional doctors chambers fix the number and geographical distribution of statutory health insurance doctors.

Mandate of planning institution

What is its role?

GÖG is responsible for collecting and analysing data. It runs the Austrian Health Information System and puts together the Austrian Health Plan which is developed on a yearly basis. Human resource planning is mentioned in this plan but it entails no forecasts. GÖG is commissioned on an ad hoc basis by the federal and regional governments to do studies with regards to future supply.

Does it collaborate with any other institutions in Europe?

No

Planning Models and Methods

How is workforce planning carried out in the country?

Health insurers together with the regional doctor's chambers fix the number and geographical distribution of statutory health insurance doctors (Stellenplan).
GÖG carries out analysis on the health workforce on an ad hoc basis in the form of studies. E.g. A study on the demand for doctors which entailed a prognosis for 20 years on the development of supply and demand for the Ministry of Health.

What does it take into account?

GÖG takes into account in its studies: Demographic change, medical developments, epidemiological changes, system capacity and change in demand for doctors.
The plan (Stellenplan) for statutory health insurance doctors focuses meeting demand in the short term.

What planning models and methods are used?

Not applicable

Training

How are workforce planners trained?

No specific training for workforce planners.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

There were 1613 Austrian medical doctors in Germany in 2007 (Prom, 2011) and 306 Austrian trained medical doctors in the United Kingdom in 2007 (Dussault, et al., 2009)

There were 1,000 active Austrian nurses in Germany (2008)

Who, where did they go, why and why they come back?

Austrian medical doctors move to Germany, the United Kingdom, Switzerland, Sweden, Norway, Denmark, Australia or New Zealand.

Germany is the top country among emigrating Austrian medical doctors likely because there is no language barrier. For nurses, this makes it easy to validate diplomas. Additionally, Germany has modern hospitals and good pay.

Inward Geographical Mobility

How many health workers are entering the profession?

3,322 (8.8% of total) foreign national, active medical doctors (2008) while Garcia, et. al reports 1,442 foreign or foreign-trained physicians in Austria in 2005.

100 (40%) foreign dentists (2007)

Who, where do they come from, how are they trained/recruited?

Germany and Italy are major sources of health workforce.
Slovakia is the second most common source country for nurses because of its proximity to Austria. The Czech Republic is also a source country for nurses.

There is an arrangement between Austria and South Tyrol (Italy)
Quality assurance is driven in part by the Austrian Association for Quality Assurance who sponsor training programmes on quality to meet ISO 9000 activity requirements (Legido-Quigley, et al., 2008).

What are the main drivers/obstacles of data collection *on mobility*

The number of data sources makes comparability difficult.

Data on mobility has not been collected systematically in the past and is not very recent.

Data on nurses does not indicate if those applying for diploma validation are still working in Austria. Also, nurses are not registered in the same way and therefore there is less reliable data available.

Data is by nationality, not by country of birth

Research conducted in 2006 indicated that the number of foreign doctors in Austria may be underestimated because of the number of doctors who have acquired Austrian citizenship (García-Pérez et al., 2007).

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for men and 60 for women.

The average effective retirement age over the 2004-9 period was 58.9 for men and 57.5 for women.

Inward Professional Mobility

How many health workers are entering the profession?

In 2003, 5997 Austrian citizens worked as interns, of whom around 54% completed their training.

General practitioners and specialists since 2004 must complete an examination which is a prerequisite for being licensed to practice medicine.

Country Profile Belgium

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
10.8 million (2010)
Health Expenditure
9.7% of GDP (2008)
Health System Type #1
Federal system. There are three levels of government – the federal government, the federated entities (three regions and three communities) and the local governments (provinces and municipalities).
Health System Type #2
Decentralised, based on compulsory social health insurance (covers 99% of population) and funded through income contributions from employees and employers. 20% of total health expenditure is financed through patients' co-payments, supplements and non-reimbursed medical acts, drugs and devices. Providers: hospital and sickness fund Delivery: doctors are self-employed and paid on a fee-for-service basis Services covered by insurance are defined in the national established fee schedule (more than 8000 services).
Overview of Supply Side
General trend in supply of healthcare workforce
The number of health care professionals has been quite stable since 2000. Problem of ageing workforce. Especially nurses tend to leave the profession at a young age.
Proportion of those employed in the health care system
6.91% (2010)
Gender Distribution
73.84% (F) 60% of new graduates are women 87% of the nursing practice licence were women (2006)
Is there a training quota?
Yes. The competence for setting the fixed numbers belongs to the Federal Government. These numbers are fixed for medical doctors, dentists and physiotherapists. For physiotherapist there is a selection for new entrees after graduation. For doctors and dentists, the quota varies by community. The Flemish community has entrance examinations whereby everyone who passes the exam is eligible to register at university. Since 2008, the French community has currently no quotas (after being introduced in 1997-98, modified in 2003 and in 2006). There is no university in the German community. Holders of foreign diploma are not subject to the quota regulations.
What are the practices for registration/licensing of health personnel?
In order to practice, a compulsory registration is required for doctors, dentists, pharmacists, nurses, midwifes, and physiotherapists with the following institutions: the Ministry of Health, the Professional association, the National Institute of Health Insurance and Disability and finally the Provincial medical board. Every physician, dentist and pharmacist must be also on the register of their respective Order. The licence is given for unlimited time.
Overview of Demand Side
Population ages 0-14 years
16.9 (2009)
Population ages 65 and above
17.2% (2009)

Population ages 80 and above
17.1% (2009)
Major issues in current health policy
High medical density - the supply exceeds the demand. As a result, many doctors go to other industries. Ageing of the medical population Feminisation of the medical workforce - women tend to work less than men. It is expected that in terms of full-time equivalent, more doctors will be needed in the future. This trend is reinforced by the European Directive on Working time.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
In general there are three sources available: "licensed to practice" (in Federal Public Services health), "practising" (in National Institute of Health Insurance and Disability) and "working" (in Cross Road Social Security). In order to link these sources, a specific research request needs to be submitted to the Committee on Privacy. This is already done for nurses. The data collected can be grouped in the following categories: Identification data: allowing for the identification of the practitioner. Includes the number of the national registry, academic, professional and specialty qualifications, the home and business address. Certification data: number of issued certificates of practice Social security data: professional status (employee/independent/retired). Data provided by practitioner about their practice (not yet available) Number of visas granted to foreign medical doctors.
What is the scope of this data?
All professions are covered if the data are linked: physicians, pharmacists, dentists, physiotherapists, nurses, midwifes, allied health workers
Does it cover students/trainees?
The data cover trainees, but not students.
Data Collection Institutions
Is the data collected at the national and/or regional level?
Federal and regional level
Who collects the data?
Ministry of Health (main source of data) National Institute of Health Insurance and Disability National registers National office of social security National Institute of Social Insurance for the Self-Employed National Office of Retirements Professional associations Practitioners Licensed care facilities Nursing homes and public or private agencies providing care or performing preventive activities).
Who reports the data?
Data is reported by the Planification Commission using a compiled database.
Challenges
What are the main data gaps?
Full time equivalents are only available for employees, not for self employed.
What are the barriers obstructing better workforce data collection?
The quality of the data used by the Planning Commission is collected from different sources. Given that the data is not collected for planning purposes, the information is not standardised. In order to make the data operable for workforce planning, more capacity for analysis is needed. A multi-annual plan is set up for this, wherein year by year another health profession will be analysed in depth.
How might these challenges be overcome?

N/A

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

Two levels of government are involved in planning.
1.The federal government is responsible for health insurance policies and for the training specialities, therefore it is responsible for policies which limit practitioners' access to the health profession and also reimbursement
2. Communities are responsible for managing education and training (examination selections, numerus clausus policies). The two level governance leads to diverging outcomes: the number of students graduated each year from universities exceeds sometimes the federal fixed numbers, The system monitors the numbers over a period of time (e.g. medical doctors headcounts are monitored up to 2018).

Does the country have a workforce planning institution?

Yes. Planning for physicians, dentists and physiotherapists is undertaken by the Committee for Medical Supply Planning.
There is no planning for speech therapists and other allied health professionals and no fixed numbers for nurses and midwives. Being competent for the nurses and midwifes, the Planning Committee is preparing a forecast scenario for this health profession.

Mandate of planning institution

What is its role?

Advises federal authorities on quota systems. Advisory and not independent institution. Comprises representatives of the public authorities, relevant health professionals, experts and other stakeholders.

Does it collaborate with any other institutions in Europe?

Joint Action Group

Planning Models and Methods

How is workforce planning carried out in the country?

This Committee for Medical Supply Planning is responsible for formulating proposals for the federal Minister of Public Health on the annual number of candidates per community that are eligible to be granted the professional title of physician, dentist or physiotherapist, after obtaining the relevant diploma. The so-called quota mechanism is applied immediately after the completion of basic training.
The Committee also monitors and analyse data on health workforce, evaluate the adequacy of the health workforce and make an annual report for the ministry of health.

What does it take into account?

Ageing trends. Care pathways and epidemiological parameters (e.g. obesity) are not included in the models.

What planning models and methods are used?

Stock and flow model, which looks at both demand and supply of health workforce.

Training

How are workforce planners trained?

No formal training for workforce planners.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

There were 1576 Belgian national medical doctors in France in 2009 and 1495 doctors with Belgium training/citizenship in the Netherlands in 2007.
There were 1092 nurses with Belgium training/citizenship in France in 2005 and 377 in the Netherlands in 2007.
There were 373 doctors with basic training, GPs and specialists who registered in the Netherlands from 2006 to 2008.
There were 81 nurses and 69 dentists who registered in the Netherlands from 2006 to 2008.
In 2007, around 400 doctors with a Belgian visa left the country just after obtaining their diploma.

Who, where did they go, why and why they come back?

Who/Where
Specialists (medical doctors and dentists) request conformity certificates for France, Netherlands and the United

Kingdom.

Why go
Surplus of specialists in Belgium

Inward Geographical Mobility

How many health workers are entering the profession?

There were 1704 foreign basic medical diplomas recognised (declared equivalent) from 2001 to 2008
There were 355 from France and 313 from the Netherlands.
There were 267 recognitions from Romania in 2007 (zero before EU accession).
There were approximately 7704 foreign national registered nurses (4.4%) in 2008.
In 2008, of the 9489 registered dentists 6.1% were not Belgian nationals – 2.3% were French, 0.8% Dutch and 0.5% Italian. In the same year, 19.3% of newly licensed dentists were foreign-trained dentists. New visas granted to foreign medical doctors on an annual basis rose from 78 before 2004 to 430 in 2008.

Who, where do they come from, how are they trained/recruited?

Who/Where
France, Netherlands, Romania, Germany, and Italy are common EU source countries for medical doctors. Congo, Cameroon and Morocco are historically African sending countries of medical doctors while Congo and Morocco are common African sending countries of nurses. France, Italy, Netherlands, Romania, and Lebanon our common source countries for nurses as well.

Recruitment
Recruitment is facilitated for non-EEA medical doctors under Article 49 bis §1 and §2 of Royal Decree No. 78 which recognises foreign diplomas approved as academically equivalent by the French or Flemish Community.
Hospitals in Brussels, as of 2010, were facing a shortage in nurses and experiencing higher competition for recruitment, using international recruitment agencies to recruit nurses from Romania, Lebanon and Tunisia.

Training
Many of the inflows include medical doctors with only basic training who come to Belgium to undertake specialist training.
Flemish Institute for Integral Quality in Health Care has a training programme for doctors and nurses.

What are the main drivers/obstacles of data collection *on mobility*

Drivers: The FPS Health is a central source of information and it provides links to the French and Flemish Communities of Belgium when those organisations will have further information.

Obstacles:
Data on number of applications for conformity certificates does not include those countries that do not require a conformity certificate. Applicants for a conformity certificate do not always declare their destination. Applications for conformity certificates do not distinguish between Belgium nationals and foreign nationals.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age is 65 (2010) for both men and women; however retirement is possible at 60 provided workers have made 40 years of contributions.
The average effective retirement age over the 2004-9 period was 59.1 across the population as a whole.

Inward Professional Mobility

How many health workers are entering the profession?

Who
Medical graduates accepted for further training after graduation was set at 757 for the years 2008–2011, 890 for 2012, 975 for 2013, 1025 for 2014 and 1230 for the years 2015–2018 (minimum 300 GPs for the years 2008–2014 and 360 for the years 2015–2018) and specialists (with a minimum of 20 specialists in child psychiatry, 10 specialists in acute medicine, and 5 specialists in emergency medicine; no minimum was defined for other specialties)

How
In order to practise medicine in Belgium, every physician must be recorded on the register of the Order of Physicians. This mandatory registration applies to all physicians, even those coming from other EU Member States or foreign physicians who wish to establish themselves in Belgium; and must be made in the province where the physician will have his/her main medical practice.

Country Profile Bulgaria

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
7.49 million (2010)
Health Expenditure
7.3% of GDP (2008)
Health System Type #1
Decentralised, in 1992 ownership of most health care facilities was devolved to locally elected municipalities. Public health services are organized by the Ministry of Health and its 28 regional health centres and are financed centrally. Based on compulsory social health insurance. Voluntary health insurance is provided by 10 companies (2006).
Health System Type #2
Predominantly public, with a mix of public and private facilities. Physicians or centres contract with the National Health Insurance Fund in order to participate in statutory provision of services and any providers that do not sign contracts can provide private services on a fee-for-service basis.
Overview of Supply Side
General trend in supply of healthcare workforce
The number of GPs, nurses and pharmacists is low, the number of dentists is the highest in Europe. (per 100000 people) 3 major problems: 1. Emigration of medical and non medical staff abroad 2. Migration of health workforce from public to private sector 3. Geographic maldistribution of medical professions: migration from countryside to cities (due to higher salaries and better working conditions) 4. Ageing of medical population Consequences: 1. Acute shortage of nurses 2. Shortage of medical specialists intensified over the last 5 years (anaesthesiologists, gynaecologists, paediatricians)
Proportion of those employed in the health care system
3.69% (2010)
Gender Distribution
80.02% (F)
Is there a training quota?
Yes. The Ministry of Education sets the quota according to annual university reports. Each university is responsible for admissions and the organization of specializations, but all trainees sit a final standardized examination in Sofia before they are allowed to practise their specialty.
What are the practices for registration/licensing of health personnel?
Upon graduation health professionals are required by law to become members of their respective professional organizations.
Overview of Demand Side
Population ages 0-14 years
13.4% (2009)

Population ages 65 and above
17.4% (2009)
Population ages 80 and above
3.7% (2009)
Major issues in current health policy
Shift from public health sector to private sector. Nonetheless, in 2010, public sector continues to account for 86.03% of health care sector. Emigration of medical specialists abroad (400 specialists in 2009).

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Gender, age, rural/urban location, Number of physicians according to specialty and age
What is the scope of this data?
Physicians + medical specialties Dentists Doctors' assistants Midwives Nurses Laboratory assistants Dental mechanics Sanitary inspectors Other medical specialists
Does it cover students/trainees?
Yes. Figures on students are collected by the Ministry of Education. Figures on students in training (specialisation training in university hospitals) are collected by the Ministry of Health.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National and regional level
Who collects the data?
National Centre of Health Informatics Ministry of Health National Statistical Institute National Insurance Fund Ministry of Education
Who reports the data?
National Centre of Health Informatics National Statistical Institute
Challenges
What are the main data gaps?
Data on medical specialists working outside of the country as well as on medical specialists practicing outside of the health establishments (for example, doctors working for pharmaceutical industry).
What are the barriers obstructing better workforce data collection?
Lack of interconnection and coordination between different data sources. The data are collected by various institutions which do not collaborate between each other. There is no coordination.
How might these challenges be overcome?
Not available

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
There is currently no workforce planning at the national or regional level in Bulgaria
Does the country have a workforce planning institution?
No. However, the Supreme Medical Council acts as a consultative body on health policy, hospital networks, national demographic problems, medical education and postgraduate medical training.
Mandate of planning institution
What is its role?
The Council determines the main priorities of national health policy and medical aspects of demographic problems in the country. The Supreme Medical Council (SMC) reports to the Ministry of Education and Science, which is responsible for planning the training of university and postgraduates students as well as for planning financial resources for university students.
Does it collaborate with any other institutions in Europe?
Not available
Planning Models and Methods
How is workforce planning carried out in the country?
Human resources are assigned to health facilities in accordance with the National Health Map, which specifies by region the numbers of health care professionals per institution. However, it appears that National Health Maps have so far not been widely used for health workforce planning purposes. Lack of coordination between national and regional authorities could be the reason for the limited use of these maps.
What does it take into account?
The Regional Health Map (RHM) describes the types, number, activities and distribution of health establishments/doctors/specialists within one region for inpatient, emergency and outpatient care. The RHM estimates are based upon available health establishments and their capacities in providing medical care, geography, existing infrastructure, demographic stratification, social characteristics, priorities, needs of the population and health status in the region.
What planning models and methods are used?
Mainly supply side models.
Training
How are workforce planners trained?
At the faculty of Public Health (University of Varna) there is a Public Health Management programme, which includes human resource management classes.

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
The International Medical Association Bulgaria estimated that over 11,000 Bulgarian medical specialists (physicians, dentists, pharmacists, health-care managers) live and work abroad. Dimitar Lenkov, the Secretary General of the Bulgarian Doctors Union reports that the number of doctors who left Bulgaria was 1280 from 2008-2010: 380 in 2008; 400 in 2009 and 500 in 2010.
Who, where did they go, why and why they come back?
Who/Where Doctors choose Germany, France, England, North Ireland, Denmark and Sweden. Why go Improved wages and better medical infrastructure.
Inward Geographical Mobility
How many health workers are entering the profession?
Not applicable

Who, where do they come from, how are they trained/recruited?
Not applicable
What are the main drivers/obstacles of data collection *on mobility*
Obstacles: The statistical data on doctors and nurses emigrating to Bulgaria is not publically available.
Outward Professional Mobility
Retirement age by law and by practice
As of 2010, the retirement age (to get a minimum pension) is 63 for men, and 60 for women. The average effective retirement age in 2006 was 55.6 across the population as a whole (55.4 for men, 55.6 women). The average effective retirement age according to the OECD over the 2004-9 period was 64.2 for men and 61 for women.
Inward Professional Mobility
How many health workers are entering the profession?
Not applicable.

Country Profile Croatia

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
4.4 million (2010)
Health Expenditure
7.8% of GDP (2008)
Health System Type #1
Decentralised social health insurance system funded through contributions and general taxation.
Health System Type #2
Predominantly public, although private providers and insurers also operate in the market.
Overview of Supply Side
General trend in supply of healthcare workforce
The health workforce per population ratio is well-below the EU-level average, except for dentists. Recently increased quotas on medical universities. Geographical maldistribution of practicing doctors.
Proportion of those employed in the health care system
5.39% (2010)
Gender Distribution
79.45% (F)
Is there a training quota?
Yes for medical universities. Due to lack of systematic workforce planning there are continuous discussions about the number of enrolled students.
What are the practices for registration/licensing of health personnel?
Compulsory reaccreditation with the professional chambers for medicine, pharmacy, dentistry, medical biochemistry and nursing every 7 years. All professionals are obliged to attend courses of continuous education.
Overview of Demand Side
Population ages 0-14 years
15.3 % (2009)
Population ages 65 and above
17.2% (2009)
Population ages 80 and above
3.4% (2009)
Major issues in current health policy
In the last decade Croatia started experiencing a continuous decrease in numbers of candidates interested in acquiring a medical education.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?
Headcount, nationality, demography, health status, network and activity of health establishment, manpower and health education, regional data, number of issued certificates of medical recognition, number of foreign health workers
What is the scope of this data?
Headcount, age, sex, degree, type of employment, activity, place of practise. All medical and allied health professions.
Does it cover students/trainees?
No.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National, regional and hospital level.
Who collects the data?
Central Bureau of Statistics Croatian Institute for Public Health National Institute for Health Insurance: provides data on shortages of a medical workforce in some regions (rural areas, underdeveloped regions, islands, etc. Professional chamber registries National Institute for Employment: collects general data about professionals County Public Health Institutes: collect statistics and participate in the formulation and implementation of health programmes for their areas. Hospitals
Who reports the data?
Medical Worker Registry at the Croatian Institute of Public Health
Challenges
What are the main data gaps?
No data on the number of physicians who are currently not employed in the healthcare system and who are working temporarily. No data on technical medical staff. No data on workforce migration. There is no comprehensive system for such surveillance or obligation for professionals to report on migration. No data on graduates from medical schools.
What are the barriers obstructing better workforce data collection?
Not available
How might these challenges be overcome?
Not available
PLANNING (REVIEW OF EXISTING STUDIES)
Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
At central level, the Ministry of Health is responsible for: health policy, planning and evaluation, including the drafting of legislation, regulation of standards for health services and training. The central Government sets the framework within which a county draws up its health policy. Some planning, administrative and supervisory roles are devolved to county authorities. The output is produced in a form of an advice on planning strategy for each hospital separately.
Does the country have a workforce planning institution?
No. Planning is done by the Ministry of Health and Social Welfare.
Mandate of planning institution
What is its role?

Not applicable

Does it collaborate with any other institutions in Europe?

Not applicable

Planning Models and Methods

How is workforce planning carried out in the country?

The Ministry of Health produces an annual national health plan that contains clearly defined objectives following suggestions from the Croatian National Institute of Public Health and hospital needs. Once this plan is approved by the central government, it is implemented and supervised by Ministry of Health.

What does it take into account?

Hospitals needs.

What planning models and methods are used?

Predominantly demand induced model.

Training

How are workforce planners trained?

Not applicable

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

There were135 Croatian health workers in Germany in 2005 and 50 in the UK in 2007.

Who, where did they go, why and why they come back?

Who/Where
The International Labour Office published a working paper in 2006. The chapter on Croatia indicated that Slovenia, Italy, Western Europe and the United States are common destinations. Italy in particular is a destination country for nurses. Other statistics that other common destination countries are Germany and the UK.

Why go
Medical students pursue emigration if they cannot train for their desired specialty in Croatia. In addition, health workers emigrate for improved earnings.

Inward Geographical Mobility

How many health workers are entering the profession?

Not applicable.

Who, where do they come from, how are they trained/recruited?

Not applicable.

What are the main drivers/obstacles of data collection *on mobility*

Obstacles: Migrations are not subject to systematic national surveillance or reporting.

Professional chambers know the number of licences, but this is not equal to the number of health professionals currently working in the health sector in Croatia.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age as of 2009 is 65 for men and 60 for women. The average effective retirement age in 2005 was 60.5 for men and 57.4 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who
The proportion of medical graduates becoming physicians was approximately 0.1 per 1000 population (1997).

Government policy encouraged doctors to move to sparsely populated areas such as the islands along the Croatian coast where possible at the end of the 1990s post-war period.

How
The professional chambers for medicine, pharmacy, dentistry, nursing and medical biochemistry are responsible for promoting professionalism among their members. The chambers are responsible for accrediting professionals, who must also be re-accredited every seven years.

Country Profile Cyprus

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
1.1 million (2010)
Health Expenditure
6.7% of GDP (2008)
Health System Type #1
Cyprus is a small country with a highly centralized public administration system. Public health services are provided through a network of hospitals, health centres, sub-centres and dispensaries. Most of the system's organizational, administrative and regulatory functions take place at state level.
Health System Type #2
At present, there is a dual system of healthcare delivery in Cyprus: the government-run public system and the private system provided by the private hospitals, private clinics and physicians.
Overview of Supply Side
General trend in supply of healthcare workforce
The number of active physicians in Cyprus has risen constantly over the past years. Of a total of 1863 physicians, 1805 are active, a rate of 2.7 per 1000 population. As shown in Fig. 23, the number of physicians per 1000 population is lower than the EU-15 average Although the private sector employs the most doctors, the large majority of nursing staff is employed in the public sector. In 1980, of 1707 nursing staff: 1427 were employed in the public sector, only 280 in the private. In 2001, of 2892 nurses (69.4% increase from 1980): 2152 were employed in the public sector (51% increase), 740 (164% increase) in the private. The significant increase in the number of private sector nursing staff shows a trend towards greater utilization of nursing staff in private sector settings.
Proportion of those employed in the health care system
3.36%
Gender Distribution
66.4% (F)
Is there a training quota?
There is no medical training facility in the country.
What are the practices for registration/licensing of health personnel?
Submission of qualifications to the Medical Council or other related Councils, examining of these qualifications based on the existing legislation and regulations and registration of applicants if basic requirements are fulfilled.
Overview of Demand Side
Population ages 0-14 years
19.6% (2010)
Population ages 65 and above
13.1% (2010)
Population ages 80 and above
2.9% (2010)
Major issues in current health policy

Not available

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Headcount, nationality (place of birth), age, gender, location, place of study,
What is the scope of this data?
Doctors, Specialized Doctors, Dieticians, Physiotherapists, Psychologists, Occupational Therapists, Dentists, Pharmacists
Does it cover students/trainees?
Not applicable
Data Collection Institutions
Is the data collected at the national and/or regional level?
National level
Who collects the data?
Data is provided by the Medical Council and other related Councils, Cyprus Statistic Department, Ministry of Health Cyprus.
Who reports the data?
Not available
Challenges
What are the main data gaps?
Not available
What are the barriers obstructing better workforce data collection?
Lack of one competent authority which will be responsible of monitoring the data.
How might these challenges be overcome?
Not available

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
There is not a health workforce planning in our country.
Does the country have a workforce planning institution?
No
Mandate of planning institution
What is its role?
Not applicable
Does it collaborate with any other institutions in Europe?
Not applicable
Planning Models and Methods
How is workforce planning carried out in the country?
Not applicable
What does it take into account?

Not applicable
What planning models and methods are used?
Not applicable
Training
How are workforce planners trained?
Not applicable

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Circa 2000, approximately 706 Cypriot doctors and nurses were working abroad (approximately 19.1% of all Cypriot doctors and nurses) (OECD 2007: 213)
Who, where did they go, why and why they come back?
Not available
Inward Geographical Mobility
How many health workers are entering the profession?
Not available
Who, where do they come from, how are they trained/recruited?
Not available
What are the main drivers/obstacles of data collection *on mobility*
Not available
Outward Professional Mobility
Retirement age by law and by practice
Not available
Inward Professional Mobility
How many health workers are entering the profession?
Not available

Country Profile Czech Republic

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
10.55 million (2012)
Health Expenditure
8.2% of GDP (2009)
Health System Type #1
Based on Social Health Insurance with mandatory membership in health insurance funds (8 HIF since 2011). Financed mainly through social health insurance contributions (80%), but also general taxation (5%) and out-of-pocket payments (15%).
Health System Type #2
Providers in the outpatient sector are mainly private while the inpatient care providers are predominantly public. Hospitals are managed by a range of actors: Ministry of Health, other ministries, regions and municipalities, private entities and churches.
Overview of Supply Side
General trend in supply of healthcare workforce
General trend in supply of healthcare workforce The health workforce is slowly ageing in line with the ageing of the population. There is currently sufficient number of doctors, there might be some regional problems, especially in some fields of speciality. Shortage of GPs: outflow of 1/3 of graduates in 2010 Outflow of nurses, mainly midwifes, physiotherapists and paediatric nurses Inflow of Slovak pharmacists
Proportion of those employed in the health care system
333 043.4 (2009, OECD Health Data)
Gender Distribution
77.92% (F)
Is there a training quota?
No training quota or *numerus clausus*. Limits to medical, pharmacy and nursing programmes set by the schools themselves. Non –EU medical staff is required to pass additional exams..
What are the practices for registration/licensing of health personnel?
Licences for private practice are granted by Czech Medical Chamber, the Czech Chamber of Dentists and the Czech Chamber of Pharmacists. Registration of general care nurses, midwifes, physiotherapists is done by the Ministry of Health. Compulsory continuous lifelong learning.
Overview of Demand Side
Population ages 0-14 years
14.1 (2009)
Population ages 65 and above
14.9% (2009)
Population ages 80 and above
3.5% (2009)

Major issues in current health policy
Transformation of an increasing number of public hospitals into private establishments. Demographic ageing of population

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Registry of physicians, dentist, pharmacists, and non-physician workers. Headcount, nationality, demography, educational level, network and activity of health establishment, number of issued certificates of medical recognition, number of foreign health workers
What is the scope of this data?
All medical and nursing professions are covered.
Does it cover students/trainees?
Students are monitored by universities.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National and regional level
Who collects the data?
Czech Medical Chamber Czech Dentist Chamber Czech Statistical Office Ministry of Education, Youth and Sport Institute for Information on Education
Who reports the data?
Ministry of Health, Institute of Health Information and Statistics
Challenges
What are the main data gaps?
No information about the number of practicing aged doctors whose certificates date back to the era of Czechoslovakia and they do not require recognition of the Ministry of Health. No information on doctors, nurses and other health care professionals who leave country. The number of issued recognition certificates does not reflect the number of doctors who actually left the country. No distinction of practising and non-practicing nurses on the register. Partial information on vacant positions for nurses and other health care professionals. Partial information on number of unemployed nurses. No information about medical lapses means that low-quality medical stuff is not sufficiently controlled.
What are the barriers obstructing better workforce data collection?
Privacy of individual data
How might these challenges be overcome?
Not available

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
The Ministry of Health provides financial support for accredited providers to train medical graduates in specialty fields and to train specialised nurses. Subsidy covers costs of postgraduate training and a part of the trainee salary. To tackle workforce shortages in some medical specialties, the Ministry of Health runs a series of educational programmes which are aimed to lead to efficient use of human resources by level of education, acquired knowledge and skills.
Does the country have a workforce planning institution?

No

Mandate of planning institution

What is its role?

Not applicable

Does it collaborate with any other institutions in Europe?

Not applicable

Planning Models and Methods

How is workforce planning carried out in the country?

Prediction based on the age structure of certain health care professionals (e.g. dentists)

What does it take into account?

Not applicable

What planning models and methods are used?

Not applicable

Training

How are workforce planners trained?

Not applicable

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

There were 1,809 physicians registered in other countries as reported by the WHO in 2006.
The Czech Medical Chamber issued a total of 1000 professional integrity certificates 2003-2005 /200 (2003), 500 (2004), 300 (first half 2005)/.
In 2003, 700 Czech physicians were working in Germany.
In the Czech Republic, 50 new medical graduates and 250 fully trained medical specialists move abroad every year.

According to the Czech MoH, between the years 2005 and 2009, the number of the issued recognition certificates for general care nurses was around 150 per year, with an increase in 2008, when 274 applications were approved. However, based on this information, it is not possible to determine whether the applicant actually migrated, to which destination country she/he migrated, or any other important information.

Who, where did they go, why and why they come back?

Who/Where
The main destinations for migration of Czech doctors are Germany, Austria, the United Kingdom, the United States and Canada.
Czech doctors - including new medical graduates and fully trained medical specialists - move to eastern Germany to replace German colleagues moving to West Germany.
For example, according to the Nursing and Midwifery Council in the UK, between the years 2005-7 there were on average 60 nurses from the Czech Republic annually registering in the UK.
Why go
Doctors move for improved salaries, improved working conditions or because of family or friends abroad.

Inward Geographical Mobility

How many health workers are entering the profession?

The Czech Medical Chamber reported 700 Slovak physicians working in the Czech health system.

Who, where do they come from, how are they trained/recruited?

Who/Where
The main source countries are Slovakia, Poland and the Russian Federation
The Czech Republic is "becoming a place to practise temporarily while shopping for more lucrative positions in the UK or Belgium"

Recruitment and Training
Health workers were recruited from Slovakia when Czech doctors began moving to eastern Germany.

Agencies contract the health workforce abroad
What are the main drivers/obstacles of data collection *on mobility*
Drivers: Two governmental acts in 2004 have been main drivers for data and regulation of health-care workers. The first, Act No. 95/2004 Coll. specified the requirements for obtaining professional qualifications. This included the medical professions of doctor, dental practitioner and pharmacist. Act No. 96/2004 specified the categories of health workers, the education requirements for working in the health care sector and set out the conditions for eligibility for EU nationals or non-EU nationals Obstacles: The professional organisations do not know how many applicants actually leave the country after having applied for a certificate of professional integrity. The faculties of medicine register only the numbers of students accepted and graduates including foreigners
Outward Professional Mobility
Retirement age by law and by practice
The retirement age is 62 years for males and 60 years for females (ILO). According to the OECD, the official retirement age is 62 years for males and 59 for females.
Inward Professional Mobility
How many health workers are entering the profession?
Not available.

Country Profile Denmark

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
5.56 million (2011)
Health Expenditure
9.9% of GDP (2008)
Health System Type #1
Tax based, decentralized health system delivering universal health care to all Danish residents. Most health services are under the five public regional authorities, which are almost exclusively tasked with health. Since 2005 they are reduced to administrative authorities unable to issue tax themselves. Financing comes from state block grants and to a much smaller extent (5%) activity based payments.
Health System Type #2
Public.
Overview of Supply Side
General trend in supply of healthcare workforce
There has been a significant rise in the number of doctors as a result of increased university intake, new increased immigration of medical workforce and new tendencies in later medical retirement. Expected average doctor age to fall Expected shortages limited to certain specialisations and certain geographical areas The number of dentists is expected to fall until 2025, while the number of dental technicians will rise dramatically.
Proportion of those employed in the health care system
7.08% (2010)
Gender Distribution
81.84% (F) (2010)
Is there a training quota?
Yes. The universities are free to set the intake quotas according to their capacity and the level of demand. The maximum intake quotas are however set by the minister of Science and Technology, based on recommendations from the National board of health.
What are the practices for registration/licensing of health personnel?
The National Board of health issues registrations to: • Chiropodist • Chiropractor • Clinical Dental Technician • Clinical dietician • Dental hygienist • Dentist • Medical doctor • Medical laboratory technologist • Midwife • Nurse • Occupational therapist • Optician and contact lens optician • Optometrist • Physiotherapist • Prostehetist and orthotist • Radiographer • Social and healthcare assistant

Registration is given on the basis of completed education, application and payment.

Doctors, dentists and chiropractors achieve automatic authorisation after a completed university education. One year of practise is required to practise independently as a medical doctor, dentist or chiropractor. Additional 4-7 years of specialization are required for specialised medical disciplines.

Overview of Demand Side
Population ages 0-14 years
18.1% (2009)
Population ages 65 and above
15.9% (2009)
Population ages 80 and above
4.1% (2009)
Major issues in current health policy
Not available

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Headcount of health personnel, number of unemployed, geographical distribution and medical specialisation, age, retirement, migration patterns.
What is the scope of this data?
Public and private sector.
Does it cover students/trainees?
Only trainees in medical and dentist professions.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National and regional level.
Who collects the data?
Data is gathered from three main sources: 1) Authorisation Register (Autorisationsregistret): managed by the National Board of Health and collects data on authorised health personnel. 2) Occupation Register (Beskæftigelsesregistret): managed by Danish statistical office and providing data through tax information and social security services. These two sources are interlinked with social security number. The combined register is the Mobility Register (Bevægelsesregistret). 3) Human resources reports from hospitals are used separately to estimate current demand for doctors. Only public hospitals are included.
Who reports the data?
1) Health personnel themselves in relation to application for authorisation 2) Danish Statistical Office (Danmarks Statistik) 3) HR departments in hospitals
Challenges
What are the main data gaps?
No major data gaps. In some cases, authorisation permit is granted to non –resident doctors without social security number. The lack of social security number can hinder the interconnection between different registers.
What are the barriers obstructing better workforce data collection?
The mechanism of distribution of medical specialists is fixed to three main regions.
How might these challenges be overcome?

In the future, the distribution of medical specialists will be done according to the geographical needs and parameters.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

National.

Does the country have a workforce planning institution?

Yes. The National Board of Health.

Mandate of planning institution

What is its role?

To conduct studies and issue opinions concerning the proportion of specialist doctors and dentists across regions. Its opinions on the intake of medical and dental students must be approved by the minister of Science, technology and development.

Does it collaborate with any other institutions in Europe?

Yes, the Joint Action Group.

Planning Models and Methods

How is workforce planning carried out in the country?

Based on authorisation data and social security data, the National Board of Health produces reports which forecasts the supply of medical doctors, dentist, Clinical Dental Technicians and dental hygienists. This feeds into the decisions on student intake and the distribution of specialisation positions.

What does it take into account?

Headcount of doctors/dentists/dental hygienists/clinical dental technicians, number of unemployed, geographical distribution and medical specialisation, age, retirement, migration patterns.

What planning models and methods are used?

Not available.

Training

How are workforce planners trained?

Not applicable.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

The data show, that 13% of doctors educated in Denmark, in the period 2005-2010 have emigrated.

There were 164 doctors with Danish training/citizenship in the United Kingdom in 2007 and 46 nurses with Danish training/citizenship in France in 2005.

Who, where did they go, why and why they come back?

Danish doctors are most likely to migrate to the United Kingdom.

Inward Geographical Mobility

How many health workers are entering the profession?

Not available.

Who, where do they come from, how are they trained/recruited?

Who/Where
Nurses from Sweden, Finland, Norway and Iceland migrate to Denmark. Sweden, Norway, Germany and Poland are common source countries for doctors in Denmark

Recruitment

The common Nordic labour market was created in 1954 and there are some restrictions on migration flows from outside this market.

What are the main drivers/obstacles of data collection *on mobility*

Not available.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for both men and women.
The average effective retirement age over the 2004-9 period was 64.4 for men and 61.9 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who
In 2003, there was an intake of 1139 medical students, a 31% increase from 1995.
In 2007, recruiting doctors is becoming increasingly difficult, especially in rural areas that are far from the urban centres.
How
The National Board of Health registers and supervises qualified practitioners and other health care personnel.

Country Profile Estonia

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

1,340,194

Health Expenditure

5.9% of GDP (2008)

Health System Type #1

Largely centralised following recentralisation in the 1990s.

Stewardship, supervision and health policy development are the duties of the Ministry of Social Affairs and its agencies. Financing is mainly organized through the independent EHIF. The Ministry of Social Affairs and its agencies are responsible for the financing and management of public health services (i.e. share paid by the state budget). Local municipalities have a minor, rather voluntary, role in organizing and financing health services. The Estonian health system has developed with the strong participation of professional organizations and, increasingly, patients and their organizations, which have gained more influence in recent years.

Health System Type #2

The Estonian health care system is mainly publicly funded through solidarity based mandatory health insurance contributions in the form of earmarked social payroll tax, which mounts to almost two thirds of total health care expenditure. The Ministry of Social Affairs is responsible for financing emergency care for uninsured people, as well as for ambulance services and public health programmes. The role of the local municipalities in health financing is relatively small and yet diverse. Private expenditure comprises approximately a quarter of all health expenditure, mostly in the form of co-payments for pharmaceuticals and dental care. This growing out-of-pocket (OOP) expenditure may hinder access to health care for low-income population groups. As a consequence, health financing has become more regressive over recent years.

Overview of Supply Side

General trend in supply of healthcare workforce

Estonia is predominantly a source country. Since EU accession the outflow of health professionals appears to have been moderate, especially in comparison to the impact of other human resource issues such as ageing of the workforce and attrition. Inflows from other countries have remained insignificant; only a small number of medical doctors and dentists have migrated to Estonia in recent years, mostly from the Russian Federation.

Main issues 2009-2011: Outflow increasing (still moderate) i.e. cross-border health professional mobility has increased - Estonia is a source country and outflow is predominantly temporary; health professionals ageing; increasing number of medical doctors and nurses choosing to work outside the health-care sector which poses a significant problem to the system's sustainability. The combined effect of attrition, migration and retirement will inevitably reduce the number of medical doctors and nurses in the near future. The number of doctors meets current targets in the National Health Plan for 2020 but there is a clear lack of nurses.

Proportion of those employed in the health care system

4.17% (2010)

Gender Distribution

Sizeable in comparison to other EU countries.

Is there a training quota?

Yes.

Admission quotas for publicly funded undergraduate or postgraduate medical training positions are set by the Ministry of Education, based on proposals put forward by the Faculty of Medicine and agreed to by the Ministry of Social Affairs and the professional associations. However, the University of Tartu and the Faculty of Medicine can admit additional students for medical training who pay for their own education. The University has used this option for up to 10% of the total number of admitted students and has also admitted up to 20 students from abroad (mainly Finland).

What are the practices for registration/licensing of health personnel?

Since 2002, the competent medical licensing authority in Estonia is the HCB (a governmental agency operating under the auspices of the Ministry of Social Affairs). The HCB: Registers all health care professionals (physicians, dentists, midwives and nurses) and pharmacists; recognizes the qualifications of doctors, dentists, nurses, midwives and pharmacists; issues registration certificates; issues or revokes the licences of health care providers; and issues the appropriate certificates to Estonian health care professionals who wish to work in other EU Member States.

In order to provide health care services and pharmacy services in Estonia, it is compulsory to be registered. Registration is a one-off process and there is an applicant fee of €64 (EEK 1000). For EU Member States nationals, the registration conditions for health workers are same as for Estonian nationals. When a person passes the registration procedure and is employed by an Estonian health care provider, the opportunities for professional development and career development, along with wage conditions, are the same as those for Estonian doctors and nurses. In addition, there are no differences in access to training opportunities.

Overview of Demand Side

Population ages 0-14 years

15.1% (2010)

Population ages 65 and above

17.1% (2010)

Population ages 80 and above

4.1% (2010)

Major issues in current health policy

Not applicable

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

The number of active health professionals is collected from the National Institute for Health Development (NIHD) annual report. Data on the mobility of health professionals is based on Health Board's registry of health-care professionals. The collected data:

- Number of active health care personnel (doctors, nurses, dentists, midwifes);
- Number of health care personnel by profession;
- Number of health care personnel by county.

What is the scope of this data?

Physicians, dentists, physicians of private medicine, medium-level medical personnel, nurses, midwives, pharmacists

Does it cover students/trainees?

No

Data Collection Institutions

Is the data collected at the national and/or regional level?

National and regional

Who collects the data?

Health care providers

Who reports the data?

The health care providers forward the data to the country governor; the country governor sends the collected data to the National Institute for Health Development who analyses and announces the health care statistic data.

The country governors currently report the data. There is, however, an ongoing process of centralisation taking place with regards to health workforce data collection and the role of country governors as of next year will cease to exist. The health care providers will collect and report the data.

Challenges

What are the main data gaps?

Temporary migration not fully captured in the data.

What are the barriers obstructing better workforce data collection?
Data on the mobility of health professionals are based the Health Care Board registry of health-care professionals. Registration does not have to be renewed and therefore it cannot be presumed that all registered health-care professionals are working in the health-care sector.
How might these challenges be overcome?
Not applicable

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
The continuous planning and monitoring of health professionals takes place at state level. This includes analysis of the dynamics of how many professionals have migrated and how many are working outside the health sector. Moreover, the Ministry of Social Affairs has financed several studies to map the outflow readiness of health professionals and their satisfaction with the working environment in Estonia
Does the country have a workforce planning institution?
Health Care Department of the Estonian Ministry of Social Affairs
Mandate of planning institution
What is its role?
The Advisory Committee on the training of health professionals was established in 2002 by the Ministry of Social Affairs to improve HRH planning and collaboration. The Committee comprises 20 stakeholders (including the Ministry of Social Affairs, the Ministry of Education and Research, training institutions, professional associations and advisors from the professional commissions for medical specialists and specialized dentists). The advisory committee makes proposals regarding how many health care workers are needful to train annually.
Does it collaborate with any other institutions in Europe?
No
Planning Models and Methods
How is workforce planning carried out in the country?
The current health workforce planning model was developed by the Ministry of Social Affairs in 2005. It aims to improve human resource planning in the health-care system and to calculate the annual demand for training. The education of health professionals is coordinated centrally with a state budget for training health professionals. The Ministry of Education and Research sets admission quotas for publicly funded state-commissioned student places. These are based on proposals by the Ministry of Social Affairs and agreed by the university, medical colleges and professional associations (as members of the Advisory Committee).
What does it take into account?
The Ministry of Social Affair's model takes account the age profile of health professionals, migration, the existing hospital network and planned capability for providing health-care services.
What planning models and methods are used?
Stock and flow model for forecasting health professional need (physicians, dentists, nurses, midwifes); evidence based methodology.
Training
How are workforce planners trained?
There is no specific training for workforce planners. Current workforce planners have

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
The HCB issued 709 mutual recognition of diplomas certificates to medical doctors from 2004 to 2009. The HCB issued 605 mutual recognition of diplomas certificates to nurses from 2004 to 2009. There were 64 nurses registered in Finland with Estonian training in 2005 (Dussault, et al., 2009)

The HCB issued 174 mutual recognition of diplomas certificates to dentists from 2004 to 2009.

Who, where did they go, why and why they come back?

Who: Medical doctors, nurses and dentists choose Finland, the United Kingdom, Sweden, Germany and Norway most commonly. Finland is the most common for medical doctors.
Why: The main reason to emigrate is higher salaries and better working conditions.
There are some medical doctors who commute from Estonia to Finland, Sweden or Norway and may work also in Estonia part-time.

Inward Geographical Mobility

How many health workers are entering the profession?

The number of foreign-trained doctors in Estonia is quite small – between 2004 and 2008 only 0.1% to 0.2% of active doctors were registered with a foreign diploma.
There is very little to no inflow to nurses.

Who, where do they come from, how are they trained/recruited?

Who/Where: Medical doctors enter Estonia from Finland, Latvia, the Russian Federation and Ukraine.
Recruitment: There are Finnish and Norwegian recruitment agencies that target nurses

What are the main drivers/obstacles of data collection *on mobility*

Data on inflows is based on foreign-trained doctors, not by foreign-born.
Data from the HCB is not published in public reports.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 63 for men and 61 for women.
The average effective retirement age over the 2004-2009 period was 66.2 for men and 63.4 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who Since 2004, the government has increased the admissions for medicine to 140 per year. The Ministry of Social Affairs considers 3 doctors and 8 nurses per 1000 population to be the optimal rate for the next 10–15 years (projected until 2020), and is planning to continue to fund the admission of 130–140 new medical students and 125 new medical residents annually (WHO, 2008)

Country Profile Finland

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

5.36 million

Health Expenditure

9.2% of GDP (2009)

Health System Type #1

Tax financed health system providing comprehensive universal coverage to all residents in Finland. Publicly provided services supplemented by private health care (partially reimbursed) and occupational health care. Management by the Ministry of social affairs and health.

Health System Type #2

Mainly public, supplemented by private services.

Overview of Supply Side

General trend in supply of healthcare workforce

Overall, the recruitment of doctors, nurses and particularly dentists in rural areas was especially difficult until 2007. The structure of the municipal social and health care service system will be restructured in accordance with restructuring local government.

Physician shortages in health centres have nonetheless diminished significantly during the last years. Every October, a study of physician distribution in health centers takes place. The shortage in October 2010 was 6 % on average in Finland, compared to 11% in 2008. However, there remains great variation between different parts of the country. For example, on the Åland Islands there were no shortages, while in Itä-Savo and Kainuu the provinces were 17 and 16 % short of physicians respectively. (Finnish Medical Association Study on physicians availability in health centers, data for 6 October 2010. Study in collaboration with the Ministry of Social Affairs and Health and the National Institute of Health and Welfare).

At the same time the Local government employers association the KT (www.kuntatyonantajat.fi) studies the **distribution of physicians in hospitals**. Hospitals in October 2010 were on average 7.5 % short on staff, with a big variation in specialities. Shortages were especially hgh in adolescent psychiatry (15%), respiratory medicine and allergology (13%), internal medicine (12 %), radiology (10 %), psychiatry (10 %) and child psychiatry (10 %). By contrast, shortages were much lower in paediatrics (5 %), anaesthetics and intensity medicine (4%), cardiology (3%) and obstetrics and gynaecology (3%).

The **shortage of dentists in municipal health centres has remained** at the level of 11-12 % since 2007.

The Local government employers in collaboration with the Ministry of Social Affairs and Health assessed the **shortages of the professional groups in municipal social and health care (excluding physicians and dentists)** in 2004, 2005, 2008 and 2010. Based on the latest study the shortage of dentists was estimated to be at 3,6 % (2010) compared to 5,0 % in 2008. Among the professional groups in health care, the shortages of practical nurses for social and health care (4,9 %), dental hygienists (4,8 %), public health nurses (4,7 %) and dental assistants (3,9 %) were slightly higher than on average. In absolute numbers, the shortage was the highest among nurses (n=997).

There were some regional differences related to the labour force shortages in **social and health care**. Shortages were the highest in the region of Oulu (6,6 %) and in South Finland (5,3 %).

According to the present forecasts there will be **235 450 job openings** in health and social care (1 142 790 in all industries) in 2008-2025, with an average of 13 080 per year. 67 % of the job openings in health and social care will be due to natural wastage. On the basis of these forecasts the proposals for entrant targets in social services, health and sports have been proposed to be increased by 9 % compared to the level of intake in 2009. Corresponding change in all fields of education and training would be minus 5 % (http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2011/liitteet/tr16.pdf?lang=fi).

Proportion of those employed in the health care system

7.5 % (2008, Thl, based on Employment Statistics. Statistics Finland)

Gender Distribution

86.4% (F) ((2008, Thl, based on Employment Statistics. Statistics Finland)

Is there a training quota?

Yes. Over 700 students are accepted to medical education every year. Around 150 students are accepted to dentist's education and 2400 students to nurse's education.

What are the practices for registration/licensing of health personnel?

National Supervisory Authority for Welfare and Health (Valvira) grants, upon application, the right to practice as a licenced or authorised professional and authorises the use of the occupational title of healthcare professional. In addition, the National Supervisory Authority for Welfare and Health grants an authorisation to practice to nationals of countries outside the EU/EEA and who have obtained their qualifications in a country outside of the EU/EEA. The authorisation is valid for a fixed period of time and may be restricted to a specific place of employment.
The National Supervisory Authority for Welfare and Health keeps a central register of health care professionals in order to manage the supervision tasks laid down in the Act on the National Supervisory Authority for Welfare and Health (669/2008).
(http://www.valvira.fi/en/licensing/professional_practice_rights)

Overview of Demand Side

Population ages 0-14 years

16.6% (2010)

Population ages 65 and above

17.0% (2010)

Population ages 80 and above

4.6% (2010)

Major issues in current health policy

The Government's program defines that the social and health services will be restructured during the upcoming 2012-2015 period.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

Place of residence, place of work, retirement, age, gender, retirement number of graduates, medical specialisation.

What is the scope of this data?

National coverage. Public and private sector.

Does it cover students/trainees?

Yes. Students and trainees alike.

Data Collection Institutions

Is the data collected at the national and/or regional level?

National level.

Who collects the data?

Data is collected by four main sources:
Statistical office collects demographic data, as everyone has to have a registered address with their PIN number. Contains data on age, gender, place of residence. The statistical office also compiles data based on tax reports; these include variables such as income, place of work, employment record and social security benefits.

National Supervisory Authority for Welfare and Health (VALVIRA) under the Ministry of Health and Social Affairs collects information about the health care authorisations and licensing of all health care personnel in Finland.

Finnish medical association and Finnish dental association together with the Local government employers collect

information on physician and dentist shortages in municipal health centres.

Finnish medical association provide extra detailed data on specialisation which clarifies in particular what specialisation an particular doctor is actually practising in, in case he holds multiple qualifications.

The Local Government Employers makes assessments every two or three years on the shortages of other professional and vocational groups in municipal social and health care. These assessments are carried out in collaboration with the Ministry of Social Affairs and Health and are based on questionnaires answered by municipal health and social care organizations.

Who reports the data?

Medical professionals through authorisation
Employers through tax and wages reports
Hospitals and health centres in relation to annual survey on positions and vacancies performed by the medical and dental associations of Finland

Challenges

What are the main data gaps?

No major data gaps.

What are the barriers obstructing better workforce data collection?

No barriers.

How might these challenges be overcome?

Not applicable.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

Regional and national.

Does the country have a workforce planning institution?

The responsibility lies mainly with the National Board of Education under the Ministry of Education and Culture. The Government Institute for Economic Research (under the Ministry of Finance) produces labour force demand forecasts that are utilised in the planning process.

Mandate of planning institution

What is its role?

Firstly, workforce forecasts are produced by the Government Institute for Economic Research and commissioned by a collaborative group of four ministries (Employment and Economy, Finance, Education and Culture, Social Affairs and Health). These feed in to the planning process in the the National Board of Education. In collaboration with a wide network of experts from the regional authorities, trade unions, employers' associations ministerial representatives etc. it produces workforce forecasts for the whole economy (28 different sectors). These recommendations feed into "The Development Plan of Education and Research"; based on this development plan the Government adopts a plan for the education and university research every four years.

Does it collaborate with any other institutions in Europe?

WHO, OECD.

Planning Models and Methods

How is workforce planning carried out in the country?

The forecasts of the workforce demand are provided in accordance with two or three scenarios. Forecasts for the educational supply are prepared on the basis of the workforce demand. The Ministry of Social Affairs and Health is involved also into this process. The Government will adopt the entrant targets on the basis of these proposals in December 2011 as a part of a development plan for education and research 2011-2016.

What does it take into account?

The calculation model Mitenna (forecasting of educational needs) developed by the Finnish National Board of Education converts the labour demand into education planning of each occupational group. The calculations also take into account drop-outs, completion of qualifications, transfer of graduates to the labour market and supply of

unemployed labour force, etc.

The model VATTAGE (used in forecasting labour demand) is an applied general equilibrium economic model, that takes into account structural changes of the economy, development of employment, demographics etc.

What planning models and methods are used?

Vattage model: used by the Government Institute for Economic Research to forecast workforce future demands.
Mitenna model: used by the National Board of Education to forecast educational needs.

Training

How are workforce planners trained?

Not applicable.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

As at December 2010, 3502 Finnish nurses were working abroad, with the top five locations for Finnish nurses Sweden (1332); Norway (548); United Kingdom (367); Switzerland (284) and USA (194). 190 nurses left Finland in 2010, with the top five destinations Sweden (43); Norway (30); United Kingdom (28); Switzerland (12) and Estonia (21), 195 returned back to Finland same year.

As at December 2010, 821 Finnish Medical doctors were working abroad, with the top five locations for Finnish MD's Sweden (332); Estonia (91); Germany (79); USA (63) and United Kingdom (47). 190 MDs 130 left Finland in 2010, with the top five destinations Estonia (39); Sweden (32); USA (7); United Kingdom (6);Germany (7). 165 MDs returned back to Finland same year.

Who, where did they go, why and why they come back?

Who/Where

Why go
Social reasons including family ties, professional motives to improve language skills and professional competence, low wages & high taxes.

Why come back
40% of nurses, 40% of medical doctors, 30% of dentists who emigrated returned to Finland within two years (Prometheus, 2011)

Inward Geographical Mobility

How many health workers are entering the profession?

The proportion of the personnel holding a foreign passport was 1.3 % in social and health care in 2007 (n=4 400; 1.1 % in health care); the proportion of the foreign personnel by birth was a bit higher, 2.8 % (n=9 900; 2,6 % in health care). The proportion of foreign personnel has almost doubled since the year 2000. However, foreign physicians and nurses were more likely to be unemployed or out of the workforce for other reasons than Finnish physicians and nurses.

The number of the employed foreign physicians has also almost doubled since the year 2000. The number of the employed foreign physicians was 620 (3.3%) in 2007. The proportion of the foreign physicians by birth was 6.9 % (n=1 300). However, there are some variations between the regions related to the proportion of the foreign physicians. The number of the foreign nurses employed in social and health care was 425 (0.8 %) in 2007. The proportion of the foreign nurses by birth was 2.2 % (n=1 500).

Who, where do they come from, how are they trained/recruited?

Who/where
Estonia is the main source country, other important countries are Russia and Sweden. Some of the incoming personnel can be Finns who have studied or worked abroad.

Recruitment: Finland has minor recruitment activity and recruits most often from Nordic countries, Estonia and Russia.

