

EHMA 2022 CONFERENCE REPORT



EHMA 2022

**FROM PEOPLE TO SYSTEMS:
LEADERSHIP FOR A
SUSTAINABLE FUTURE**

15-17 June 2022
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Disclaimer

This report was compiled thanks to the EHMA 2022 Rapporteurs who attended and reported on the 34 sessions presented in person at the EHMA 2022 Annual Conference.

Despite EHMA's and the Rapporteurs' best effort to ensure accurate reporting, errors may occur. For any corrections, clarifications, or additional information, please contact Evelyn Donohoe, Policy Officer, at evelyn.donohoe@ehma.org

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Lessons learnt from EHMA 2022

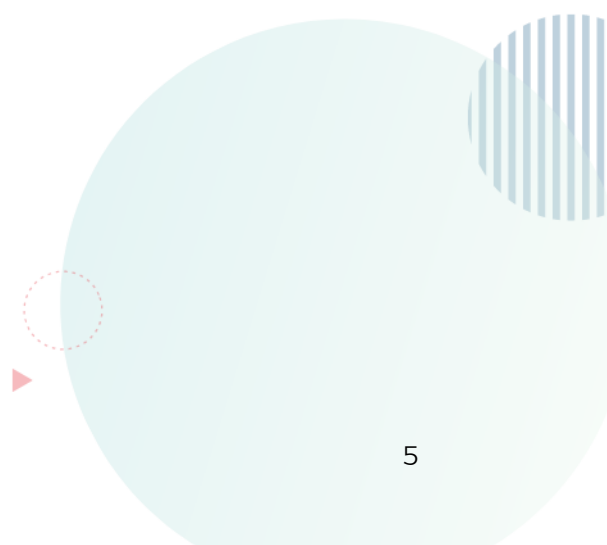
- The COVID-19 pandemic has rapidly triggered policy changes and highlighted new priorities in the healthcare agenda, as well as exposing numerous pre-existing gaps in healthcare systems across Europe. **Stakeholders in the healthcare ecosystem should now implement lessons learnt to ensure preparedness for future crises.**
- To ensure sustainability and resilience, health systems need to adapt and evolve to the changing needs of the population. In the European context, **future readiness should be built on a strategy of cooperation while allowing for diversity and context-specific needs on national levels.**
- **Digitalisation is a system competence and must be used to make healthcare systems more sustainable.** Digitalisation can help, amongst others, to improve healthcare access in remote areas with limited resources, increase the speed and precision of diagnosis, alleviate the administrative burden, and support the delivery of person-centred healthcare. Future innovations must continue to recognise and consider security, privacy and ethics concerns.
- **Working practices must allow for shared decision-making with patients and their families and encourage empowerment.** Person-centredness is about transforming the perceived role of the patient from a passive recipient to recognising them as an individual with knowledge and decision-making power about their own health.
- Having the goal of carbon neutrality in mind, **healthcare and hospital managers must learn and adopt best practices to establish the sustainability of processes** such as procurement and waste management, that protect and preserve the environment and human health, and are prepared for an upcoming climate crisis.
- **Human resource planning must think long-term and prioritise workforce retention by considering their physical and mental health needs,** bearing in mind the diversity in the availability of resources. Task sharing and task shifting between healthcare professionals, patients and the digital ecosystem can support the health workforce to be more efficient and sustainable.

- **Countries need effective governance and leadership to navigate future crises and to improve population-wide health outcomes.** For effective governance, when authorities make decisions that affect populations, they must consider the diversity of population groups and involve the communities and their leaders.
- Decision-making in health and social policy should be based on evidence, implementation frameworks and an assessment of needs. To generate useful data, **common action is required across the Member States to share and translate knowledge and best practices.**
- Although the competency of organising healthcare delivery remains with nation states, **numerous European tools, funds and partnership opportunities can be harnessed to improve national health systems.**
- With the planning of health and social care, **engaging communities early in the process can improve cooperation, build trust, identify barriers and co-produce solutions,** leading to gains in health service delivery.
- The communicable and non-communicable disease burden in Europe can be alleviated with prevention and early detection. **Health managers and policymakers should encourage and ensure equitable access to screening and prevention as well as support educational initiatives that improve citizens' health literacy.**
- In health and social care institutions, **common goals and interdependence rather than competitiveness can foster steady and confident teams and individuals delivering care,** which have proven to improve patient safety and patients' perception of quality of care.

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The EHMA 2022 Annual Conference

EHMA 2022 was the 27th Annual Conference of the European Health Management Association (EHMA), organised for the first time in Brussels, Belgium in collaboration with the **Leuven Institute for Healthcare Policy – KU Leuven**. It brought together key healthcare stakeholders providing the latest evidence to guide the much-needed transformation of health systems. It supported managers and health systems to excel at a time where the complexity of the challenge ahead is immense.

The Conference *'From people to systems: leadership for a sustainable future'* explored challenges and solutions to creating sustainable health systems and ways health managers can lead towards them.

One of EHMA's main areas of work has been maintaining a dialogue between policymakers, health managers and professionals, thereby facilitating policy refinement and change. The EHMA 2022 Annual Conference was an occasion for health managers and professionals to have their voices heard, to connect with decision-makers, and inform policymaking at the European level.

Every year, the EHMA Annual Conference attracts research from leading universities, creating space to exchange knowledge on excellent delivery of healthcare and showcase evidence-based practices at the country, systems and organisational level. The conference is abstract-driven and features research by leading experts on the most contemporary topics on health management.

The European Health Management Association

The European Health Management Association (EHMA) strives for excellent health management for a healthy Europe by supporting the spread of knowledge on effective health management practices. Active since 1982, EHMA exists so that Europe's citizens and communities can benefit from quality, safe, value-based care and health systems.

Our focus is on enhancing the capacity and capabilities of health management to deliver high-quality healthcare and support the successful implementation of health policy. Our commitment is on supporting the provision of data and research findings for evidence-based decision-making and monitoring health policies and practices.

