Digital Transformation in Low and Middle income countries

Importance of Interoperability and latest updates in Digital Health developments in Europe

Nicole Denjoy, COCIR Secretary General
Thursday 10 May 2017
1. Importance of Interoperability

2. Updates in Digital Health developments in Europe
   - Blueprint
   - EIP on AHA
   - DEI
Interoperability matters

CHALLENGES

• The slow deployment of interoperable digital health solutions across European countries remains a barrier for the scaling-up of integrated care.

• Lack of interoperability also presents a major hurdle for advancing the quality and efficiency in European health systems. It prevents data sharing and hinders the ability to maximise the full potential of digital innovation.

• Current trends such as the uptake of connected health and Internet of Things technologies within the health, social and wellness sectors pose further challenges both for open interoperability.

All this means that … “the discussion of interoperability isn’t only relevant to EHR systems, but is part of the larger conversation of how data are shared across contexts. We can’t avoid the old challenge of data siloes simply by creating larger siloes. How connected do systems need to be to be effective and efficient? This is a conversation that the field desperately needs to have”

- Cynthia Grossman, Associate Director, Science of Patient Input- Faster Cures
Joint COCIR- IHE- PCHA
Recommendations on Interoperability

**Users of eHealth Technologies: Citizens, Patients, and Healthcare Professionals:**

1. Act as an agent in the transition to integrated care; contributing to defining the technology requirements supporting changes to workflows and practices to make the best use of new technologies and sharing health and care data.

**Healthcare Providers:**

1. Engage in interoperability initiatives and train their in-house IT teams on relevant international standards.

**Health ICT Vendors:**

1. Embrace international standards, building them into digital health products and solutions.
2. Educate clients and customers on the benefits of interoperability.

**Ministries of Health, Regional Health Authorities and Sickness Funds:**

1. Develop and implement eHealth strategies, guidelines, and action plans and provide guidance on interoperability.
2. Reference international standards, Profiles and guidelines in procurement documents, as relevant, preferred or mandatory.
3. Build an eHealth infrastructure based on international standards, including electronic health record systems.
4. Prioritise ways to connect platforms, rather than creating a single ecosystem platform or trying to connect all stakeholders on a one-to-one basis.
5. Take into account application programming interface (API) standards and Profiles when implementing mobile and web-based interoperability solutions.
6. Evaluate the potential of the emerging API standard ‘HL7 FHIR’ for trial use in mobile and web-based solutions.
7. Adopt recognised Europe-wide standards and Profiles when deploying regional and national digital health solutions. Ideally, this approach should extend to mHealth APIs.
8. Work further to achieve semantically rich standards. Using coding systems (taxonomies, terminologies) is a good start, but these do not formally describe the greater clinical and operational context.
9. Apply a consistent, proven, end-to-end interoperability strategy that spans all aspects of digital health, including mHealth.
10. Apply the following interoperability approach to mHealth-centric use cases:

**I. Interoperability Need and Specification Sprint Approach**

1. Identify use cases
2. Select Profiles and standards
3. Refine data content
4. Write the interoperability specifications

**II. Implementation Sprint Approach**

5. Organise testing
6. Educate end-users on interoperability
4. European Initiatives – Blueprint (1/3)

What is the Blueprint?
1. A stakeholder initiative to help scale up digital transformation of Health and Care
2. Bringing together demand and supply sides under a common vision
3. With commitments to address barriers and mobilise investments
4. Reaching concrete targets by 2018
5. Supported by the European Commission

BLUEPRINT TARGETS 2016-2018
CREATE A DIGITAL SINGLE MARKET FOR ACTIVE & HEALTHY AGEING
INNOVATION

DEPLOYMENT OF INNOVATION

50 + REGIONS
DEPLOYING LARGE-SCALE, SUSTAINABLE, DIGITALLY-ENABLED INNOVATIVE SOLUTIONS FOR ACTIVE AND HEALTHY AGEING

INVESTMENT

REACHING AT LEAST €500 MILLION INVESTMENT IN DIGITAL INNOVATION FOR HEALTH & CARE. €250 MILLION PUBLIC INVESTMENT – MATCHED BY €250 MILLION FROM PRIVATE SOURCES

