European Commission

Health system performance assessment – Integrated Care Assessment (20157303 HSPA)

Health system fiches

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INTRODUCTION

This report contains the individual results of the Maturity Assessments performed in 12 health systems. Each maturity assessment presented here is further complemented with an up-to-date description of the corresponding health system. Furthermore, a summary of relevant integrated care policies at national and / or regional level is provided for each health system, as well as examples of bottom-up and / or top-down integrated care implementation.

The assessment of integrated care implementation maturity was carried out in the following 12 health systems:

- Belgium | West Flanders region;
- Bulgaria | Sofia;
- Denmark | Southern Denmark region;
- Estonia | national-level analysis;
- Germany | local-level analysis of the areas of Hausach and Haslach im Kinzigtal;
- Greece | national-level analysis;
- Iceland | national-level analysis;
- Italy | Lombardy region;
- Netherlands | national-level analysis;
- Poland | East Mazovia region;
- Spain | Asturias region;
- Sweden | Norrbotten region.

The results from these integrated care implementation maturity analyses are displayed in figures in the form of relative scores provided for each *maturity domain*, and for each selected health system, by interviewed stakeholders.

It is apparent from the self-assessment results displayed below that the health systems in **Germany, Denmark, Belgium, Italy, Spain, Greece, Sweden and Iceland** were perceived by their corresponding stakeholders to be more mature than those in **Estonia, the Netherlands, Poland and Bulgaria**. This is further highlighted in the qualitative summaries, also sourced through the maturity model analysis, and outlined below.

Belgium

Population size (thousands): 11,274 (State of Health in the EU, Belgium, 2017)[1]

Population density: 371.8 inhabitants / km^2 (Eurostat, 2015)[2]

Life expectancy: 81.1 years (State of Health in the EU, Belgium, 2017)

Fertility rate: 1.7 births / woman (State of Health in the EU, Belgium, 2017)

Mortality rate: 9.7 deaths / 1,000 people (Central Intelligence Agency, 2017)[3]

Total health expenditure: 10.5% (State of Health in the EU, Belgium, 2017)

Health financing: government schemes (11.4%), compulsory contributory health insurance schemes and compulsory medical saving accounts (66.2%), voluntary health insurance schemes (4.4%), financing schemes of non-profit institutions serving households (0.2%), enterprise financing schemes (0.1%), household out-of-pocket payments (17.8%) (Eurostat, 2015)[4]

Top causes of death: circulatory diseases, malignant neoplasms, and respiratory diseases (State of Health in the EU, Belgium, 2017)

The Belgian healthcare system

Belgium is a federal state that has three levels of government – the federal government, the federal entities (i.e. three regions and three communities) and the local governments (i.e. provinces and municipalities). The Belgian health system is characterised by compulsory insurance, regulated by federal authorities and managed by the National Institute for Health and Disability Insurance, and achieves nearly universal health coverage (99%). The social insurance is characterised by solidarity between the rich and poor, healthy and unhealthy people, and with no selection of risk. The federal entities are responsible for health promotion and prevention, as well as social and community care services, integration of care and financing hospital investments (European Commission, 2017b). A number of eHealth applications run by the National Institute for Health and Disability Insurance are likely to foster integration of care. The organisation of health services allows for therapeutic freedom for physicians, freedom of choice for patients and remuneration based on fee-for-service payments. At the federal level, the parliament is the legislative body; the federal government and the Minister of Social Affairs and Public Health are the executive bodies. In terms of national-level healthcare organisation, numerous public authorities are responsible for the funding of healthcare and the oversight of its organisation – there are *c.* 150 official commissions in the Belgian healthcare sector (European Commission, 2017b). The whole budget for outpatient care is hold by the federal government. This strongly impacts the room for manoeuvre of other levels of the government in terms of organising GPs' activities, including integration of care.

In Belgium, healthcare is provided by public health services, hospitals, specific facilities for the elderly, independent ambulatory care professionals, and independent pharmacists. The budget for the health system is determined on an annual basis using a six-step procedure: (i) determining needs, (ii) carrying out technical estimates, (iii) identifying potential economy measures, (iv) suggesting the global budget objective and partial objectives, (v) determining the budget, and (vi) negotiating conventions and agreements (European Commission, 2017b).

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[1] https://ec.europa.eu/health/sites/health/files/state/docs/chp_be_dutch.pdf

[2] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[3] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[4] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

Integrated care policies

In Belgium, the focus has been on moving away from providing mostly expensive acute care, and measures have been implemented to adopt models of integrated care and multidisciplinary cooperation, patients' pathways, care programmes, and networks (Paulus et al., 2013). After a series of policy initiatives to tackle chronic diseases, such as the 2008 national plan 'Priorité aux malades chroniques!'/ 'Prioriteit voor de chronisch zieken!' (Office of the Deputy Prime Minister, 2008) and the 2010 conference 'Innovative Approaches for Chronic Illnesses in Public Health and Healthcare Systems' organised by the Belgian presidency, the government published in 2015 its joint plan in favour of chronic patients – *Integrated care for better health* (Government of Belgium, 2015). The execution of the plan includes the development of up to 20 pilots and has 14 components including patient empowerment; carers support; case management; concentration and coordination; multidisciplinary guidelines; and adaptation of the funding mechanisms.

Integrated care policies and strategies in Belgium reflect an all-encompassing approach to the integration of health and social care, as highlighted in the national-level plan *Integrated care for better health*. These policies represent a shared vision and strategy of both the federal government and the federated entities for the digitally enabled integration and management of health and social care pathways. Additional care components are also addressed by other strategies and policies, such as the regional-level Flanders Care strategy,[5] and the 'Conventions' agreement (European Observatory, 2010) for functional rehabilitation and integrated care projects in mental health sector policies.

Implementation of integrated care in Belgium: pilot projects in Flanders

- *De Koepel,*[6] which targets chronic patients who have polypharmacy (concurrent use of multiple medications), multiple hospitalisations or precariousness;
- *De Brug – la constitution d'une chaîne de soins, de diagnostic, de traitement et d'accompagnement/Zorgintegratie De Brug, De Weg Naar Mijn Eigen (Pro) Actief Gezondheids- En Welzijnsplan,*[7] which looks to enable a chain of care, diagnosis, treatment and support, as well as prevention, early detection and self-management, with the patient at the centre of the approach;
- *Empact!*[8], which aims to develop a generic model of integrated care for all chronic patients who are dependent on care;
- *Continuité des soins et empowerment du malade chronique/ Zorgregio Waasland: Zorgcontinuïteit En Empowerment Chronisch Zieken*[9], which aims to improve the

[5] A description of the 'Flanders Care Strategy' is available at https://ec.europa.eu/eip/ageing/repository/flanders-care_en

[6] A detailed description of this project can be found at http://www.integreo.be/fr/pres-de-chez-vous/de-koepel-la-coupole

[7] A detailed description of this project can be found at http://www.integreo.be/fr/pres-de-chez-vous/de-brug-la-constitution-dune-chaine-de-soins-de-diagnostic-de-traitement-et

[8] A detailed description of this project can be found at http://www.integreo.be/fr/pres-de-chez-vous/empact-collectief-impact-platform-chronic-care

[9] A detailed description of this project can be found at https://www.integreo.be/fr/pres-de-chez-vous/saint-nicolas-beveren-saint-gilles-waes-tamise-continuite-des-soins-et-empowerment

health status and participation in the community of chronic patients through an integrated approach of self-empowerment and well-coordinated home care;

- *Soins intégrés pour les malades chroniques avec de multiples maladies chroniques et une vulnérabilité accrue/ Geïntegreerde Zorg Voor De Chronisch Zieke Met Multipathologie En Verhoogde Kwetsbaarheid In De Vlaamse Ardennen*[10], which is based on a simple primary screening (i.e. Groningen Frailty Indicator) and further filtering of a target group based on degree of vulnerability, and subsequent orientation toward a self-management path.

Assessment of the maturity of the health system

Maturity Model – Flanders (Belgium)	
Readiness to Change to enable more Integrated Care	
Self-assessment	5 – Political consensus; public support; visible stakeholder engagement
Justification	Broad preparation and assessment with all stakeholders, local level and partner organisations; feedback at Ministerial levels; Political consensus at all levels of governance including regional and federal (national) level.
Structure & Governance	
Self-assessment	4 – Roadmap for a change programme defined and broadly accepted
Justification	Growing process involving new models of care, with cooperation towards good practices of integrated care. Structural debates identified the need for broad communication on a frequent basis with the sector and individual care professionals.
Information & eHealth Services	
Self-assessment	3 – Information and eHealth services to support integrated care are available via a region-wide service but use of these services is not mandated
Justification	eHealth systems vary over the regions in Belgium. Software packages are not compatible, and not every professional has access to relevant software packages; therefore, communication among professionals requires more attention.
Finance & Funding	
Self-assessment	4 – Regional/national funding for scaling up and ongoing operations
Justification	New projects are in the pipeline (i.e. 20 pilot projects); not only recurrent projects are financed; the implementation of the primary care reform has started.
Standardisation & Simplification	
Self-assessment	3 – A recommended set of agreed information standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway
Justification	Standards exist for some groups of professionals; no standards for software providers.
Removal of Inhibitors	
Self-assessment	2 – Strategy for removing inhibitors agreed at a high level

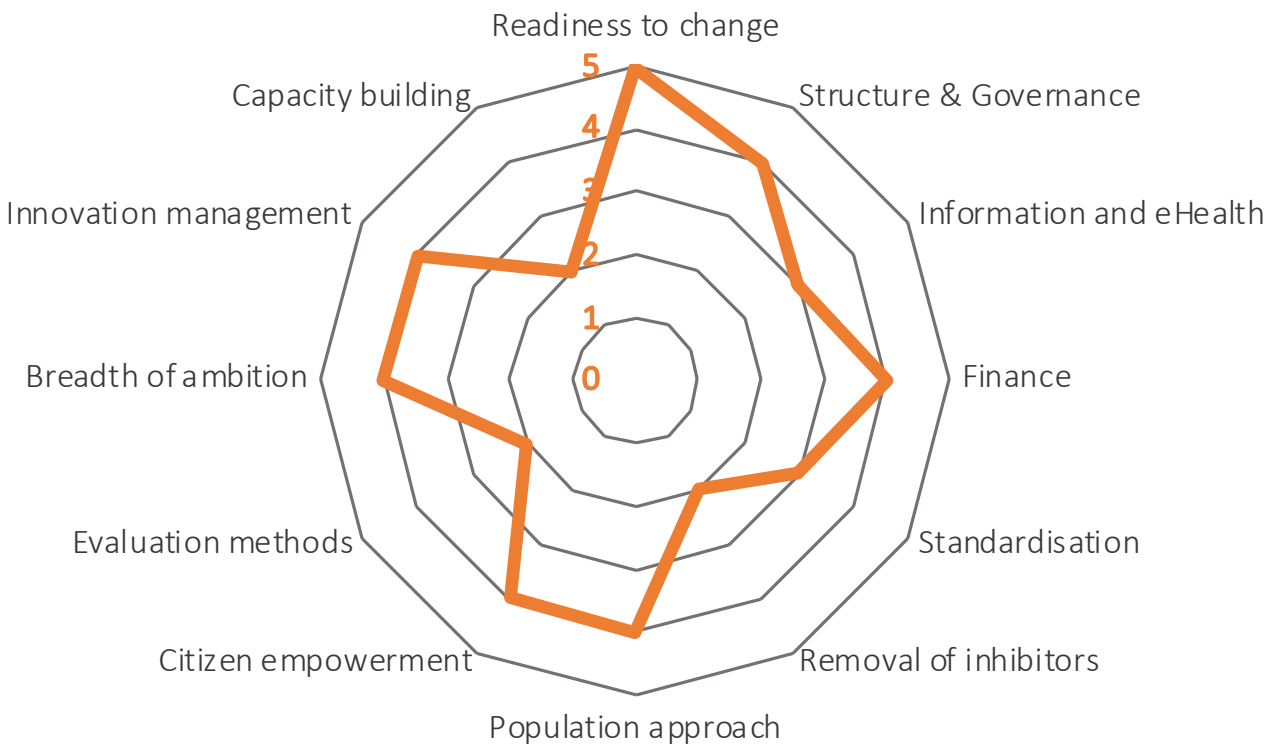
[10] A detailed description of this project can be found at https://www.integreo.be/fr/pres-de-chez-vous/audenaerde-renaix-zottegem-oosterzele-soins-integres-pour-les-malades-chroniques

Justification	Reform process and strategy takes the inhibitors into account and work is in progress to ensure co-creation.
Population Approach	
Self-assessment	4 – Population-wide risk stratification started but not fully acted on
Justification	Primary care reform started after Health conference in February 2017. Regional zones will make up care strategic planning; bottom-up approach. Population-based risk stratification concept is there but requires further development.
Citizen Empowerment	
Self-assessment	4 – Incentives and tools to motivate and support citizens to co-create health and participate in decision-making processes
Justification	Co-creation is the goal: together with the Patient Platform to map care tools.
Evaluation Methods	
Self-assessment	2 – Evaluation of integrated care services takes place, but not as part of a systematic approach
Justification	Work in progress; establishment of the Flanders Institute on Health Quality
Breadth of Ambition	
Self-assessment	4 – Integration includes both social care service and healthcare service needs
Justification	Integration of social and health primary care was the topic for the reform process in Flanders that was endorsed in February 2017.
Innovation Management	
Self-assessment	4 – Formalised innovation management process is in place and widely implemented
Justification	Examples of this include: Flanders Care and Flanders Synergy; Flanders Agency on Innovation and Entrepreneurship.
Capacity Building	
Self-assessment	2 – Cooperation on capacity building for integrated care is growing across the region
Justification	Platform 'eenlijn' offers tools, modules and courses to professionals to link up and understand the reform of primary care in Flanders and the consequences and opportunities for them. Local cluster projects for professionals to learn to cooperate on specific issues.

There are well-defined policies aimed at the implementation of integrated care, as well as a clear political consensus around governance and engagement with relevant stakeholders. This was clearly reflected in the Maturity Model Assessment, particularly in the Readiness to Change assessment dimension, which was rated as 5 (*Political consensus; public support; visible stakeholder engagement* – the highest possible score).

This clear set of policies and political consensus served as a basis for the establishment of 20 pilot projects that aim to implement integrated care across several regions in Belgium, including the Flanders region, for which three projects are currently finishing their conceptualisation stages. Because the concept of integrated care implementation is relatively new in Belgium (and the Flanders region), there is a need to progress in several assessment dimensions once the pilot projects begin their operationalisation phases. These dimensions include the development of systematic evaluation methods, as well as improvements in capacity building.

Belgium | West Flanders



Bulgaria

Population size (thousands): 7,178 (State of Health in the EU, Bulgaria, 2017)[11]

Population density: 66.2 inhabitants / km^2 (Eurostat, 2015)[12]

Life expectancy: 74.7 years (State of Health in the EU, Bulgaria, 2017)

Fertility rate: 1.5 births / woman (State of Health in the EU, Bulgaria, 2017)

Mortality rate: 14.5 deaths / 1,000 people (Central Intelligence Agency, 2017)[13]

Total health expenditure: 8.2% (State of Health in the EU, Bulgaria, 2017)

Health financing: government schemes (8.8%), compulsory contributory social health insurance schemes and compulsory medical saving accounts (44.2%), voluntary health insurance schemes (0.3%), financing schemes of non-profit institutions serving households (0.5%), enterprise financing schemes (0.4%), household out-of-pocket payments (45.8%) (Eurostat, 2015)[14]

Top causes of death: circulatory diseases, malignant neoplasms, and ischaemic heart diseases (State of Health in the EU, Bulgaria, 2017)

The Bulgarian healthcare system

The Bulgarian health system is based on an insurance model consisting of a centralised, compulsory SHI (statutory health insurance) and VHI (voluntary health insurance). SHI is administered by a single payer, the National Health Insurance Fund (NHIF), while VHI is solely provided by for-profit, joint-stock companies, and only makes up 0.3% of health financing (Eurostat, 2015b). The SHI/VHI insurance system covers diagnostic, treatment and rehabilitation services as well as medication for the insured individuals. However, an estimated 12% of the population cannot afford SHI coverage, and have lost their coverage. Moreover, an extremely high proportion of the health expenditure (48%), comes from out-of-pocket payments, which has significant implications on the accessibility of healthcare (European Commission, 2017c).

With regard to allocation of healthcare funding, the National Revenue Agency is in charge of pooling funds for both the central budget and the NHIF – it allocates tax revenue directly to the government agencies' accounts; the amount of funds distributed to each agency or sector depends on the approved budgets (European Commission, 2017c). In terms of healthcare organisation, the Ministry of Health is responsible for the overall organisation and functioning of the health system and national health policy, and further coordinates with all ministries regarding public health (European Commission, 2017c). In Bulgaria, healthcare providers are autonomous self-governing organisations: the private sector encompasses all primary medical and dental care, and the pharmaceutical sector most of the specialised outpatient care and some hospitals (European Commission, 2017c).

Integrated care policies

The majority of integrated care policies in Bulgaria originate from the social sphere, and are based on the Law on Social Support and the strategies and projects of the Ministry of

[11] https://ec.europa.eu/health/sites/health/files/state/docs/chp_bulgaria_english.pdf

[12] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[13] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[14] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

Labour and Social Policy. These strategies and projects include but are not limited to the following:

- *National Strategy for Long Term Care*,[15] which aims at integrating social and health services for elderly people and people with disabilities;
- *National Strategy for the Child (2008–2018)*,[16] which proposes measures for integration of institutional services, including health and social care integrated care interventions;
- *The National Concept for Promotion of Active Ageing (2012–2030)*,[17] which aims at improving the quality of life and access to services for social inclusion in response to complex needs, including health needs, of disabled and elderly people in need of health and social support.

Moreover, the expression 'integration of health and social care' was introduced in Bulgaria by law for the first time in 2015, through changes in the Law on Health and the Law on Healthcare Establishments. The **Law on Health** introduced integrated health and social services as 'activities through which medical professionals and specialists in the field of social services provide healthcare and medical supervision and carry out social work'. The **Law on Healthcare Establishments** introduced a new type of healthcare establishment and healthcare activity, respectively: (i) centres for complex services to children with disabilities and chronic diseases; and (ii) integrated health and social services, which the healthcare establishments can perform.