What are the main drivers/obstacles of data collection *on mobility*

- **Drivers**: Valvira, THL.
- **Obstacles**: Valvira data on numbers granted practising license include people of Finnish origin who studied abroad & foreign professionals who had already re-emigrated from Finland.

Outward Professional Mobility

Retirement age by law and by practice

The official minimum retirement age (2011) is 63 for both men and women, yet one can continue working up to 68 year of age. Thus, it is possible to retire flexibly on an old-age pension between the ages of 63 and 68.

The average effective retirement age was 59,5 for men and 59,8 for women in 2010 for all workers. In the municipal sector, where most of the health care professionals are employed, the average effective retirement age was 61,4 for physicians and 58,1 for nurses.

Inward Professional Mobility

How many health workers are entering the profession?

The number of new graduates from medical education was about 656 in 2010 (Source: Statistics Finland). The intake in medical education was increased in 2003 to the present level. The intake was by contrast much lower in 1990s.

The **intake in education of nurses has also increased,** in accordance with the increase of the entrant targets defined by the development plan for education and research.

Country Profile France

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
62,8 million (2010)
Health Expenditure
11.1% of GDP (2008)
Health System Type #1
Mixed type of system: Social health insurance is coupled with increasing importance of tax revenue. Rather centralised system where health policy defined mostly by state and Social Health Insurance and to lesser extent regional communities.
Health System Type #2
The delivery of care is shared among private, fee-for service physicians, private profit-making hospitals, private non-profit-making hospitals and public hospitals.
Overview of Supply Side
General trend in supply of healthcare workforce
Currently there is no shortage of health workforce. In the future, the medical workforce is expected to decrease due to ageing trends.
Proportion of those employed in the health care system
6.88% (2010)
Gender Distribution
74.13% (F)
Is there a training quota?
Quotas are set at national level with the aim to regulate shortages/oversupplies. Quota system intends to regulate geographical disparities promoting less concentrated areas for postgraduate training. However, after graduation, students are allowed to practice wherever they want.
What are the practices for registration/licensing of health personnel?
Physician registration by the Physicians' Professional Association is usually granted upon request after the initial training and has permanent validity. It is mandatory for practising physicians. Registration for nurses is granted by the Association of Nurses and its valid for life.
Overview of Demand Side
Population ages 0-14 years
18.5% (2009)
Population ages 65 and above
16.5% (2009)
Population ages 80 and above
5.1% (2009)
Major issues in current health policy
Internal geographical mal-distribution of physicians, nurses, and of health professionals in general

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

Data are collected by several health ministry services, French national councils and professional associations. A common repertory is going to be put into place ("répertoire de partage des professions de santé RPPS") Most of the data are gathered in order to get a comprehensive and homogenous photography by ONDPS.
Data covers: public and private health care sector, type of employment contract, regional distribution, age and sex of practicing health workforce.

What is the scope of this data?

Public and private sector. All medical specialties, and all health professionals are covered.

Does it cover students/trainees?

Yes. Ministry of Higher Education and Research runs the tracking system of students based on data reported by universities and Higher Education establishments.

Data Collection Institutions

Is the data collected at the national and/or regional level?

National level

Who collects the data?

Ministry of Higher Education and Research
Ministry of Health through the Regional Health Agencies (ARS)
National Observatory of Demography of Health Professions

Who reports the data?

Ministry of Health
Professionnal Associations
National Observatory of Demography of Health Professions

Challenges

What are the main data gaps?

Not applicable.

What are the barriers obstructing better workforce data collection?

Not applicable.

How might these challenges be overcome?

Not applicable.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? ***(What workforce planning happens at each level?)***

Since 1996, responsibility for planning health system resources and capacity has been shared by the central government (the Ministry of Health) and 26 regional hospital agencies (ARHs), replaced by regional health agencies (ARSs) in 2010. This partial devolution of the planning function aimed to enable regional authorities to meet the health needs of the population more appropriately.

Does the country have a workforce planning institution?

Yes. National Observatory of Health Professionals (Ministry of Health).

Mandate of planning institution

What is its role?

Provides figures and guidance to the Ministry of Health and the Ministry of education Its annual reports provide information on weaknesses in information required for the steering of human resources in the French health care system by the Ministry of Health.
It also identifies gaps in strategic planning at the national and regional levels.

Does it collaborate with any other institutions in Europe?

Not applicable.

Planning Models and Methods

How is workforce planning carried out in the country?

The National Observatory provides the Ministry of Health with data evidence on number and geographical distribution of health professionals. The Observatory also proposes the number of students to be trained, in each région.

Global Resources Supply – Regional Health Agencies determine the allocation of technical resources according to the medical specialisation of a hospital. These decisions influence the number and specialisation of medical staff needed.

Development of incentives to attract young health professionals to under-served areas: financial and non financial incentives (professional building amenities, personal housing).

What does it take into account?

Not applicable.

What planning models and methods are used?

Supply and demand system including evolution of the professional capacities.

Training

How are workforce planners trained?

There is no special training for workforce planners. Workforce planners generally have health economics and statistics degrees.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

In 2004, there were 12,124 French-trained medical doctors practising abroad.

In the following countries there were a total of 2514 French medical doctors:
Belgium 930 (2004)
Italy 649 (2006)
UK 529 (2007)
Germany 407 (2008)

Who, where did they go, why and why they come back?

Who/Where
Belgium, Germany, Italy, UK

Why go
There are university and hospital exchange programmes for medical trainees which may be the reason some move abroad.

Inward Geographical Mobility

How many health workers are entering the profession?

In 2007, the French National Medical Council reported an increase of 321% Romanian doctors registered in France in 2007.

In 2007, there were approximately 8,070 foreign-national medical doctors registered with the Medical Council of which: Belgians (1125), Germans (732), Italians (566). In 2005 there were 2765 (44% of foreign doctors) medical doctors from North Africa and sub-Saharan Africa combined.

EU medical doctors represented approximately 64% of foreign medical doctors

There were 7616 (1.6%) active foreign-national nurses with either French (3552) or a foreign degree (4046) in 2006. There were 4488 from the EU. Border countries are common source countries for nurses: Spain (1284), Belgium (1177), Germany (432), United Kingdom (421).

Who, where do they come from, how are they trained/recruited?

Who/Where
Romania, Belgium, Germany and Italy are common source countries for medical doctors. North Africa is a common Non-EU source. Spain, Belgium, Germany and United Kingdom are common source countries for nurses.

Recruitment

HR management policies in 2008 were focused improved health coverage and underserved areas, not international recruitment. Training In France professional associations were established specifically to address issues of quality; this helps maintain quality standards.

What are the main drivers/obstacles of data collection *on mobility*

Obstacles: The French National Medical Council requires doctors to register if they intend to practice independently in the private sector. Therefore, there is less robust data on those working in public hospitals. It is possible to work under the responsibility of another doctor and in this case it is not required to register with CNOM.

There is limited data on outflows and in generally fewer data on dentists and nurses.

There is a high rate of naturalisation to French citizenship which will skew the migration data. Also, there are foreign doctors in training who are not in official registries.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age is 60 for both men and women, provided they have made 40 years of contributions.
The average effective retirement age over the 2004-9 period was 59.1 for men and 59.7 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who
The number of available graduate physician positions increased between 2002 and 2007 from 4700 to 7100 in order to address likely future shortages.

How
The registration of medical professionals is by the relevant professional organisations, and is mandatory for all professionals. Membership is usually granted upon request after the initial training and has permanent validity.

Country Profile Germany

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

82,302,000 (2010)

Health Expenditure

10.4% of GDP (2008)

Health System Type #1

Health insurance system:
• Characterized by federalism and delegation to nongovernmental corporatist bodies as the main actors in the social health insurance system; the physicians' and dentists' associations on the providers' side and the sickness funds and their associations on the purchasers' side. Hospitals are not represented by any legal corporatist institution, but by organizations based on private law. The actors are organized on the federal as well as the state (Länder) level.
• Ministry of Health and Social Security proposes the health acts that define the legislative framework of the social health insurance system. It also supervises the corporatist bodies and – with the assistance of a number of subordinate authorities – fulfils various licensing and supervisory functions, performs scientific consultancy work and provides information services.
• 292 sickness funds collect the contributions of the statutory insurance for health and long-term care. They also negotiate contracts with the health care providers. Almost every insured person has had the right to choose a sickness fund freely, while funds are obliged to accept any applicant. Decision-making in statutory health insurance has been integrated into a trans-sectoral joint federal committee that is supported by an independent institute for quality and efficiency.

Delivery:
• Ambulatory health care: Mainly delivered by sickness fund-contracted GPs and specialists in private practice. Patients have free choice of physicians, psychotherapists, dentists, pharmacists and emergency care. No formal gate keeping system for GPs, although their coordinating competences have been strengthened in recent years.
• Acute inpatient care: Delivered by a mix of public and private providers.
• Strict separation between ambulatory and hospital care has been eased in recent years by encouraging outpatient clinics at hospitals, trans-sectoral disease-management programmes and delivery networks.

Health System Type #2

Based on social health insurance and characterized by three co-existing schemes. In 2003, 87% of the population were covered by statutory health insurance, an additional 10% took out private health insurance and 2% were covered by governmental schemes.

Of total expenditure (2003): 57% from statutory health insurance, 7% from statutory long-term care insurance, 4% from other statutory insurance schemes and 8% from government sources. Private health insurers financed 8%, employers 4% and non-profit-making organizations and households 12%. Most out-of-pocket payments were spent to purchase over-the-counter drugs and to cover co-payments for prescribed drugs.

The risk-compensation scheme among sickness funds aims to level out differences in the age, sex and health-status structure of those insured through the different schemes. This system is complemented by a high-risk pool and by incentives for disease-management programmes for the chronically.

In ambulatory physician care, a regional physicians' association negotiates a collective contract with a single sickness fund in the form of a quasi-budget for physician services. The physicians' association distributes the funds among GPs and specialists who claim reimbursement mainly on a fee-for-service basis; limitations of service volumes apply.

Hospitals are financed on a dual basis: investments are planned by the governments of the 16 Länder, and subsequently co-financed by the Länder as well as the federal government, while sickness funds finance recurrent expenditure and maintenance costs.

Overview of Supply Side

General trend in supply of healthcare workforce

Doctors associations insist there is a lack of doctors; some institutions however say there is a maldistribution rather than shortage. Reasons for the lack of doctors? Especially in rural areas (in 5-10 districts):
- More applicants than places and hence no lack of potential doctors (budgetary question)

- Doctors association says that the current workforce is old and that there are not enough to replace those retiring, especially given that there are many part-time women doctors (and hence an overall fall in the number of working hours);
- Another reason is that the mentality of doctors has changed, as an increasing number place more importance on leisure time.

There is also a shortage of geriatric nurses. Reasons for lack of nurses?
- Enough applicants but there is a problem of retention - many want to move profession (high rate of burn out, long working hours, shift work which is not compatible with family life, and unsatisfactory remuneration.

Proportion of those employed in the health care system

7.21% (2010)

Gender Distribution

21.8% male, 78.16% female

Is there a training quota?

Yes. University places are financed and fixed by the Länder according to their budget.

What are the practices for registration/licensing of health personnel?

Registration: There is no registration at state level. System of self-administration. The professional chambers of doctors, dentists and pharmacists (regional chambers - i.e. registration takes place at Länder level) require membership as a prerequisite to practicing. The professional chambers of doctors form a federal association (working group).
Licensing: Rules set by the state and carried out by the Länder.

Overview of Demand Side

Population ages 0-14 years

13.5% (2010)

Population ages 65 and above

20.7% (2010)

Population ages 80 and above

5.1% (2010)

Major issues in current health policy

Shrinking social security revenues; moderate increase in elderly populations need for health care; lower need for curative medical intervention.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

The "Information System of the Federal Health Monitoring" collects data on all health care personnel by year, age, sex, and type of employment. Personnel include:

Health care professions: Doctors, pharmacists, psychotherapists, dentists, medical assistants including dental assistants, dieticians, health and nursing assistants, nurses, midwives, physiotherapists, masseurs, medical bath attendants, medical-technical assistants, pharmaceutical technicians, therapeutic professions.
Social professions: Including geriatric nurses, social care workers and curative teachers.
Health care technicians: Including opticians, orthopaedic technicians, dental technicians, other health care technicians
Other health professions: including health engineers, health technicians, pharmaceutical technician, pharmaceutical business employees.

What is the scope of this data?

National and regional

Does it cover students/trainees?

Yes

Data Collection Institutions

Is the data collected at the national and/or regional level?
National and Regional
Who collects the data?
The Information System of the Federal Health Monitoring collects the data. The data presented is national but many of the primary sources (e.g. Regional statistics offices, professional associations) are regional, for example the regional professional associations collect data about their members.
Who reports the data?
The Information System of the Federal Health Monitoring as well as professional associations.
Challenges
What are the main data gaps?
Mobility data only captures outflow of doctors (through professional regional chambers).
What are the barriers obstructing better workforce data collection?
Strict data protection rules (especially with regards to data from the health insurance funds); perceived/actual administrative burden; sophisticated system of self administration at Länder level.
How might these challenges be overcome?
Not available

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
Mainly regional. At the level of professional associations. No federal state involvement.
Does the country have a workforce planning institution?
For panel doctors (which make up around 40% of all doctors), the 17 Associations of Statutory Health Insurance Physicians (ASHIPs) and its National Association (NASHIP - KBV in German) - whilst NOT planning institutions as such - do do some planning (Bedarfsplanung). All ASHIPs and the NASHIP are part of the medical self-government. They are bodies under public law. The NASHIP represents the political interests of all office-based physicians and psychotherapists and informs the public on its health policy. It advocates the doctors' positions in legislative processes, keeps the federal registry of physicians, and concludes contracts with the national confederations of the health insurance funds and other parties of the health care sector. Together with the health insurance funds it devises and revises the office-based doctors' fee schedule, the so-called Uniform Assessment Standard. As a member of the Federal Joint Committee it is also one of the organizations that determine the benefits catalogue.
Mandate of planning institution
What is its role?
Monitoring the supply of Statutory Health Insurance Physicians and determine the number of statutory health insurance doctors allowed to practice in the 397 planning districts.
Does it collaborate with any other institutions in Europe?
No
Planning Models and Methods
How is workforce planning carried out in the country?
The Federal Joint Committee 'Gemeinsammer Auschuss' (made up of representatives from the NASHIP, the German hospital federation (DKG), the national association of dentists with contracts with the social insurance scheme (KZBV), and the GKV-Spitzenverband) sets the guidlines for the requirement planning (Bedarfsplanung) which is then done by the ASHIPs and the Länder associations of the statutory health insurance providers.
What does it take into account?
Population and, since 2011, also a demographic component (age).
What planning models and methods are used?

For each planning district, it is determined how many doctors of a particular speciality there should be per 100,000 inhabitants, taking into account whether the district is rural or urban. This is done by extrapolating data from the 1990 on doctor distribution, taking into account population growth, to establish the present need for doctors. The ASHIPs and state associations of statutory health insurance providers create corresponding 'requirement plans' (Bedarfspläne). Regions where supply is deemed to be more than adequate (over 110%), are then closed to new doctors.

Training

How are workforce planners trained?

No specific workforce planning.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

In 2008, 3065 medical doctors moved abroad, 67% of whom held Germany nationality.
One study indicates that there are 17,000 physicians practising abroad (Kopetsch, 2010 as cited by Prometheus, 2011).
The number of foreign nurses decreased from 3.7% in 2003 to 3.4% in 2008.

Who, where did they go, why and why they come back?

Who/Where: Doctors: In 2008 those who left went to Switzerland 729; Austria 237; US 168; UK 95; Sweden 86.
The number of nurses leaving is Not applicable but estimates do not exceed 1000. Main destination countries are Switzerland, Austria and UK.

Why go: Nurses: better training opportunities, higher incomes and flatter hierarchies; Doctors: high wage differentials, better working conditions and training opportunities.

No return migration data collated.

Inward Geographical Mobility

How many health workers are entering the profession?

Between 2003 and 2008 the share of foreign nationals amounted to approximately 4.5% - medical doctors, dentists, nurses, midwives and nursing assistants.
In 2008, 13% of health professionals were born outside of Germany.
End of 2008, there were 21,784 medical doctors of foreign nationality, approx 5.2% of total registered medical doctors, and 18,105 practising foreign medical doctors, i.e. 5% of all active medical doctors.
In former West Germany the number of active foreign medical doctors increased by 40% between 2000 and 2008 whilst in former East German states this increased by roughly 309%.
24,387 foreign nurses and midwives in 2008.

Who, where do they come from, how are they trained/recruited?

Who/Where: Doctors - Austria (1802); Greece (1708); Russian Federation/former USSR (1685); Poland (1428); Islamic Republic of Iran (1092) and Romania (927)
Nurses and midwives - Croatia (3058), Turkey (2886), Poland (2390) Serbia/former Federal Republic of Yugoslavia (1553), Bosnia & Herzegovina (1413) and Austria (989) (ref date 30 Sept 2009.

Recruitment: Growing number of agencies specialise in recruiting nurses and medical doctors from eastern EU countries.

Training: Regional chambers of physicians are responsible for secondary training, certification and continuing education and membership is mandatory.

Foreign medical doctors are not allowed to work independently in their own medical practices, only as employees under supervision.

What are the main drivers/obstacles of data collection *on mobility*

No annual outflows recorded for nurses and dentists.
Social insurance contributions are not tracked for self-employed practice-based health professionals.
No data available on number of doctors who returned to Germany after practising abroad as return migration is not recorded.
Numbers working abroad differs from source to source.
No registry data for nurses and midwives due to being organised through voluntary membership of a variety of professional organisations.
Number of nursing staff working illegally in country differs from sources.

Outward Professional Mobility

Retirement age by law and by practice
The official retirement age (2010) is 65 for both men and women. The average effective retirement over the 2004-9 period was 61.8 for men and 60.5 for women.
Inward Professional Mobility
How many health workers are entering the profession?
Not applicable

Information missing due to lack of sources/interview partners.

Country Profile Greece

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
11,359,000
Health Expenditure
9.7 % (2008)
Health System Type #1
Attempt to move towards decentralisation but political tendency to recentralise since 2006. Mixture of the public integrated, public contract and public reimbursement systems, incorporating principles of different organizational patterns. 7 Health Region Administrations (DYPE): Responsibilities cover population needs, the planning and evaluation of health programmes as well as the organization, operation and management of health providers within their catchment area. A Council of the Health Region (SYPE) has been established in each DYPE, chaired by the general director and with the participation of hospital general managers, a delegate from the administrative region appointed by the general secretary, a delegate from every prefecture of the region appointed by the prefect, and delegates from medical, dentist, pharmacist and nursing associations, university faculties and social partners. The aim of the SYPE is to advise the Minister of Health on issues related to the DYPE. SYPEs maintain close cooperation with the health ministry and coordinate their policies through the Central Council of Health Regions (KESYYPE), chaired by the Minister and attended by the Director General of Health and Social Solidarity and the general directors of the DYPEs. A significant problem is that the boundaries of administrative regions and health region administrations are not identical which restricts the possibilities of coordination between the two structures and the development of an integrated health and social policy.
Health System Type #2
Coexistence of the NHS, a compulsory social insurance and a voluntary private health insurance system. The NHS provides universal coverage to the population operating on the principles of equity, equal access to health services for all and social cohesion. In addition, 97% of the population is covered by approximately 35 different social insurance funds (compulsory social insurance) and 8% of the population maintains complementary voluntary health insurance coverage, bought on the private insurance market. Public sector: The social insurance system consists of a large number of funds and a wide variety of schemes, all of which are under the jurisdiction of the Ministry of Employment and Social Protection. Each insurance institution is subject to different legislation and, in many cases there are also differences in contribution rates, coverage, benefits and the conditions for granting these benefits, resulting in inequalities in access to and financing of services. The Ministry of Health and Social Solidarity is responsible for the planning and regulation of the NHS, with some responsibilities delegated to regional health authorities. However, government regulatory interventions are extensive and every aspect of funding and health care provision is subject to the control of the health ministry. Private sector: includes profit-making hospitals, diagnostic centres and independent practices. A large part of the private sector enters into contracts with the insurance funds, providing mainly primary care.
Overview of Supply Side
General trend in supply of healthcare workforce
General trend: 1980 - 1990: Substantial increase (46.3%) in the number of practising physicians. Since 1990: Increase was more moderate. Supply/demand mismatch: Although there are excessive numbers of specialized physicians and shortages of GPs, and medical unemployment and underemployment has risen to 25%, no specific measures such as quotas for medical specialties have been adopted. The only interventions to limit the number of doctors are the result of Ministry of Education policy rather than planning by the Ministry of Health and Social Solidarity. During the last decade the Ministry of Education has stabilized the number of new entrants in medical schools.
Proportion of those employed in the health care system

Not applicable
Gender Distribution
36.46% male / 63.49 % female (2010)
Is there a training quota?
Yes. Access to public university medical schools is limited to people who attain extremely high entry grades in national competitive examinations.
What are the practices for registration/licensing of health personnel?
Doctors: After completing specialization training and acquiring full medical specialization status, in order to have the right to practise medicine, doctors are obliged to apply to the health department of the prefecture where their residence is located for a licence to practise. In addition, doctors are required to enrol in the relevant Medical Association. Nurses: those who have the necessary diploma granted by the universities and the ATEIs nursing departments also apply to the prefecture for a licence to practise.
Overview of Demand Side
Population ages 0-14 years
14.4% (2010)
Population ages 65 and above
18.9% (2010)
Population ages 80 and above
4.6% (2010)
Major issues in current health policy
Not applicable

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Poor quality and coverage of data.
What is the scope of this data?
Not applicable
Does it cover students/trainees?
No
Data Collection Institutions
Is the data collected at the national and/or regional level?
Not applicable
Who collects the data?
TSAY (TAMEIO SYNTAXEOS KAI AFTASFALISEOS YGEIONOMIKON), the social insurance fund for doctors, dentists, pharmacists and veterinarians and the National Academic Recognition Centre
Who reports the data?
Not applicable
Challenges
What are the main data gaps?
Mobility: No reliable data are available concerning the international mobility of Greek doctors and nurses.
What are the barriers obstructing better workforce data collection?
Not applicable

How might these challenges be overcome?
Not applicable

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
The existence of different subsystems and organizational models, combined with a lack of mechanisms for coordination, results in fragmentation and overlaps in care, and creates significant difficulties in the management of the system as well as in the planning and implementation of national health policy. To date, health care and education policy planners have found it difficult to determine a national strategy for medical career planning. Such a strategy is needed to provide medical graduates with a clearer understanding of what opportunities for specialization are available to them and which career paths would be more attractive.
Does the country have a workforce planning institution?
Not applicable
Mandate of planning institution
What is its role?
Not applicable
Does it collaborate with any other institutions in Europe?
Not applicable
Planning Models and Methods
How is workforce planning carried out in the country?
Not applicable
What does it take into account?
Not applicable
What planning models and methods are used?
Not applicable
Training
How are workforce planners trained?
Not applicable

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Not applicable
Who, where did they go, why and why they come back?
Not applicable
Inward Geographical Mobility
How many health workers are entering the profession?
Not applicable
Who, where do they come from, how are they trained/recruited?
Not applicable
What are the main drivers/obstacles of data collection *on mobility*
Not applicable

Outward Professional Mobility
Retirement age by law and by practice
Not applicable
Inward Professional Mobility
How many health workers are entering the profession?
Not applicable

Country Profile Hungary

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
10 million(2010)
Health Expenditure
7.4% of GDP (2009)
Health System Type #1
The country has a comparatively decentralised healthcare system – currently going through a centralisation process - with the national government retaining control over the central budget. The health social insurance system, is primarily administered by Health Insurance Fund and funded through general taxation to cover capital costs.
Health System Type #2
Public system with a purchaser-provider contract model.
Overview of Supply Side
General trend in supply of healthcare workforce
Outflow of health professionals (mainly practitioners of 30-39 age group) intensified after joining the EU in 2004: mainly doctors without specialisation Staff shortages especially in nursing and certain medical specialties: e.g. lack of nurses due to low salaries, poor working conditions, heavy workloads and insufficient qualified personnel. Staff shortages in certain geographical areas. Ageing of the health workforce.
Proportion of those employed in the health care system
4.3% (2010)
Gender Distribution
75.46% (F)
Is there a training quota?
The number of state-financed places is defined yearly by the Education Secretariat of the Ministry of National Resources. The number has been increasing over the last years. There are more applicants for medical profession than available places (3 - 4 times). The number of applicants for nursing professions matches the number of available places.
What are the practices for registration/licensing of health personnel?
The Office of Health Authorisation and Administrative Procedures (OHAAP) is responsible for the mandatory registration of all medical and non medical profession s and the operation of the registry. The registration needs to be renewed every 5 years. Doctors have to certify that they have enough credit points (by participating in conferences, publishing activity, and trainings) in order to be allowed to practice. Registration in professional medical chambers is mandatory.
Overview of Demand Side
Population ages 0-14 years
14.9% (2009)
Population ages 65 and above

16.4% (2009)

Population ages 80 and above

3.8% (2009)

Major issues in current health policy

Improve retention capacities by providing better salaries and working conditions for health professionals in order to avoid the increase of their outflow which endangers the sustainability of the health care system.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

Comprehensive data is collected. Public and private sector. National and regional level. Headcount, gender, education, language knowledge, validity time of the operational licence.

What is the scope of this data?

GPs (except medical doctors with basic medical training) and specialists, dentists, nurses and allied health workforce, pharmacists, clinical psychologists.

Does it cover students/trainees?

The OHAAP registry covers only graduates.

Data about trainees, those, who have the basic medical diploma and are participating in the state-financed specialised training programs (the so-called resident-doctors) are collected in the “resident-registry”.

Data on student migration potential of the future medical doctors is collected by Health Services Training Centre of the Semmelweis University through a nation-wide survey among 1st and 6th years students and resident doctors (trainees).

Data Collection Institutions

Is the data collected at the national and/or regional level?

National level

Who collects the data?

OHAAP
Central Statistical Office
Different governmental offices

Who reports the data?

Ministry of Health, Office of Authorisation, training institutions, persons themselves and the e health care providers

Challenges

What are the main data gaps?

There is no comprehensive data on the number of Hungarian doctors practising in other countries, given that doctors practising abroad cannot be monitored as they cannot be obliged to provide data about their intention to leave. Data on intentions to leave is collected.

What are the barriers obstructing better workforce data collection?

Fragmented and separated data collected by several institutions. Lack of standardisation.

How might these challenges be overcome?

The HRH monitoring programme is aiming to merge all available data.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

Workforce planning is carried out at the national level. Current workforce planning corresponds to the process of reporting the number of medical residency places to the ministry of health. Since the last year, each hospital estimates the number of new medical places based on the real demand. The real number of new medical residency vacancies is

made based on this estimation.

Does the country have a workforce planning institution?

No

Mandate of planning institution

What is its role?

Not applicable

Does it collaborate with any other institutions in Europe?

Not applicable

Planning Models and Methods

How is workforce planning carried out in the country?

New system of postgraduate training (2009) aims to improve retention of lacking specialists by increasing their remuneration by 50%, giving them additional financial compensation and accommodation support. Moreover, since 2009 there have been many changes in the system of postgraduate training in order to achieve better and continuous availability and flexibility of postgraduate programmes.

Regulation of medical enrolment rates envisages a planning provided by the Education State Secretariat of the Ministry of National Resources on the number of state financed places at the higher education institutions. The planning is based on labour market trends. The quotas for medical specialities are defined by the State Secretariat for Health of the Ministry of National Resources according to the indicated requirements of the healthcare institutions (as they have to apply for the resident-places).

Some hospitals and medical institutions have own planning, but this is not coordinated. Mainly consists in offering attractive career plans to health professionals in order to attract them to work in their constituencies.

What does it take into account?

The project Human Resources for Health Monitoring System will take into account demographics of health professionals. It is expected to be put in place in 2012. Some elements have already been introduced (e.g. the above mentioned changes in the training system, the different grants for resident doctors and pharmacists, financial support for the training of scarce professions, etc.)

What planning models and methods are used?

Supply and demand system.

Training

How are workforce planners trained?

Not applicable

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

There are no data on how many doctors do migrate to other countries. Based on the information on the number of certificates of medical recognition (OHAAP), in 2011 1200 medical professionals intending to leave the country. Because this is an expensive and time-consuming procedure, many applicants are committed to migrate and these figures are considered as a good indicator of mobility trends.

Who, where did they go, why and why they come back?

Who/Where
Since accession in 2004, the United Kingdom and Germany have been common destination countries along with Italy, Austria, France and Sweden.

Why go
After EU accession in 2004, medical doctors moved abroad because of job opportunities. Hungary has proportionately small hospital budgets and salaries that are significantly less than their EU counterparts.

Inward Geographical Mobility

How many health workers are entering the profession?

Who/Where
There are observed inflows of foreign students participating in the training in English or German language. However, once the programme is finished, they are most likely to return to their country of origin.

Who, where do they come from, how are they trained/recruited?

Not applicable.

What are the main drivers/obstacles of data collection *on mobility*

Drivers: Emigration and demographic trends are really driving forces to develop more adequate planning system.

Obstacles: Before 2009 the register of allied health professionals was run according to qualification, which could cause multiple registration numbers for professionals with more than one qualification. This practice has however changed after 2009 and the register is based on person itself since then.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 62 for both men and women. Approximately 4000 of doctors with operational licence are in retirement age.

Inward Professional Mobility

How many health workers are entering the profession?

About 700 medical doctors graduate at Hungarian universities every year and consequently enter the labour market. Among doctors having acquired diploma and being registered (49000), 28000 of them have operational licence.

Country Profile Iceland

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

318,452 (2011)

Health Expenditure

9.26% of GDP (2009)

Health System Type #1

Centralised.

Two major institutions: the Ministry of Welfare, and the Directorate of Health. The Ministry of Welfare was created in 2011 and is responsible for policy development. The Directorate of Health is a government agency with responsibility for policy delivery. Its key functions are general management, data collection and monitoring, and provision of health care.

Health System Type #2

Iceland has a universal, comprehensive system which is free at the point of delivery and is funded by general taxation, with supplementary private provision for some outpatient, dental and pharmaceutical treatments. All foreign nationals are entitled to free health care only after six months residence in Iceland. Iceland provides the initial six year training for clinicians and full training for nurses and general practitioners. Medical students wishing to specialise in a particular area must do so abroad.

Social Insurance in Iceland is financed from the State Treasury by tax payments into the treasury and payroll taxes paid by employers and independently working individuals, but there is no other specific premium paid for Social Insurance. Icelandic Health Insurance (Sjukratryggingar Islands) administers health insurance and occupational injury insurance. Social insurance is an integral part of social security in Iceland, providing a certain minimum insurance coverage. An individual who has insurance pays less for health services.
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Overview of Supply Side

General trend in supply of healthcare workforce

Supply of healthcare workforce generally in good shape - enough doctors, nurses, nurses assistants etc. However:
• Shortages in certain sub-specialities (e.g. GPs, surgical nurses, psychiatrists, paediatricians).
• Iceland's small size makes it vulnerable in manning certain sub-specialities
• Increasing number of healthcare practitioners (esp. doctors) going abroad for longer periods of time: After 6 years of medical training, most (almost 90%) go abroad for specialisation (Scandinavia) for 5-10 years but usually come back. Whilst almost 500 Icelandic physicians (up to a third of the total) are currently abroad, there is, in general terms, no shortage. However there is a new trend of an increasing number of doctors and nurses moving abroad (esp. Norway). There are 30% more applications for the Directorate of Health certification required to demonstrate they have a licence. Going abroad part-time is not new and recognised as good for knowledge exchange but phenomenon of full-time, longer term migration is new.
• Relatively new trend of those going to Denmark and Hungary for basic medical school (given the numerous clausus type exam required for medical school in Iceland).
• In the next 5 - 10 years a shortage of nurses is predicted if not addressed now (given the large number of older nurses going on retirement during that time). An additional 20-30 more nurses per year are required over the next 5-10 years. When the financial crisis over it is predicted that jobs in the public sector will increase.
• Undersupply in midwives (same situation as for nurses), nurses assistants and a severe undersupply of medical laboratory scientists.

Proportion of those employed in the health care system

6.49% (2010)

Gender Distribution

20.39% male / 78.64% female (2010)

Is there a training quota?

Yes. *Numerus clausus* for doctors (48 graduates each year); there are also restrictions on the number of physiotherapists and dentists educated (based on the number of places of medical practice available). For doctors, anyone can initially enrol, then after an examination in the first 1st semester, only 48 go on to complete medical school (this does not include the growing number going abroad to Denmark and Hungary for medical school - a relatively recent phenomenon). The number of 48 is based on university capacity and the need for doctors in Iceland. The number was increased by one third (from 36) around 7 years ago; the justification given for this increase was that Iceland was looking at a shortage of physicians. The decision was made after consultation with the Ministry of Health, the Directorate of Health, universities and hospital authorities.

The number of annual graduates for certain professions (based on the capacity to train them in a clinical setting) is as follows: Nurses – 150, Medical doctors – 48, Physiotherapists – 25, Dentists – 7.
The faculty is responsible for the decision.

What are the practices for registration/licensing of health personnel?

Authorisation by DIRECTORATE OF HEALTH. Requires papers (examination from school recognised - may have to seek information from other countries e.g. Scandinavia).
Registration/licensing follow the specific regulations for each of the health professions. Normally requires Diploma/statement from school; other requirements varies by profession. Some professions, for example, also require the curriculum. Procedure also varies by profession:
• Nurses (nationals): Diploma/statement submitted to Directorate of Health who then issues the licence.
• Medical doctors (nationals and non-natives) and non-native nurses: Diploma/statement submitted to Directorate of Health, Directorate of Health then sends them to the respective committee asking them to check if the education meets the profession's requirements before issuing the licence.

Overview of Demand Side

Population ages 0-14 years

20.9% (2010)

Population ages 65 and above

12.0% (2010)

Population ages 80 and above

3.3% (2010)

Major issues in current health policy

Not applicable.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

Directorate of Health registry: Headcount, age/date of birth, gender, Date of registration/license, profession, certification, nationality BUT not residence or information about whether they are practicing in Iceland (no formal deregistration process for those who have moved abroad or are no longer employed in the healthcare system); about graduates and their specialisations.

The registry also documents (confidentially) whether health practitioners have been reprimanded or have lost their license.

What is the scope of this data?

National, covering mainly the public sector

Does it cover students/trainees?

No.
90% of doctors go abroad for specialisation - Iceland does not hold information on the type of specialisation the doctors are training for. The Directorate of Health does however have a register of specialists in various professions who have an authorisation in Iceland.

Data Collection Institutions

Is the data collected at the national and/or regional level?

National

Who collects the data?

Directorate of Health (keeps track, is the governing body, also responsible for quality). Also health centres and professional associations

Who reports the data?

Directorate of Health, Statistics Iceland, and Associations of doctors/nurses also produce reports based on their own data and Directorate of Health data.

Challenges

What are the main data gaps?

No monitoring of actual active healthcare workforce: Changes of job not captured and duration of stay abroad of health professionals also insufficiently captured - Healthcare professionals are under no legal obligation to report changes (Iceland has chosen not to regulate by law; they rely on professionals being responsible - which they are around 90% of the time). There is also no information regarding what kind of specialisations are being trained for abroad.

What are the barriers obstructing better workforce data collection?

Lack of information about workforce mobility because Iceland doesn´t collect data on employment place and time both nationally and abroad. This not mandatory and, according to the Ministry of Welfare, needs to be resolved.

How might these challenges be overcome?

There is need for a mandatory registering of who is active, especially abroad.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

National

Does the country have a workforce planning institution?

Not as such, but the Directorate of Health has roughly 2 full time employees working on planning and the Ministry of Welfare contributes with input from hospitals, primary health care institutions and universities.

Mandate of planning institution

What is its role?

Directorate of Health collects and reports data and makes recommendations regarding future needs.

Does it collaborate with any other institutions in Europe?

EEA/EU. Since crisis, collaboration (due to budgetary constraints) is limited.

Planning Models and Methods

How is workforce planning carried out in the country?

Health workforce planning takes place nationally and is led by the Directorate of Health. The planning structure reflects the size of the country, with emphasis on consultation. The Directorate collates data on health workforce headcounts and estimates the likely future needs based on current statistics. The Directorate consults with health centre officials and professional associations, before making recommendations on training numbers to higher education institutions and the Welfare and Education Ministries. The higher education institutions and the two ministries work together to determine final quotas for training places. Focus is given to balancing the numbers of health professionals and trainees with the budget available. By contrast, there is currently little focus on demand and no models in place.

What does it take into account?

Number of health professionals, fiscal budget. It essentially also takes into account the needs of the nation - includes care pathways and demographics.

What planning models and methods are used?

Models and methods based on supply factors (demographics and professionals-to-people) used.

However, the 2008 Ministry of Health report which identified the needs of certain healthcare professions was produced in collaboration with the Institute of Economics and the University of Iceland – here more specific methods were used.

Training
How are workforce planners trained?
No specific workforce planning training.

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
In 2002, there 450 Icelandic doctors working abroad (HiT, 2003). 176 were in Sweden, 109 in the United States and 116 in Norway, according to SNAPS (Samnordisk arbetsgrupp för prognos- och specialutbildningsfrågor). There were 327 Icelandic nurses working in Denmark in 2005 (Dussault, et al., 2009).
Who, where did they go, why and why they come back?
Who/Where: Doctors move to the Nordic countries, the UK, the Netherlands and the United States. Why: Doctors move abroad to complete specialist training.

Inward Geographical Mobility
How many health workers are entering the profession?
Not applicable
Who, where do they come from, how are they trained/recruited?
Who/Where: There are Polish doctors and Indian doctors. Training: Applicants must pass a test on the Icelandic language and may be subject to tests in public health, health legislation, specialty specific, and Icelandic law connected to medicine.
What are the main drivers/obstacles of data collection *on mobility*
There are mainly data on number of doctors and it is difficult to find updated figures. Lack of registration of data on several issues of mobility

Outward Professional Mobility
Retirement age by law and by practice
The official retirement age (2010) is 67 for both men and women. Within the medical profession as of 2000, medical workers must retire at 70. The average effective retirement age is 69.7 years for men and 65.4 years for women. Within the medical profession, the number of doctors younger than 70 (the official retirement age) was 958.

Inward Professional Mobility
How many health workers are entering the profession?
The number of annual graduates for certain professions (based on the capacity to train them in a clinical setting) is as follows: Nurses - 150 Medical doctors - 48 Physiotherapists - 25 Dentists – 7

Country Profile Ireland

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
4.58 million (2011)
Health Expenditure
9.5% of GDP (2009)
Health System Type #1
Centralised system with 75% of health services funded through taxes. The level of reimbursement of health-related costs depends on the age and income of service users: Cat I citizens (36% of population) (as of 2010) are entitled to free services; Cat II citizens cover for public hospital services, but must make contribution towards most other services. Approximately 23% of the population hold neither a medical card nor private health insurance.
Health System Type #2
Mix of public and private health service funding and provisions. In 2011, 47% of the population had private health insurance.
Overview of Supply Side
General trend in supply of healthcare workforce
Overall supply of healthcare workforce has increased by 56.7% since 1997 (2009 data) Three main issues: - issue regarding supply of junior doctors (last year they were short of 300-400 junior doctors); to solve the problem, increasing reliance on EU doctors and doctors from India and Pakistan - limited number of consultants posts make junior doctors migrate and go to other countries (especially US, Canada, Australia) to train and possibly not come back - challenge of current financial crisis: priority to reduce headcounts
Proportion of those employed in the health care system
8.35% (2010)
Gender Distribution
78.6% (F) (2011)
Is there a training quota?
Yes, for physicians (fixed places in the different universities) and GPs (157 places). Number of places available has been increasing. Also number of places available for EU students has been increasing
What are the practices for registration/licensing of health personnel?
All doctors need to be registered with the Medical Council; there are 2 registries (General Register of Medical Practitioners and Register of Medical Specialists). Nurses must be registered with the Nursing Board (An Bord Altranais).
Overview of Demand Side
Population ages 0-14 years
21.3% (2010)
Population ages 65 and above
11.3% (2010)
Population ages 80 and above

2.8% (2010)

Major issues in current health policy

Flexible labour market: increasing number of flexible contracts
Feminisation of medical profession
Cuts in health budget (estimated at €727 million in the 2011 budget)

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

Headcount, type of contract, age profiling, gender distribution, full time/part time equivalents, number of employees, especially in terms of whole time equivalence (WTE).

What is the scope of this data?

National
The Health Service Staff Census only collates data on the public health service. Age profiling is also provided via HR/payroll systems.

Does it cover students/trainees?

The health personnel census collects data on students/trainees that are on the payroll only; no link with Registries either.

Data Collection Institutions

Is the data collected at the national and/or regional level?

National census, data also come from HSE HR systems. They use information previously collected by the former Health Boards.
Regional level/hospital level

Who collects the data?

Health Service Executive for the Health Service Staff Census (i.e. through payroll analysis)

Who reports the data?

Health Service Executive (HSE)
Department of Health

Challenges

What are the main data gaps?

Migration/international mobility of workforce: 10 percent of workforce is non Irish
information of private sector: need link with national registries
Limited information on nursing homes
international comparison is difficult: health personnel census is built to provide information about payroll so it is very specific to Irish context
Lack of unified management system— PPARS introduced in 1997 but full rollout abandoned in 2005 due to difficulties.

What are the barriers obstructing better workforce data collection?

Budgetary constraints in expanding correct data collection activities to other sources (e.g. registries)

How might these challenges be overcome?

Development and implementation of the Integrated Workforce Strategy from 2012
Development of quantitative tool by Foras Aiseanna Saothair/Training and Employment Authority FAS to collate and analyse a wide range of data from different sources to be able to see trend patterns. Model currently used by the RN4CAST project for nurses.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

National and regional (integrated workforce planning by HSE)
National (analysis of supply side and training side by HSE)

Does the country have a workforce planning institution?

Yes. HSE is in charge of workforce planning. However, its mandate is much broader as the HSE employs all doctors, runs hospitals, etc. It acts in response to targets set by the Department of Health on headcount, and has responsibility for implementing the Department's strategy.

Mandate of planning institution

What is its role?

The HSE's principal task is to review future human resource requirements in health care, in response to targets set by the Department of Health.

Does it collaborate with any other institutions in Europe?

Limited collaboration with EU and other international organisations such as OECD and WHO (attending meetings; codes of practice). Involved in EU Joint Action Group

Planning Models and Methods

How is workforce planning carried out in the country?

The HSE is responsible for collating data, primarily from the annual health personnel census and human resource payroll system and provides monthly reports to the DH. The information is updated throughout the year, and the HSE produces monthly national reports to the DH.

The DH is responsible for setting headcount targets and, within these targets, the HSE calculates how best to provide the workforce at national and regional levels in terms of skills mix. Some workforce planning takes place at service level (for example, mental health), however not all services currently have comparable/consistent approaches or tools.

In 2008, the Training and Employment Authority (FAS) developed a quantitative modelling tool for the DH and HSE which aimed to provide better forecasting and better integration of workforce planning with financial planning at a national level. The tool brings together various sources of local and national data, including information from the private sector. The model is founded on a number of assumptions regarding education/training patterns, historical trends in personnel, attrition rates, government measures/targets and ageing. The tool has enabled a better understanding of employment in the private and employment sectors to support future forecasting, and has been adopted in limited form by the RN4CAST project for nurses.

What does it take into account?

The integrated workforce planning promoted by HSE using the FAS's tool takes into account both demand and supply and integrates them; steering group with Clinical Programmes representatives and FAS representatives to bring demand and supply together; it also aims to integrate workforce planning with services planning and financial planning.

What planning models and methods are used?

It is a quantitative tool.

Training

How are workforce planners trained?

No training of workforce planners in place.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

In 2009 there were 3978 (22%) doctors holding full registration who had overseas addresses.

There were 1,575 total verification requests made by 1,356 nurses in 2010. The Nursing Board has records for 6,172 inactive files for nurses who have indicated that they are working abroad in 2010.

Who, where did they go, why and why they come back?

Who/Where
Nurses made the most verification requests for the United Kingdom, Australia, and Canada in 2009 and mainly for the United Kingdom and Australia in 2010.

Doctors frequently choose to work abroad in the US or Canada.

Why go
Australia has had a strong recruitment policy for nursing staff.

Inward Geographical Mobility

How many health workers are entering the profession?

A high proportion of doctors and nurses are foreign-trained. In 2008, there were 6300 foreign doctors (35.5%) and 37,892 foreign nurses (47.1%) (OECD/WHO 2010)

In 2010 there were 338 newly registered qualifications made by nurses from the EU or other countries.

In 2009, there were 1,568 doctors registered in Ireland with a degree from an EU Country.

In 2009 there were 2,083 doctors registered in Ireland who qualified in Queensland, Australia, New South Wales, South Australia, Victoria, Western Australia, Saskatchewan, New Zealand or South Africa.

In 2009 there were 2,649 doctors registered in Ireland who qualified in a non-EU member state.

Who, where do they come from, how are they trained/recruited?

Who/Where
Nurses made the most verification requests for the United Kingdom, Australia, and Canada in 2009 and mainly for the United Kingdom and Australia in 2010.

Doctors with full registration in Ireland come from Great Britain, Northern Ireland, and Poland as well as from South Africa and the Australian States of NSW, South Australia, Victoria, WA, or Queensland.

Recruitment
Medical training in Ireland is financed to a large extent through the payments of students from outside the European Union, which explains the high number of places reserved for these students.

What are the main drivers/obstacles of data collection *on mobility*

Drivers: The Medical Council captures detailed information on foreign and foreign trained doctors in Ireland. The Irish Nursing Board collects robust information on nurses.

Outward Professional Mobility

Retirement age by law and by practice

There is no official / statutory retirement age set out in legislation, it depends on the terms and conditions set out by the employer. In general, the retirement age for health care workers is 65 years.
The average effective retirement age over the 2004-9 period was 63.3 for men and 63.7 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Not available.

Country Profile Italy

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
60,55 million (2010)
Health Expenditure
9.5% of GDP (2009)
Health System Type #1
Universal coverage Central state and regions share responsibility for health care Regions have responsibility for the organisation and administration of the health care system Local health authorities are responsible for the delivery of health care services and serve geographical areas with average populations of 300000inhabitants.
Health System Type #2
Central health care financed through indirect tax (not from general revenues), collected through regional taxes. Regional tax is supported by central government contribution to the regions (financed through value added tax revenues) Health Care service source of revenue: Taxation: 76%; Out of pocket payments: 19% (especially for private health care services and over the counter medicines); Voluntary health insurance: 2% (approximately 15% of the population has complementary private health insurance).
Overview of Supply Side
General trend in supply of healthcare workforce
General increase in the number of health professionals. Medical profession (physicians): no shortages; one of the highest numbers of physicians per population in Europe. Real issue is the ageing of the workforce: not enough doctors specialised and habilitated to meet demand in the next 20 years. Healthcare professions (nurses, etc.): shortage of nurses; but it seems that the problem is solving progressively, probably due to the budget cuts (hospitals do not have enough money to hire more nurses so they ask for less) and because of intense education and training in the past decade
Proportion of those employed in the health care system
5.31% (2010)
Gender Distribution
62.93% (F)
Is there a training quota?
Yes. Quotas at both undergraduate and specialisation level. Undergraduate level: set by the Ministry of Education based on recommendations of the Ministry of Health (after exchange with regional authorities). Specialisation level: quotas set by the Ministry of Economy who sets the total budget, thus the number of people that can access specialisation.
What are the practices for registration/licensing of health personnel?
There is registration for GP (following a 3 years GP training course). There is mutual recognition of GP qualifications (gained in other EU Member States).
Overview of Demand Side
Population ages 0-14 years
14.1% (2009)

Population ages 65 and above
20.2% (2009)
Population ages 80 and above
5.8% (2009)
Major issues in current health policy
Major differences in health care provision across regions Shortage of nurses and number of students is not sufficient to meet demand in the future. Ageing of medical professionals.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Data are collected through multiple sources both at the regional and national level Detailed data for 8 medical professions: aggregate data (number of employees) for other health professional grouped within 5 main categories (not exhaustive) Public sector (private not exhaustive); hospitals, but not other healthcare structures Stock data: Headcount, geographical distribution, active workforce, specialisation; non-complete data on age and gender Flow data: Limited data on professional flow; no data on geographical flow
What is the scope of this data?
Depending on the indicator: national and regional (but often difficult, especially for the healthcare staff)
Does it cover students/trainees?
Yes, but data are collected and reported by the Ministry of Education.
Data Collection Institutions
Is the data collected at the national and/or regional level?
Data collected mainly at the regional level and by professional boards.
Who collects the data?
Professional boards (Health Professionals Associations) Regions Universities Ministry of Economy
Who reports the data?
National Office of Statistics (ISTAT) Ministry of Health Conto Annuale (Ministero dell'Economia)
Challenges
What are the main data gaps?
Main gaps: very different data collected in the various regions; no unified database, Ministry of Health has to use different sources of data; non comparability; gap for certain specialisations; private sector
What are the barriers obstructing better workforce data collection?
Main problem is that data are collected by multiple different sources at the national and regional levels; comparability and analysis are quite complex.
How might these challenges be overcome?
In order to obtain comparable information from the regions and reach forecasting that represents the real needs of healthcare at the regional and national levels, there is a need to identify standard indicators and share criteria and methodologies for data collection across the regions.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
Regional level primarily; attempt to analyse, compare and make recommendations at the national level but it is very difficult, especially because of (a) differences across regions, (b) differences in the amount and type of data collected (at national level there is incomplete information on the type of data collected).
Does the country have a workforce planning institution?
No; workforce planning is done primarily at the regional level and the Ministry of Health (Department of Human Resources) tries to make time and geographical data consistency analysis and comparison but it is difficult.
Mandate of planning institution
What is its role?
Role of the Department within the Ministry of Health is bring together the data and forecasts developed at the regional level, analyse, compare and validate them to make appropriate recommendations to the Ministry of Education.
Does it collaborate with any other institutions in Europe?
Not applicable
Planning Models and Methods
How is workforce planning carried out in the country?
Combination of National and regional level: - regions define their own professional needs - bottom-up approach to NHS human resources forecasting - national needs is the sum of regional needs - medical and health professional associations estimations are taken into account as well - Ministry of Health makes its time and geographical data consistency analysis and comparison (also on the basis of independent data collection) - top-down data check and central government proposal to the regions during discussion - national government - regional government agreement - communication of results to Ministry of Education defines number of entrants in degree courses
What does it take into account?
Aspects taken into account in planning: - short term forecasting of healthcare professionals (yearly) - medium term forecasting of the number of physicians by specialty (3 years) - objectives and essential level of assistance indicated by Health National Plan - organisational models of services - employment offer - work demand, considering also healthcare professionals in training - university training capacity
What planning models and methods are used?
Not available.
Training
How are workforce planners trained?
Not applicable.

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Italy's emigration factor was 4.7% in 2006 with 774 total physicians registered in other countries (2007). UK: 1692 new registrants from Italy registered with the UK GMC between 2003 and 2008 Germany: 755 Italian doctors in 2008 & 950 nurses France: 566 Italian doctors in 2007
Who, where did they go, why and why they come back?
Who/Where: Germany & UK are main destination countries. Mainly medical doctors & researchers trained in Italy.

Why go:
Over-supply of these professionals, poor career opportunities and inadequate working conditions in Italy coupled with increasing demand for these areas in destination countries with better salaries and more stable career opportunities.

Inward Geographical Mobility

How many health workers are entering the profession?

1. Entry requirements have been eased and currently one in ten nurses are of foreign origin.

2. 14548 foreign-born medical doctors were registered with the FNOMCeo in 2008-2009, representing 3.7% of the medical workforce.

3. Between 9.4% and 11% of the nursing profession are foreign. In 2008 33364 of these were professional nurses and just over half were from EU countries.

4. INPS reports more than 250000 foreign nationals worked as domestic workers in 2009.

5. Proportion of nurses has increased from 2% in 2005 to 10%

Who, where do they come from, how are they trained/recruited?

Who/Where:
1. Nurses: Mainly from the EU accession countries: Romania - 25%; Poland - 10.7%; Switzerland - 7%; Germany 5.6%; Peru 5.3%. Albania, France, India and Spain each represent around 3.5%.
2. Doctors: Around 4% of the medical workforce. Germany 1276; Switzerland 869; Greece 851; Islamic Republic of Iran 752; France 686; Venezuela 626; US 618; Argentina 584; Romania 555; Albania 431.

Recruitment:
Majority of foreign nurses are in central and northern Italy

Training:
Bilateral programmes with foreign training institutes.
Doctors must attend an annual Continuing Medical Education programme equivalent to 're-accreditation' (WHO, 2009).

What are the main drivers/obstacles of data collection *on mobility*

Obstacles:
There is no system to allow for identification of foreign health professionals working outside hospital settings.

Foreign nurses are not permitted to hold permanent positions in the public sector and therefore hold jobs in the private sector or for contract work which makes it more difficult to track

It is difficult to know if foreign medical doctors have completed their training in Italy or their home countries.
Those working in the informal care sector are the most difficult category of health workers to measure.

Compiling data at national level would require consolidation of data at various levels

Some foreign-born medical doctors have been naturalised and if data on nationality is considered, the foreign share in the medical workforce drops from 3.7% to 1%.

Medical doctors and nurses working abroad can be commuters e.g. living in Italy but working in France.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for men and 60 for women. However workers may retire at 57 with 35 years of contributions.
The average effective retirement age over the 2004-9 period was 61.1 for men and 58.7 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who
The rate of graduate physicians as a proportion of the population was 0.10 per 1000 in 2006 [compared to 0.18 in 1990]

There has been a shortage of nurses while the supply of doctors as a percentage of the population is among the highest in Europe.

Country Profile Latvia

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

2,252,000

Health Expenditure

6.5% (2008)

Health System Type #1

Having abolished the highly centralized system that prevailed during the Soviet period, focus in Latvia has been on decentralization of health care delivery, administration and financing; full or partial privatization of some kinds of provider institutions; and the establishment of independent primary care practices, which have led to a wide variety of legal forms of health care providers and institutions. The health care system has experimented extensively with a variety of social insurance structures ranging from highly decentralized to partially recentralized arrangements, as well as with organizational forms of health care delivery in parallel with reforms of the state administrative system. The wide-ranging reforms and continuous and ongoing process of change are prompted by the perceived need to increase the efficiency of health care financing and provision and to improve the quality of care.

Health System Type #2

Latvia possesses a tax-funded “social insurance” system with a purchaser–provider split. The central Government is responsible for financing the statutory health care system through tax revenue. In addition, financing for health services comes directly from household payments as well as VHI. Tax revenue allocated for health care by the Ministry of Finance is transferred (via the Treasury) to the State Compulsory Health Insurance Agency (SCHIA), a state-run organization under the jurisdiction of the Ministry of Health, which signs contracts with all statutory health care providers. What differentiates the Latvian financing system from most general tax-based systems is that the funds from the central government budget are transferred to the SCHIA, which – together with its five regional branches – acts as purchaser of health services on behalf of the entire population.

Payment methods for services and health care professionals have evolved over several years and are quite complex. They are determined by government regulations and defined in contracts. Health care personnel working as employees in health care institutions are salaried. GPs are paid through capitation, plus fees for defined activities, bonus payments and fixed allowances (such as a practice allowance). In addition, they hold funds for the purchase of certain secondary care services. Specialists are paid by means of fees for flat rate episodes of illness. Hospitals are remunerated by a per diem fee with additional activity-based payments.