PEOPLE

REACH ADDITIONAL 4 MILLION PEOPLE IN EUROPE BENEFITING FROM DIGITAL INNOVATION ACTIVE & HEALTHY AGEING.
**COCIR contribution to the Blueprint**

- **Digital Health Roadmap**: It provides an overview of the core health IT functionalities and technologies required to deliver Integrated Care at different stages of the IC journey.

### Common Interoperability Scenarios

<table>
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<tr>
<th>Interoperability</th>
<th>Data Protection</th>
<th>Health Technology Assessment</th>
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</thead>
<tbody>
<tr>
<td>1. Scalability of EHRs, data capture and navigation tools</td>
<td>1. Data sharing for health providers and workflows</td>
<td>1. Big Data: Tame from disease data sources</td>
</tr>
<tr>
<td>2. Non-traditional data capture, wearable devices</td>
<td>2. Standards</td>
<td>2. Deep learning (bottom up)</td>
</tr>
<tr>
<td>3. Natural Language Processing</td>
<td>3. Health record management and patient consent</td>
<td>3. Rule-based decision support (top down)</td>
</tr>
<tr>
<td>5. Visual integration of external data sources</td>
<td>5. Bi-directional communication between team members</td>
<td>5. Big data analytics, including risk stratification tools</td>
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### Common Incentive Strategies

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<th>Policy</th>
<th>Incentives</th>
<th>Skills</th>
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<tr>
<td>1. All stakeholders in the care continuum capture all necessary data</td>
<td>2. Smart applications intuitively support caregivers and patients, taking into account the changing medical, social, and economic conditions, as well as the health management processes in place</td>
<td>3. The acquired experience and insights feed back down to health care experts and health policy makers, enabling them to analyze their outcomes and adopt a M&amp;E approach</td>
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### Common Themes

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<tr>
<td>1. All stakeholders in the care continuum capture all necessary data</td>
<td>1. Semantic interoperability for data and workflows</td>
<td>1. Population health information management and disease outcomes reporting</td>
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<tr>
<td>2. Multidisciplinary teams, including the patient, family, and informal caregivers and processes for collaboration are set-up</td>
<td>2. Standards</td>
<td>2. Health information exchange and sharing platforms</td>
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<td>3. Delivery of integrated care may begin, based on agreed care pathways, across health and care settings, covering first- and second-line care but also involving wellness and social care</td>
<td>3. Health record management and patient consent</td>
<td>3. Clinical decision support tools</td>
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<td>4. Smart applications intuitively support caregivers and patients, taking into account the changing medical, social, and economic conditions, as well as the health management processes in place</td>
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4. European Initiatives – EIP on AHA (2/3)

What is EIP on AHA?

- A stakeholder-driven initiative launched by the European Commission to foster innovation in the field of active and healthy ageing

- Has been conceived for connecting & engaging public and private stakeholders across sectors that compose the innovation value-chain, to accelerate scaling-up of innovation for active and healthy ageing and share best practices

- The EIP pursues a Triple Win for Europe

- EIP on AHA is driven by Action Groups (Commitments & Collaborative Works) and Reference Sites (Regional ecosystems): i.e. coalitions of regions, cities, integrated hospitals or care organisations aimed at providing a comprehensive, innovation-based approach to active and healthy ageing

Source: EIP on AHA

+2 Healthy Life Years by 2020

https://ec.europa.eu/eip/ageing
Digitising European Economy

- Digital and physical technologies can be best brought to bear through coordinated platform activities across Europe and across many sectors.
- Mapping of EU, MS and industry initiatives.
- Need to align national and European initiatives.
- Large-scale federating initiatives to demonstrate the value of digital platforms and to build the necessary partnerships and ecosystems.
- Digital Transformation of Health and Care one of the Focus Areas.
- Large Scale pilots in H2020 WP 2018-20
Thank you!
www.cocir.org
Back-up slides
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1. COCIR structure (linked to digital health activities)