EHMA is the only membership organisation in Europe to bring together the full health management ecosystem, including health and hospital managers, healthcare professionals, researchers, academia, policy and decision-makers. We are a recognised and respected amplifier of best practices in the evolution of health management, and we provide an environment where evidence, challenge and experience are valued and complex debates on current topics can take place.

Organisations and individuals working in health management and interested in joining EHMA as Members are invited to visit www.ehma.org or contact the EHMA Secretariat at governance@ehma.org.



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**SHAPING
SUSTAINABLE
SYSTEMS**

#EHMA2022

Plenary session 'Implementing the lessons learnt from COVID-19'

Keynote: **Dr Matthias Wismar**, Programme Manager, European Observatory on Health Systems and Policies, Belgium

Speakers: **Dr Eszter Kovacs**, Assistant Professor, Health Workforce Planning Knowledge Centre, Semmelweis University Health Services Management Training Centre, Hungary

Ms Laura Marchetti, Policy Manager, Mental Health Europe, Belgium

Prof Dr Dirk Ramaekers, Head of the health crisis management team, Belgian Ministry of Health; Board Member, HERA; Head, Task Force COVID-19 Vaccination, Belgium

Mr Luca Rossi, Head of Unit SG.RECOVER.B3 – 'Social Affairs, Education, Health', Recovery and Resilience Task Force, European Commission, Belgium

Facilitator: **Prof Dr Kris Vanhaecht**, Associate Professor in Quality in Healthcare, Leuven Institute for Healthcare Policy, KU Leuven, Belgium

Summary

Over the last years, national health systems and pan-European health authorities have worked tirelessly to progress toward managing the pandemic. They have created recovery plans and increasingly worked to strengthen the resilience of their health systems and the sustainability of their resources in an ever-changing context. Many lessons have been identified as a result of facing the pandemic and will be essential in the implementation of changes for the future. This plenary session addressed the key lessons learnt from COVID-19 across European health systems.

Dr Matthias Wismar started his keynote speech by expressing that the health system deficiencies laid out by the pandemic had already been obvious for many years. COVID-19 opened a window of opportunity and created an urgency to act and push for the right implementation. In summary of the key lessons learnt, he stressed that governance should take evidence into account, implement frameworks and assess needs. Governance has been the single most important component to mobilise health systems against the pandemic.

Furthermore, new payment systems and patient pathways are needed. Investment in health systems is key to building resistance, but capacities and resources vary between countries. To strengthen the health workforce now – **Dr Wismar** stated – we need to scale up existing capacity and re-deploy, reskill and repurpose and support and protect the physical and mental health of health workers. Creating standards and sharing knowledge between countries as well as investing in digital health infrastructure is critical to effectively managing backlogs. **Dr Wismar** concluded that we could learn approaches from the quick responses to COVID-19 and turn them into long-term strategies to effectively build resilience.

Mr Luca Rossi mentioned that addressing issues in the health care sector and digital transformation was the priority for the European Union following the COVID-19 crisis. He commented on the need to create a good mix between investment, reforms, country-specific recommendations, and better communications among Member States.

Dr Dirk Ramaekers highlighted that the pandemic is still ongoing; learning, sharing knowledge, and best practice translation and implementation need to be continued. He remarked that teamwork is what got us through the pandemic and is what should drive us in addressing future challenges.

Dr Eszter Kovacs agreed that the pandemic facilitated the implementation of new practices and strategies and that the focus should now be on sustaining these strategies in the long term. Health workforce planning should be a common goal and needs bottom-up strategies to inform policymaking. She outlined that managers should sustain long-term mental health and well-being strategies.

Ms Laura Marchetti stated that there has been an increasing incidence of mental health issues in the health workforce in the past two years, including anxiety and stress. Agreeing that long-term strategies focusing on the mental and physical health of the workforce are needed, she added that COVID-19 responses lacked the development of and funding for prevention strategies.

Towards the end of the discussion, all speakers agreed that Europe's future response should be built around a common strategy but allow for diversity and context-specific guidelines in carrying out strategies on national levels to combat the pandemic and its consequences.

Take-Home Messages

- Effective governance should be based on evidence, implementation frameworks and an assessment of needs to regain the trust of citizens.
- Investment in health systems is key to building resistance. It remains important to sustain the lessons learnt in long-term health systems management.
- The first wave of COVID-19 hit unprepared, it remains important to continue developing future readiness by learning key lessons and creating resilience in health systems, governance structures and political will.
- Sharing and translating knowledge and best practices requires common action across Member States. Country contexts and responses differ from each other. A joint commitment action framework is needed to guide the systems through future crises.
- The pandemic impacted the mental health of the population and at the same time shifted mental health to the top of the political agenda. It created more openness to address mental health issues, to ensure funding and policy commitment toward mental health services.
- There is no common management approach that effectively guides health systems through a pandemic. We must be adaptive and flexible and therefore need adaptive leaders to provide care based on demands and person-centredness.

Plenary session ‘Anticipating future trends in health systems’

Keynote: **Dr David Somekh**, Director, European Health Futures Forum (EHFF), United Kingdom

Speakers: **Dr Dimitra Panteli**, Programme Manager, European Observatory on Health Systems and Policies, Belgium

Dr Miklos Szocska, Director, Health Services Management Training Centre, Semmelweis University, Hungary

Facilitator: **Prof Dr Walter Sermeus**, Full Professor, Leuven Institute for Healthcare Policy; Programme Director, Master of Healthcare Management and Policy, KU Leuven, Belgium

Summary

To ensure their sustainability and resilience, health systems must anticipate future trends and challenges, as well as plans to deal with them. Although changes in healthcare tend to be slow-moving and incremental, disruptive models, technology, and processes are ever-present and require swift adaptations at the European, national, and organisational levels.

Keynote speaker **Dr David Somekh** discussed the need to resist remaining comfortable in the current healthcare system. Healthcare systems need to evolve and be adaptive to the changing needs of the population. **Dr Somekh** noted that we can no longer afford the current healthcare systems, especially given the turbulence caused by the COVID-19 pandemic.