Overview of Supply Side

General trend in supply of healthcare workforce

There are a number of problems in the area of human resources employed in the health sector in Latvia, resulting from the lack of a proper human resource policy. The most significant problems are:

- Shortage of physicians and medical professionals with secondary education. This has been worsened by the emigration of specialists to other EU Member States. Consequences include restricted access to health care services as well as low quality of services.
- The average age of physicians and other medical professionals is increasing.
- The educational system does not meet the growing needs of the health care system and the development of human resources in this sector.
- There is no long-term programme for human resources renewal.
- Low salaries of medical staff and lack of social guarantees do little to promote recruitment of medical staff.
- Prestige in the sector is low. Work has become more time-consuming and the amount of paperwork has increased.

Proportion of those employed in the health care system

3.61% (2010)

Gender Distribution

13.25% male / 86.75% female

Is there a training quota?

No

What are the practices for registration/licensing of health personnel?
After education, persons who have received a health profession diploma have to to be registered in the medical practitioners register in order to independently engage in medical practice in the relevant profession (physician, nurse, midwives etc) in conformity with the competence (Medical Treatment Law Section 26 (1)). The registration (license) is issued for five years. Medical practitioners must, prior to the expiry of their registration (license), submit evidence of their fulfilment of the conditions for renewing the register (license). For the renewing of register (license) medical practitioners (except physicians) must collect credit points during the past licensing period.
Overview of Demand Side
Population ages 0-14 years
13.8% (2010)
Population ages 65 and above
17.4% (2010)
Population ages 80 and above
3.9% (2010)
Major issues in current health policy
Not applicable

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Medical practitioners register collects information about medical practitioners: - Personal data, place of residence, gender; - Education (educational institution, educational documents): speciality, professional qualification levels (first-level or second-level professional higher education, secondary professional education), academic degrees (bachelor, master, doctoral degree); - Work place (title): position, Recruitment date and release date, release reason; - Language (native language, foreign language); - Certificate (specific basic speciality, sub-speciality or additional speciality).
What is the scope of this data?
National
Does it cover students/trainees?
Yes
Data Collection Institutions
Is the data collected at the national and/or regional level?
National
Who collects the data?
Data is collected by the Health Inspectorate of Latvia - a state administrative institution supervised by the Ministry of Health.
Who reports the data?
Data is reported by the Ministry of Health or by the Health Inspectorate. Medical practitioners register database provides necessary information for public health policies, as well as, international commitments (WHO, Eurostat).
Challenges
What are the main data gaps?
There are situations where medical practitioners or a medical institution does not provide timely data about changes in practitioner's information e.g. that an individual is no longer practicing.
What are the barriers obstructing better workforce data collection?
Medical practitioners or a medical institution do not provide timely data about practitioners' information changes. The certification institutions do not timely list information on medical practitioners who have a new speciality, sub-

speciality or additional speciality certificate (the certificate is issued for 5 years).
There is a lack of understanding on the need for registration among medical practitioners.
There is no e-registration.

How might these challenges be overcome?

Improve communication between medical practitioners register and medical practitioners, certification institutions and medical institutions.
E-registration.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

Demand for health care personnel, including doctors, is analysed by the Medical Professional Education Centre (a public body under supervision of the Ministry of Health). The Centre is responsible for planning and organising further education, including specialisation of medical professionals, as well as fulfilment of professional qualifications. The distribution of residents is also the responsibility of this Centre.

Professional associations deal with the training and planning of their respective specialisations. There is no agency at state level that is involved in planning and organisation of training for chief doctors, directors of hospitals, heads of health care institutions or high-level specialists. This function is undertaken partly by the Association of Management Experts of Health Care, a public organisation that does not engage in planning, but rather is involved in organising particular courses that can be pursued by its members for the purpose of improving their managerial capabilities.

Local governments are more directly involved in planning of the number of chiefs or directors of health care institutions under their ownership and within their own territories.

Does the country have a workforce planning institution?

There is no specific planning institution but health workforce planning is performed by the Ministry of Health.

Mandate of planning institution

What is its role?

The Ministry of Health is responsible for health workforce planning. The planning is made in close collaboration with subordinate institutions, social partners and non-governmental organisations, like medical practitioner's professional associations.

Does it collaborate with any other institutions in Europe?

The Ministry of Health does not collaborate with any other institutions in Europe in the field of health workforce planning. However, Latvian professional association collaborate with other institutions in Europe.

Planning Models and Methods

How is workforce planning carried out in the country?

There is programme "Human resources development in health care 2006-2015" approved by Cabinet of Ministers. Because of the significant decrease in the health care state budget starting from 2009 and realised structural reforms in health care, there is the necessity to actualise this programme according to available state budget for health care.

What does it take into account?

Healthcare workforce planning takes into account factors such as: medical practitioners, demographic situation, current situation on patients flow and demographic situation in society.

What planning models and methods are used?

Methods will be elaborated. At this moment methods are being revaluated.

Training

How are workforce planners trained?

Healthcare workforce planners have long-term experience with the planning process. Collaborates experience with medical practitioners register, certification institutions and medical institutions to create healthcare workforce planning continuity.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?
43 doctors trained in Latvia work in US, Canada, & New Zealand in 2005 & 2006 In Latvia, more than 200 doctors expressed their intention to migrate in 2005
Who, where did they go, why and why they come back?
43 doctors trained in Latvia work in US, Canada, & New Zealand in 2005 & 2006. Why: Better economic conditions in destination countries
Inward Geographical Mobility
How many health workers are entering the profession?
174 doctors and 6 nurses trained in other selected EU countries registered in Latvia between 2004 and 2007
Who, where do they come from, how are they trained/recruited?
Not applicable
What are the main drivers/obstacles of data collection *on mobility*
The majority of Latvians who emigrated between 2004-2009 did not declare their departure and it is difficult to estimate how many have actually left. There are gaps between the number that is suggested has left and in comparison to data collated in destination countries.
Outward Professional Mobility
Retirement age by law and by practice
The official retirement age (from 2008) is 62 for both men and women. The average effective retirement age in 2006 across the entire population was 57.9 years (for men 60; for women 56.4).
Inward Professional Mobility
How many health workers are entering the profession?
The average number of medical graduates per year during 2003-05 from both the University of Latvia and Riga Stradins University was 176, with 118 pursuing postgraduate studies in medicine.

Country Profile Liechtenstein

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

35,894 (2010)

Health Expenditure

Not applicable

Health System Type #1

Every person residing or working in Liechtenstein is subject to mandatory health insurance. An insured person may seek treatment from every health care provider who has a contractual relation with the Liechtenstein Association of Health Insurance Funds (Liechtensteinischer Krankenkassenverband, LKV). This contract allows the health professional to provide services subject to agreed tariffs with the insurance funds. If a professional association exists for a medical profession (e.g. chamber of doctors), it can conclude a contract with the LKV which is valid for all professionals which are member of this association. This concept is subject to the principle of territoriality, which means that the LKV can only conclude agreements with foreign service providers, if the professional association agrees to it.

All health care providers connected to the LKV can directly claim the reimbursement of their services with the four existing health insurance funds (CONCORDIA, INTRAS, SWICA and freiwillige Krankenkasse Balzers). Thus, the patient does not have to pay the treatment in advance (benefit-in-kind system). In case a health professional is not linked with the LKV ("private doctor"), the insurance funds reimburse 50% of the costs the insured had to pay to the service provider, who is also not bound by the tariffs of the LKV. For the rest, the patient has to cover the costs himself or take out a private insurance. Since 2004, only a restricted number of health care providers are allowed to be part of the public health care system (Bedarfsplanung). The LKV and the chamber of doctors decide on the number of doctors under the public system.

Hospital treatment: When it comes to hospital treatment, no contract is concluded with the LKV, but with the Liechtenstein Government, which has the responsibility to provide for hospitals, care homes and other institution in the field of health care. There exist several agreements with medical institutions outside of Liechtenstein, primarily Switzerland and Austria, in which the free access of persons insured under the Liechtenstein health care system is agreed. Also in this case, the medical institution has direct access to the Liechtenstein insurance funds and the patient does not have to pay in beforehand for the services.

Health System Type #2

The Liechtenstein health care system is financed via contributions from insured persons and the employers (Prämien), co-payments (Kostenbeteiligung) for services and state subsidies (Staatsbeitrag). The amount of State subsidies (Staatsbeitrag) is fixed for every year). In 2009, this amount was CHF 52 million (EUR 36 million) and for 2010 the amount was set for CHF 57 million (EUR 40 million).

Overview of Supply Side

General trend in supply of healthcare workforce

There is currently an oversupply in all healthcare professions in Liechtenstein.

Liechtenstein's accession to the EEA resulted in a sharp rise in GPs (from 33 to 42, with the figure totalling 56 in 2000), making the geographic density of physicians very high compared with neighbouring countries.

Currently (2010), about 90 doctors with permission from the Office for Public Health to practise in Liechtenstein are linked to the public health care system. This number has been steadily rising in the past (46 in 2000).

Proportion of those employed in the health care system

Not applicable

Gender Distribution

Not applicable

Is there a training quota?

Over 90% of school leavers from Liechtenstein go abroad for higher education. Liechtenstein has agreements with

Switzerland, Austria and the University of Tuebingen in Germany.

Liechtenstein does not have its own education system for health care professionals.

What are the practices for registration/licensing of health personnel?

Registration process is as follows: Approval process following application to the Ministry of Health. Technical requirements are scrutinised by the professional associations. List of professions can be found online.

Overview of Demand Side

Population ages 0-14 years

15% (2010)

Population ages 65 and above

16.1% (2010)

Population ages 80 and above

3.6% (2010)

Major issues in current health policy

Not applicable

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

There is a "Datenblatt" (data sheet) for every person in the health care professions. Information included is as follows: Name, job, status (self-employed etc.), date of birth, home and work address, nationality, date of registration, education, date of last inspection, liability insurance (which and how much).

What is the scope of this data?

Covers all health professionals defined by law including: Physicians, pharmacists, opticians, chiropractors, chemists, dental hygienists, occupational therapists, dieticians, midwives, laboratory diagnosticians, speech therapists, medical masseurs, natural health professionals, osteopaths, nurses, physiotherapists, psychologists, psychotherapists, dentists.

Does it cover students/trainees?

No

Data Collection Institutions

Is the data collected at the national and/or regional level?

National

Who collects the data?

National statistics office, Ministry of Health

Who reports the data?

Government (yearly accountability reports), national statistics office (statistical year book)

Challenges

What are the main data gaps?

Not applicable

What are the barriers obstructing better workforce data collection?

Not applicable

How might these challenges be overcome?

Not applicable

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*
At the level of the professional associations.
Does the country have a workforce planning institution?
No workforce planning at the federal (state) level. The professional associations (doctors, psychotherapists) along with the health insurers set the number of professionals under the public system.
Mandate of planning institution
What is its role?
The Liechtenstein Association of Health Insurance Funds and the chamber of doctors decide on the number of doctors under the public system.
Does it collaborate with any other institutions in Europe?
Not applicable
Planning Models and Methods
How is workforce planning carried out in the country?
Not applicable
What does it take into account?
Not applicable
What planning models and methods are used?
Not applicable
Training
How are workforce planners trained?
Not applicable

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Not applicable
Who, where did they go, why and why they come back?
Not applicable
Inward Geographical Mobility
How many health workers are entering the profession?
Not applicable
Who, where do they come from, how are they trained/recruited?
Not applicable
What are the main drivers/obstacles of data collection *on mobility*
Not applicable
Outward Professional Mobility
Retirement age by law and by practice
Not applicable
Inward Professional Mobility
How many health workers are entering the profession?
Not applicable

Country Profile Lithuania

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

3,324,000 (2010)

Health Expenditure

6.2% of GDP (2008)

Health System Type #1

The Ministry of Health has overall responsibility for the public health system's performance.

Private health insurance is permitted. A few private insurance companies mainly dealwith coverage of health care expenditures of Lithuanian citizens during foreign travel and for foreigners residing in Lithuania.

Municipalities are responsible for the provision of about 60% of public health care services. This includes all ambulatories, the majority of polyclinics and small and medium-sized hospitals. Municipalities decide on investments for municipal institutions within limits of municipal budgets. They employ administrative staff (employment of medical staff is the responsibility of providers). All health care providers (both private and state run) are registered and licensed by State Health Care Accreditation Agency. However, only providers with contracts with the State Sickness Fund receive reimbursement. The Ministry of Health and the State Sickness Fund decide which providers and which health care services are reimbursed.

There is still a tradition of gratitude payment inherited from the Soviet past.

Health System Type #2

There is no privatisation planned for hospitals; most of the dentists are private and only small proportion works for the state, it is the same with general practices (about 70% are private) but they do get reimbursed by the state; most pharmacies are private.

Overview of Supply Side

General trend in supply of healthcare workforce

Decline of personnel but the ratio per population has been maintained (or increased slightly) except for nurses where the ratio has declined as well thanks to the changes in training and lower number of graduates from colleges

A serious problem involves the unequal distribution of medical personnel throughout the country. While the density of physicians differs by a factor of 3, that of paramedical personnel differs by more than 5 times. However there is no consistent policy in dealing with the imbalances in the distribution of health care personnel. It is quite common for doctors to hold various jobs (sometimes even 3 or 5).

There is a lack of pharmacies in rural areas.

In June 2011 a about the influence of the EU membership on 3 health workforce professions, including physicians (9 qualifications – GP, Internists, paediatricians, etc), midwives, and nurses, concluded that overall about 2-8% has left for the EU.

Proportion of those employed in the health care system

There were 75400 people employed in the health care system in Lithuania in 2010, which makes up 5.71% of the total employed persons

Gender Distribution

14.99% male, 85.01% female

Is there a training quota?

Yes. The number is usually fixed by the Government, however universities, since they are independent bodies, are not obliged to keep these quotas. Usually there is up to 5% difference. For example, regarding Medical degrees, universities tend to accept higher numbers than proposed because of quite a high proportion of dropouts (ca 20% of medical students, 15% of nursing students, the number is even higher at colleges).

What are the practices for registration/licensing of health personnel?
Under the Ministry of Health: State Health Care Accreditation Agency - licensing of physicians, nurses, and midwives State Medicine Control Agency - licensing of pharmacists Chamber of Dentists - licensing of dentists, the only organisation not "answerable" to the Ministry of Health. There is no additional exam required to obtain a licence; the applicant only has to give evidence of a University Diploma and in case of specialisation a Diploma of Residency Practice The licence needs to be renewed every 5 years; out of these 5 years only 3 years have to be spent practising; also additional refreshment courses at universities are required (requirement of certain hours); there is no age limit. It is not unusual for doctors to practice well in their retirement age. Many continue practicing over the age of 80.
Overview of Demand Side
Population ages 0-14 years
15% (2010)
Population ages 65 and above
16.1% (2010)
Population ages 80 and above
3.9% (2010)
Major issues in current health policy
Lack of funds and continued orientation of health services towards specialized and hospital services and ageing population. Policy makers try to shift resources from hospitals to primary care providers.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Wide range of data including age, gender, employment, distribution, services provided; special data for WHO
What is the scope of this data?
National, regional (urban / rural), practicing privately, working in hospitals
Does it cover students/trainees?
Yes. The universities hold data about students which are necessary for future health staff predictions.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National
Who collects the data?
State Health Care Accreditation Agency, State Medicine Control Agency, and the Chamber of Dentists collect data on licences, gender, age (not much flexibility, one can be removed when his licence expires (does not take into account if the person is actually practising) or when he dies). Institute of Hygiene -Health Information Centre (HIC) - collects data on headcounts, full time equivalents, distribution; no data about gender or age. State Sickness Fund (SSF) - data on services provided by health personnel.
Who reports the data?
Health Information Centre provides annual report and also reports to WHO. The database of registered professionals of the Licensing bodies is available online. Other data are available on special requests.
Challenges
What are the main data gaps?
Not applicable

What are the barriers obstructing better workforce data collection?
Comparability remains a challenge. There are plans to make the data collection more efficient, however due to the economic situation these have not been realised yet.
How might these challenges be overcome?
The government plans to have a database that would combine all available data, which could then be divided by different areas such as age, region, retirement, etc.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
National, no centralised and consistent workforce planning.
Does the country have a workforce planning institution?
The health care planning is not an institutionalised programme. There are no annual plans and there is no specific workforce planning institution. Institutions involved with elements of planning include the Ministry of Health, the Ministry of Education and the Lithuanian University of Health Science.
Mandate of planning institution
What is its role?
The Ministry of Health and the Ministry of Education are responsible for indicative planning of the number of students in medical universities and colleges. The Lithuanian University of Health Science is also involved in different projects for the Ministry of Health on health care and health care improvement, some of which related to human resource planning.
Does it collaborate with any other institutions in Europe?
Yes, at university level.
Planning Models and Methods
How is workforce planning carried out in the country?
Projects on human resource planning by the Lithuanian University of Health Science as well as planning by the Ministry of Health and Education on the number of medical students.
What does it take into account?
Lithuanian University of Health Science considers: Supply side – age, gender, number, enrolment number, drop out numbers (20% of medicine students,15% nurses, even higher in colleges), p emigration percentages , assumptions of retirement – full retirement, or “part retirement” (receives pension but is still employed); Demand side – demographic characteristics, health care services –age, gender of population; changes in demographics.
What planning models and methods are used?
Supply -Australian model of John Dewdney Demand - Dutch Nivel Institute in Utrecht
Training
How are workforce planners trained?
Some training done during PhD studies.

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Medical doctors being issued with certificates of good standing to work abroad: 657; nurses: 540 overall, dentists: 72 - from 2004-2009
Who, where did they go, why and why they come back?
Who/where: January 2008 nurses from different Lithuanian regions emigrated to Bergen, Norway and the UK. Why go: Some countries are easier to settle (Norway) while countries with language requirements are more difficult. Health workers move for better working conditions, quality of life, higher prestige & higher pay. Nurses seek

employment abroad because of higher salaries and improved working conditions, workloads and attitudes among hospital managers. In addition, there is the fear of possible job loss due to the ongoing restructuring/optimisation in the Lithuanian health sector.
Inward Geographical Mobility
How many health workers are entering the profession?
Work permits for health professionals 2005-2008: 15 medical doctors, 6 nurses, 2 dentists
Who, where do they come from, how are they trained/recruited?
Who/Where: 3 Surgery, 2 psychotherapy, ophthalmology professions. Mainly from Belarus, China, Israel, Lebanon, Pakistan, Russian Federation, Syrian Arab Republic, Ukraine); only three came from EEA countries (Latvia, Norway).
What are the main drivers/obstacles of data collection *on mobility*
Certificates of good standing do not reflect numbers of those who actually leave. Data collected does not include foreign-national members or data by nationality. Data used is against work permits issued to foreign nationals. The absence of data hinders comparison of mobility before and after EU accession.
Outward Professional Mobility
Retirement age by law and by practice
Since 2006, the official retirement age has been 62.5 for men and 60 for women. The average effective retirement age in 2006 across the entire population was 57.7 years (for men 58.4; for women 57.3).
Inward Professional Mobility
How many health workers are entering the profession?
Starting in 2002, the number of study places was increased to 400 students per year.

Country Profile Luxembourg

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
507,000 (2010)
Health Expenditure
7.2% of GDP (2008)
Health System Type #1
Centralised. Three fundamental principles: compulsory health insurance, free choice of provider, compulsory provider compliance with fixed set of fees for services. Mainly publicly funded through social health insurance, taxes, out-of-pocket payments and voluntary health insurance. Contribution level is set by the Union of Sickness Funds. Hospital budgets are negotiated between individual hospitals and the USF. Controlled number of pharmacies
Health System Type #2
Privately managed and publicly funded
Overview of Supply Side
General trend in supply of healthcare workforce
There has been no legal means to restrict the influx of medical personnel. Once in Luxembourg, physicians have to compete in the market to attract patients, who have free choice of primary care provider; but there is no medical unemployment in Luxembourg. The same situation applies to dentists, whilst in contrast the opportunities for pharmacists are limited because the total number of pharmacies in the country is controlled.
Proportion of those employed in the health care system
4.76% (2010)
Gender Distribution
72.12% (F) (2010)
Is there a training quota?
There is no university in Luxembourg.
What are the practices for registration/licensing of health personnel?
The process consists in applying at the ministry of health and submitting documents certifying the qualification and education. The Luxembourgian authorities are not allowed to limit the number of medical personnel by means of limited authorisations due to the free movement of workers guaranteed by EC law.
Overview of Demand Side
Population ages 0-14 years
17.7% (2010)
Population ages 65 and above
14% (2010)
Population ages 80 and above

3.6% (2010)

Major issues in current health policy

No major issues.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

The following variables are collected on all authorised health personnel: Age, gender, education/specialisation, time of authorisation, place of work and place of residence

What is the scope of this data?

Not available.

Does it cover students/trainees?

No. There are no students/trainees in Luxembourg.

Data Collection Institutions

Is the data collected at the national and/or regional level?

National level.

Who collects the data?

"Autorisation d'exercer une profession de santé" is a unit in the ministry of health, which employs two persons. Their assignment is to process and grant authorisations for health care personnel in Luxembourg. They also collect data on all health care personnel

Who reports the data?

All health care personnel is obliged by law to report change of workplace. Since it doesn't always happen the two people employed spend a lot of time validating the data through annual interviews with employers as well as cross checking with other national data sources in particular in the question of place of residence. This data is collected by municipalities and regions. When residing in Luxembourg, the person is obliged to report place of residence. This information also includes deaths and emigration.

Challenges

What are the main data gaps?

Not available.

What are the barriers obstructing better workforce data collection?

It is difficult to keep track of medical workers workplace as they tend to forget to report it when they move.

How might these challenges be overcome?

Not available.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

There is national collection of data.

Does the country have a workforce planning institution?

There is a unit with two people, who collect data on healthcare personnel: "Autorisation d'exercer une profession de santé".

Mandate of planning institution

What is its role?

Collect data on health care personnel

Does it collaborate with any other institutions in Europe?

No.

Planning Models and Methods

How is workforce planning carried out in the country?

There is no workforce planning, only data collection.

What does it take into account?

The following variables are collected on all authorised health personnel: Age, gender, education/specialisation, time of authorisation, place of work and place of residence

What planning models and methods are used?

None.

Training

How are workforce planners trained?

Not available.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

In January 2006, 76 medical doctors trained in Luxembourg but live in France

159 medical doctors & 45 nurses are registered in Germany 2008

Who, where did they go, why and why they come back?

Not available.

Inward Geographical Mobility

How many health workers are entering the profession?

330 doctors and 60 nurses trained in other selected EU countries registered in Luxembourg between 2004 and 2007

In 2000 c8 Polish workers in Luxembourg.

5.4% (903) of nurses from the Lorraine region are employed in Luxembourg

Who, where do they come from, how are they trained/recruited?

Training
The Luxembourg Hospital Association organises training in quality.

What are the main drivers/obstacles of data collection *on mobility*

Not available.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for both men and women.
The average effective retirement age over the 2004-9 period was 57.3 for men and 58.0 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who
There is no full university in Luxembourg (students can only complete their first two years of study in the country), nor a medical school.

How
Following completion of their training, physicians simply need approval of their foreign diploma by the Ministry of Health (if delivered in an EU member state) or by the Ministry of Education (if delivered in other countries) and authorisation from the Ministry of Health to practise in Luxembourg.

Information missing due to lack of sources/interview partners.

Country Profile Macedonia (FYROM)

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
2,061,000
Health Expenditure
7% of GDP (2008)
Health System Type #1
An insurance-based health care system with the Government and the Ministry of Health providing the legal framework for operation and stewardship, and the Health Insurance Fund being responsible for the collection of contributions, allocation of funds and the supervision and contracting of providers. Health care is delivered through a system of health care institutions, covering the country's territory relatively evenly. The health facilities range from health care stations and centres at primary health care level and specialty-consultative and inpatient departments at secondary level, to university clinics and institutes at tertiary level, with the latter also carrying out research and educational activities. Doctors', dentists' and pharmacists' chambers are responsible for licensing health professionals, and the medical associations are responsible for drawing up clinical guidelines.
Health System Type #2
Recent years have seen substantial growth of the private sector, especially in the field of primary health care. Most dental offices have been privatized, and pharmacies are in the process of privatization.
Overview of Supply Side
General trend in supply of healthcare workforce
Oversupply, unemployment and a lack of healthcare coverage, particularly for ethnic minorities. Oversupply seems to be partly the result of the relatively high obligatory number of medical doctors per 1000 citizens, for example, as defined in the system established prior to 1991, and partly the result of the absence of a strict quota for professional training. The sector experiences difficulties in employing all qualified personnel and there is therefore unemployment among doctors and nurses. However, the recent reduction in admission numbers to the Medical Faculty aims to take account of these difficulties. On the contrary, unemployment among pharmacists is rare.
Proportion of those employed in the health care system
6% of the total workforce
Gender Distribution
Not applicable
Is there a training quota?
Yes, faculties decide actual admission numbers. In recent years, the official admission policy of the university faculties has become more restrictive in order to achieve a better balance between demand for and supply of human resources for health, and since 1998 admission quota have been reduced accordingly. However, it is the faculties that decide on the actual admission numbers, and as the decision so far has not been based on any rigid needs assessment, the number of enrolled students is quite high. Moreover, owing to the faculties' restrictions on intake, many young people decide to study abroad.
What are the practices for registration/licensing of health personnel?
Requirements: Basic State Licence - completion of 6 month practical training and passing of state exam; Specialisation Licence - upon completion of the specialisation programme. Relicensing takes place every 7 years.

The doctors', dentists' and pharmacists' chambers are responsible for licensing and supervising the professional conduct of their respective professional groups. In order to improve the performance of health care personnel and thereby to enhance the quality of health services the chambers have been granted the authority to extend, renew and deprive individuals of working licences. However, implementation of this on the ground is yet to be carried out.

To acquire a basic state licence, graduates need to complete six months of practical training and subsequently pass a state exam. The licence allows the individual to work under supervision and to become, for example, a general medical practitioner.

Upon completion of the specialisation programme doctors receive a licence to practise in their field.

Overview of Demand Side
Population ages 0-14 years
17.7% (2010)
Population ages 65 and above
11.6% (2010)
Population ages 80 and above
1.8% (2010)
Major issues in current health policy
At present the system is facing a number of challenges, however, including the need to overcome the legacies of the health system that was in place until 1991. These challenges include: strengthening of human resources planning and training, including the reduction of the oversupply of staff, especially in the PHC sector; strengthening of continuing medical education; and introducing admission quota to training facilities. The following reform priorities have been identified: the strengthening of the sector's financial sustainability, the further rationalisation of delivery structures as well as the enhancement of human resources planning.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Not applicable
What is the scope of this data?
Not applicable
Does it cover students/trainees?
Not applicable
Data Collection Institutions
Is the data collected at the national and/or regional level?
Not applicable
Who collects the data?
Not applicable
Who reports the data?
Not applicable
Challenges
What are the main data gaps?
Not applicable
What are the barriers obstructing better workforce data collection?
Not applicable
How might these challenges be overcome?

Not applicable

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
Not applicable
Does the country have a workforce planning institution?
Not applicable
Mandate of planning institution
What is its role?
Not applicable
Does it collaborate with any other institutions in Europe?
Not applicable
Planning Models and Methods
How is workforce planning carried out in the country?
Not applicable
What does it take into account?
Not applicable
What planning models and methods are used?
Not applicable
Training
How are workforce planners trained?
The Public Health Program of the Open Society Institute in the scope of the Project for Healthy Communities has provided a public health management training programme on decentralisation for local health managers.

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Not applicable
Who, where did they go, why and why they come back?
Not applicable
Inward Geographical Mobility
How many health workers are entering the profession?
Not applicable
Who, where do they come from, how are they trained/recruited?
Not applicable
What are the main drivers/obstacles of data collection *on mobility*
Not applicable
Outward Professional Mobility
Retirement age by law and by practice
Not applicable
Inward Professional Mobility

How many health workers are entering the profession?
Not applicable

Country Profile Malta

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

417,000 (2010)

Health Expenditure

7.5% of GDP (2008)

Health System Type #1

The Maltese health care system operates by means of an integrated health service that is organized at the national level. The statutory system is publicly financed and is free at the point of use. Private health care also has a significant role in Malta. The Parliament is responsible for enacting health care legislation and for approving the health care budget. Otherwise most decisions regarding health care are taken at the level of the Ministry of Health as of now. Following a restructuring exercise at the Ministry of Health, the Elderly and Community Care the direction is now to decentralise decisions and empower the entities. However, human resourcing still remains a centralised system whilst carrying out the annual capacity building exercise to take into account all the HR needs across the different sectors.

Health System Type #2

The private sector is taking on an increasingly important role in financing health care, as private medical insurance is becoming more widespread.

Overview of Supply Side

General trend in supply of healthcare workforce

Decline in supply due to demographic contraction and brain drain to the UK. EU provided more possibilities for specialization. Salaries are not a big pull factor (except for some nurses from Romania and Bulgaria). Demand generally exceeds supply (some exceptions).

Proportion of those employed in the health care system

5.37% of total workforce (2010)

Gender Distribution

47.13% male / 52.87% female (2010)

Is there a training quota?

Only for dentists. There used to be quotas for doctors, nurses, physiotherapists and midwives, but it was then considered to run against the spirit of competition. University rejects certain applicants per year due to limited capacity.

What are the practices for registration/licensing of health personnel?

Regulation of the medical profession is in the hands of the President. The professional regulators are responsible for granting licences, maintaining and updating professional registers. They also act as self-regulators by monitoring professional and ethical standards and carrying out disciplinary proceedings.
• Medical Council regulates physicians, dentists and veterinary surgeons;
• Nursing and Midwifery Board is the only board to hold specialist registers. These are for mental and paediatric nursing;
• Board for the Professions Supplementary to Medicine regulates clinical psychologists, dental hygienists, dental laboratory technicians, health inspectors, medical laboratory analysts, and medical laboratory technologists, occupational therapists, operating department assistants, optometrists, orthoptists, perfusionists, physiotherapists, chiropodists, radiographers and speech therapists. The Board is currently debating whether to include complementary medicine practitioners;
• Pharmacy Board is responsible for regulating pharmacists.

Registration and licensure of health professionals is carried out by various bodies for the different health professions. The Medical Council is a self regulatory body that governs the registration and licensure of doctors, dentists and veterinary surgeons. Other professional regulators holding registers include the Nursing and Midwifery Board, the Pharmacy Board and the Board for Professions Supplementary to Medicine. These professional regulators are responsible for monitoring and enforcing professional and ethical standards. Doctors, dentists, midwives, pharmacists

and pharmacy technicians are issued with a licence to practise whilst all other health professionals are issued with a certificate of registration. Nobody can exercise a regulated profession without a licence or certificate of registration issued locally by the respective regulatory boards. Some of these licences renew every year or after a couple of years, depending on the council. There is now an attempt to unify the examination process for each profession. There is no age limit for health workforce, but there is the issue with an ageing workforce (the exception being nurses, which are generally young).

Overview of Demand Side

Population ages 0-14 years

15.6% (2010)

Population ages 65 and above

14.8% (2010)

Population ages 80 and above

3.3% (2010)

Major issues in current health policy

The number of players in the field of health care has increased during the past few years. This has occurred as a result of government decentralization, through the creation of Commissions and Committees as well as greater involvement by the voluntary and private sectors. In addition it is recognized that several determinants of health lie outside the sphere of responsibility of the Ministry of Health and inter-sectoral collaboration is strongly encouraged.

The re-structuring process within the Department of Health, now called the Health Division, has led to the creation of a number of Departments which perform an integrating function across the National Health Service. However the problems of excessive centralization and bureaucracy as well as inefficient management have not been overcome. In addition the reform process has not yet filtered down to the lower levels of control within hospitals and health centres. As a result, most decisions involving day-to-day running of facilities still have to be taken centrally far away from the people and services being affected.

For some rare diseases patients are increasingly being sent abroad to the UK, meaning that less expert personnel is needed in the country.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

Data on professions, licence, age, gender (all except managing staff). Also on non-healthcare employees in hospitals, and graduates. Online registers contain contacts and inform about where the licence was obtained.

What is the scope of this data?

National

Does it cover students/trainees?

All health professions are covered.

Data Collection Institutions

Is the data collected at the national and/or regional level?

National, collected by hospital, can go down to entity level. Hospitals maintain their own databases.

Who collects the data?

Human resource managers at hospitals, the human resource department of the Ministry of Health, the human resource organizations of the public administration. On the national level, the Employment Cooperation is responsible for data collection.

The health department gathers information and does the research on health care standards and hospitals. The data is then processed to the national statistics office.

Who reports the data?

Hospitals report to the Ministry of Health. Managers of services report the data in general.

Challenges

What are the main data gaps?

People slip through the net if they do not work in public services. Some allied healthcare personnel and unemployed nurses are not covered by the data collection.

What are the barriers obstructing better workforce data collection?

Element of double counting.
No clear definition of caring personnel.
The private health care sector has no code of admission.

How might these challenges be overcome?

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

National.

There is no big tradition of health workforce planning in Malta. Attempts for planning started 1.5 years ago with a projection for the next 10 years, which will be revisited and adjusted annually.

Does the country have a workforce planning institution?

There is no specific workforce planning institution. The functional equivalent of a specific workforce planning institution are the annual capacity building exercises of the Ministry of Health which look at the demand in the next 5 years and are reported to the Ministry of Finance. Furthermore, there are liaisons with universities to open courses to facilitate professionals' adaptation to changing supply and demand.

Mandate of planning institution

What is its role?

Projections are now made on a more institutionalized basis and serve to identify the kind of workforce that is in demand and the dynamics of supply.

Does it collaborate with any other institutions in Europe?

No

Planning Models and Methods

How is workforce planning carried out in the country?

Via annual capacity-building exercises that are carried out by the Ministry of Health in collaboration with HR managers from hospitals and entail projections for staffing needs for the next 5 to 10 years. The results are then reported to the Ministry of Finance.

What does it take into account?

Takes into account dynamics of supply - demographics, migration, trends of professions, advance in medicine, technological development, retirement, changes of services.

What planning models and methods are used?

Not applicable

Training

How are workforce planners trained?

Usually planners learn on the job, now joint action group, attendance of some seminars, exchange of information with other countries.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

In 2005, Malta lost, 23.1% (376) of the physicians they had trained.

Who, where did they go, why and why they come back?

France, UK.

Inward Geographical Mobility

How many health workers are entering the profession?

427 doctors and 2 nurses who trained in other [selected] EU countries registered in Malta between 2004 and 2007.

Who, where do they come from, how are they trained/recruited?

France

What are the main drivers/obstacles of data collection *on mobility*

Not applicable

Outward Professional Mobility

Retirement age by law and by practice

Malta's retirement age is currently dependent on date of birth:

- on the 31st December 1951 or before, the retirement age is 60 years if female and 61 years if male
- between 1952 and 1955, the retirement age is 62 years
- between 1956 and 1958, the retirement age is 63 years
- between 1959 and 1961, the retirement age is 64 years
- on the 1st January 1962 or after, the retirement age is 65 years.

The average effective retirement age in 2003 was 58. According to the OECD, the average effective retirement age across the 2004-09 period was 60.5 for men and 59.5 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Not applicable

Information missing due to lack of sources/interview partners.

Country Profile Montenegro

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
631,000 (2010)
Health Expenditure
9.5% of GDP (2008)
Health System Type #1
Financed through compulsory health contributions and taxes. There is both compulsory and voluntary health insurance. The current contribution rate is 12.3 % and unified collection of contributions and taxes has been introduced and endowed to the National Tax Administration. Governed by cost containment of health expenditures, promoting quality and efficiency in service delivery, improving efficiency in the administration of the health financing system, the new payment model (combination of capitation and fee for service) has already been introduced at the primary health care level and reform of the hospital payment model, that will be performance based, is under way.
Health System Type #2
Mostly publically financed via insurance collections.
Overview of Supply Side
General trend in supply of healthcare workforce
Significant oversupply of medical doctors.
Proportion of those employed in the health care system
Not applicable
Gender Distribution
Not applicable
Is there a training quota?
Not applicable
What are the practices for registration/licensing of health personnel?
Not applicable
Overview of Demand Side
Population ages 0-14 years
19.3% (2010)
Population ages 65 and above
12.9% (2010)
Population ages 80 and above
2.3% (2010)
Major issues in current health policy
Not applicable

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Not applicable
What is the scope of this data?
Not applicable
Does it cover students/trainees?
Not applicable
Data Collection Institutions
Is the data collected at the national and/or regional level?
Not applicable
Who collects the data?
Institute of Public Health
Who reports the data?
National Statistical Office
Challenges
What are the main data gaps?
Not applicable
What are the barriers obstructing better workforce data collection?
Recent independence, lack of functioning healthcare system. A decade of conflicts in the Balkans has gravely impacted the health of its citizens and their healthcare system. During the decade of armed conflicts, mass migration, and political and economic instability, healthcare system in the Region became overwhelmed. Data collection and availability is limited.
How might these challenges be overcome?
Not applicable

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
Not applicable
Does the country have a workforce planning institution?
Not applicable
Mandate of planning institution
What is its role?
Not applicable
Does it collaborate with any other institutions in Europe?
Not applicable
Planning Models and Methods
How is workforce planning carried out in the country?
Not applicable
What does it take into account?
Not applicable
What planning models and methods are used?

Not applicable
Training
How are workforce planners trained?
Not applicable

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Not applicable
Who, where did they go, why and why they come back?
Not applicable
Inward Geographical Mobility
How many health workers are entering the profession?
Not applicable
Who, where do they come from, how are they trained/recruited?
Not applicable
What are the main drivers/obstacles of data collection *on mobility*
Data collection and availability is limited. Data on medical doctors working abroad sometimes mapped in with Serbia
Outward Professional Mobility
Retirement age by law and by practice
Not applicable
Inward Professional Mobility
How many health workers are entering the profession?
Not applicable

Country Profile Netherlands

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
16.6 million
Health Expenditure
9.1% of GDP (2008)
Health System Type #1
Health insurance based system with three tiers. Over recent years responsibilities have shifted from government to the private sector (delegation or functional decentralization). Transfer of competences from central to provincial/local governments (devolution or territorial decentralization). This is illustrated by the local and provincial governments' increased influence on planning. Primary health care is well-developed and provided mainly by general practitioners (GPs). Each patient is supposed to enrol with one GP who acts as a gatekeeper for specialist and inpatient care. More than 90% of the hospitals are private, not-for-profit facilities, the rest are mainly public university hospitals.
Health System Type #2
The healthcare insurance funds for normal medical care make up 38% of health expenditure. The main complementary sources are private health insurance (15%) and out-of-pocket payments (6%).
Overview of Supply Side
General trend in supply of healthcare workforce
Health workforce has increased by over 35% during the period 2000-2010. This increase seems sufficient to cope with the population increase by 2.2%. However, demand for healthcare has increased because of a number of factors (social-cultural trends, technology, and ageing. In contrary to what the general public thinks, ageing is not the most important factor. Ageing can only account for 25-30% of the total increase in health spending and workforce). Workforce Trends are different across categories. Strongest increase in supply in occupational groups that have elderly as primary patient (e.g. cardiologists, ophthalmologists, nurses, mental health physicians) In general, supply seems to match demand in a small country like the Netherlands. However, the labour market in the health sector is a regional one and there are some gaps. Moreover, there are issues related to supply matching demand of GP in large cities. Physician and nurse ratio well above EU average. Dentists and pharmacists ratio well below EU average.
Proportion of those employed in the health care system
7.24% (2010)
Gender Distribution
75.32% (F) (2010)
Is there a training quota?
Yes. Quota are advised by the Ministry of Health and are set by the Ministry of Education. However, the government is working on legislation to remove the numerus clauses.
What are the practices for registration/licensing of health personnel?
Quality of health care professionals is safeguarded by obligatory registration and licensing schemes maintained by professional associations
Overview of Demand Side
Population ages 0-14 years

17.6% (2010)
Population ages 65 and above
15.3% (2010)
Population ages 80 and above
3.9% (2010)
Major issues in current health policy
Substitution and transfer of tasks from medical to nursing professionals (especially because relative number of nurses is particularly high compared to the rest of EU) Ageing population (which requires different skills and different occupation mix) Foreign educated physicians and nurses; requests to work in the NL by medical specialists in particular (17% of medical specialists hold a degree from abroad; 44% anaesthesiologists; 10% GP; low inflow of nurses)

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Headcount, full time equivalent, ageing of the workforce, retirement rates
What is the scope of this data?
National Public and Private (even though private is rather small) Internal mobility (in and out of employment) External mobility (inward and outward)
Does it cover students/trainees?
Yes, students and trainees alike.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National level.
Who collects the data?
National Office of Statistics and NIVEL
Who reports the data?
National Office of Statistics There is a lot of information on health workers from different sources that gives stock and flow data on occupational groups and data on health care institutions. It includes data on 'registered nurses' at two distinct levels (bachelor and non-bachelor), 'non-registered nurses', other caretakers and non-care staff.
Challenges
What are the main data gaps?
No gaps.
What are the barriers obstructing better workforce data collection?
Not available.
How might these challenges be overcome?
Not available.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*

National level in more general sense, but regional level on more concrete issues.

Does the country have a workforce planning institution?

Capacity Body alias Advisory Committee on Medical Manpower Planning (Capaciteitsorgaan) established in 1999 is the exclusive advisory body on the inflow into all specialized postgraduate training programmes. Furthermore there is a research consortium who make forecasts of the labour market in the health sector excluding specialists but including nurses, assistant-nurses, care-giving, sociotherapists, home helpers.

Mandate of planning institution

What is its role?

Preparing estimates for the training capacity of medical and dental training, based on the expected need for care.
Preparing estimates for the capacity of the initial medical training.
Providing Information about the healthcare and government.

Does it collaborate with any other institutions in Europe?

No.

Planning Models and Methods

How is workforce planning carried out in the country?

Workforce forecasting model provides forecasts which are discussed within the Capacity Body (by experts first and then by representatives of the three composing parties); the outcome is an advice on the number of new medical specialists to be trained in a certain time period; this proposal is then discussed with the Ministry of Health and the Ministry of Education.

The numbers are then used to advise faculties, universities and schools. The Capacity Body also advises on internships and specialisation positions in medical schools.

What does it take into account?

Demographics, social cultural development, epidemiologic developments, deficits/ surpluses, demand of health, labour market, efficiency, ICT, changes in working hours, gender/ age professionals, different retention rates, etc.

What planning models and methods are used?

Capacity Body is supported by a workforce forecasting model for physicians developed by NIVEL.

Training

How are workforce planners trained?

Not applicable.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

In 2005 there were 1118 Dutch medical doctors in Belgium and 525 in Germany while the United Kingdom has data from 2007 reporting 698 Dutch-trained medical doctors.

There were 327 Dutch nurses in Belgium, 110 in Denmark and 186 in France, all in 2005.

Who, where did they go, why and why they come back?

Who/Where
Doctors choose to move to Belgium, Germany and the UK while nurses choose Belgium, Denmark and France.

Why go
There is not a shortage of healthcare workers in the Netherlands and therefore healthcare workers may seek employment opportunities abroad.

Inward Geographical Mobility

How many health workers are entering the profession?

International migration of health workers to the Netherlands tends to be very small because health workers have to speak Dutch.

There is data available from 2000 and 2002 on foreign-trained medical doctors. In the year 2000 there were 257

recognition requests from 51 different countries and 303 recognition requests in 2002. These were from:

South Africa (33)
Afghanistan (23)
Iraq (17)
the former USSR (26)
Poland (20)
Romania (10)

Who, where do they come from, how are they trained/recruited?

Who/Where
Health workers entering the Netherlands are refugees or individuals who want to join their spouses/partners. They have come from Romania and Poland from the EEA and South Africa, Iraq and Afghanistan from non-EU source countries.

Recruitment
In general, there is minimal recruitment of medical doctors in the Netherlands. However, there was recruitment of medical doctors from 2001-2002 from South Africa to fill shortages in Dutch hospitals.

Training
It is required to pass a Dutch test that is given by the MSRC or a Committee of Experts to study medicine in the Netherlands and show proof of proficiency in Dutch in order to be accredited in the Netherlands and practice medicine.

What are the main drivers/obstacles of data collection *on mobility*

Not available.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for both men and women.
The average effective retirement age over the 2004-9 period was 62.1 years for men and 62.6 years for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who
There were 5800 new medical specialists who were registered in the Netherlands in the period 2000–2006.

The number of medical professionals increased between 2000 and 2009:

The number of GPs rose from 7821 to 8921
The number of medical specialists increased from 15307 to 19073
The number of dentists rose from 7397 to 8390
The number of pharmacists rose from 3018 to 3463
The number of midwives/obstetricians rose from 1651 to 2522

Country Profile Norway

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
4.88 million
Health Expenditure
8.6% of GDP (2008)
Health System Type #1
Norway has a tax-based central insurance fund. In 2004 a reform transformed the system from decentralized to semi centralized system with high level of autonomy of health providers. Universal coverage through compulsory insurance. There are four regional health authorities in charge of the hospitals. Municipalities are in charge of elderly care and primary care
Health System Type #2
Public.
Overview of Supply Side
General trend in supply of healthcare workforce
Norway is experiencing shortage low educated health care personnel such as care workers. Sufficient level of nurses, high skilled personnel, doctors and dentists. This is referred to as the Norwegian paradox.
Proportion of those employed in the health care system
6.49% (2010)
Gender Distribution
Not available.
Is there a training quota?
Yes, based on high school grades.
What are the practices for registration/licensing of health personnel?
The Norwegian Registration is responsible for granting professional authorization, required for practice in all health care occupations.
Overview of Demand Side
Population ages 0-14 years
18.9% (2010)
Population ages 65 and above
14.9% (2010)
Population ages 80 and above
4.5% (2010)
Major issues in current health policy
The recently approved cooperation reform addresses changes in financing and management responsibility between municipalities and state to ensure better coordination. The reform was the result of a health sector with extremely high expenses combined with demographic changes which were expected to put extra strain on the budget.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?
Data is collected about education, specialisation, place of work, place of residence, age, gender, data of admittance, leave, retirement, death.
What is the scope of this data?
Covers public and private sector and the data has been collected since the beginning of the 1990s.
Does it cover students/trainees?
Yes. The educational register (Utdanningsregisteret) monitors all graduates coming out of university, including unqualified doctors. Around 50% of all doctors getting their qualification in Norway have studied abroad.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National and regional level.
Who collects the data?
Statistics Norway under the Ministry of Finance collects and annually publishes data on number of health personnel. Education register under the Ministry of Education: annual reports The Ministry of local government and regional development: annual data in a form of employee/employer register.
Who reports the data?
Schools, colleges, doctors themselves, public employers in municipalities and regions.
Challenges
What are the main data gaps?
Quality gaps, uncertain reporting from employers, no national statistics about post graduate training for all professions
What are the barriers obstructing better workforce data collection?
Minor barriers: no patient level data
How might these challenges be overcome?
Not available.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
At a national level with input from local and regional authorities and from four state corporations running Norwegian hospitals.
Does the country have a workforce planning institution?
Yes. The Norwegian Directorate of Health.
Mandate of planning institution
What is its role?
The Health Directorate advises the government department of health and care which passes the recommendations on to the Ministry of Science in relation to the annul public budget planning. Additionally it is in charge of the allocation of specialist training positions.
Does it collaborate with any other institutions in Europe?
Yes. Joint Action Group.
Planning Models and Methods
How is workforce planning carried out in the country?
The Norwegian Directorate of Health publishes a tri-annual Helsemod report based on the data collected and analysed by Statistics Norway. The report forecasts healthcare supply and demand in all sectors for the next 25 years.
What does it take into account?

The main variables included are educational capacity, mortality, sickness patterns, leave patterns, retirement patterns, as well as health policy initiatives/priorities. This feeds into the ministry of health's decision of student intake and opening of vacancies in hospitals. It covers all publicly employed health personnel.

What planning models and methods are used?

The model used to plan and forecast supply and demand in Norway is called Helsemod.

Training

How are workforce planners trained?

There is no special education for workforce planning.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

In 2005/2006 there were only 77 doctors (.03%) trained in Norway working in the United States.

There were 113 doctors who had Norwegian training/citizenship in Denmark (2005)
There were 73 doctors who had Norwegian training/citizenship in Germany (2005)

There were 717 nurses who had Norwegian training/citizenship in Denmark (2005)

Who, where did they go, why and why they come back?

Who/Where
Doctors and nurses work in Denmark and doctors also work in Germany.

Inward Geographical Mobility

How many health workers are entering the profession?

In 2010 there were a total of 25,417 employed immigrants and non-residents with the healthcare education working in Norway.

There were 2160 physicians and 2344 specialised physicians in 2010.

There were 8088 nurses and midwives and public health nurses and 5479 auxiliary nurses in 2010.

Who, where do they come from, how are they trained/recruited?

Who/Where
Denmark, Finland, Sweden and Germany are the main EU source countries. Over 5000 nurses from the category nurse, midwife and public health nurse and auxiliary nurse were from a country in Asia, Africa, Latin America, or Oceania excluding Australia and New Zealand.

Recruitment
Norway has recruited significant numbers of foreign nurses

What are the main drivers/obstacles of data collection *on mobility*

Not available.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 67 for both men and women.
The average effective retirement age over the 2004-9 period was 64.7 for men and 64.5 for women.

However, for nurses the average retirement age is 54,37 years.

Inward Professional Mobility

How many health workers are entering the profession?

Who
3558 were authorised within the medical professions in 2005 (WHO, 2006). There are 8318 female nursing students, and 1030 male nursing students (International Council of Nurses Workforce Forum, 2010)

Four public universities in Norway admit students onto medical study programmes (there are no private educational establishments offering this education in Norway). The education capacity of the Norwegian medical faculties for 2003

was 156 in Oslo, 139 in Bergen, 91 in Trondheim and 79 in Tromsø (2006).

Country Profile Poland

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
38.3 million (2010)
Health Expenditure
6.6% of GDP (2008)
Health System Type #1
Centralised system with a single National Health Fund. Private/Public system with insurance fund contracting with providers, private or public. Patients having a choice of provider. General practitioner acts as a gatekeeper to specialised care.
Health System Type #2
Combination of public and private.
Overview of Supply Side
General trend in supply of healthcare workforce
Overall the number of health care personnel is seen as adequate (2004). However, the number of doctors, nurses and other health care staff per capita is lower than in other EU MS (2.3/1,000 compared to 3.6/1.000) and seen as having too many specialists compared to primary care doctors.
Proportion of those employed in the health care system
4.45% (2010)
Gender Distribution
80.71% (F) (2010)
Is there a training quota?
Yes, limited number of admission places in medical schools. Regulation of the Ministry of Health.
What are the practices for registration/licensing of health personnel?
Licence to practice for doctors and dentists issued upon approval of internship coordinators and passing of the state exam. Nurses and midwifes receive license to practice from their regional council of nurses and midwifes based on them receiving the nursing diploma.
Overview of Demand Side
Population ages 0-14 years
15.2% (2010)
Population ages 65 and above
13.5% (2010)
Population ages 80 and above
3.3% (2010)
Major issues in current health policy
Low salaries and "brain-drain" of doctors and nurses are the main challenges. Controlling expenditure, reducing debts, and finding new sources of revenue for healthcare financing are also important issues. Unfavourable trends and challenges include: unemployment, unfavourable demographic trends, lack of political stability, limited access to care, underfunding of the public health care system and rising dissatisfaction with low

salaries among health professionals; this dissatisfaction has given rise to the “brain-drain” of doctors and nurses to western European countries and the widespread presence of informal payments, which are all reflected in the lack of a positive attitude towards the health system and health reforms in the general population.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Data on number of physicians (medical, surgical, obstetric and gynaecological, paediatric, GPs) Data on number of physicians working in hospitals Data on number of dentists Data on number of pharmacists Data on number of nurses Data on number of midwifes Physicians, dentists, nurses, midwives, and pharmacists graduating every year
What is the scope of this data?
National.
Does it cover students/trainees?
Yes. Number of graduates in a given year.
Data Collection Institutions
Is the data collected at the national and/or regional level?
Mainly national, but decentralised.
Who collects the data?
National Institute of Public Health - Department of Organization, Health Economics and Hospital Management Central Statistical Office Other bodies: Ministry of the Interior and, Ministry of Defence, Medical, Polish Chamber of Physicians and Dentists Polish Chamber of Physicians and Dentists maintains the National Central Register of Physicians
Who reports the data?
Not available.
Challenges
What are the main data gaps?
No data in full-time equivalents (FTE) Data only for numbers graduating, no indications regarding students/trainees.
What are the barriers obstructing better workforce data collection?
Not available.
How might these challenges be overcome?
Not available.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
On 1 January 1999, a new fundamental three-tier territorial division of the country was introduced, based on gminas, powiats and voivodships. At each level of the self-government administration, health authorities are responsible for three domains: general strategy and planning based on the identified health needs in a given region, health promotion, and the management of public health care institutions.
Does the country have a workforce planning institution?
No.
Mandate of planning institution
What is its role?

Not applicable

Does it collaborate with any other institutions in Europe?

Not applicable.

Planning Models and Methods

How is workforce planning carried out in the country?

Health services delivery plans are elaborated by the National Health Fund on the basis of national health plans approved by the Minister of Health. They define the volume and the scope of health services needed to satisfy the health needs of a given population outlined in voivodship health plans.

What does it take into account?

These plans should contain: the characteristics of the health status and identified health needs of the population in a given voivodship; an outline of policy and undertakings to meet the population's health needs and consequently improve its health status, indicating priorities.

What planning models and methods are used?

None.

Training

How are workforce planners trained?

Not available.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

7138 medical doctors; 2069 dentists obtained certification of professional qualifications in 2005-2008.

Who, where did they go, why and why they come back?

Who/Where:
Main destinations UK, Ireland, Germany & Scandinavian countries.
Health professionals working outside Poland in 2000: (i). Nurses: 841 Austria; 133 Greece: 475 Sweden; 263 UK.
Medical doctors: 245 Austria; 134 France: 678 Sweden; 282 UK
(ii) Health professionals working outside Poland by 2007: UK preferred destination country with 1633 medical doctors registered; 364 in Germany.

Why go:
Economic motivations
EU accession

Inward Geographical Mobility

How many health workers are entering the profession?

Limited data indicates insignificant inflows.
1119 newly registered medical doctors and 27 foreign-born dentists.

Who, where do they come from, how are they trained/recruited?

Who/Where
From countries with less GDP than Poland. Ukraine main inflow & Germany. In 2009: Medical doctors - 193 from Ukraine; 48 from Russian Federation; 41 from Germany. 38 dentists from Germany & 20 from Lithuania. (i)
Less than 3% of medical doctors and 1% of nurses foreign nationals (ii)

Recruitment: language barrier and lack of recruitment policy.

Training the National Centre for Quality Assurance in Health Care organizes several training courses on methods and tools for quality assurance.

What are the main drivers/obstacles of data collection *on mobility*

Obstacles:
1. lack of uniformity in registers and definitions in Poland
2. Data not collected routinely
3. Self-employed medical doctors not subject to same statistical registration as medical staff in public sector

4. Number of certificates issued to work abroad indicates 'interest' rather than actual emigration
5. Number working abroad following EU accession not known:
6. Data on migration not recorded.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for men and 60 for women.
The average effective retirement age over the 2004-9 period was 61.7 for men and 58.5 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Who
Eleven Medical Academies, from which 2473 physicians and 901 dentists graduated in 2002. The number of graduates fell from 2002, with 2387 physicians and 753 dentists graduating in 2004 (as of 2005).

Information missing due to lack of sources/interview partners.