2. COCIR activities and publications
   - 2016 activities and publications
   - 2017 activities and publications (including: Interoperability joint position paper)

3. COCIR partnerships
   - eHealth stakeholder group
   - HTA Industry Pool
   - EU projects (eStandards, Eurocas)
   - Blueprint Champion
   - Integrated Care Alliance
   - Participating in DEI, EIP on AHA (partner)
   - EU Partnerships (HIMSS, ESR, ESTRO, EFOMP)
   - Working at International level with IMDRF, WHO, WB, OECD and B20
1. Structure (linked to eHealth activities)

**Digital Health**
- COCIR Digital Health Committee
- COCIR Data Protection Focus Group
- COCIR Interoperability Focus Group
- COCIR Blueprint/Integrated Care Task Force
- COCIR mHealth Task Force

**EU Regulatory Affairs**
- COCIR EU RA Focus Group
- COCIR Medical Software Task Force
- COCIR Post Market Surveillance Task Force
- COCIR Clinical Evaluation Soft Group
- COCIR UDI/EUDAMED Soft Group
2. COCIR 2016 – activities (1/2)

- **Integrated Care Alliance (June 2016)**
  - Integrated Care Alliance and Call for actions (10) on IC launched in June 2016 in the European Parliament.
  - Partners: European Patients Forum, European Critical Care Foundation, Voka Health Community, Eurocarers, ESTRO, European Union of Private Hospitals and Arsenal IT

- **COCIR 3rd annual eHealth Summit** (December 2016)
  - Embedded into the European Summit on Innovation for Active and Healthy Ageing.
  - High quality summit with approx. 100 participants with good level of participation of multiple key stakeholders: patients, carers, healthcare providers, academia, etc. (30 participants) and EU and MS (13 participants)

- **Involvement in EC mHealth activities**
  - Members of the privacy Code of Conduct drafting team and the mHealth quality assessment guidelines working group
2. COCIR 2016 – Publications (2/2)
2. COCIR 2017 – activities (1/3)

- **COCIR Blueprint Champion**
  - COCIR members have drafted a Digital Health Roadmap to Integrated Care as a contribution to the Blueprint
  - Seminar on Mafeip scheduled in June for COCIR members to assess the tool and discuss how to improve it

- **Participation at the eHealth Week:**
  - Hans Vandevyngaerde, Agfa HealthCare and COCIR Board member to participate as speaker in the session “Scaling up Digital Innovation for Sustained Transformation of Healthcare”
  - Inés Hernando, COCIR eHealth Senior Manager, to co-moderate session on “eHealth and Data Protection”
Digital Health Roadmap: It provides an overview of the core health IT functionalities and technologies required to deliver IC at different stages of the IC journey.

Joint paper COCIR-IHE-PCHA: It provides joint recommendations on eHealth interoperability. The paper also showcases how the IHE/PCHA partnership works in practice and describes the experience of 2 countries (Austria and Switzerland) that have long-term strategies to build national interoperable eHealth infrastructures.

Position paper on GDPR compliance: It focuses on the operational challenges linked to complying with the principles of privacy by design and default. The paper provides recommendations on the implementation of the GDPR for different stakeholders – Target: June 2017.
3. Other partnerships and activities

1. Member of the eHealth stakeholder group

2. Contribution to HTA Industry Pool study

3. Involved in 2 EU projects in the domain of standards and interoperability (eStandards, Eurocas)

4. Blueprint Champion

4. Blueprint Champion

5. Partner of the Integrated Care Alliance

6. Participating in DEI, EIP on AHA (partner)

7. EU Partnerships (HIMSS, ESR, ESTRO, EFOMP)

8. Working at International level with IMDRF, WHO, WB, OECD and B20