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DHAGE Priorities for the Decade of Digital Health

*Digital Health Advisory Group for Europe (DHAGE)
Report from Annual High-Level Meeting*

7 June 2023



MINISTRY OF
SOCIAL AFFAIRS AND HEALTH
Finland

The Digital Health Advisory Group for Europe (DHAGE)

The DHAGE Annual Meeting in June 2023 analysed current developments and priorities in digital health. The meeting provided valuable insights to the role of digital health as a central pillar of the European Commission's Digital Decade policy programmed.

Significant progress has been made by the European Union, the World Health Organisation and several European countries to define actionable strategies to improve health policies fit for the digital age. Building on this momentum, DHAGE took the opportunity to broaden the perspective on digital health transformation. According to its work plan for the next several years, DHAGE seeks to influence policy agendas through a series of events. The plan will outline the next focal points in digital health strategies and policy debates, ensuring a comprehensive approach to addressing the challenges and opportunities that lie ahead.

During the high-level meeting, DHAGE members engaged in in-depth discussions on the new landscape of digital health in Europe. The meeting format included three Round Tables, focusing on people and professionals, governance and interoperability, and innovation and solutions. Members explored critical topics and identified priority areas for action. These discussions were guided by a logical framework inspired by the EU's Digital Compass, ensuring a structured approach to group deliberations.

The outcomes of the high-level meeting, captured in this report, present collaborative actions, policy recommendations, and suggestions for joint strategic initiatives. By sharing members' insights and experiences, the DHAGE aims to drive the digital health agenda forward, ensuring a healthier and more digitally enabled future for Europe.

This report serves as a resource for stakeholders and decision makers, providing a roadmap for implementing the identified priorities and advancing digital health policies across the continent.

The 5th annual Digital Health Advisory Group for Europe (DHAGE) High-Level Meeting was co-hosted by HIMSS and the Finnish Ministry for Social Affairs and Health. DHAGE serves as a visionary and dynamic thought leadership platform for influential decision makers in Europe. It helps countries and international organisations identify synergies and foster collaborations on digital health policies, providing a forum to collectively address complex and challenging issues in the realm of digital health. DHAGE also assists in identifying common ground and forging alliances on critical digital health policies.

This year's meeting brought together more than 15 decision makers from governments of seven European countries and international organisations. Alongside the annual high-level gathering, the designated points of contact from participating ministries and organizations convene quarterly to drive the DHAGE agenda forward. The outcomes of the high-level meeting are captured in a report that emphasizes collaborative actions, policy recommendations and proposals for joint strategic initiatives.



The DHAGE meeting commenced with a series of thought-provoking keynote presentations with valuable perspectives on the digital health landscape.

Päivi Sillanaukee

*Special Envoy for Health and Wellbeing,
Director General, Ministry of Social Affairs and Health*

Reflection on DHAGE Successes

One of the Chairs of the DHAGE Group, from the Finnish Ministry of Social Affairs and Health, began the presentations by providing an opportunity to reflect on the accomplishments that the advisory group has made since its creation in 2019. To date, three reports have been created by the group.

[The first report was created in 2020 and focused on building the common European response to the COVID-19 pandemic](#), [a 2021 report focused on European cooperation for digital inclusion](#), and [2022's focus was trust](#).

Dr. Nuno Costa

Member of the Board of Directors, SPMS

The future in the eyes of the host country

The Shared Services for the Ministry of Health of Portugal shed light on Portugal's vision for the digital health landscape, demonstrating the country has one of the most collaborative and fastest developing ecosystems in Europe.

Clayton Hamilton

Regional Technical Officer, Digital Health Flagship, WHO Europe

Healthcare and Digital Health in 2033

The Group also had the privilege of hearing from the World Health Organization (WHO) in a presentation that offered a glimpse at predictions made in 2015, how the trajectory of digital health was deflected presents a different situation post-pandemic, and a look at the coming 10 years with predictions around the integration of health and social care, more adaptive regulatory frameworks, global digital trust framework for data exchange, and social contracts for data use and reuse.

Maria Hassel

Senior Advisor and International Coordinator, Swedish eHealth Agency

Juan Fernando Muñoz Montalvo

Secretary General Digital Health, Information and Innovation, National Health System, Ministry of Health of Spain

The Future in the Eyes of the Presidencies

Lastly, a combined presentation provided insights from the recent Presidencies – Sweden and Spain. The Swedish eHealth Agency provided an outlook on the political priorities addressed as well as the carried negotiations, especially on EHDS. Spain resumed envisioning the path forward, continuing the work done by Sweden and focusing on interoperability, data exchange for primary and secondary use and digital services for a more equitable and accessible public health system.

