Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)

Regional Ministry of Health and Families of Andalusia
Andalusian Health Service

Marketplace of good practices in Primary Care
(1\textsuperscript{st} - 2\textsuperscript{nd} June 2021)
OVERVIEW

• Andalusia main facts
• Andalusian Healthcare system
• Design and implementation of PAPs
• Results (CHRODIS+)
• Success factors
Andalusia: basic data

87.597 Km²
8.464.411 habitants
- 655.555 foreigners
- 32.476.854 tourists (2019)

Life expectancy at birth
- 81,9 (Total)
- 84,6 (♀)
- 79,2 (♂)

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Andalusia: political context

- Political Autonomy since 1981
- Regional Institutions
  - Parliament
  - Government ("Junta de Andalucía")
  - Court of Justice (TSJA)

Regional Parliament  Regional Government  Regional Court of Justice
Andalusia: economic context

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Spain: National Health System

- 100 % Public Funding
- Universal coverage
- Free of charge (Pharmacy co-pay)
- Integrated care
- 2 levels:
  - Primary Care
  - Specialized Care

Spanish Healthcare General Act 1986
National Health System Cohesion and Quality Act 2003
National Public Health Act 2011
RDL 7/2018 Universal access to National Health System

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Andalusian Public Healthcare System: Framework Principles

• Full Autonomy for Health Policy since 1984
• Healthcare Management at regional level
• Same Principles as national law
• Some specific driving principles:
  • Public provision of the services
  • Based on cooperation & coordination
  • Stress on:
    • Equity
    • Guarantee of rights
    • Territorial homogeneity
    • Accessibility
    • Transparency
    • Participation

Andalusian Health Act 1998
Andalusian Public Health Act 2011

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Andalusian Public Healthcare System: Main features

- 1,519 Primary care centers
- 50 Public Hospitals
- 104,198 Healthcare professionals
- 10,729 M € Health Budget 2021
- 3,972 Pharmacies
- 8,507,269 Users

Andalusian Health Service

https://www.sspa.juntadeandalucia.es/servicioandaluzdesalud/

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
IV Andalusian Health Plan

- Health problems analysis
- Available resources
- Health objectives
- Priorities
- Strategies and policies
- Calendar
- Resources needed

https://www.juntadeandalucia.es/organismos/saludyfamilias/areas/planificacion/plan_andaluz_salud.html
Comprehensive Health Plans

- Identification main health problem
- Analysis of the situation and causes
- Definition of recommended interventions
- Development of activities in prevention, health education and promotion; health care delivery organization, training, research, etc
- Evaluation

https://www.sspa.juntadeandalucia.es/servicioandaluzdesalud/el-sas/planes-integrales-y-de-salud

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Corporate information system and eHR

Integrating Available (time and place)

All health information for each citizen: 8.5 M eHR
440 M diagnoses

106,8 M appointments (97 M PHC)

Primary HC:
43 M consultation sheet
3.6 M cons/month

12,3 M Radiology
5,9 M Lab requests
72,8 M Lab results

Hospital care:
3,4 M emergencies
4,5 M outpatient visits
1,7 M episodes

3.900 Pharmacies on-line:
162 M e-prescription/e-disp

https://www.sspa.juntadeandalucia.es/servicioandaluzdesalud/profesionales/sistemas-de-informacion/diraya

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Hospital Care in Andalusia

- Hospital **Network**. Patient **referral** by levels of complexity
- Financing based on capitation + level of complexity + foreign patients
- Professionals are **civil servants** or **salaried**
- % of salaries depends on outcomes (incentives & professional career)
- **Multidisciplinary teams** working by objectives
- Close coordination between hospitals and primary care districts*

* In 12 cases, the Hospital and the Primary Care District are unified as an “Integrated Area”

**Hospitals**
- 5 Level I (>1,000 beds)
- 10 Level II (500-1,000 beds)
- 19 Level III (<500 beds)
- 16 HRH (proximity hosp)

**Total**: 50 Hospitals
Hospital Care in Andalusia: Map

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Primary Healthcare in Andalusia