Country Profile Portugal

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
10.69 million (2010)
Health Expenditure
10.1% of GDP (2008)
Health System Type #1
Centralised but effort to decentralise some responsibility to regional level. Access to public services is universal but user fees are imposed. Funded mainly through taxation, direct payments from patients and voluntary health insurance. The Portuguese health system is characterized by three co-existing systems: the National Health Service (NHS), special social health insurance schemes for certain professions (health subsystems) and voluntary private health insurance. Modalities of financing range from historically based budgets to prospective payments.
Health System Type #2
Network of public and private health care providers, each linked to the Ministry of Health.
Overview of Supply Side
General trend in supply of healthcare workforce
The Portuguese ratio of physicians is at 3.7, higher than EU27 average. The ratio of nurses per 1000 inhabitants 5.3 in 2009is still below EU27 average but has increased steadily.
Proportion of those employed in the health care system
4.25% (2010)
Gender Distribution
78.54% (F) (2010)
Is there a training quota?
Not available.
What are the practices for registration/licensing of health personnel?
Not available.
Overview of Demand Side
Population ages 0-14 years
15.2% (2010)
Population ages 65 and above
17.9% (2010)
Population ages 80 and above
4.5% (2010)
Major issues in current health policy
Despite the remarkable achievements in health policy, a number of challenges remain for the Portuguese health care system. These include low efficiency and accountability in comparison with other NHS-based systems; high levels of private expenditure; high levels of pharmaceutical expenditure; inequities in the health sector; and the need to

modernize the organizational structure and management of the NHS. After a first attempt in the recent past, there appear to be good prospects for developing a comprehensive health strategy for Portugal.
Foreign educated physicians and nurses; requests to work in the NL by medical specialists in particular (17% of medical specialists hold a degree from abroad; 44% anaesthesiologists; 10% GP; low inflow of nurses)

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Not available.
What is the scope of this data?
Not available.
Does it cover students/trainees?
Not available.
Data Collection Institutions
Is the data collected at the national and/or regional level?
Not available.
Who collects the data?
Not available.
Who reports the data?
Not available.
Challenges
What are the main data gaps?
Not available.
What are the barriers obstructing better workforce data collection?
Not available.
How might these challenges be overcome?
Not available.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
Not available.
Does the country have a workforce planning institution?
Not available.
Mandate of planning institution
What is its role?
Not available.
Does it collaborate with any other institutions in Europe?
Not available.
Planning Models and Methods
How is workforce planning carried out in the country?
The first formal National Health Plan (1998-2002) included the objective of the formulation of an explicit health workforce policy The second Plan (2004-2010) proposed the development of an integrated health workforce information system, the adjustment of demand and supply in the workforce and an improvement of continuing

professional development, amongst other things. The Ministry of Health is currently working on the third Plan (2011-2016) (MoHProf, 2012)

What does it take into account?

Not available.

What planning models and methods are used?

Not available.

Training

How are workforce planners trained?

Not available.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

Around the year 2000, there were approximately 2655 doctors and nurses born in Portugal working abroad in OECD countries (5.7%) (OECD, 2007).

Who, where did they go, why and why they come back?

Who/Where
The five most popular destinations for doctors were: Australia (218); United States (200); France (164); Spain (61) and Canada (50) (OECD, 2007: 210).

For nurses, the top five destinations were: United States (710); Canada (470); Switzerland (283); United Kingdom (118) and France (108) (OECD, 2007: 211).

Inward Geographical Mobility

How many health workers are entering the profession?

In 2000, there were 3859 doctors and 2977 nurses who were born in Africa. The main source country for nurses is Guinea-Bissau.

There were 696 foreign doctors working in Portugal in 2000 and 1681 foreign nurses in 2000.

In 2010, 2.4% of NHS staff was of foreign nationality with 84% of them working as either doctors (9.52% foreigners) or nurses (4.84% foreigners, numbers from 2007). In 2003, approximately 1830 out of 34440 doctors were foreign born (5.7%).

Who, where do they come from, how are they trained/recruited?

Who/Where
In 2000, there were 3859 doctors and 2977 nurses who were born in Africa: the top five country providers were Angola (2006 doctors; 1639 nurses); Mozambique (1218 & 748); Cape Verde (186 & 128); Guinea-Bissau (160 & 212) and Sao Tome e Principe (96 & 141)

61.4% of foreign doctors came from sub-Saharan Africa, 18.3% from non-OECD countries in Latin America and 15.3% from the OECD. For nurses, the respective figures were 57.6% from sub-Saharan Africa, 33.1% from OECD countries and 7.1% from non-OECD Latin American countries.

There were 696 foreign doctors working in Portugal in 2000 from the OECD. The most common countries of origin for doctors were Spain (276); France (166); Germany (85); USA (40) and Canada (24) (OECD 2007: 210) Out of the 1681 foreign nurses from the OECD, the most common countries of origin were: France (702); Spain (616); Germany (177); USA (35) and Canada (31).

The number of foreign doctors (mostly from Spain, Brazil and eastern European countries) working in the Portuguese NHS decreased between 2004 and 2007. In 2007, there were 1903 practising foreign physicians, 814 in hospitals, 780 GPs and 35 public health specialists.

What are the main drivers/obstacles of data collection *on mobility*

Obstacles: The data is not very up to date

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for both men and women.
The average effective retirement age over the 2004-9 period was 67 for men and 63.6 for women.

Inward Professional Mobility

How many health workers are entering the profession?

After training is complete, doctors typically become attending physicians within a hospital. Promotion is dependent on both the number of years and the positions available in the structure.

Nurses qualify on completion, but may specialise via various postgraduate programmes.

Country Profile Romania

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
21.4 million (2010)
Health Expenditure
4.7% of GDP (2008)
Health System Type #1
Decentralised compulsory social insurance system Finance through contributions from employers and employees and general taxation (15.8% in 2004).
Health System Type #2
Mainly public.
Overview of Supply Side
General trend in supply of healthcare workforce
Important shortage of health workforce: the scale of emigration to other EU countries is high*; numerus clausus* in other EU countries creates shortage and attracts RO medical workforce; working time directive imposes limit on maximum number of worked hours and raises the demand for more physicians and nurses who would cover the loss of working hours; more practising women (predominantly part-time doctors) than men (predominantly full-time doctors), making the demand for more doctors (especially in highly qualified specialties) increase. Due to the lack of coordination, there is a substantial oversupply of nurses from private colleges, not regulated by the Ministry of Health. Inflows of doctors and nurses from Moldova. But observed problems with therecognition of non-EU medical graduates.
Proportion of those employed in the health care system
3.64% (2010)
Gender Distribution
77.91% (F)
Is there a training quota?
Doctors: There is no quota in place and each university decides how many students to admit. The number of specialist residency places is set by the Ministry. Pharmacists: quota based on the number of practising pharmacists per capita and territory. Controlled by the Ministry of Education Nurses: strictly regulated by the Ministry of Education, Research and Innovation with regard to nursing colleges, but the number of students entering other private nursing schools is not controlled.
What are the practices for registration/licensing of health personnel?
The registration/licensing of doctors, dentists and pharmacists is the responsibility of their professional associations and the Ministry of Public Health.
Overview of Demand Side
Population ages 0-14 years
15.2% (2009)
Population ages 65 and above
14.9% (2009)

Population ages 80 and above
2.9% (2009)
Major issues in current health policy
Waste of human resources with large annual losses (between 10-30%) of health care professionals.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Workforce data includes: headcount of doctors, dentists, pharmacists, and nurses, specialties, sex, age.
What is the scope of this data?
54 subcategories of medical professions, 3 subcategories of dentists, 3 subcategories of pharmacists and 32 subcategories of allied health workforce.
Does it cover students/trainees?
Data on students: collected by the Ministry of Education Data on trainees: collected by the Ministry of Health for resident doctors, dentists and pharmacists in training.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National and regional level
Who collects the data?
National Institute of Public Health Professional chambers
Who reports the data?
Ministry of Health
Challenges
What are the main data gaps?
Private health facilities are not covered. There is no data on health workforce migration.
What are the barriers obstructing better workforce data collection?
Data on mobility of health professionals is described as "extremely scarce and of poor quality, with low levels of accuracy and completeness." (Prometheus, 2011). There needs to be more awareness at the political level. Verification certificates from the Ministry of Health have not been collected since 2007.
How might these challenges be overcome?
Not applicable.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
Each year, the district health directorates report their estimated needs for each specialty for a five-year period based on new inflows to, and exits from, each specialty. Decisions to increase/decrease the number of trainees in any particular specialty are taken on an ad-hoc basis.
Does the country have a workforce planning institution?
No
Mandate of planning institution
What is its role?

Not applicable

Does it collaborate with any other institutions in Europe?

Not applicable

Planning Models and Methods

How is workforce planning carried out in the country?

The workforce planning is done in a non systematic way.

What does it take into account?

Not applicable.

What planning models and methods are used?

Not applicable.

Training

How are workforce planners trained?

Not applicable.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

4990 medical doctors applied for diploma verification in 2007. This is 10.2% of all practicing medical doctors.
2896 nurses and midwives applied for diploma verification in 2007 (3.4% of workforce) but this is likely an underestimate.

Who, where did they go, why and why they come back?

Who/Where
France, Germany, Italy and the United Kingdom are common destination countries. The United States and Canada are non-EU destination countries for medical doctors.

Why go
Higher wages, improved social standing and career opportunities are common motivations for migration.

Inward Geographical Mobility

How many health workers are entering the profession?

There are high levels of immigration from the Republic of Moldova and these numbers may include nurses and doctors.

Who, where do they come from, how are they trained/recruited?

Who/Where
Republic of Moldova

Recruitment/Training
Not applicable.

What are the main drivers/obstacles of data collection *on mobility*

Obstacles: data on mobility of health professionals is described as "extremely scarce and of poor quality, with low levels of accuracy and completeness."

Verification certificates from the Ministry of Health have not been collected since 2007.

There is limited to no data on inflows of health professionals.

Outward Professional Mobility

Retirement age by law and by practice

In May 2007, the official retirement age was 63 years and 1 month for men and 58 years and 1 month for women. By 2015, the retirement age will have risen to 65 for men and 60 for women respectively.

The average effective retirement age in 2006 was 57.2 across the whole population (58.2 for men and 56.3 for women). According to the OECD, the average effective retirement age across the 2004-09 period was 68.4 for men and 63.5 for women.

Inward Professional Mobility

How many health workers are entering the profession?

On average, 3700 students graduate each year.

Country Profile Slovakia

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
5.46 million (2011)
Health Expenditure
7.6% of GDP (2009)
Health System Type #1
Decentralised at regional level with compulsory health insurance and universal coverage.
Health System Type #2
Mostly public. The state is the owner of the largest insurance company (out of 3 on the market in 2010) and of the largest healthcare providers.
Overview of Supply Side
General trend in supply of healthcare workforce
Continuous fall in the number of physicians and nurses after 2001. Increasing tendency of students to migrate as a result of low salaries to other countries after having finished a medical degree. Ageing of medical population: the percentage of doctors less than 49 years old was 53.66% in 2009 compared to 62.43% in 2003.
Proportion of those employed in the health care system
4.51% (2010)
Gender Distribution
81.27% (F)
Is there a training quota?
No. Decisions on the numbers of students are made by the university, funded by the educational sector and are not based on health sector needs.
What are the practices for registration/licensing of health personnel?
Healthcare professionals can be - providers: need to have both permit and licence - employees: only registration from the professional chamber Licences and permits are issued by the professional chambers and they are permanent.
Overview of Demand Side
Population ages 0-14 years
15.9% (2009)
Population ages 65 and above
12.1% (2009)
Population ages 80 and above
2.7% (2009)
Major issues in current health policy

2011 - Doctors signed a manifesto to abandon their professions if their salaries are not raised
2011 - The chamber of nurses and midwifes signed a petition demanding higher salaries.

Ageing of medical population, in particular GPs.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

- Number of students per specialty
- Number of medical staff: headcount, education, gender, location of practice
- Level of salaries per medical category
- Number of certificates of conformity of study, required for working abroad

What is the scope of this data?

Data has been collected for more than 10 years and it covers all medical establishments except the private ones. All medical professions are covered.

Does it cover students/trainees?

Yes.

Data Collection Institutions

Is the data collected at the national and/or regional level?

National and regional level.

Who collects the data?

Ministry of Health and its adjacent institutions (National Health Information Centre)
Professional Chambers
Ministry of Education

Who reports the data?

Ministry of Health and National Health Information Centre
Professional Chambers
Ministry of Education

Challenges

What are the main data gaps?

The main problem is availability and updating of data information.

Although doctors are obliged to register at medical chambers, they are not obliged to inform the chambers when they leave the country. The data collection on mobility of health workforce is problematic.

Information on health workforce salaries is not collected for nursing professions. Only doctors, dentists and pharmacists.

Information on private hospital establishments is not collected.

What are the barriers obstructing better workforce data collection?

Challenges in workforce planning: the main cause of health workforce imbalance is the low financial remuneration of medical staff; hospitals (employers) are indebted and the extent to which they can raise salaries of their employees depends on their contracts with social insurance companies; the competence of the State in therefore limited; the context of current economic crisis determines the level of national health budget which is currently discussed in the Parliament.

How might these challenges be overcome?

Not applicable.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

Workforce planning is carried out at the national level, but funding is distributed to regions.

Does the country have a workforce planning institution?

No. Human resource policy (including planning) falls under the competencies of the Ministry of Health. It is partially influenced by funders of health-care facilities and trade unions, with the Ministry of Health cooperating with Ministry of Education and holding a legislative and monitoring role.

Mandate of planning institution

What is its role?

Not applicable

Does it collaborate with any other institutions in Europe?

Not applicable

Planning Models and Methods

How is workforce planning carried out in the country?

The human resources planning policy is largely determined through the human resources and wage policies of individual employers.

Adoption of self-sufficiency policy in 2006 - favours state hospitals to other hospitals. However, the Association of Hospitals has pointed towards a discrimination of other healthcare providers than hospitals.

The Operational Programme (2007, 2009 -Education intervention focuses on the retention of specialist medical doctors. Funded by ESF.

What does it take into account?

Vulnerable specialties to outflows (anaesthesiologists, intensive care, pathologists, gynaecologists, etc.) Doctors funded in this way were contracted to remain and practise in the territory of the relevant Slovak self-governing region for at least one year after completion of their specialization or face sanctions.

What planning models and methods are used?

Not applicable.

Training

How are workforce planners trained?

Not applicable

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

Between 1 May 2004 and 30 June 2008, the Ministry of Health issued 3972 confirmations of professional qualifications, including: 1772 medical doctors, 126 dentists, 1525 nurses, 85 midwives, 288 other health worker

As of 2007, there were about 1300 Slovakian doctors working in the Czech Republic, often filling vacancies left by Czech doctor migration to higher-paying jobs elsewhere on the continent.

Who, where did they go, why and why they come back?

Who/Where

Common destination countries include the Czech Republic, Austria, the United Kingdom, and Germany. Austria is the destination for nurses while the Czech Republic, Germany and United Kingdom are common destinations for medical doctors.

Why go

Austria is a common destination country because of the existing Slovak community due to emigration in the 1960s. There are also economic reasons to move to Austria. The Czech Republic is a key destination country because of the similarity of the Slovak and Czech languages, cultural similarities and geographical proximity.

Inward Geographical Mobility

How many health workers are entering the profession?

125 (0.7%) Foreign-national medical doctors (2007)
18 (0.7%) Foreign-national dental doctors (2007)
27 (0.1%) Foreign-national nurses (2007)

Who, where do they come from, how are they trained/recruited?

Who/Where
The Czech Republic and Ukraine were common source countries for foreign medical doctors while Germany and Ukraine were common source countries for dental doctors.

Recruitment
Recognition of professional qualification is needed and non-EEA nationals require a residency permit and a work permit to practice

What are the main drivers/obstacles of data collection *on mobility*

Drivers: EU accession in 2004 has driven data collection.

Obstacles: The Slovak health reforms from 2002 to 2006 moved the health system to one based on market principles. As a result of decentralisation, the following issues in the data are identified by the WHO:

1. Lack of a unified information system
2. Outdated data structure and standards which results in poor validity and system errors.
3. Insufficient capacity to analyse the data.

Data from professional organisations on applications for emigration documents does not include definitive information if the individual actually emigrated; the same obstacle faced in the data from the Ministry of Health on equivalence certification granted.

Some EU Member States automatically except Slovakian diploma and therefore these emigrating health professions will not be tracked by the Ministry of Health.

Professional chambers often do not are not able to enforce reporting requirements.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 62 for both men and women. The average effective retirement over the 2004-9 period was 59.9 for men and 56.2 for women.

Inward Professional Mobility

How many health workers are entering the profession?

Four medical faculties in Slovakia produce approximately 500 graduates annually (509 in 2006).

Country Profile Slovenia

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

2,030,000 (2010)

Health Expenditure

7.8% of GDP (2008)

Health System Type #1

Since 1992 Slovenia has a Bismarckian type of a social insurance system based on a single insurer for statutory health insurance, which is fully regulated by national legislation and administered by the HIIS. This insurance is universal and based on a clear employment status or on a legally defined dependency status (such as minors, unemployed spouses, registered unemployed people and individuals without source of income). Slovenia has a comprehensive universal health care system, which assures coverage for health care services for every citizen, to the amount defined by the Health Care and Health Insurance Act and other regulations. A very small group of people (approximately 30000) who do not have citizenship or residence in Slovenia are not covered by compulsory health insurance. Access to primary care is open to all citizens. To access secondary and tertiary care, patients need to be referred by their physicians. Limitations in terms of coverage by compulsory health insurance for expenditure on medicines are regulated by means of a positive list. The same applies for services that exceed certain regulated standards. These limitations apply to all insured individuals, without exception or other distinctions.

Slovenia's health system is funded by compulsory health insurance, state revenues, VHI and OOP spending.

The Slovenian health care system remains relatively centralised and the responsibility of local communities is still limited. The Ministry of Health has the task of planning health care for the entire healthcare sector. All administrative and regulatory functions of the system take place at the national level; the sub-national levels predominantly have executive duties. Compulsory health insurance is also centrally managed and administered, whereas the local levels conduct only those tasks and activities that were previously assigned to them from the central level. The professional chambers and organizations also operate at state level or through their regional branches.

Health System Type #2

There is a growing share of private providers in Slovenia, especially in primary and specialist health care.

Overview of Supply Side

General trend in supply of healthcare workforce

The level of human resources in health care is monitored and deemed appropriate. However, there is a shortage of doctors and highly educated nurses but an over-supply of nurses (about 1,000 nurses are unemployed).

There are a high number of nursing professionals when compared to Austria or Croatia, or to Member States that joined the EU in May 2004. However, there is a net deficit of nurses with university and college degrees, which reaches approximately 15% of the current workforce. The number is however growing.

The number of dentists in Slovenia has been increasing constantly over recent years, but at a slower pace than the number of physicians.

The number of pharmacists in Slovenia has been increasing steadily since the late 1990s.

Proportion of those employed in the health care system

Slovenian health care system employs about 39300 people that make up 4.17% of the total Slovenian workforce.

Gender Distribution

81.27% (F)

Is there a training quota?

Yes, for medical students (300 are accepted every year), pharmacists and dentists. There is no *numerus clausus* for nurses because of the existence of private colleges.

The Ministry of Health, in cooperation with the Medical Faculty, professional colleges and other institutions, proposes

and monitors the implementation of health-related professional education. The Ministry of Health (the Health Council) proposes recommendations on the number of health professionals and the decisions to adjust enrolment figures are made by the relevant medical and health-related faculties at various universities across the country, in cooperation with the Ministry of Education. Through these mechanisms, the State exerts rather tight control and containment of educational posts.

What are the practices for registration/licensing of health personnel?

Doctors - First licence awarded after successful passing of the final specialty exam. Afterwards renewal every 7 years. After reaching 70 lifetime licence is assigned. All doctors must be members of the Medical Chamber.

Nurses - Obtain registration after graduation and successful completion of internship. Same licence procedure as doctors.

Dentists - Registration obtained after registration exam (taken after 1 year internship). Licence has to be renewed every 7 years.

Pharmacists - Mandatory membership of the Pharmaceutical Chamber.

All other recognised health professionals are required to pass the state registration exam.

Overview of Demand Side

Population ages 0-14 years

14% (2010)

Population ages 65 and above

16.5% (2010)

Population ages 80 and above

3.9% (2010)

Major issues in current health policy

The reform of the health system; financial sustainability; health workforce planning.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities

What type of data is collected?

Wide range of data is collected.

What is the scope of this data?

National. All professions are covered as each chamber collects their own data.

Does it cover students/trainees?

Yes. Ministry of Health and Ministry of Education cooperate closely with universities and medical colleges to adjust the *numerus clausus* according to workforce needs.

Data Collection Institutions

Is the data collected at the national and/or regional level?

Data is collected on the national level with inputs from hospitals and other medical facilities.

Who collects the data?

There are several institutions that collect data about health/health workforce (such as Ministry of Health, Ministry of Higher Education, Science and Technology; National Institute of Public Health). Each institution collects data differently and over different time range using different mechanisms for data collection. For example, the insurance fund only collects data for teams rather than individuals. The Ministry of Health intends to resolve the data collection issue shortly by introducing a new HR management plan that will include data on both doctors and nurses.

Who reports the data?

Institute of Public Health is the institution that reports data to WHO and OECD.

Challenges

What are the main data gaps?

Each institution collects data differently and holds different type of data.
There is also the legacy of the past regime: during the Yugoslav Republic, data collection was not a priority. Also Slovenia was considered one of the most developed regions of the republic therefore there was a lot of migration of workforce from other regions which was not necessarily monitored.

What are the barriers obstructing better workforce data collection?

A new law about public data collection is being debated about in the Parliament; personal data security seems to be the issue that could dominate the debate.

How might these challenges be overcome?

Careful approach, workshops, joint action plans. Exchanging experiences with other countries to make the system work better.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

Workforce planning is not adequate and still in the process of being developed. Planning is done at the national level (Ministry of Health); however there are inputs from all the actors involved, especially from the regions where there are shortages of staff.

Does the country have a workforce planning institution?

There is no specific workforce planning institution. The Ministry of Health is the main institution, others involved in planning the Institute of Public Health, Medical Chambers, Ministry of Education, Universities, Colleges, Hospitals and Primary Health Care centres.

Mandate of planning institution

What is its role?

The Ministry of Health It confirms number of students, new technologies, university professors, state registration exam, medical programmes, the number of staff as well as future predictions.

Does it collaborate with any other institutions in Europe?

Yes

Planning Models and Methods

How is workforce planning carried out in the country?

Workforce planning is necessary to predict future changes and help with dealing with the "leftovers" of the past regime. The Ministry of Health (Health Council) monitors, synthesises and forecasts on the basis of data collected by different institutions. It then makes recommendations to hospitals.

What does it take into account?

The inputs are carefully assessed with emphasis on future development.

What planning models and methods are used?

No specific methods/models are used. Planning looks at demography of the individual profession's population and includes a simple equilibrium model taking into account the present number of health professionals. Now because of some shortages, the demand is taken into account as well.

Training

How are workforce planners trained?

There is no specific training for workforce planners. Planners attend international workshops, conferences and exchange knowledge with foreign counterparts.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

There are not many health workers moving abroad - there are estimates of around 1% of all medical doctors and dentists from 1999-2007. Foreign health professionals move back because of personal circumstances, basic living conditions, promise of higher income than in other countries of former Yugoslavia.

Who, where did they go, why and why they come back?
Who/Where: Most preferred countries are outside EU including Australia, the US and Canada. Why go: Higher salaries outside of Slovenia. Professional development in specialty areas that do not exist or are difficult to enter in Slovenia. Specific research interests that can only be carried forward in relevant setting. Between 2003 and 2008, 57 medical doctors returned to Slovenia.
Inward Geographical Mobility
How many health workers are entering the profession?
Significant numbers: 21.8% of all active medical doctors and 22.7% of dentists foreign-trained in 2008. Numbers slowed down due to political unrest but started again 1995-1996. Between 2003 and 2008, 352 foreign newly registered medical doctors came to Slovenia. By 2008, 22.5% of all active medical doctors trained abroad.
Who, where do they come from, how are they trained/recruited?
Who/Where: Around 80% medical doctors come mostly from Croatia, Bosnia & Herzegovina and Serbia. This is similar with dentists moming into Slovenia. Recruitment: Very few nurses are recruited - only 24 in 2009 on the NHCPD register. There is no specific national strategy to recruit foreign medical workers in place. Training: 3 year education in nursing and new nursing schools with clear distinction between nurses and health technicians. Medical professionals who work in health care must pass a licensing examination to practise. General nurses no longer need to pass the exam, they only need a license to practise.
What are the main drivers/obstacles of data collection *on mobility*
Nursing Chamber of Slovenia (NCS) has minimal information on foreign nurses based on reliable sources. Data was not collected until 2008 for NCS and a postal survey took place to help improve data on foreign-trained nursing professionals but data not complete. No fully reliable data on numbers leaving Slovenia and numbers are estimated.
Outward Professional Mobility
Retirement age by law and by practice
The official retirement age (2010) is 63 for men and 61 for women. The average effective retirement over the 2004-9 period was 62 for men and 59.2 for women.
Inward Professional Mobility
How many health workers are entering the profession?
Not applicable

Country Profile Spain

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
46.16 million
Health Expenditure
8.7% of GDP (2008)
Health System Type #1
Decentralised system funded through general taxation and regional taxes.
Health System Type #2
Predominantly public. Private voluntary insurance cover 13% of the population.
Overview of Supply Side
General trend in supply of healthcare workforce
Last decade shortage of health professional became a dominant issue in planning. Forecasting models estimate persistent shortages for some medical specialties (from a current shortage of 2% to a shortage of 14% by 2025) while recent analysis shows there are emerging surpluses for other specialties which, if not properly addressed, can also become a problem in the medium/longer term. Health professional inflows and outflows have increased substantially in Spain over the last decade. Professional mobility between Latin America (LA) and Europe. Outflows have been declining since the mid 2000s - indications of return of Spanish health professionals. Since the financial crisis in 2008, the effect of planning and hospital workforce retrenchments has created equilibrium between the offer and the demand of health workforce.
Proportion of those employed in the health care system
4.88% (2010)
Gender Distribution
73.17% (F)
Is there a training quota?
Since 1978 the number of available places is fixed annually. The selection is done through a competitive entry examination. The total number of places available varies from year to year. Figures from the Ministry of Health indicate an 18.6% increase in the 2003-2008 period, with the total rising from 6,404 places for all medical, nursing and health sciences (pharmacy, biology, chemistry, physics, psychology) specialised training in 2003/04 to 7,866 places in 2008/09.
What are the practices for registration/licensing of health personnel?
Professional college registration is compulsory for all regulated health professions, however in some Autonomous Communities (ACs) professionals employed by the public health service are not obliged to register. The professional re-accreditation is not mandatory at present. Health centres are obliged to verify that their health professionals fulfil the requirements for correct performance of their jobs. The specific evaluation measures vary according to the medical specialisation.
Overview of Demand Side
Population ages 0-14 years
14.8% (2009)
Population ages 65 and above
16.6% (2009)

Population ages 80 and above
4.7% (2009)
Major issues in current health policy
Current challenges facing the Spanish health-care system include coordination; funding; the management search for improved efficiency; and workforce planning. There is no defined national strategy for health in Spain and therefore the recruitment and training of foreign professionals is improvised rather than planned.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
• 1.Number of health professionals entering Spain: Recognition of diplomas to practice in Spain, but not on the number of professionals leaving the country • 2.Registration data: retired and active professional • 3.Sex and age of practicing health workforce in public establishments • 4. Payroll data: headcount • 5. Public and private health facilities
What is the scope of this data?
Information on family and community doctors, medical specialists and some nursing professions. No data collected on pharmacologists, dentists, and nursing assistants. Data on public and private health professionals is collected separately.
Does it cover students/trainees?
Yes. Collected by the Ministry of Education.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National and regional level.
Who collects the data?
Central government - recognition of diplomas to practise in Spain Human Resources Commission - number of practising doctors by sex and age Professional Colleges - registration data National Statistical Institute (INE) retired and active professional by sex and age
Who reports the data?
Regional contact points of the Human Resources Commission.
Challenges
What are the main data gaps?
No official registers on the emigration of any categories of Spanish health professionals. Information collected by National Statistical Institute does not differentiate between retired and practising doctors meaning that the information can be duplicated since a doctor can register in different communities.
What are the barriers obstructing better workforce data collection?
Information received from hospitals is not standardised and not all required data is collected.
How might these challenges be overcome?
Not applicable.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
National and regional.
Does the country have a workforce planning institution?

Yes. The National Health System Human Resources Commission.

Mandate of planning institution

What is its role?

The Commission was created in order to give more decision power to autonomous regions in health workforce planning.

Does it collaborate with any other institutions in Europe?

Not applicable

Planning Models and Methods

How is workforce planning carried out in the country?

Studies of the need for health professionals. The studies analyse of supply and current and future needs of medical specialists serves as a basis workforce planning . The first study, published in 2007, covered the years 2006-2030. It has been updated in 2009 (for the years 2008-2025) and 2011 (for the years 2010-2025). A first study on the needs of nurses, midwives and nursing specialists has also been published in 2011.

Bilateral Agreements: Signed 2001 between Spanish Ministry of Health and United Kingdom to send Spanish medical doctors, nurses and other health professionals to work in the National Health Service

Recognition of specialty degrees: Royal decree on the recognition of the medical specialty degree from EU-countries and validation of medical specialty degree from non-EU countries

Streamlined work visas for non-EU citizens in shortage professions: Labour ministry publishes quarterly list of shortage occupations by autonomous community

What does it take into account?

With the third study expected to be published in November 2011, the studies cover all medical specialties and GPs and nursing professions.

What planning models and methods are used?

The Commission monitors both the supply and demand of health workforce. The methodology applied to estimate the need in medical specialists is the system dynamics approach allowing the application of modelling and simulation techniques to complex systems.

Training

How are workforce planners trained?

Not applicable

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

1870 doctors working in Portugal in 2008
1500 nurses working in Portugal in 2007
233 Spanish doctors in Belgium in 2005
327 Spanish-trained doctors in France in 2004
356 Spanish doctors in Germany in 2005
1096 Spanish-trained doctors in the UK in 2007

There were 275 (3%) of nurses who requested degree validation to work outside of Spain.

Who, where did they go, why and why they come back?

Who/Where
Most migrating Spanish doctors choose Portugal, France, Germany and the United Kingdom.

Why go
Portugal is convenient because it is possible to commute.

Why come back
There was a shortage of the doctors in Spain in the mid-2000s

Inward Geographical Mobility

How many health workers are entering the profession?

There were approximately 25,000 registered doctors of foreign origin (2007).
Unpublished data from the EAPS as cited by Health Professional Mobility and Health Systems reports that in 2008 there were 2 295 (1%) foreign nurses registered to work in Spain.

Who, where do they come from, how are they trained/recruited?

Who/Where
Significant numbers of immigrants come from Latin America, especially Peru, Argentina, Columbia and Venezuela

Recruitment
Health professional recruitment agencies target Poland and Romania

Training
Spain's specialist medical training is well recognised and many medical doctors come to Spain for specialist training
There is no national strategy for training as it is a decentralised regulatory health system

What are the main drivers/obstacles of data collection *on mobility*

Obstacles: The medical regulatory system is decentralised and therefore little quantitative information is collated and stored centrally and therefore it is necessary to use data collected individually from the medical councils of each region in Spain.

Outward Professional Mobility

Retirement age by law and by practice

The public sector has a mandatory retirement age of 65 for both men and women; the private sector has no mandatory retirement age. The retirement age can be extended to 70 on a case-by-case basis. Across the entire population, the average effective retirement age over the 2004-9 period was 61.8 for men and 63.4 for women.

Inward Professional Mobility

How many health workers are entering the profession?

The number of places available for medical specialised training (including family and community medicine) in 2011/2012 was 6707, this is -2.54% than in 2010/11 when 6881 vacancies were offered). The vacancy offer for medical specialised reached their peak in 2009, when 6948 vacancies were offered. For 2011/2012, 1002 vacancies were offered for specialist nursing training.

Country Profile Sweden

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
9.38 million
Health Expenditure
9.1% of GDP (2008)
Health System Type #1
Compulsory, predominantly tax-based health care system providing coverage for the entire resident population. Voluntary insurance is very limited and typically provides only supplementary coverage to the public health system.
Health System Type #2
Publicly operated, regionally based.
Overview of Supply Side
General trend in supply of healthcare workforce
The number of midwives employed in healthcare are projected to decrease by 6% between 2008 and 2025 is 6 percent. The number of doctors employed in the healthcare is projected to increase. The supply in 2025 is projected to be 5 percent higher compared to 2008. Assuming an annual net immigration of 400 physicians, the supply of doctors will in 2025 be around 44 000, which represents an increase of 29 percent compared to 2008. The number of nurses employed in the health sector in 2025 is projected to increase by about 8 percent. No particular prediction has been made for specialist trained nurses.
Proportion of those employed in the health care system
6.94% (2010)
Gender Distribution
79.83% (F) (2010)
Is there a training quota?
Yes, annual intake of doctors is around 1.300 students. A report from 2004 estimated that the number of medical students should be increased by 30% in order for Sweden to be self-sufficient in meeting population's future needs for physicians
What are the practices for registration/licensing of health personnel?
National board of health and welfare has supervisory function with respect to health personnel and is also responsible for licensing. The licence is given for an unlimited period but can be withdrawn following disciplinary action in case of malpractice.
Overview of Demand Side
Population ages 0-14 years
16.6% (2010)
Population ages 65 and above
18.1% (2010)
Population ages 80 and above
3.5% (2010)

Major issues in current health policy
Government committed to further privatization of the health care sector. Deregulation will mean less strict reporting requirement to private and particularly small establishments. This will have a negative impact on workforce planning where data on private health sector are already missing. The priority is to attract foreign personnel without depriving countries with health shortages from health workforce.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Headcount of health personnel (5 categories), death, retirement, change in skills and occupation Two-way mobility between healthcare and other sectors, migration patterns.
What is the scope of this data?
National
Does it cover students/trainees?
Trainees. As soon as doctors commence their training to become licensed, they are included in the register.
Data Collection Institutions
Is the data collected at the national and/or regional level?
National level..
Who collects the data?
The main registers: 1) Authorisation data on all health care personnel 2) University and College register: providing data on medical exams 1977–2008. 3) Longitudinal employment data from National statistical agency: every employer must report information about their employees to the tax office
Who reports the data?
Doctors applying for licenses, tax authorities as well different welfare offices (unemployment, disability, sickness etc.) and universities.
Challenges
What are the main data gaps?
No individual employment data for individual hospitals. Only the place of work and skill level of employee is monitored. That means that a qualified doctor, who is employed as a cleaning assistant at a hospital will still be counted as a doctor. Missing social security numbers from foreign doctors working in Sweden. The free movement of doctors in Scandinavia makes it possible for other Scandinavian doctors to practise based on their home country license which means that they escape the figures if they haven't applied for a Swedish license.
What are the barriers obstructing better workforce data collection?
Private sector hospitals (15-20% of total data source) are excluded from data collection.
How might these challenges be overcome?
Not available.

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
National level and county level.
Does the country have a workforce planning institution?
No. The Welfare Analysis Unit falls under the National Board of Health and Welfare which reports to the Ministry of Health.

Mandate of planning institution
What is its role?
The board's mandate is to assess current and future supply of different staff categories and issue recommendations to the ministry about student intake. Counties on decisions related to specialisation of doctors and dentists.
Does it collaborate with any other institutions in Europe?
Yes. Joint Action Group. Passive collaboration with OECD, WHO, EU.
Planning Models and Methods
How is workforce planning carried out in the country?
The agency's mandate is to assess current and future supply of different staff categories and issue recommendations to the ministry about student intake and the municipalities about specialist distribution of doctors and dentists.
What does it take into account?
Headcount of health personnel (5 categories), death, retirement, change in skills and occupation Two-way mobility between healthcare and other sectors, migration patterns.
What planning models and methods are used?
Micro simulation model.
Training
How are workforce planners trained?
Not applicable

MOBILITY TRENDS

Outward Geographical Mobility
How many health workers have left the profession?
Between 2004 and 2006 more than 5000 doctors received certificates to practice elsewhere which is approximately 4.3% of the active workforce. In 2005/2006 there were only 352 doctors who had trained in Sweden working in the United States. There were 534 doctors who had Swedish training/citizenship in Finland (2005) and 489 in Denmark (2005) There were 2227 nurses who had Swedish training/citizenship in Denmark (2005)
Who, where did they go, why and why they come back?
Who/Where The most common destination countries for doctors include the United States, Finland and Germany. Nurses' main destination country is Denmark. Why go Higher pay and/or learning opportunities
Inward Geographical Mobility
How many health workers are entering the profession?
In 2003, there were 8219 Healthcare and medical specialists, 2646 midwives and specialist nurses, and 5955 nurses.
Who, where do they come from, how are they trained/recruited?
Who/Where Primarily doctors working in Sweden are from other Nordic countries, the EU or from Asia (Ananny, 2009) Recruitment Sweden focuses recruitment efforts on Poland. Training Citizens with a degree from a Third Country are required to participate in a traineeship within the Swedish health and medical care sector.
What are the main drivers/obstacles of data collection *on mobility*
Not available.

Outward Professional Mobility
Retirement age by law and by practice
The official retirement age (2010) is 65 for both men and women. The average effective retirement age over the 2004-9 period was 66 for men and 63.6 for women.
Inward Professional Mobility
How many health workers are entering the profession?
Approximately 1100 students begin medical training each year (2005). A substantial proportion of the new certificates issued to Swedish physicians have been given to students that have graduated in other countries.

Information missing due to lack of sources/interview partners.

Country Profile Turkey

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS
Population size
72,752,000
Health Expenditure
5.00% of GDP (2008)
Health System Type #1
Decentralised Primary healthcare is provided through general practitioners, health centres, health posts, Maternal and Child Health and Family Planning centres as well as tuberculosis dispensaries. Several reforms have been applied in order to standardise health benefits across the different health insurance schemes. In 2007, legal measures mandated that all citizens of Turkey would have free access to primary care, even if they are not covered under the social security system. By the end of 2010, family medicine will be in practice in the whole country. The Ministry of Health is the main government body responsible for health sector policy making, implementation of national health strategies through programmes and direct provision of health services. Ministry of Health is the major provider of primary and secondary healthcare, maternal health services, children's and family planning services. It is essentially the only provider of preventive health services through an extensive network of health facilities (health centres and health posts) providing primary, secondary, and specialised in-patient and out-patient services. At the provincial level, provincial health directorates (for 81 provinces) are responsible for administering health services provided by the Ministry of Health. The provincial health directorates are accountable to provincial governors for administrative matters and to the Ministry of Health for technical matters. Directors of Ministry of Health hospitals report to the Director General of Curative Services, while Directors of Health Centres report to the Director General of Primary Healthcare. Aside from the hierarchical structure there are also various management systems in place under the direction of the Ministry of Health to ensure the smooth running of the healthcare system as a whole. One of these systems is Human Resources Management System (HRMS), which provides a monitoring service for staff information and activities under the Ministry of Health. HRMS is a very comprehensive system. 325,000 employees and 150,000 retired/left personnel's information is hosted on it. This system is used by the General Directorate of Personnel and the central organisation in particular and 81 Provincial Directorates of Health, hospitals and Public Health Centres. The system has more than 15,000 active users.
Health System Type #2
Healthcare is provided by a mixture of public and private organisations, including the Ministry of Health, universities, the MoD and private health professionals.
Overview of Supply Side
General trend in supply of healthcare workforce
The increase in urban dwellers is coupled with access to healthcare being better in the urban and western areas of the country. Comparably low patient satisfaction but significant increase in recent years; unequal geographical distribution; very low nurse to physician ratio (compared to other OECD countries).
Proportion of those employed in the health care system
2.42% (2010)
Gender Distribution
45.48% male / 54.50% female (2010)
Is there a training quota?
Not available

What are the practices for registration/licensing of health personnel?
Not available
Overview of Demand Side
Population ages 0-14 years
26% (2010)
Population ages 65 and above
7% (2010)
Population ages 80 and above
1.2% (2010)
Major issues in current health policy
Not applicable

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Mobility data: Number of Turkish-educated health professionals working in OECD countries, number of foreign-trained doctors and nurses residing in Turkey by country of training, number of Turkish-born doctors and nurses by OECD country of residence.
What is the scope of this data?
Not applicable
Does it cover students/trainees?
Not applicable
Data Collection Institutions
Is the data collected at the national and/or regional level?
Not applicable
Who collects the data?
Not applicable
Who reports the data?
Not applicable
Challenges
What are the main data gaps?
Not applicable
What are the barriers obstructing better workforce data collection?
Not applicable
How might these challenges be overcome?
Not applicable

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions
At what level does workforce planning take place? *(What workforce planning happens at each level?)*
The planning and development of human resources for health does not occur within a systematic, homogenous and independent structure. Despite various official attempts, it is generally the result of knee-jerk reactions rather than strategic and systematic planning. To date, no planning has taken account of international mobility. However, in recent years and particularly within the Health Transformation Programme, it has been stated that Turkey will prepare and

implement policy strategies to plan and develop the health workforce in a way that is compatible with the EU integration process. Accordingly, a Draft Strategic Plan for 2023 was initiated in 2009 in order to determine a new strategy for human resources for health.

Strategic planning of human resources for health (HRH) is ongoing in Turkey. The objective is to determine HRH needs for the next 15 years and to forecast the distribution of health professional and new health jobs according to health care demands tendency and demographic changes. Current HRH production was therefore scaled up and workshops with stakeholders were organized. This was followed by several initiatives on workforce planning, e.g. the translation of WHO simulation models into Turkish and the training of a taskforce on how to use these models, the collection of the required data, and the identification of a technical working group. The plan is based on a comprehensive amount of assumptions such as major morbidity and mortality patterns, growth rate in public and private health expenditure, expenditure to personnel vs. non-personnel costs, preventive vs. curative care, primary care vs. secondary care, urban population vs. rural population, required competency levels. This led to clear objectives and policy proposals not only for the required number of health professionals, but also for training and recruitment needs and skills required to manage this workforce. Implementation achievement and progress of the plan is closely monitored.

Does the country have a workforce planning institution?

Currently, there is divided responsibility for the education and management of the human resources for health in Turkey. The State Planning Organization, The Council of Higher Education and the Ministry of Health are the three main institutions that formulate and implement health workforce policies. The Ministry of Finance and the State Personnel Department are also stakeholders. There is a lack of effective coordination between these institutions and organizations.

Mandate of planning institution

What is its role?

Not applicable

Does it collaborate with any other institutions in Europe?

Not applicable

Planning Models and Methods

How is workforce planning carried out in the country?

Not applicable

What does it take into account?

HRH-Strategic Planning Key Planning Assumptions:
Dominant morbidity and mortality patterns
Relative emphasis given to public sector vs. private sector
Growth rate in public health expenditure
Growth rate in private health expenditure
Relative emphasis given to personnel vs. non-personnel expenditure
Relative emphasis given to preventive vs. curative care
Relative emphasis given to primary care vs. higher-level care
Relative emphasis given to urban population vs. rural population
Relative emphasis given to high, medium and support level personnel
Other assumptions that will affect this scenario

What planning models and methods are used?

Not applicable

Training

How are workforce planners trained?

Not applicable

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

From 2004-2007, a total of 3,123 Turkish-educated doctors and nurses were working in the following OECD countries:
Medical doctors: Denmark (2005) 13, Finland (2005) 14, France (2004) 32, Germany (2005) 884, Netherlands (2007) 8, United Kingdom (2007) 187
Nurses: Denmark (2005) 1, Netherlands (2007) 5

Who, where did they go, why and why they come back?

Germany, the United Kingdom and the United States are the most common destination countries for Turkish-trained medical doctors and nurses.
Inward Geographical Mobility
How many health workers are entering the profession?
There were 21 foreign-trained medical doctors and 51 foreign-trained nurses in 2005.
Who, where do they come from, how are they trained/recruited?
Bulgaria is the most common source country for nurses and medical doctors. Medical doctors are also from Germany, Greece, the United States, the UK and the Netherlands.
What are the main drivers/obstacles of data collection *on mobility*
Turkey does not have one recording system for international statistical data. Data can be very high level and is not always stored electronically. In general, there is very limited data on international mobility of health workers in Turkey.
Outward Professional Mobility
Retirement age by law and by practice
The official retirement age (2010) is 60 for men and 58 for women. The average effective retirement age over the 2004-9 period was 62.8 or men and 68.3 for women.
Inward Professional Mobility
How many health workers are entering the profession?
Not applicable

Country Profile United Kingdom

BACKGROUND AND CONTEXT

MAIN INSTITUTIONAL CHARACTERISTICS

Population size

62.26 million (2010), of which 52.2 million live in England, 5.22 million in Scotland, 3 million in Wales and 1.8 million in Northern Ireland.

Health Expenditure

9.3% of GDP (2009). In 2010, £121.3 billion spent in total, of which 83.1% was spent in England, 9% in Scotland (9.0%), 5% in Wales and 2.9% in Northern Ireland.

Health System Type #1

Devolved Department of Health administrations in the four nations (England, Scotland, Wales, Northern Ireland), with regional health administrations in all four, and an additional layer of local administration in England (primary care trusts).

Health System Type #2

Public system, free at point of delivery with some private supplementary health provision.
Funded through taxation (with some exceptions, e.g. prescriptions).

Overview of Supply Side

General trend in supply of healthcare workforce

There has been a large expansion of the workforce since the late 1990s (in particular, between 1999 and 2005 where the workforce rose by 260,000 people or 24%). In 2010, 1.93 million employees worked in the health sector.

However, the National Health Service (NHS) is shifting to a mode of workforce sustainability with the intent to maintain spending at levels close to that of inflation.

Proportion of those employed in the health care system

7 % (2010)

Gender Distribution

78% (F) (2010)

Is there a training quota?

There is a ceiling set by the government on the number of students from outside the EEA admitted to undergraduate medical courses each year.
Undergraduate medical training placements are decided by a combination of local and national planning. Regional organisations (SHAs)/devolved administration hold contracts with Higher Education Institutes (HEIs) for education and training. Funding allocation is made based upon local and national planning input.
The Migration Advisory Committee (MAC) produces shortage occupation lists for UK and Scotland. These lists highlight occupations for which recruiting non-EEA migrants is recommended by the MAC. If a work visa (Tier 2) applicant has a job offer from an occupation which is on the UK shortage occupation list, the earnings, qualifications and Resident Labour Market Test (RLMT) criteria required for a work visa are waived.
In Scotland the situation for training is very similar however, for specific professions such as Nursing and Midwifery, Medical and Dental student intakes are determined through workforce planning and modelling work. The Scottish Government sets the student intake numbers and commissions training through HEIs. In relation to AHPs although numbers are not set by the Scottish Government, they do close work with HEIs on demand requirements.

What are the practices for registration/licensing of health personnel?

Qualified health professionals must register with their respective regulatory bodies in order to practice in the United Kingdom. The main regulatory bodies include the General Medical Council (GMC), the Nursing and Midwifery Council (NMC), the General Dental Council (GDC) and the Health Professionals Council (HPC). These single regulatory bodies span all four constituent countries of the United Kingdom, and keep a register of health professionals who meet standards for training and professional skills in their area of work. Professional titles are protected by law, and use of an official title must be registered with the respective professional body.

Overview of Demand Side
Population ages 0-14 years
19% (2010)
Population ages 65 and above
17% (2010)
Population ages 80 and above
4.6% (2010)
Major issues in current health policy
The UK has an ageing population (projections indicate there will be a 65% increase in the number of people over 65 in the next 25 years). Coupled with high life expectation and increased numbers of people living with long-term conditions and co-morbidities means that the NHS finances will be strained. The Department of Health (England) has emphasised efficiency savings in the last few years. The Department of Health in England is trying to achieve £20 billion of productivity savings by 2015 and efficiency savings of 4% per year to allow reinvestment in front line services. There are ongoing changes in the commissioning structure of the NHS England as part of the proposed 2011 Health and Social Care Bill, which plans to abolish regional and local health authorities and replacing them with local, general practitioner led commissioning consortia. In addition to ageing population, the Welsh Government manifesto priorities emphasise the importance of citizen engagement, the Public Health focus and the need for citizens to take greater responsibility for the prevention agenda.

MAPPING (A LOOK AT THE DATA)

Data Collection Activities
What type of data is collected?
Workforce data includes information on staff groups by headcounts (full-time and whole-time equivalent); age, gender, ethnicity, occupation codes (job role), hospital, grade, bands, pay scales, levels, organisational structures, care group, registration status/qualifications, sickness/absence rates, turnover and number of hours worked (this informs the Working Time/Full Time equivalent number). Data is also collected by UK-wide regulatory bodies (GMC, NMC, GDC, and HPC) and professional bodies on registered members. Data on GP staff includes GPs, GPs in training, practice nurses and administrative staff.
What is the scope of this data?
Only systematially collected for people employed by the NHS Collected since 1997 (In England). Prior to this there were partial surveys of the workforce.
Does it cover students/trainees?
The Electronic Staff Record System (ESR) records students/trainees employed by the NHS in England and Wales, which includes post-graduate medical training and post-registration trainees in non-medical programmes. However, this excludes undergraduate students and numbers of temporary and contract staff. Scotland collects student numbers using the Scottish Workforce Information Standard System (SWISS); while Northern Ireland uses the Human Resource Management Systems (HRMS). In addition, the University Colleges and Admissions Service and the Higher Education Statistics Authority collect data on the numbers commencing health-related courses at higher education institutions on a UK-wide basis
Data Collection Institutions
Is the data collected at the national and/or regional level?
Regional/national in Wales, Scotland and Northern Ireland; Local/Regional/National in England
Who collects the data?
The NHS ESR is a principal resource for England and Wales and it is used by NHS staff either through direct access (for operational reports) via the ESR Data Warehouse or via the iView service provided by the Information Centre for Health and Social Care. Data is aggregated for analytical purposes. Northern Ireland's Department of Health, Social Services and Public Safety collects workforce data via the Human Resource Management Systems (HRMS) Scotland records their data using the Scottish Workforce Information Standard System (SWISS) on the basis of payroll information. The GP census is based on data taken from the GP payment system (colloquially known as Exeter). The Royal Colleges, professional associations and trade unions collect membership information and periodically survey their members. The Union of the Local Government Employers makes assessments every two or three years on the shortages of other

professional and vocational groups in municipal social and health care. These assessments are carried out in collaboration with the Ministry of Social Affairs and Health and are based on questionnaires answered by municipal health and social care organisations.
The data within the ESR/SWISS/HRMS is collected by local trusts/boards responsible for inputting data into the data systems. The data itself is then verified by the NHS Information Centre (England); the National Leadership and Innovation Agency in Health Care (NLIAH) for Wales; the Information Services Division (ISD) for Scotland and the Information and Analysis Directorate (IAD) in Northern Ireland. Corrections are then made by local trusts as necessary.

Who reports the data?

UK: Office for National Statistics (ONS); Skills for Health; Post-graduate Medical Deaneries on doctors in specialist training; Higher Education (HE) Institutes; Royal Colleges, professional associations and trades union bodies;
NHS service organisations such as the Litigation Authority; the Care Quality Commission on regulated services
England: NHS Information Centre for Health and Social Care; the Centre for Workforce Intelligence (CfWI)
Scotland: Information Services Division (NHS National Services Scotland)
Wales: National Leadership and Innovation Agency in Health Care (NLIAH, Wales)
Northern Ireland: Northern Ireland Health and Social Care Workforce Census (reported by the DHSSPSNI's Workforce Planning Unit)

Challenges

What are the main data gaps?

There are gaps with quantifying the numbers in the private/independent sector (especially pharmacy and social care), foundation trusts and the unregistered workforce. This is because general practices and private organisations are not required to provide workforce information to the level that is recorded for NHS workforce
Quality of data collection reliant on the goodwill of trusts
Inconsistency of data
Data for some professions (e.g. paediatricians) collected only at national level and not locally
Data mobility on individuals across sectors and between UK countries is neither complete nor thorough.

What are the barriers obstructing better workforce data collection?

NHS barriers:
1. Consistent application of coding of occupation, especially across the UK
2. Accurate current staffing information
3. Capacity to record staff movement
A significant challenge is to collect non-NHS workforce data.

How might these challenges be overcome?

Improved integration of separate data sources:
- Data to analyse career paths – connecting data on workforce supply and development, from student to eventual retirement or other exit.
- Multi-disciplinary workforce planning, especially with finance– recognising that joined-up data will help to support holistic workforce planning across all disciplines
Continual development of workforce planning networks, including between different nations of UK
Improved standardisation of data, e.g. standardised definitions of health professionals
Better understanding of private and voluntary sectors and their increasing role in health and social care
Better understanding of strategic context in order to better predict impact of policy changes

PLANNING (REVIEW OF EXISTING STUDIES)

Existence of specific workforce planning institutions

At what level does workforce planning take place? *(What workforce planning happens at each level?)*

At local, regional and national levels
Health workforce planning is carried out by a range of organisations including hospitals and NHS boards/trusts, and SHAs in England
National level planning organisations such as the Centre for Workforce Intelligence and NLIAH in Wales also inform planners to help them make decisions through training sessions and provision of toolkits; in Scotland and Northern Ireland such roles are provided by national Departments of Health.

Does the country have a workforce planning institution?

England: CfWI (2010). Previously Workforce Review Team (WRT) within the Department of Health
Northern Ireland: Department of Health, Social Services and Public Safety of Northern Ireland (DHSSPSNI), The Workforce Planning Unit (WPU) (2001)
Scotland: Health Workforce Directorate - Workforce Planning and Development Division (2002)
Wales: National Leadership & Innovation Agency for Healthcare - Workforce Development team for Wales (2005)
United Kingdom: Skills for Health (2002) - Provides online tool kits for local planning purposes

Mandate of planning institution

What is its role?

The overall aim of workforce planning is to ensure that there are sufficient and suitably qualified staff to meet the needs of patients.
CfWI (England): To provide leadership within the system; provide workforce intelligence to the health and social care system to inform decisions; and provide support, resources and best practice to improve effectiveness of workforce planning at all levels.
NLIAH (Wales): Locally, to create a workforce with the right skills, competences, qualifications and motivation to provide modern, flexible services wherever and when these are needed. Nationally, to support the development and commissioning of education and training programmes which meet the need for new and changing roles across the health and social care sectors.

Does it collaborate with any other institutions in Europe?

Yes. The CfWI in particular is set to play a leading role in the EU Joint Action Group from 2012, where it will lead on behalf of the UK on horizon scanning and on data for health workforce planning. The CfWI also participates in meetings with workforce planners from England, Scotland, Wales and Northern Ireland. Other workforce planning insitutions in the UK (e.g. NLIAH) collaborate far less with their European counterparts.

Planning Models and Methods

How is workforce planning carried out in the country?

Health workforce planning in England is carried out by a range of organisations including hospitals and NHS trusts locally, SHAs regionally, CfWI nationally and independent sector organisations and private sector organisations.
In Scotland, workforce planning is carried out by fourteen local NHS Boards with some trade union representation; in addition some workforce planning takes place regionally among three regional groups (North; West; South East & Tayside). Workforce plans are analysed by the Health and Social Care Directorate.
In Wales, planning is carried out by seven regional health boards, with plans examined by the NLIAH.
In Northern Ireland, planning is carried out by six local trusts, with plans examined by the DHSSPSNI.
Education and training needs are determined by local trusts/boards in consultation with higher education institutions (HEIs). Medical Education England (MEE) currently helps scrutinise education and training plans developed regionally and locally. NHS Education Scotland has a similar role, while the NLIAH fulfils the same function in Wales. The Northern Ireland Practice and Education Council (NIPEC) scrutinises training plans for nurses and midwives only. Skills for Health/Skills for Health Scotland represent UK health employers, with their role to work with health employers to plan and manage workforce development and change. MEE will be replaced by Health Education England (HEE) in April 2013 with a wider remit than MEE, informed by modelling from CfWI.

What does it take into account?

Planning focuses on future demand, potential supply, gap analysis, horizon scanning, succession planning, training needs analysis, skill mix and competence, and assessing labour market intelligence.

What planning models and methods are used?