The Round Table Discussions

The DHAGE meeting featured three dynamic Round Table discussions:

01 Round Table: People and Professionals

02 Round Table: Governance and Interoperability

03 Round Table: Innovation and Solutions

These topics of the high-level workshop were selected based on a voting process in the preparatory meetings of the designated DHAGE points of contact.

The overarching topic “People and Professionals” was selected after listing and discussing essential aspects such as empowering citizens through MyData, enhancing digital health literacy among the workforce, providing digital skills training for medical professionals and healthcare workers, addressing the mental health of the healthcare workforce, examining bioethics considerations, and embracing the concept of One Health.

The second overarching topic, “Governance and Interoperability,” was selected after focusing on key areas such as establishing governance frameworks for the European Health Data Space (EHDS) to ensure responsible data sharing, incorporating digitally enabled solutions into policies as part of the Recovery and Resilience Facility, discussing an international pandemic treaty, exploring business models that capture the benefits of digital health, streamlining procurement processes for interoperable systems, harmonizing evaluation criteria for digital medical solutions, and addressing the ethical implications of artificial intelligence (AI) in healthcare.

And the last topic “Innovation and Solutions,” bundles topics such as fostering innovation to advance digital health, seizing the new momentum created by emerging technologies, exploring the integration of health and social data, examining the cross-border utilisation of digital care within the EHDS framework, exploring new financing models for sustainable digital health initiatives, and considering the return on investment (ROI) for digital health endeavors.

These three topics served as the foundation for the discussions, allowing participants to collectively brainstorm, define priorities and choose the topics with the highest importance to address the challenges and opportunities that lie ahead. The Round Tables provided a platform for in-depth exploration and dialogue surrounding challenges and opportunities within the digital health landscape. Throughout the discussions, the groups’ primary objectives were to identify DHAGE priorities for 2023-2025, interconnections between key priorities across different Round Tables, and to detail the definitions of priority topics and areas.

01 Round Table: People and Professionals

- **Chair:** Abigail Norville
Deputy Secretary General, Ministry of Health, Welfare and Sports, The Netherlands (NL)
- **Facilitator:** Jukka Lahesmaa
Consulting Officer, Ministry of Social Affairs and Health of Finland, Finland (FI)

In the People and Professionals Round Table, the aim was to delve into essential aspects that empower citizens, enhance digital health literacy among workforce, and address critical issues faced by healthcare professionals. The group explored topics such as empowering citizens through MyData, providing digital skills training for medical professionals and healthcare workers, and addressing the mental health of the healthcare workforce. Additionally, it examined bioethics considerations and embraced the concept of One Health, recognizing the interconnectedness of human and animal health.

During the Round Table discussion, several challenges and opportunities in digital health education and engagement were highlighted. One of the main challenges identified is the need to improve digital education and communication among healthcare professionals. Retaining and recruiting professionals, as well as providing them with appropriate training, are ongoing struggles across Europe. It was noted that there is currently no standardised European model for governance training, but in England the Royal Colleges play a significant role in training programs, potentially filling the education gap.

The issue of resources and financial performance also emerged as key considerations. To engage professionals in discussions around digital health,

a value proposition and a digital health curriculum were proposed as part of the workforce strategy. It was emphasized that conferences and programs directed specifically at healthcare professionals, such as doctors and nurses, are currently lacking.

Another crucial aspect highlighted during the discussion was the importance of putting the patient at the center of digital health initiatives. There is still a lack of a comprehensive data management governance scheme. Participants emphasized the need to develop digital transformation policies that prioritize people and center Health IT Systems as a one-stop shop for professionals to utilise. While some advancements in digital health have been driven by the demands of events like the COVID-19 pandemic, overall prioritisation has been insufficient. To address this, it was suggested that articulating and demonstrating the benefits of digital health not only for professionals themselves, but also for patients, lab and pharmacy colleagues, would lead to better adoption.

Both healthcare and ICT professionals must understand the potential of digital transformation in health. This means how to reengineer the processes utilising new technologies and what effectiveness this will bring. Emerging technologies, like AI and quantum computing, will challenge us in this respect during the next decade. The professionals also have to have change management skills to implement the transformation and realise the benefits.