Dr Somekh highlighted current trends that challenge and threaten the state of health by referring to the 2012 presentation of Dr Hans Kluge which predicted the state of health in 2050. According to Dr Kluge, threats and challenges of the future relate to the ageing population, shortage and productivity of the European health workforce, climate change, urbanisation and migrations, and economic inequalities.

Dr Somekh mentioned that all the trends we have seen ten years ago will continue in the next ten years. The question is, what can we do about it? **Dr Somekh** continued that healthcare systems must be holistic and able to consider the needs for the complete well-being of humans in a socio-economic framework.

Specifically, he presented the need to: 1) utilise digital innovations as an enabler, 2) promote health literacy as an effective method of prevention and promotion of wellbeing and 3) recognise the shift towards decentralisation of health towards communities.

Health systems should seek to find the balance toward centralised governance while also recognising that local health systems can cater to the needs of their community. Addressing that systems thinking is not a new concept, **Dr Somekh** proposed that for future-readiness, leaders should apply systems thinking beyond the organisation to the whole health system. In his concluding remarks, **Dr Somekh** noted that we need visionary leaders for transformation.

Dr Miklos Szocska stated that evidence only has an impact when it is put into action. He highlighted the importance of community involvement and recommended actions such as investments in education, health literacy and reducing the divide between policy-makers and the community.

Further, **Dr Szocska** highlighted that the most common reason for resistance to change is the lack of knowledge of what the outcomes of change will be. He addressed the need for health managers to have good leadership and change management knowledge. To future-ready their health systems, policy-makers should co-create change with their communities.

Dr Dimitra Panteli discussed that workforce is an area that health systems need to invest in moving forward. She highlighted the importance of proactively taking care of the mental health of the health workforce. Further, she suggested investment in education and budgeting.

Ultimately, there are two perspectives: preparedness and learning about change and implementation. For preparedness, healthcare needs to have focused funds. Dr Panteli suggested that the structural issues in health systems can be improved by understanding future goals, based on evidence and sustainable funding.

The speakers agreed that digitalisation is important and will cater well to other future trends like person-centredness and integrated care. Digitalisation is a system competence and not a technological breakthrough and must be used to make healthcare systems more sustainable.

Take-Home Messages

- There may be resistance to changing our systems, but change is necessary. Stakeholders in health can start by accepting unpredictability, respecting autonomy, and creativity, and responding flexibly to emerging patterns and opportunities.
- Innovation is the key to sustaining health systems that are adaptive and resilient to changes. Digitalisation as a future trend is an important competence for health managers to learn and make use of, as it supports other trends such as person-centredness and integrated care.
- Involving the community, improving health literacy and co-creating change are crucial steps in making health systems more sustainable, especially given the limited resources faced in turbulent times.

Partner session ‘Exploring the role of health stakeholders in the European vaccine ecosystem: a simulation game’

Keynote: **Prof Americo Cicchetti**, Director of the Graduate School of Health Economics and Management (ALTEMS); Professor of Management at Università Cattolica del Sacro Cuore, Italy

Facilitator: **Prof Sandra C. Buttigieg**, Head of Department of Health Systems Management and Leadership, University of Malta, Malta

Summary

Vaccines are recognised as one of the most cost-effective public health interventions for preventing infectious diseases. Each year, vaccination prevents 2.7 million people worldwide from contracting measles, one million from contracting pertussis and two million babies from contracting tetanus¹. However, are we aware of what it takes to bring a safe and efficacious vaccine to the market and how many different “actors” can impact the process?

The vaccine ecosystem is an organism/community made up of different elements which interact with each other and their environment. This means that actions in one part of the ecosystem will have consequences elsewhere, sometimes upsetting a delicate balance. Decisions on prioritisation of new pathogens for research and development (R&D), regulatory requirements, manufacturing and supply capacity, industrial and technology policies, procurement, pricing policies, forecasting, and stockpiling practices, and financing of vaccination programmes, all impact access to vaccines globally and in each country. Ultimately, these components should lead to a predictable and sustainable supply of innovative, qualitative, and affordable vaccines to meet public health needs.

The session aimed to help the audience understand and recognise the many different components of the vaccine ecosystem, and how they are all interconnected through an innovative role-play-based format. The audience was given the chance to ‘switch hats’ and act as a representative of one of the stakeholder groups defined as driving forces of the European vaccine ecosystem: civil society, EU institutions, Ministries of Health, healthcare professionals, manufacturers, procurement actors, media and regulators. This way, the session showcased how the different groups of stakeholders are extremely dependent on each other’s support to achieve their goals and on how any action has a tangible impact on the other drivers of the vaccines system – such as coverage rates, access, supply, affordability.

Prof Americo Cicchetti opened the session discussing the overall concept of an ecosystem. In an ecosystem, all pieces depend on the others to function properly and produce the best results. The healthcare system is an ecosystem with multiple, complex stakeholders. The complexity of the ecosystem changes and somewhat increases when we consider a unique vaccine ecosystem within healthcare. **Prof Cicchetti** addressed the risk of unrelated consequences of positive actions in the vaccine ecosystem and emphasised the need to assess the concept of value when developing a vaccine strategy.

The session participants then started with the game, which was played in two rounds. Being assigned to a specific stakeholder group, participants had to choose one out of five actions supporting two Key Performance Indicators (KPIs) defined for their group. In the first round of the game, one representative from each stakeholder group lobbied for the proposed actions within another stakeholder group. Civil society lobbied for communication of vaccine benefits to citizens, while procurement bodies lobbied for pooled procurement actions to negotiate lower prices for vaccines. Next, as an outcome of the lobbying process, the stakeholders had to decide who they wanted to support. The stakeholders decided to put their support with the

¹ [Immunisation and vaccines \(europa.eu\)](https://www.euro.who.int/en/about-us/partners/immunisation-and-vaccines)

Ministries of Health and European institutions, while no stakeholders decided to support the procurement group.