Workforce planning differs by organisational level. For example, the event horizon at hospital level is monthly - planning ward rotas for the next month. At trust level, planning is done for the current and following financial year. Regional workforce planning is done by the SHAs(with support from CfWI) over 3-5 years; foundation trusts typically have a five-year plan.
A variety of tools are used to evaluate the workforce on a national level include supply-side projections, profiling regional variations, scenario modelling, skill mix and competence models, care pathway models and cost profiles.
There are a range of methodologies used and a variety of online toolkits used at local levels. Some examples include:

Assessing Workforce Supply Tool
DH Workforce - comprehensive spending review
NHS Benchmarking Database
Workforce Evaluation Tool
Workforce reconfiguration tool (Christmas tree)

In Scotland, the 6 steps model is used along with Nursing and Midwifery Workforce and Workload planning tools and the Workforce Planning Unit is in the process of developing similar tools for AHPs.

Training

How are workforce planners trained?

Some training exists for people in managerial positions who contribute to the planning process:
The CfWI and NHS Education Scotland in conjunction with board workforce planners and Skills for Health all hold regional and national workforce planning workshops. There are also online guides, frameworks, resources and toolkits developed by the individual workforce planning groups in England, Northern Ireland, Scotland and Wales.

Training for workforce planning professionals: There is a PGCert in Strategic Workforce Planning.
The Scottish Government is currently updating the guidance for Workforce Planing in Scotland which will be issued

shortly. This guidance will replace HDL 52 which was issued in 2005.

MOBILITY TRENDS

Outward Geographical Mobility

How many health workers have left the profession?

Shortages are severe in 35 specific health-related roles and recruitment from outside the EU is necessary. These roles require very specialist levels of skill and are consistent across the UK.
Nurses: More than 11,000 UK registered nurses have requested their UK registration to be verified to enable them to apply for a job in another country
Doctors: 11,912 doctors have requested a Certificate of Current Professional Standing (CPPS) be sent to an organisation outside the UK.

Who, where did they go, why and why they come back?

Who/Where:
Nurses, midwives and medical doctors request verification of qualification for Ireland significantly more often than any other EU country, followed by Spain and France.
Half of the verification requests from UK based nurses in 2007/08 were for Australia with other major destinations include New Zealand, US, Canada and the Middle East.

Why go:
Primarily the UK is a 'destination country.' The UK has history of undersupply of medical staff and therefore has recruited heavily in the past. This has also enabled strong career opportunities.

Inward Geographical Mobility

How many health workers are entering the profession?

Newly registered doctors, nurses and midwives
11, 794 newly registered medical doctors in 2008 (57.4% Up trained)
25, 336 newly registered nurses and midwives in 2008 (85.3% UK trained)
The number of non-EEA nurses applying for initial registration in the UK was only 762 in 2009 (95% fewer than in 2004) because of the introduction of the PBS (Points Based System) and the removal of the overall nursing category from the shortage occupation list in 2006.

The number of registrants in the UK (2009) from each country is indicated in brackets below1: (www.gmc-uk.org/International_Comparison_of_Ten_Medical_Regulatory_Systems___final_report.pdf_25404378.pdf)
• Egypt (2,755)
• Germany (3,672)
• Greece (1,682)
• India (26,589)
• Italy (1,731)
• Nigeria (3,192)
• Pakistan (7,340)
• Poland (1,937)
• Spain (1,082)
• South Africa (7,167)

Who, where do they come from, how are they trained/recruited?

Who/Where:
Historically, many qualified health professionals migrated to the UK from countries with ties to the UK such as India, Pakistan, Nigeria and South Africa. Nurses and midwives mainly came from Australia, New Zealand, South Africa, Nigeria, Zimbabwe and the West Indies.
Germany is now the most significant source country for medical doctors (2008). Italy, Greece, Poland, Hungary, India, Pakistan, South Africa and Australia are also significant source countries.
Spain, Germany, Poland, India, Philippines, Australia and South Africa are top ranking source countries for nurses and midwives over the period 2003-2008.
Recruitment:
Recent international recruitment has focused on the EU and there are more stringent requirements for a specialty qualifying for the MAC Skills Shortage list.
The British government has signed recruitment agreements with Spain, Greece, Germany, Italy, Austria, France and Scandinavian countries.
Training:
It is necessary to register with a professional body in the United Kingdom in order to practice using a qualified title. The professional bodies such as the GMC, NMC and the HPC ensure that there are well-trained and qualified health professionals.

What are the main drivers/obstacles of data collection *on mobility*

Obstacles:
It is difficult to track mobility in sectors outside the NHS
Data reflects professional registration only.
It is hard to be certain of comparable data across professions and across the four constituent countries of the United Kingdom.
Health profession migration has not been tracked by EU country, only the EEA, EU-15 or EU-12
There is limited data on outflows – information relates often only individual's intention or first steps to leave the United Kingdom rather than actual migration.
There are many proposed changes in the NHS in England, including new GP commissioning structures and the TCS programme. This is a temporary obstacle to data collection and with any change, data sources will take some time to catch up and accurately reflect the new landscape.

Outward Professional Mobility

Retirement age by law and by practice

The official retirement age (2010) is 65 for men and 60 for women.
The average effective retirement age over the 2004-9 period across all professions was 64.3 for men and 62.1 for women.

Inward Professional Mobility

How many health workers are entering the profession?

The professional regulatory bodies hold unpublished data on newly registered members and track the country of qualification. However, it is not possible to identify location of work of professionals who have dropped off the respective register.

7.0 Case Studies

7.1 List of Contacts – Case Studies

Country	Name	Surname	Organisation
BE	Henk	Vandenbroele	Ministry of Health
BE	Georges-Francois	Wagemans	Ministry of Health
BE	Walter	Sermeus	KULeuven
BE	Bernard	Maillet	Belgian Chambers of Doctors
ES	Pilar	Carbajo	Ministry of Health
ES	Ana	Giménez Maroto	Ministry of Health
ES	Encarna	Campelo	Region Canarias
ES	Sebas	Martín	Region País Vasco
ES	Francesc	Molina	Region Murcia
FI	Marjukka	Vallimies-Patomäki	Ministry of Social Affairs and Health
FI	Lauri	Vuorenkoski	Finnish Medical Association
FI	Nina	Hahtela	Finnish Nurses Association
HU	Edmond	Girasek	Semmelweis University
HU	Réka	Kovács	Ministry of Health
IE	Brendan	Murphy	Department of Health
IE	John	Brehony	Health Service Executive
IE	Ronan	Boland	Irish Medical Association
IE	Ivica	Milicevic	National Training and Employment Authority, Skills and Labour Market Research Unit
IS	Valgerður	Gunnarsdóttir	Ministry of Welfare, Department of Quality and Prevention
IS	Gunnar Alexander	Ólafsson	Ministry of Welfare, Department of Economic Analysis
IS	Anna Björg	Aradóttir	Directorate of Health
IT	Annalisa	Malgieri	Ministry of Health
IT	Cristina	Sabatini	Ministry of Health
IT	Carlo	De Pietro	Bocconi University
IT	Alessandra	Burgio	National Statistical Office – ISTAT
LT	Ludvika	Starkiene	Lithuanian University of Sciences, Medical Academy
LT	Birute	Miskiniene	Ministry of Education and Science
LT	Jonas	Bartlingas	Ministry of Health
NL	Leon	van Berkel	Ministry of Health, Welfare and Sport
NL	Victor	Slenter	Capacity Body
NL	Marcel	Spijkerman	Economic Research Institute, Rotterdam (SEOR)
NL	Lud	van der Velden	Netherlands Institute for Health Services Research (NIVEL)
RO	Adriana	Galan	National Institute of Public Health

Country	Name	Surname	Organisation
SI	Tit	Albrecht	National Institute of Public Health
SI	Dušanka	Petrič	Ministry of Health
SI	Radivoje (Rade)	Pribaković Brinovec	National Institute of Public Health
SI	Zlatko	Fras	Committee for Postgraduate Studies (UEMS) University medical centre Ljubljana
UK – England	Cris	Scotter	Department of Health
UK – England	Derek	Marshall	North East Strategic Health Authority
UK – England	Chris	Jefferies	North West Strategic Health Authority
UK – England	Richard	Ansell	NHS Leicestershire County & Rutland
UK – England	Ian	Bullard	Information Centre for Health and Social Care (IC)
UK – England	Ian	Wheeler	Skills for Health
UK – England	Howard	Catton	Royal College of Nursing
UK – England	Patricia	Reid	Cambridge University Hospitals NHS Foundation Trust
UK – England	Oonagh	Monkhouse	Cambridge University Hospitals NHS Foundation Trust
UK – England	Wendy	Mitchell	Medical Education England
UK – NI	Melanie	McClurg	Department of Health, Social Services and Public Safety
UK – Scotland	Colin	Tilley	NHS Education for Scotland
UK – Scotland	Heather	Love	Health and Social Care Directorate, Scottish Government
UK – Scotland	Michael	Burslem	Health and Social Care Directorate, Scottish Government
UK – Scotland	Kay	Sandilands	NHS Lanarkshire
UK – Wales	Stephen	Griffiths	National Leadership and Innovation Agency for Healthcare (NLIAH)
UK – Wales	Liz	Davis	Department for Health and Social Services, Welsh Government

7.2 Case Study Reports

Health Workforce Case Study - Belgium

1. Key findings

1. Belgium has one of the highest population densities in Europe. The federal government and the federal entities (regions and communities) share responsibilities for health care provision. Financing of the Belgian health system is based on compulsory health insurance, which covers 99% of the national population.
2. Data on human resources for health are collected primarily through three sources: the Federal Public Services (FPS) health database, National Institute of Health Insurance and Disability (INAMI/RIZIV) and Crossroad Social Security database. These sources collect a wide array of data across professions, sectors and data type.
3. Health workforce planning has been envisaged in the Belgian health care system in order to contain health expenditure and overcome discrepancies across communities. The health workforce planning institution in Belgium is the Committee for Medical Supply Planning, which provides forecasts to the Federal Ministry of Health.
4. Forecasts are developed on the basis of a stock and flow model, which looks at both the demand and supply of health workforce. On the basis of these forecasts, the Federal Ministry sets quotas on the number of health professionals allowed to practice. The communities are in charge of setting *numerus clausus* at university level.
5. The main challenge for the Belgian health workforce planning system is the lack of coordination across levels of governance. Planning strategies at the federal and community level might lead to diverging outcomes, which might create over-supply or shortages of health professionals.
6. The EU level scenarios for collaboration suggested by stakeholders in Belgium do not seem to necessarily address some of the key issues of the Belgian system. Stakeholders have suggested the creation of a minimum database on mobility, the exchange of good practices on horizon scanning and the establishment of network of experts to analyse existing challenges.

2. Introduction and Background

Three interviews were carried out in Belgium, with the Ministry of Health (both policy and data collection unit), professional associations including the Belgian Medical Association and academic experts.

Overview of health system

Belgium has one of the highest population densities in Europe. Its 10,839,905 inhabitants (in 2010) live in a total land area of 30,528 km^2 (349 people per km^2). In 2008, 9.7% of the Belgian GDP was allocated to healthcare.

The federal government and the federal entities (regions and communities) share responsibilities for health care provision in Belgium. At the federal level, the government is in charge of regulating and managing the finances of the health care system, particularly with respect to compulsory health insurance contributions. The federal government also allocates hospital budgets. Regions and communities are responsible for health promotion and prevention and other complementary services (e.g. maternity and child health services; different

aspects of elderly care, home care, etc.). To facilitate cooperation between the federal level and governments of regions and communities, inter-ministerial conferences are regularly organized.[3] Hospital care is provided by either private non-profit-making or public hospitals. Most medical specialists work independently in hospitals or in private practices on an ambulatory basis. General practitioners (GPs), dentists and pharmacists also provide independently ambulatory or primary care.

Financing of the Belgian health system is based on compulsory health insurance, which covers 99% of the national population. Social security contributions, related to income, and subsidies from the federal government are the main funding sources for the compulsory health insurance system. Sickness funds collect compulsory health insurance contributions from the population and are responsible of distributing reimbursements through health service benefits. There are six private non-for-profit sickness funds and one public national sickness fund in Belgium, which are gathered under the National Institute for Health and Disability Insurance. In addition, 20% of total health expenditure is financed through patients' co-payments, supplements and non-reimbursed medical acts, drugs and devices.[4]

Overview of data collection methodologies

In Belgium, data on stocks and flows of human resources for health are collected through three main sources:

- **Federal Public Services (FPS) health database**, which provides data on health workers that are licensed to practice and which is managed by the Federal Ministry of Health. Every health professional who wants to practice in Belgium needs to be registered and licensed; data on registered professionals are collected in the FPS. This information is integrated and presented on a database, which is available to all institutions involved in health workforce planning in Belgium. However, the FPS database does not provide information on the specialty of this profession, nor on which sector they work in, nor on their current status (e.g. part-time, full-time, retired, etc.)
- **National Institute of Health Insurance and Disability (INAMI/RIZIV)**, which provides data on health workers that are practicing. In order to practice, health professionals are required to have a health insurance number (HIN). The INAMI/RIZIV database collects information through HIN on all the practicing professionals, based on the services they provide to patients. Hence, the National Institute of Health Insurance is a comprehensive database which reports information on all practicing professionals, their specialty, the sector in which they work and their current status (e.g. part-time, full-time, retired, etc.).
- **Crossroad Social Security database**, which also provides data on active health workers. The database is managed by the Crossroad Bank of Social Security, which was created in 1990 to organise and manage an electronic network facilitating information exchange among agencies of Social Security and the National Register. The information are collected through a digital social identity card (SIS Card), which is owed by all beneficiaries of the system and which allows providers to check insurability rights. Inevitably, the bank holds a large amount of information both on patients and providers of health care.

[3] WHO (2010), Belgium Health system review, Health Systems in Transition, Vol.12 No. 5 2010

[4] Ibid.

The three data sources described above collect a wide array of data across professions, sectors and data type. All health professions defined in Belgium are covered by the databases, including in particular physicians, pharmacists, dentists, physiotherapists, nurses and allied health workers. As mentioned in the introduction, the Belgian health system relies primarily on independent practitioners. However, the fact that all professionals need to be registered in order to practice, allows FPS to collect information about all those practicing in the health care system. Finally, social security and national insurance data collect detailed information about the professional status of health workers, including whether they are employed, active (independent) or retired. In addition, it is also possible to collect data on full-time equivalents of health professionals that are not self-employed.

Table 3: Overview of data collection in Belgium

Scope of data	Exclusively federal level All health workers, all specialisations, including allied health workers
Type of data collected	Stock data: Headcount, age, gender, place of residence, place of work, professional status, medical specialisation Flow data: Professional flow, geographical flow

Overview of workforce planning

Health workforce planning has been envisaged in the Belgian health care system in order to contain health expenditure. Doctors prescribe treatments which are then reimbursed by insurance funds. Such a third-party payment model – where neither the doctor nor the patient bear the cost of the treatment – needs to be regulated in order to contain expenditures. In most cases, the market is regulated by imposing limits on the number of doctors that can practice. In the case of Belgium, the amount of licenses issued is controlled to contain the excess supply of human resources for health. In addition, health workforce planning was introduced in the country in order to reduce discrepancies in supply and demand of health personnel across communities.

The federal government established the health workforce planning system in 1996, when the Committee for Medical Supply Planning[5] was created to give advice on the numbers of physicians, dentists and physiotherapists qualified to practise in Belgium. With an annual budget of approximately €400,000, the Committee, which is part of the federal Ministry of Health, includes representatives of public authorities, health professional associations, sickness funds and other stakeholders.

The Committee for Medical Supply Planning formulates proposals for the federal Minister of Public Health on the annual number of candidates per community who are eligible to be granted the professional title of physician, dentist or physiotherapist, after they have obtained the relevant diploma.

Forecasts are developed on the basis of a stock and flow model, which looks at both demand and supply of health workforce. The supply side of the model takes in consideration

[5] In Flemish, *Belgische Planningscommissie Medisch Aanbod*, in French, *Commission de planification de l'Offre médicale*

headcounts, annual inflows from universities, annual inflows through migration and annual outflows. Other factors influencing supply and productivity are also considered: feminisation of the labour force, ageing of health workforce and part-time policies. Through this model it is possible to estimates trends in the supply of health workforce, factoring in multiple scenarios regarding various levels of inflows in the workforce. The demand side of the model instead takes in consideration the evolution of demand based on health expenditures. Ultimately, demand modelling is based on past utilisation of services according to age, sex and region. It does not include an assessment of care pathways and epidemiological parameters, but does factor in the ageing of the population.

Forecasts developed by the Committee for Medical Supply Planning on the basis of the stock and flow model are then used by the federal government to regulate the number of physicians, dentists and physiotherapists that are allowed to practice. Two levels of government are involved in strategic health workforce planning in Belgium.

a. The **federal government** can regulate the supply of health workforce by limiting practitioners' access to practice. The nature of universal health insurance systems enables government to regulate the supply of some medical and health professions by restricting their right to reimburse treatment costs. By preventing health and medical professionals from reimbursing their patients' treatment costs, it is possible to control the number of professionals that are actually practicing. In addition, the government manages and controls access to specialist training.
b. **Communities** are responsible for managing the education and training system. Thus, they establish the content of courses and the standards for selections. They also govern *numerus clausus* policies.

Table 4: Overview of health workforce planning in Belgium

Main institutions involved in workforce planning	Committee for Medical Supply Planning Federal Government Communities
Structure of workforce planning	At the national level, the Federal Government controls the number of physicians, dentists and physiotherapists that are allowed to practice. At the community level, the government administers the educational system and thus manages university (not specialist training) quotas.
System of workforce planning	The Committee for Medical Supply planning develops estimates on the supply and demand of human resources for health. These forecasts are provided to the federal Ministry of Health that sets quotas on the number of physicians, dentists and physiotherapists admitted to the profession. At the federal level, quotas are applied after physicians, dentists and physiotherapists graduate and before they are allowed to register with the health insurance system and thus to practice. Communities can set their own *numerus clausus* to regulate university intakes.
Planning models and methods	Stock and flow model that considers both demand and supply indicators.

3. Successes and Challenges of workforce planning

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector in Belgium. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 5: Overview of successes and challenges of workforce planning in Belgium

Workforce planning dimension	Successes	Challenges
Monitoring	Comprehensive and complete across three main sources Data from multiple sources are comparable and complementary	Data not collected for planning purposes, hence some indicators are missing Data from different sources not integrated or linked Data not accessible due to privacy regulations No full time equivalents
Analysis	Easy to use stock and flow model Both supply and demand are considered Present inflows and outflows of professionals factored in the model	Does not include needs for care Covers only a limited number of professions Care pathways and epidemiological parameters are excluded Future mobility trends not factored in the model
Governance and Strategic planning		Communities are only partially involved in health workforce planning. Limited coordination between quotas on professionals allowed to practice (federal level) and university intakes (community level)

Main successes of workforce planning

Belgium has developed a comprehensive system for the monitoring of human resources for health. Data is provided through three complementary sources of information, which cover all health and medical professions, all sectors (independent and employed personnel) and multiple data indicators (age, gender, professional status, professional specialty, inflows, outflows). Data collection and reporting is centralised at the federal level, ensuring the

comparability of data. Moreover, the Ministry of Health has developed a sophisticated and comprehensive database where data from FPS are made accessible to all institutions involved in health workforce planning.

In order to tackle some of the issues related to its health insurance based system and to the discrepancies across communities, the Belgian Federal government has also developed a **sophisticated system for the analysis of human resources for health**. The system is based on a stock and flow model, which is easy to use and which, at the same time, factors in multiple dynamics and scenarios. Contrary to many other systems in Europe, the Belgian stock and flow tool includes both supply and demand modelling and it takes into consideration inflows and outflows of health professionals. The forecasts developed through this model are then used at the federal level to regulate the number of professionals allowed to practice (i.e. provided with a health insurance number to reimburse patients).

However, there are still numerous challenges related in particular to strategic health workforce planning in Belgium, which are due primarily to its governmental structure.

Main challenges of workforce planning

One of the main successes of the Belgian health workforce planning system is the availability of data. However, as data are collected through multiple sources that are not yet formally linked, there still appears to be gaps in data reporting. Only if the three main sources of data were linked, full coverage across professions, sectors and data types would be ensured. In addition, as data are not collected specifically for the purpose of workforce planning, information from multiple sources are not standardised. Finally, there are still obstacles related to the accessibility of such information, as privacy rules prevent national authorities from making data available.

As mentioned earlier, the Belgian system for the analysis of human resources for health is sophisticated, even though still not comprehensive. The Federal government has invested a large amount of resources to develop a stock and flow model for the analysis of supply and demand of physicians, dentists and physiotherapists. However, other professions are still not covered. The Ministry of Health is currently developing a system for the analysis of demand and supply of nurses.

Even though the monitoring and analysis of human resources for health are not yet perfect, the real challenge to be addressed in Belgium refers to **strategic health workforce planning**. Planning for human resources for health is not yet integrated, as two main levels of governance exercise their competences in an un-coordinated manner. The federal government controls the number of professionals allowed to practice and intakes in specialist trainings; the communities instead manage quotas at the university level. Planning strategies at these two levels often lead to diverging outcomes. The result might be that more students graduate from university than the number of licenses planned by the federal government, creating an over-supply of health workers. In order to avoid this issue, Communities have been asked to adapt their *numerus clausus* system to the forecasts developed by the Committee for Medical Supply Planning on behalf of the federal Ministry of Health. This recommendation is however not followed by the French community, which applies different quotas.

The lack of coordination across level of governance (federal level and community level) also prevents the government from developing comprehensive health strategies that would tackle some of the upcoming issues in the health system. For instance, work on the organisation level has always been limited, even though the government is currently developing a retention strategy to contain the outflow of health professionals.

4. EU level collaboration

Current collaboration with other European countries

Stakeholders in Belgium have argued that there is **no significant and regular collaboration at the EU level in the field of health workforce planning.** The exchange of information and good practices with other European countries mostly takes place on an informal basis, with few official conduits in place to facilitate collaboration. There are no bilateral agreements officially establishing EU level collaboration, besides the preparatory work carried out in the framework of the EU Joint Action on Health Workforce Forecasting and Planning that Belgium is coordinating.

Possible scenarios for further collaboration with European countries

The EU level scenarios for collaboration suggested by stakeholders in Belgium do not seem to necessarily address all of the key issues of the Belgian system. Instead they seem to be aimed at ensuring more integration and coordination at the European level, both in terms of health workforce planning and in terms of education and specialist training. Nonetheless, the scenarios suggested seem to focus on the strategic planning dimension of health workforce planning, with respect to which most of the challenges of the Belgian system have been identified. We explore below the key scenarios for collaboration suggested across the three main dimensions of health workforce planning.

In terms of monitoring, Belgium has quite a sophisticated system which could be improved by integrating multiple sources of data. One of the key successes of the Belgian data collection system is the fact that it provides data on inflows and outflows of health workers. Stakeholders have suggested that this information should be shared in an effective and sustainable way across countries. Data should be collected at the national level through national professional registries and then shared at the European level through a web-based system. Hence, a **mobility dataset containing minimum information on inflows of health workers** in different countries should be built. This would support health workforce planning especially in sending countries. Moreover, it would help national health workforce planning institutions carry out mobility trend analyses, which would allow them to factor migration scenarios into their models. The mobility database should also be accessible to professional associations, which could check the reliability of the data.

Stakeholders have not made any suggestion on scenarios for collaboration with respect to analysis. They have instead concentrated on strategic planning, the most cumbersome dimension of health workforce planning in Belgium. In particular, they have suggested that more efforts should be made at European level to help countries develop horizon scanning capabilities. This could be achieved primarily through the exchange of good practices on horizon scanning. The existing models, even though still in a development phase, should be shared and outlined more clearly to health workforce planning authorities. This could be done

through the development of a **toolbox and guidelines, which present and explain existing horizon scanning tools**.

In addition, in order to inform and facilitate horizon scanning, a **network of experts** should also be established. This group of experts could meet frequently and recurrently to look at existing trends and issues that affect health care systems across Europe. They could then exchange views, develop forecasts and develop solutions for these issues. The network should include expertise from professional associations and universities in particular, as they have different but complementary knowledge. Professional associations have in fact the technical expertise to present and discuss this type of issues, while universities have the capability to analyse them and develop scientific forecasts.
Finally, stakeholders suggested that specialties should be harmonised across Europe, as this would facilitate but also help monitor and regulate mobility across countries. In particular, the content of specialists training should be common across Europe and a central examination board should be established. The stakeholders had no suggestion with respect to how and where this common examination board should be created, but instead claimed that it should be composed of different members from different countries.

Table 6: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	Minimum Mobility Dataset	Exchange of basis information and data on present flows of HRH. Web-based. Particularly useful for countries with intense migratory flows to exchange their data.
Analysis	n/a	n/a
Governance and Strategic planning	Toolbox or Guidelines	To present and explain horizon scanning models.
	Network of Experts	Recurrent meetings to analyse key challenges that will affect health systems across Europe and to identify common strategies to address them. Should include both professional associations and universities.

Sustainable international collaboration

The sustainability of international collaboration in health workforce planning depends on the extent of mutual trust across countries, according to stakeholders. This mutual trust can only be created if authorities involved in and affected by health workforce planning strategies meet recurrently at the European level. Hence, international meetings should be organised maybe three or four times a year and should involve not only policy makers, but also professional associations and universities.

Health Workforce Case Study - Finland

1. Key findings

1. Data on stocks and flows of human resources for health are collected through four main sources: the National Statistical Office, the National Supervisory Authority for Welfare and Health (VALVIRA), the Finnish Medical Association and the Union of the Local Government Employers. Thanks to the collaboration and complementarity across these multiple data collection authorities, data on HRH in Finland are complete and comprehensive.

2. Comprehensive analyses of long-term labour demand for every industry have been carried out in Finland since 1991. Two models are used in Finland to provide systematic and transparent methods for forecasting:
    a. the demand model Mitenna, developed and used by the National Board of Education; and
    b. the supply model VATTAGE, developed and used by the Institute of Economic Research.
    c. These forecasts are used by the Ministry of Education and Culture to draft the Development Plan of Education and Research, which establishes university intakes. Regional authorities, professional associations, the Ministry of Social Affairs and Health are only consulted as part of the process.

3. Key successes of the Finnish health workforce system are:
    a. The availability of a comprehensive and complete database, covering stock and flows of health workers in the private and public sector;
    b. The existence of sophisticated and flexible demand and supply models for forecasting and horizon scanning, which incorporate multiple scenarios; and
    c. Forecasts of workforce demand and forecasts of educational needs are taken into consideration for the setting of university and training intakes.

4. There appear to be no major challenges in the Finnish system of health workforce planning. However stakeholders have identified the following possible improvements:
    a. Development of indicators for monitoring the sufficiency of the personnel and adequate skill mix;
    b. Strengthening the role of regional and, in particular, municipalities that are in charge of healthcare provisions; and
    c. Ensuring the continuous involvement of key stakeholders in forecasting and planning and, in particular, of the Ministry of Social Affairs and Health.

5. The following possible scenarios for collaboration have been identified across the three key dimensions of health workforce planning:
    a. Monitoring: EU level collaboration should focus on the exchange of data through a minimum dataset, rather than on the development of common key indicators, definitions and models
    b. Analysis: models for forecasting and horizon scanning should be exchanged across countries, through toolboxes and guidelines

6. Strategic Planning: networks of experts with different focus should meet recurrently to analyse the key challenges that will affect HRH across Europe and to identify common strategies to address them.

2. Introduction and Background

Three interviews were carried out in Finland, with the Ministry of Health, the Finnish Medical Association and the Finnish Nurses Association.

Overview of health system

Finland has a population of 5.36 million, distributed over 415 self-governing municipalities, with a median number of inhabitants of 5,000. 9.2% (2009) of the national GDP is allocated to healthcare, which is primarily financed by public funds (74.8% in 2008). In practice, in Finland there are **three different health care systems** which receive public funding: municipal health care, private health care and occupational health care. Employed people have the possibility to choose among these three types of health care provision.

The largest share of health care services is provided by the municipal health care system. Municipal health care services are financed by municipal taxes, state subsidies and user-fees. All municipalities are obliged by law to maintain health centres for the provision of primary health care services, either on their own or jointly through a local federation of municipalities. Thus, health care provision is primarily administered and organised by municipalities. The Ministry of Social Affairs and Health (MSAH) directs and guides social and health services at the national level. Finally, administrations in the five provinces and in Åland Islands (autonomous) supervise municipalities in their area.

Seventeen per cent of the total cost of health care in Finland is financed by the statutory National Health Insurance (NHI) scheme. The scheme is run by the Social Insurance Institution (SII, Finnish acronym KELA). SII falls under the authority of Parliament. The main funding to NHI comes from the state budget (28% in 2006), the insured (33%) and employees (38%). NHI covers part of outpatient drug costs, part of medical costs in the private sector, part of the costs of occupational health care, compensation of travel costs to health care units, sickness allowance and maternity leave allowance. In addition, employers are obliged to provide preventative occupation health care for their employees.

Overview of data collection methodologies

In Finland, data on stocks and flows of human resources for health are collected through four main sources. First, the **national statistical office** collects demographic data (i.e. age, gender, place of residence), through personal social security numbers. The statistical office also compiles data based on tax reports; these include variables such as income, place of work, employment record and social security benefits.

Second, the **National Supervisory Authority for Welfare and Health (VALVIRA),** under the Ministry of Health and Social Affairs, collects information about health care authorisations and licensing of all health care personnel in Finland. Data collected by VALVIRA cover both the public and private sector and are frequently updated to reflect flows of health workers in and out of the profession.

Third, the **Finnish medical association** provides detailed information on health workers specialisation. Finally, the **Union of the Local Government Employers** makes an assessment every two or three years on the shortages of professionals and vocational groups in municipal social and health care. These assessments are carried out in collaboration with the Ministry of Social Affairs and Health and are based on questionnaires answered by municipal health and social care organizations.

Thanks to the collaboration and complementarity across these multiple data collection authorities, data on HRH in Finland are complete and comprehensive. Information on the place of residence, place of work, retirement, age, gender, temporary leave and specialisation across all health and medical professions are available. Full coverage is ensured, thanks to the fact that data is collected directly at the national level. In addition, the involvement of professional registries allows Finnish authorities to have an overview of stocks and flows both in the public and in the private sector.

In Finland, the health workforce is divided into five broad groups, according to educational level:

- Doctors, dentists and pharmacists (with compulsory licensing requirements);
- Nurses (with compulsory licensing requirements);
- All other qualified health care personnel (with optional licensing requirements);
- University graduates; and
- All other personnel working in hospitals.

All categories, but the last one, are well covered by data.

Data collected by the four main sources are then reported by the Statistical Office, which makes an extraction for the Unit of Statistics and Registers in the VALVIRA. This unit performs the analysis of the data and drafts monitoring report.

Table 7: Overview of data collection in Finland

Scope of data	Exclusively national 3 main groups: Doctors, dentists and pharmacists (with compulsory licensing), nurses (with compulsory licensing), all other qualified health care personnel. Also data on number of graduates.
Type of data collected	Stock data: Headcount, age, gender, place of residence, place of work, active workforce, retirement age, medical specialisation Flow data: Professional flow, geographical flow

Overview of workforce planning

Comprehensive analyses of long-term labour demand for every industry have been carried out in Finland since 1991. Workforce demand forecasts are prepared by the National Board of Education, under the Ministry of Education and Culture, in collaboration, since recently, with the Institute for Economic Research, under the Ministry of Finance. This national institute produces workforce forecasts for the whole economy (28 different sectors), in cooperation with a wide network of experts from regional authorities, trade unions, employers' associations, ministerial representatives etc. These recommendations feed into "The Development Plan of Education and Research", which is drafted every 4 years by the Ministry of

Education and Culture and which establishes the educational needs corresponding to the forecasts.
The Institute for Economic Research applies a dynamic demand model called VATTAGE ('Forecasts for labour demand') for the development of forecasts on health workforce demand. This model takes into account demographics, structural changes of the economy, development of employment and other factors. Two or three different scenarios are taken into consideration and evaluated to develop the forecasts. The supply model Mitenna ('Forecasts for Educational Needs') has instead been developed by the Finnish National Board of Education to convert labour demand to a corresponding educational need for each professional group. The calculations take into account drop-outs, completion of qualifications, graduates entering the labour market, and supply of unemployed labour force.

Table 8: Overview of health workforce planning in Finland

Main institutions involved in workforce planning	Institute for Economic Research (Ministry of Finance) National Board of Education (Ministry of Education and Finance)
Structure of workforce planning	National, but in collaboration with regional authorities, trade unions, employers' associations, ministerial representatives, etc.
System of workforce planning	The Institute for Economic Research and the National Board of Education develop forecasts on future health workforce needs and related educational needs. These estimates are provided to the Ministry of Education and Culture that, in consultation with the Ministry of Finance and the Ministry of Social Affair and Health, draft a Development Plan for Education and Research. This process is carried out every four years. Forecasts look at the medium term (not annual).
Planning models and methods	Vattage model: used by the Institute for Economic Research to forecast workforce future demands. Mittena model: used by the National Board of Education to forecast educational needs.

3. Successes and Challenges of workforce planning

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 9: Overview of successes and challenges of workforce planning in Finland

Workforce planning dimension	Successes	Challenges
Monitoring	Comprehensive and complete database, based on multiple sources and registries Data from multiple sources are comparable and complementary	Development of indicators for monitoring the sufficiency of the personnel and adequate skill mix
Analysis	Integrated supply and demand models that develop forecasts on labour demand and educational needs Flexible models incorporating 2 or 3 scenarios Extensive network of experts involved in the modelling	Ensure the availability of technical and financial resources for the analysis Strengthen the role of regional authorities and regional stakeholders
Governance and Strategic planning	2 key workforce planning institutions, which collaborate closely with the Ministry of Education for the establishment of university and training intakes Consultation of multiple stakeholders	Limited involvement of Ministry of Social Affairs and Health Ensure the continuous involvement of key players Monitor the implementation of strategic plans Ensure that sufficient resources are allocated to health workforce planning

Main successes of workforce planning

Data collection is carried out through multiple national sources in Finland. Different databases providing complementary information can be easily integrated and triangulated to ensure their validity and completeness. Data coverage is exhaustive across health and medical professions and across sectors (private and public). Moreover, information covers both present and forecasted stock and flows of HRH. Several annual statistical reports on health workforce, its mobility and shortages, provide a solid base for evidence based planning and decision making in the field of social and health policy. A comprehensive and detailed database is instrumental to the effective analysis of HRH and their demand and supply in Finland.

The demand model Mitenna and the supply model VATTAGE provide systematic and transparent methods for forecasting. Forecasts of workforce demand are provided in accordance with two or three scenarios, which give the opportunity to develop and include assumptions on economic development, health service needs and other aspects. Therefore, one of the key success factors of the Finnish health workforce planning system is its flexibility and the ability to reflect and take into consideration future developments. Finally, the forecasting process is implemented through an extensive network of experts representing different ministries, the Government Institute for Economic Research, the National Board of Education as well as other relevant actors. This ensures that the key expertise and stakeholders are involved in the process.

Strategic planning takes into account forecasts of the workforce demand in all industries as well as forecasts of education needs for all fields of education and training. Every four

years the Ministry of Education and Culture drafts the Development Plan for Education and Research and sets university and vocation training courses intakes. These are established on the basis of supply and demand forecasts carried out by the Institute for Economic Research and the National Board of Education. In this process, the Ministry of Education and Culture also consults with regional authorities, trade unions, employers' associations and representatives from the Ministry of Social Affairs and Health. This provides the political commitment behind educational supply.

In order to ensure that the university intakes and the content of university and training programmes established in the Development Plan are respected, the Ministry of Education and Culture makes three-year performance agreements with polytechnics and universities. Intakes are agreed in these negotiations.

Main challenges of workforce planning

Because a comprehensive analysis of labour demand and supply has been carried out on a regular basis since 1991, there is quite a long tradition of health workforce planning in Finland. This implies that there are **no major challenges in the process**. Nonetheless, stakeholders have identified specific shortcomings of the system and possible improvements, which are already under consideration by the Ministry of Health.

Monitoring of HRH is well developed in Finland: a comprehensive and detailed database, covering most professions and both the private and public sector, with detailed data on stocks and flows is available. However, stakeholders have suggested that **the development of indicators for monitoring the sufficiency of the personnel and adequate skill mix** in different types of social and health care organisations and at the regional level should be envisaged. These indicators should be integrated in methods for staff planning at the local and regional level, in social and health care organisations. The Government is already envisaging including these indicators in the development plan for social and health care for 2012-2015 which will be adopted by the Government at the beginning of February, 2012.

Modelling and analysis of the present and future supply of HRH is also well-developed in Finland. However, it appears that **technical and financial resources allocated to the forecasting of health workforce supply and demand at the national level could be limited in the future**. These could undermine future developments and ultimately reduce the modelling and analysis capacity of workforce planning institutions. Another challenge related to the analysis of health workforce is the limited involvement of experts representing social and health care organisations at the regional level. The **role of regional and local players should be strengthened**. In particular, regional and local health providers and professional organisations should be given the opportunity to contribute to the forecasting, as they might have more specific inside knowledge to predict future developments

In this sense, the Health Care Act which came into force in May 2011 establishes that the primary health care unit in a hospital district should ensure the sufficiency of the human resources and should coordinate the demand for labour and the supply of training with regional councils. These new regulations strengthen the role of regional health care organisations in the analysis and forecast of workforce demand and educational needs.

The Development Plan for Education and Research provides an effective platform to strategically plan HRH. However, there are still challenges related to the **implementation of the plan and of the related entrant targets**. For this reason, the Ministry of Education and Culture should continue to monitor and work in collaboration with universities, polytechnics, vocational institution and social and health care organisations, in order to ensure the implementation of the entrant targets. Moreover, the government needs to focus on **ensuring the continuous involvement of key stakeholders in forecasting and planning**. In particular, stakeholders have argued that the Ministry of Social Affairs and Health is not sufficiently involved in the strategic planning process and it is not given sufficient opportunities to contribute to the drafting of the Development Plan.

Similarly, regional authorities and professional associations could be more effectively involved in the process. This is particularly true in the case of the content and intake of specialist schools, which are not within the competence of the Ministry of Education, but are administered by municipalities. However, municipalities are not anyhow involved in the planning process. Consequently, there is limited strategic planning with respect to specialisation schools' content and intakes; this raises an issue with respect to skill mix. Finally, it will be important to integrate the development of human resources, as a key resource in the social and health policy programmes at all levels of the social and health care system, to ensure that **sufficient resources are allocated to health workforce planning**.

4. EU level collaboration

Current collaboration with other European countries

Stakeholders in Finland have argued that there is **no significant and regular collaboration at the EU level, in the field of health workforce planning.** The exchange of information and good practices with other European countries is mostly carried out on an informal basis, with few official channels in place to facilitate collaboration. There are no bilateral agreements officially establishing EU level collaboration, besides the preparatory work carried out in the framework of the EU Joint Action on Health Workforce Forecasting and Planning.

Possible scenarios for further collaboration with European countries

Labour demand can only be met by means of a wide set of policy interventions at the European and national levels. In particular, national and international stakeholders should look into increasing productivity, developing skill mix and advanced roles of nurses, developing multi-professional teams and collaboration, restructuring the service system, developing preventive services and supporting patients' capacity on self-care. Finland is emphasizing the importance of the national framework for monitoring, planning and anticipating the supply and demand of workforce, as well as of national policies aiming at self sufficiency of workforce. Well-functioning national systems are a basic prerequisite for reliable data collection and monitoring also at the European level.

Stakeholders have also pointed out that international collaboration could attempt to **develop common key indicators, definitions and models**, which can be used by national health workforce planning authorities. However, they also recognised that developing such instruments might be particularly challenging due to national and cultural differences. Well-developed national models for demand and supply analysis and forecasting should rather be exchanged at

the international level. In this sense, well-developed national databases should represent the basis for defining a **minimum dataset** at the international level. National data collection institutions and, in particular, countries with particularly intense migratory flows, should agree on exchanging key information on an on-going basis and on building minimum datasets. In particular, the development of minimum mobility database could be envisaged. To start with, this would report information on current migration flows to support the application of the WHO Code of Practice.

Stakeholders have also emphasised the importance of exchanging information and data on health workforce between Finland and Estonia. There is in fact an intense flow of health workers from Estonia to Finland, which should be monitored. On the basis of this monitoring, the two countries could assess present and future migration flows and develop common strategies to address present and future shortages.

To support analysis at the national level, EU collaboration across countries should focus on the development of a **toolbox and guidelines** on good practices to forecast demand and supply and to carry out horizon scanning. Thus, even in this case, international level should facilitate the exchange of existing practices, rather than attempting to develop common models.

Finally, EU level collaboration should support strategic planning ensuring the engagement of multiple stakeholder groups, from different countries, during **international conferences and meetings**. On top of this, a **network of experts** should meet recurrently in order to analyse key challenges that will affect HRH across Europe and to identify common strategies to address them. For instance, papers and policy documents on the future of health systems across Europe could be drafted and common EU level views on the future of specific health and medical professions should be developed and shared with national stakeholders. This would support national administrations to monitor future developments and integrate solutions to address them in their national health workforce planning strategies.

Table 10: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	Minimum Dataset	Exchange of basic information and data on present stocks and flows of HRH. Minimum dataset could be built at EU level. But it is particularly useful for countries with intense migratory flows to exchange their data.
	Key indicators and models	Definitions, indicators and models for their analysis could be established and designed at the international level. However, due to national and cultural differences, it might be difficult to define these.
Analysis	Toolbox and guidelines	Toolbox and guidelines outlining and explaining the models and tools used to forecast demand and supply and to carry out horizon scanning
Governance and Strategic planning	International conferences	With specific focus and gathering different stakeholder groups
	Network of Experts	Recurrent meetings to analyse key challenges

		that will affect HRH across Europe and to identify common strategies to address them. Policy papers on the future of health systems and of specific professions should be the outcome of the network discussion

Sustainable international collaboration

In order to ensure the sustainability of international collaboration, a platform for the exchange of data and information between interested partners should be envisaged. This should also be supported by continuous and frequent meetings between national and international experts.

Health Workforce Case Study - Hungary

1. Key findings

1. Hungary has a statutory health insurance system financed by health insurance contributions and general taxation. Ownership is characterised by division of responsibilities between central and local governments, currently going through a process of transferring certain institutions from local to central government ownership to enhance structural adjustment and better cooperation among various levels of care. A shortage in health professionals is foreseeable due to emigration and an ageing workforce.
2. Data collection is comprehensive and carried out by the Office of Health Authorisation and Administrative Procedures and analysed by the State Secretariat for Health at the Ministry of National Resources; a common HRH monitoring system to integrate the data collection process is currently under development
3. Communication between health and education policy makers is good as they are located at the same Ministry
4. Hungary is actively engaged in EU level cooperation and leads Work Package 4 of the EU Joint Action Group on Health Workforce Planning
5. Hungary suggests to put the main focus of future collaboration on workshops and a common database

2. Introduction and Background

Interviews were carried out with a public official from the State Secretariat for Health and a representative from the Semmelweis University.

Overview of health system

Hungary has a population of 10 million and spends 7.4% of its GDP on healthcare of which 70.3% is publicly funded[6]. The country has a comparatively decentralised healthcare system – currently going through a centralisation process - with the national government retaining control over the central budget. It is based on a purchaser-provider contract model and employs 4.3% of the total workforce. The health insurance is primarily administered by the Health Insurance Fund and financed by general taxation. All health personnel are registered with the Medical Chambers and with the Office of Health Authorisation and Administrative Procedures which approves registration every 5 years. While overall there is still a good availability of workforce professionals, a shortage is foreseeable as the workforce ages (52.4% of practising doctors are over 50 with the official retirement age set at 62) and professionals emigrate, especially since EU accession in 2004. In 2011, 1,200 medical doctors showed intentions to leave compared to only 49 newly registered foreign medical doctors (in 2009, 887 showed intentions to leave compared to 49 newly registered foreign doctors and, in 2010, 1,111 showed intentions to leave compared to 41 newly registered foreign doctors). Most of these doctors and dentists migrate to the UK and to Germany where hospital budgets are significantly bigger. The main reasons for emigration identified are low salaries, poor working conditions and insufficient qualified personnel. Staff is already lacking in nursing and certain medical specialties. For nurses, this

[6] Gaal, Peter/Szigeti, Szabolcs/Csere Marton/Gaskins, Matthew/Panteil, Dimitra. 2011. *Health Systems in Transition. Report Hungary. Health system review.* 13 (5). p. 64

can be related to low salaries, poor working conditions, heavy workload and insufficient qualified personnel. There are also an increasing number of doctors without a specialisation among those who are intending to leave the country. The major issue in health policy, consequently, is to improve retention capacities by providing better salaries and working conditions in order to ensure the sustainability of the healthcare system.

Overview of data collection methodologies

A broad variety of data is collected in Hungary. The most comprehensive effort is made by the Office of Health Authorisation and Administrative Procedures (OHAAP) which runs a registry that contains also data on the workplaces of health professionals. The operational registry – kept also by OHAAP – contains data also on the applicant's continuous education. Migration flows can be monitored through the issuing of certificates required for recognition of the diploma abroad (conformity certificates, acquired rights certificates) and assessing the qualifications of foreigners wishing to work in Hungary. In addition surveys are carried out amongst medical students by the Health Services Training Centre of the Semmelweis University. Data is collected by the OHAAP for the public and private sectors at the national level. Moreover, universities, training institutions, and healthcare centres collect their own data.. Other sources of data are the Central Statistical Office and various governmental offices.

There is no comprehensive data on the number of Hungarian doctors practising in other countries which can only be approximated with the help of certificates required for recognition of the diploma abroad.

Table 11: Overview of data collection in Hungary

Scope of data	OHAAP data covers the public and private sector both at regional and national level Graduates, physicians and specialists, nurses, dentists, pharmacists, clinical psychologists, allied health workforce, trainees.
Type of data collected	Stock data: Headcount, age, gender, place of residence, place of work, nationality, active workforce, full-time/part-time, specialisation, continuous education, language knowledge, validity time of operational licence, data from recognition procedures Professional flow, geographical flow

Overview of workforce planning in Hungary

Currently, workforce planning is carried out at the national level and consists mainly of the process of defining the number of university places on the basis of labour market trends by the State Secretariat for Education, and the determination of the number of medical residency places by the State Secretariat for Health. While there is no central workforce planning institution, the project **Human Resources for Health Monitoring Programme** is expected to merge all available data through a compulsory reporting to the OHAAP as project leader. It will enclose projections of future health workforce according to supply and demand. The present government is taking on a strategic approach in order to guarantee the sustainability of the health system. The quotas for medical specialties are defined by the State Secretariat for Health of the Ministry of National Resources taking into account the indicated requirements of healthcare institutions. Since 2010, hospitals are not only required to report the number of

medical residency places to the Secretariat for Health but also the number of new medical places based on the demand. The Secretariat in turn defines quotas for medical specialties based on demand and supply. Beyond that, some hospitals and other medical institutions have their own planning, but they lack coordination.

The shortage of specialists is countered with measures including higher salaries and accommodation support for those taking part in specialist training ("resident medical doctors") to improve retention of professionals. Moreover, since 2009, there have been many changes in the system of postgraduate training in order to achieve better and continuous availability and flexibility of postgraduate programmes.

Table 12: Overview of health workforce planning in Hungary

Main institutions involved in workforce planning	State Secretariat for Health, Ministry of National Resources, State Secretariat for Education, Ministry of National Resources hospitals, OHAAP, National Institute for Quality- and Organisational Development in Healthcare and Medicines
Structure of workforce planning	National
System of workforce planning	Data collected by hospitals and other institutions, analysed by the Secretariat for Health who estimates workforce needs on the basis of such data. HRH Monitoring programme will merge data.
Planning models and methods	Demand and supply side projections

3. Successes and Challenges of workforce planning

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 13: Overview of successes and challenges of workforce planning in Hungary

Workforce planning dimension	Successes	Challenges
Monitoring	Data collecting rather comprehensive, development of HRH monitoring system.	Hospitals collect data without coordination.
Analysis	Takes into account both supply and demand side when estimating workforce needs.	Current tools of analysis are not very sophisticated and do not take key variables such as

		demographics into account.
Governance and Strategic planning	Secretariat for Health is aware of the problem; started various initiatives such as the HR project that will streamline data and advise decision makers. Sets quotas for specialties depending on analysis.	Comprehensive planning is just currently evolving.

Main successes of workforce planning

Workforce planning in Hungary has experienced improvements in all three dimensions:

Monitoring

There is comprehensive data on the availability of health workforce professionals in Hungary. While until 2009, the register of allied health professionals was run according to qualification, causing multiple registration numbers for professionals with more than one qualification, this practice has changed now and the register is based on individuals.

Analysis

The State Secretariat for Health channels demands from health care providers to see what is needed and adjusts quotas accordingly.

Governance/strategic planning

Hungary has no history of thorough planning, but the current decision makers are aware of the merits of strategic planning. Since 2009, the new system of postgraduate training tries to retain workforce by increasing remuneration of resident medical doctors applying for training in specialities of shortage by 50% and providing additional benefits. A scholarship has also been established: those who are accepted for the programme will be granted an amount of 100,000 HUF (~350 euro) monthly during the resident training. Following the scholarship, the applicant has to work in a publicly financed healthcare provider in Hungary for at least a period equal to the duration of the grant and cannot accept any informal payment from patients.

Successes can be explained by the increasing political support the issue of HR planning is receiving.

Three main factors explain the improvements in data collection and analysis achieved to date:

- Centralised data sources and collection;
- Legal and political commitment and adequate regulation (e.g. mandatory provision of data) in certain aspects since the problem of emigration and demographic trends has received proper attention; and
- Collaboration between the Education and Health Secretariats of State. The fact that both entities are located in the same ministry facilitated information sharing on graduates and specialist needs.

Main challenges of workforce planning

Generally speaking, the high mobility of workforce makes it more difficult to obtain up-to-date information and complicates forecasting. Fiscal constraints of public authorities in the current

economic climate mean that solutions need to work with limited resources. This also means that raising salaries can only address the problem of the outflow of doctors in the long term.

Monitoring

While there is some degree of centralisation, there remain multiple databases: the OHAAP obtains its data from operational and basic registries of health professionals; healthcare providers and training institutions collect also data. Data collection is made also by the Central Statistical Office and other governmental offices. There are difficulties with keeping the operational registry up-to-data as health professionals often fail to report changes, so new information is available in these cases only when the license has to be renewed – in every 5 years.

As in other countries, cross-country migration is only assessed indirectly by looking at the intention to leave.

Generally, the data available is fragmented and not easy to combine due to different collection procedures.

Analysis

Hungary's models and analytical tools are comparatively less sophisticated and need to incorporate many other aspects beyond demography to adequately map workforce trends.

Governance/strategic planning

Planning is still under development. The challenge is to further develop the methods used for data analysis and forecasting and to link it to strategic decision making.

Overcoming existing challenges at the national level

The HRH **Monitoring** system is a national project that works as an integrated data warehouse – merging different types of data (such as workforce and university data) and a starting point of a planning system that is strongly supported by the State Secretary for Health. It will take into account both supply and demand. Currently, it is in its implementation phase. It is lead by the OHAAP with the National Institute for Quality- and Organisational Development in Healthcare and Medicines being consortium partner and supported by universities, professional chambers and other partners. It can be extended to allow public service workers to sign in and exchange information; it could work also as an HR portal that requires stakeholders to upload data on its website. It will eventually increase the accessibility of data. In that capacity, it will improve data analysis and strategic planning and serve as a basis for tackling the problem of workforce emigration and retention. As part of the project, a career-model for health professionals is to be worked out.

Interviewees expressed their hope that this initiative would help assessing the magnitude of the problem of outflow of qualified health workforce. However, being mainly a monitoring system to support decision-making, it would not be enough to address this issue. Scholarship programmes and higher salaries would be needed to incentivise professionals to stay in the country but these measures would only yield results in the long term. This once again would require high level and sustainable political commitment.

4. EU level collaboration

Current collaboration with other European countries

On the **international level**, Hungary currently participates in WHO workshops that involve nurses associations and other stakeholders. Hungary also participates in the work of the newly established OECD health workforce planning and management group.

On the **European level**, it takes part in the EU Joint Action Group on health workforce planning where it is leading on Work Package 4. Such cooperation is valued by Hungarian stakeholders, even if responses take longer than on a regional or national level.

Hungary also took part in research projects such as PROMeTHEUS at university level. Drawing from this experience, stakeholders stated that a **minimum data set** should be kept by all and made available to all Member States.

On the **bilateral level**, a pilot project has been initiated between the Hungarian Semmelweis University and the Swedish Karolinska Institute on an exchange of resident pathologist doctors. Hungarian doctors would spend a certain period in Sweden and then rotate back to Hungary. This agreement will be mutually beneficial as it encourages knowledge generation and more specialist fields in more countries. It could serve as a model for future bilateral agreements as it addresses the issue of mobility while taking home countries interests into account. There are other initiatives for best practice sharing, e.g. the Hungarian Deputy Secretary responsible for human resources issues visited Lithuania to learn about their good practices in terms of measures to overcome human resources for health crises on the national level. Stakeholders consider such good practice sharing should be institutionalized.

Table 14: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Topic focus of current collaboration
Monitoring		
Analysis	JAG (Hungary leads work package 4)	Information and best practice sharing
Governance/strategic planning	Bilateral agreement with Sweden on specialists rotation	Address brain drain and human resources for health crises

Possible scenarios for further collaboration with European countries

Hungarian stakeholders expect the EU Joint Action Group to find a common understanding of data and terminologies (**monitoring**) and to improve international data collections. Learning from other Member States' experiences would help in further developing health workforce planning on the national level. Beyond that, common solutions for shortages should be found rather than simply attracting professionals from other Member States as this only relocates the problem. Circular mobility and capacities for training would be mutually beneficial solutions. One interviewee also pointed out that the EU Joint Action Group to convey its message to practitioners, institutions, and governments in order to have a long-lasting effect. This can be achieved by involving stakeholders from the beginning. The relevant workforce planners need to be identified in each country and need to take part in capacity-building exercises. This could

work in collaboration with professional associations, but the main focus should lie on government or government-funded entities.

An improved DG MARKT database could help assess the number of professionals actually moving in and out of the country (in contrast to the number of professionals intending to migrate). This would facilitate **analysis** and forecasting. Other international databases should also be aligned. Apart from that, expert workshops are regarded as the most helpful tool to improve collaboration.

Hungary favours collaboration at the **international and European level** which allows for best practice exchange on both policy and research. In that context, the differences between home and host countries need to be taken into account to properly address each country's challenges. On a **regional level**, countries with common problems should collaborate and focus on sharing best practices. Finally, **bilateral** or multilateral collaboration should bring about an exchange of training capacities, building on similar efforts in the EU Joint Action Group.

Table 15: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	Improved DG MARKT database, aligned international databases	Workforce flow
Analysis	Good practice sharing	
Governance/strategic planning	Workshops Bilateral agreements on exchange and training	Effective collaboration rather than creation of new institutions

Sustainable international collaboration

National and international collaboration must be complementary, stakeholders must be aware of collaboration projects on different levels. EU-level collaboration needs to be underpinned by bilateral projects such as the initiated agreement with the Karolinska Institute in order to ensure the sustainability of collaboration. At the same time, countries should aim at becoming self-sufficient in order to make their system of health workforce planning sustainable. The HRH reform lays the foundation for sustainable national workforce planning by focussing on long term issues.

Hungary also warns that sustainable collaboration should not necessarily translate into more institutionalisation. Nonetheless, a forum for workforce planning practitioners is desirable. Stakeholders interviewed did not specify the characteristics such a forum should have.