The literacy and trust among all citizens were identified as crucial factors. It was acknowledged that new digital health services and mobile health

applications are often implemented without sufficient evidence. In contrast, the pharma industry follows evidence-based practices with an emphasis on safety and trust.

It was highlighted that the finance industry has a single international governance standard, whereas the healthcare industry lacks such a unified approach. The increasing number of devices in healthcare settings presents workflow challenges. Standardising user interfaces can help familiarize professionals with the devices and build trust in their use.

In conclusion, the Round Table discussion generated several recommendations. The participants expressed the need for a list of organizations that facilitate engagement between IT and clinical professionals. It was also suggested to map out available education resources across European countries to facilitate access to digital health education.

The insights and conclusions from the Round Table discussion on People and Professionals focus on empowering citizens, enhancing professional engagement, and establishing robust governance frameworks.

KEY PRIORITIES

1. Involving health professionals in digital health development.

A primary concern raised during the discussion was how to effectively involve healthcare professionals in digital health initiatives. It was recognized that professionals need to be engaged in the discussion of digital health while fulfilling their primary role of delivering care. To achieve this, a value proposition and a digital health curriculum were proposed as part of the workforce strategy. Creating an environment that showcases the benefits of digital health for professionals and the wider healthcare ecosystem is essential for successful adoption.

2. Putting people at the center: Co-creation, benefits and trust.

Participants stressed the importance of placing people and patients at the center of digital health initiatives. It was acknowledged that co-creation with patients and involving them in decision-

making processes is crucial, although this remains an ongoing challenge. To address this, a value proposition that clearly articulates the benefits of digital health needs to be developed. Building trust among patients is a vital aspect of successful implementation.

3. Creating an EU level training programme on digital health.

The need for a well-developed training programme at the European Union level in the field of digital health was highlighted. Currently, there is a patchwork of governance training and no common European model, underlining disparities across countries. Developing common training programs for various professional groups, such as doctors, nurses and policy makers, would increase digital health competencies in healthcare. This would help in bridging the existing gaps and ensure a more unified approach to digital health across Europe.

02 Round Table: Interoperability and Governance

- **Chair:** Päivi Sillanaukee
Special Envoy for Health and Wellbeing, Director General, Ministry of Social Affairs and Health, Finland (FI)
- **Facilitator:** Herko Coomans
International Digital Health Coordinator, Ministry of Health, Welfare and Sports, The Netherlands (NL)

The Governance and Interoperability Round Table focused on establishing effective governance frameworks for the European Health Data Space (EHDS), ensuring responsible data sharing practices. The participants considered the incorporation of digitally enabled solutions into policies, aligning with the EU's Reform and Renewal agenda. Additionally, the group discussed the potential of an international pandemic treaty and explored business models that capture the benefits of digital health.

In Round Table 2, the participants engaged in a discussion on various topics related to health data, technology and governance. The conversation revolved around key themes such as EHDS governance frameworks, the inclusion of digital solutions in policies, the International Pandemic Treaty and contact tracing legislation. Furthermore health technology assessment, governance, and regulatory frameworks for AI in healthcare, capacity building, and the balance between regulation, risks, and benefits in the digital health space were also considered. Addressing the ethical implications of AI in healthcare was another crucial aspect of this Round Table.

The participants highlighted the need for a legal interoperability framework and authority to govern health data effectively. They emphasized the

importance of stability and adaptability in the framework, ensuring compliance with standards while accommodating evolving requirements. The term “person-centric approaches” was identified as a fundamental principle for optimising the use of health data for the benefit of individuals.



The discussion also touched upon the challenges associated with accessing and integrating data from different systems, including topics like data silos and data lakes.

Three major challenges were identified in interoperability and governance: inadequate language and definitions, lack of interoperability between legislative tools, and outdated legislative processes for emerging technologies. To address these challenges, the participants suggested developing new terms and flexible approaches, exploring innovative methods for lawmaking, and increasing policymakers' awareness.

The importance of keeping the focus on individuals and involving them in decision-making processes was highlighted. The European Commission's role in harmonizing terms and requirements was acknowledged, but there was also a feeling of being excluded from EU level negotiations.