Prof Cicchetti and Prof Sandra Buttigieg pointed out that the healthcare ecosystem, especially in the case of vaccinations, cannot underutilise the less visible stakeholders. Overlooking stakeholders such as procurers can lead to significant negative impacts on vaccine indicators such as vaccine supply, innovation, quality, affordability, and equity of access. The lack of coordination among stakeholders pointed to the main takeaway: within the vaccine ecosystem communication among stakeholders is key.

The participants were given a second chance in round two. The room addressed communication among stakeholders within the ecosystem. This time, the civil society group lobbied for taking citizen science perspectives on board when setting research and innovation priorities. During the second round the stakeholders understood the system better and were able to achieve better outcomes in all the key performance indicators. Similar learnings emerged, indicating the need for further communication among stakeholders. Prof Buttigieg concluded the session pointing out that no stakeholder is an island for themselves, and interactions within the whole vaccine ecosystem is essential.

Take-Home Messages

- An ecosystem is a network of actors that interact with each other. One action impacts all other pieces of this ecosystem. The vaccine ecosystem is a multistakeholder and complex organism. Support and cooperation are needed from the stakeholders to increase the effectiveness of each action taken, which in turn impacts the outcomes.
- Although some stakeholders may be more visible in the ecosystem, especially in the case of vaccinations, underutilising less visible stakeholders can have a significant negative impact on important indicators such as vaccine supply, innovation, quality, affordability, and equity of access.
- Communication between stakeholders is one of the most important factors for achieving better outcomes in the vaccination ecosystem. No stakeholder is an island for themselves and interactions among all stakeholders are essential for the ecosystem to thrive.

This session was organised thanks to the support of MSD Europe and Sanofi.

Partner session ‘Reducing the environmental impact of medicines: the role of health managers’

Speakers: **Mr Joaquim Duarte**, Senior Sustainable Waste Manager, University Hospitals Bristol and Weston NHS Foundation Trust, United Kingdom
Prof Dr Marija Jevtic, Full Professor, Medical Faculty, University of Novi Sad, Serbia; Scientific Collaborator, Research Centre on Environmental and Occupational Health, Université Libre de Bruxelles, Belgium; EU Climate Pact Ambassador
Dr Kirsty Reid, Director of Science Policy, European Federation of Pharmaceutical Industries and Associations (EFPIA), Belgium
Ms Emmi Weller, Policy Officer, European Health Management Association (EHMA), Brussels

Facilitator: **Mr George Valiotis**, European Health Management Association (EHMA), Belgium

Summary

Medicines are crucial to saving human lives and improving wellbeing. However, when prescribed, used, or disposed of inappropriately, they can negatively impact human health, wildlife and ecosystems. Medicines can affect the environment through CO₂ emissions from the supply chain or through pharmaceutical effluents from production and usage. Pharmaceutical wastewaters contain an essential concentration of antibiotic resistance genes and their continuous presence in the environment can lead to antimicrobial resistance (AMR). In the EU and in the European Economic Area (EEA) alone, an estimated 33,000 annual human deaths are linked to antibiotic-resistant bacteria.

Multisectoral engagement across the medicine’s lifecycle is therefore urgently needed to address this matter. In this session, speakers discussed strategies and best practices that health managers can implement to reduce the environmental impact of medicines at various stages of the lifecycle: procurement; logistic planning and distribution; prescription; consumption and use; and disposal.

Ms Emmi Weller provided an overview of the policy context and the existing evidence base surrounding this issue. She mentioned the European Commission’s Pharmaceutical Strategy for Europe aims to address unmet medical needs and ensure quality and safe medicines. In particular, she highlighted that the Pharmaceutical Strategy includes an environmental sustainability angle, as it aims to reduce the impact of pharmaceutical components and their residues on the environment as well as encourage pharmaceutical industries to commit to climate neutrality. **Ms Weller** stressed that misuse of pharmaceuticals harms the environment by contaminating water, leading to the development of antimicrobial resistance and impacting wildlife. There are five identified stages of the life cycle of medicines where health managers can intervene to reduce the environmental impact: (1) Procurement, (2) Logistic planning and distribution, (3) Prescription, (4) Consumption and use, and (5) Disposal. Lastly, she shared best practices for all five stages coming from different European countries such as Italy, Portugal, Sweden, Norway, The Netherlands, Finland, France, and the United Kingdom. **Ms Weller** stated that the best practices on the role of health managers in reducing the impact of medicines on the environment will be soon published in a White Paper curated by the European Health Management Association due for release in October 2022.

During the following panel discussion **Mr Joe Duarte** highlighted that to effectively reduce the environmental impact of medicines, cross-sectoral and international sharing of best practices is crucial. Communicating the good work that has already been done and involving all stakeholders can lead to finding global, sustainable solutions. Investments should be made in people to increase knowledge about the various lifecycles of medicines and how to move through them efficiently and sustainably. **Mr Duarte** also highlighted how procurement can be strategically used to bring about more environmental sustainability in the healthcare sector.

Prof Marija Jevtic mentioned that although there is a clear need for medicines, there is not enough discussion on expired medicines and vaccines. She also highlighted the financial burden of buying medicines and disposing of them after expiration. Therefore, there is a need for creating new curricula for healthcare professionals and to include professionals from other sectors, such as economists, in the discussion. This will enable addressing the issue from a multidisciplinary perspective. **Prof Jevtic** gave an example from Serbia where people have already a good idea of possible solutions, but there is not enough workforce capacity to take up such initiatives. Finally, she mentioned that clinicians and other providers should be aware of their responsibilities and ask themselves whether they use medicines effectively.

Dr Kirsty Reid reflected on the topic from an industry point of view. She mentioned that due to the COVID-19 pandemic existing environmental sustainability strategies from the European Commission slowed down. The European Federation of Pharmaceutical Industries and Associations is taking some action related to the use of renewable energies and trying to collate and disseminate all these ideas and good practices. **Dr Reid** also mentioned that although in European countries there are initiatives on environmental risk and information available on how and where to dispose of medicines, a lot of people are still not aware of the availability of such information and tools.