Implementation of integrated care in Bulgaria: initiatives in Sofia

- *Caritas Home Care for Elderly People,*[18] which looks to provide integrated health and social services at home for elderly people;
- *HISPA Center,*[19] which aims to identify, diagnose, treat and monitor patients at high risk of cardiovascular disease in an efficient and timely manner.

Assessment of the maturity of the health system

Maturity Model – Sofia (Bulgaria)	
Readiness to Change to enable more Integrated Care	
Self-assessment	2 – Dialogue and consensus-building underway; plan being developed
Justification	There is a strategic alliance with the Ministry of Health and Social Policy to implement integrated care at national level. There are policies about this but no specific legislation to implement integrated care.

[15] A detailed description of this integrated care strategy is available at http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=882

[16] A detailed description of this integrated care strategy is available at http://sacp.government.bg/bg/za-agenciyata/politiki/strategii-i-programi/

[17] A detailed description of this integrated care policy is available at http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg- BG&Id=764

[18] A detailed description of this integrated care intervention is available at http://caritas.bg/our-campaign/caritas-home-care/home-care-support/item/2979-homecare?lang=bg#%D0%B7%D0%B0%D1%89%D0%BE

[19] A detailed description of this integrated care intervention is available at http://alexandrovska.com/display.php?bg/%D0%90%D0%BA%D1%82%D1%83%D0%B0%D0%BB%D0%BD%D0%BE/3520

Structure & Governance	
Self-assessment	1 – Recognition of the need for structural and governance change
Justification	The justification above applies to this domain as well. A pilot project to integrate health and social care has been implemented in Sofia (as part of the BeyondSilos[20] programme), financed with EU structural funds. The project finished in February 2017 and to continue it needs to be part of a national health insurance system to provide funding. Short-term and long-term pathways have been developed as part of the pilot. The best way forward would be to include these pathways in the coverage of the national health insurance system.
Information & eHealth Services	
Self-assessment	1 – ICT and eHealth services to support integrated care are being piloted
Justification	Technology applied in the pilot project included blood pressure meters with Bluetooth technology, temperature control with smartphone application and access to a web portal. Although including these technological advancements helped in the success of the project, it is important to first achieve integration even without ICT. Nationally we are lagging behind with ICT and eHealth.
Finance & Funding	
Self-assessment	1 – Funding is available but mainly for the pilot projects and testing
Justification	There are some opportunities for funding through structural funds for the municipalities but they finish in 2020. Not aware of other lines of funding available at national level.
Standardisation & Simplification	
Self-assessment	1 – Discussion on the necessity for ICT to support integrated care and of any standards associated with that ICT
Justification	Not aware this is happening outside the pilot project in Sofia; there seem to be no plans at national level.
Removal of Inhibitors	
Self-assessment	1 – Awareness of inhibitors but no systematic approach to their management is in place
Justification	Through the pilot project it has been noticed that GPs, while key players, are reluctant to change and take on what they consider an extra workload. It is difficult to recruit GPs for this type of initiative. Nurses and social workers are amenable to change and have generally embraced the use of ICT systems.
Population Approach	
Self-assessment	1 – A population risk approach is applied to integrated care services but not yet systematically or to the full population
Justification	This is available to health and social services only for five municipalities at the moment. The need is recognised but there is no system in place to extend it to the general population.
Citizen Empowerment	
Self-assessment	2 – Citizen empowerment is recognised as an important part of integrated care provision; effective policies to support citizen empowerment are in place but citizens do not have access to health information and health data
Justification	There is an expectation that electronic health records will be made available in the future, but there are no firm plans as yet to do so. There is a new government and the new health minister (Kiril Ananiev, 2017) has promised to implement electronic health records in two years, but there is uncertainty whether this will be possible in such a short timeframe. The patients in the

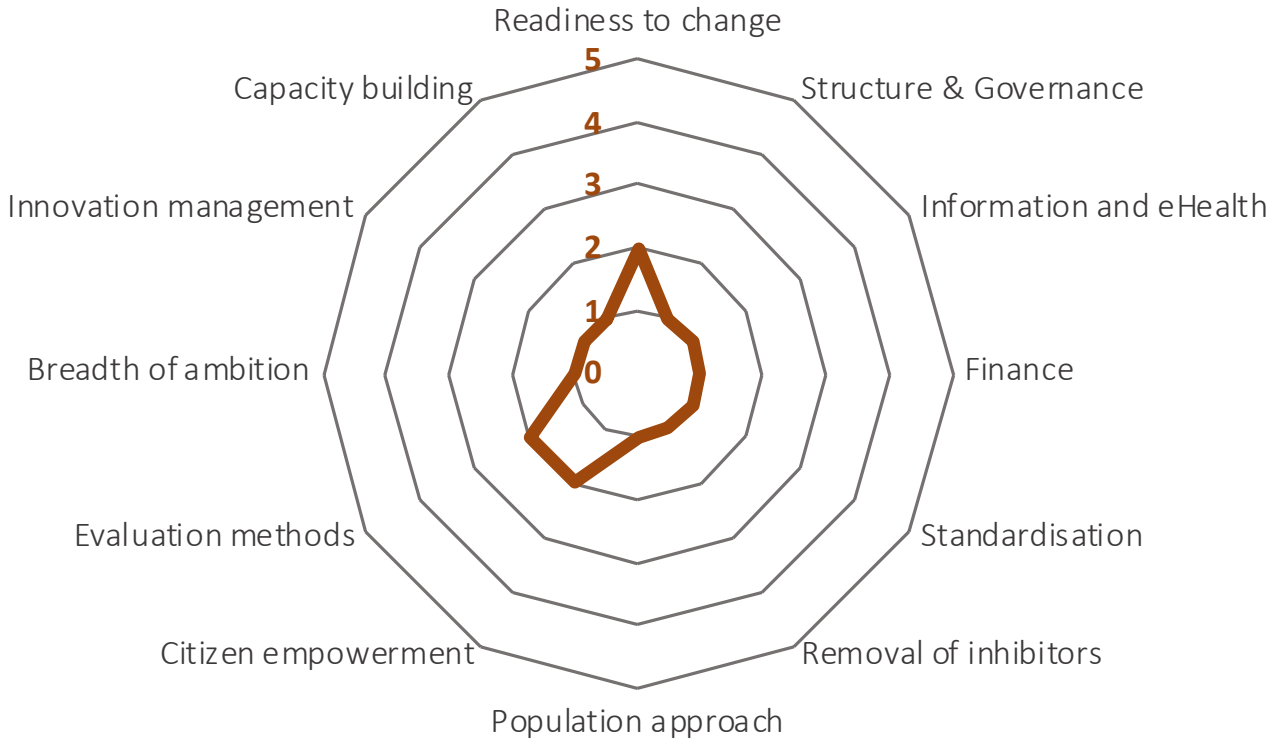
[20] See http://beyondsilos.eu/pilots/sofia-bulgaria.html

	pilot project (around 50 people) are very pleased with the care they received according to satisfaction questionnaires (extra services and technology).
Evaluation Methods	
Self-assessment	2 – Evaluation of integrated care services is planned to take place and be established as part of a systematic approach
Justification	There are evaluation plans in place as part of the pilot project and in municipalities receiving structural funds.
Breadth of Ambition	
Self-assessment	1 – The citizen or their family may need to act as the integrator of service in an unpredictable way
Justification	As part of the pilot, it was found out that informal carers (family, friends and neighbours) play an important role as integrators of services.
Innovation Management	
Self-assessment	1 – Innovation is encouraged but there is no overall plan
Justification	The score is considered to be self-explanatory.
Capacity Building	
Self-assessment	1 – Some systematic approaches to capacity building for integrated care services are in place
Justification	*N.B. The stakeholder was not confident on providing a clear justification for this domain*

The implementation of integrated care at national level is in its early stages. Where integration of health and social care has taken place, for example a pilot project (i.e. Beyond Silos[21]) in Sofia, the results have been positive. It has been noted that for scaling up and expanding the implementation of integrated care, new and more ambitious funding is needed, as well as the political will to do it. The Beyond Silos project has been financed with European structural funds. The need for implementing more integrated care is recognised by the government in its policies and there are plans, or at least intentions, to bring it forward, although these are still at the early stages.

[21] See http://beyondsilos.eu/pilots/sofia-bulgaria.html for more information

Bulgaria | Sofia



Denmark

Population size (thousands): 5,683 (State of Health in the EU, Denmark, 2017)[22]

Population density: 132.4 inhabitants / km^2 (Eurostat, 2015)[23]

Life expectancy: 84 years (State of Health in the EU, Denmark, 2017)

Fertility rate: 1.7 births / woman (State of Health in the EU, Denmark, 2017)

Mortality rate: 10.3 deaths / 1,000 people (Central Intelligence Agency, 2017)[24]

Total health expenditure: 10.3% (State of Health in the EU, Denmark, 2017)

Health financing: government schemes (84.2%), voluntary health insurance schemes (2%), household out-of-pocket payments (13.8%) (Eurostat, 2015)[25]

Top causes of death: malignant neoplasms, circulatory diseases, and respiratory diseases (State of Health in the EU, Denmark, 2017)

The Danish healthcare system

The Danish health system is financed through taxation and provides universal healthcare. It is a de-centralised system, with responsibilities for service delivery devolved at local level and the regulation, supervision and planning carried out at government level. Access to a wide range of health services is free of charge for all residents (European Commission, 2017d).

The system is organised according to three administrative levels: state, regional and local. The responsibility for preparing legislation and providing overall guidelines for the health sector lies with the Ministry of Health. Moreover, healthcare expenditure targets are agreed each year by the Ministry of Health, the Ministry of Finance and municipal councils (represented by Danish Regions and Local Government Denmark) (European Commission, 2017d). Each year in May and June, the national government negotiates limits to municipal taxation and expenditure, the total size of the block grants and the service level for the next year with Local Government Denmark – the block grants are distributed to the municipalities in proportion to each municipality's tax revenue (European Commission, 2017d).

In Denmark, the regions own and run hospitals, prenatal care centres and community psychiatric units; additionally, they finance GPs, specialists, physiotherapists, dentists and pharmaceuticals. Municipalities are responsible for providing services such as nursing homes, home nurses, health visitors, school healthcare, dental care, prevention and health promotion, and institutions for people with special needs, e.g. people with disabilities, treatment of drug- and alcohol-related problems (European Commission, 2017d).

Integrated care policies

Generally, a wide variety of integrated care strategies and policies can be found in the Scandinavian countries (Norway, Sweden, Denmark), Finland and Iceland, covering a wide range of topics, e.g. integration of social and healthcare in the context of home rehabilitation for chronic patients, eHealth-driven health records integration and health pathway management, mental health, integration of social and healthcare services for

[22] https://ec.europa.eu/health/sites/health/files/state/docs/chp_da_english.pdf

[23] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[24] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[25] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

young patients. Specifically, in Denmark there are two active integrated care policies and one strategy, as follows:

- *SAM:BO Cooperation of care pathways in the Region of Southern Denmark,*[26] which looks to establish cooperation on care pathways between GPs, local authorities and hospitals;
- *Evaluering af indsats for forløbskoordination. Midtvejsrapport - Status for regionale og kommunale aktiviteter og resultater,*[27] which looks to enable commissioned evaluations of the municipalities' and regions' implementation of shared care and collaborative care pathways for elderly patients;
- *Anbefalinger for tværsektorielle forløb,*[28] which looks to set recommendations for cross-sectoral interventions for people with chronic lower back pain, and to further enhance the quality of prevention, intervention and treatment.

Implementation of integrated care in Denmark: initiatives in Southern Denmark

- *Integrated Care Odense*. Cooperation model focused on the elderly and people with stress, anxiety and depression using risk stratification, action plans, multidisciplinary teams and a common data warehouse;[29]
- *The child in the centre – the focus of the family*, run by Helene Elsass Centre. Collaboration model focused on families with children with the congenital brain injury cerebral palsy. The aim of the project has been to increase efforts in the CP area as well as to ensure cross-sectoral and interdisciplinary cooperation among the major players.[30]

Assessment of the maturity of the health system

Maturity Model – Denmark (Southern Denmark)	
Readiness to Change to enable more Integrated Care	
Self-assessment	4 – Leadership, vision and plan clear to the general public; pressure for change
Justification	There is a very good understanding at both the political and management level that integration of health and social care is required in order to successfully address the challenges currently faced by the health system (both at national and regional level). Moreover, Denmark is a small and homogeneous country, meaning that all regions progress at the same rate in terms of health policy implementation.

[26] A detailed description of this integrated care policy can be found at http://publications.jrc.ec.europa.eu/repository/bitstream/JRC94488/jrc94488.pdf

[27] A detailed description of this integrated care strategy can be found ay www.kora.dk

[28] A detailed description of this integrated care policy can be found at https://www.sst.dk/da/sygdom-og-behandling/kronisk-sygdom/faglige-anbefalinger/anbefalinger-kroniske-laenderygsmerter

[29] A more detailed description of this integrated care initiative can be found at http://www.integratedcare.dk/topmenu/projektet/samarb;

[30] A more detailed description of this integrated care initiative can be found at A more http://viden.sl.dk/media/8115/evaluering-af-samarbejdsmodel-omkring-boern-med-handicappet-cerebral-parese.pdf.

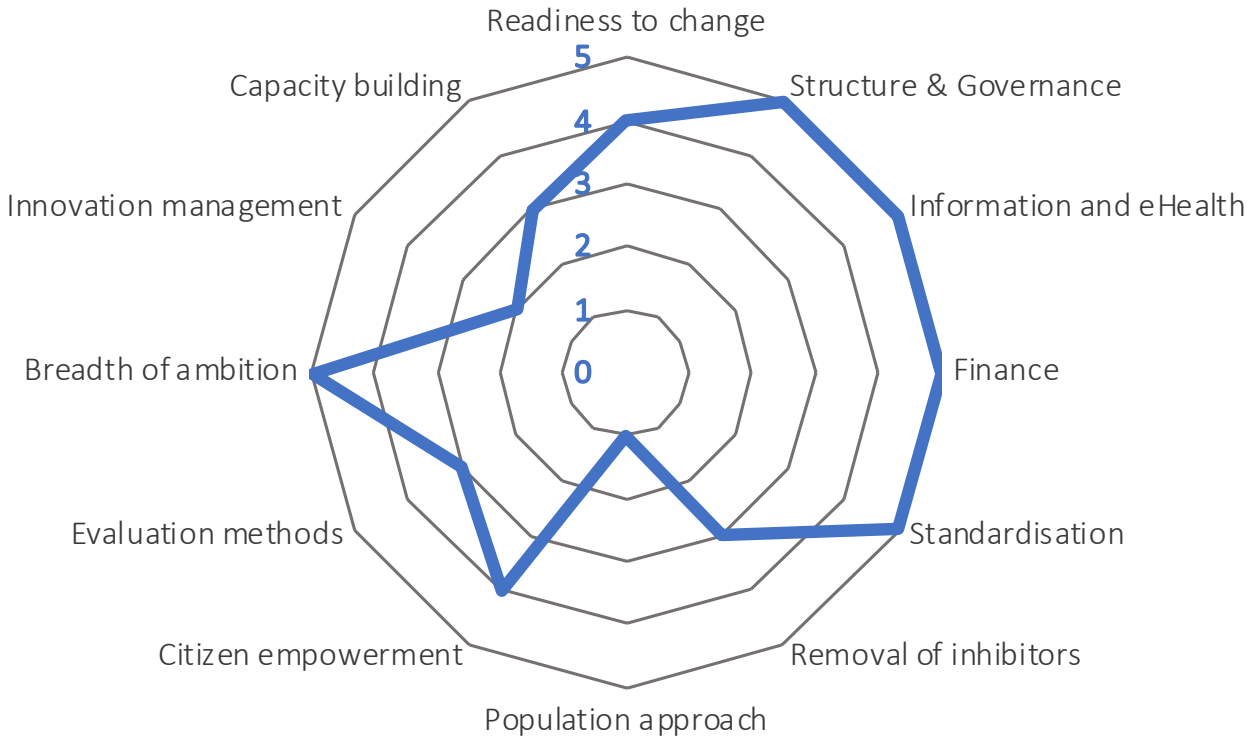
Structure & Governance	
Self-assessment	5 – Full, integrated programme established, with funding and a clear mandate
Justification	There is an established management and political consensus in the region. There is a political framework that has been signed off by all the municipalities concerning the processes, technology and workflows for integrated care. Social care is also included in this framework.
Information & eHealth Services	
Self-assessment	5 – Universal, at-scale regional / national eHealth services used by all integrated care stakeholders
Justification	There is a high level of implementation with regard to national infrastructure and standards for communication, as well as other e-tools that can be used to integrate care. Moreover, there are guidelines and protocols that have been signed off both at the political and clinical level. Citizens have access to data on their health, including health records, through a portal.
Finance & Funding	
Self-assessment	5 – Secure multi-year budget, accessible to all stakeholders, to enable further service development
Justification	Funding schemes are tied to the investment on national infrastructure and are co-developed between the five regions and central government. Every 2nd or 3rd year there is a budget for integrated care established at national level. This process has been operating for 20 years so it can be considered stable.
Standardisation & Simplification	
Self-assessment	5 – A unified and mandated set of agreed standards to be used for system implementations fully incorporated into procurement processes; clear strategy for regional/national procurement of new systems; consolidated data centres and shared services (including the cloud) is normal practice
Justification	Denmark is very advanced with regard to the development and implementation of standards. New professions and a higher population might require more standards to be developed.
Removal of Inhibitors	
Self-assessment	3 – Implementation plan and process for removing inhibitors have started to be implemented locally
Justification	Changing the structure of incentives in the health system remains a challenging task. Models for funding schemes and incentives are very difficult to change in the current landscape of health management and care delivery in Denmark. This remains the most important inhibitor in the Danish health system, and is directly applicable to the region of Southern Denmark as well.
Population Approach	
Self-assessment	1 – A population risk approach is applied to integrated care services but not yet systematically or to the full population
Justification	Traditionally, the Danish health system has not invested in or implemented population risk stratification approaches. Indeed, 'family doctors' do the risk stratification and act as gatekeepers to the system. Family doctors have access to patient data, but not the organisational setup to use stratification tools.
Citizen Empowerment	
Self-assessment	4 – Incentives and tools exist to motivate and support citizens to co-create healthcare services and use these services to participate in decision-making processes about their own health

Justification	Citizens can access most of their health data through a national web portal. In the region of Southern Denmark there has been a debate regarding how digital tools can create a more active role for patients, providing them with the tools to proactively empower themselves. Indeed, this topic is considered a high priority on the political and management agenda of the region.
Evaluation Methods	
Self-assessment	3 – Some integrated care initiatives and services are evaluated as part of a systematic approach
Justification	Health technology assessments are done regularly, in a thorough and systematic manner. The region has also developed the MAST model for assessing implementation and maturity of telemedicine implementation.
Breadth of Ambition	
Self-assessment	5 – Fully integrated health and social care services
Justification	There is great overlap between the delivery of primary care and social care in the region of Southern Denmark (and generally at national level). Stakeholders in the region across clinical, management and policy-making levels realise that the delivery of healthcare in the future will require full integration of primary and secondary care.
Innovation Management	
Self-assessment	2 – Innovations are captured and there are some mechanisms in place to encourage knowledge transfer
Justification	In Denmark, there is an online portal for information sharing and knowledge transfer (i.e. across health managers, practitioners and policy-makers), but it is not widely used. The most important need in this domain is to implement a more efficient procedure to scale up processes and solutions to regional and national level, which is more about management and less about tools and portals.
Capacity Building	
Self-assessment	3 – Systematic learning about integrated care and change management is in place but not widely implemented
Justification	As with dimension 11 (i.e. Innovation Management) a management perspective is required to turn this rating into a 5. Clearer goals and objectives in terms of capacity building must be established, as well as determination on building up from existing knowledge and information.