In summary, the discussion in Round Table 2 emphasized the need for a legal interoperability framework, addressed challenges related to data integration, and stressed the importance

of involving stakeholders in decision-making processes. The participants outlined key priorities, including developing a common vocabulary language and vocabulary for interoperability, exploring new approaches to legislation, and supporting policymakers in understanding digital health transformation. The overall aim will be to foster adaptable regulations, collaboration among stakeholders, and a comprehensive understanding of the evolving landscape of digital health and interoperability.

KEY PRIORITIES

1. Establishing a common language and defining terms for interoperability.

Participants recognised the absence of a suitable language to address interoperability challenges. New ways of speaking common language and making definitions for interoperability is needed. The concept of protecting the individual's health data is complex due to its vastness, overlap and lack of clear definitions. The existing environment lacks regulation, necessitating an assessment of how terms are formulated and the exploration of innovative approaches to defining them.

2. Promoting innovative co-creation and testing of interoperable legislation.

The current legislation surrounding interoperability is not itself interoperable. Creative ways to co-create and test interoperable legislation would be welcome. Various acts and regulations exist in a decentralised manner. Participants stressed the need to find new ways of lawmaking that promote interoperability. This includes sandboxing legislation to ensure it is fit for purpose and co-creating legislation in collaboration with industry, governments and citizens.

3. Enhancing policymakers' understanding of digital health transformation.

It was noted that traditional legislation processes are ill-suited to address the constantly evolving digital health transformation landscape. This approach is insufficient, and there is a need to equip policymakers to comprehend the changing circumstances, the effects of digitalization and how to enable the digital transformation. This support should involve collaboration with industry, academia, and other relevant stakeholders.

03 Round Table: Innovation and Solutions

- **Chair:** David Lowe
*Clinical Director for Health Innovation,
Scottish Health and Industry Partnership (SHIP),
the United Kingdom (UK)*
- **Facilitator:** Louisa Stuwe
*Project Director, Ministerial Digital Health Delegation,
Ministry of Health and Prevention, France (FR)*

The Innovations and Solutions Round Table focused on advancing digital health through innovation and use of emerging technologies. The discussions covered several important aspects, including the integration of health and social data, the role of AI in healthcare, cross-border use of digital care within the EHDS framework, and the exploration of new, sustainable financing models for digital health initiatives.

The need for an evidence-based digital health policy was emphasised, along with the importance of questioning decisions regarding digital health acquisition. Participants noted that while some governance frameworks exist at the national/regional levels, there is a lack of a unified common standard. The enormous quantity of data in healthcare makes this standardization process particularly challenging.

Standards for data, and technologies across Europe are essential for a properly functioning internal market in Europe. The Digital Single Market can serve as a platform to promote innovation and its adoption, facilitated by all European countries adhering to agreed standards and accompanying funding programmes. The most topical project is the legislative work on the EHDS. Its adoption will be followed by a massive implementation period. This can lead to sovereign and capable infrastructure solutions and trusted research environments in Europe.

The use of AI is often misunderstood. AI is already used in many applications and the use can be expanded through collaboration and engagement with various countries and stakeholders from the public and research sectors. The key new areas of AI in health include prevention, automation of care processes and clinical support. EU projects provide concrete examples, and the emerging European legislation will provide the appropriate regulatory framework. This will help determine the supportive and structuring tools that can be employed to maximise the potential of AI for the European community.

The use of health and social data is dependent on the health and social systems, which are often separate. However, addressing many health problems rely on working jointly on health and social factors. Social determinants of health are crucial for evidence-based prevention. This requires proper information systems. Standards and information systems are less developed for social data, which should be a part of a modern information system. Exploring the application of terminologies and standards developed for health data to social data is an important consideration. The example of Findata, which hosts both health and social data, was discussed.

To foster innovation in digital health, it is crucial for member states to establish supportive national frameworks that encompass ethics and security standards.