Take-Home Messages

- There is a need for increased sharing of best practices and health literacy among patients, physicians, health managers and the pharmaceutical industry regarding the environmental impact of medicines.
- Multisectoral engagement is necessary to address the environmental impact of medicines at the different stages of the medicines' lifecycle. Investing in education for both health professionals and professionals from other sectors will enable to address the issue from a multidisciplinary perspective.
- There is a need for introducing new roles across the healthcare system and forming new partnerships, collaboration, innovation and sharing of resources to reduce the environmental burden of medicines.
- Health managers should consider the full life cycle of medicines when working towards no waste policies and circular economy initiatives.

This session was organised thanks to the support of MSD Europe.

Partner session ‘Evidence from the State of Health in the EU country profiles: making health systems more resilient after the COVID-19 pandemic’

Speakers: **Mr Gaetan Lafortune**, Senior Economist, OECD Health Division, France
Mr Federico Pratellesi, Policy Officer, DG SANTE, European Commission, Belgium
Ms Anna Sagan, Research Fellow, European Observatory on Health Systems and Policies; London School of Economics and Political Science, United Kingdom

Summary

The [State of Health in the EU](#) is a recurring two-year cycle of knowledge brokering. The project is the result of a collaboration between the European Commission, the Organisation for Economic Co-operation and Development (OECD) Health Division and the European Observatory on Health Systems and Policies. The project collates the latest evidence on health systems in Europe and delivers it through a series of data-based reports. The State of Health in the EU supports Member States by strengthening the evidence base on health. One of its objectives is to build more resilient health systems. In this session, the speakers discussed the various stages in which the EU tries to create more resilient health systems.

Mr Federico Pratellesi spoke about the four stages of the State of Health in the EU cycle that the European Commission uses to support Member States and to collect data for policy development. The first stage is the ‘[Health at a Glance: Europe](#)’ report, providing a neutral and descriptive comparison of publicly available data and indicators from all EU countries. Published every two years, the report gauges progress toward effective, accessible and resilient health systems across the EU. Second, the [Country Health Profiles](#) provide an overview of knowledge and information on a country’s health system, put into the perspective of a cross-EU comparison. Third, the [Companion Report](#) is presented by the European Commission and accompanies the Country Health Profiles. This report highlights a selection of horizontal observations based on the analysis of the country profiles. Fourth, health ministries across Europe are encouraged to conduct [Voluntary Exchanges](#) with the experts responsible for conducting the analysis to develop possible policy responses by drawing on their expertise.

Mr Gaetan Lafortune addressed the economics of health systems performance – saying that when it comes to health system performance assessments, it is important to keep in mind that there are great differences in the amount countries are spending. Countries that are spending more have more doctors and nurses and this had an impact on their response to the pandemic. He then shared the healthcare workforce strategies that countries used, that appeared all quite similar: modify existing work practices, reskill, redeploy, and repurpose human resources, or bring in new or inactive workers.

Ms Anna Sagan highlighted that countries with more resources found it easier to recover from the pandemic than those with less resources. She discussed the European Observatory on Health Systems and Policies book ‘[Health systems resilience during COVID-19: Lessons for building back better](#)’ which contains 20 strategies – grouped according to health systems’ functions – that have been found as enhancing health systems resilience in the face of COVID-19. The governance function was found to be the most important because it was key to steering all other strategies. However, she emphasised that any strategies employed during the COVID-19 pandemic should not be seen as a goal in itself but as a tool for broader health system goals such as efficiency and equity.

Looking to the future, it was highlighted that the current EU framework is not adequate and if health systems’ risks are ignored, this will push the EU into other crises. The speakers also mentioned the Health Emergency Preparedness and Response (HERA) department, which has been created in the aftermath of the pandemic, that will publish yearly reports that anticipate threats and potential health crises as a key pillar of the European Health Union. Furthermore, in a new joint project, the European Observatory on Health Systems and Policies and the European

Commission will develop sets of methodologies for Member States to assess their health system resilience.

Take-Home Messages

- Workforce, digitalisation and other innovations are not goals on their own, but should be seen in the light of health service delivery and outcome improvement goals.
- It is evident that more doctors, nurses, and other health workers should be trained; retention rates of current health workers should be increased; and health service delivery should be innovated.
- Countries are seeking to sustain measures used for surge capacity during COVID-19 waves to deal with care backlogs. This will risk overburdening the health workforce; instead, sustainable measures to support health workers should be prioritised.
- During the pandemic, the starting point of health systems mattered; governance mattered; and not every strategy was effective. Interventions put in place during the pandemic should be used as a learning and smart investments should be prioritised to better prepare health systems for the next shocks.

This session was organised thanks to the support of the European Observatory on Health Systems and Policies.

Partner session ‘How does the EU support the transformation of health and care systems?’

- Speakers:**
- Ms Nicole Mauer**, Technical Officer, European Observatory on Health Systems and Policies, Belgium
 - Ms Sabrina Montante**, Senior EU Policy Advisor, Istituto Superiore di Sanità – Brussels Liaison Office, Italy
 - Ms Solvejg Wallyn**, Policy Officer, Flanders Agency for Care and Public Health, Belgium
- Facilitator:**
- Dr Dimitra Panteli**, Programme Manager, European Observatory on Health Systems and Policies, Belgium

Summary

Health systems face a broad range of evolving challenges and need to be dynamic to respond in ways that help them achieve their goals. While improving health and care systems is primarily the responsibility of Member States, the EU has a wide range of instruments that can potentially provide support. However, for most of them, health systems strengthening is not among the principal objectives. This can make it challenging for Member States to identify and make the best use of the different support options. This session was about developing stronger health systems and how the EU can support Member States in facing their healthcare challenges.