The current level of integrated care implementation in Denmark is advanced in most of the dimensions covered by the Maturity Model Assessment. This is reflected in the self-assessment ratings, with more than half of the assessment dimensions being rated as 5 or 4. Generally, the progression of integrated care implementation in Denmark over the past decade has been uniform across the different regions (including Southern Denmark), given that there is a fully implemented integrated care programme at national level and a supporting political consensus.

Moreover, the Southern Denmark region has made considerable progress on the enablement of shared health records and the development of common health standards to be used within the region. Interestingly, the region does not use a systematic approach to population risk stratification. This is still carried out by 'family doctors', who act as gatekeepers in the Danish health system.

Denmark | Southern Denmark Region



Estonia

Population size (thousands): 1,315 (State of Health in the EU, Estonia, 2017)[31]

Population density: 30.3 inhabitants / km^2 (Eurostat, 2015)[32]

Life expectancy: 78 years (State of Health in the EU, Estonia, 2017)

Fertility rate: 1.6 births / woman (State of Health in the EU, Estonia, 2017)

Mortality rate: 12.6 deaths / 1,000 people (Central Intelligence Agency, 2017)[33]

Total health expenditure: 6.5% (State of Health in the EU, Estonia, 2017)

Health financing: government schemes (10%), compulsory contributory health insurance schemes and compulsory medical saving accounts (65.6%), voluntary health insurance schemes (0.2%), enterprise financing schemes (1.4%), household out-of-pocket payments (22.7%) (Eurostat, 2015)[34]

Top causes of death: circulatory diseases, ischaemic heart diseases, and malignant neoplasms (State of Health in the EU, Estonia, 2017)

The Estonian healthcare system

The Estonian healthcare system is mainly funded through earmarked social payroll tax paid by citizens employed. The regulatory framework of the Estonian health system is laid down in five major pieces of legislation – the Health Insurance Act, the Health Services Organisation Act, the Public Health Act, the Medicinal Products Act, and the Law of Obligations Act (European Commission, 2017e).

In terms of national-level healthcare, organisation, planning, regulation and supervision, as well as health policy development are the responsibility of the Ministry of Social Affairs and its agencies. The financing of healthcare is mainly organised through the independent Estonian Health Insurance Fund (EHIF). The Ministry of Social Affairs and its agencies are also responsible for the financing and management of public health and ambulance services financed by the state budget (European Commission, 2017e).

With regard to health provision, primary care is the first level of contact with the health system and is provided by independent family doctors working alone or in groups, increasingly supported by family nurses, and practising on the basis of a practice list of enrolled patients. Secondary health services are provided by publicly or privately owned healthcare providers (hospitals and outpatient care offices). Pharmaceuticals are distributed to the public through privately owned pharmacies, and account for the majority of out-of-pocket spending. Palliative and long-term care are delivered as part of nursing care (European Commission, 2017e).

Integrated care policies

Several structural reforms to the Estonian health system have been undertaken in the past decade, namely: centralisation of primary care organisation (2012), establishment of the Health Board (2010), establishment of the health information system (2008), implementation of diagnosis-related groups as payment system (2004), and adoption of

[31] https://ec.europa.eu/health/sites/health/files/state/docs/chp_et_english.pdf

[32] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[33] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[34] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

the Hospital Master Plan (2013–2015) (European Observatory, 2013). However, it is worth noting that Estonia does not have any formal policies or roadmaps for policy-making in the context of integrated care implementation.

Implementation of integrated care in Estonia

- *Medendi* is an organisation that focuses on patients that are discharged to their homes after surgery, disabled patients, and patients requiring rehabilitative and follow-up care. The organisation develops initiatives in the context of process monitoring, creation of integrated care patient groups, and patient surveillance and preparation for upcoming visits to hospitals.[35]
- *Sentab* is an initiative in Estonia and England that looks to advance the horizontal integration of primary care for elderly patients with chronic diseases.[36]

Assessment of the maturity of the health system

Maturity Model – Estonia	
Readiness to Change to enable more Integrated Care	
Self-assessment	1 – Compelling need is recognised, but no clear vision or strategic plan
Justification	Health professionals are readier for change than policy-makers, who disseminate the message that no considerable changes are required for integrated care to be delivered in Estonia, and that it can be achieved simply through better coordination between health professionals. The stakeholder noted that health professionals are aware of progress in other countries and that there is a clear motivation to bring that advancement to Estonia; however, the current policy landscape does not facilitate that.
Structure & Governance	
Self-assessment	2 – Formation of task forces, alliances and other informal ways of collaborating
Justification	There are several good practices in Estonia with regard to the integration of health and social care, but mostly based on pilot projects. However, there is no formal mandate to create effective and consistent collaboration between health professionals.
Information & eHealth Services	
Self-assessment	1 – ICT and eHealth services to support integrated care are being piloted
Justification	The need for integrated information systems is understood by most health professionals, but advancements in this context are only done at pilot project level. The stakeholder noted that for true integration between health and social care, core information systems for healthcare and social care have to be integrated. One example of this is the InterRAI platform, which is currently being funded by the Ministry of Social Affairs.
Finance & Funding	
Self-assessment	1 – Funding is available but mainly for pilot projects and testing

[35] For additional information on this integrated care organisation and its initiatives, see http://www.sustain-eu.org/integrated-care-sites/

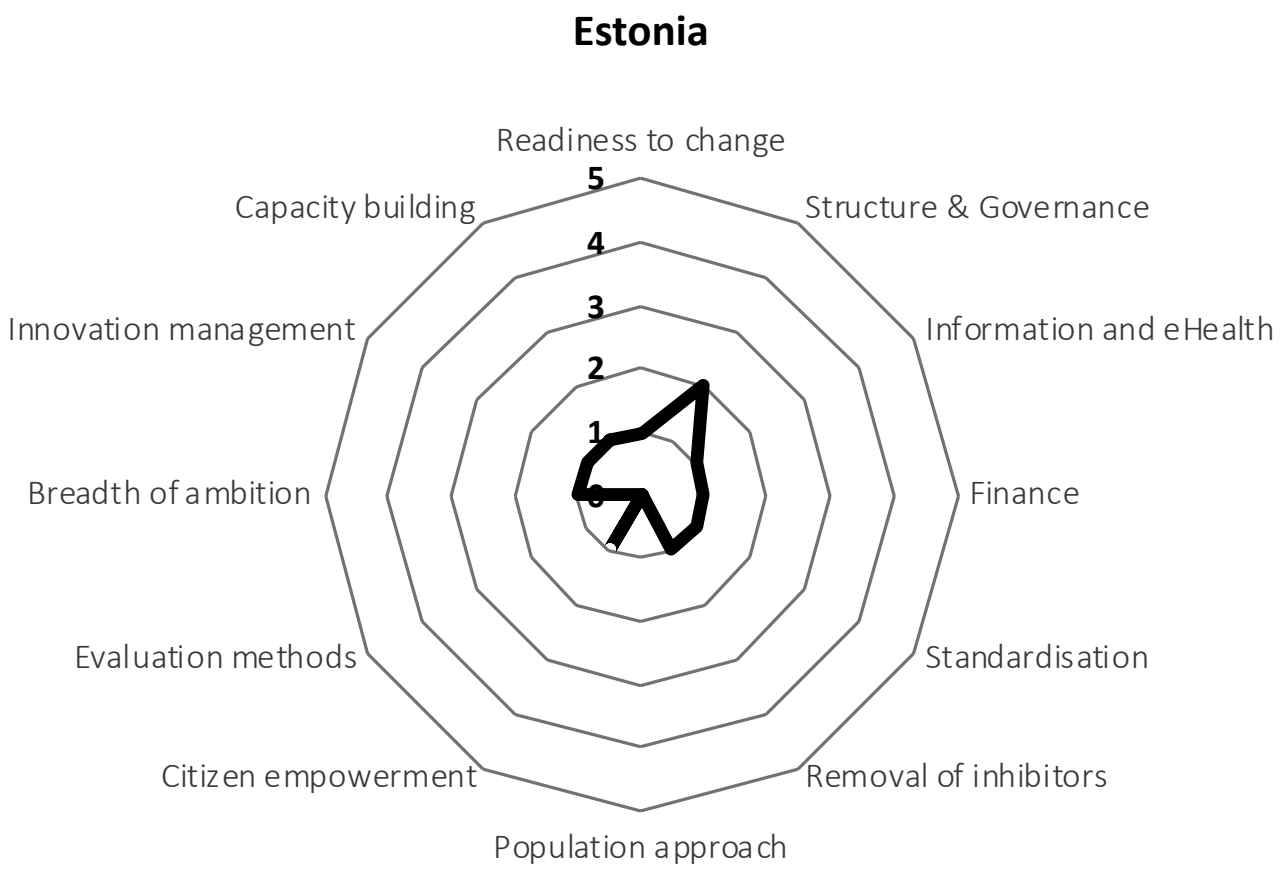
[36] For additional information on this integrated care initiative, see https://www.sentab.com/about

Justification	Funding is only available for small-scale pilot projects looking to integrate health and social care.
Standardisation & Simplification	
Self-assessment	1 – Discussion of the necessity of ICT to support integrated care and of any standards associated with that ICT
Justification	The need for integrated information systems is understood by most health professionals, but advancements in this context are only done at pilot project level. The stakeholder noted that for true integration between health and social care, core information systems for healthcare and social care have to be integrated. One example of this is the InterRAI platform, which is currently being funded by the Ministry of Social Affairs.
Removal of Inhibitors	
Self-assessment	1 – Awareness of inhibitors, but no systematic approach to their management is in place
Justification	The biggest inhibitors are known to health professionals: IT systems are not integrated, financing is separated between health and social care, the 'case manager' role is nonexistent. There is also a competition environment between and within these two sectors. Little interest from policy-makers to address these inhibitors to integration.
Population Approach	
Self-assessment	0 – Population health approach is not applied to the provision of integrated care services
Justification	The stakeholder was not aware of population risk stratification approaches being used in Estonia.
Citizen Empowerment	
Self-assessment	1 – Citizen empowerment is recognised as an important part of integrated care provision but effective policies to support citizen empowerment are still in development
Justification	The stakeholder was not confident enough on this topic to further support this ranking, and has suggested the Ministry of Social Affairs as a potentially useful contact point.
Evaluation Methods	
Self-assessment	0 – No evaluation of integrated care services is in place or in development
Justification	The stakeholder was not confident enough on this topic to further support this ranking, and has suggested the Ministry of Social Affairs as a potentially useful contact point.
Breadth of Ambition	
Self-assessment	1 – The citizen or their family may need to act as the integrator of service in an unpredictable way
Justification	Pilot projects have shown some level of progress in this dimension. However, the 'case manager' profession / role is nonexistent, and practices usually have to depend on 'hero social workers'.
Innovation Management	
Self-assessment	1 – Innovation is encouraged but there is no overall plan
Justification	Encouragement is seen as the main tool for changes, but there is little interest from policy-makers with regard to the development of new systems and additional funding. Lack of a consistent strategy and approach to funding of integrated care.
Capacity Building	
Self-assessment	1 – Some systematic approaches to capacity building for integrated care services are in place

Justification	The stakeholder was not confident enough on this topic to significantly expand on this domain, but has noted that the National Health Insurance is interested in care integration, and will potentially incentivise developments in 2018.

There are no clear policies specifically aimed at setting guidelines for integrated care implementation, which is considered to be in its infancy in Estonia. Moreover, there is no political consensus or a shared vision toward implementation of integrated care and a roadmap to overcome the identified inhibitors to care integration. This was reflected in the Maturity Model Assessment, particularly in the Readiness to Change and Removal of Inhibitors assessment dimensions, which were rated by the stakeholder as 1 (second lowest possible score).

However, there is a considerable ongoing effort in Estonia to advance implementation of integrated care from a 'bottom-up' perspective. In fact, there are numerous integrated care initiatives in the form of projects and interventions looking to use information technology to integrate care provision with health record management, as well as organisations looking to advance integration of health and social care.



Germany

Population size (thousands): 81,687 (State of Health in the EU, Germany, 2017)[37]

Population density: 234 inhabitants / km^2 (Eurostat, 2015)[38]

Life expectancy: 80.7 years (State of Health in the EU, Germany, 2017)

Fertility rate: 1.5 births / woman (State of Health in the EU, Germany, 2017)

Mortality rate: 11.7 deaths / 1,000 people (Central Intelligence Agency, 2017)[39]

Total health expenditure: 11.2% (State of Health in the EU, Germany, 2017)

Health financing: government schemes (6.61%), compulsory contributory health insurance schemes and compulsory medical saving accounts (77.86%), voluntary health insurance schemes (1.47%), voluntary health care payment schemes (3%), NPISH (non-profit institutions serving households) financing schemes (1.1%), Enterprise financial schemes (0.43%) household out-of-pocket payments (12.53%) (Eurostat, 2015)[40]

Top causes of death: circulatory diseases, malignant neoplasms, and respiratory diseases (State of Health in the EU, Germany, 2017)

The German healthcare system

The German healthcare system is characterised by the sharing of decision-making powers between the Länder, the federal government and legitimised civil society organisations. Governments traditionally delegate competencies to membership-based, self-regulated organisations of payers and providers. Eighty-five percent of the population is covered by statutory health insurance (SHI). At the federal level, the Federal Assembly (Bundestag), Federal Council (Bundesrat) and the Federal Ministry of Health (Bundesministerium für Gesundheit) are the key actors in the healthcare system. The Federal Ministry of Health is organised into six departments: (i) central department, European and international health policy (Dept. Z); (ii) fundamental policy issues, telematics (Dept. G); (iii) pharmaceuticals, medical devices and biotechnology (Dept. 1); (iv) healthcare delivery, SHI (Dept. 2); (v) health protection, disease control, biomedicine (Dept. 3); and (vi) long-term insurance, prevention (Dept. 4) (HiT Germany, 2014)

The German healthcare system makes a clear institutional separation between (i) public health services, (ii) primary and secondary ambulatory care, and (iii) hospital care. Specific public health tasks differ from Land to Land and are provided by roughly 350 public health offices across Germany, varying widely in size, structure and tasks. Primary and secondary care are covered under the SHI scheme, allowing for a selection of any family physician of their choice. Ambulatory care is mainly provided by private for-profit providers, including physicians, dentists, pharmacists, physiotherapists, speech and language therapists, occupational therapists and podiatrists.

Implementation of integrated care in Germany

- *Optimal versorgt bei Depression – Freiburger Modell zur Integrierten Versorgung depressiver Erkrankungen*, which aims to integrated care for people with depressive disorder;

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[37] https://ec.europa.eu/health/sites/health/files/state/docs/chp_de_english.pdf

[38] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[39] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[40] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

- *Geriatrische Versorgungsstrukturen in Deutschland,* a cross-border cooperation in geriatric medicine;
- *Interdisziplinäre Notaufnahmen,* an interdisciplinary emergency department as self-standing department in hospitals;
- *FAST network for acute stroke care,* which aims to connect hospitals in the Rhine-Neckar Region for stroke patients;
- *MANAGE CARE (active ageing with Type 2 Diabetes as Model for the Development and Implementation of innovative Chronic Care Management in Europe),* which focuses on the development of chronic care management standards as a guidance for Europe;
- *Beyond bariatric surgery: a pilot aftercare programme for bariatric patients in Germany,* which offers six-months' nutritional counselling and weight monitoring services to qualifying bariatric patients;
- *Gesundes Kinzigtal,* which is a joint venture between a network of physicians in Kinzigtal and a Hamburg-based healthcare management company delivering population-based integrated care to nearly half of the regional population*;*
- *Gesundheitsnetz Qualität & Effizienz eG,* a network of GPs and specialists to define treatment standards;
- *Schaaz Schaafheim,* a local network of primary care physicians in a rural area with the objective of providing access to healthcare in the region;
- *GeReNet – Geriatric network Wiesbaden,* which aims to maintain the independence and health status of older people;
- *Health Region Lower Saxony (Niedersachsen),* which aims to maintain access to primary healthcare, especially in rural regions, and improve quality and efficiency of chronic and long-term care, prevention and health promotion;
- *Geriatric Concept,* an integrated care model for cross-sector cooperation of healthcare providers, establishing standard assessments, introducing treatment pathways and supporting formal and informal carers.
- *TK Integrated Care Contract for Back Pain,* which aims to improve the treatment of back pain;
- *INVADE,* which focuses on cerebrovascular risk factors and their treatment;
- *KV RegioMed Zentrum Templin,* an innovative care concept for older patients;
- *Pflegewerk (Careworks),* which aims to improve the care of older people with complex health and long-term care needs in the Berlin neighbourhood of Marzahn-Hellersdorf;
- *Casaplus,* which aims at reducing avoidable hospital admissions through preventive case management and enhanced self-management skills (enrolled persons in the intervention group). Casaplus offers a case management service with a mandatory risk assessment, patient education and a 24/7 crisis management service. Structured case management is an essential element of the programme. Trained case managers inform, advice, support and monitor the well-being of the enrolled elderly, multi-morbid persons.
- *Gerinet Leipzig e.V.,* which aims to identify deficits in the provision of geriatric care and establish integrated treatment pathways for older patients.
- *Seniorenbüros (Senior Citizen Centres – Leipzig),* which is made of 10 senior citizen centres;
- *Pflegestützpunkte ('Care Support Centres') / Long-Term Care Development Act (2008),* which aims to provide information and advice about local providers and supply;
- *GesundheitzNetz Leipzig (Health Network),* a network of GPs and specialists to shape primary care from prevention and diagnosis to therapy, nursing care and rehabilitation;

- *Dortmunder Modell,* a voluntary public-private partnership to gather stakeholders at the 'Round Table' / 'Seniorenbüros', which aims to address demographic ageing;
- *'Innovation Fund – The Care Provision Strengthening Act (GKV-Versorgungsstärkungsgesetz),* which aims to make available EUR300 million every year from the health insurance funds and from the liquidity reserves;
- *Disease Management Programmes (DMPs),* which are structured treatment regimens for chronically ill people;
- *Cooperation contracts between long-term care facilities and panel doctors,* which aim to reduce avoidable hospitalisations of patients who are receiving inpatient care in long-term care facilities;
- *Discharge management* (section 39 subs 1a of SGB V), which aims to enhance cross-sectoral patient care;
- *Short-time care as a new service reimbursed by the statutory health insurance system,* which is a new service reimbursed by the statutory health insurance that assists patients who need outpatient care due to a serious illness or an acute aggravation of an illness;
- *Electronic Health Card (eGK),* which supports applications such as an emergency dataset and an electronic patient record to enhance sectoral and intersectoral communication.