KEY PRIORITIES

1. Enabling policy environment for innovation and health information systems.

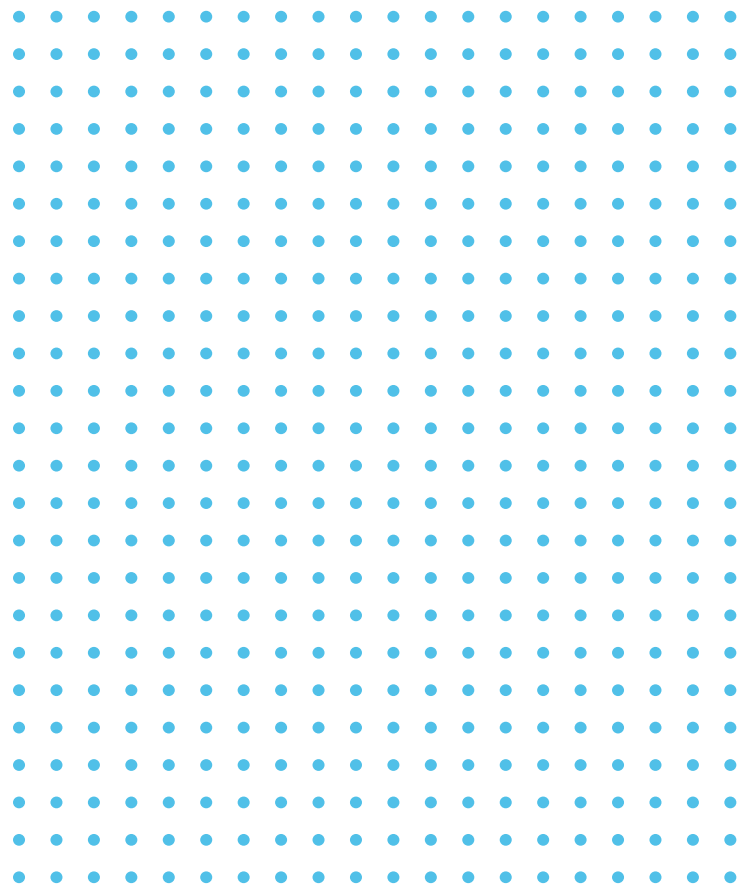
Creating an enabling policy environment is crucial for fostering innovation in digital health. It involves finding and enabling the necessary structural support for innovation initiatives and understanding the need for substantial investment in information systems. Prioritising the adoption of innovative solutions will drive progress in this area. It is important that procurement processes can facilitate innovation adoption. Guidance on how and where to start is needed. Establishing data standards is essential to ensure interoperability and seamless exchange of health information.

2. Defining and positioning AI in Europe's healthcare.

Defining and positioning AI within the European context involves understanding how the wide range of different AI solutions can address specific challenges and how they provide opportunities for healthcare systems, from administrative processes to clinical decision support. Access to AI tools and platforms need to be ensured in the European internal market. By recognizing the solutions and problems that AI can contribute to, policymakers can develop effective regulatory frameworks, supportive tools, and strategic approaches to maximize the potential of AI in healthcare.

3. Use of integrated health and social data.

The integration of health and social services offers significant potential for prevention, improving health outcomes and addressing determinants of health. In complex health problems, health and social aspects are often intertwined. Integrated health and social data and information systems should ensure a flow of vital information in care and for research. However, it is essential to approach the use of integrated data with an ethical mindset, proper safeguards and robust governance frameworks. Priority should be given to establishing guidelines and practices that ensure the responsible and secure use of integrated data, protecting individuals' privacy and rights.



Key Conclusions and Calls to Action

By engaging in these discussions, the participants shared knowledge, and facilitated understanding of the key issues and potential solutions in digital health. The outcomes of these Round Table discussions will help to set the DHAGE agenda and guide its efforts to shape policies towards a digitally enabled and healthier future for Europe.

There are clear interconnections and commonalities between the three overarching themes and the resulting priorities. The three topics and lists of priorities cannot be seen as standalone actions but have positive consequences on each other.

For instance, people, professionals and policy makers all need to understand and use a common language. This language should be used by all the governance bodies to break any silos. Education was the relevant action to highlight, not only for citizens and healthcare professionals, but also for

legislators to understand the inherent aspects of the digital health field.

Co-creation and new regulatory approaches were common aspects across the three topics. People should be able to co-create with other stakeholders, working collaboratively with actors within the healthcare ecosystem. This is reflected in how new regulatory frameworks are necessary to transform digital health, building trust, interoperability and enabling policy environments for innovation.

The third commonality discussed in all three Round Tables is the use of AI in health. This is due to the rapid advances and new uses of AI in healthcare. The use of AI can be very wide, ranging from simple administrative supports to complex clinical devices. This underlines the need for regulation that enables innovation but protects people from negative impact.