Health Workforce Case Study – Iceland

1. Key findings

1. Iceland is a small island country of just under 320,000 people. There is one main teaching hospital and approximately twenty health centres. Icelandic health care is universal, comprehensive and free at the point of delivery, and is funded primarily by general taxation. The system is managed by the Ministry of Welfare and the Directorate of Health.

2. The key successes of health workforce planning include the mandatory registration of the health workforce through professional associations prior to practicing so that information is collected across 31 health professions; Iceland's size means that is it easy to obtain a good overview of the system.

3. The key challenges of health workforce planning are related the fact that Iceland does not have a systematic model in place and its island status is a factor in planning, training and service delivery. For example, it provides (and funds) full training for nurses and the initial 6 years training for doctors (including GPs). Medical students wishing to specialise (e.g. surgery), are required to source their own funding, choose which area they wish to specialise in and which country they want to train in. Iceland therefore has no control over where trainees go (usually English speaking or Scandinavian countries), what areas they choose to specialise in, or whether they will return to Iceland. This mobility is not tracked.

4. Following the recent financial crisis, there has been a change in policy direction, with policymaking becoming focused on cost reduction. For example, there have been moves towards day care and towards fast discharge of patients from hospital; a new mother typically is now discharged within eight hours rather than two days as was previously the case ten years ago.

5. Iceland has a strong interest in continuing to evolve formal collaboration with other countries in order to keep both their health system and their planning sustainable. Iceland is reliant on other countries to train their specialist clinicians and provide specific health services. For example, Iceland is reliant on trainees qualifying as specialists abroad and then returning to Iceland to practice, bringing with them international knowledge and experience. Iceland also pays the Swedish health service to provide care for all Icelandic cancer patients.

2. Introduction and Background

Three key representatives from the Icelandic health system (one from the Directorate of Health and two from the Ministry of Welfare) were interviewed to provide opinions and intelligence on workforce planning and opportunities for collaboration.

Overview of the Icelandic health system

Iceland is a small island country, with a population of 318,452 as of January 2011.[7] In 2010 Iceland spent 9.26% of its GDP on health care.[8] 8,586 health professionals were recorded in Iceland in 2010, an average of one health professional per 37 people.[9]

Iceland has a universal, comprehensive system which is free at the point of delivery and is funded by general taxation, with supplementary private provision for some outpatient, dental and pharmaceutical treatments. All foreign nationals are entitled to free health care only after six months residence in Iceland. Iceland provides the initial six year training for clinicians and full training for nurses and general practitioners. Medical students wishing to specialise in a particular area must do so abroad.

The Icelandic health care system is centralised, with two major institutions: the Ministry of Welfare, and the Directorate of Health. The Ministry of Welfare was created in 2011 and is responsible for policy development. The Directorate of Health is a government agency with responsibility for policy delivery. Its key functions are general management, data collection and monitoring, and provision of health care.

Overview of data collection methodologies in Iceland

Iceland collects data nationally, primarily via the Directorate of Health which has full responsibility for quality assurance of the data. The Directorate of Health collects data through reports from family doctors, hospitals and professional associations and illustrates headcounts. Variables extracted from the data include dates of registration and licence to practice, health care professions (e.g. nurses), specialisms (e.g. ophthalmology), certifications, dates of birth and nationalities. Data reporting is carried out by the Directorate of Health, Statistics Iceland and professional associations such as the Icelandic Nursing Association and Icelandic Medical Association, who combine their own data with those of the Directorate.

There are gaps in Iceland's data collection, particularly in terms of mobility. There is no data collection on numbers of medical graduates or where health professionals are working, both in Iceland and abroad. Health professionals are not obliged to report changes in their employment status (although most do so voluntarily). In the case of medical graduates, there is no mechanism for encouraging certain specialisms, as trainees are able to choose both the specialism and the country they wish to train in.

Table 16: Overview of data collection in Iceland

Scope of data	National Data collected on 31 health professions.
Type of data collected	Headcount, age, gender, dates of registration/licence, nationality, specialisation
Data collection bodies	Directorate of Health; health centres; professional associations
Data reporting bodies	Directorate of Health; Statistics Iceland; professional associations

[7] Statistics Iceland database (http://www.statice.is); figures true as of 1st January 2011.

[8] Statistics Iceland database; OECD, *Key Tables from OECD 2011,* http://www.oecd-ilibrary.org/social-issues-migration-health/total-expenditure-on-health_20758480-table1

[9] Statistics Iceland database

Gaps	No data collected on inflows/outflows; number of medical graduates; where professionals work (in Iceland and abroad); what specialisations graduates are training in overseas.

Overview of workforce planning in Iceland

Health workforce planning takes place nationally and is led by the Directorate of Health. The planning structure reflects the size of the country, with emphasis on consultation. The Directorate collates data on health workforce headcounts and estimates the likely future needs based on current statistics. The Directorate consults with health centre officials and professional associations, before making recommendations on training numbers to higher education institutions and the Welfare and Education Ministries. The higher education institutions and the two ministries work together to determine final quotas for training places which they fund.[10] Focus is given to balancing the numbers of health professionals and trainees with the budget available. By contrast, there is currently little focus on demand and no models in place.

Table 17: Overview of health workforce planning in Iceland

Main institutions involved in workforce planning	Directorate of Health; Ministry of Welfare, Ministry of Education; hospitals; primary care institutions; higher education institutions; professional associations
Structure of workforce planning	National
System of workforce planning	Directorate of Health collates data and consults with health centres/professional associations and recommends training numbers to higher education institutions and Welfare and Education ministries, who decide final numbers
Planning models and methods	No specific models; reliant on supply side factors (numbers of professionals; budget)

3. Successes and Challenges of Workforce Planning

Main successes of workforce planning

Iceland's main successes in health workforce planning lie in its ability to obtain an overview due to its size and the requirement of health professionals to register with the relevant associations before practicing. This means that data is collected and monitored across 31 health professions. For example, Iceland faced a shortage of nurses in the late 1990s and early 2000s. This was largely due to nurses choosing to pursue other related careers within Iceland, such as in the pharmaceutical industry. Aware of such shortages, Icelandic policymakers chose to increase the number of training places for nurses and was able to do so quickly. However, since the financial crisis and changes to laws on prescriptions by GPs, there are fewer jobs within the pharmaceutical companies and nurses are staying within the health system, leading to a surplus.

Main challenges of workforce planning

Iceland faces three major challenges in workforce planning: its capacity, the 2008 financial crisis, and the strength of professional associations in policymaking. Whilst Iceland is good at

[10] Currently set at 150 for nurses; 48 for medical doctors; 25 for physiotherapists; and 7 for dentists.

monitoring and reaching agreements over the numbers of health professionals required in the short term, it has been less able to develop a more systematic, longer term approach to workforce planning.

The size of the country makes monitoring of the health workforce numbers manageable, but it is difficult to create an accurate picture of the location and skills mix of people working across the health sector to enable more sophisticated proactive planning. This is due to the limited data available, especially on mobility, the capacity for workforce planning, and the lack of experience and expertise among planners. For example, Iceland does not count the number of graduates, does not require health employees to report on changes to their employment status, and relies on reports from health centres on shortages of specific skilled resources.

Iceland pays for medical training for all doctors and nurses, but doctors who graduate may choose to specialise and are required to go abroad to further their studies. Students travelling abroad are also responsible for sourcing their own funds. Consequently, Icelandic policymakers have limited knowledge of mobility, including what specialties medical graduates choose to study and where they go. Workforce planners can only estimate how many are not practicing in Iceland at any one time, with approximately a third of all doctors (ca. 500) estimated to be working or training abroad. The lack of robust information and control makes policymaking potentially reactive and inefficient. The cost to the system of doctors staying abroad following qualifying as a specialist is also unknown.

The 2008 financial crisis in Iceland and subsequent political reforms have created further challenges. For instance, hospitals have been closed at night, and health professionals increasingly choose to work abroad for financial reasons. Workforce planning has become increasingly focused on the short-term and on cost reduction. Consequently, there has been minimal political commitment to improving the strategic dimension of the planning system, with the priority to keep costs low.

The obligation for officials to consult with professional associations at both local and national level further complicates workforce planning, especially given the lack of data and the fact that collective bargaining between the government and the professional associations is guaranteed in law on any changes proposed to the professions.[11] In addition, the lack of gate keeping over co-payments for GPs owning their own practice is also a particular problem: GPs are paid by the state but are allowed to charge users additional expenses.

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;

[11] Translation of Health Services Act 2007, Article 13. Found at http://esb.utn.is/media/esb_svor/28_-_Consumer_and_Health_Protection/Annex_28-7_Health_Service_Act.pdf; accessed 11 January 2012

- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 3: Overview of successes and challenges of workforce planning in Iceland

Workforce planning dimension	Successes	Challenges
Monitoring	• Small size of country enables **easy tracking of headcounts** • Compulsory registration for all health professionals enables good overview	• **Lack of data on workforce mobility** • **Reliance on foreign countries** (EU and international, especially English speaking countries) for providing specialist training
Analysis	• Size of country enables good overview of system • **Easy to identify shortages**	• **Insufficient data on mobility** - as Icelanders go abroad to specialise medical specialties Icelanders learn abroad and patterns regarding country of work post qualification. • Lack of workforce planners and experience/expertise in this area
Governance and Strategic planning	• **Able to respond quickly when changes required e.g. shortages**	• Impact of financial crisis has led to much **more shorter-term planning and focus on cost reduction** • **Strength of professional associations in policymaking** • **Lack of gate keeping on co-payments**

Overcoming existing challenges in Iceland?

The aim of health policy makers is to move towards a more formal approach to workforce planning by continuing to improve the intelligence gathered and promoting a stronger collaborative approach so as, in the words of one official, '*add value while spending the same amount of money'* [12]*.* Icelandic officials are aware of the challenges they face in workforce planning, and have introduced two key initiatives designed to address them:

1. In 2011 the government increased the authority of the Directorate of Health in data collection, making them the main collector for all health data. The Directorate is currently strengthening its organisation to deal with its increased responsibilities.

2. The result of an advisory committee on the status of the Icelandic health system in September 2011 suggested the following, which is currently being implemented:
   - Reducing the number of maternity hospitals from nine to five
   - Closure of hospital departments at night (day care only)
   - Patients discharged more quickly
   - Increased resources for data collection and analysis in order to make better informed decisions and create a more flexible system.

[12] Interview, December 2011

4. EU level collaboration

Current collaboration with other European countries

Some collaboration already exists between Iceland and other European countries, although the financial crisis in 2008 has limited further moves towards collaboration due to lack of capacity and funding available. The most extensive form of collaboration takes place at health professional association level, including the doctors' association's involvement in a pan-Scandinavian scheme to improve workforce planning. Iceland is also reliant on other countries to provide specialist medical training, and pays Sweden to provide all cancer services to Icelandic patients.

Table 4: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Purpose of current collaboration
Monitoring	• Involvement with other EEA countries of mutual recognition of qualifications	• Improve understanding of numbers coming into Iceland, and the implications for medical practice. However, only done on an informal case-to-case basis • Assure health workers meet minimum qualifications in order to work in Iceland; make it easier for Icelandic health professionals to return from abroad
Analysis	• Informal interest in the UK and French health workforce planning system	• Improve understanding of challenges elsewhere in EU and learn lessons as much as possible
Governance and Strategic planning	• Collaboration by professional associations with similar organisations in Scandinavia (for example, SNAPS[13] for doctors)	• Predict future challenges for doctors across the Nordic countries, and estimate numbers for the next 10 years. Reports inform Icelandic planning.
Other	• Reliance on foreign countries for specialised training • Treatment of all cancer patients take place in Sweden (Iceland pays)	• Effective use of resources

Possible scenarios for further collaboration with European countries

Icelandic policymakers strongly favour further European collaboration. Iceland is reliant on other countries for providing specialised treatment and training and has limited expertise and capacity in workforce planning. It considers greater collaboration as a means of improving access to

[13] SNAPS (*Samnordisk Arbetsgrupp för Prognos- och Specialistutbildningsfrågor*) is a working group consisting of the major medical associations in Scandinavia.

data, of learning from other countries and of helping make their system more sustainable. Continuous participation in projects and initiatives on workforce planning, such as the EU Joint Action Group, across multiple countries was underlined as vital to improving expertise in a particular area, building up good contacts and learning from other countries.

A key motivation for Icelandic policymakers for collaborating in the European and international arenas is to understand the impact of workforce mobility on their health system. This is crucial as their medical trainees must go overseas in order to specialise. Icelandic officials wish to understand better what happens to these trainee specialists, whether they are likely to come back, and how other countries have dealt with similar problems. The key driver is cost as medical training is expensive. Officials underlined the importance of knowing where young medical professionals wanted to be, and which other countries Iceland was likely to compete with for health professionals.

Interviewees emphasised the importance of learning from best practice. They consider further European collaboration necessary for learning and acquiring new approaches for improved planning methods. A range of proposed opportunities for EU collaboration is outlined in table 5 below. Information exchange to promote best practice, primarily on workforce trends and mobility in other European countries was considered essential. Icelandic policymakers suggested the possibility of formal collaboration in health care training, to ensure health professionals had access to the best training available whatever their nationality and to mitigate the risk of unequal geographic distribution.

Sustainable international collaboration

For international collaboration to be sustainable, Icelandic policymakers emphasised the importance of building up good contacts and relationships and developing networks. They praised the EU Joint Action Group as a positive step towards fostering further collaboration. Given Iceland's limited resources, Icelandic officials also emphasised the importance of central EU financial resources as vital to facilitating coordination.

Table 5: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Stakeholders/Level of Engagement	Scenarios for collaboration (instrument)	Topic focus of future collaboration
• Monitoring	• Information accessible to all, though primarily researchers and planners	• Database on workforce trends and data in other European countries	• Improve knowledge of flows/trends and mobility between countries
		• Database/portal on research methodologies	• Improve understanding of workforce planning and learn from best practice
• Analysis	• Primarily high level officials	• Participation in projects and initiatives, including EU Joint Action Group	• Improve collaboration and analysis on workforce planning

• Governance and Strategic planning	• Workforce planners/higher education institutions	• Formal collaboration in specialist training	• Explore possibility that training in specialist areas could be provided across Europe, in order to improve/guarantee access to training without risk of 'brain drain'

Health Workforce Case Study – Ireland

1. Key findings

1. The Republic of Ireland[14] has a population of 4.47 million. The health system is centralised, with 75% funded through public taxation. The cost and access to different health services is related to age and income, with 36% of the population (2010) being entitled to a free service. 47.7% of the population have private health insurance. The system is managed predominantly by the Department of Health (DH) and the Health Service Executive (HSE).

2. The key successes of workforce planning identified in Ireland include:
    a. Improved data quality and collection from annual HSE census
    b. Ability to leverage information from other sources to compare with the HSE census data (e.g. HSE human resources (HR) system) and identify new patterns and trends. A recent example of this is feminisation of the whole health workforce
    c. Cultural shift towards better planning, through development of workforce planning teams, a national planning strategy and a new quantitative modelling tool developed by Foras Aiseanna Saothair (FAS).

3. The key challenges of workforce planning identified include:
    a. Lack of information on health workforce mobility and the private sector
    b. No single integrated management system collating all health workforce and trainee data
    c. Lack of emphasis on strategic planning due to the recent financial crisis and therefore importance of reducing headcounts
    d. Limited planning capacities within both the DH and HSE
    e. Lack of clear definitions on what roles and mobility terms mean when comparing to other countries

4. Suggestions for further collaboration cover five key areas:
    a. Standardisation of definitions and mobility measurements of health workers at an EU level
    b. A European wide focus group to analyse comparable mobility data and jointly work to address projected short falls in health professions
    c. Development of a web portal to facilitate the exchange of information and develop a resource of internal examples of good practice
    d. Development of forums to discuss practices and methodologies and how information is being used to improve the quality of workforce analysis. It was envisaged, where possible, that these take place through web-conferencing to keep costs to a minimum
    e. At the European level, development of a research network and a specialised unit to provide policy guidance and funding for further research. Development of

[14] We refer to the Republic of Ireland (ROI) as Ireland throughout the text. This does not include Northern Ireland.

such institutions would both improve and sustain the links between research and policy.

2. Introduction and Background

Four key representatives from the Irish health system (Irish Medical Organisation, Health Service Executive (HSE), Skills and Labour Market Research Unit, FAS (Foras Aiseanna Saothair/Training and Employment Authority), and Department of Health) were interviewed to provide opinions and intelligence on workforce planning and opportunities for collaboration. In addition, two other individuals from the DH were approached but were unavailable for an interview.

Overview of health system

Ireland has a population of 4.58 million[15] and 9.5% GDP was spent on health in 2009.[16] The health system is centralised, with 75% funded through public taxation[17]. The cost of services is related to the age and income of service users with 36% (2010) entitled to a free service (referred to as category I). The majority of the population are entitled to free hospital services but must make a contribution towards most other services (referred to as category II). In 2011, 47.7% of the population had private medical insurance but approximately 23% of the population do not hold either private health insurance or a medical card entitling them to free health services[18].

There is a clear delineation of roles with the way the health service is managed. The DH is responsible for policy development and evaluation of workforce planning and the Health Service Executive (HSE) leads on implementation of workforce planning.

Overview of data collection methodologies

The HSE collects data via a national annual personnel census which covers headcount; type of contract; gender distribution; full time/part time equivalents; number of employees (whole time equivalent). The HSE human resource system is used to age profile approximately two thirds of all health professionals in Ireland and make comparisons against census data. There is no data collected centrally for staff employed by other organisations and agencies, e.g. private sector and nursing homes. There is also limited information with regard to mobility issues both in terms of changing professions and inflows and outflow of health workers from the country.

Table 18: Overview of data collection in Ireland

Scope of data	National
Type of data collected	Health Service Executive (HSE) Annual Census includes: headcount; type of contract; gender distribution; full time/part time equivalents; number of employees, in terms of whole time equivalence (WTE). HSE HR/payroll system: Age profile
Data collection bodies	HSE

[15] Ireland Central Statistical Office, *Census of Population 2011: Preliminary Results,* p1

[16] Department of Health, *Health in Ireland: Key Trends* 2011, p57

[17] OECD,Statistical database

[18] Central Statistical Office, *Health Status and Health Service Utilisation, Quarterly National Household Survey, Quarter 3 2010,* 31 August 2011

Data reporting bodies	HSE; Department of Health
Gaps	Migration/Mobility; private sector, nursing homes

Overview of workforce planning in Ireland

The HSE is responsible for collating data, primarily from the annual health personnel census and human resource payroll system and provides monthly reports to the DH. The information is updated throughout the year, and the HSE produces monthly national reports to the DH.

The DH is responsible for setting national headcount targets and, within these targets, the HSE calculates how best to provide the workforce at national and regional levels in terms of skills mix. Some workforce planning takes place at service level (for example, mental health), however not all services currently have comparable/consistent approaches or tools.

In 2008, the FAS developed a quantitative modelling tool for the DH which aimed to provide better forecasting and better integration of workforce planning with financial planning at a national level. The tool brings together various sources of local and national data including information from the private sector. The model is founded on a number of assumptions regarding education/training patterns, historical trends in personnel, attrition rates, government measures/targets and ageing. The tool has enabled a better understanding of employment in the private and employment sectors to support future forecasting.

Table 19: Overview of health workforce planning in Ireland

Main institutions involved in workforce planning	HSE; Department of Health; Training and Employment Authority (FAS)
Structure of workforce planning	National
System of workforce planning	• HSE responsible for collating data: annual health personnel census and payrolls • Department of Health responsible for setting headcount targets • HSE calculates how best to provide workforce at national and regional levels within targets • Workforce planning also takes place across some service levels (for example, mental health) • Integrated Workforce Planning Strategy completed by DH and is to be implemented in full by end of 2012
Planning models and methods	The Expert Group on Future Needs commissioned FAS on behalf of the DH and HSE to develop a quantitative tool in 2008-09 which aimed to improve forecasting through better access to supply information. The tool uses national/local statistics (including Labour Force Surveys); registration data; survey data from private care homes and hospitals and voluntary bodies and Irish Prison Service data. The model is founded on certain assumptions made about education/training patterns; historical trends in personnel; attrition rates; government measures/targets and ageing.

3. Successes and Challenges of workforce planning

Main successes of workforce planning

In recent years, there has been a gradual increased focus on workforce planning and a move to a better understanding of the benefits that workforce planning can bring. The main current driver for this is the financial crisis and the need to be able to obtain the right number of health professionals with the appropriate skills mix. The need for a more formal national approach to workforce planning has started to be realised by the establishment of the HSE in 2005 and a small workforce planning team within the DH in 2011. The DH has developed an integrated workforce planning strategy shaping the future of workforce planning in Ireland, to be implemented from 2012. The strategy is designed to integrate health workforce planning, finance and HR.

In parallel to these developments, a quantitative workforce planning tool has been developed by FAS (outlined above) that combines a range of data from different sources to provide better forecasting and better integration of workforce planning with financial planning. There have also been improvements to the data collection and data quality through refinements to the national census. Different sources of data have started to be explored and analysed with the census data to enable development of trend patterns. For example, there has been an increase in the proportion of women working across all levels of the health service, including doctors. This feminisation will have an increasing impact on workforce patterns and numbers due to increasing numbers of part-time workers and career breaks.

Main challenges of workforce planning

Whilst Ireland has started to move towards a more systematic and comprehensive approach to workforce planning, it is in the early stages and has been hindered as a result of the financial crisis, with limited capacity and skills in this area. There are a number of information gaps, particularly in terms of mobility (between professions, and country inflows and outflows) and the private sector. This is a particular issue due to Ireland having an especially high proportion of foreign trained doctors (35.5%) and nurses (47.1%)[19].

Analysis is further complicated by the lack of one integrated management system, making comparison between data sources problematic due to the use of different measurements. Attention remains on short-term headcount statistics, with ad hoc progress being made to more strategic longer term workforce planning at a service level (e.g. mental health) rather than one systematic and comprehensive national model.

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;

[19] 2008 - http://www.oecd.org/dataoecd/8/1/44783473.pdf

- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 3: Overview of successes and challenges of workforce planning in Ireland

Workforce planning dimension	Successes	Challenges
Monitoring	• **Improved data collection** and **data quality** through refinement of national census • **Able to collect a lot of information**, though mostly limited to personnel/ageing of workforce	• **No integrated management system** • **Lack of information** on tracking migration, private sector • **Difficult to make comparisons with other countries** due to lack of consistent interpretation of definitions • **Overlap between public/private sector employment** (potential to double count)
Analysis	• **Able to leverage additional information when comparing between sources** • **Development of FAS quantitative modelling tool**, ability to identify trends *(confirmed to be highly accurate when compared to registration records)*	• **Issues when comparing data across multiple sources** • **Hard to understand impact of migration**: can assess non-EU flows but not those from the EU • **Limited capacity and expertise on workforce planning**, no training available • **No expertise on best skills mix** of health workforce
Governance and Strategic planning	• Increasing **awareness of what needs to be addressed** • **Development of small workforce planning teams** in DH and HSE	• **Financial crisis**: priority to reduce headcounts. • **Limited planning capacities** (around 4-5 staff nationally) • **No formal national approach to workforce planning** • Need for tighter links between Health Department and HSE to **progress changes quicker**

Overcoming existing challenges at the national level

The DH believes that the Integrated Workforce Strategy, which will be fully implemented by the end of 2012, will see a shift to a formal national workforce planning approach. However some planning experts believe this may be more aspiring than a practical solution. The interviews conducted illustrated a consensus that more capacity is required to continue to progress, building on a number of steps taken in recent years as outlined above and learning from other countries and examples of best practice.

The FAS quantitative modelling tool has seen a shift towards a better understanding of the workforce and the benefits such tools can bring. However, more needs to be done to develop

this model further and achieve a formal national approach. Focus continues to be on the headcount number set by the DH. An integrated management system referred to as PPARS was created in 1997 to provide a range of data through one system. However, full implementation of the system was suspended in 2005 due to major problems with the system during roll out, although the system continues to be used for some health professionals in Ireland.

4. EU level collaboration

Current collaboration with other European countries

There is currently limited collaboration with other EU countries with regard to workforce planning but all interviewees would welcome further opportunities to learn from other countries and exchange ideas and examples of best practice. An EU funded project on the nursing workforce (RN4CAST) is using a simplified version of the FAS model and is currently expanding the model to take in to account patient outcomes. This project involves 12 European countries. Ireland's HSE representatives have also visited Northern Ireland to learn from their local approach to workforce planning. In addition, the Irish Medical Organisation has an international unit which manages work across the EU and represents Ireland on a number of EU committees, such as European Junior Doctors (interests of doctors in training) and the Standing Committee for European Doctors, CPME (represents medical associations across Europe).

Table 4: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Purpose of current collaboration
Monitoring	• **Sharing information** on FAS tool (RN4CAST for nursing – project using adapted FAS tool involving 12 countries)	• Informal discussions with other EU countries interested in modelling tool developed within Ireland
Analysis	• **Fact-finding** (Northern Ireland)	• To understand localised approach to workforce planning carried out in NI
Governance and Strategic planning	• Some collaboration with EU, start of **Joint Action Group, OECD** (various meetings) and **WHO** (code of practice)	• Attend meetings across Europe to access and share information, enabling sharing of comparable data
Other	• **Representation on a number of EU/national bodies**, e.g. CPME (Standing Committee for European Doctors)- represents medical associations across EU	• To represent the interest of specific health professions internationally

Possible scenarios for further collaboration with European countries

Ireland has some informal links with other European countries and would particularly welcome the opportunity for a more formal co-ordinated approach.

It was recommended that the key area of focus should be on defining both a common language and an approach to collecting mobility related-data to enable accurate comparisons across the EU. The aim of these measures is to compare health professions/roles, and to obtain a better understanding of mobility issues and the impact this has on workforce planning in individual countries. It was highlighted that this would require careful consideration, to take into account the different capabilities of the data collection systems in each country and the changes

required. This would enable European countries to work collectively to start to address the projected shortfall of health professionals.

A simpler opportunity for collaboration in the short to medium term mentioned by all interviewees was to set up a web based portal to enable open sharing of information and best practice across Europe. This would need to be managed to ensure the information was easy to find and understand. It was recommended that a special section was dedicated to international best practice. Interviewees took this a stage further and suggested the use of discussion forums and working groups to focus on specific topic areas. It was envisaged that web conferencing should be explored assuming that face to face travel could be difficult in the current financial climate. This approach could be used to support some of the suggested collaboration topics above, e.g. common definitions and measurements of mobility data and a strategic group to develop an EU solution to the projected shortfall of health professionals.

It was also suggested that there should be an EU co-ordinated approach to future research with funding made available to support this. This would enable a more strategic approach to the range of research carried out and the opportunity for wider sharing between countries.

Table 5: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Stakeholders/Level of Engagement	Scenarios for collaboration (instrument)	Topic focus of future collaboration
• Monitoring	• Primarily high level officials/ researchers	• Single approach to collecting mobility information	• **Consistent comparisons of mobility data across Europe**
		• Consistent approach to defining skills of health professionals	• Standardise definitions and thereby **improve comparability of professions** and related data
	• Open access but targeted at officials/researchers	• **Web portal.** Need for data to be easily accessible, understandable and uploadable	• **Share practices/documents** • **Develop resource of best practice internationally**
• Analysis	• Representative to reflect topic being discussed (most appropriate 'expert' from country)	• **Forums on specific issues;** preferably through e-learning/web conferencing.	• **Discuss practices; methodologies; publications; how information is used.** • **Improve analysis, especially on migration**
• Governance and Strategic planning	• High level officials (with strong understanding of workforce issues and data)	• Collective work to address shortfall of health professionals by 2012	• Understand causes and possible solutions for shortages in health professionals

	• Researchers	• **Research network**	• **Improve coordination in research** through setting parameters, providing funding and encouraging links between research and policy (improved collective learning)

Sustainable international collaboration

It was noted that any collaboration needed to be realistic and scalable to the individual country size and capacity. Interviewees tried to suggest practical electronic methods for collaboration to make it as cost effective as possible, for example, web based portals and web conferencing. One example to enable collaboration across Europe to account for size, capacity and funding availability was to establish a research network to improve the co-ordination across Europe and manage a central funding source to support this.

From Ireland's perspective, if a shared solution to define different health professional roles and track mobility could be established, Ireland could develop a much stronger understanding of the impact this has on the workforce and factor this in to future planning models. In addition the sharing of best practice and a common approach to research would provide Ireland with better knowledge and expertise to continue to evolve and improve their approach to workforce planning.

Health Workforce Case Study - Italy

1. Key findings

1. Italy's National Health Service is regionally based and decentralised; it is funded through indirect taxes collected at the regional level;
2. Italian regions are responsible for the organisation and administration of the health care system and thus are the key players in health workforce planning;
3. Data are collected by multiple regional and national institutions. Data collection methodologies applied by these institutions tend to differ substantially in scope and purpose. Hence, integrating and reporting this information at the national level is difficult. Moreover, data covering specific sectors (e.g. private and non-hospital care) and specific indicators (e.g. full-time equivalents, gender and age distribution) are still missing.
4. While the healthcare system is decentralised, other aspects which influence HRH supply are regulated at the national level. University intakes, salaries and contractual obligations on the labour market are administered by the Ministry of Education and regulated by national law. Thus, regions do not have full control over some of the aspects that influence the supply of health workforce. Health workforce planning is thus not integrated at the national or regional level in Italy.
5. In order to partially overcome this problem, the Ministry of Health has developed a process for setting university intakes, which involves stakeholders at multiple levels. As part of this process, forecasts on health workforce needs, developed by regions and professional organisations, are analysed, compared and used at the national level.
6. The involvement of multiple stakeholder groups, including in particular professional associations, seems to be the only key success of the Italian system.
7. Key challenges of the Italian health workforce planning system relate to the limited comparability and availability of data and the limited transparency with respect to analysis and strategic planning carried out at the regional level.
8. EU level collaboration on monitoring and strategic planning could help addressing some of the challenges of the Italian system. The identification of key indicators and definitions at the international level could support the harmonisation of definition and data collection methodologies across Italy.
9. Collaboration should also focus on the engagement of multiple stakeholders groups at the international level. In particular, both regions and professional associations should participate in expert groups and meetings and should have access to international web platforms for the exchange of good practices.

2. Introduction and Background

Three interviews were carried out in Italy, with the Ministry of Health, an independent expert and the National Statistical Office (ISTAT). While regions appear to be the key players in the Italian health workforce planning system, their interest and engagement at the international level is limited. Hence, no region agreed to participate to the interview process. Similarly, professional associations were contacted, but did not respond to our questions.

Overview of health system

Italy has a population of 60.55 million (2010) and is divided in 22 regions (20 regions + 2 autonomous provinces of Trento and Bolzano); the central state and the regions share the responsibility for health care. In 2009, 9.5% of GDP (including public and private resources) was spent on healthcare, which is in line with the OECD average (9.5%).

Italy's National Health Service (*Servizio Sanitario Nazionale*) is regionally based and decentralised. Regional governments are in charge of the organisation and administration of the health care system, while local health authorities are responsible for the delivery of health care services and serve geographical areas with average populations of 300,000 inhabitants. The national government is responsible for ensuring the general objectives and fundamental principles of the national health care system[20], but does not interfere with the organisation, delivery and administration of healthcare provision, which is hence decentralised. It is important to stress, for the purpose of this case study, that health care is one of the few services that is organised and administered at the regional level. Other systems that play a role in health workforce planning, such as the university system, are instead centralised and administered by the national government.

The Italian National Health Service is financed primarily through indirect taxation (76%), not from general national revenues. Taxes are collected by the regions and are complemented by central government contributions, funded through value added tax revenues. Out of pocket payments and voluntary health insurance finance only a small part of the national health care budget (approximately 21%).

Overview of data collection methodologies

Data on human resources for health (HRH) are collected through multiple sources both at the regional and national level. Local health providers collect data on human resources at their disposal. Professional associations and registries collect data about their members, including their age, gender and employment sector, covering both the public and the private sector. Finally, data on the number of medical students are collected by universities. However, these institutions tend to collect **aggregated data on specific groups**, which are more difficult to analyse. For instance, local hospitals would collect data on the number of doctors, nurses and other professionals practicing in their structure, but not data on the specific person working in the hospital.

In order to obtain disaggregated data, which would provide information on the single health or medical professional, other sources need to be explored and used. Sources of administrative and economic information might be useful in this sense. For instance, the Ministry of Economy gathers data through the Annual Account (*Conto Annuale*), where economic expenditures, including National Health Service expenditures, are analysed and reported. The Annual Account provides detailed data on the regional distribution of HRH and the professional profile, age and gender of health workers within the public sector. This information might be supplemented by ad hoc parameters obtained by the tax authorities. However, as the purpose of data collection in those cases is not supporting health workforce monitoring and planning, significant data gaps can still be identified. For instance, the Annual Account does not report

[20] WHO (2009), Italy Health System Review, Health Systems in Transition, Vol. II No.6, 2009.

information on health workers' profession and professional registries do not provide information on the specialisation of the health or medical staff.

The information collected through the Annual Account and the aggregated data collected by the regions can also be supplemented through **data collected by professional associations, through the national registries**. For instance, as nurses are required to register in order to practice, the Italian nurses association can collect detailed data on the approximately 400,000 registered nurses. Data include information on gender, age, likely retirement age, sector (public or private), part-time or full-time and professional flows.

The Ministry of Health has access to all these sources of information and complements them with its own data collection activities. In this sense, the Ministry of Health has a variety of data at its disposal, including data on headcount, geographical distribution, specialisation and active workforce. However, data on age and gender distribution of health workers, full-time equivalents and professional and geographical flows of HRH still appear to be limited. Data coverage is also limited and the granularity of data varies across health workforce groups. While the 8 recognised medical professions (*professioni mediche)*[21] are covered in detail, the other health professions (*professioni sanitarie*) are not. For data collection purposes, health professions are grouped within 5 main categories[22]; hence, data are not reported by single profession, nor do they provide details on regional allocation and other workers characteristics (gender, age, employment status and specialisation). Moreover, there are still gaps related to the private sector and only data on public and private hospitals staff appear to be exhaustive.

Even though the Ministry has access to multiple data sources, it is important to stress that there is no system for the comparison and integration of data on HRH. Ultimately, it is very difficult to obtain a complete picture of the headcounts and characteristics of HRH in Italy. Between 2008 and 2010, the National Statistical Office (ISTAT) has completed a project, financed by the Ministry of Health, to assess the availability of data on HRH and to compile an integrated database, in order to report such database. As part of the project, ISTAT was able to collect a large amount of information and data from multiple sources, organise them in a comprehensive database and identify specific data gaps. However, the project was not re-financed and there has not been any follow up on this type of action. Therefore, there is no comprehensive and updated database reporting information on HRH in Italy.

Table 20: Overview of data collection in Italy

Scope of data	Both local, regional and national level 8 medical professions; 5 health professional groups (not exhaustive) Public sector (private not exhaustive); hospitals, but not other healthcare structures
Type of data collected	Stock data: Headcount, geographical distribution, active workforce, specialisation; non-complete data on age and gender Flow data: Limited data on professional flow; no data on geographical flow

[21] Physicians, veterinary, dentists, pharmacists, biologists, chemists, physicists, psychologist

[22] Nursing and midwives, rehabilitation area, technical-diagnostic area, technical-care area, prevention area

Overview of workforce planning

Planning for HRH takes place at the regional level in Italy, as regional health departments are responsible for the organisation and administration of health care provision. Due to the decentralisation of power, regional health systems and related workforce planning structures might differ substantially across regions. Therefore, there is not a central health workforce planning institution and the central government does not have a clear overview and cannot influence regional health workforce planning systems. Regional differences also do not allow the central government to make meaningful recommendations and to attempt to harmonise the systems.

As a consequence, there is no harmonisation in terms of models and tools used to analyse HRH and forecast future demand and supply of HRH. The extent to which and the way in which regional governments analyse and forecast present and future health needs to ensure adequate supply of health workers varies across the regions. Most importantly, the fact that the educational systems and the labour market are administered at the national level implies that regions are not able to influence supply of health workforce to meet present and future health needs.

While the health system is completely administered at the regional level, **the Ministry of Education, University and Research[23] (MIUR) manages student intakes and establishes the content of university and training programmes.** Similarly, contractual obligations and rights, working hours and salaries are set at the national level and not administered at the regional level. As the devolution of powers in the healthcare sector is not matched by devolution of other powers, regions are not able to develop integrated health workforce planning systems. Similarly, the Ministry of Health and the MIUR do not have the power and the capacity to administer human resources for health, without inputs from the regions.

In order to partially overcome this challenge, the Ministry of Health has put in place a process to set university quotas in collaboration with regions, professional associations and the Ministry of Education. This allows the Ministry of Health to influence the supply of HRH, on the basis of inputs from regional authorities and professional associations. Every year, regional departments of health develop estimates on the short-term demand for health workers, which are collected by the Ministry of Health. These estimates are developed independently by the regions and they specify the annual HRH requirement for each profession. According to the Ministry of Health, regions take into consideration stock and flows of health workers, regional universities capacity and existing career paths in order to develop these estimates.[24] Some regions have created observatories or research centres that are in charge of running mathematical models to establish HRH demand.

In parallel, the Ministry of Health asks national professional associations to develop their own estimates on health needs and related supply requirements. These estimates, which take into consideration also the private sector, are then compared with forecasts developed by regional authorities. At this point, a meeting between the Ministry of Health, regions and professional associations is organised to discuss the health needs and to debate any possible inconsistency across different estimates. Only once the three stakeholder groups have agreed

[23] Ministero dell'Istruzione, Universita' e Ricerca – MIUR

[24] There is however no evidence that this is the case, as the regions do not disclose the data and models they use.

on common estimates and forecasts on present and future health needs, these are shared with the MIUR, which is in charge of setting university quotas. The MIUR than considers universities' capacities before setting university quotas. This process is summarised in the figure below.

Figure 3 Integrated Health Workforce Planning in Italy

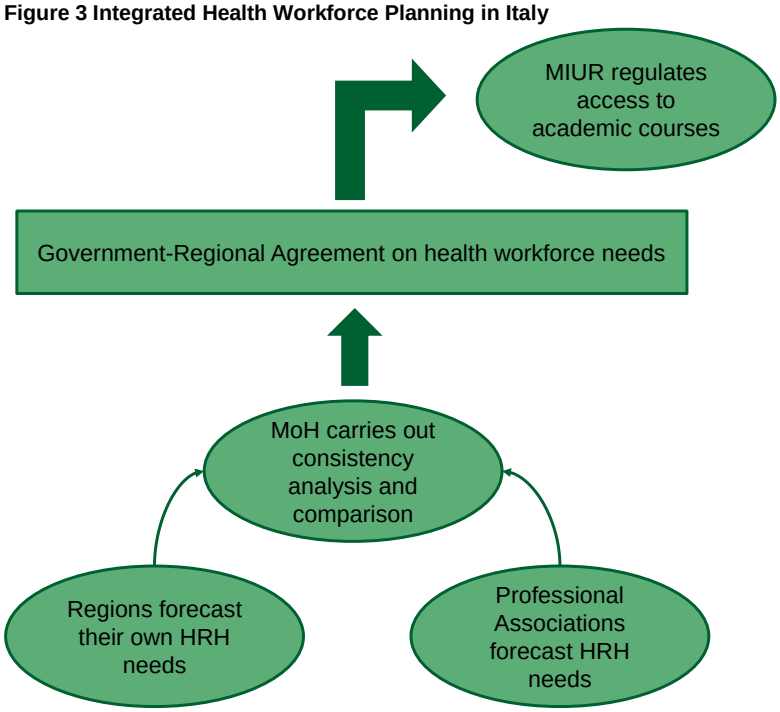


Table 21: Overview of health workforce planning in Italy

Main institutions involved in workforce planning	Regional health departments, Ministry of Health, Ministry of Education (MIUR), professional associations
Structure of workforce planning	Regional, but HRH supply is established at the national level
System of workforce planning	Data collected and analysed by regional health departments and professional associations. Central government (Ministry of Health) has no control over the models and tools used to establish health workforce needs and related health requirements. Ministry of Health, regional health departments and professional associations meet annually to agree on common short-term forecasts on health needs Estimates on annual demand for health workforce are shared with the MIUR, which established university intakes, based also on university capacities.
Planning models and methods	No common supply/demand models. Substantial differences across regions in terms of planning methods and models used

3. Successes and Challenges of workforce planning

Stakeholders interviewed as part of this case study have identified key successes and challenges of health workforce planning in Italy. The successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast (e.g. expenditure);
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Main successes of workforce planning

Stakeholders have been able to identify only a very limited number of successes of health workforce planning in Italy. The Ministry of Health has suggested that one of the main positive aspects of the Italian system is the involvement of multiple stakeholders in the health workforce planning process. In particular, professional associations play an active role in all the different phases of health workforce planning. They collect and analyse data on their members, in order to develop estimates on short-term future health workforce needs, which are taken into consideration in the planning process. Professional associations are in fact involved in the process for the determination of university intakes, together with regional and national authorities. Other stakeholders however suggested that this involvement might yet be further developed.

Main challenges of workforce planning

The main challenges of health workforce planning in Italy are related to three main aspects:

- The **lack of an integrated and complete database**, which would gather and report information collected through multiple sources;
- The decentralisation of the health systems and the consequent **differences across regions**;
- The **lack of an integrated strategic planning process**, due to the fact that, while the health system is decentralised, other aspects influencing HRH administration and management are governed at the national level.

Clear challenges with respect to health workforce monitoring are due to the fact that information are collected through different sources, using primarily aggregated information. Consequently, central government institutions (e.g. statistical office, Ministry of Health, Ministry of Education) obtain information and data from multiple sources, which are often not comparable. Moreover, there is no on-going effort to integrate data obtained by multiple sources in a unique database, which could be accessed by national and regional workforce planning authorities. In addition to issues related to data fragmentation, the granularity of data available varies substantially across health professions and clear gap for certain specialisations exist. As a consequence, it is difficult to carry out comprehensive and centralised monitoring of health workforce supply and demand in Italy. The only reliable source

of information, at the national level, is the sample data collection carried out by the Statistical Office, as part of a one-off project for the Ministry of Health.

Due to the poor quality and limited availability of data and due to the decentralisation of the health system, the analysis of supply and demand for HRH is not carried out at the national level. There is no central health workforce planning institution that models the current and future health workforce supply and forecasts health workforce demand. Health workforce analysis is supposed to be carried out at the regional level, by health departments in charge of the organisation and administration of health systems. However, there is no evidence on models and tools used by regions and how the results of this analysis are incorporated in the planning process. The Ministry of Health suggests that some regions have created observatory for the mathematical modelling of supply and demand of HRH. It is however unable to obtain more specific information on the models and tools used within these and other regions.

Finally, regions are not able to effectively plan their workforce as university intakes and other factors are administered at the national level. While the healthcare system is decentralised, the university system and labour markets are regulated at the national level. MIUR is in charge of setting university intakes and salaries and contractual obligations are defined at the national level. This also prevents regional governments to control all the factors that influence the supply of health workers. This suggests that it is not possible to have integrated health workforce planning in Italy. The process put in place by the central government to set university quota has however partially managed to overcome this problem.

Overcoming existing challenges at the national level

In order to overcome some of the challenges related to the decentralisation of organisational and administrative powers in Italy, the government has put in place an **integrated process for the setting of university intakes.** The process described in Figure 3 aims to ensure that regional health needs are considered when setting university intakes at the national level. In this sense, the establishment of this process represents an important step towards a more integrated health workforce planning. However, the extent to which MIUR considers these forecasts while setting university quotas is difficult to assess. According to some stakeholders, the main criterion for determining intakes is still universities' capacity and not HRH needs.

Hence, despite the establishment of this process, the Italian health workforce planning system cannot yet be considered fully structured and integrated. Regional and national authorities involved in workforce planning still have a narrow vision of what might influence HRH supply and planning, in particular from the organisation point of view. For instance, they still do not consider retention strategy, changing salaries, adapting labour market regulations as instrument to influence health workforce demand and supply. More should be done to include these dimensions in the regional or national health workforce planning strategies and to ensure that the authorities in charge of health systems organisation and administration have access to these instruments.

The lack of comprehensive and comparable data and the limited availability and use of models to forecast health workforce demand and supply still represent a challenge. Initiatives should be proposed to ensure that data collection is coordinated and data reporting is centralised. In this way, data and information on HRH in Italy would be more accessible. Moreover, the introduction

of common models and tools for the analysis of HRH would strengthen the reliability of regional forecasts.

Table 22 below summarises the key successes and challenges of the Italian workforce planning system.

Table 22: Overview of successes and challenges of workforce planning in Italy

Workforce planning dimension	Successes	Challenges
Monitoring		No comparability No data on certain professions Limited data on the private sector
Analysis		No centralised health workforce analysis Different models and tools used across regions Central government not aware of models used
Governance and Strategic planning	Integrated process to set university quotas	No integrated health workforce planning system at regional or national level Lack of control at the regional level over aspects such as salary, contractual obligations, labour market regulations, university degree and training content

4. EU level collaboration

Current collaboration with other European countries

The extent of collaboration between the Italian healthcare system and the European Union or other national systems appears to be limited. The main platform for collaboration identified by the stakeholders is the EU Joint Action on Health Workforce Planning, which is currently in the preparatory phase. Moreover, any collaboration has so far been conducted mostly at the EU level, on an informal basis and without involving extensively the regional authorities that are in charge of the organisation and administration of the healthcare system.

The Ministry of Health is the main actor involved in collaboration efforts with other European countries; regions, with a few notable exceptions, are not particularly active at the international level. For instance, Regione Veneto has been involved in the Health PROMeTEHUS project, investigating the mobility of health professionals, and it participates to international conferences and other forms of collaboration conducted mostly on an informal basis.

Possible scenarios for further collaboration with European countries

Stakeholders identified a few opportunities for EU collaboration that could improve health workforce planning in Italy. Possible collaboration should focus primarily on strengthening monitoring and strategic planning capabilities of national and regional authorities. Moreover, further collaboration between national data collection institutions should be envisaged to facilitate the exchange of data. No recommendations were made with respect to

exchanges of good practices that would support the analysis of demand and supply for HRH. Models and tools for health workforce planning are in fact designed and implemented at the regional level and can hardly be influenced by new policies at the national or international level. Possible scenarios for collaboration related to the monitoring and strategic planning of HRH are presented separately below.

Monitoring

Stakeholders suggested that more can be done at the international level to support data collection and to facilitate the exchange of data across countries.

Firstly, the **identification of key indicators and definitions** at the EU level could not only ensure the comparability of data at the international level, but could also allow countries to benchmark their own data collection methodologies to international standards. In the case of Italy, this would help the national government address issues related to the limited comparability of data collected at the regional level. If key indicators and definitions were identified at the EU level, the central government could recommend regions and national data collection institutions to comply with these new international standards. Regional and national data collection methodologies would be standardised and consequently the quality and completeness of datasets to support workforce planning could be assessed and monitored. This would ultimately be instrumental to the development of an integrated national database. In this sense, experts groups focusing on the identification of a list of key indicators and definitions should be created. This key indicators and definition should be designed based on the needs of health workforce planning. The starting point for the identification of common indicators and definitions should be the work carried out by international institutions, such as Eurostat, OECD and WHO, as part of the Joint Questionnaire, where common definitions have already been developed, but can be expanded further, especially to cover other health professions and sectors.

Secondly, stakeholders have suggested that international collaboration should envisage **recurrent exchange between national statistical offices**. The decentralisation of the healthcare system in Italy implies that it would be difficult to involve all authorities in charge of data collection. For this reason, it would be easier and more useful to establish a platform for collaboration between representative national statistical offices. In the case of Italy, the national statistical office (ISTAT) could be given more responsibilities to communicate and engage with statistical offices in other countries, in order to agree on common standards and definitions for data reporting. While this is not likely to influence much data collection activities, it would at least support better comparability and accessibility of reported data. It could also be instrumental to the design and development of a common minimum database on both stock and flows of HRH.

Governance and Strategic Planning

EU level collaboration should focus on supporting and ensuring the **exchange of good practices and the collaboration between multiple stakeholder groups at different levels across Europe.** Integrated and effective health workforce planning needs to involve multiple stakeholders, not only national Ministries of Health. In order for collaboration to be effective and useful, it should involve also other groups, such as for instance, expert planners, data collection authorities and professional associations.

For this reasons, interviewees in Italy have suggested that international conferences and meetings which involve exclusively Ministries of Health should be replaced or complemented by platforms for collaboration among other stakeholder groups. In this sense, the creation of **expert groups with specific focus** should be envisaged. The specific groups should be composed of national authorities, regional authorities, data collection institutions and professional associations. These groups should meet frequently (e.g. four times a year) to discuss specific topics relevant for their area of expertise and to exchange good practices.

Alternatively, the **development of web portals or platforms** that can be accessed by all the stakeholders involved in health workforce planning could also be developed. This would allow national and regional experts to get access to information, data and good practices produced and used in other countries.

In the case of Italy, both these scenarios of collaboration would help ensuring that regional authorities and professional associations that are directly involved and are responsible for health workforce planning are also exposed to practices in place in other countries. This would be instrumental to the exchange of good practices and the development of an integrated workforce planning system at the national and at the European level.

Table 23: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	Key indicators and definitions	Expert groups should meet to define common indicators and definitions that would be used as benchmarks for data collection both at the national and regional level
	Recurrent exchange between National Statistical Offices	National Statistical Offices should meet frequently to discuss common standards for data reporting. This would support the comparability of data at the international level and the creation of a minimum dataset
Analysis	n/a	n/a
Governance and Strategic planning	Focused experts groups	Focus experts groups involving multiple stakeholders, such as national authorities, regional authorities, data collection institutions, professional associations. During the discussion, experts groups should exchange information, data and good practices, related to their particular field of expertise and competencies
	Web portal	Reporting data, information, models and tools. This should be accessed by all the stakeholder groups involved in health workforce planning at the national and

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
		regional level.

Sustainable international collaboration

International collaboration should aim to produce clear outcomes and it should result in the design and implementation of specific products. For instance, the identification of key indicators and definitions could be sustainable if these are reviewed recurrently, on the basis of development and changes in the structure and competencies of HRH. At the same time, the creation of clear output such as a web portal or a minimum dataset developed by national statistical offices would also ensure the sustainability of international collaboration.

On a basic level, the majority of interviewees believed that a shared open portal with accessible information targeted to a lay audience (as opposed to very technical detailed academic papers) would be of great benefit and encourage further networking and collaboration. If the information gathered could be added to and monitored overtime, an intended result would be better intelligence and improve longer term strategic planning in the future.

Interviewees also thought it was important to ensure the appropriate level of representation according to the area. For example, collaboration could range from senior policy groups to data collection groups and meeting between regional representatives.

Health Workforce Case Study – Lithuania

1. Key findings

1. The Lithuanian health care system is decentralised with the Ministry of Health having overall responsibility for the public health care system's performance and for the general supervision of the entire health care system. Municipalities are responsible for the provision of about 60% of public health care services.

2. Data on human resources for health in Lithuania are collected at national level by multiple institutions and data coverage is comprehensive. **There is no centralised and consistent health workforce planning in Lithuania**. Institutions involved in elements of health workforce planning include the Ministry of Health, the Ministry of Education and Science as well as the Lithuanian University of Health Sciences.

3. There are a number of challenges for workforce planning in Lithuania. Whilst the quality of data is good, the high number of institutions involved in data collection means that ensuring comparability remains a challenge. Professional and geographical mobility present an additional challenge for the monitoring dimension in Lithuania. Further challenges include estimating demand and the lack of an integrated system of workforce planning.

4. Lithuania has participated in international projects such as RN4Cast, PROMeTHEUS and the EU lifelong learning programme. The country also collaborates with strategic countries on a bilateral basis and the Lithuanian University of Health Sciences has imported supply and demand side models for health workforce planning from Australia and the Netherlands respectively.

5. Possible scenarios for further collaboration with European countries identified by stakeholders in Lithuania include data exchange on migration via a minimum common database on migration, the exchange of good practices for supply and demand side modelling as well as the further promotion of university level collaboration to create integrated, cross-national training for health workforce professionals.

2. Introduction and Background

Three interviews were carried out in Lithuania with representatives from the Ministry of Health, the Ministry of Education and Science and the Lithuanian University of Health Sciences.

Overview of health system

Lithuania has a population of 3,324,000 (2010), distributed over 10 counties which are themselves subdivided into 60 municipalities. 6.2% (2008) of the national GDP is allocated to healthcare, which is primarily funded by public funds (73% in 2008). In 2010, 75,400 people were employed in the health care system in Lithuania, which makes up 5.71% of the total workforce.

The Lithuanian health care system is decentralised with the Ministry of Health having overall responsibility for the public health care system's performance and for the general supervision of the entire health care system. Municipalities are responsible for the provision of about 60% of public health care services. This includes all ambulatories, primary health care centres, the majority of polyclinics and small and medium-sized hospitals. Municipalities decide on investments for municipal institutions within limits of municipal budgets. They employ administrative staff (employment of medical staff is the responsibility of the institutions). All health care providers (both private and state run) are registered and licensed by State Health Care Accreditation Agency. However, only those providers who have contracts with the State Sickness Fund receive reimbursement. It is up to the Ministry of Health and the State Sickness Fund to decide which providers and which health care services are reimbursed.

Overview of data collection methodologies

In Lithuania, data on human resources for health are collected at the national level by numerous bodies. Data coverage is comprehensive. The **State Health Care Accreditation Agency**, the **State Medicines Control Agency** and the **Chamber of Dentists** collect data on licences, gender and age. The Institute of Hygiene's **Health Information Centre** collects data on full time equivalents and distribution. The **State Sickness Fund** collects data on services provided by health personnel.

Data is reported by the **Health Information Centre** which produces annual reports and also reports to the WHO. In addition, the database of registered professionals of the licensing bodies is available online and other data are available on special request.

Table 24: Overview of data collection in Lithuania

Scope of data	National and regional, public and private, students and graduates Includes, amongst others, doctors, midwives, nurses, nursing assistants, pharmacists and pharmacists assistants, dentists, dentist assistants, oral hygienists, dental technicians, physiotherapists, occupational medical therapists
Type of data collected	Wide range of data including age, gender, employment, geographical distribution, services provided

Overview of workforce planning

There is no centralised and consistent health workforce planning in Lithuania. In 2003, the Lithuanian University of Health Sciences was appointed by the Ministry of Health as a supervisory organization for implementation of the **Strategic Planning of Health Human Resources** in Lithuania for the 2003–2020 programme. The health care planning system is not an institutionalised programme. There are no annual plans and there is no specific workforce planning institution. Institutions involved with elements of planning include the Ministry of Health, the Ministry of Education and Science as well as the Lithuanian University of Health Sciences.

The **Ministries of Health and Education and Sciences** are responsible for indicative planning of the number of students in medical universities and colleges. The **Lithuanian University of Health Sciences** is involved in different projects for the Ministry of Health on health care and health care improvement, some of which are related to human resource planning.

Human resource planning in Lithuania considers both supply and demand side indicators. On the supply side, it considers age, gender, head count, numbers enrolled, number of drop-outs, percentage of leave (to different countries), and assumptions regarding retirement (full or part retirement). On the demand side it considers, amongst others, demographics and health care services. With regards to **specific models**, the Ministry of Health uses situation analysis and the Lithuanian University of Health Sciences has implemented the Australian supply side model of John Dewdney and the Dutch (NIVEL) demand side model to do workforce planning.