Assessment of the maturity of the health system

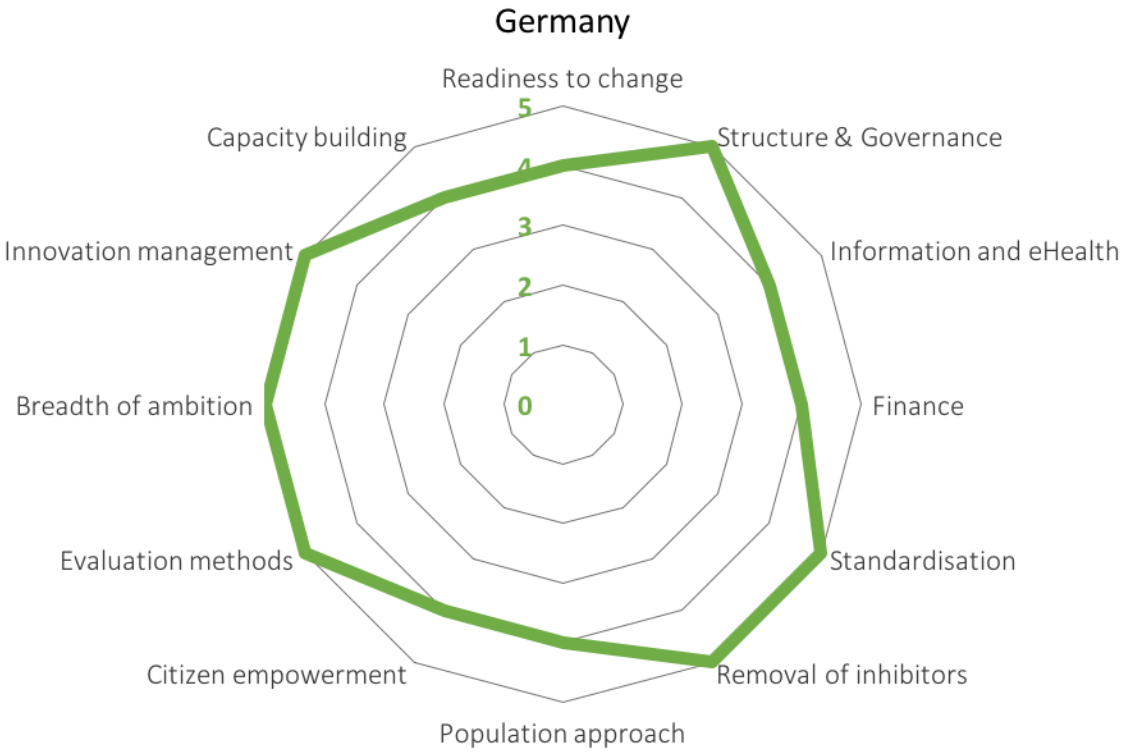
Maturity Model – Germany	
Readiness to Change to enable more Integrated Care	
Self-assessment	4 – Leadership, vision and plan clear to the general public; pressure for change
Justification	Gesundes Kinzigtal is a very special health system for about 33,000 inhabitants.
Structure & Governance	
Self-assessment	5 – Full, integrated programme established, with funding and a clear mandate
Justification	Only specific Gesundes Kinzigtal
Information & eHealth Services	
Self-assessment	4 – Mandated or funded use of regional/national eHealth infrastructure across the healthcare system
Justification	
Finance & Funding	
Self-assessment	5 – Secure multi-year budget, accessible to all stakeholders, to enable further service development
Justification	Stakeholder notes: I put 5 but we don´t get an additional funding; rather we 'earn' our funding through shared savings
Standardisation & Simplification	
Self-assessment	4 – A unified set of agreed standards to be used for system implementations specified in procurement documents; any shared procurements of new systems; consolidated data centres and shared services widely deployed

Justification	
Removal of Inhibitors	
Self-assessment	5 – High completion rate of projects and programmes; inhibitors no longer an issue for service development
Justification	Between 4 and 5. Many projects and programmes but the surrounding fragmented German healthcare is still an inhibitor.
Population Approach	
Self-assessment	4 – Population-wide risk stratification started but not fully acted on
Justification	
Citizen Empowerment	
Self-assessment	4 – Incentives and tools exist to motivate and support citizens to co-create healthcare services and use these services to participate in decision-making processes about their own health
Justification	Perhaps approaching a 5
Evaluation Methods	
Self-assessment	5 – A systematic approach to evaluation, responsiveness to the evaluation outcomes, and evaluation of the desired impact on service redesign (i.e., a closed loop process)
Justification	
Breadth of Ambition	
Self-assessment	5 – Fully integrated health and social care services
Justification	
Innovation Management	
Self-assessment	5 – Extensive open innovation combined with supporting procurement and the diffusion of good practice is in place
Justification	
Capacity Building	
Self-assessment	1 – Some systematic approaches to capacity building for integrated care services are in place
Justification	4 – Systematic learning about integrated care and change management is widely implemented; knowledge is shared, skills retained and there is a lower turnover of experienced staff.

The integrated care landscape in Germany varies widely in term of advancement of integration, with the region where the integrated care system is located, and covering about 33,000 inhabitants, being one of the most developed ones. This was reflected in the maturity assessment model, where all dimensions were given a score of 4 or 5, the maximum possible score.

Comparing this maturity assessment score to the one done in 2015 (European Commission, 2017a), it is noticeable that the initiative has developed significantly, improving its score in most domains ('Structure and Governance' (from 3 to 5), 'Innovation Management' (from 3 to 5), 'Capacity Building' (from 3 to 4), 'Breath of Ambition' (from 3 to 5), 'Population Approach' (from 3 to 4), 'Removal of Inhibitors' (from 2 to 5), 'Standardisation and Simplification' (from 1 to 5), and 'Information and eHealth Service' (from 3 to 4)).

From the comparison outlined, the results of the new maturity assessment undertaken for this study may be a reflection of the shift of Gesundes Kinzigtal's integrated care model from the coordination type towards full integration (Meyer et al., 2017). This demonstrates that the use of the maturity assessment tool over time facilitates tracking the areas of improvement and those that require further development.


Germany
Readiness to change
Structure & Governance
Information and eHealth
Finance
Standardisation
Removal of inhibitors
Population approach
Citizen empowerment
Evaluation methods
Breadth of ambition
Innovation management
Capacity building
5
4
3
2
1
0

Greece

Population size (thousands): 10,821 (State of Health in the EU, Greece, 2017)[41]

Population density: 81.9 inhabitants / km^2 (Eurostat, 2015)[42]

Life expectancy: 81.5 years (State of Health in the EU, Greece, 2017)

Fertility rate: 1.3 births / woman (State of Health in the EU, Greece, 2017)

Mortality rate: 11.3 deaths / 1,000 people (Central Intelligence Agency, 2017)[43]

Total health expenditure: 8.4% (State of Health in the EU, Greece, 2017)

Health financing: government schemes (28.4%), compulsory contributory health insurance schemes and compulsory medical saving accounts (31.3%), voluntary health insurance schemes (3.6%), financing schemes of non-profit institutions serving households (0.1%), household out-of-pocket payments (35.4%) (Eurostat, 2015)[44]

Top causes of death: circulatory diseases, malignant neoplasms, and respiratory diseases (State of Health in the EU, Greece, 2017)

The Greek healthcare system

Since 2016, the Greek healthcare system has provided universal health coverage, extending the coverage of and eligibility to the health benefits package to unemployed and low-income citizens. The system is a highly centralised one that comprises elements from both the private and public sectors. The public sector combines a national health service-type system with a social health insurance model. The private sector includes profit-making hospitals, diagnostic centres and independent practices, and one-third of private expenditure is made up of direct informal payments to surgeons, to get 'better treatment' (European Commission, 2017g). The Ministry of Health and Social Solidarity is responsible for ensuring the fundamental principles and general objectives of the national health system, e.g. free and equitable access to quality health services for every citizen. Indeed, the Ministry makes decisions on health policy issues and the overall planning and implementation of the national health strategy (European Commission, 2017g). The 2008 economic crisis had a profound impact on the health system, as health expenditure shrank drastically.

The role of local and regional governments in healthcare planning, organisation and provision is limited: regional and local governments play a minor role, since they do not have enough power or economic resources to implement extended policies at the regional level. At the level of service provision, municipalities are responsible for running all public infant and child centres and the open care centres for the elderly (KAPIs), and for implementing welfare programmes, e.g. 'Home Assistance' (European Commission, 2017g). Moreover, some large municipalities run a small number of healthcare centres, especially in the greater area of Attica (European Commission, 2017g).

Integrated care policies

Greece has undergone several endeavours aimed at modernising and improving national healthcare services, including integrated primary healthcare (Lionis et al., 2009). According

[41] https://ec.europa.eu/health/sites/health/files/state/docs/chp_gr_english.pdf

[42] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[43] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[44] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

to the systematic review of integrated primary healthcare in Greece by Lionis et al. (2009), the long-standing dominance of medical perspectives in Greek health policy has been paving the way towards vertical integration, minimising discussions about horizontal or comprehensive integration of care.

Implementation of integrated care in Greece: national-level initiatives

- Dementia Counselling Centres Network,[45] neuropsychological screening and neurological examinations, cognitive stimulation for groups of people with mild cognitive impairment and normal cognition, and psychoeducational support to carers;
- Psychargos,[46] which aims to transform the way mental health and care services are provided, from a traditional and clinical-based care model to a community care model.

Assessment of the maturity of the health system

Maturity Model – Greece	
Readiness to Change to enable more Integrated Care	
Self-assessment	2 – Dialogue and consensus-building underway; plan being developed
Justification	There is official dialogue underway, especially relating to the development and modernisation of primary care. The concept of integration of health and social care is emerging but not clear yet in Greece.
Structure & Governance	
Self-assessment	2 – Formation of task forces, alliances and other informal ways of collaborating
Justification	There are no formal structure and governance pathways coming from the Ministry of Health or regional authorities. Some efforts have been made in this direction, but in an informal manner – available plans on this topic are not yet robust.
Information & eHealth Services	
Self-assessment	3 – ICT and eHealth services to support integrated care are planned and deployed widely at large scale but use of these services is not mandated
Justification	There are examples of applications in several sites in Greece, with some of them being successful at the level of integrating health records and patient data, but the use of ICT and eHealth applications is not mandated in Greece.
Finance & Funding	
Self-assessment	2 – Consolidated innovation funding available through competitions/grants for individual care providers and small-scale implementation
Justification	In addition to the description in the row above, the stakeholder noted that there is also an example of a large-scale implementation (done by the

[45] A detailed description of this integrated care initiative is available at https://ec.europa.eu/eip/ageing/repository/dementia-counseling-centres-network_en

[46] A detailed description of this integrated care initiative is available at http://www.psychargos.gov.gr/Default.aspx?lang=1

	municipality and university of Athens). However, funding for integrated care is not available for routine implementation projects.
Standardisation & Simplification	
Self-assessment	2 – An ICT infrastructure to support integrated care has been agreed. together with a recommended set of information standards; there may still be local variations.
Justification	*N.B. The stakeholder was not confident on providing a clear justification for this domain*
Removal of Inhibitors	
Self-assessment	2 – Strategy for removing inhibitors agreed at a high level
Justification	Stakeholders are aware and mobilised to remove inhibitors but this is still not happening in Greece.
Population Approach	
Self-assessment	1 – A population risk approach is applied to integrated care services but not yet systematically or to the full population
Justification	The situation in Greece is still immature at this level. Most stakeholders in the country are not familiar with population risk stratification approaches. This concept is only recognised by special academic sectors.
Citizen Empowerment	
Self-assessment	2 – Citizen empowerment is recognised as an important part of integrated care provision; effective policies to support citizen empowerment are in place but citizens do not have access to health information and health data
Justification	Electronic prescription systems are not available to most of the population but they are widely used by those who already have access to them. There is increasing mobilisation about this topic. Citizens can use electronic means for administrative functions as well.
Evaluation Methods	
Self-assessment	1 – Evaluation of integrated care services takes place, but not as a part of a systematic approach
Justification	No official evaluation methods and procedures are currently implemented in Greece. In addition, there are no plans to start implementing this in the near future. There is a need as a society for a large-scale implementation of projects and evaluations, but little political will to do so.
Breadth of Ambition	
Self-assessment	2 – Integration within the same level of care (e.g., primary care)
Justification	Many initiatives are coming from regional or local players (i.e. bottom-up). However, these players have great difficulty in penetrating the Ministry of Health / policy-makers / other ministries. There is a problem in terms of acceptance of usefulness of projects. No coordination of different projects and initiatives.
Innovation Management	
Self-assessment	2 – Innovations are captured and there are some mechanisms in place to encourage knowledge transfer
Justification	Stakeholder is not aware of any electronic platforms for knowledge transfer.
Capacity Building	
Self-assessment	2 – Cooperation on capacity building for integrated care is growing across the region
Justification	Several efforts from academia (i.e. in the medicine sector) and the Ministry of Health are geared toward building capacity, but the number of people participating is not large. There are however some efforts, and considerable mobilisation in this topic. There is a certain level of maturity in this aspect.

The current level of integrated care implementation in Greece is low in most of the dimensions covered by the Maturity Model Assessment. This is reflected in the self-assessment ratings, with the majority of the assessment dimensions being rated as 1 or 2. Generally, it is perceived that progression of integrated care implementation in Greece has been hindered by the lack of political will and consensus to establish a comprehensive set of integrated care policies and strategies at national level.

However, there is a considerable ongoing effort in Greece to advance implementation of integrated care from a 'bottom-up' perspective. In fact, there are numerous integrated care initiatives in the form of projects, interventions and models at the local and regional levels, particularly around the use of information technology and eHealth.

Iceland

Population: 332,529 (Eurostat, 2016)[47]

Population density: 3.3 inhabitants / km^2 (Eurostat, 2015)[48]

Life expectancy: 84.5 years (Eurostat, 2014)

Fertility rate: 1.8 births / woman (Eurostat, 2015)

Mortality rate: 6.4 deaths / 1,000 people (Central Intelligence Agency, 2017)[49]

Total health expenditure: 8.8% (Eurostat, 2014)

Health financing: government schemes (52.1%), compulsory contributory health insurance schemes and compulsory medical saving accounts (29%), financing schemes of non-profit institutions serving households (1.5%), household out-of-pocket payments (17.5%) (Eurostat, 2015)[50]

Top causes of death: circulatory diseases, malignant neoplasms, and diseases of the respiratory system (European Observatory on Health Systems and Policies) [51]

The Icelandic healthcare system

The Icelandic healthcare system is a centralised publicly financed system: there is a single administrative tier in the governance of healthcare in which policy, administration and regulation are centralised at the level of the state (European Observatory, 2014). The planning of healthcare services and public health, including the management of communicable diseases, takes place centrally but is based on seven healthcare regions in the country: the regions are planning devices with no administrative authority or separate revenue streams (European Observatory, 2014). The main bodies responsible for policy, financing, planning and regulation are the Parliament, central government via the Ministry of Welfare (MoW) and the Ministry of Finance, and a combination of public and private service providers, although publicly provided care is predominant. The MoW has major policy-making and executive authority and its agencies are responsible for health policy, administration and supervision.

The country's centre of clinical excellence is the University Hospital, Landspitali, in Reykjavik, which alone accounts for 70% of the total national budget for general hospital services (European Observatory, 2014). In Iceland, the health budget is determined by Parliament on an annual basis: allocation of financial resources to government agencies is a centralised process. The MoW uses modelling in which the population and type of service are taken into consideration when allocating funds. After parliamentary approval on the National Budget for the year, the MoW has authority over the implementation of its particular budget allocation for health (European Observatory, 2014).

Primary healthcare, in principle designated as patients' first point of contact with the healthcare system, is provided in public primary care centres throughout the country and a few private primary healthcare clinics and private GPs operating in the capital region. Most primary healthcare clinics are able to offer the required services but small clinics in rural areas often cannot, and their patients are referred to larger clinics in the health region

[47] http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_and_population_change_statistics

[48] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[49] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[50] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

[51] European Observatory on Health Systems and Policies (2014), Iceland – Health System Review, Health Systems in Transition, Vol. 16, No. 6

or to the nearest hospital. All hospitals providing inpatient and ambulatory care are public hospitals. Regional hospitals provide general medical care in outpatient as well as inpatient departments 24 hours a day, but availability of specialist care varies. The MoW and local authorities share responsibility for the organisation and provision of long-term care services. Palliative care is well established, especially in Reykjavik and the surrounding areas (European Observatory, 2014).