Ms Nicole Mauer presented the example of the [TO-REACH project](#). This project addressed priority areas where European health systems can learn from each other and how their ability to do so can be improved and contribute to the transformation of health and care systems. Priorities for European health systems can be clustered into four domains: 1) person and population centredness; 2) integration of services; 3) key sectors requiring service reform (i.e., long-term care, mental health, primary and hospital care); and 4) preconditions for improved functionality of the aforementioned areas. The successful transfer of service and policy innovations depends on certain attributes or contextual conditions, and collaborative European research could most usefully address the aspects of innovation transfer that need to be better understood. The EU has plenty of tools to support health and care systems transformation and these tools’ potential has been largely untapped. While EU funding tools – such as the European Semester, Cohesion Policy Funds, Horizon Europe and the Recovery and Resilience Facility – primarily focus on infrastructure and research rather than supporting Member States with the running costs of health systems, Austria has successfully used all EU funding instruments to facilitate its healthcare transformation through the reform of primary health. Despite the primary responsibility for health systems sits with Member States, EU funding tools can provide support to strengthen health systems even if this is not their main objective. The challenge is to align different health and care transformation objectives to these tools given different health systems have different needs and challenges.

Ms Sabrina Montante spoke about the [European Partnership on Transforming Health and Care Systems \(THCS\)](#), a Horizon Europe initiative which builds on previous initiatives, including the TO-REACH project. The THCS initiative establishes partnerships among participating Member States to ensure an accelerated transition towards more sustainable, resilient, innovative and high-quality people-centred health and care systems. The THCS partnership brings together a broad range of research and innovation results and actors with the vision to translate results into evidence-based policies, coordinated actions and concrete hands-on outcomes. **Ms Montante** said that to translate ‘what’ into ‘how’, it is necessary to fill knowledge gaps in key priorities, support implementation, respond to policy needs and work on improving health and care system capacity.

Ms Solvejg Wallyn presented the reform of primary care in the Flanders region and their experience with using European funding instruments to support this transformation. Flanders’ primary care reform aimed to connect medical care with welfare and social care; strengthen

people and care actions towards people-centred, integrated and goal-oriented care; and strengthen a population-oriented approach. The reform began in 2010. Ms Wallyn discussed the different components of the reform. She mentioned that the Flanders region made use of international support, regional networks, the structural reform support programme, and the [Maturity assessment tool](#) of the Scirocco project. The latter was used in drafting the plans on 'Caring Neighbourhoods', which aims to ensure that people in need of care can keep on living in their trusted environment for as long as possible through access to necessary services and facilities. She mentioned that WHO Europe is also interested in the 'Caring Neighbourhoods' project and is closely following the results. Looking back at their trajectory of support from the European Commission and the WHO, the Flanders region has realised the importance of EU tools and their added value in strengthening their health system. Flanders are also planning to use EU funding instruments for their Digital Care and Support plans.

During the discussion, the audience challenged the speakers to what extent European tools can contribute to 'real' health system transformation, especially in light of the current challenges. To allow for more radical changes it may be necessary to rethink the overall approach to EU-funded projects.

Take-Home Messages

- Health systems have different needs and tools available in support of strengthening health systems need to be adapted to country's specific contexts. To better support policy-makers in using EU funding instruments and ensure synergies among them, it is advisable to map the different European tools and how they may provide support.
- The European Partnership on Transforming Health and Care Systems (THCS) – a Horizon Europe initiative – has the aim to transform health systems. Different to other funding instruments, it can be seen as a co-funded action that also provides implementation support to ensure its effectiveness.
- The difficulty to trace back concluded European-funded projects may indicate that several of these project results are not taken forward after the project completion. More work needs to be done to ensure European-funded project results do not remain isolated or end up being lost, but become part of an overall framework that can form the basis for continued learning.

This session was organised thanks to the support of the European Observatory on Health Systems and Policies.

Partner session ‘The European Patients’ Rights Directive: a milestone towards a true European Health Union?’

- Speakers:** **Dr Eleanor Brooks**, Lecturer in Health Policy, Global Health Policy Unit (GHPU), School of Social and Political Science, University of Edinburgh, United Kingdom
Dr Nick Fahy, Health and Wellbeing Research Group Director, RAND Europe, United Kingdom
Prof Scott Greer, Professor of Health Management and Policy, Global Public Health and Political Science, University of Michigan; Senior Expert Advisor, European Observatory on Health Systems and Policies, USA
- Facilitator:** **Dr Matthias Wismar**, Programme Manager, European Observatory on Health Systems and Policies, Belgium

Summary

The responses of health systems to COVID-19 have demonstrated the importance of a European Health Union (EHU). Cross-border healthcare is part of such a Health Union: it adds value to border regions and it empowers citizens when going abroad as students, workers, pensioners, tourists, or patients. It resolves capacity issues, improves access and helps patients with rare diseases. To clarify the terms and conditions of cross-border healthcare, the Patients’ Rights Directive (Directive 2011/24/EU) was introduced in 2011. The Directive introduced a section titled ‘cooperation in healthcare’ which calls on Member States to render mutual assistance and facilitate cooperation at regional and local levels, particularly with neighbouring countries. The cooperation included supporting assistance and cooperation; recognition of prescriptions issued in another Member State; the European Reference Networks; action in the area of rare diseases; eHealth; and cooperation on Health Technology Assessment (HTA).

This session addressed the strengths and challenges of the existing initiatives toward the EHU in cross-border healthcare. It was organised in conjunction with the launch of the third edition of the book [‘Everything you always wanted to know about European Union health policies but were afraid to ask’](#) published in 2022. The book provides insights into the changing landscape of health policy in the European Union in response to COVID-19, leading to steps forward in the journey towards the EHU.

Dr Matthias Wismar noted the limited competencies of the European Union regarding the social determinants and health, despite the growing need for European health policies to strengthen health systems. He mentioned that eliminating differences in treatment based on the Member State of origin, as well as barriers to access to healthcare is one of the European Union’s deeply entrenched principles. **Dr Wismar** highlighted that although the development of powerful European laws has the potential to improve the quality of health delivered, the implementation of these laws too often focuses on market integration rather than promoting the health and sustainability of healthcare systems.