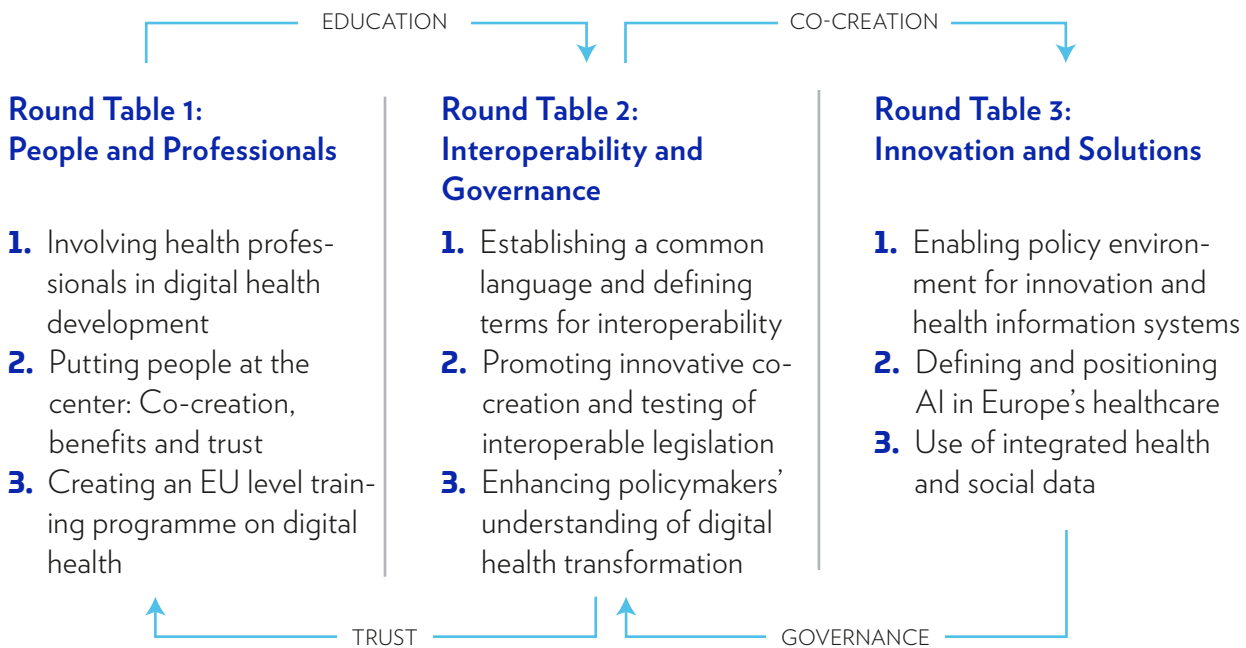


The insights generated from the **Round Table 1** discussion on People and Professionals, along with the identified priorities, will shape the future strategies and policies in digital health. By involving health professionals, putting people at the center, and establishing an EU level training program, the aim is to foster greater engagement, co-creation and trust, ultimately leading to improved healthcare outcomes.

The **Round Table 2**, titled „Interoperability and Governance,“ discussed various topics related to health data, technology and governance. The priorities suggested reflect the need for innovative approaches to address the challenges of interoperability, governance and digital health transformation. By focusing on establishing a

common language, co-creating legislation, and providing support to policymakers, stakeholders can work towards achieving effective interoperability and ensuring that legislation keeps pace with technological advancements.

In summary, the discussions in **Round Table 3** highlighted the need for an enabling policy environment for digital health that is at the forefront of health innovation, the definition and positioning of AI in Europe, and the responsible use of integrated health and social data. These priorities will drive innovation and shape the future of digital health, ensuring ethical use, interoperability, and the overall advancement of healthcare systems.



The Group will further discuss these priority topics in the next DHAGE meetings and define more detailed policies and actions. By doing so the aim at DHAGE group is to ensure that these key enabling factors are in focus of European digital health developments.

Participating Offices in the 2023 Workshop

- Ministry of Social Affairs and Health, Finland
- Ministry of Health and Prevention, France
- Ministry of Health, Welfare and Sport, Netherlands
- Ministry of Health, Greece
- Shared Services Ministry of Health – SPMS, Portugal
- Health Cluster Portugal, Portugal
- Swedish eHealth Agency, Sweden
- The Scottish Government, Scotland
- Digital Health and Care Wales, Wales
- OECD
- WHO Europe
- HIMSS

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