Integrated care policies

In Iceland, the term integrated care is not referenced often in policies and strategies; however, the approach can be recognised in several high-level documents on elements of care. For example, Iceland's care guidelines for managing diabetes in primary settings describe integrated care elements such as multi-specialty teams, promotion of self-management and the inclusion of secondary prevention into primary care. In the national policy for mental health in Iceland, integrated care is mentioned as an objective more specifically. An action plan was submitted in which it is proposed to offer more psychological services in healthcare centres, to establish mental health teams and strengthen the children's department in the national university hospital. The Directorate of Health, a government agency, responsible for the promotion of high-quality and safe healthcare, health promotion and effective disease prevention measures, dictates that more should be done to cooperate with the family of the patient, and more opportunities should be offered for patients to meet mental health professionals, and improve assistance after they leave the hospital.[52] An example of 'out of hospital' care is the collaboration between healthcare and social services to provide treatment in the home. Emphasis is also placed on the compatibility of medication instructions between professionals.[53]
Moreover, Goal no. 15 in National Health Policy 2010 states that healthcare should be provided with teamwork and be integrated. The fundamental policy concerning health promotion and prevention in Iceland, the National Health Policy 2020, is currently in progress.

Implementation of integrated care in Iceland: initiatives at national level

- *Back and Neck programme of The Spinal Unit at St Franciscus' Hospital*[54]*;*
- *Strengthening diabetes service delivery at the primary care level in Iceland*[55];
- *eHealth Iceland*[56];
- *Joint Action on Chronic Diseases*[57];

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[52] A detailed description of this integrated care intiative is available at http://www.nordicwelfare.org/PageFiles/36616/island_webb.pdf

[53] Department of General Practitioners (2014). Evaluation of quality and services of psychiatric hospitals. Reykjavik: Author.

[54] A detailed description of this integrated care initiative is available at https://www.nivel.nl/sites/default/files/bestanden/Rapport-CHRODIS.pdf?

[55] A detailed description of this integrated care model is available at http://www.integratedcare4people.org/practices/333/strengthening-diabetes-service-delivery-at-the-primary-care-level-in-iceland/

[56] A detailed description of this integrated care initiative is available at http://ehealth-strategies.eu/database/documents/Iceland_CountryBrief_eHS_FinalEdit.pdf

[57] A detailed description of this integrated care policy is available at http://chrodis.eu/wp-content/uploads/2014/10/JA-CHRODIS_Iceland-country-review-in-the-field-of-health-promtion-and-primary-prevention.pdf

- *Communicable Disease Control*[58];
- *Child Protection*[59];
- *Health Policy to year 2010*[60];
- *Integration of mental health*[61];
- *High risk pregnancies and choice of where to give birth*[62];
- *The State Diagnostic and Counselling Centre*[63];
- *Virk (ACTIVE) – vocational rehabilitation.*[64]

Assessment of the maturity of the health system

Maturity Model – Iceland	
Readiness to Change to enable more Integrated Care	
Self-assessment	2 – Dialogue and consensus-building underway; plan being developed
Justification	The need to integrate health and social services as well as different levels of health services has been discussed for a long time in Iceland, although there is still not a clear policy statement in relation to integration.
Structure & Governance	
Self-assessment	2 – Formation of task forces, alliances and other informal ways of collaborating
Justification	Some work has already taken place. For example, the home care nursing services in Reykjavik were moved out of the community health centres and integrated with the social services under the municipal authority in Iceland. Similarly, there is an ongoing project focusing on integrating home care nursing and outpatient clinics for people with heart failure in the metropolitan area.
Information & eHealth Services	
Self-assessment	4 – Mandated or funded use of regional / national eHealth infrastructure across the healthcare system
Justification	Public institutions are mandated to use a single type of system for health records. However, private sector institutions can use their own systems. Moreover, the Icelandic health system is divided into regions, and there is one database of health records per region. The databases and underlying systems are interconnected, and data can be pooled from one region to another. This is not the case within the private sector, which is more loosely coupled and not mandated to follow the rules governing management and accessibility of health records.

[58] A detailed description of this integrated care organisation is available at http://www.vhpb.org/files/html/Meetings_and_publications/Presentations/COPS27.pdf

[59] A detailed description of this integrated care initiative is available at http://www.bvs.is/media/forsida/Child-Protection-in-Iceland-and-the-role-of-the-Government-Agency-for-Child-Protection.pdf

[60] A detailed description of this integrated care policy is available at https://www.velferdarraduneyti.is/media/Skyrslur/htr2010.pdf

[61] A detailed description of this integrated care policy is available at http://www.althingi.is/altext/pdf/145/s/1217.pdf

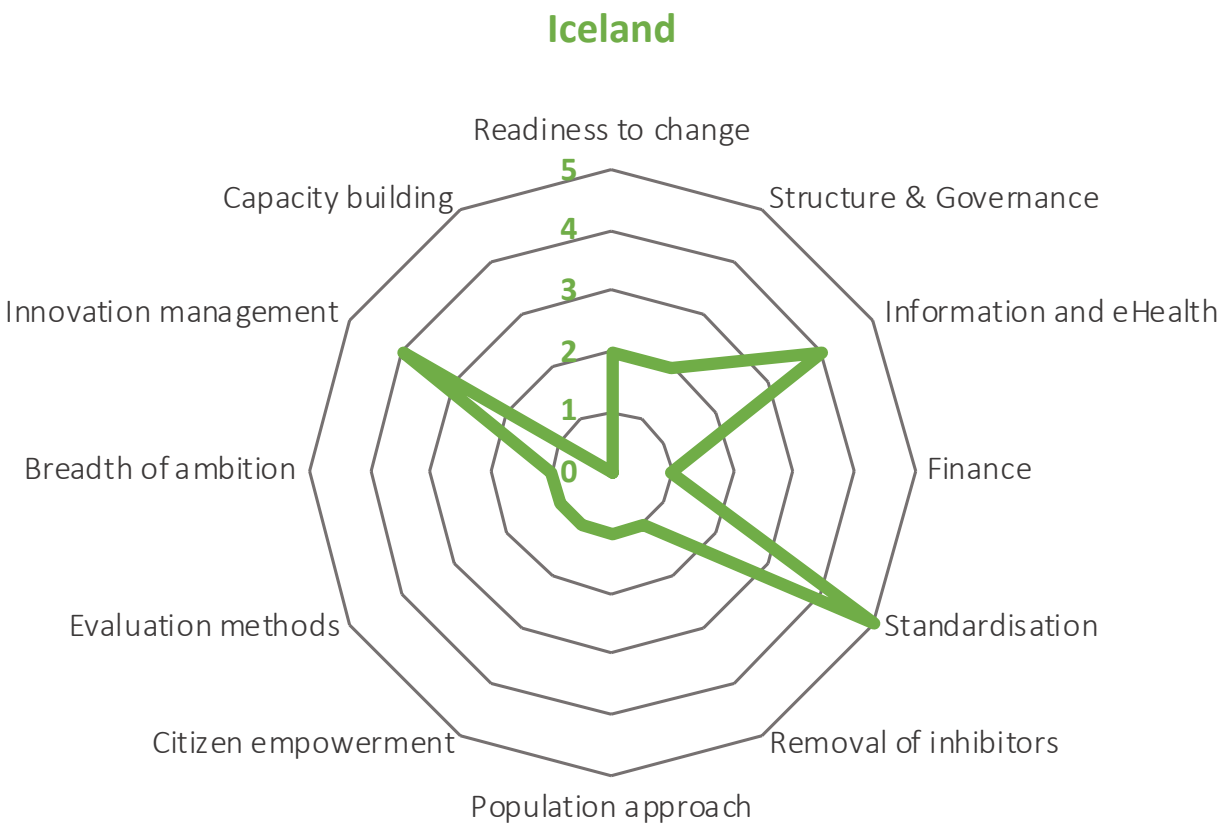
[62] A detailed description of this integrated care organisation is available at http://www.landlaeknir.is/servlet/file/store93/item2818/3304.pdf

[63] A detailed description of this integrated care organisation is available at http://www.greining.is/is/tungumal/english

[64] A detailed description of this integrated care initiative is available at http://www.virk.is/is/english/mission-and-activities-of-virk

Finance & Funding	
Self-assessment	1 – Funding is available but mainly for pilot projects and testing
Justification	The interviewed stakeholders were not confident in this ranking.
Standardisation & Simplification	
Self-assessment	5 – A unified and mandated set of agreed standards to be used for system implementations is fully incorporated into procurement processes; clear strategy for regional / national procurement of new systems; consolidated data centres and shared services (including the cloud) is normal practice
Justification	The Icelandic health system has its own standards, which are not always in accordance with international standards. Every data centre in Iceland must comply with these national standards.
Removal of Inhibitors	
Self-assessment	1 – Awareness of inhibitors but no systematic approach to their management is in place
Justification	It is the opinion of interviewed stakeholders that the Icelandic health system is still at a stage where individual practitioners decide on what the inhibitors are and how to overcome them.
Population Approach	
Self-assessment	1 – A population risk approach is applied to integrated care services but not yet systematically or to the full population
Justification	The interviewed stakeholders pointed out that current population risk stratification projects are ongoing, specifically focusing on people with heart failure as well as COPD and neurological difficulties in home care.
Citizen Empowerment	
Self-assessment	1 – Citizen empowerment is recognised as an important part of integrated care provision but effective policies to support citizen empowerment are still in development
Justification	There is considerable emphasis on accountability for patients. Person-centredness is a big issue in Iceland, as in other countries. There is considerable discussion on empowerment, but not at policy-making level.
Evaluation Methods	
Self-assessment	1 – Evaluation of integrated care services takes place, but not as a part of a systematic approach
Justification	The interviewed stakeholders were not confident on this ranking.
Breadth of Ambition	
Self-assessment	1 – The citizen or their family may need to act as the integrator of service in an unpredictable way
Justification	The interviewed stakeholders were not confident on this ranking.
Innovation Management	
Self-assessment	4 – Formalised innovation management process is in place and widely implemented
Justification	There is considerable mobilisation in terms of the development of tools and applications to help manage nursing and maternity care. The design and implementation process underlying this development consists of having a group of specialists from hospitals, universities, clinics, and computer programmers to co-design the applications and tools. There is an AGILE and user-based research approach to this development process. This approach is quite simple to implement in Iceland, given its small size.
Capacity Building	
Self-assessment	0 – Integrated care services are not considered for capacity building
Justification	The interviewed stakeholders were not confident on this ranking.

The Icelandic health system has been progressing consistently toward integrated care over the past two decades, but without establishing policies that make specific use of the 'integrated care terminology'; instead reference is made to 'consolidation of primary and secondary care', and 'establishment of multidisciplinary teams'. As a result, Iceland does not have a formal political consensus or specific policies around integrated care, although legislation is currently being drafted. This is reflected in the Maturity Model Assessment, where the assessment dimensions unrelated to information technology and eHealth were rated between 1 and 2. Conversely, the implementation of information technology and eHealth tools was categorised by interviewed stakeholders as advanced, e.g. use of electronic health record systems is mandated by law; systems for patient management are co-designed with users, and there are well-defined and widespread Icelandic standards for use of systems and data.



Italy

Population size (thousands): 60,731 (State of Health in the EU, Italy, 2017)[65]

Population density: 201 inhabitants / km^2 (Eurostat, 2015)[66]

Life expectancy: 82.7 years (State of Health in the EU, Italy, 2017)

Fertility rate: 1.3 births / woman (State of Health in the EU, Italy, 2017)

Mortality rate: 10.4 deaths / 1,000 people (Central Intelligence Agency, 2017)[67]

Total health expenditure: 9.1% (State of Health in the EU, Italy, 2017)

Health financing: government schemes (75.5%), compulsory contributory health insurance schemes and compulsory medical saving accounts (0.3%), voluntary health insurance schemes (1.5%), financing schemes of non-profit institutions serving households (0.4%), enterprise financing schemes (0.3%), household out-of-pocket payments (22%) (Eurostat, 2015)[68]

Top causes of death: circulatory diseases, malignant neoplasms, and ischaemic heart diseases (State of Health in the EU, Italy, 2017)

The Italian healthcare system

The Italian healthcare system, the Servizio Sanitario Nazionale (SSN), provides universal coverage largely free of charge at the point of delivery. It is highly de-centralised system, organised into three levels – national, regional and local. The 19 Italian Regions and two Autonomous Provinces are responsible for the organisation, planning and delivery of health services, through local authorities, whereby the only roles of the national government are to set fundamental principles and objectives of the SSN, determine the core benefit package of health services guaranteed across the country, and allocate national funds to regions (European Commission, 2017h). Local health authorities, Aziende Sanitarie Locali (ASLs), deliver public and community health and primary care directly; secondary and specialist care is delivered either directly or through public hospitals and accredited private providers (European Commission, 2017h). Since 2016, many regions have merged local ASLs to improve the efficiency and quality of care through better integration. The de-centralisation of service organisation, planning and delivery results in different health outcomes across the country (European Commission, 2017h).

The regions and provinces share financing and planning responsibilities with the national government in the State-Regions Conference. Moreover, they are exclusively responsible for delivering public health and healthcare services through their regional health systems. The executive functions of regional governments with regard to healthcare include: (i) drafting the three-year Regional Health Plan; managing ASLs by defining their catchment areas and resource allocation profiles; coordinating health and social care provision through a Standing Conference for Regional Health and Social Care Planning; and defining the authorisation criteria for accrediting private and public care providers (European Commission, 2017h).

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[65] https://ec.europa.eu/health/sites/health/files/state/docs/chp_it_english.pdf

[66] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[67] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[68] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

Integrated care policies

In Italy the universal national health system is organised at three levels: National, regional (responsible for the organisation and governance of the system), and local health units (delivering services) (Calciolari and Ilinca, 2016). Each LHU / ASL is responsible for hospital and community care services, with an institutional orientation toward their coordination. In the last decade, a number of legislative interventions have been implemented in Italy to foster the coordination and integration of health and social services (Calciolari and Ilinca, 2016). National initiatives are complemented by regional ones, notably in Emilia-Romagna, Veneto and Lombardy.

In this context, a wide variety of regional-level integrated care initiatives can be found in Italy, mostly at the intervention and model levels. This wide variety of integrated care initiatives, however, does not apply directly to integrated care policies and strategies. Indeed, only three initiatives at policy or strategy level can be found in Italy, all with a focus on preventive health: 'Regional Plan for prevention of heat related health effects' in the Lazio Region;[69] PDTA (Percorsi Diagnostico Terapeutico Assistenziali) in Brescia (European Commission, 2017a); and 'A sustainable, active, primary prevention strategy for cardiovascular diseases in Italy for Adults older than 50' in Veneto.[70]

Implementation of integrated care in Italy: initiatives in Lombardy

- Telemedicine for real-life integrated care in chronic patients[71] in the Lombardy region;
- Buongiorno CREG,[72] in the cities of Milan, Bergamo, Como and Lecco;
- The 'Walk to School' and 'Walking Groups' programmes[73] in the whole of the Lombardy region;
- The Lombardy Workplace Health Promotion Network,[74] in the Lombardy region;
- PDTA (Percorsi Diagnostico Terapeutico Assistenziali) (European Commission, 2017a), in the city of Brescia.

Assessment of the maturity of the health system

Maturity Model – Italy (Lombardy)	
Readiness to Change to enable more Integrated Care	
Self-assessment	3 – Vision or plan embedded in policy; leaders and champions emerging

[69] A detailed description of this integrated care strategy can be found at https://ec.europa.eu/eip/ageing/repository/regional-plan-prevention-heat-related-health-effects-lazio-region_en

[70] A detailed description of this integrated care policy can be found at http://platform.chrodis.eu/clearinghouse?id=1405, under projects 'CUORE' and 'CARDIO 50'

[71] A detailed description of this integrated care intervention can be found at https://ec.europa.eu/eip/ageing/repository/telemedicine-real-life-integrated-care-chronic-patients_en;

[72] A detailed description of this integrated care model can be found at http://www.buongiornocreg.it/buongiorno-creg/

[73] A detailed description of these integrated care interventions can be found at https://ec.europa.eu/eip/ageing/repository/%E2%80%9Cwalk-school%E2%80%9D-programme_en and https://ec.europa.eu/eip/ageing/repository/%E2%80%9Cwalking-groups%E2%80%9D-programme_en

[74] A detailed description of this integrated care intervention can be found at https://ec.europa.eu/eip/ageing/repository/lombardy-workplace-health-promotion-network_en