Prof Scott Greer addressed the scope of the European Union to influence health policies through the internal market or fiscal governance policies. **Prof Greer** explained how at the start of the pandemic healthcare supply chains suffered due to the unwillingness Member States showed to share resources. He added that the EU4Health programme will contribute to solving long-term health challenges by building stronger, more resilient, and accessible health systems. For example, during the pandemic, the EU4Health brought in additional funds to revive health programmes and set up a vaccine strategy of collective procurement.

Dr Eleanor Brooks talked about the Recovery and Resilience Facility which is a temporary recovery instrument allowing the European Commission to raise funds to support Member States to implement reforms and investments that are aligned with the European Union’s priorities. She noted that few Member States mentioned the COVID-19 pandemic in their investment and reform plans. Instead, the Recovery and Resilience Facility is being used towards improving pre-existing, more fundamental problems in the wider health system and

infrastructure. Examples are building infrastructure for health data, eHealth, telemedicine and digitalisation; building and renovating healthcare facilities; and the development of national strategies across healthcare systems.

Lastly, **Dr Nick Fahy** presented the 'behind-the-scenes' of the European Patients' Rights Directive regarding its original implementation. In formulating the Directive, the intention was to give people who are seeking care across borders the right to do so and provide an answer to very practical questions for healthcare providers, such as how to handle the cases of cross-border patients. There was a strong financial drive behind the European Patients' Rights Directive and the European Reference Networks were not considered as highly important. The European Reference Networks are a requirement of the Directive for health authorities to cooperate in the implementation and development of networks between healthcare providers and centres of expertise. Later the importance of the European Reference Networks emerged as a solution to practical problems such as the monitoring of patients seeking cross-border care.

Take-Home Messages

- EU cooperation has improved significantly, but the way Member States tackle health remains quite different and specific to their context. Member States are still learning about the different processes, implementation, and cooperation across and with other countries. A coherent approach to strategic programming (e.g. an EU institution of health) is yet to be achieved.
- Numerous financial instruments can support the development of strong and sustainable healthcare systems; however, these funds must be invested in the right initiatives at the right time.
- As a result of the pandemic, the expectations Member States had towards the EU has been shifting. Member States are asking the EU for support in reshaping their health systems and services, which would have been impossible before.

This session was organised thanks to the support of the European Observatory on Health Systems and Policies.

Partner session ‘Partnership working in health and social care: embedding the lessons of the COVID crisis’

Facilitators: **Mr Nabil Jamshed**, Head of Corporate Governance, Guy's and St. Thomas' NHS Foundation Trust, United Kingdom
Dr Usman Khan, Visiting Professor, KU Leuven, United Kingdom
Prof Walter Sermeus, Full Professor, Leuven Institute for Healthcare Policy; Programme Director, Master of Healthcare Management & Policy, KU Leuven, Belgium
Prof Kristin Wilson, Associate Professor, Saint Louis University College for Public Health & Social Justice, USA

Summary

During the pandemic, three countries and locales started the International Health and Social Care Collaborative between the United States, Belgium, and the United Kingdom to better understand partnership working among health and social care organisations globally. The International Health and Social Care Collaborative aims to recognise similarities and differences in partnerships across the different health and social care settings to compare and identify best practices, share experiences, and ultimately learn from each other. As the Collaborative is in the early stages, emerging knowledge is still in development. The first part of this session provided an overview of the Collaborative's work to date, and the second part was a facilitated discussion aimed to identify others interested in joining the Collaborative and solicit thoughts for its expanded research, practice, and structure.

Dr Usman Khan presented the background of the Collaborative and how during the lockdown the four speakers decided to analyse how partnerships between health and social care changed under the pressure of COVID-19 in three different countries: Belgium, the United Kingdom, and the United States. **Dr Khan** mentioned that their goal was to develop a common guide on topics where stakeholders such as leaders from health, social care and public health believe there is a need for more action or room for improvement. One of their findings was that all three health and social care systems adapted and responded differently during the pandemic.

Prof Walter Sermeus represents Belgium in the Collaborative. He discussed the influence of collaboration between health and social care on the different COVID-19 vaccination rates across Belgium. The Flanders region had the highest vaccination rate compared to any other Belgian region. **Prof Sermeus** mentioned that the variation can be due to different reasons such as the implementation of vaccination policies, the collaboration between health and social care, or vulnerable populations appearing hesitant in getting vaccinated for various reasons such as limited access to care and information. He highlighted that all these hypotheses brought the four professionals together aiming to analyse their experiences of partnerships created between health and social care during the pandemic.

Mr Nabil Jamshed, representing the UK, expressed that current implementation practices have not been considering the lessons learnt from the COVID-19 pandemic regarding health and social care partnerships. He also highlighted the critical work that social care and the voluntary sector in the UK are performing within hard-to-reach vulnerable groups such as informing them on vaccination policies and practices. As he mentioned, the vulnerable population requires greater communication strategies and provision of information. In the UK, this was done by the voluntary sector.

Prof Kristin Wilson provided insights from the United States where partnership working during the pandemic was influenced by local political forces and resource scarcity. She mentioned that the US had increased partnerships and collaboration across all three countries. However, she stressed that these partnerships were mainly built out of the personal networks of the stakeholders involved and therefore many groups that should have been part of these partnerships were not included. **Prof Wilson** explained that one of the takeaways of their

research was that the social care system in the US is very fragmented as local public health organisations report to and are overseen by local governments. The fragmented social care system is not sustainable or effective mainly due to the political tension that exists in each local government.

During the second half of the session, participants split into two groups where a facilitated discussion took place. Participants reflected on the findings of the Collaborative and discussed how these findings resonate with their own experiences. One of the participants mentioned that the role of the voluntary sector in the UK is essential as it is supporting the rising demand for health care services. The participant explained that in the UK social prescribing is an excellent example of an intervention that facilitates the linkage between primary care and the third sector. Social prescribing is trying to meet the rising demand while making use of community resources.