- Healthcare system **Backbone**
- **Capitation**: 1 GP/1,400 inhabitants
- Team of professionals working in a PC Centre
- Homogeneous **territorial distribution**
- Aggregation of PC Centres in “**Districts**”
- **Supportive teams** at Districts for Public Health purposes: Epidemiologists, Vets, Pharmacists…
- Professionals are **civil servants**
- Focus on **health promotion** and prevention
Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Public healthcare expenditure in PHC in Spain

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)

https://www.mscbs.gob.es/estadEstudios/estadisticas/sisInfSanSNS/tablasEstadisticas/InfAnSNS.htm
Management of complex chronic patients in Andalusia: PAPs in PHC

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)

https://www.juntadeandalucia.es/organismos/saludyfamilias/areas/planificacion/plan-integral/paginas/paier.html
Patients with chronic conditions in Andalusia

Number of chronic diseases by age and gender (2020)

Average nº of chronic diseases per person, age group and gender (2020)

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Personalized care action plans (PAPs): main characteristics

- **Written plans** (within eHR-Diraya)
- **Multidisciplinary teams** (Fam Dr, RN, Internists, case managers, pharma, social w, …)
- **Agreed with pat + family/caregiver**
- **Comprehensive assessment** (target symptoms, functional ability, quality of life, …)
- **Patient preferences** (desired pat outcomes)
- **Recorded and stored** in the corporate information system and eHR (Diraya)
- **Regularly monitored and revised**
Activities for PHC professionals to ensure the success of the practice deployment and implementation:

- Awareness-raising sessions,
- Training sessions on CCPs management and PAPs elaboration.

<table>
<thead>
<tr>
<th>Awareness and training sessions (total number)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness-raising sessions</td>
<td>0</td>
<td>48</td>
<td>0</td>
</tr>
<tr>
<td>Attendees to the awareness-raising sessions</td>
<td>0</td>
<td>154</td>
<td>0</td>
</tr>
<tr>
<td>Training sessions (OPIMEC)</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Healthcare professionals trained (OPIMEC)</td>
<td>2,711</td>
<td>3,107</td>
<td>2,570</td>
</tr>
</tbody>
</table>

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)

[https://www.opimec.org/](https://www.opimec.org/)

[https://www.picuida.es/](https://www.picuida.es/)
Personalized care action plans (PAPs): Overall results

PAPs delivered (per year)

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
  - CCPs followed for 12 month, data routinely collected in the corporate eHR-DIRAYA.
  - Key Indicators:
    - Potentially preventable unplanned hospitalisations
    - Primary healthcare visits
    - Inpatient episodes
    - Outpatient visits
    - Emergency episodes

PACIC+ (patients’ perception)

Quality assessment of drafted PAPs
  - Study design: transversal descriptive study
  - Subjects: random sample of 350 anonymized PAPs
  - Criteria: agreed by expert group (Score: 0-5)
## Main results: Healthcare services utilisation

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2017 (n)</th>
<th>2018 (n)</th>
<th>2019 (n)</th>
<th>2018 Vs 2017 (%)</th>
<th>2019 Vs 2018 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unplanned potentially preventable inpatient episodes</td>
<td>472</td>
<td>647</td>
<td>751</td>
<td>37.1%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Family physicians’ visits at PHC</td>
<td>35,471</td>
<td>39,630</td>
<td>36,049</td>
<td>11.7%</td>
<td>-9.0%</td>
</tr>
<tr>
<td>Family nurses’ visits at PHC</td>
<td>33,331</td>
<td>41,767</td>
<td>40,350</td>
<td>25.3%</td>
<td>-3.4%</td>
</tr>
<tr>
<td>Family physician home-visits</td>
<td>543</td>
<td>903</td>
<td>1,499</td>
<td>66.3%</td>
<td>66.0%</td>
</tr>
<tr>
<td>Family nurses home-visits</td>
<td>8,431</td>
<td>12,176</td>
<td>13,746</td>
<td>44.4%</td>
<td>12.9%</td>
</tr>
<tr>
<td>Emergency episodes at PHC</td>
<td>3,408</td>
<td>3,841</td>
<td>3,716</td>
<td>12.7%</td>
<td>-3.3%</td>
</tr>
<tr>
<td>Emergency episodes at hospitals</td>
<td>2,647</td>
<td>3,032</td>
<td>3,102</td>
<td>14.5%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Outpatient visits</td>
<td>14,635</td>
<td>16,048</td>
<td>15,421</td>
<td>9.7%</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Inpatient episodes</td>
<td>1,121</td>
<td>1,382</td>
<td>1,402</td>
<td>23.3%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