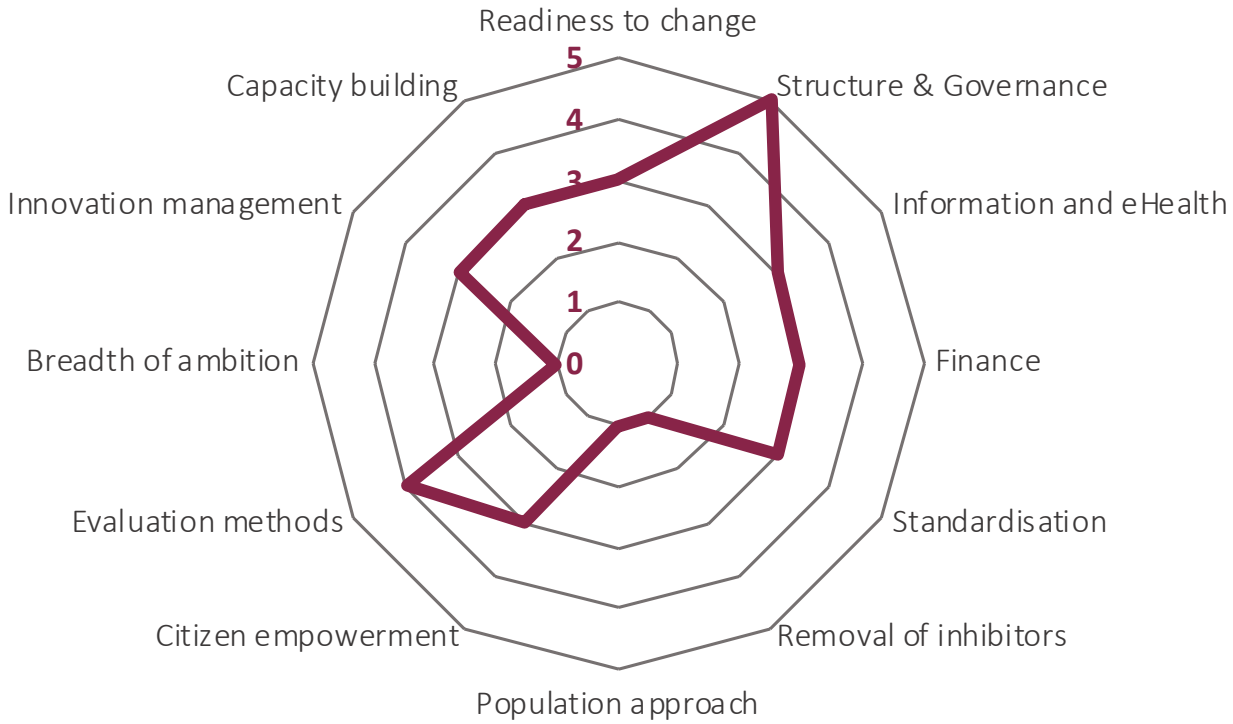
Justification	In the Lombardy Region, the last two resolutions on the Chronicity Plan (X/6164 of 30/01/2017 and X/6551 of 04/05/2017) outline a revolutionary proposal for the chronic patient, regarding the interactions of patients with organisations (hospitals, public or private providers, associations of general practitioners).
Structure & Governance	
Self-assessment	5 – Full, integrated programme established, with funding and a clear mandate
Justification	The resolutions of the Lombardy region explain in full the criteria for organisations' accreditation and the programmes for the different levels of patient chronicity that have been identified by the Region on the basis of the current condition of Lombardy citizens, and the funding for patient management at different levels.
Information & eHealth Services	
Self-assessment	3 – ICT and eHealth services to support integrated care are planned and deployed widely at large scale but use of these services is not mandated
Justification	The situation is not homogeneous. The differences arise from the fact that not all hospitals in the region adhere in the same way to the accreditation scheme set out by the regional government in 2006 and updated in 2010. While some hospitals have developed full-fledged call centres and electronic patient records, other hospitals only provide a simple telephone service. The accreditation system only requests a minimum dataset describing what has been done to receive the grant, but the requirements of telemedicine and tele-surveillance are not clearly stipulated.
Finance & Funding	
Self-assessment	3 – Regional/national (or European) funding or PPP for scaling up is available
Justification	Providers participating in the NRS, Nuove Reti Sanitari (new healthcare networks) receive a reimbursement for every patient of EUR720 every six months for high-intensity patients, and around half that amount for low-intensity patients. In addition to these networks, there are other projects run by the European Commission, the Region and the national government providing funding.
Standardisation & Simplification	
Self-assessment	3 – A recommended set of agreed information standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway
Justification	The situation is not homogeneous: stakeholders chose the answer 3 for the 'NRS, Nuove Reti Sanitari' (new healthcare networks) and for the CREGs in the Lombardy Region. Regarding the 'FSE, fascicolo sanitario elettronico' electronic health record, the answer 2 would be the correct one.
Removal of Inhibitors	
Self-assessment	1 – Awareness of inhibitors but no systematic approach to their management is in place
Justification	First, to ensure the reduction of barriers to this process, university training should be adapted to this end. There is strong resistance to change especially in the medical profession.
Population Approach	
Self-assessment	1 – A population risk approach is applied to integrated care services but not yet systematically or to the full population
Justification	Regional laws exist. The problem is that health professionals are unlikely to implement risk stratification and propose an integrated approach, but instead direct the patients to private visits.
Citizen Empowerment	

Self-assessment	3 – Citizens are consulted on integrated care services and have access to health information and health data
Justification	There is a strong focus on patient engagement during and following up hospitalisation, to empower them to manage their conditions (e.g. COPD or heart failure). Patients can discuss their situation with professionals using videoconferencing. However, the service is not provided outside the programme and not even all patients suffering from the above conditions are covered by the service. From January 2018, a new law in the Region will make patient engagement of chronic patients mandatory.
Evaluation Methods	
Self-assessment	4 – Most integrated care initiatives are subject to a systematic approach to evaluation; published results
Justification	All the data related to the programme is compiled (e.g. results of echocardiograms, spirometries, as well as information on severity of the patient, telephone calls, adherence to treatment, dosage, secondary effects, examinations, hospital visits). The data collected for the service, as well as for ambulatory service, is analysed and evaluated, including cost-benefit.
Breadth of Ambition	
Self-assessment	1 – The citizen or their family may need to act as the integrator of service in an unpredictable way
Justification	Reality is very uneven. There are some very positive experiences of integration between primary and secondary care, but very often the citizen or his/her family may need to act as an integrator of service in an unpredictable way, especially because of limited information sharing and integration in social services.
Innovation Management	
Self-assessment	3 – Formalised innovation management process is planned and partially implemented
Justification	More needs to be done in terms of innovation management to get the personnel in the hospital to accept the changes to the management practice for the conditions covered by the programme, especially around personal health records, videoconferencing, and the new approach taken by the nurses. Nurses were not previously accustomed to being case managers.
Capacity Building	
Self-assessment	3 – Systematic learning about integrated care and change management is in place but not widely implemented
Justification	Health professionals (doctors, nurses, therapists) are not trained in these new ways of working and of managing patients and need more support to be trained in management of chronic care; for example, in the use of telemonitoring or the fact that now the patient's care is 'shared' with other specialists.

The Lombardy region has made great progress over the past five years in developing policies that are specifically aimed at integrated care implementation. There is a political consensus around integrated care programmes in the region, as highlighted in the Structure and Governance assessment dimension, which was rated as 5. This political consensus in the region also provides the platform for enabling the implementation of integrated care across other dimensions, such as financing of programmes, evaluation methods, and development of eHealth initiatives.

The remaining obstacles to the implementation of integrated care in Lombardy relate to the heterogeneity in integrated care practices across different providers in the region. Moreover, there is considerable resistance from medical doctors with regard to adapting elements of their profession in order to effectively deliver integrated care, which remains one of the most challenging inhibitors of integrated care implementation in the region.

Italy | Lombardy



Netherlands

Population size (thousands): 16,940 (State of Health in the EU, Netherlands, 2017)[75]

Population density: 502.9 inhabitants / km^2 (Eurostat, 2015)[76]

Life expectancy: 81.6 years (State of Health in the EU, Netherlands, 2017)

Fertility rate: 1.7 births / woman (State of Health in the EU, Netherlands, 2017)

Mortality rate: 8.9 deaths / 1,000 people (Central Intelligence Agency, 2017)[77]

Total health expenditure: 10.7% (State of Health in the EU, Netherlands, 2017)

Health financing: government schemes (4.8%), compulsory contributory health insurance schemes and compulsory medical saving accounts (75.8%), voluntary health insurance schemes (5.9%), financing schemes of non-profit institutions serving households (0.3%), enterprise financing schemes (0.9%), household out-of-pocket payments (12.3%) (Eurostat, 2015)[78]

Top causes of death: malignant neoplasms, circulatory diseases, and respiratory diseases (State of Health in the EU, Netherlands, 2017)

The Dutch healthcare system

The social insurance background of the healthcare system in the Netherlands fits in a Bismarckian tradition, with dominant roles for not-for-profit sickness funds and independent providers and a modest role for the government. A major healthcare reform in 2006 (European Commission, 2017i) resulted in the implementation of a unified compulsory insurance scheme, which changed the roles of actors across the healthcare system, e.g. multiple private health insurers now have to compete for insured persons, and social support was delegated to municipalities (European Commission, 2017i). In the Netherlands, the tradition of private provision of services, self-regulation and financing via a system of social health insurance resulted in a healthcare sector that is dominated by several mutually dependent actors with different backgrounds. Since the 2006 Health Insurance Reform (European Commission, 2017i), through which three markets (i.e. delivery, purchasing, and insurance of care) have become the core of the healthcare system, the role of the government has become less dominant. However, the government still plays an important role in health policy development and implementation, while advisory bodies and research institutes play an intermediate role (European Commission, 2017i).

In terms of funding allocation, the Ministry of Health decides upon the national budget for healthcare. The Ministry also decides on the budget for both municipality-based de-centralised healthcare and home nursing care (European Commission, 2017i). The municipality budget is paid into the municipality fund – the budget of this fund is allocated to the municipalities, based on certain indicators, such as number of citizens, the physical size of the municipality, and the number of people entitled to social security. In the Netherlands, public health services are primarily the responsibility of municipalities and include services such as prevention, screening and vaccination (European Observatory, 2016). Currently, attention is being paid to integrated care for chronic diseases and care for people with multi-morbidities, and the shift of care to lower levels of specialisation – from hospital care to GP care to practice nurse to self-care (European Observatory, 2016).

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[75] https://ec.europa.eu/health/sites/health/files/state/docs/chp_nl_english.pdf

[76] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[77] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[78] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

Integrated care policies

In the Netherlands, the introduction of an integrated payment system in 2010 has been perceived as the cornerstone of a policy stimulating the development of a well-functioning integrated chronic care system (Tsiachristas et al., 2011). With the introduction of the Health Insurance Act of 2006, health insurers are required to offer a standard package of basic healthcare insurance to every applicant, regardless of pre-existing condition, and it is also mandatory for every citizen to have at least a basic benefit package. This framework was developed with a view to stimulating the integration of chronic care; however, according to Tsiachristas et al., 2011, integration of care ended up being dependent on whether or not a patient had voluntary supplementary insurance. Among other barriers to the implementation of care, the integrated payment model introduced by the Dutch Ministry of Health includes a reimbursement system offering an 'all-inclusive' payment for people with chronic conditions to multidisciplinary teams providing care for these patients. Under this payment system, chronic care is coordinated by groups of providers in the Netherlands.

With regard to the variety of integrated care payment schemes in Europe, such as PFC (pay-for-coordination), PFP (pay-for-performance) and bundled payments, Tsiachristas et al. (2013) reported that the Netherlands (together with Austria, France, England and Germany) have implemented payment schemes that are designed to promote the integration of chronic care. The implemented payment schemes target different stakeholders in different countries depending on the structure of each individual health system.

Implementation of integrated care in the Netherlands: national-level initiatives

- *Buurtzorg Model,*[79] a home care organisation with small nursing and personal care teams, which has introduced an in-built attempt to contact and integrate with other local, formal and informal care providers;
- *INCA Model,*[80] which aims at providing integrated care for patients with multi-morbidity;
- *JOGG – Jongeren op Gezond Gewicht (i.e. Young People at Healthy Weight),*[81] which looks to encourage young people (0–19 years of age) in a city, town or neighbourhood to eat healthy food, do physical exercise and adopt healthy lifestyles;
- *Dutch Obesity Interventions in Teenagers (DOiT),*[82] which aims at preventing obesity amongst pre-vocational school children by improving energy-balance-related behaviours (EBBs).

Assessment of the maturity of the health system

[79] A detailed description of this integrated care model is available at http://www.buurtzorgnederland.com/

[80] A detailed description of this integrated care model is available at http://www.icare4eu.org/pdf/INCA_Case_report.pdf

[81] A detailed description of this integrated care intervention is available at http://platform.chrodis.eu/clearinghouse?id=801

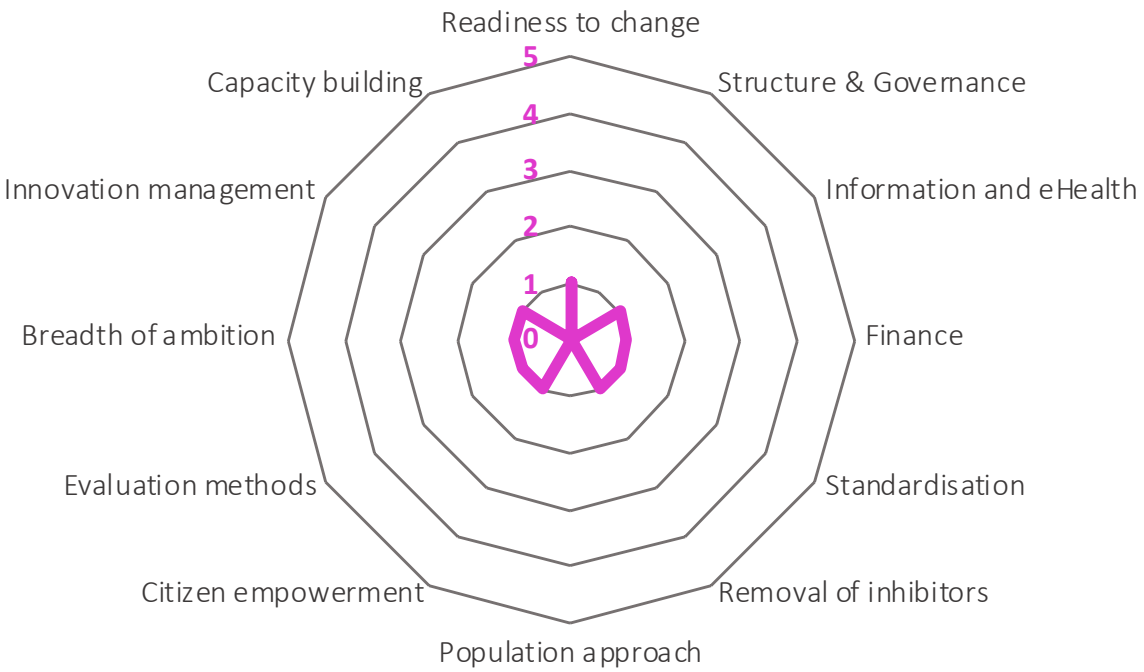
[82] A detailed description of this integrated care intervention is available at Dutch Obesity Interventions in Teenagers (DOiT)

Maturity Model – Netherlands	
Readiness to Change to enable more Integrated Care	
Self-assessment	1 – Compelling need is recognised, but no clear vision or strategic plan
Justification	Policy-makers, professionals and payers (also at municipal level) recognise shortcomings, inability to deliver truly integrated care and lack of communication. Also, inefficiencies and high costs incurred are recognised.
Structure & Governance	
Self-assessment	0 – Fragmented structure and governance in place
Justification	Various sectors do their best to keep delivering high-quality healthcare, and generally still accomplish this laudable goal despite barriers in organising and establishing integral health service systems. By design (healthcare market), each individual healthcare provider is expected to compete for market share by showing value for money. This results in perverse incentives when done in the absence of clear benchmarks and quality control measures.
Information & eHealth Services	
Self-assessment	1 – ICT and eHealth services to support integrated care are being piloted
Justification	No general grand design but some interesting and promising initiatives are operational. These might ultimately serve as best practice exemplars, yet the risk of non-progression due to absence of governance is very real.
Finance & Funding	
Self-assessment	1 – Funding is available but mainly for pilot projects and testing
Justification	National funding is not available. Governance is lacking, as is a national vision or plan in this respect. The notion that ultimately the optimal system will emerge through competition and survival of the fittest is predominant. Some healthcare insurance companies invest limited amounts for limited periods in pilot or research projects.
Standardisation & Simplification	
Self-assessment	1 – Discussion of the necessity of ICT to support integrated care and of any standards associated with that ICT
Justification	Rudimentary development. Attempts have been made, yet in the absence of governance the 'market' is not going to solve the issue.
Removal of Inhibitors	
Self-assessment	1 – Awareness of inhibitors but no systematic approach to their management is in place
Justification	Interviewed stakeholder is inclined to say no awareness, yet in some pilots the awareness and sense of urgency is present.
Population Approach	
Self-assessment	0 – Population health approach is not applied to the provision of integrated care services
Justification	Apart from local (sometimes quite successful) pilots no systematic general implementation.
Citizen Empowerment	
Self-assessment	1 – Citizen empowerment is recognised as an important part of integrated care provision but effective policies to support citizen empowerment are still in development
Justification	The notion and concept of citizen empowerment is recognised as relevant, and the lack of empowerment is further recognised as a barrier. However, in the absence of clear governance and leadership this will not evolve.
Evaluation Methods	

Self-assessment	1 – Evaluation of integrated care services takes place, but not as a part of a systematic approach
Justification	Most services currently deployed are part of research programmes or pilots. Thus evaluation is generally part of the process. This clearly is not part of a systematic approach.
Breadth of Ambition	
Self-assessment	1 – The citizen or their family may need to act as the integrator of service in an unpredictable way
Justification	It is the opinion of the interviewed stakeholder that if informal caregivers recognise the need for integration some may succeed and achieve some level of integration. Integration may be achieved successfully as part of local pilots, but this remains rare.
Innovation Management	
Self-assessment	1 – Innovation is encouraged but there is no overall plan
Justification	In general, an entrepreneurial spirit is supported and considered relevant by national government and subsequently delegated to knowledge institutes. However, progress in this area is currently very slow, as there is not an overall, policy-based national plan to guide this.
Capacity Building	
Self-assessment	0 – Integrated care services are not considered for capacity building
Justification	No formal systematic approaches are in place. The niche or void is recognised and a professional master's programme has even been developed.

The current situation regarding implementation of integrated care is characterised by lack of political consensus and development of national-level policies. It was also noted that, while there are numerous 'bottom-up' integrated care initiatives (e.g. pilot projects) across the Netherlands, it will remain challenging to implement integrated care effectively without an all-encompassing national-level policy. These elements were reflected in the Maturity Model Assessment, where all the assessment dimensions were rated as either 0 or 1.