Table 25: Overview of health workforce planning in Lithuania

Main institutions involved in workforce planning	Ministry of Health, Ministry of Education and Science, Lithuanian University of Health Sciences
Structure of workforce planning	National but not centralised and consistent workforce planning
System of workforce planning	Projects on human resource planning Planning regarding the number of medical students
Planning models and methods	Considers supply and demand side characteristics. Australian supply side model of John Dewdney Dutch (NIVEL) demand side model

3. Successes and Challenges of workforce planning

The table below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 26: Overview of successes and challenges of workforce planning in Lithuania

Workforce planning dimension	Successes	Challenges
Monitoring	Good quality data Financial support from EU structural funds	Ensuring comparability of data Monitoring professional and geographical mobility
Analysis	Collaboration between stakeholders	Ad hoc, rather than continuous, analysis of data
Governance/strategic planning	Political support behind human resources for health and strategic planning since 2000 which has survived changes in government	Ageing workforce High dropout rates in universities

Main successes of workforce planning

Stakeholders have been able to identify only a limited number of successes of health workforce planning in Lithuania. Data collection and monitoring in the country are carried out on a regular basis and are financed by the national budget. Recently, the ANALYSIS project (completed in June 2011) obtained funding from the EU Structural Funds. All interviewees point to the good quality of the data collected. With regards to the analysis dimension of workforce planning, stakeholders identified the collaboration between the Lithuanian University of Health Science (responsible for data analysis) and the Ministries of Health and Education as a success; the analysis provides the basis for joint action by these two ministries. In 2002, for example, the quota for state funded university places was doubled by the Ministry of Education and Science from 200 to around 400 on the basis of a project carried out by the university on attrition and retention rates. More generally, stakeholders note the continued political support behind human resources for health as an additional success. Strategic planning, in one form or another, has been in place in Lithuania since 2000 and has survived changes in government.

Main challenges of workforce planning

Stakeholders have identified a number of challenges facing workforce planning in Lithuania with implications for all three dimensions of planning. Regarding monitoring, whilst the quality of data is good, **the high number of institutions involved in data collection means that ensuring comparability remains a challenge. Professional and geographical mobility present an additional challenge for the monitoring dimension in Lithuania.** For geographical mobility, the certificates of good processional standing (CGPS) for health personnel wishing to practice abroad issued by the Ministry of Health do not precisely reflect real migratory flows. The two mechanisms currently used in Lithuania to check real migratory flows[25] are both complex and time consuming. Professional outflows are a further challenge for monitoring as it is difficult to monitor such movements given that data collected through professional registries is only updated every five years and hence do not provide a timely indication of attrition rates.

For the **analysis dimension** of workforce planning, estimating labour market needs represents a particular challenge. The Ministry of Education and Science is working together with the Ministry of Economy on future specialist mapping, also beyond the health sector, but the process needs to become more efficient; there is currently often still a mismatch between the qualifications specialists have and actual labour market demand.

The lack of an integrated system of strategic workforce planning in Lithuania has implications for the analysis and strategic planning dimensions in particular. The analysis of data, whilst feeding into policy considerations of the Ministries of Health and Education and Science, is done on a project basis and hence is not continuous. The Ministry of Health puts out calls for tenders on studies regarding human resources for health for which a number of organisations – including the Lithuanian University of Health Sciences – compete.

From a strategic planning perspective, there are also two main challenges for health workforce planning in Lithuania that are independent from the planning structure itself, namely the **ageing of the healthcare workforce and the high dropout rates in universities**. These challenges mean that inflows of students are not sufficient and reaffirm the need for integrated workforce

[25] The first requires a manual check of professionals' names and surnames in the online databases of receiving countries. The second links personal codes of health personnel issued CGPS to the Social Security database at the Ministry of Social Affairs and Labour, which contains records of all employed persons (both in public and private sector). The latter method does not give a precise indication of the proportion of migrants, but does indicate how many are inactive/employed outside the health sector.

planning. Demographic projections on the ageing of the workforce will have a significant impact on the human resources for health system and lead to considerable losses, particularly given that physicians in Lithuania currently retire comparatively late. The high dropout rates (20% of medical and nursing students enrolled in universities do not finish their studies), coupled with the fact that many students do not register or emigrate, mean that the number of students enrolled is much larger than the actual inflow into the health workforce.

Overcoming existing challenges at the national level

According to the interviewees, a number of measures have been considered at the national level to tackle some of the aforementioned challenges.

For data comparability, a study carried out by the Lithuanian University of Health Sciences concluded that it is **possible to link the data collected by different institutions**. In particular, it would be possible to collect data throughout the professional lives of medical students: from university enrolment, to graduation, to placement in job market. This data was obtained by linking students' as well as health professionals' records to the Social Security database at the Ministry of Social Affairs and Labour. On the basis of the results of this study, the Lithuanian University of Health Sciences reconfirmed the need for development of a comprehensive registry/database for data reporting. Development of such a registry is high on the agenda of the Ministry of Health, however has not yet been implemented due to financial constraints.

To address the challenges of an ageing workforce and high dropout rates, **quotas for university places in Lithuania have been doubled** but given the long education cycle, it will take time to overcome the challenge. Reducing university drop-out rates remains a government and university priority. The Lithuanian University of Health Sciences has also been looking at good practices in the Netherlands, where the selection process for new students is moving away from a lottery system to a system that takes into account factors such as qualifications, motivation and extra-curricular activities[26]. Using this new system, the Netherlands has obtained better results in terms of student retention. The Lithuanian University of Health Sciences suggested that the system currently in place in Lithuania is not suitable for medical and nursing subjects and should be replaced by a system that takes good practices such as in the Netherlands into account.

4. EU level collaboration

Current collaboration with other European countries

All stakeholders interviewed voiced support for international collaboration. Lithuania has participated in international projects such as RN4Cast, PROMeTHEUS and within the framework of the EU lifelong learning programme. In addition, Lithuania has also collaborated with strategic countries on a bilateral basis.

Table 27: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Topic focus of current collaboration
Monitoring	Bilateral data sharing with the UK	Data exchange in the field of migration to facilitate a better

[26] The lottery system does not only look at academic records, but also at other indicators of how motivated a student is before they are allocated a place at medical school. They look, for example, at motivation and extra-curricular activities.

		understanding of emigration from Lithuania
Analysis	RN4Cast	Identify innovative forecasting methods addressing not only volumes, but also quality of nursing staff and patient care. The Lithuanian University of Health Sciences has developed a comprehensive country case study for this project.
	PROMeTHEUS	Understanding health professional mobility
	Bilateral exchange of good practices	Exporting supply and demand models from Australia and the Netherlands
Governance/strategic planning	EU lifelong learning programme Bilateral cooperation with strategic countries including Kazakhstan and the Nordic countries	Cooperation for the training of health workforce professionals

Stakeholders in Lithuania perceive the **exchange of data in the field of migration** to be important. Lithuania has already checked data from the UK – the main destination for Lithuanian health workers – illustrating that it is possible to link migration data across countries. Data exchange can and should, nevertheless, be improved.

The Lithuanian University of Health Sciences **also sees the exchange of good practices as crucial**. With regards to analysis, personal connections nurtured during international conferences provided the basis for the exchange of modelling good practices. As a result, the Lithuanian University of Health Sciences has replicated the Australian supply side model and the Dutch NIVEL demand side model to do workforce planning. The Lithuanian scientific experts underwent a period of training in the Netherlands where the models had been developed. They were then able to replicate the model and adapt it to the Lithuanian context. Contrary to much expectation, Lithuanian scientific experts argued that it was not too difficult to adapt the foreign models to their national context. The main challenges were related to limited data availability in Lithuania, which did not allow them to fully exploit the model, rather than to different national institutional contexts or lack of resources.

One criticism voiced by stakeholders of collaboration at European level as it stands is that whilst it connects individuals across Europe working on health workforce planning, it does not allow people to understand how one country reached a given level of development in terms of health workforce planning. **Good practice sharing, consequently, should not only focus on results but also on the process of getting there.**

In the field of **education and training**, the Ministry of Education and Science sees the value added of the EU lifelong learning programme and increased international collaboration more generally. Lithuania participates in this EU programme and also collaborates on a bilateral basis with strategic countries. The Ministry of Education and Science, for example, plans to establish

a joint sector centre for life-long learning with Kazakhstan. Baltic-Nordic cooperation also takes place for the training of the healthcare workforce at ministerial and institutional level, for example, with the promotion of Nordic languages. Lithuania also collaborates with countries such as China and Belarus and hopes that through exchanging expertise and experience, Lithuania will also be able to increase its market share in training services.

Possible scenarios for further collaboration with European countries

The scenarios for further collaboration identified by stakeholders in Lithuania covered all three dimensions of workforce planning and, in particular, build on past experience with data exchange as well as the exchange of good modelling practices.

Table 28: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	Data exchange on migration at EU level	Minimum common database on migration which first requires data to be harmonised at the national level
Analysis	Exchange of good practices International research projects	Supply and demand side modelling and other aspects of workforce planning
Governance/strategic planning	Development of joint degree programmes through university level collaboration	Promote collaboration with foreign universities to create integrated studies across countries
	General principles on the free movement	Encouragement of the circular migration of students/recent graduates

The Ministry of Health and the Lithuanian University of Health Sciences in Lithuania emphasise the need for **further exchange of data in the field of migration**. They suggest that a minimum common database on migration should be created at EU level which requires, as a prerequisite, the harmonisation of data at the national level as well as the development of a glossary at European level. More general sharing of healthcare workforce data could also take place via workshops, presentations and the DG MARKT Internal Market Information System which could facilitate data sharing between competent authorities. The comparability of such data is particularly important to enable comparison over time. Sharing could take place at every level – both at EU level as well as by competent national authorities – and could be managed by the Commission who has both the authority and financial resources.

Given Lithuania's previous positive experience with the **exchange of modelling good practices**, stakeholders further support this type of international collaboration. This could, in the future, take place at EU level rather than solely through bilateral agreements. The EU could create an umbrella or platform to facilitate exchange generally and specific exchange within this umbrella on a bilateral basis.

With regards to the education and training of the healthcare workforce, the Ministries of Health and Education recognize the value of European collaboration. The Ministry of Education and Science is planning measures to use structural funds to support joint degree programmes at all

levels (integrated studies) and sees room to develop this further through university level collaboration in a variety of health care professions. The national benefit of the circular migration of students for the healthcare system could be further enhanced by the establishment of general principles on free movement of students at European level which oblige students receiving state funding to return home for a period of 2 to 3 years after having received training abroad.

Sustainable international collaboration

To ensure the sustainability of international collaboration, stakeholders point, in particular, to the need to **identify and exploit mutual benefits**. The health sector is viewed as an opportune area for mutual benefits, where, for example, the exchange of professors and students could yield benefits across Europe.

The Lithuanian experience with the Dutch NIVEL model has shown that the exchange of good practices can be made sustainable if institutional ties are developed amongst each other.

Health Workforce Case Study – Netherlands

1. Key findings

1. The Netherlands has a population of 16.7 million as of January 2011. The health care system is based around dual health insurance, with the public and private sector playing different roles. It is compulsory for all residents to have a basic level of health insurance which is subsidised by the state for lower income earners. Individuals can choose to top this up for specialised treatments. Long term health care is paid for by the state. Health services are largely delivered by the private sector.

2. The key successes of workforce planning identified in the Netherlands include:
    a. Quality data available for physicians across a wide range of specialisms
    b. An established workforce planning model in place for physicians, enabling analysis of workforce trends over the last ten years
    c. The range of data available, especially on headcounts
    d. The number of experts/stakeholders engaged in the modelling process and in the interpretation of forecast information.

3. The key challenges of workforce planning identified include:
    a. A need for a new workforce planning model for nursing and care professions to reflect the regional and dynamic nature of planning for approximately 640,000 nursing and care staff with many different roles
    b. Difficulties in obtaining data and analysing the impact of changes to the skills composition of staff (e.g. the development of nurse practitioners from 2002; the changing use of technology)
    c. The need to turn analysis into intelligence to enable longer-term strategic planning across all health professions.

4. Suggestions for further collaboration identified cover three key areas:
    a. Easier access to European-wide information through developing networks and establishing a web-based portal to share and promote best practice, e.g. forecasting modelling methodologies
    b. Development of common definitions of professions to enable production of comparable data and a shared understanding of mobility issues across the EU
    c. Collaborative working to improve longer-term strategic planning, e.g. skills-mix requirements and impact of technology in medicine

2. Introduction and Background

Four key representatives from the Netherlands health system were interviewed to provide opinions and intelligence on workforce planning and opportunities for collaboration. Interviewees belong to the Ministry of Health, Welfare & Sport (MIN VWS), responsible for overall policy direction at the national level; the Capaciteitsorgaan (Capacity Body), the principal agency entrusting with workforce planning for doctors; and NIVEL (Nederlands Instituut voor Onderzoek van de gezondheidszorg/Netherlands Institute for Health Services Research) and SEOR (Stichting Economisch Onderzoek Rotterdam/Economic Research Institute, Rotterdam),

two research institutes that specialise in modelling: NIVEL for doctors; SEOR for nurses and care professionals. In addition, a representative from KIWA Prismant, a leading certification agency in the Netherlands was approached, but was unavailable for interview.

Overview of health system

A 2010 study by the Commonwealth Fund comparing six leading developed countries ranked the Dutch health system first in terms of quality, efficiency, access to care, equity and the ability to promote long, healthy, productive lives.[27]

In 2011, the Netherlands's population was 16.7 million, and in 2009 the Netherlands spent 11.2% of its GDP on health care[28]. It has a system based around dual health insurance, with different roles played by the public and private sectors in financing. It is compulsory for all residents to have a basic level of insurance, which is subsidised by the state for lower income earners. Individuals can choose to top this up for special services such as additional private treatment. Long-term care (for example, for the elderly or severely disabled) is covered via social insurance funded by taxation earmarked for that purpose. In 2010, health care was funded from a mixture of sources that included social insurance (27%), individual insurance premiums (41%), the government (14%), out of pocket payments (9%), optional health insurance packages (4%) and other sources (4%).[29]

The health care system is managed primarily by MIN VWS and by the 418 municipal governments. However, the twelve provinces also play a role in the governance of the system, through their engagement with municipal governments and their powers in wider planning. Health services are provided predominantly by the private sector, with the exception of some public university hospitals which are responsible for training health professionals.

Overview of data collection methodologies

The Netherlands collects a range of data to support the management of the health system (outlined in table 1 below). There are two different approaches to workforce planning, one for physicians and one for nurses and care assistants, each uses a different range of data sources.

To complete the physicians' forecasting model, data are collected from a number of sources by a dedicated government agency contracted to produce workforce planning scenarios for MINWS. Sources used for planning purposes include government bodies such as the Central Bureau of Statistics (CBS), the national register for health professionals working for individual patients (BIG-Registry) and the National Institute for Public and Environmental Health for forecasts on demographics and the development of need/demand for health care. Professional Associations such as the Royal Netherlands Society for Medicine keep detailed personal registers for each specialism and for each training programme. Data are collected from training institutes on success rates/ attrition of training programmes, duration of training programmes, number of applicants per vacancy, male/ female ratio, etc.

[27] Reuters, 'US Scores Dead Last in Health Care Study', 23 June 2010. Accessed 11 January 2012. The six countries were the UK, Canada, Germany, the Netherlands, Australia, New Zealand and the United States.

[28] Population data from CBS - 11 January 2012. Expenditure data from OECD statistics database, accessed 11 January 2012.

[29] Statsline, accessed 11 January 2012.

For the newly developed quantitative nursing model, researchers use a range of micro data collected from hospitals and municipalities by the CBS, including labour workforce surveys.

In addition, specialist agencies such as NIVEL provide research and advice to the government, insurance companies, professional associations, and other agencies.

Table 29: Overview of data collection in the Netherlands

Scope of data	National Data collected across health professions
Type of data collected	**Central Bureau of Statistics:** headcount/full-time equivalent based on health workers personnel numbers; retirement rates; ageing of workforce; gender; registrations; working hours **Labour workforce surveys** **Professional Association Registers/BIG-Registry:** registers of individuals per specialism **Training information:** success rates/attrition of training programmes, duration, no of applicants per vacancy, male/female ratio. **Research papers/journal articles: information on changes in overall public health/technology/demographics**
Data collection and reporting bodies	Central Bureau of Statistics (CBS); professional associations; other agencies (e.g. NIVEL/Dutch Hospital Data/KIWA Prismant)
Data Gaps	Data on the skills of individual health professionals

Overview of workforce planning in the Netherlands

Workforce planning is overseen by the MINVWS. The ministry currently has two contracts in place for data collation, analysis and modelling in order to make recommendations back to the MIN VWS on likely future needs. One contract is related to doctors; the other is related to nurses and other care professions.

The Capaciteitsorgaan collects data and information on developments from a wide range of organisations and sources, with focus on both supply (registers, training programmes) and demand (demographics, vacancies, technological developments). Experts for each medical specialism are involved to discuss the changes in working processes that will affect the capacity of the workforce in the future. For instance, questions typically asked will include how much time can be saved by the newest generation endoscopes compared to at present, and whether a specialised nurse can be trained to carry out these tasks. Some specialists are also interviewed about working hours, their personal objectives as to retiring or diminishing working hours, and their potential desire and/or reasons for wanting to go abroad.

The data obtained is then combined into a quantitative Excel based-model, with typically nine scenarios on estimated training numbers for each medical specialism within a given time period developed. The Capaciteitsorgaan discusses the findings with experts chosen from the professional associations, health insurance companies and universities to develop advice on the most likely scenario (in practice, two will usually be recommended). The final option(s) are communicated to the MIN VWS. The Education Ministry is then consulted by MIN VWS, because it is responsible for the estimated training numbers on medical students.

The approach to workforce planning for all nurses is less developed compared to that for doctors. Two years ago a new contract was given to a consortium of research organisations (led by Panteia; supported by SEOR and Etil)[30] with the aim to develop a model for forecasting the workforce requirements for this large, more dynamic workforce at both a national and regional level. Nursing is split into nine areas which include hospital, children, and mental health; it therefore covers medical as well as social care roles. A range of data from the Central Bureau of Statistics (CBS) is analysed and fed into a quantitative labour market model. This model is calculated according to both inflows and outflows at the national and regional levels of government. The information is discussed with a range of experts and a final forecast for the next four to five years is presented to the MIN VWS. This programme is funded by the MIN WVS and employers organisations, for example hospitals and nursing homes.

Table 30: Overview of health workforce planning in the Netherlands

Main institutions involved in workforce planning	Capaciteitsorgaan (physicians); Panteia/SEOR/Etil consortium (nurses and social care); Ministry of Health, Welfare and Sport (MIN VWS); Ministry of Education; professional associations; health insurance companies; universities/higher education institutions; research centres
Structure of workforce planning	Physicians: National New nursing model: National and Regional
System of workforce planning	The contracted organisations gather data from a range of sources and feed the data in to the model (one model for physicians and a separate model for nurses). The findings are discussed and agreed with experts from each specialist field. The final forecast is presented to the Health and Education Ministries who decide the final numbers.
Planning models and methods	– Physicians' model - quantitative model. Data are obtained both quantitatively (statistical bodies, registration bodies) and qualitatively (interviews/surveys with professionals). Nine scenarios are developed and shared with an expert panel before presenting the two most likely scenarios to the MIN VWS. – Nursing model - currently being finalised and focuses on the inflow and out flow of the local labour markets. The model produces national forecast and this is broken down by region. – The overall style of policymaking is known as '*participative policy development'*, policymaking is decided on a collaborative basis, with the emphasis on ensuring that all relevant stakeholders have been consulted.

3. Successes and Challenges of workforce planning

Main successes of workforce planning

The main successes mentioned relate to the established modelling process that has been in place since 2000 for physicians. Reasons stated for this include: good quality data covering all specialisms, a comprehensive scenario modelling tool based on a wide range of data sources,

[30] Panteia is a policy research and consulting company which serves as the lead contractor, with responsibility for managing the overall programme. SEOR (Economic Research Institute, Rotterdam) is a research centre based at the Erasmus University Rotterdam; it is a subcontractor with responsibility for data modelling. Etil is based in Maastricht and is a research institute that specialises in regional affairs. Like SEOR it is a subcontractor.

historic consistent information over the last eleven years to refer back to, information received from a range of experts for each specialism and the collaboration process involving a range of experts to produce the final two scenarios for physicians to the MIN VWS.

The change in approach towards implementing a more regionally focused nursing model is seen as a positive move by interviewees. Experts involved in the modelling also believe that the close engagement of a range of experts to review and endorse the information will make forecasting more robust.

Main challenges of workforce planning

Developing a well-established approach to workforce planning for nursing is thought to be a harder model to develop due to the numbers involved (approximately 640,000 nurses and social care roles) and the dynamic nature of this workforce. Accordingly, MIN VWS have contracted a consortium led by Panteia to develop a comprehensive model for these nurses and care professions with greater emphasis on regional planning. It is thought that this new approach will provide comprehensive intelligence to improve workforce planning for nursing professions, but it will take several years to build up historic comparable analysis and trends as has been achieved for physicians.

Another key challenge relates to the skills mix requirements over the next ten years. There is limited information available regarding the skills of each health professional currently working in the field. To date, it has not been possible to ascertain the impact that the development of nurse practitioners and physician assistants in 2002 has on capacity and the affect that workforce model technology will have on health professional roles and the skills mix in the future.

The collaborative approach to health workforce planning is also seen as a challenge. Consultation with a wide range of key stakeholders was deemed to be positive to make the final forecasting more robust but the difficulties of getting everyone to agree and follow a formal repeatable approach is often difficult.

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 3: Overview of successes and challenges of workforce planning in Netherlands

Workforce planning dimension	Successes	Challenges
Monitoring	• **Good data covering all specialisms for physicians** • **11 years of historic**	• **Lack of information on mobility** (mixed perception on scale of this) • **Lack of information on individuals**

	information available for physicians to draw on	**skills**
Analysis	• **Established model in place for physicians** *(evaluated as good model by National Institute of Planning)* • **New approach to modelling for nursing being finalised**	• **Lack of comparable historic analysis/trends to draw on for nursing.** • **Unable to demonstrate capacity benefits** and impact of previous reforms, e.g. development of nurse practitioners from 2002
Governance/strategic planning	• Experience since the late 1990s has improved the **quality of intelligence, especially in terms of understanding training cycles** • **Majority of planning decisions agreed through consensus**, (consultation with numerous stakeholders and neutral research agencies)	• **Need to make continual improvements on how models turn into policy decisions, e.g. skills-mix requirements** • **Collaborative approach can make decision making/ difficult** • Not always easy to get decisions: need for more reliable , repeatable process • **Limited understanding of potential impact of technologies** and how best to implement over the next 10 years • **Need to forecast more long term (10-20 years).** Current forecast of 4-5 years often too late as trainees already started courses

Overcoming existing challenges at the national level

A number of initiatives have been put in place to address many of the challenges outlined above. These include:

- The new contract to manage the development and implementation of a new inflow/outflow workforce model for nurses
- An experiment in three universities to train technical students in medicine to provide improved expertise in medical technology. In 2012, the Capaciteitsorgaan aims to focus on better understanding the change in skills mix and the impact of the nurse practitioner role.
- NIVEL (research advisers on model for Capaciteitsorgaan) are currently carrying out research to improve the modelling process in terms of the estimated correlations between professions, e.g. dentist and hygienist numbers to understand the impact of these numbers on retirees and young people.

4. EU level collaboration

Current collaboration with other European countries

The opportunities for collaboration identified in the interviews were primarily related to workforce planning. Currently all work related directly to the health workforce modelling is conducted within the Netherlands, with no collaboration with other countries on this issue. Interviewees identified several other examples of collaboration, with the emphasis on informal exchanges with individual countries and the introduction of the EU Joint Action Group.

Table 4: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Purpose of current collaboration
Monitoring	• Informal consultation with experts (e.g. conferences)	• Awareness of international issues
Analysis	• EU Joint Action Group	• Improve understanding of horizon scanning (HS) and skills-mix composition
	• Academic exchanges with universities in other countries (e.g. Germany/Portugal/Lithuania)	• Learn from experiences elsewhere
Governance/ strategic planning	• Informal consultation with other countries	• Learn from experiences elsewhere
	• Involvement in trans-national networks	• Networking/information exchange

Possible scenarios for further collaboration with European countries

Two priority areas were mentioned by the majority of interviewees. Firstly the need for the EU to work together to monitor, analyse and plan for the mix of skills required in the health system over the next 10-20 years, taking in to consideration the impact of changing technologies on individual professions and roles. This would initially require improvements to the standardisation of data collected to enable analysis and comparisons between countries. An example provided was that salaries of physicians in the Netherlands are higher compared to other countries, but that the data available is not directly comparable.

The two modelling experts interviewed were keen to have a forum with which to share and discuss modelling techniques across Europe, and focussing on collaboration with countries with similar health systems. The two interviewees argued that such collaboration would be useful for lesson learning and for a better understanding of best practice. However, they cautioned against a single approach to modelling, advising instead that each country needed to work out what lessons could be drawn from other countries to improve their own country specific system.

Ensuring comparable data on mobility was also mentioned but not seen as a major issue in Netherlands due to the language barrier. Health professionals wishing to practice in the Netherlands have to be able to speak Dutch and in some cases complete a labour market test in order to complete their registration. However, health professionals leaving the Netherlands to practice in other countries, specifically bordering countries may have a greater impact on the health system.

Table 5: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Stakeholders/Level of Engagement	Scenarios for collaboration (instrument)	Topic focus of future collaboration
Monitoring	• Open access, but primarily researchers and planners	• **Standardisation of data measurement**	• Improve information to **enable comparisons between countries, e.g. definitions of health professions, skills, salaries and mobility**
		• **Information database/portal,** with users able to verify information	• **Share information on best practice models across EU**. Focus on countries with similar health systems
Analysis	• Variable according to the topic discussed, for example researchers on modelling	• Face-to-face working groups/networks/conference which meet regularly (according to remit of group)	• **Facilitate information exchange and analysis,** develop contacts (building on web portal)
	• Modelling experts	• **Modelling network** (electronic and face to face)	• **Promote best practice, lessons learnt from each other**
Governance/ strategic planning	• High level officials/researchers	• EU to provide oversight on facilitating co-operation **e.g. EU Joint Action Group**	• **Horizon scanning** • **Skills mix required in future (to include impact of changing technologies)**

Sustainable international collaboration

Views on the practicalities of how collaboration could take place varied between individuals interviewed and depended on the nature of the topic. The need to co-ordinate EU wide collaboration was emphasised and should involve representation from across countries. Exchange of specific information was considered to be more appropriate on a country to country basis so that contacts and relationships could be further developed with countries with a similar health system, e.g. modelling methodologies.

If health workforce experts across the EU could analyse comparable data, share best practice and lessons learnt on different modelling methodologies and collectively focus on the skills mix requirements of a changing health system. This would enable the Netherlands to continue to

evolve their approach to workforce planning and start to forecast the effects of different skills mixes over the longer term (10-20 years). Consequently, policymakers would be able to adjust education and training programmes more effectively, and tasks could be better divided among health professionals according to the necessary requirements identified.

Health Workforce Case Study – Romania

1. Key findings

1. Romania has a decentralised healthcare system based on a compulsory social insurance system that is administered by the National Health Insurance Fund and financed by employers' and employees' contributions as well as general taxation.

2. HRH monitoring is carried out by various institutions; one of the main problems identified is the migration of healthcare workforce.

3. The key challenges of workforce planning are the lack of political commitment and communication between the Ministry of Health and other stakeholders, the lack of appropriate data on workforce mobility, and the lack of integrated planning mechanisms.

4. Suggestions for further collaboration identified include the establishment of a EU observatory that builds up capacity in Member States to carry out workforce planning more professionally, bilateral and regional cooperation to compensate the imbalances created by workforce migration, and the sharing of best practices within the EU.

2. Introduction and Background

An interview with a public official from the National Institute of Public Health was carried out as part of this case study. A public official from the Ministry of Health preferred to reply in written form due to language issues. A representative of a private healthcare provider was also contacted but was unavailable for an interview.

Overview of health system

Romania has a population of 21.4 million. In 2009, the country had a healthcare expenditure of approximately 4.7% of its GDP (possibly excluding some private sector expenditure). This percentage is still comparatively low compared to the West European average of 9.60%[31]. but healthcare expenditure in Romania has been increasing in recent years. Approximately 78.7% of the expenditure is publicly funded[32] (mostly social security funds). Romania has a decentralised compulsory social insurance system[33] that is regulated by the Ministry of Health and 42 representative district public health authorities. The National Health Insurance Fund administers the system in conjunction with public authorities mainly. It is financed by both employers' and employees' contributions as well as general taxation[34].

With 3.64% of the workforce employed in the healthcare industry, the country is currently witnessing a considerable shortage of healthcare professionals, especially in rural areas. The workforce is rapidly aging, with 40% of medical doctors being over 50 years old. The retirement age is 63 years for women and 65 for men. Female medical doctors may continue to practice

[31] WHO Regional Office for Europe (2010)
[32] Eurostat
[33] Allin, Sara/Mladovsky, Philipa (2008) *Health Systems in Transition. Romania. Health system review.* 10 (3) p. 22
[34] European Commission/Health Consumer Powerhouse. *Euro Health Consumer Index 2008*

until 65 if they obtain an annual authorisation from the College of Physicians. Family doctors practising in rural areas may continue to work up to the age of 70. Comparatively low salaries and limited career opportunities may push many doctors to go into the pharmaceutical industry or to migrate to other EU countries. This process has become more intense since Romania's accession to the EU in 2007. In that year alone, 10.2% of practical medical doctors applied for diploma verification which is a necessary step before finding work abroad. This trend is fostered by the shortages that other EU countries face in combination with the higher salaries they can offer. Another reason for the lack of adequate workforce may be the working time directive which limits the number of working hours of healthcare personnel and thus increases the demand for skilled professionals. Moreover, many female doctors may switch to part-time work due to maternity leave, aggravating the situation. At the same time, there is an oversupply of nurses from private colleges that are inadequately regulated[35]. There is also an influx of doctors and nurses from neighbouring Moldova whose degrees are not easily recognisable by EU standards.

While the number of medical students is not limited by a *numerus clausus*, the number of pharmacists and the admission of nurses to public schools in particular are strictly regulated. The number of students obtaining degrees from private nursing schools is not controlled. Specialty places are set by the Ministry of Health. Healthcare personnel are registered and obtain licenses from their professional associations, the College of Physicians and the College of Nurses and Midwives, in conjunction with the Ministry of Health.

Overview of data collection methodologies

Data collection in Romania is carried out on both central and local levels and covers doctors, dentists, pharmacists, and nurses broken down into more than 80 subcategories. It also covers geographical distribution, gender, age bracket, as well as specialities and types of health units. This way, regional distribution and local shortages can be identified.

Data is collected by various institutions, including the Ministry of Health, the College of Physicians which maintains a register of physicians, the College of Nurses and Midwives which maintains a similar register on the national level, and hospitals on the local level which collect data in a non-systematic way. Data on students and graduates is collected by the Ministry of Education. Data on trainees is collected by the Ministry of Health for resident doctors, dentists, and pharmacists in training.

On the regional level, the district health directorates report their estimated needs for each specialty for a five-year period based on new inflows to, and exits from, each specialty. Decisions to increase or decrease the number of trainees in any particular specialty are taken on an ad-hoc basis. The National Institute of Public Health is an institution subordinated to the Ministry of Health which collects data with help of the National Centre for Public Health Statistics and Informatics and develops studies and produces reports that inform health policy decision-making. It publishes annual reports on the distribution and skill mix of healthcare workforce and holds its own register of physicians.

Table 31: Overview of data collection in Romania

[35] Wismar, Matthias/Claudia Maier/Irene Glinos/Gilles Dussault/Josep Figueras (eds.). 2011. *Health Professional Mobility and Health Systems.* World Health Organization. Chapter on Romania. p. 449-477

Scope of data	Regional and national Graduates, physicians, nurses, midwives, dentists, pharmacists (54 subcategories of medical professions, 3 subcategories of dentists, 3 subcategories of pharmacists, 32 subcategories of allied health workforce), data on students
Type of data collected	Stock data, age, gender, specialisation, geographical distribution

Overview of workforce planning in Romania

Table 32: Overview of health workforce planning in Romania

Main institutions involved in workforce planning	Ministry of Health, National Institute of Public Health, Professional chambers, Ministry of Education
Structure of workforce planning	National but incoherent
System of workforce planning	Data is collected by Professional chambers and the National Institute of Public Health and by the Ministry of Education on students, and then reported to the Ministry of Health
Planning models and methods	Planning is carried out on a very basic level

3. Successes and Challenges of workforce planning

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 33: Overview of successes and challenges of workforce planning in Romania

Workforce planning dimension	Successes	Challenges
Monitoring	Monitoring is carried out by various institutions on national, regional and local level	Insufficient data on workforce mobility, both nationally and internationally
Analysis	National Institute of Public Health analyses data and compiles reports	Insufficient communication between stakeholders
Governance/strategic planning	National Institute of Public Health together with other professional bodies are aware of need for	Lack of political commitment and coherent planning

	improved planning	

Main successes of workforce planning

Monitoring

Monitoringis carried out by the Ministry of Health and the Ministry of Education, the College of Physicians, and the College of Nurses and Midwives on the national level, and hospitals on the local level. It covers all relevant professions as well as key variables such as age and gender, geographical distribution and some data on outward geographical mobility. The latter is approximated by looking at the number of professionals who apply for diploma verification (at the Ministry of Health) and for the good-standing certificate from the Romanian College of Physicians.

Analysis

Shortages in regions and specialties are identified. This ensures some degree of equal distribution of workforce. The successful establishment of a mechanism for data collection and analysis can be explained by the availability of resources.

Governance/strategic planning

Many stakeholders appear to have realised the urgency of implementing a workforce planning system and of improving the information system for decision-making.

Main challenges of workforce planning

Monitoring

One of the main challenges is the lack of data on mobility of health professionals both internally and externally with other EU MS, and on private health facilities. Data are "extremely scarce and of poor quality, with low levels of accuracy and completeness.[36]" It appears that across the EU, better data is available from countries receiving migrating healthcare professionals than from those countries sending them. Since Romania is mainly a sending country, data coverage is insufficient. The main problem is that migration can only be assessed by looking at how many physicians request a good standing certificate which only demonstrates the intention of leaving. Nurses can often work abroad without such a certificate which makes it even harder to assess their mobility. Furthermore, short-term movements such as temporary work abroad often do not require the issue of a new certificate which makes it impossible to assess whether those professionals emigrating are returning or not via such proxy indicators.

The fact that there are several independent monitoring systems in place complicates the data collection and analysis process. For example, the College of Physicians runs its own register of physicians, and a register of nurses and midwives was recently created. This data is not always in line with the data reported by the Ministry of Health. It would be better to have one integrated system.

More data on mobility will have to be collected since Romania signed up to a WHO reporting code.

Analysis

[36] Wismar, Matthias/Claudia Maier/Irene Glinos/Gilles Dussault/Josep Figueras (eds.). 2011. *Health Professional Mobility and Health Systems.* World Health Organization. Chapter on Romania. p. 449-477

The lack of communication between the Ministry of Education and the Ministry of Health is the main challenge Romania is facing. Consequently, the Ministry of Education cannot match the Ministry of Health's demands in terms of graduates. A separate mechanism or institution to overcome this problem should be developed.

Governance/strategic planning

A coherent planning mechanism is missing. The Ministry of Health has not an official strategy to address the issues of healthcare workforce, especially the issues of mobility, misdistribution and skills shortages. Many stakeholders are pushing the Ministry of Health to take the problem seriously and to create health workforce planning mechanisms. The biggest threat comes from the "brain drain" of healthcare professionals to other countries as well as an ageing HRH.

Overcoming existing challenges at the national level

In its reports and other communications, the National Institute of Public Health regularly tries to raise politicians' awareness of the need for workforce planning. Decision-makers need to provide doctors with incentives to stay or move into rural areas and less popular specialties and to refrain from emigrating. This will require additional resources.

4. EU level collaboration

Current collaboration with other European countries

Romania currently participates in the **EU-level** projects PROMeTHEUS, MOHPROF, and a new project by the WHO European Observatory on Health Systems and Policies that fosters regional cooperation in HR and patient mobility. All these projects to some extent address the issue of intra-EU health workforce mobility. During the interviews, hope was expressed that this work will continue on a more regular basis rather than just exchanging ideas on conferences and other occasional meetings.

Some of the issues can be addressed within the region of Southeast Europe with the help of **bilateral** arrangements. For example, Bulgarian doctors already work in Romania to eliminate shortages locally. Similar developments evolve with Hungary. The situation is more difficult with Moldova since Moldovan personnel are not recognised within the EU unless they have obtained an EU diploma in Romania.

On a **regional level**, Romania is a member of the South-East Europe Health Network in which each country has a regional health development centre; the HR centre is now based in Moldova. According to a stakeholder from Romania this network illustrates how health problems do not stop at the EU external border and that cooperation with non-EU countries is also of importance.

Table 34: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Topic focus of current collaboration
Monitoring	Ad hoc information exchange	Ad hoc information exchanges are trying to fill data gaps
Analysis	PROMeTHEUS, MOHPROF (EU level)	EU-level collaboration project on workforce and patient mobility

	South-East Europe Health Network (regional) Belgian-led EU Observatory on HR management and patient mobility	
Governance/strategic planning	Regional exchange of doctors to meet shortages	Exchanges of doctors with neighbouring countries are the focus of international collaboration initiatives to try to solve the shortage of professionals.

Possible scenarios for further collaboration with European countries

One interviewee argued the Commission should have a platform or publish a policy regarding workforce planning paper that pushes the national Ministries of Health to take action. Many decision-makers in Romania currently lack awareness of the need for workforce planning. To address this, the EU could help building up the capacity of the Ministry of Health for **strategic planning** by funding trainings, organising discussion forums, and establish databases of best practices for **analysis**.

On an **international** level, the EU-OECD PROMeTHEUS project on the monitoring of health professionals' mobility was regarded as very helpful and should be continued.

On a **bilateral basis**, Romania should focus its cooperation efforts on France as the most popular destination for doctors leaving Romania. Consequently, an agreement which regulates the return of physicians to Romania would be very helpful.

Table 35: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	Continued data exchange	Practical collaboration, not creating new institutions
Analysis	Databases of best practices, discussion forums	
Governance/strategic planning	Training of workforce planners EU publication should push Ministries of Health into action Bilateral agreements	How to reconcile workforce mobility with demand and supply in EU MS Address workforce flow

Sustainable international collaboration

Stakeholders argued that conferences should be held more regularly and communication amongst stakeholders should be continued in the meantime. The establishment of a European observatory was strongly supported as it could create a strategic network with focal points from each country. EU action and pressure could also help decision-makers realise the urgency of establishing a permanent workforce planning system and could strengthen those institutions in Romania such as the National Institute of Public Health that are aware of the issues.

According to one interviewee, the problem of workforce migration should be viewed from a **European perspective**. Eastern European countries suffer when their most talented doctors migrate to Western Europe while Western European countries' health systems may come under strain when Eastern European patients migrate with them because they do not get adequate treatment in their home countries. Once collaboration is regarded as mutually beneficial, it will be sustainable.

Health Workforce Case Study – Slovenia

1. Key findings

1. Slovenia has a centralised healthcare system financed by universal statutory health insurance.
2. The Ministry of Health is responsible for planning and all regulatory measures are taken on national level
3. The three main issues in current health policy are the reform of the health system, achieving financial sustainability, and balancing supply and demand via health workforce planning.
4. Slovenia has a comprehensive data collection and forecasting system in place that is based on both demand and supply. It is mostly carried out by the National Public Institute of Health
5. The Ministry of Health and Ministry of Education closely cooperate on human resources management
6. Decision makers have realised the importance of workforce planning and a major reform is currently under way
7. Slovenia takes part in various EU level (PROMeTHEUS, European Observatory) and international (WHO workshops) collaboration projects
8. For the future, stakeholders would like to see increased data sharing and a harmonised dataset that builds on WHO, OECD, and Eurostat data

2. Introduction and Background

Interviews were conducted with the Ministry of Health, the National Institute of Public Health, and with a representative from the University Medical Centre in Ljubljana. The Nursing chamber, the Medical chamber, and another public official from the Ministry of Health were contacted but were unavailable for an interview.

Overview of health system

Slovenia had a population of 2 million in 2010. In 2008, health care expenditure amounted to 7.8% of GDP, of which 71.4% is publicly funded[37]. The health care system is centralised and there is a single body, the Health Insurance Institute of Slovenia (HIIS), responsible for the administration of statutory universal health insurance. The Ministry of Health is responsible for planning and the system is fully regulated by national legislation. Access to primary care is open to all citizens. To access secondary and tertiary care, patients need to be referred by their physicians. The system is funded by compulsory contributions and state revenues, as well as personal contributions. In addition to that, there is a growing number of private health care providers.

Overall, the amount of human resources in health care is deemed appropriate with 4.17% of the total workforce employed in this sector. There is however an oversupply of nurses from unregulated private colleges, and it is likely that there will be soon an oversupply of nurses with degrees from public universities and colleges. On the other hand, a shortage of doctors is

[37]Albreht, Tit et al. 2009. *Health Systems in Transition. Slovenia. Health system review.* 1 (3). HiT Report, p. 41 fig 3.2

foreseeable. This increasing demand has triggered considerable inflows of workforce. The country is an attractive destination for medical doctors and dentists from the countries of the former Yugoslavia. The numbers of physicians, dentists, and pharmacists have slowly been increasing since the 1990s.

Physicians and dentists obtain their degree after 6 years, pharmacists after 5.5 years, and nurses after 3 or 4 years of post-secondary courses. There is a *numerus clausus* for medical students, dentists and pharmacists but not for nurses. Limiting the vacancies in public universities would make more students to join private colleges that are unregulated. The Ministry of Health in conjunction with the Medical Faculty and professional colleges monitors the implementation of health-related professional education and makes recommendations on the number of health professionals that are needed. The relevant faculties in cooperation with the Ministry of Education adjust enrolment figures.

The three main issues in current health policy are the reform of the health system, achieving financial sustainability, and balancing supply and demand via health workforce planning. By opening up new nursing schools and an additional medical faculty, Slovenia is trying to become self-sufficient in terms of training capacity.

Overview of data collection methodologies

Slovenia has a comprehensive data collection and forecasting system in place that is based on both demand and supply and mainly taken from national registries and databases. Health professions are defined according to international guidelines with the exception of specialist training periods that may differ. It is however difficult to link data between institutions and prepare sound plans for human resources in health care.

While the National Institute of Public Health is the main data collector, a wide range of data is also collected on the national level by the Statistical Office, Ministries, Chambers (which cover all professions), and the Insurance Fund with inputs from hospitals and other medical facilities on the local level. More data is available from the Health Care Providers Database. Data is collected over different time ranges using various procedures of collection.

Table 36: Overview of data collection in Slovenia

Scope of data	National/local (hospitals) Graduates, physicians, nurses, midwives, dentists, pharmacists
Type of data collected	Stock data: Headcount, age, gender, geographical distribution, active workforce, full-time/part-time, specialisation Flow data: Professional flow, geographical flow

Overview of workforce planning in Slovenia

Currently, workforce planning only exists in its initial stages at the national level, with inputs coming from the regions, especially those with shortages of staff. The Ministry of Health is responsible for the implementation of health-related professional education, and proposes recommendations on the number of health professionals. The decisions to adjust enrolment figures are made by the relevant medical faculties at various universities across the country, in cooperation with the Ministry of Education.

Table 37: Overview of health workforce planning in Slovenia

Main institutions involved in workforce planning	Ministry of Health, Ministry of Higher Education, Science and Technology; National Institute of Public Health
Structure of workforce planning	National
System of workforce planning	Ministry of Health suggests number of health professionals, enrolment figures are adjusted by medical faculties, nursing schools, etc. in cooperation with the Ministry of Higher Education, Science and Technology
Planning models and methods	N/A

3. Successes and Challenges of workforce planning

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 38: Overview of successes and challenges of workforce planning in Slovenia

Workforce planning dimension	Successes	Challenges
Monitoring	Data collection is comprehensive, although the quality of the data is insufficient	Data is collected by several institutions using different methods Some data gaps exist such as information on the number of foreign nurses
Analysis	Close cooperation between Ministry of Health and Ministry of Higher Education, Science and Technology Data analysis by National Institute of Public Health	Currently it does not take demographic trends into account Private nursing schools not properly regulated
Governance/strategic planning	Strategic plan is under development, decision-makers are aware of the need for workforce planning Participation in international cooperation	Planning is still under developed Resource constraints prevent better planning and responses

Main successes of workforce planning

Monitoring

Data collection is comprehensive, but the quality of the data is insufficient. To address this issue, the Ministry of Health is working on health workforce planning strategy. An essential part of the strategy is to improve the database. Regarding workforce mobility, the register of physicians held by the Medical Chamber includes data on foreign born, foreign nationals, and foreign trained doctors.

Analysis

There is strong communication between the Ministry of Health and the Ministry of Higher Education, Science and Technology. The Ministry of Higher Education, Science and Technology along with the medical faculties adjusts the *numerus clausus* according to workforce needs. Expenditure and forecasting is monitored through the accounts method developed by the OECD. There is a forecast model for nurses in place. PROMeTHEUS is used to analyze cross border movement.

Collected data is also analysed by the National Institute of Public Health and used for budgeting, tendering of training posts based on calculated demand, projections of supply and demand, and to provide indicators for international statistics.

Analysis is practically implemented. After a shortage of medical doctors had been recognised, the University in Maribor established a new Medical Faculty and a new legislation was passed making it easier for foreign doctors to obtain a license or working permit in Slovenia. Taken together, those two measures addressed the shortage in doctors. Nonetheless, this was carried out on an ad hoc basis rather than systematically.

Governance and Strategic planning

There is a strategic plan to develop workforce forecasting and planning with the aim to identify trends and collect data more systematically. This indicates that political decision-makers are aware of the importance of health workforce trends for the health system more generally. A workshop with WHO triggered the creation of four working groups in the Ministry of Health. Each one of them prepares different background data and suggests how to prepare the strategic plan.

Doctors' performance is now assessed against quantitative criteria. This has caused political controversy but is puts workforce planning on a more objective platform.

The government is making extra efforts to address the imminent shortage of physicians. For instance, Slovenia recently adopted a new Act that allowed Professionals from former Yugoslavian republics to work in Slovenia.

Main challenges of workforce planning

Monitoring

In addition to the Ministry of Health, data collection is undertaken by the University faculty, the insurance fund, the organisation of workforce, the Medical Chamber for Doctors and Nurses, the Institute for Public Health, and hospitals at the local level. Thus, monitoring is not centralised and each institution collects data differently and over different time ranges – all with their own shortcomings. For example, the insurance fund only collects data for teams rather than individuals. Also, the data on retirement and employment status of retired doctors (some of whom still work) is unsatisfactory.

The current system of data collection is neither accurate nor user friendly and new data is not instantaneously available. For example, hospitals are not always able to provide monthly updates. There are plans for a new registry but they may be postponed due to a recent change of government. For example, the e-health programme which was supposed to finance the database has now been put on hold.

In terms of workforce mobility, the Nursing Chamber of Slovenia has only minimal information on foreign nurses. There is also no fully reliable data on the number of professionals leaving Slovenia.

Moreover, the mobility of professionals is currently assessed only by looking at the number of doctors who request a letter of good name which reflects the intention to emigrate. The problem is that this number does not necessarily indicate the number of physicians actually leaving the country. Data on nurses' mobility is even more difficult to find. The assessment of performance of Professionals is not carried out regularly (there were three studies in the past ten years). For some well-intended projects, the financial support is missing. This is the case for one project envisaging a new registry which would be technically more accurate and up to date. Finally, more comprehensive data collection on individuals may be obstructed by personal data security concerns that dominate the public debate.

Analysis

- More emphasis needs to be placed on analysing the impact of changing demographics of the workforce in general, and physicians and dentists in particular.
- Private nursing schools are not properly regulated and are saturating the labour market with less qualified nurses on the labour market

The Ministry of Health considers a better database as an essential part of the country's health workforce planning strategy.

Governance and Strategic planning

Currently, there is no coherent workforce planning strategy in place. Strategic planning is still in its initial phase and actors have only now realised its importance. This may be partly due to the fact that in terms of international migration of health professionals it only became an urgent matter since EU accession in 2004.

To add more complexity, strategic planning needs to respond to new legislation, such as the raising of the retirement age. Stakeholders also compete over competences. For example, universities do not want the Ministry of Health to be too involved and want to maintain their independence with regard to the number of students they educate. At the same time, they often lack the resources to accept more students into the Medical faculty. Consequently, there is a shortage of medical students in Slovenia and too many university posts available. The eight existing nursing schools are too many and could be less in order to reduce public spending. Immigration is not a viable solution because of the language barrier.

Overcoming existing challenges at the national level

There are a number of initiatives in place in Slovenia trying to address the existing challenges in relation to workforce planning,

Monitoring

New data from hospitals on their needs and fluctuation as well as retirement and specialization for both doctors and nurses is currently being collected and **analyzed**. A new national registry is in development and will obtain data from ministries, chambers, insurance funds, universities, institutes, and healthcare providers and will be made available to all those stakeholders. To finish this project successfully will be the main challenge for the next 5 years since this type of data has not been collected by one institution previously. Now all this data will be collected the National Institute of Public Health, which should facilitate integrated planning.

Governance and Strategic Planning

There has to be a political decision that clarifies what is to be achieved by planning and a national organisation needs to take charge of the process The goal for 2020 set by the Slovenian government is to achieve self-sufficiency in terms of its health workforce capacity nationally.

While the development of a national strategy for HR in the health sector has not been a government priority until recently, regional activities have now translated into a national expert group that prepares analysis and input for a strategy for the next year. In addition to that, professional associations and other stakeholders should participate more actively in the planning process.

There currently exist different perceptions in Slovenia on how to properly manage the health workforce. From the service perspective taken on by the Ministry of Health, health workforce issues should solve themselves in a controlled market environment. It is sceptical about quantitative performance criteria. Professional organisations, on the other side, adopt a more systematic approach and focus on the workload per professional. Such differences need to be overcome by standardising planning and management procedures.

Finally, a transfer of knowledge and competences between nurses and doctors is inevitable to solve the shortage problem and needs to be operationalised.

4. EU level collaboration

Current collaboration with other European countries

International level: Slovenia participated in a WHO workshop where the creation of a system of **data collection** was discussed. WHO also offers support with tools in HR strategy development in general. This had a big impact on national governance as it triggered the setup of four working groups at the Ministry of Health (see above). Slovenia is a member of the WHO-lead European Observatory on health systems and policies, and therefore uses its services, especially with regard to strategic developments. Stakeholders valued this cooperation as very useful and described the Observatory as very proactive and responsive. The WHO country officer is regarded as very active as well.

In the private sector, professional chambers already receive support from European professional associations on issues such as assessment of performance and standards. An

interviewer indicated that professional associations should also be involved in international collaboration projects.

Data is also reported to the OECD, the WHO, and the EU on an annual basis. PROMeTHEUS and past projects focussed on very specific issues.

It appears there are no collaboration projects on a **bilateral level** at present. .

Table 39: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Topic focus of current collaboration
Monitoring	Participation in WHO Workshop on data collection	Triggered national reform
Analysis	PROMeTHEUS	Health Professional Mobility
Governance and Strategic planning	European Observatory	n/a

Possible scenarios for further collaboration with European countries

Stakeholders pointed out that Slovenia needs to be more aware of European developments and regulation that may influence its own national planning. At the same time, international collaboration would need to take into account peculiarities of national healthcare systems and should not involve too many institutions to keep data collection as simple as possible. Experts should thus make use of existing platforms.

In terms of **monitoring**, continuous data sharing would allow Slovenia to assess the flow of medical professionals out of and into Slovenia. This should involve the OECD, Eurostat, and WHO and should result in a common harmonized dataset. Such collaboration could help finding out the country of origin of health professionals migrating to Slovenia and the destination of those leaving the country. Rather than the current setup of ad hoc sharing on conferences or via email correspondence, this should be institutionalised. This does not need to go beyond **EU level**.

A comparison with countries with a similar health system on a more systematic base is also desirable. This would include an exchange of good practices, preferably via a pool at EU level, for example on how HR management could be better organised. Stakeholders also pointed out that it is sometimes more interesting to understand the process behind improvement rather than just focusing on the end result. For example, it would be interesting to see how authorities managed to get doctors and nurses on board. This should be considered in workshops.

Analysis: A common platform on forecasting tools and methodologies would further benefit Slovenia and other small countries that lack sophisticated models of forecasting.

Training of workforce planners is also regarded as very helpful by Slovenian stakeholders and should take place on an **international level**, for example organised by WHO or the OECD. These organisations have already conducted workshops in which Slovenia took part. They could also provide planning tools, a critical perspective and initiate new reforms. It would be important to focus on those problems that many countries have in common. The workshops

should include both expert group who meet regularly to become familiar with each other and broader, changing groups of stakeholders. Before engaging in workshops, each country should clarify its targets and what it wants to take out of the workshop internally.

For regional issues, **bilateral** cooperation is also regarded as helpful.

Most important, however, is **EU level collaboration** on **strategic planning**. The EU Joint Action Group is regarded as the right next step to achieve efficient collaboration mechanisms. Slovenia is cautious, however, when it comes to the creation of any new institutions on EU level.

Table 40: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	• Harmonized dataset building on WHO, OECD, and Eurostat data • Data sharing	Flow of medical professionals
Analysis	Common platform on forecasting tools and methodologies	n/a
Governance/strategic planning	EU Joint Action Group	n/a

Sustainable international collaboration

The way Slovenia already cooperates with WHO and the way the WHO provides very valuable advice should be exported or transposed to the EU level.

Health Workforce Case Study - Spain

1. Key findings

1. Spain's healthcare system is decentralised, funded through taxes. Coverage is universal and predominantly delivered within the public sector.
2. The central government (Ministry of Health) holds authority over certain strategic areas and acts as the coordinator of health services across the country.
3. The seventeen regional governments (Autonomous Communities, ACs) have jurisdiction over the organisation and delivery of health services within their territory. Regions administer more than 90% of the public health resources, and have autonomy in expenditure and revenue rising.
4. The highest body of coordination of the National Health System (*Sistema Nacional de Salud* – SNS) is the Inter-territorial Council of the National Health System (CISNS), comprising the 17 regional ministers of health and the Ministry of Health, which chairs the CISNS.
5. The main challenge in health workforce planning in Spain is that the country went from a surplus to a shortage of medical specialties. Shortages of professionals have been in part solved through professionals' inflows mainly from Latin America and Europe, but there are some specialties with persistent shortages.
6. Since 2003, a great deal of regulatory and legislative activity has taken place to overcome the challenges. These initiatives include the creation of the Human Resources Commission of National Health System; the creation of a national Registry of Health Professionals and a study on needs in medical specialists, updated on a regular basis.
7. The development of the national Registry of Health Professionals, based on corresponding regional registries, is in progress. In the meantime, data collectors have to resort to several less reliable sources.
8. Although there is a need for more reliable data, the information available has allowed workforce planners to estimate with a certain degree of confidence the need of medical specialists, including family doctors[38].
9. The studies on the needs in medical specialists (published in 2007, 2009 y 2011) and nurses and midwives (2011) analyse supply and demand variables using a system dynamics approach.
10. Based on these studies, reports submitted by the national commissions for every specialty and the Ministry of Education and in consultation with the regional health ministries, the number of available specialist training vacancies[39] is decided annually by the SNS HR Commission.
11. Key challenges relate to the abovementioned lack of more reliable data on health workforce and mobility, and the fact that much of the work done to date relate to medical specialist while work on other health professions is only starting.
12. Suggested areas for collaboration include a shared database on professional mobility and migrations; a common Health Professional Registry; a shared database of good practices for workforce planning, workforce development and also for the professional development of health workforce; and the creation of a European agency for the

[38] In Spain, Family and Community Medicine is a medical specialisation.