### Economic impact estimation

<table>
<thead>
<tr>
<th></th>
<th>O 2018</th>
<th>O 2019</th>
<th>E 2019</th>
<th>(O-E)/O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>19,897,248,63 €</td>
<td>20,541,162,59 €</td>
<td>24,726,246,52 €</td>
<td>23.51%</td>
</tr>
</tbody>
</table>

O: Observed; E: Estimated

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Main results: Patients’ perspective

Qualitative assessment: PACIC+ questionnaire

<table>
<thead>
<tr>
<th>Subscale</th>
<th>PACIC component</th>
<th>PRE (n=51)</th>
<th>POST (n=42*)</th>
<th>IMPROVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Activation</td>
<td>1-3</td>
<td>2.8</td>
<td>3.4</td>
<td>22.6%</td>
</tr>
<tr>
<td>Delivery System Design / Decision Support</td>
<td>4-6</td>
<td>3.6</td>
<td>3.9</td>
<td>10.7%</td>
</tr>
<tr>
<td>Goal Setting</td>
<td>7-11</td>
<td>2.8</td>
<td>3.4</td>
<td>19.7%</td>
</tr>
<tr>
<td>Problem-solving / Contextual Counseling</td>
<td>12-15</td>
<td>3.1</td>
<td>3.7</td>
<td>19.6%</td>
</tr>
<tr>
<td>Follow-up / Coordination</td>
<td>16-20</td>
<td>2.4</td>
<td>3.1</td>
<td>25.7%</td>
</tr>
<tr>
<td>Items derived from the ‘Patient-centered model of behavioral counseling’</td>
<td>21-26</td>
<td>2.6</td>
<td>3.2</td>
<td>25.4%</td>
</tr>
</tbody>
</table>

Health status change perceived by patients 5.3


Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Main results: Qualitative assessment

Average score 2.36

| PAPs that meet all PAP requirements | 4.6% |
| PAPs that are fully filled but do not meet all PAP requirements | 76.9% |
| PAPs that are not fully filled | 18.5% |

- Scores:
  - 0: PAP No field filled-up (no text to be assessed)
  - 1: PAP Some but not all compulsory fields filled-up
  - 2: PAP All compulsory fields are filled-up
  - 3: PAP, with all compulsory fields filled-up, but one criterium addressed adequately or according to patient’s situation and diseases (a, b or c)
  - 4: PAP, with all compulsory fields filled-up, and two criteria addressed adequately or according to patient’s situation and diseases (a+b, a+c, b+c)
  - 5: PAP, with all compulsory fields filled-up, and all criteria addressed adequately or according to patient’s situation and diseases (a, b y c)

Areas of improvement identified

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
### Barriers

1. Deployment of the methodology at the same time throughout the territory: Andalusia extension is 87.597 km², with 8.5 M inhabitants (average size of an EU MS)

2. Variability in PAP drafting by healthcare professionals (lack of systematization)

3. Unclear IT PAP form, with many compulsory fields to be filled within the corporate eHR “Diraya” to register a PAP without direct explanations

4. Healthcare professionals’ agendas have to include all activities and daily tasks
### Enablers

- Teams of experts developed training materials (on-line training courses and guidelines) to tackle CCPs as well as to perform PAPs
- Availability of standard documents and guidelines and on-line training courses
- Each field to be filled in the IT PAP form can display a help window including an explanation of the needed information
- Healthcare professionals’ agendas were adapted to include time for performing PAPs
New PAP solution within eHR-Diraya

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
New PAP solution within eHR-Diraya

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
New PAP solution within eHR-Diraya

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
New PAP solution within eHR-Diraya

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
New PAP solution within eHR-Diraya

Integrated care for complex chronic patients in Andalusia (Spain): Personalized care action plans (PAPs)
Thank you, Merci, Dzięki, Gracias, Aitäh, Grazie, Takk, Vđ'aka, Евхаристώ, Vielen Dank, Köszönöm.