Netherlands



Poland

Population size (thousands): 37,986 (State of Health in the EU, Poland, 2017)[83]

Population density: 124.1 inhabitants / km^2 (Eurostat, 2015)[84]

Life expectancy: 77.5 years (State of Health in the EU, Poland, 2017)

Fertility rate: 1.3 births / woman (State of Health in the EU, Poland, 2017)

Mortality rate: 10.4 deaths / 1,000 people (Central Intelligence Agency, 2017)[85]

Total health expenditure: 6.3% (State of Health in the EU, Poland, 2017)

Health financing: government schemes (9.2%), compulsory contributory health insurance schemes and compulsory medical saving accounts (61.8%), voluntary health insurance schemes (4.5%), financing schemes of non-profit institutions serving households (1%), enterprise financing schemes (0.6%), household out-of-pocket payments (22.9%) (Eurostat, 2015)[86]

Top causes of death: circulatory diseases, malignant neoplasms, ischaemic heart diseases (State of Health in the EU, Poland, 2017)

The Polish healthcare system

The Polish healthcare system is a de-centralised system based on mandatory social health insurance and complemented with financing from territorial self-government budgets and the state budget, covering 91% of the population. In Poland, there is an evident separation of healthcare provision and financing: the National Health Fund (NFZ) (i.e. the sole payer in the system) is responsible for healthcare financing and contracting with public and private providers (European Commission, 2017j). In terms of structural organisation, the Ministry of Health is both the regulator and policy-maker in the healthcare system, and is further supported by several advisory bodies. Finally, health insurance contributions are collected by intermediary bodies and subsequently pooled and distributed by the NFZ to the 16 regional branches (European Commission, 2017j).

In Poland, the entry point to healthcare services is usually through a primary care physician, with access to specialist care requiring a referral. Thus, primary care physicians act as gatekeepers in the system, directing patients to more complex care (European Commission, 2017j). Primary healthcare in Poland comprises both diagnostic and preventive healthcare services, as well as therapeutic and rehabilitative care. Additionally, ambulatory care services are provided by clinics, specialist dispensaries or specialist medical practices (European Commission, 2017j).The majority of hospitals provide healthcare across different specialties, with single-specialty hospitals being rare in Poland. Long-term and rehabilitative care services are provided within both the social and healthcare sector (European Commission, 2017j).

Integrated care policies

The majority of integrated care strategies and policies in Eastern European Member States, including Poland, are at national level. Indeed, the only integrated care strategy and policy retrieved at local level in Poland is Healthy Krakow 2013–2015. In Poland, integration of

[83] https://ec.europa.eu/health/sites/health/files/state/docs/chp_poland_english.pdf

[84] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[85] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[86] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

social and healthcare services is not mentioned in the integrated care policies and strategies retrieved by the Study Team. Instead, the main focus of these strategies and policies is on clinical integration (including preventive medicine), chronic care and mental health. Some of the most notable integrated care policies in Poland are listed below:

- *The national project of integrated care in Poland,*[87] which sets out objectives and processes to develop integrated care in Poland;
- *'Ustawa o podstawowej opiece zdrowotnej' (*i.e. Act on primary healthcare),[88] which aims at integrating primary care, especially in the context of chronic diseases;
- *National Mental Health Programme,*[89] which sets a strategic direction for the provision and organisation of mental health services, including an overview on how to develop a coordinated approach in mental care.

Implementation of integrated care in Poland: initiatives in East Mazovia

- A pilot study was started in 2011 to evaluate the impact of an integrated, multidisciplinary diabetic care programme on clinical outcomes (Szafraniec-Burylo et al., 2016).
- The Medical Diagnostics Centre has implemented a functional integration initiative to integrate primary care and specialist ambulatory care.[90]

Assessment of the maturity of the health system

Maturity Model – Poland (East Mazovia)	
Readiness to Change to enable more Integrated Care	
Self-assessment	3 – Vision or plan embedded in policy; leaders and champions emerging
Justification	There are no major developments at the regional level. However, several organisations in the region are mobilised and involved in the implementation of integrated care. The stakeholder's organisation (i.e. Centrum Medyczno – Diagnostyczne) is a good example of this, while delivering healthcare to 10% of the population of East Mazovia.
Structure & Governance	
Self-assessment	2 – Formation of task forces, alliances and other informal ways of collaborating
Justification	The process of establishing a structure and governance platform to enable integrated care is still in its early days in Poland. There are informal organisations, such as cooperation between institutions and the national health service, which have resulted in several informal programmes (i.e. in the form of pilot projects) at national and regional level. Integrated care policy is being approached from a top-down perspective as well, directly from the Ministry of Health.
Information & eHealth Services	

[87] A detailed description of this integrated care policy is available at http://akademia.nfz.gov.pl/wp-content/uploads/2016/04/OOK-NFZ_Intro_KWiktorzak.pdf
[88] Available at http://www.dziennikustaw.gov.pl/DU/2017/2217
[89] Available at http://www.mz.gov.pl/wp-content/uploads/2015/01/npoz_zdrpub_03112011.pdf
[90] A detailed description of this integrated care strategy is available at http://akademia.nfz.gov.pl/wp-content/uploads/2016/04/CMD_APrusaczyk.pdf

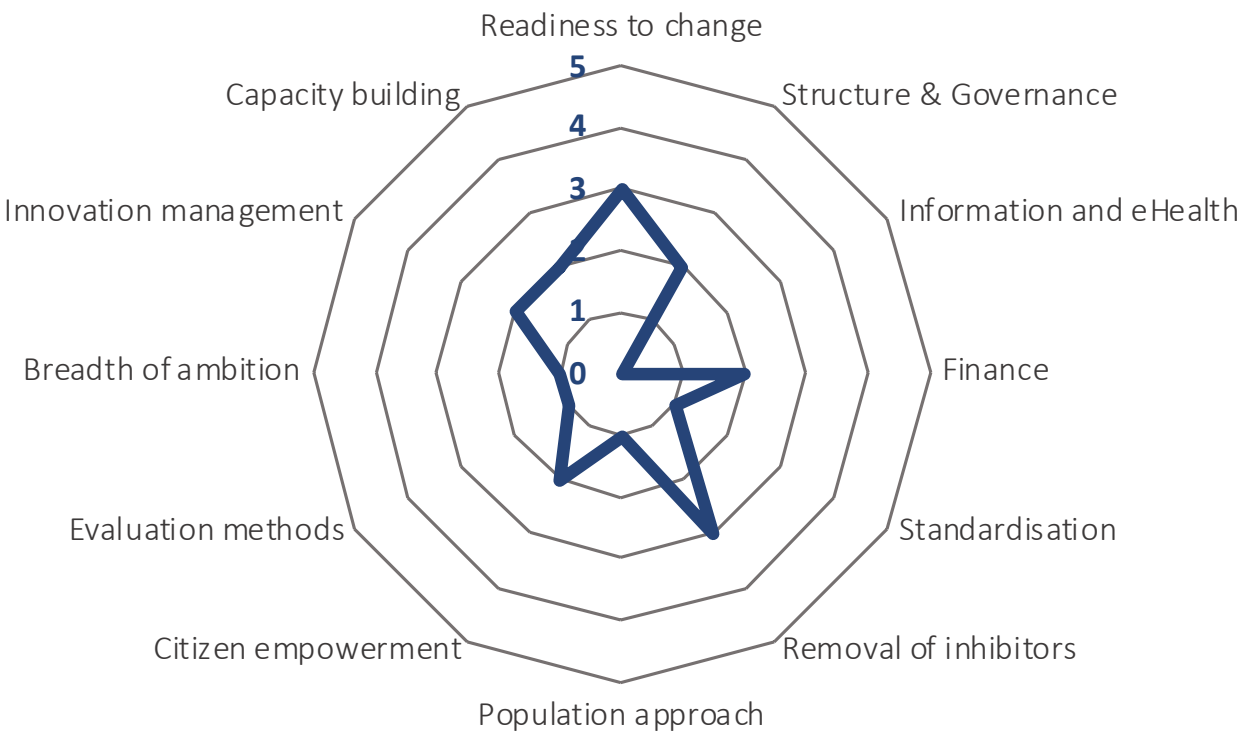
Self-assessment	0 – ICT systems are not designed to support integrated care
Justification	IT systems have been the same since the early 2000s. Currently, there are regional programmes funded by the EU and the national government to transform old IT systems to more modern ones, in the context of enabling integrated care delivery. These initiatives, however, are still in the early stage of development.
Finance & Funding	
Self-assessment	2 – Consolidated innovation funding available through competitions/grants for individual care providers and small-scale implementation
Justification	At the regional level, funding was made available for the implementation of three integrated care models, i.e. all-round support of pregnant women, support for patients with myocardial infarction, and diagnostics and disease management for oncological patients. In the stakeholder's organisation, there are two co-existing integrated care models: (i) 'health check-ups for adults (i.e. focused on onco-diagnostics and chronicity)', and (ii) 'whole support pathway for chronically ill patients'.
Standardisation & Simplification	
Self-assessment	1 – Discussion of the necessity for ICT to support integrated care and of any standards associated with that ICT
Justification	IT systems and standards have been the same since the early 2000s. Currently, there are regional programmes funded by the EU and the national government to transform old IT systems to more modern ones (and agree on standards at regional and national level), in the context of enabling integrated care delivery. These initiatives, however, still in the early stage of development.
Removal of Inhibitors	
Self-assessment	3 – Implementation plan and process for removing inhibitors have started being implemented locally
Justification	From a regional point of view, there are programmes and grants for educational projects relating to the concept of patient-centred care; these programmes are usually targeted at practitioners. It is the stakeholder's opinion that these programmes are effective in reducing the burden of inhibitors. Currently, the main inhibitor is staff rigidity. Indeed, in the stakeholder's organisation, a considerable amount of resources are spent in educational programmes and financial incentives for staff. This approach is part of a wider philosophy of 'more focus on performance and less on competition'.
Population Approach	
Self-assessment	1 – A population risk approach is applied to integrated care services but not yet systematically or to the full population
Justification	At the state and public sector levels there is not a risk stratification approach to the patient population. Instead, there are programmes that are targeted directly at diabetics and oncological patients. Moreover, there is not a systematic approach to population risk stratification in the region. In the stakeholder's organisation, however, there has been a small-scale implementation project related to the stratification of primary care in order to contain costs of delivering care to chronically ill patients; this was targeted at patients with a genetic predisposition to specific conditions, such as diabetes.
Citizen Empowerment	
Self-assessment	2 – Citizen empowerment is recognised as an important part of integrated care provision; effective policies to support citizen empowerment are in place but citizens do not have access to health information and health data
Justification	At national level, citizens can track their medical services and procedures history through a portal hosted by the National Health Fund. However, this portal is not extensively used by citizens. At regional level, there are several

	initiatives directed at promoting the adoption of a healthy lifestyle. Generally, there is not a good framework for data sharing and cooperation in Polish law.
Evaluation Methods	
Self-assessment	1 – Evaluation of integrated care services takes place, but not as a part of a systematic approach
Justification	Integrated care is still in an early stage of development in Poland. Evaluations are only focused on patient satisfaction and not on performance indicators. The vast majority of primary care organisations in Poland and East Mazovia do not have or produce any information about true medical performance.
Breadth of Ambition	
Self-assessment	1 – The citizen or their family may need to act as the integrator of service in an unpredictable way
Justification	Clinical pathways are heavily fragmented at national level, e.g. GPs often find it difficult to refer patients to secondary care providers and the process takes a long time. In the stakeholder's organisation in East Mazovia, however, patients flow through the system in an efficient manner.
Innovation Management	
Self-assessment	2 – Innovations are captured and there are some mechanisms in place to encourage knowledge transfer
Justification	Innovation is focal and only focused in small regions, with different programmes being funded by the EU and the state, but in a fragmented way. In the stakeholder's organisation, there is a platform for organisation of medical innovation, e.g. grants are available for innovative eHealth and telemedicine applications.
Capacity Building	
Self-assessment	2 – Cooperation on capacity building for integrated care is growing across the region
Justification	Grants are made available by the government and the National Health Fund for capacity building purposes, in the context of integrated care. In the stakeholder's opinion, there has been an increase in understanding of the benefits of integrated care over the past years, which has resulted in considerable mobilisation to implement it.

The status of integrated care implementation in the East Mazovia region is generally less advanced than in specific private organisations, e.g. Centrum Medyczno – Diagnostyczne. From a regional (and national) point of view, there are no clear policies specifically aimed at setting guidelines for integrated care implementation, which is considered to hinder its progression in the region. This was reflected in the Maturity Model Assessment, whereby the majority of assessment domains were ranked between 0 (the lowest possible score) and 2.

Moreover, there are other inhibitors to the implementation of integrated care in the East Mazovia region, namely the issue of 'staff rigidity' (i.e. lack of skill base to effectively deliver integrated care), and outdated IT systems that prevent an integrated flow of information (e.g. health records) between providers.

Poland | East Mazovia



Spain

Population size (thousands): 46,448 (State of Health in the EU, Spain, 2017)[91]

Population density: 92.5 inhabitants / km^2 (Eurostat, 2015)[92]

Life expectancy: 83 years (State of Health in the EU, Spain, 2017)

Fertility rate: 1.3 births / woman (State of Health in the EU, Spain, 2017)

Mortality rate: 9.1 deaths / 1,000 people (Central Intelligence Agency, 2017)[93]

Total health expenditure: 9.2% (State of Health in the EU, Spain, 2017)

Health financing: government schemes (65%), compulsory contributory health insurance schemes and compulsory medical saving accounts (4.8%), voluntary health insurance schemes (5.2%), financing schemes of non-profit institutions serving households (0.4%), household out-of-pocket payments (24.7%) (Eurostat, 2015)[94]

Top causes of death: circulatory diseases, malignant neoplasms, and respiratory diseases (State of Health in the EU, Spain, 2017)

The Spanish healthcare system

The Spanish Health System, Sistema Nacional de Salud (SNS), has near-universal coverage (with 99.1% of the population covered), is almost fully funded from taxes, and operates predominantly within the public sector. Provision is free of charge at the point of delivery, with the exception of pharmaceuticals prescribed to people aged under 65, which entail co-payment of 40% of the retail price (European Commission, 2017k). The national Ministry of Health and Social Policy (MSPS) is vested with a limited extent of powers due to the de-centralised nature of the health system. It has authority over pharmaceutical legislation and is the guarantor of the equitable functioning of health services across the country – thus being responsible for coordinating the SNS through the 17 regional health systems (European Commission, 2017k).

The 17 regional health administrations (ACs) are responsible for regional health legislation, health insurance, health services planning, management and provision, and public health; local authorities (i.e. in provinces and municipalities) are responsible for sanitation and collaboration in health services provision as well as in direct management of 'residual' public health and community services. Primary care is entirely public and is run by multidisciplinary teams made up by GPs, paediatricians, nurses, social workers and, occasionally, physiotherapists and dentists (European Commission, 2017k).

Integrated care policies

The *Strategy for Addressing Chronicity in the National Health System* of 2012, highlighted in the Council of the European Union's *Reflection process: Towards modern, responsive and sustainable health system* (Council of the European Union, 2013a) promotes integration of care at the structural and organisational level in Spain (National Health System, Spain, 2012). Nevertheless, integrated care has been adopted in several but not all regions, where healthcare coordination still seems to predominate over integration in the health setting (Jiminez-Martin and Vilaplana Prieto, 2012).

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[91] https://ec.europa.eu/health/sites/health/files/state/docs/chp_es_english.pdf

[92] Population data, Eurostat *http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1*

[93] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[94] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

Catalonia and the Basque Country lead in terms of the number of initiatives and population coverage. The experiences in the two regions have taken different approaches. In Catalonia, a split between purchaser and provider was promoted; organisations known as integrated healthcare organisations (IHO), (organizaciones sanitarias integradas (OSI) in Spanish), have been slowly created to manage the provision of the healthcare continuum. IHOs have been evolving over the years and, despite some common characteristics, it is possible to differentiate the organisations by their basic features such as breadth and depth of service integration along the care continuum, the emphasis on formal instruments or on coordination mechanisms, and the forms of relationship between the entities that make up the IHO. In addition to this evolution of the service model, the Chronicity Prevention and Care Programme set up by the Health Plan for Catalonia 2011–2015 has been used as an opportunity to create a new integrated care model in Catalonia (Contel et al., 2015). In the Basque Country, in addition to the establishment of IHOs, other integrated care initiatives (e.g. projects and programmes) have been developed to improve the care of chronic diseases (Vazquez et al., 2012). In addition to Catalonia and the Basque Country, other numerous experiences of integration of care are emerging in other Spanish regions, such as Galicia, Andalusia and Madrid.

In addition to the Strategy for Addressing Chronicity in the National Health System mentioned above, a total of seven strategies and one policy related to integrated care can be found in Spain, all at the regional level and including the Basque Country, Murcia, Andalusia and Valencia regions. Three strategies were of particular interest in this context given their population-level scope: Population Intervention Plans[95] and the Chronicity Strategy,[96] both in the Basque Country; and the Strategy for Chronic Care in Valencia Region (Barbarella et al., 2015), both focusing on a regional-level integration of health and social care with the purpose of improving the quality of chronic care and tackling multi-morbidity.