[39] Specialist training vacancies are offered for graduates in Medicine, Nursing, Pharmacy, Biology, Chemistry, Psychology and Physics. More information available at: http://sis.msps.es/fse/PaginasDinamicas/AccesoBOE/AccesoBOE.aspx?MenuId=IE-00&SubMenuId=IE-09&cDocum=

strategic planning of workforce that carries out health professional needs assessment at European level

2. Introduction and Background

Five interviews were carried out to undertake the Spanish case study. The selection of interviewees included two representatives from the National Ministry of Health and three representatives from three different regional governments (Canarias, Murcia and Pais Vasco). Stakeholders have validated this case study.

Overview of health system

Spain has a population of 46,157,822 (2008). The Spanish demographic structure reveals the significant ageing of the population, with 16.5% of the population aged 65 or older[40]. Total health expenditure was 8.7% of GDP in 2008, just slightly below the EU average of 9.01%. The proportion of those employed in the health care system was 4.88% in 2010.

The public system is funded through taxes. Coverage is universal and free of charge at the point of delivery (with the exception of the pharmaceuticals prescribed to people aged under 65, which in most cases entail a 40% co-payment). Apart from that, there is a private system with pocket direct payments and/or contributions to voluntary insurance. With the exception of civil servants, there is no possibility of opting out from the Spanish National Health System (SNS). Public officials (State Civil Servants, Justice system's staff, and the Armed Forces) are eligible for the assistance in the public sector or by a private company. Public expenditure accounts for 71.8% of all health expenditure and private expenditure accounts for 28.2%[41].

The country has a decentralised health system with one national body (the Ministry of Health, Social Services and Equality - MSSSI) holding authority over certain strategic areas, such as pharmaceuticals' legislation and acting as guarantor of the equitable functioning of health services across the country. The Ministry has competences over the basic principles of health, determining the minimum conditions and requirements to attain basic equality in the provision of public healthcare services. Additionally, it holds jurisdiction over foreign health affairs and international relations and agreements[42]. In terms of health workforce, the Ministry holds jurisdiction over health professionals' regulation, the evaluation of the SNS services portfolio (all SNS services ranging from A&E to organ transplantation), and inspection of all health care services providers. The Ministry's *Agencia de Calidad* (Quality Agency) is responsible for the auditing system of all centres and units providing training for health care professionals.

The health ministries (*Consejería de Sanidad/Salud*) of the 17 regional governments (*Comunidades Autónomas*, Autonomous Communities, ACs) have primary jurisdiction over the organisation and delivery of health services within their territory[43]. Each autonomous region has its own regional Health Service, which is the administrative and management body responsible for all the health centres, services and facilities in its region. The regional ministry is responsible for health policy and health care regulation and planning[44]. The highest body of coordination of

[40] Ministerio de Sanidad y Política Social. National Health System of Spain 2010
[41] Ministerio de Sanidad, Política Social e Igualdad. 2010. *National Health System of Spain. Annual report 2008*.
[42] Ministerio de Sanidad y Política Social. National Health System of Spain 2010
[43] The central Government retains healthcare management in the cities with autonomy statutes - Ceuta and Melilla- through the National Health Management Institute (INGESA).
[44] García-Armesto S. et al. *Spain. Health system review*. Health Systems in Transition Vol. 12 No. 4 2010.

the SNS is the Inter-territorial council of the national health system (CISNS), comprising of the 17 regional ministers of health and chaired by the national minister.

Regions have autonomy both in expenditure and in revenue rising. According to 2007 data, ACs administer 91.16% of the public health resources, central administration spends 1.41% and 1.65% corresponds to the municipalities, which have responsibility for local health and hygiene and cooperation in the management of public services. The expenditure in Social Security accounts for 2.87% of resources and the remaining 2.91% are spent in private insurance for civil servants (*mutualidades de funcionarios*)[45]. Health care is the foremost policy responsibility of ACs. On average, it accounts for 30% of ACs' total budget[46].

Overview of data collection methodologies

Headcount data of healthcare professionals in Spain needs to be taken with caution since the compilation of a **National Registry of Health Professionals**, in process since 2007, has not yet been finalised. The registry is to be developed by the Human Resources Commission of the SNS on the basis of the corresponding regional registries, many of which are also still in the process of compilation.

In the absence of a registry, there are three alternative but less reliable data sources:

1. **College registration for professionals:** College registration is not entirely reliable. Although college registration is compulsory for all regulated health professions, in some ACs professionals employed by the public health service are not obliged to register. Even where that obligation exists, the colleges' registries are rather limited, providing no information on the activity status of the registered professional.
2. **Payroll data of the regional health services**: this data does not take into account private sector and self-employed health professionals.
3. **A combination of regularly collected sources**: for primary care, mainly provided by the public sector, the source would be the SNS Information System for Primary Care (SIAP) and for hospital-based care, both ambulatory and inpatient, the source would be the National Survey of Inpatient Care Premises (ESCRI), which is compulsory for hospitals, either public or private, across the country. ESCRI is limited to doctors, nurses and nurse associate professionals.

In addition to the above-mentioned sources, the **National Statistical Institute (INE)** holds data on:

1. Retired and active professionals by sex and age
2. Health Professionals entering Spain: (a) Economically Active Population Survey (EAPS) – allows comparison of data on foreign-origin health professionals and all health professionals; (b) National Immigrant Survey (NIS) 2007 - social and demographic characteristics of persons born abroad.

The studies on needs in healthcare specialists undertaken by the Ministry of Health take into account all available sources to estimate the number of health professionals both in the public and private sectors.

[45] Ministerio de Sanidad, Política Social e Igualdad. 2010. *National Health System of Spain. Annual report 2008*.
[46] García-Armesto S. et al. *Spain. Health system review*. Health Systems in Transition Vol. 12 No. 4 2010.

In terms of **mobility data** there is information on the number of foreign degree diplomas recognised by the Ministry of Education and Ministry of Health and the number of foreigners taking the medical resident interns' programme (MIR) selective examinations.

Overview of workforce planning in Spain

Over the last decades, Spain went from a surplus to a shortage of physicians, with some specialties more affected than others[47]. The shortage of healthcare specialists since the years 2000 is caused by the population growth generated by increasing immigration flows, the retirement of many professionals and the *numerus clausu*s policy for undergraduate and specialist training established in the 1970's. The shortage of health professionals became therefore a dominant issue in workforce planning. Health professional inflows increased substantially in Spain over the last years, especially through professional mobility between Latin America and Europe. Outflows have been declining since the mid 2000s, which gives indications of the return of Spanish health professionals. Since the start of the financial crisis in 2008, the effect of planning and hospital workforce cutbacks has created a balance between the offer and the demand of health workforce[48].

Still, forecasting models estimate persistent shortages for some medical specialties[49] **while recent analysis shows there are emerging surpluses for other specialties which, if not properly addressed, can also become a problem in the medium/longer term**[50]. The SNS's concerns about regular programming and planning in response to the country's needs for health professionals has led to two key strategies being put in place in 2008:

- the introduction of the **Registry of Health Professionals** mentioned in the previous section, and
- a **study on needs in medical and other healthcare specialists**, updated on regular basis.

The study of supply and current and future needs of medical specialists serves as a basis workforce planning[51]. The first study, published in 2007, covered the years 2006-2030[52]. It has been updated in 2009 (for the years 2008-2025) and 2011 (for the years 2010-2025)[53]. A first study on the needs of nurses, midwives and nursing specialists has also been published in 2011[54].

The analysis takes into account **supply variables** such as medical demography, by considering the registry data of professionals furnished by the autonomous communities, data on medical schools' *numerus clausus* and on medical school graduates, the number of places offered in

[47] Sermeus W. and Bruyneel L. 2010. *Investing in Europe's health workforce of tomorrow: Scope for innovation and collaboration. Summary report of the three Policy Dialogue*

[48] Health Professional Mobility Full Report 2011

[49] In 2008, the forecasting model estimates a current shortage of 2% and of 14% by 2025. The study indicated that the areas of specialisation with the greatest deficits were anaesthetics; orthopaedic surgery and trauma; paediatric surgery; plastic, cosmetic and reconstructive surgery; family and community medicine; paediatrics and its specific areas; diagnostic radiology; and urology.

[50] Barber- Perez, P. et al. 2011. *Oferta y necesidad de especialistas médicos en España (2010-2025).* P. 200.

[51] Sermeus W. and Bruyneel L. 2010. *Investing in Europe's health workforce of tomorrow: Scope for innovation and collaboration. Summary report of the three Policy Dialogues*

[52] González López-Valcárcel, B. et al. 2007. *Oferta y necesidad de especialistas médicos en España (2006-2030).*

[53] The most recent study is available at: http://www.mspsi.gob.es/novedades/docs/OfYneceEspMedicos_ESP_2010_2025_03.pdf

[54] The study is available at: http://www.mspsi.gob.es/novedades/docs/Estudio_necesidades_enfermeria.pdf

specialised training programmes and the validation of general medicine and specialist degrees from other countries. It also analyses **demand variables**, such as demographic information on the population as a whole, the perceived needs of the autonomous communities, and the number of jobs available. The study also incorporates the opinions of experts with regard to variations in health care demand by specialty, technological advances and organisational changes in the system[55]. The methodology applied to estimate the need in medical specialists is the **system dynamics** approach allowing the application of modelling and simulation techniques to complex systems.

To try to overcome the challenges in relation to health workforce, abundant regulation regarding health professionals' career paths (including doctors, nurses and midwives) has been issued since 2003 when a new **law on the Regulation of Health Professionals** (Law 44/2003) was approved. Among other things, the law sets up **the Human Resources Commission of the SNS**. The SNS Human Resources Commission, as part of its mandate from the CISNS, has the task of fostering adequate planning for the needs of the SNS[56]. The Commission is composed of:

- Central Administration of Ministry of Health, Education, Economy;
- 17 Autonomous Communities and the Institute of Health Management (represents the cities of Ceuta and Melilla);
- Ministry of Defense - expected to offer medical undergraduate training. The Ministry of Defense currently offers medical and pharmacy specialist training to both military personnel and health science graduates in general.

Other important work strands emanating from legislation are the consolidation of the **Resident's Statute**[57], the **new training programmes** (*programas formativos*) put in place in a large number of specialties and, especially, the publication of **Royal Decree 183/2008**, of 8 February 2008, which establishes and classifies the medical and health science specialties and regulates certain aspects of specialised health care training. There is a project to reform specialist training to include two years of common training pathways for some specialties, and there is a project to create new specialties such as Accident and Emergency (A&E) doctor, child and adolescent psychiatrist and geneticist.

The main areas of work in health workforce planning in Spain relate to:

Specialised training

The postgraduate training of medical specialists and family and community doctors is very well structured and regulated. The system was created over 30 years ago, with the introduction in 1978 of the medical resident interns' postgraduate programme (MIR). This type of specialist training now exists for a number of healthcare specialisations: PIR for psychologists, FIR for pharmaceutics, BIR for medical biologists, QUIR for chemists, EIR for nursing specialists. The specialised training capacity is managed via a competitive examination process. The number of available specialised training places is approved annually by the SNS HR Commission, following the offer put forward by the regional health ministries and based on reports submitted by the national commissions for every specialty and the Ministry of Education. Any modification

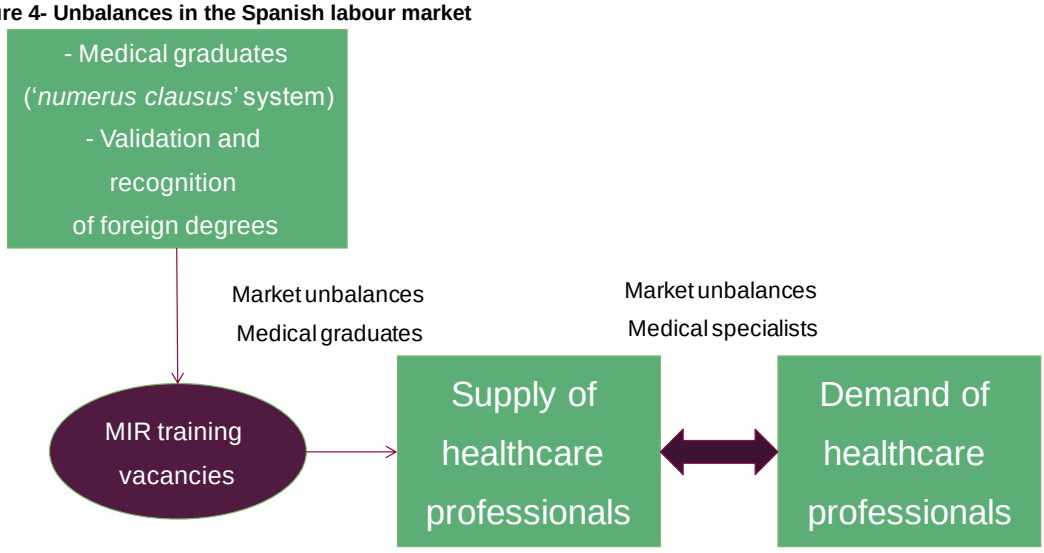
[55] Ministerio de Sanidad, Política Social e Igualdad. 2010. *National Health System of Spain. Annual report 2008*.
[56] García-Armesto S. et al. *Spain. Health system review*. Health Systems in Transition Vol. 12 No. 4 2010.
[57] Royal Decree 1146/2006

of the offer put forward by the regional ministries undertaken by the SNS HR Commission has to be approved by the ACs[58].

The specialised training system is based on a period of paid practical work of between two and five years – depending on the specialisation – in centres and units that are specifically accredited for training. Each specialisation is governed by a national commission, made up of representatives of the relevant scientific associations, academics, health professionals, residents and medical colleges; they define the training programmes for each specialty, as well as the training duration[59]. Figures from the Ministry of Health indicate an 18.6% increase in the 2003-2008 period, with the total rising from 6,404 places in 2003/04 to 7,866 places in 2008/09. In 2008 the specialist training system in Spain had 2,338 foreign residents (9.8% of the total) of which 458 were nationals of other EU member states or countries of the European Economic Area.

In terms of the number of places available for medical specialised training (including family and community medicine), 6,707 vacancies were offered in 2011/2012, this is -2.54% than in 2010/11 when 6881 vacancies were offered. As for nursing specialisation, since 2005, seven areas of nursing specialisation have been approved. For six of them (midwifery, mental health, occupational health, geriatric, paediatric and family and community nursing), future specialists need to undertake a two-year resident interns postgraduate programme (EIR). For 2011/2012, 1002 vacancies were offered for specialist nursing training.

Figure 4- Unbalances in the Spanish labour market



Source: Barber- Perez, P. et al. 2011. *Oferta y necesidad de especialistas médicos en España (2010-2025).*

Teaching accreditation

Any centre, public or private, may request to the Ministry of Health accreditation for training, conditional on their compliance with rigorous standards, which are regularly audited by a team of especially trained inspectors. The **Accredited Teaching Centres and Units** passing the accreditation process obtain authorisation to provide training for a certain number of graduate students for a maximum of five years, after which they must be re-accredited. The accreditation

[58] More information available at: http://www.mspsi.es/profesionales/formacion/home.htm
[59] García-Armesto S. et al. *Spain. Health system review*. Health Systems in Transition Vol. 12 No. 4 2010.

process is run jointly by the national and regional ministries of health and ministries of education, in collaboration with the National Council for Specialties. The external auditing procedures are performed by the Quality Agency of the SNS (in 2008 a total of 42 audits were performed on teaching centres and 189 on teaching units)[60].

Common training pathways

In 2008, the **National Council of Medical Specialties** recommended in a report the development of common training pathways for medical specialties under these areas: 1) medicine, 2) surgery, and 3) medicine and clinical laboratory. The report also addresses topics such as basic competences, itineraries, access systems and evaluation of the different pathways. To develop a proposal on common training pathways, a Working Group of the Human Resources Commission of the SNS was created, with representatives of the autonomous communities and the Ministry. There is currently a project for a new Royal Decree approving these changes to specialised training.

Ongoing Training Commission

The Ongoing Training Commission is responsible for harmonising ongoing training functions in institutions, bodies and the public administrations in charge of health care[61].

Recognition of EU medical degrees and validation (*homologación*) of non-EU medical degrees

In 2008, another piece of legislation, the Royal Decree 1837/2008, incorporates European Parliament and Council Directive 2005/36/EC of 7 September 2005 on the **recognition of professional qualifications**, including medicine, general care nursing, obstetrical-gynaecological nursing (midwifery), pharmacy, and dentistry[62]. In 2010, 266 EU medical degrees have been recognised in Spain. The requests to validate qualifications obtained outside the EU has also gone up with the increasing demand for specialists in Spain. The Royal Decree 459/2010 regulates the **validation of foreign professional qualifications of health science specialists obtained outside the EU**. In 2010, 6,800 non-EU medical degrees have been validated by the Ministry of Education. The number of nursing qualification degrees recognised and validated in 2010 were 1,241 (335 non-EU and 906 EU).

Returns Office

An office to assist the return for professionals from Spain who are currently working abroad has been created in 2009 but with so far very limited results.

Table 41: Overview of health workforce planning in Spain

Main institutions involved in workforce planning	Ministry of Health (SNS Human Resources Commission), Ministry of Education, regional health ministries, national commissions for each specialty
Structure of workforce planning	National and regional
System of workforce planning	The SNS Human Resources Commission makes recommendations on workforce planning, based on the studies on needs of medical specialists (including family

[60] More information available at: http://www.mspsi.es/profesionales/formacion/AcreDocCntUniForSanEsp.htm
[61] More information available at: http://www.mspsi.es/profesionales/formacion/formacionContinuada/home.htm
[62] More information available at: http://www.mspsi.es/profesionales/formacion/recoTitulosEuro/home.htm

	doctors and nurses, midwives and other nursing specialties). Coordinates the specialist training vacancies with regional health ministries and national commissions for each medical specialty.
Planning models and methods	Studies on the needs in medical specialists and nurses, midwives and other nursing specialties analysing supply and demand variables using a system dynamics approach.

3. Successes and Challenges of workforce planning

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;
- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 42: Overview of successes and challenges of workforce planning in Spain

Workforce planning dimension	Successes	Challenges
Monitoring	Data gathering has improved.	The Registry of Health Professionals has not been finalised.
Analysis	Studies on the needs of medical specialists are improving. They allow for a sound estimation of health workforce demand in medical specialties. A first study on the needs of nurses and midwives has also been published.	Studies focus on medical and other health care specialties but work on other health professions is only starting.
Governance/strategic planning	Improvements in monitoring and analysis are driving improvements at strategic levels. Good levels of cooperation between national authorities in the Ministry of Health and regional health authorities.	Much of the work on health care planning has only recently started and much of the new legislation in this area is still being developed.

Main successes of workforce planning

The study on needs in medical specialists has improved workforce planning to a great extent in Spain. There have been improvements in all key dimensions although much work still

needs to be done, especially in relation to other health care professions beyond medical, nursing and other health science (pharmacy, biology, chemistry, physics, psychology) specialists.

- **Monitoring**: data gathering has improved with each edition of the study. Workforce planners were able to validate the data they have used in the study published in December 2011. National authorities feel they have now enough data to carry out the analysis and to be able to assess the needs for medical specialists in a more robust way.
- **Analysis**: workforce planners have been able to assess the needs using the same criteria each time to be able to compare and plan vacancies for medical specialists (by specialism areas) and family doctors.
- **Strategic analysis**: improvements in monitoring and analysis are driving improvements at strategic levels.

Another key strength of the Spanish system is the high quality, harmony and homogeneity in terms of content and regulation of training programmes across the country. This ensures good results and similar competences of the workforce. The high quality is assured by a robust external auditing system.

Much of the successes in workforce planning in Spain can be explained by good levels of collaboration between national authorities in the Ministry of Health and regional health authorities, national commissions of medical specialties and teaching centres and units, and other important stakeholders. Nonetheless, sensitive political issues regarding workforce planning still persist.

Main challenges of workforce planning

The key challenges the Spanish workforce planning system faces are:

- The need to finalise the development of the national **Registry of Health Professionals**. There has been investment but the registry does not yet exist. The process has been delayed by the court case started by professional bodies that consider it is their competence and not the ACs competence to hold the registry. For the moment, as explained before, workforce planners have tried to supply the lack of reliable data through other channels that are less reliable. There is a project for a new Royal Decree to create the National Registry of Health Professionals that includes the Professional Colleges.
- Most of the work done to date relates to medical specialties (including family doctors, and more recently nurses and midwives) but work on planning for other health professions has only now begun.
- More work needs to be done in terms of **professional standards** for the medical specialties. It is also necessary to better match **competences** acquired by specialist training and the competences later acquired on the job. The issues of **continued professional development**, **reaccreditation**, and the **re-specialisation** of certain professions need to be addressed. Furthermore, a greater framework to understand the relationships between the different professions should be developed. In addition to this, the work on common training pathways is still ongoing.

- The authorities reached their maximum specialist training vacancy offer in 2009 (6,948 vacancies for medical specialised training), but the economic crisis and the spending cuts have slightly reduced this offer in 2010 and 2011. The EIR offer for nursing professions is increasing.
- Regulation has brought a great deal of improvement in many areas of workforce planning, but the excessive regulation has also added complexity to the system and increased costs.

Overcoming existing challenges at the national level

In the last decade, there has been an intense legislative activity to try and overcome the challenges affecting health workforce in Spain. Some of the initiatives are currently more developed than others, as explained in Section 2.0. More specifically, workforce planners are trying to address the challenges they face by:

- Trying to improve workforce planning year by year through dynamics system analysis as carried out for medical specialties. A study on the needs for nurses has recently been published.
- Keeping the needs assessment up to date. The study on the needs for medical specialists has been updated twice since the first edition in 2007.
- They have also carried out a survey with 2,500 professionals who graduated in the last 5 years to analyse their employment situation, this is whether they are working, where they are working (national system, private system), what type of contract they hold (permanent, fixed term), and migration and mobility issues.

4. EU level collaboration

Current collaboration with other European countries

There are no collaboration projects at the moment beyond Spain's involvement in the Joint Action on Health Workforce Planning.

Possible scenarios for further collaboration with European countries

In terms of scenarios for collaboration at European level, the following areas of work have been identified through interviews with national and regional level stakeholders:

- The development of a shared **database on professional mobility and migrations**. It would be helpful to share criteria on what it actually means: where professionals come from, where they have studied, where they have worked before, etc.
- The creation of a **common Professional Registry** (or a compilation of compatible national registries) that is developed or supervised at EU level. In order to develop the registry, EU Member States should **agree on professional standards, basic definitions, competences and roles** for the different professions and especially with regards to specialist workforce. The minimal common criteria could be related to demographics, education and training and continued professional development. In terms of workforce planning, it would be helpful to agree on criteria on how to collect data, how often it needs updating, etc.
- The **remunerations and awarding system** could also be better coordinated and homogenized (e.g. reaccreditation, re-specialisation).

- The development of a **shared database of good practices** for workforce planning, workforce development and also for the professional development of health workforce. A EU level committee should oversee the good practices that are submitted and make them available online if they meet the committee's criteria
- The agreement of **minimal standards and criteria** in relation to **medical specialist training** at European level.
- The creation of a **European agency** for the strategic planning of workforce that carries out needs assessment at European level. The agency could also publish good practice reports and facilitate cooperation and collaboration, for example, by coordinating and funding expert groups, team visits to other countries, training, etc.

Table 43: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Scenarios for collaboration	Topic focus of future collaboration
Monitoring	EU database on professional mobility and migrations European Professional Registry	Agree on common indicators, data collection and definitions (e.g. where professionals come from, where they have studied, where they have worked before, etc. Agree on professional standards, basic definitions, competences and roles for the different professions. Agree on common minimum dataset including demographics, education and training and continued professional development.
Analysis	Shared database of good practices for workforce planning Health professional needs assessment at European level.	Share good practices for workforce planning, workforce development and also for the professional development of health workforce. Use the datasets outlined above to carry out a health professionals' needs assessment at European level.
Governance/strategic planning	A European agency for the strategic planning	An agency could carry out the health professionals' needs assessment at European level. The agency could also assess and publish good practice reports and facilitate cooperation and collaboration, for example, by coordinating and funding expert groups, team visits to other countries, training, etc.

Sustainable international collaboration

Any cooperation at international level is welcome, according to workforce planners in Spain. They consider that OECD and WHO data is very helpful but the professional registry should work at European level. They feel a European recommendation about the necessity of holding professional registries could help move things forward, as they are facing severe delays in the creation of registries at national level due to legal issues. Creating a European agency could

also help to make collaboration in workforce planning sustainable and give a common general framework. Some workforce planners also acknowledge that the good will of the stakeholders involved is sometimes as or more important than financial resources in making the initiatives sustainable in the longer term.

Anyone involved in workforce planning, especially at strategic level, should understand the dynamic nature of the issue. Workforce planning should be updated and changed according to the identified needs, the data available, and forecasting (e.g. demographic projections) on an ongoing basis. It is important to modify planning as more data becomes available. The training of the medical profession is very long, continued professional development needs to keep the workforce up to date. There is a need to “re-train” or “re-specialise” those professionals whose specialty area has decreased or has disappeared due to new medical and technological developments. It is also important to be able to rationalise the competences of the different professionals to ensure they are doing the right type of job for their level and see if, for example, they are performing tasks that could be more cost-effective if they are undertaken by more junior staff or another professional. It would be helpful to include in planning all social and health care professionals to take into account important changes in healthcare across Europe such as the emergence of new models of care that are closer to home and in the community, the shift from an acute model of care to a chronic condition model of care, and the emergence of new professions.

Health Workforce Case Study - United Kingdom

1. Key findings

1. The UK has a population of 62.26 million, is made up of four nations (England, Northern Ireland, Scotland and Wales) and has devolved, increasingly decentralised public health systems in each nation. Each nation has a similar approach to workforce planning with the level of resource and support varying according to the size of the nation.

2. The key successes of workforce planning identified in the UK include:
    a. Implementation of a national human resource (HR) and payroll system which has improved the consistency, accuracy, quality and completeness of workforce statistics; led to greater standardisation of data; and the development of a suite of national and local reports and other tools to facilitate benchmarking
    b. Ensuring local workforce planners with an in-depth understanding of the local context can carry out planning and report to regional and national government structures

3. The key challenges of workforce planning identified include:
    a. Planning an affordable workforce, especially in terms of ensuring numbers are achievable, deliverable and in the right shape given budgetary constraints
    b. The ability to turn data into stronger intelligence, and using this intelligence to inform future strategic planning that improves outcomes for service users and patients
    c. Developing longer term strategic planning, i.e. 'horizon scanning' over 10-20 years. This is complicated in England due to the fact that the NHS structures are likely to change significantly
    d. Unforeseen circumstances at the national and international level that have an impact on workforce planning, e.g. the financial crisis and changes to immigration requirements.

4. Suggestions for further collaboration identified cover four key areas:
    a. Easier access to European wide information through a web based portal
    b. Strategic high level working groups to explore global changes that could impact the workforce
    c. Opportunities to combine forces, e.g. a country providing EU wide training for a specific specialist medical professional
    d. Development of a common language and standardisation of data to enable improved comparisons and analysis across the EU.

5. There is weak correlation between current challenges within the UK and suggestions for collaboration across Europe. Current challenges tended to focus largely on issues specific to nations within the UK (for example, the changing health structures in England), whereas suggestions for collaboration across Europe focused on wider cross country issues (for example, the need for a common language).

2. Introduction and Background

Sixteen interviews were carried out across the four nations of the UK to provide a range of opinions and intelligence from across the health workforce profession. Organisations were selected to cover five workforce stakeholder groups, namely; ministries/departments of health, education bodies within the NHS, health providers, professional associations and data collection institutions. In total, twenty-one organisations were approached and no invitations to interview were declined. Some contacts who were not available recommended a colleague. Please refer to Appendix A for a list of people interviewed.

Overview of the UK health system

The UK has a population of 62.26 million (2010), of which 52.2 million live in England, 5.22 million in Scotland, 3 million in Wales and 1.8 million in Northern Ireland.[63] In 2009 9.3% of GDP was spent on health. In 2010, £121.3 billion was spent on health, of which 83.1% was spent in England, 9% in Scotland (9.0%), 5% in Wales and 2.9% in Northern Ireland.[64]

All the four constituent nations within the UK have devolved government[65], each with its own ministry/department of health; and each has regional health authorities where decisions regarding service provision are made. In addition, England currently has local health authorities such as foundation trusts (for individual high-performing hospitals) and primary care trusts (PCTs) with decision-making authority.

The UK has a public funded health system which is free at the point of entry, with some supplementary private health provision. The health service itself is not a centralised organisation: rather it is a framework of several hundred organisations, each with significant autonomy in decision-making. It is largely funded through taxation and is referred to as the National Health Service (NHS) in England, NHS Scotland, NHS Wales, and Health and Social Care Northern Ireland.

The NHS in England is currently undergoing structural changes pending a change in legislation. The 2011 Health and Social Care Bill will, once fully introduced, further localise the commissioning and delivery of health services. As of 2012, the 151 PCTs in England are now grouped in fifty local clusters in order to facilitate these changes.

This case study only refers to the National Health Service and does not include social care.

Overview of data collection methodologies in the UK

In the last several years, each nation within the UK has reviewed their system for collecting and reporting data and their approach to health workforce planning. In all four nations, data are

[63] *The Guardian, http://www.guardian.co.uk/news/datablog/2011/jun/30/uk-population-growth-data* (accessed 16th December 2011)

[64] HM Treasury, *Public Expenditure Statistical Analyses 2011,* p121 (London: Stationery Office, 2011)

[65] Devolved government is the statutory granting of powers from the central government of a sovereign state to sub-national governments, typically at regional or local level.

collected nationally through a Human Resource (HR) and payroll system. England and Wales use the same system the Electronic Staff Record System (ESR). Northern Ireland (NI) and Scotland have their own separate systems (Human Resource Management System (HRMS) and the Scottish Workforce Information Standard System (SWISS)).

Each system collects workforce data based on headcounts (full time/whole time equivalent), staff groups (disaggregated according to sex, age and ethnicity), role count, basic/total earnings, absence and turnover. Data are also available on the numbers of temporary staff and numbers on fixed term contracts. Data on General Practitioners (GP), and some practice staff who are not directly employed by the NHS, are collected by separate systems in England, Wales and Scotland. Gaps still remain, for example, in England on other staff employed by local authorities, the private and third party providers of NHS services. In Northern Ireland, GP data are collected via the main system (HRMS). It is not always possible to compare data between the different systems across the UK due to differing definitions, and some information gaps remain, for example, information on all foundation trusts in England, which govern some hospitals independently and have different reporting requirements compared to other hospitals.

In both England and Wales, there is a dedicated agency with responsibility for producing comprehensive regular reports from the HR & payroll systems to improve planning and decision making across the NHS, the Information Centre for Health and Social Care (IC) in England and the National Leadership Innovation Agency for Healthcare (NLIAH) in Wales. These reports are typically reviewed by a range of forums and organisations at the national, regional and local levels of government. For instance, NHS IC data quality reports are sent to SHAs and local trusts so that anomalies in the data are identified and corrected quickly. In addition, NHS IC statistical publications are publicly available on its website, allowing a lot of the data obtained to be available in the public domain. In Northern Ireland and in Scotland the information is published by a team within each national government. As in England much of the data obtained is available in the public domain, either via government website (as in Northern Ireland[66]) or via Information Services Division (ISD) Scotland.

There are also a number of UK wide health professional bodies. Qualified health professionals must register with their respective regulatory body in order to practice in the United Kingdom. Regulation of health professionals is retained at UK level- it has not been devolved. All registered professionals must register, by law, their official title with the respective professional body if they are to practice, and meet standards for training and professional skills in their area of work. Indeed, there is untapped potential to use professional registration data as a source for 'whole population' within the workforce, with such data currently not collected by ESR, SWISS and HRMS. Trade Unions and Royal Colleges also collect membership information. The ESR now has automated data coming from the General Medical Council (GMC) and Nursing and Midwifery Council (NMC) registration data source, this will be expanded to include other professional bodies in the future.

Other key data sources which cover all types of jobs including healthcare include the Labour Force Survey conducted by the Office of National Statistics (ONS). This is the largest UK household survey, collecting employment and employment flow information quarterly. The UK Employer Skills Survey is carried out annually by the UK Commission for Employment and Skills

[66] http://www.dhsspsni.gov.uk/stats-hsc [Checked 22nd December 2011]

(UKCES) and asks a representative sample of English employers about recruitment issues, the skills lacking in their current workforce, and their approach to training. In addition, both the University and Colleges Admission Service (UCAS) and the Higher Education Statistical Agency play a critical role in monitoring pre-registration numbers, with virtually all applications for higher education courses going through UCAS.

Please refer to Appendix B (table 1) for an overview of data collection in the United Kingdom.

Overview of workforce planning in the United Kingdom

Each of the nations within the UK has a similar approach to workforce planning. In NI, Scotland and Wales, the regional health boards carry out health workforce planning and report to the national government. In England, a much larger nation, local NHS Trusts carry out health workforce planning—now among local clusters typically consisting of several PCTs— and report to their regional strategic health authorities (SHAs) who in turn report to the DH. National support is made available to local and regional workforce planners, which includes developing planning models and tools to enable benchmarking to ensure quality data. The level of support available is reflective of the size of the nation, with different public organisations providing varying levels of support to local planners in each nation:

- In England, the Centre for Workforce Intelligence (CfWI) was established by the DH in 2010 to be the national authority on workforce planning and development, providing advice and information to the health and social care system.
- In England, the IC produces and sends data quality reports (based on data extracted from the ESR) to NHS organisations, e.g. PCTs, SHAs.
- In NI and Scotland, workforce information is provided by a workforce planning team within either the NHS (Information Services Division (ISD) for Scotland) or the government (the Information and Analysis Directorate (IAD) for the Northern Ireland Executive).
- In Wales, the National Leadership Innovation Agency in Healthcare (NLIAH) has been set up to create and retain a health workforce with the skills to meet the demands of modern day healthcare. This includes workforce planning, commissioning, education and training, the reconfiguration of services concentrating skills and resources where they are most needed.

Education and training needs are determined by local trusts/boards in consultation with higher education institutions (HEIs). Medical Education England (MEE) helps scrutinise education and training plans developed regionally and locally. NHS Education Scotland has a similar role, while the NLIAH fulfils the same function in Wales. The Northern Ireland Practice and Education Council scrutinises training plans for nurses and midwives only. Skills for Health represent UK health employers, with their role to work with health employers to plan and manage workforce development and change.

Under proposed reforms, it is expected that responsibility for training and development will lie with Local and Education Training Boards (LETBs) at the local level from 2013. Local workforce plans will be scrutinised by both the CfWI and the Health Education England (HEE), the latter replacing MEE and have a wider remit for action.

Please refer to Appendix B (table 2) for an overview of workforce planning in the United Kingdom.

3. Successes and Challenges of Workforce Planning

Main successes of workforce planning

The successes of workforce planning described by the interviewees were similar across the UK despite having four separate health systems. However, the complexities of workforce planning increased in relation to the size of the nation. For example, in Northern Ireland, workforce planning operates according to a two-way dynamic between the six local health trusts and the workforce planning and statistics units at the health ministry for Northern Ireland.[67] In England the system is far larger, with a line of authority that runs from the Department of Health (DH), the ten SHAs and the numerous PCTs (151 in total). Foundation Trusts report to Monitor, the independent regulator for these trusts. However, under the proposed 2011 Health and Social Care Bill PCTs and SHAs in England are to be abolished and replaced by GP led commissioning consortia which will operate at a local level and answer to a new national board.

Overall, the successes cited relate largely to improvements in monitoring and analysis around data including consistency, quality and availability. There are now established networks within each nation and across the UK of health workforce planners and organisations, working together to gain a better shared understanding of the data. The networks have also expanded beyond workforce planners so that planning no longer takes place in isolation but instead links are now being made with finance and human resources to ensure changes to the workforce are adequately provided for.

In recent years, each nation has reviewed its method for workforce planning and a number of changes have taken place:

1. Implementation of new HR and Payroll systems in England, Wales and Scotland has led to improved standardisation and accuracy of data available nationally.
2. Creation of dedicated data institution agencies such as the CfWI in England in 2010 and the IC in England and NLIAH in Wales in 2005 has led to increased data reporting and improved analysis.
3. The focus has shifted from national planning to a more local/regional approach, with each health board/trust being responsible for its own plan.

National agencies in England and Wales have produced information and tools to support this new approach and established benchmarking and quality standards. A few years in to this new approach, lessons are being learnt with incremental improvements made each year. For example, the NLIAH on behalf of the Welsh Government have developed codes of conduct, common delegation standards and advanced practice frameworks to assist local health boards in their workforce planning.

Main challenges of workforce planning

Whilst one of the main successes in workforce planning cited was around improvements in the monitoring of data there are still gaps, specifically referred to as:

[67] Known as the Department for Health, Social Services and Public Safety (DHPSSNI)

1. A lack of available information regarding the health private sector (e.g., pharmacy, nursing care)
2. Inconsistencies of information available (e.g. there is a different system for GPs in England and Wales)
3. Foundation trusts in England (as there is no obligation for them to report)
4. Information populated on the nationality of individual workers (which is estimated as 10% complete in ESR in England and Wales)

There was a shared view among interviewees that the planning focus remains on numbers of staff and specifically on the medical professions. Interviewees also advocated a shift to more demand led modelling and a better understanding of skills and competencies across a multi-professional and multi-disciplinary healthcare system.

Further improvements to on-going monitoring and analysis of data are required in order to fully understand the impact of changes and see if the intended desired outcome was achieved. For example, the development of the nurse consultants' role to change the skills mix over the last decade was aimed to reduce reliance on medical staff in Accident and Emergency (A&E).

The main area of challenge cited by all those interviewed was around strategic planning. Due to the scale of the public sector health system and the length of time it takes to train a medical professional, focus should be on horizon scanning for the next 10-20 years. However, there are a number of factors that make this very difficult, including:

- The changing political context
- Other events happening in Europe and internationally which have had major unanticipated consequences, notably the financial crisis
- Proposed changes to the health system structure (especially in England) which are not yet confirmed and whose impacts on the workforce are not yet fully understood.

A further challenge for the UK is ensuring a shared understanding of the reasons for proposed changes to the workforce so that planners fully understand the implications that a change is likely to have on the health system and the rest of the workforce. For example, in 2010 the Government committed to increasing the number of health visitors by 4,200 full time equivalents (FTE) before 31 March 2015 in NHS England[68]. This represents a 52% increase on the 8,125 FTE health visitors currently employed in the NHS and across other providers in September 2010.

The DH in England offered a concise summary of the problems outlined above, highlighting the major challenge as *planning an affordable workforce while ensuring the numbers are achievable, deliverable and in the right shape given budgetary constraints*. For the DH, this is described as problematic, with some specialties such as emergency medicine harder to recruit to. The DH suggests that ensuring full sustainability is very difficult, as there will always be gaps in some areas at any one time.

[68] Department of Health, *Health Visitor Implementation Plan 2011-15: A Call to Action;* February 2011 (London: Stationery Office, 2011)

Table 44: Overview of successes and challenges of workforce planning in the United Kingdom

Workforce planning dimension	Successes	Challenges
Monitoring	• **One main system** (nationally) • **Improved return rates** • **Greater standardisation and quality of data** (nationally) has led to **better intelligence** • **Strong networks** locally, regionally and nationally	• **Lack of information** from the **private sector** • **Information gaps and no business processes** to support the data • Some **inconsistencies across regions** and between nations
Analysis	• **Benchmarking and quality standards** in place • **Improved links/understanding** between **workforce planning** and **finance** • **Changes to workforce/skills mix and roles**	• **Policy changes not tracked and analysed over time** to understand if the right outcome was achieved • **Linkages between required change and context not always fully understood** • **Focus still on supply** modelling and not demand.
Governance/strategic planning	• Large **expansion in workforce** in last ten years • Shift in responsibility to **local/regional planners**	• **Ensuring an affordable workforce, with numbers that are achievable, deliverable and in right shape given budgetary constraints** • **Need for workforce planning to be more strategic and to have better cross-cutting links (especially across disciplines and across levels of government)** • Hard to predict all changes that may have large impact to workforce e.g. **financial crisis** • **Planning at local level often driven by the market (especially in terms of finance and geography)** • Current focus on **short term planning** due to budgetary constraints(1-3 years) • **Difficult to make quick changes** to support changing political context. • **Difficult to plan medium to long term** (10-20 years) when future NHS structures and roles unclear

		• **Disparity between learning cycle** (10-15 years for medics) **and planning cycle**

Overcoming existing challenges at the national/UK level?

There are a number of initiatives currently being progressed across the UK that should address some of these challenges. The CfWI for example is working on a project on the future medical workforce in England. The new proposed structures to the NHS in England aim to improve commissioning of healthcare services across the nation.

The development of tools and support for workforce planners continues to evolve the use of benchmarking and to ensure quality data and better integration between workforce planning, finance and HR. This aims to reduce the information gap between planning workforce numbers and the cost and skills required to meet demand. The ESR also has the capability for planners to use the data for planning purposes. The ESR data warehouse is used at a national level (in England and Wales) to interrogate data on pay and numbers. Through organisations such as CfWI, networks of workforce planning experts continue in each nation to improve support tools available and, in turn, improve the quality of workforce planning.

Suggestions for further improvements included:

- Continuing to build on networks with workforce planners, including between different nations within the UK, to improve the understanding of neighbouring areas and learn from different approaches
- Taking more action to better understand the private and third sectors and local authorities, and the increasing role these bodies has within health and social care
- A perceived need to better understanding the strategic context in order to try to predict the possible impact other changes local, regional, nationally and internationally could have on workforce planning, e.g. changes to tuition fees across the UK.

4. EU level collaboration

Current collaboration with other European countries

There already exists a variety of connections between different parts of the NHS and the European Union. Current efforts of collaboration appear to be conducted mostly on an informal basis, with few official conduits in place to facilitate collaboration.

Table 45: Overview of current collaboration with European countries

Workforce planning dimension	Current collaboration	Purpose of current collaboration
Monitoring	• Regular NHS IC meetings with the OECD • NHS Confederation has European office	• Provide data according to OECD specifications • Monitor developments across the European Union and representing NHS interests at European level

Analysis	• EU Joint Action Group • Involvement in research projects (Northern Periphery between Scotland and Sweden; Prometheus; RN4CAST[69])	• Primarily Horizon Scanning activity • Address the issues rural doctors face (Northern Periphery); mobility of health professionals (Prometheus Report); nurse forecasting (RN4CAST)
Governance/strategic planning	• Working across education institutions across the UK • Involvement of UK hospital managers in HOPE and HOSPEEM[70]	• Improve understanding of numbers of graduates coming through system • Coordinate views and actions within hospital administration
Other	• Quarterly UK wide information sharing • Various EU Groups, e.g. European Federation of Nurses • EU wide/Global Conferences • Informal links/visits to and from other EU countries	• Improve information on health projects across the UK • Represent nurses' interests at EU level; joint partner with European Commission • E.g. Competency Development • E.g. visit from Netherlands looking to improve workforce planning for nurses

Possible scenarios for further collaboration with European countries

The areas for possible collaboration fall into four broad categories.

1. **Easy access to European wide information** – knowledge, intelligence, research, models, best practice, data sharing. This could be achieved through a web based portal which included contact details of the individual responsible for the information from each country. This would enable visitors to the website to follow up any particular areas of interest and encourage further collaboration.
2. **Strategic working groups** – senior representatives from each country to come together to explore European and International changes that could impact the workforce and develop strategies to address these. For example, responses to changes in medical technology, the financial crisis or an ageing population.
3. **Opportunities to combine forces** – explore the possibility of a more formal collaboration between countries so that specialist training could be delivered by a lead country (economies of scale, specifically in smaller countries)
4. **Ability to compare/analyse data across EU** – development of a common vocabulary, common workforce standards and minimum dataset to include mobility data.

[69] RN4CAST is a research project designed to investigate the possibilities of nurse forecasting. It involves researchers from 12 European countries (Belgium, Finland, Germany, Greece, Ireland, Norway, Poland, Spain, Sweden, Switzerland, The Netherlands and England) and is led by academics from the Catholic University of Leuven (BE) and the University of Pennsylvania (US)

[70] HOPE is the European Hospital and Healthcare Federation, which represents national public and private hospital associations and hospital owners, either federations of local and regional authorities or national health services. It is made up of 33 organisations coming from the 27 Member States of the European Union and Switzerland. HOSPEEM is the European Hospital and Healthcare Employers' Association, which represents health care employers and is a social partner of the European Commission.

A range of opportunities for EU collaboration were suggested that could benefit workforce planners in the UK. For example, local/regional workforce planners looked for improvements on specific issues such as data, analysis and modelling tools, whereas national and UK wide organisations focused on broader strategic issues such as common issues across the EU that could be discussed collectively and different countries approaches to implementing new technologies in health. This was true of the DH in England, who is supportive of such collaboration at the EU level in order to develop workforce planning tools and methodologies and a common understanding of terminology.

A number of interviewees noted the importance of ensuring the appropriate level of representation and input is established for each initiative to reflect the topic being discussed across the EU. For example, data experts would need to be present for any discussions related to data, while senior ministry officials would need to be present for any strategic discussions requiring policy decisions. The DH in England is especially keen that collaboration takes place at the appropriate level of government, with high level collaboration ideally occurring through existing institutions and means such as the EU Joint Action Group.

Collaboration already takes place on a regional, national and UK basis, and networks are continually evolving, for example an informal network of workforce planners across the UK already host meetings on a regular basis. There is a potential tension (particularly with the proposed changes in England) between continuing to develop greater consistency and joint working, and moving to a more localised health system that may be delivered differently across the nation due to decisions made locally.

A range of practical solutions around data were suggested with the main preference being a central and easily accessible portal for information sharing of data, models, research and best practice. This could include key contact details to enable individual organisations to approach other countries for further information and discussion. Such a development could be extended to include discussion forums/experts networks with some specific strategic action groups focusing on key areas of interest as the need arises.

Given that the majority of collaborative projects appear to go on an informal basis, interviewees were especially keen to support a health workforce community/network in which to facilitate information exchange. However, as interviewees were keen to note, impetus and enthusiasm from local/ regional levels of government were just as, if not more, necessary for collaboration than willingness from central government.

An interesting proposal from several interviewees from the smaller nations was for greater collaboration on some specialist areas of training. The suggestion was to examine if there was any scope for universities across Europe to become centres of excellence in certain specialties, encouraging both cost savings and increased mitigation against losing health workers.

Table 5 below provides a summary of the successes and challenges of workforce planning in the health sector. Successes and challenges are divided into the 3 key dimensions of workforce planning:

- **Monitoring** data on the current and future health workforce are collected to monitor performance and forecast;

- **Analysis** to respond to challenges in terms of balancing the demand for and the supply of human resources for health, within the current environment;
- **Strategic planning** over the longer term direction of the health system, including resource allocation, system characteristics and ensuring a sustainable health workforce.

Table 46: Overview of possible scenarios for further collaboration with European countries

Workforce planning dimension	Stakeholders/Level of Engagement	Scenarios for collaboration (instrument)	Topic focus of future collaboration
Monitoring	• **Information accessible to all** (clearly defined, easy to access information of interest to the individual viewer)	• **EU wide portal** of information (open access to all levels) (*current examples include the Prometheus research programme, which is co-managed by the WHO's European Observatory and the European Health Management Association (EHMA) and has already provided a number of publicly available case studies on health care systems)*	**Common workforce language and standards** mapped (e.g. what is a doctor; what should equivalent qualifications mean?)
			Minimum datasets, starting with a few specific staff groups
			Knowledge of flows/trends and mobility between countries
Analysis	• **Membership of the action group should be reflective of issue being examined**. For example, groups looking at specific data issues should involve experts from data collection institutes. Groups looking at the financial crisis must include senior ministry officials.	• **Action Groups** The action groups should have a specific focus. Face to face meetings and their frequency should be defined from the outset based on the requirements for that specific initiative.	• **Supply vs. demand** across Europe in next few years due to financial crisis. Explore joint ways to manage this. • **Shared understanding of mobility issues** and to what extent this impacts individual countries workforce planning
	• **Information accessible to all** clearly defined so it is easy to access information of interest to the individual viewer	• **Shared portal** - **easily accessible research, best practice** with RSS feed to flag new research/case studies	• E.g. How different countries plan to **implement medical technologies** and impact on workforce

Governance/ strategic planning	• **Senior leaders with responsibility for health workforce planning** e.g. ministry officials, Chief Executives of related agencies, Directors of SHAs	• **Discussion forum** to attempt to foresee changes across the globe that may impact workforce planning in Europe and how to address these (suggest every 6 months)	• Examples include: **financial crisis, changes to visa requirements**
	• **Senior representatives from universities/higher education/education bodies**	• **Formal collaboration in training specialists**	• Explore the possibility that specialist training could be delivered by a lead university across Europe (economies of scale, specifically in smaller countries)
General	• **Information accessible to all and easy to find on the portal**	• **EU wide portal** of information open access to all levels with contact details for follow up enquiries	• Different models, best practice
	• **Senior leaders with responsibility for health workforce planning** e.g. ministry officials, Chief Executives of related agencies	• **Joint EU wide groups** focusing on current drivers/shared issues, impacts and how different countries are addressing these Possible links to discussion forums mentioned under strategic planning (suggested frequency to meet every 6 months)	• Exploring common drivers: – Ageing population – New medical technologies – Budgetary constraints (doing more for less) – Changes to political systems • Shift to community focus

Sustainable international collaboration

It was felt that if collaboration focused on gathering intelligence and combined strategic planning, this would enable a shared understanding, leading to improved decision making nationally. According to interviewees focus must be on longer term horizon scanning of 10-20 years.

On a basic level, the majority of interviewees believed that a shared open portal with easily accessible information targeted at a lay audience (as opposed to very technical detailed academic papers) would be of great benefit and encourage further networking and collaboration. If the information gathered could be added to and monitored overtime, an intended result would be better intelligence and improve longer term strategic planning in the future.

Interviewees also thought it was important to ensure the appropriate level of representation according to the area. For example, collaboration could range from senior strategic thinking groups and detailed data specific action groups, to electronic discussion forums exchanging ideas on specific developments within the labour market.

It was envisaged that a number of factors would need careful consideration for this to be a success, including the funding of any initiatives and how the input/resource requirement from countries could be reflective of their size.

Appendix A – Data Collection and Workforce Planning in the United Kingdom

Table 47 - Overview of data collection in the United Kingdom

Nation	England	Wales	Scotland	Northern Ireland
Basic information and scope of data	**National HR & Payroll System** *Electronic Staff Record system (ESR)* The ESR covers all NHS Hospital and Community Health Service Staff (HCHS) and staff working in successor bodies, with the exception of those working in primary care (GPs) practice staff, and agency workers GP information collected by GP payment system (Exeter).		**National HR & Payroll System** *Scottish Workforce Information Standard System (SWISS)* GP information collected by General Practitioner Contractor Database (GPCD)	**National HR & Payroll System** *Human Resource Management System (HRMS) – covers all professions*
	National data collected via Labour Force Surveys (employment); UK Employers Skills Survey (skill requirements) and University Colleges and Admissions Service and Higher Education Statistics Agency (universities)			
Type of data collected	**Stock data**: Headcounts (full-time and whole-time equivalent); temporary/fixed contract staff; age, gender, ethnicity, basic/total earnings (though not for dental/medical staff/some senior managers, who have separate national pay scales); sickness/absence rates **Flow data**		**Stock data:** Headcounts (in whole time and full time equivalent), sickness and vacancies **Flow data**	**Stock data:** headcounts, age, gender, working patterns and age **Flow data**
Data Collection	**Local NHS Trusts (hospital, foundation, primary care)** Local health providers input data to ESR Information Centre for Health and Social Care (IC) managed the ESR data warehouse and produces reports	**Regional Health Boards (7 in total)** Responsible for providing payroll data to ESR; NLIAH verifies the data	**Local NHS Boards (14 in total)** Each health board (14 in total) has a coordinator who ensures the relevant data is provided to the system. Quality control carried out by ISD Scotland	**Local Trusts (6 in total)** Each health board responsible for data collection, with government department responsible for data verification
Data Reporting	**National** **Information Centre**	**National** **National**	**National** **Information**	**National** **Information and**

	for Health and Social Care (IC) *Gov agency responsible for producing regular reports and disseminating. Date of reference 30th September each year*	**Leadership and Innovation Agency for Healthcare** *Gov agency responsible for producing regular reports and disseminating*	**Services Division, NHS Scotland** *Quarterly reports produced*	**Analysis Directorate (IAD)** (within government department) *Figures used in annual review of the professions*

Table 48: Overview of health workforce planning in the United Kingdom as of 2012

Nation	**England**	**Wales**	**Scotland**	**Northern Ireland**
Main institutions involved in workforce planning				
Ministry of Health	Department of Health (DH) Regional Strategic Health Authorities (SHAs)	Department for Health, Social Services and Children	Health & Social Care Directorate	Department of Health, Social Services and Public Safety (DHSSPS)
Health Service	National Health Service (NHS)	NHS Wales	NHS Scotland	Health and Social Care Northern Ireland (HSCNI)
Education	Medical Education England (to be replaced in 2013 by Higher Education England)	National Leadership Innovation Agency for Healthcare (NLIAH)	NHS Education Scotland	Northern Ireland Practice and Education Council (NIPEC; for nurses and midwives)
	Higher Education Institutions; Postgraduate Deaneries (in England, to be replaced by Local Education and Training Boards, LETBs)			
Health Commissioners and Providers	151 local primary care trusts; grouped in 50 NHS clusters. Secondary NHS Trusts – hospital, foundation.	7 health boards and 3 specialised trusts	14 health boards and 8 specialised health boards	6 trusts (five regional and one specialised)
Key Data Bodies	Information Centre for Health and Social Care (IC); Centre for Workforce Intelligence (CfWI)	NLIAH	Information Services Division Scotland (ISD Scotland)	Information and Analysis Directorate (IAD)
UK wide bodies	Office for National Statistics (ONS) Skills for Health/Skills for Health in Scotland Trade Unions (e.g. UNISON) University and Colleges Admission Service (UCAS)- information on new inflow and graduate			

	numbers Higher Education Statistical Agency (HESA)
Professional Bodies	Ten Royal Colleges. Examples include: Royal College of General Practitioners (RCGP), the Royal College of Nursing (RCN), the Royal College of Physicians, the Royal College of Psychiatrists and the Royal College of Surgeons (RCS) Other professional associations include the British Medical Association (BMA, doctors) Regulatory bodies include the General Dental Council (GDC). the General Medical Council (GMC), the Health Professions Council (HPC) and the Nursing and Midwifery Council (NMC)
Structure of workforce planning	Local, Regional & National
System of workforce planning	Regional health bodies after consultation with local stakeholders submit plans to the workforce planning unit in the national health ministry (Wales; Scotland; Northern Ireland). Government workforce planning units and education bodies such as Medical Education England (MEE) provide tools and support to enable trusts to produce the information required and to verify their data collection. In England, there is an additional level and local trusts (after consultation with local stakeholders) submit plans to their local strategic health authority (SHA), who in turn collates the local plans and produce a region wide plan. Currently, these local trusts are grouped into clusters consisting typically of several trusts, following the proposed 2011 Health and Social Care Bill. From 2013, it is expected that responsibility for training and development will shift to Local and Education Training Boards (LETBs), with scrutiny of local plans to be carried out by Health Education England (which will replace MEE) and CfWI. In Scotland, a similar arrangement is in place, with workforce planning taking place regionally among three regional units (North, West, South East & Tayside). The principal data source in each nation is their national human resource and payroll system.
Planning models and methods	Workforce planning differs according to organisational level: hospitals plan monthly; trusts/boards plan for current and following financial year; foundation trusts and regional SHAs typically prepare a five year plan. Various tools used at national level, including supply-side projections, scenario modelling, skill mix and competence models, care pathways and cost profiles. In Scotland, the ‘Six Steps’ model is used both at board and national level.

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