Implementation of integrated care in Spain: initiatives in Asturias

- Patients School of Asturias is an initiative developed to promote the self-management of citizens with a chronic disease. It takes as a basis for its implementation the Chronic Care Model, strongly linked with the concept of Patient Schools. The model commenced in February 2017.[97]
- In 2016, the Principality of Asturias was a finalist for the Outstanding ICT Achievement Award – Europe. Information is shared in real time between all hospitals and primary care centres. Secondly, telemedicine and videoconferencing will be used to provide care at home. Thirdly, through networked medicine, population screening programmes will be implemented thus centralising clinical decision making.[98]

[95] A detailed description of this strategy can be found at https://www.nivel.nl/sites/default/files/bestanden/Rapport-CHRODIS.pdf

[96] A detailed description of this strategy can be found at http://cronicidad.blog.euskadi.net

[97] A detailed description of this strategy can be found at https://ec.europa.eu/eip/ageing/commitments-tracker/b3/develop-chronic-disease-self-mangement-programme-cdsmp-chronic-disease_en

[98] A detailed description of this strategy can be found at http://www.investinasturias.es/en/salud-en

Assessment of the maturity of the health system

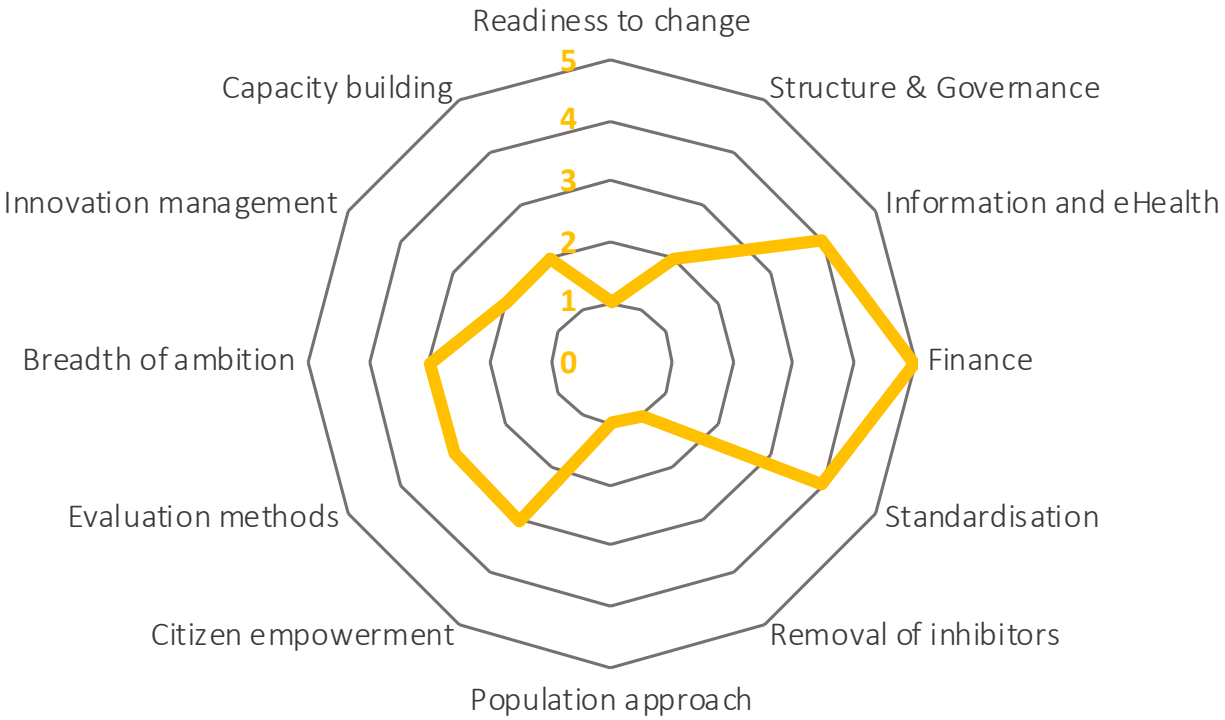
Maturity Model – Spain (Asturias)	
Readiness to Change to enable more Integrated Care	
Self-assessment	1- Compelling need is recognised, but there is no clear vision or strategic plan
Justification	A great need for change is recognised but there is no strategic plan as such, at least not in a document. Also, there is not a very clear shared vision.
Structure & Governance	
Self-assessment	2 – Formation of task forces, alliances and other informal ways of collaborating
Justification	There are multidisciplinary workgroups, especially across collaboration from health (managed at regional level) and social care services (managed at municipal level). There are supporting documents for this at national level, but not at regional level in Asturias. Some elements of level 3.
Information & eHealth Services	
Self-assessment	4 – Mandated or funded use of regional / national eHealth infrastructure across the healthcare system
Justification	Patients and healthcare professionals have access to a unique electronic health record; however, it is not integrated with social services. There is a commission working across health and social care (comisiones socio-sanitarias) in the region of Asturias to further develop ICT in this field. There are no strategic plans at the moment, however; most of the progress and discussions relate to the operational / practical level.
Finance & Funding	
Self-assessment	5 – Secure multi-year budget, accessible to all stakeholders, to enable further service development
Justification	Inclined to rank it as a 5, but not with confidence. Funding streams do not seem to be directly aimed at integrating care, but rather to develop the region (e.g. ICT and standardisation funding streams).
Standardisation & Simplification	
Self-assessment	4 – A unified set of agreed standards to be used for system implementations specified in procurement documents; many shared procurements of new systems; consolidated data centres and shared services widely deployed
Justification	There is a very well-defined set of standards across the health sector, but the social sector has not yet been integrated.
Removal of Inhibitors	
Self-assessment	1 – Awareness of inhibitors but no systematic approach to their management is in place
Justification	Rather than big barriers to integrating care, there are small inhibitors along the way and continuous work to overcome them. On the social care side, the biggest inhibitor is a cultural one – health professionals are not fully aware of, or are not used to considering, the social needs of their patients and what they can do to offer them social support in addition to health support. Another important inhibitor in the social field is the dispersion of services – social care provision is too fragmented and provided in different places (municipalities with different types and level of services). Both of these inhibitors are seen as equally important.
Population Approach	
Self-assessment	1 – A population risk approach is applied to integrated care services but not yet systematically or to the full population
Justification	Population risk stratification is not used in a systematic way.

Citizen Empowerment	
Self-assessment	3 – Citizens are consulted on integrated care services and have access to health information and health data
Justification	This question should be ranked as between 2 and 3. It would be a 3 but there is no systematic approach. Patients have the power to steer several aspects of their care provision and have access to their records
Evaluation Methods	
Self-assessment	3 – Some integrated care initiatives and services are evaluated as part of a systematic approach
Justification	Use several process and outcome indicators but evaluation methods are not used in a completely systematic way.
Breadth of Ambition	
Self-assessment	3 – Integration between care levels (e.g. between primary and secondary care)
Justification	Level 3 represents the current stage of development in the integration of care journey but with the ambition to achieve level 4 in the near future, incorporation of social care services in a more seamless and generalised way. Currently it works for dependent patients, as this area is managed at regional level rather than local level
Innovation Management	
Self-assessment	2 – Innovations are captured and there are some mechanisms in place to encourage knowledge transfer
Justification	Use of discussion groups for information sharing. There are some training courses available, some of them online. Asturias is an EIPonAHA reference site.
Capacity Building	
Self-assessment	2 – Cooperation on capacity building for integrated care is growing across the region
Justification	Initiatives are now emerging on this area. Nowadays we can confidently say that the number of resources for integrating care in the region is increasing.

There are no clear policies specifically aimed at setting guidelines for integrated care implementation, which is considered to hinder its progression in the region. Moreover, there is no political consensus or a shared vision toward implementation of integrated care. This was reflected in the Maturity Model Assessment, particularly in the Readiness to Change and Removal of Inhibitors assessment dimensions, which were rated as 1 (i.e. *Compelling need is recognised, but no clear vision or strategic plan* and *Awareness of inhibitors but no systematic approach to their management is in place,* respectively).

However, even with these constraints in place, there has been considerable progress in implementing integrated care in the Asturias region from a 'bottom-up' perspective, particularly with regard to the integration of health and social care. In this respect, one of the challenges faced in the region is that healthcare is managed at the regional level and social care at the municipal level, although a collaboration framework across the two dimensions is starting to emerge. From a healthcare perspective only, the system is integrated with unique electronic health records and shared pathways, but there are still areas of improvement such as citizen engagement, evaluation, innovation management and capacity building.

Spain | Asturias



Sweden

Population size (thousands): 9,799 (State of Health in the EU, Sweden, 2017)[99]

Population density: 24.1 inhabitants / km^2 (Eurostat, 2015)[100]

Life expectancy: 82.2 years (State of Health in the EU, Sweden, 2017)

Fertility rate: 1.9 births / woman (State of Health in the EU, Sweden, 2017)

Mortality rate: 9.4 deaths / 1,000 people (Central Intelligence Agency, 2017)[101]

Total health expenditure: 11.0% (State of Health in the EU, Sweden, 2017)

Health financing: government schemes and compulsory contributory health insurance schemes (83.66%), voluntary health care payment scheme (1.14%), voluntary health insurance schemes (0.59%), NPISH (i.e.non-profit institutions serving households) financing schemes (0.14%), enterprise financing schemes (0.42%), household out-of-pocket payments (15.19%) (Eurostat, 2015)[102]

Top causes of death: circulatory diseases, malignant neoplasms, and respiratory diseases (State of Health in the EU, Sweden, 2017)

The Swedish healthcare system

Sweden's healthcare system is organised on three levels: national, regional and local. Sweden has 21 county councils at regional level, and the healthcare system is a highly de-centralised system, with each region managing service provision, and establishing taxes locally. The government distributes resources to provide equity in health services provision across the country, enabling universal health coverage. The state is also responsible for regulation and supervision. At the local level, municipalities are responsible for long-term care of the elderly, disabled and psychiatric patients.

The Swedish healthcare system is mainly government-funded, with public expenditure accounting for 84% of the total. For private expenditure, the great majority is out-of-pocket payment by the households, with user charges varying across regions.

The healthcare system in Sweden has very low number of acute care hospital beds (2.3 per 1000 population) and has a very high use of electronic systems both for patient records for diagnostic data and for prescriptions (European Commission, 2017l).

Integrated care policies

Sweden has a high number of integrated care policies and strategies that integrate social and healthcare, coordinate care through extensive use of eHealth systems, and integrate health pathway management (Paulus et al., 2013). Since 2015, grants have focused on care coordination, supporting actions to improve collaboration at the county council level, including, for example, investments in eHealth infrastructures.

Integrated care policies have also focused in the area of specialised care. For example, in 2015, the government allocated USD220 million over four years to build six coordinated

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[99] https://ec.europa.eu/health/sites/health/files/state/docs/chp_sv_english.pdf

[100] Population data, Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00003&plugin=1

[101] https://www.cia.gov/library/publications/the-world-factbook/fields/2066.html

[102] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hf&lang=en

regional cancer centres that would allow the reduction of waiting times and reduce health inequalities for patients with cancer.

Current integrated care policies and strategies in Sweden reflect the leading position that Sweden has in the integrated care field across Europe. For example, in 2016, the government set out a vision of the country as being the world leader in eHealth by 2025.[103]

Implementation of integrated care in Sweden

- *BLMSE – Better life for the sickest elderly people*, which targets severely ill elderly people, aiming to develop a system in which it is easier to call for an ambulance and get to hospital;
- *Samordning för Linnea,* which looks to improve the care of the most ill elderly by creating multi-professional teams with employees from county councils and municipalities;
- *ViSam modellen,* which aims to create continuity and coherence in the care and care chain for the most ill elderly;
- *Äldres Bästa projekt äldrelots*, which aims to improve the care of the elderly by providing support with elderly relatives, based on the needs of the individual;
- *Pioneering integrated organisational models for improving care for elderly people in Angelholm*, which works on the introduction of mobile care teams, electronic medical records and eHealth technologies;
- *Report on the healthcare region's action plans for SVF,* which is a policy comment on the status of the regional attempts to coordinate cancer pathways;
- *Action plan for distance meeting via video,* which is the implementation of joint care pathway planning for both somatic and psychiatric care through videoconference meetings;
- *Coherent close care without unnecessary hospital stays,* which aims to avoid gaps in care;
- *Regulatory documents. A sample of documents*, which aim to coordinate health and care planning;
- *Wägledning om barns behov on national and regional level,* which aims to improve interventions for youth and children in municipalities and regions through systematic imrpvements of the coordination
- *Video- och distansmöte Handlingsplan 2013–2018,* which aims to implement video and distance meetings to enhance borderless communication across organisations, departments, authorities and even with the patients.
- *Samordnad individuell plan, SIP, insatser från både socialtjänst och hälso- och sjukvård,* which aims to train staff on how to use coordinated plans.
- *Lots of learning on IC in Nortalje Sweden,* which provides health services as well as social services to the population of Norrtälje.
- *Nntionell-samordnare-for-utveckling-och-samordning-av-insatser-inom-omradet-psykisk-halsa*, which aims to develop and coordinate interventions within psychiatric healthcare and support ongoing work across all actors;
- *Pilotproject: Cooperation between region and municipality*, which aims to test patients' records on mobile devices;
- *Coordinated care planning – simpler and higher quality,* which tests new technological tools to facilitate the coordination of care planning processes;

[103] http://international.commonwealthfund.org/countries/sweden

- *Nisseprojektet i Malmö*, which aims to set a special ward at hospitals were all districts were allocated;
- *Jönköping County Council (Esther Model),* which aims to deliver high-quality, integrated, population-based health and care;
- *Norrtälje Integrated Organisation,* which is made up of three organisations working to provide shared models of integrated care;
- *Distance spanning healthcare*, which aims to carry out acute assessment and routine visits remotely;
- *Psychosis and schizophrenia care process,* which aims to offer to patients with mental health disorders early intervention and treatments to support them in their rehabilitation;
- *The patient journey through emergency medical care,* which aims to reduce the transportations and provide better accessibility for patients to local hospitals;
- *My plan,* which aims to empower patients in hospital in both the discharge planning process and the planning process at home;
- *Äldreomsorgens värdegrund – fundamental values in elderly care*; the aim is that all employees in the city's elderly care should know and follow the intentions of the fundamental values (dignity, freedom of choice, in control of their care);
- *Shoulder rehabilitation via distance technology,* which creates a remote communication system for patients to speak to their doctors;
- *Rehabilitation at home,* which aims to understand what frail people want from their care and deliver the best care;
- *West Skaraborg community care (through Esther Model),* which is a model based on collaborative microsystems and services primarily provided in the patient's home. The development of the model is based on a common understanding of the target group's needs rather than a more formal one. The model takes as a clear base the patient group's health status and needs. A local team consisting of a doctor (geriatrician) and two specialist nurses caters for patients with complex medical care needs and where care requires collaboration between the municipal home care, primary care and hospital care.

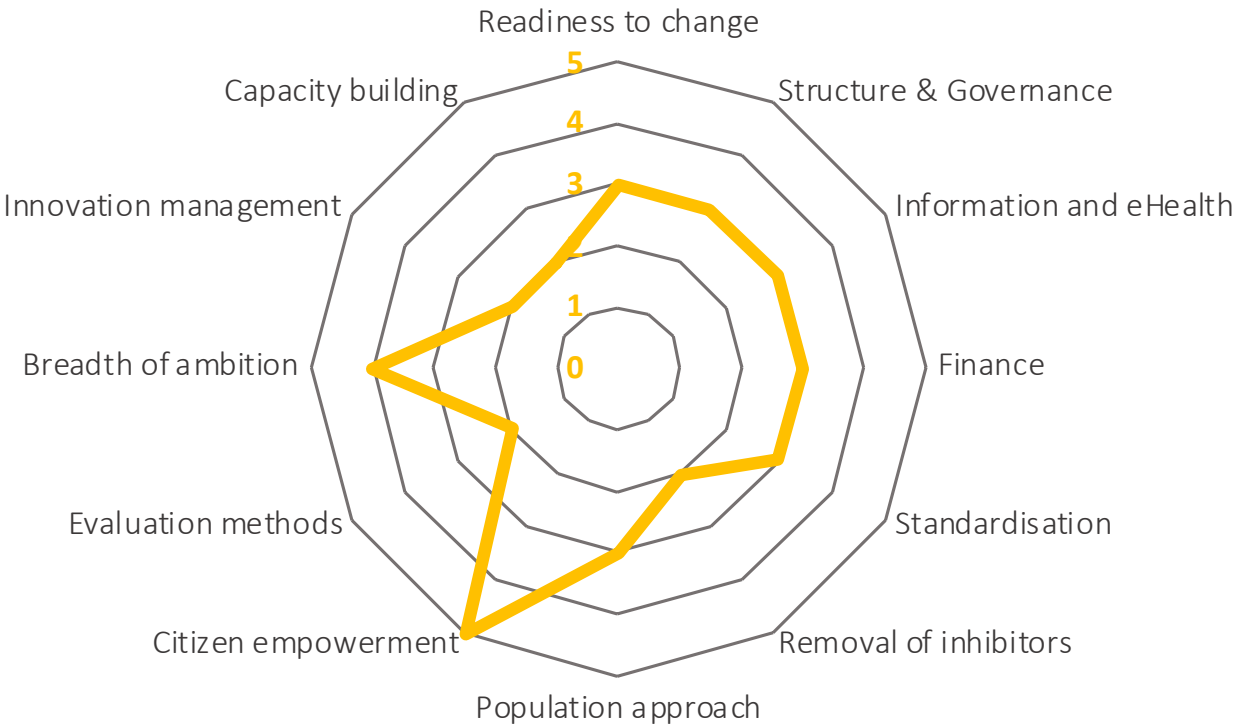
Assessment of the maturity of the health system

Maturity Model - Sweden (Norrbotten)	
Readiness to Change to enable more Integrated Care	
Self-assessment	3 – Vision or plan embedded in policy; leaders and champions emerging
Justification	
Structure & Governance	
Self-assessment	3 – Governance established at a regional or national level
Justification	
Information & eHealth Services	
Self-assessment	3 – Voluntary use of regional/national eHealth services across the healthcare system
Justification	

Finance & Funding	
Self-assessment	3 – Regional/national (or European) funding or PPP for testing and for scaling-up
Justification	
Standardisation & Simplification	
Self-assessment	2 – A recommended set of agreed information standards at local level; a few local attempts at ICT consolidation
Justification	
Removal of Inhibitors	
Self-assessment	1 – Awareness of inhibitors but no systematic approach to their management is in place
Justification	No specific model used for projects or scaling up support can be found to overcome known inhibitors. Different models have been used with different results.
Population Approach	
Self-assessment	2 – Individual risk stratification for the most frequent service users
Justification	Population risk stratification is not used in a systematic way.
Citizen Empowerment	
Self-assessment	5 – Citizens are involved in decision-making processes, and their needs are frequently monitored and reflected in service delivery and policy-making.
Justification	Everyone has access to their own electronic health records, lab-results, open comparisons, quality registers, and specific national registers. Personalised approach strategy and action plan for citizens involved.
Evaluation Methods	
Self-assessment	1 – Evaluation takes place, but not as a part of a systematic approach
Justification	No common/systematic approach. Fragmented evaluations when services are implemented.
Breadth of Ambition	
Self-assessment	5 – Fully integrated health & social care services
Justification	
Innovation Management	
Self-assessment	2 – Innovations are captured and there are some mechanisms in place to encourage knowledge transfer
Justification	The innovation management process is not very formalised. No functions which can work in all parts of the process. Procurement is currently very much removed from the process.
Capacity Building	
Self-assessment	2 – Cooperation on capacity building for integrated care is growing across the region
Justification	

The maturity of the Swedish integrated care healthcare systems is amongst the strongest analysed in terms of breath of ambition and citizens' empowerment (scored, respectively with 4 and 5), and the weakest in terms of innovation management, evaluation methods and removal of inhibitors (all scored with 1). The rationale of these low scores was the acknowledgement of a lack of models and structure to drive innovation, evaluations services and growth of integrated care initiatives.

Sweden | Norbotten



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