Another participant mentioned that in many European countries, health and social care systems are divided with no collaborations in place that could benefit both the system and the individual. In many cases, such collaborations are hindered due to a lack of integrated funding between the two sectors and therefore he suggested that integrated funding could foster collaboration between health and social care. Lastly, another participant mentioned that a framework of common incentives for the involved stakeholders can assist and encourage the creation of more effective and sustainable partnerships between the social and health care sector.

Take-Home Messages

- The COVID-19 pandemic highlighted the need for increased partnership. The variety in vaccination adherence observed across Europe indicates a lack of partnership between health and social care.
- The existing health and social care partnerships across Europe operate in different ways as each country has different needs and resources. This observed inconsistency can be an opportunity for the different social and health systems to learn from each other and share best practices and expertise.
- One of the similarities among countries observed by the Collaborative's work is that health and social systems are usually fragmented, and the provided services seem to be misused or even underused in the case of community resources which are part of the social care setting.

This session was organised in collaboration with the Leuven Institute for Healthcare Policy – KU Leuven.

Abstract session 'Management, operations and practice for shaping sustainable systems'

- Speakers:** **Mr Jonas Brouwers**, Leuven Institute for Healthcare Policy, KU Leuven, Belgium
Dr José Chen-Xu, National School of Public Health, NOVA University of Lisbon, Portugal
Mr Damir Ivankovic, Public Health Research Institute, University of Amsterdam, The Netherlands
Ms Maura Leusder, Erasmus University Rotterdam, The Netherlands
Prof Rod Sheaff, University of Plymouth, United Kingdom
- Facilitator:** **Dr Eszter Kovacs**, Assistant Professor, Health Workforce Planning Knowledge Centre, Semmelweis University, Hungary

Summary

In this session the presenters discussed a broad array of topics, ranging from clinical and business leadership to quality-of-care policy, costing in value-based healthcare, to environmental sustainability in healthcare institutions, as well as conditions for third sector contributions to health systems.

Mr Jonas Brouwers presented an alternative way of looking at quality of care. The quality of care triad in the Flemish hospital setting includes accreditation; inspection; and measurement and public reporting. 'Discreet choice experiments' come from the marketing industry. Instead of rating each characteristic of a product, such experiments involve the consideration of different characteristics of a product at once. **Mr Brouwers** conducted five discreet choice experiments with 450 participants and 5 professional groups where, instead of the triad, he assessed the preferences of participants with regards to sets of elements that make up 'quality of care', such as quality control, quality improvement, transparency, inspection and incidents. The output of the experiments gives an indication of the preference or importance of each characteristic.

Dr Jose Chen-Xu compared the efficiency of environmental measures in Portuguese healthcare facilities. Climate change mitigation requires efforts from all sectors, including healthcare. With green financing and cost-effective green measures, healthcare institutions can be green and resilient. Green hospitals save energy and reduce waste which also results in cost reduction. An analysis of 24 healthcare institutions in Portugal via the means of a questionnaire showed that there are gaps in the efficiency of environmental measures related to waste, water and electricity.

Mr Damir Ivankovic presented an international comparative study in Europe, the United States and Canada on effective use of data for clinical and business leadership. Effective use of performance data can support operational management, support managers to monitor, evaluate, communicate and act, improve health care provision and consequently improve individual and population-level outcomes. He found differences between perceptions of performance data use. Respondents perceived effectiveness in use for clinical and business leadership similarly, and the use of data for supporting individual patient care differently.

Ms Maura Leusder presented the results of her systematic review on cost measurements in value-based healthcare (VBHC). The research aimed to identify how costs are measured in VBHC and what the literature says about the consequences of applying a specific costing method in VBHC. Nearly half of the literature applied in the study had been published in the last 2.5 years and an overwhelming majority came from the United States. Cost measurements can facilitate VBHC because they can allow for better identification of related cost drivers. In her review, she found that most studies measure costs for partial care paths, which drastically limits their ability to inform VBHC.

Prof Rod Sheaff researched the relationship between the provision of services by the NHS by non-NHS organisations, specifically in voluntary, community, and social enterprises (VCSE) in

the UK. He studied the barriers and methods of commissioning non-NHS organisations for work, the consequences and the absorptive capacities of the NHS and VCSEs. VCSEs are increasingly used by the NHS on – for example – mental health, end-of-life, social prescribing, new public health campaigns, and advocacy for patients and carers. Through a realist mixed methods study, they found that for commissioning VCSEs, negotiation and persuasion methods are more used than competition and financial incentives. Furthermore, it is harder for smaller, advocacy based VCSEs to influence commissioners.

Take-Home Messages

- Discrete choice experiments provide an opportunity to include attitudes and views into new policy recommendations and may facilitate bottom-up decision-making.
- In hospitals, environmental measures are not yet implemented to their full potential. Examples such as LED lamps only being implemented in parts of hospitals exist, and more efforts are needed to make healthcare a front runner in becoming climate neutral.
- The perceived use of performance data in effective healthcare organisations is different between Europe and North America such as when it comes to population health.
- Cost measurements can facilitate value-based healthcare (VBHC), but most studies in the literature do not measure the costs for the total care pathway, drastically limiting their ability to inform VBHC.
- Even though the voluntary, community and social enterprises (VCSE) are increasingly relied on by the NHS to arrange services such as social prescribing, they will need to develop their absorptive capacity to better recognise their value so that the use and interest of these services develops sustainably.



EHMA 2022

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**PEOPLE-CENTRED
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Plenary session ‘Partnerships for people-centred health systems’

Keynote: **Ms Maya Matthews**, Head of Unit B1 – ‘Performance of national health systems’, DG SANTE, European Commission, Belgium

Speakers: **Dr Elly Breedveld**, Director, Stichting Perspekt, The Netherlands
Ms Elisabeth Kasilingam, Chief Executive Officer, European Multiple Sclerosis Platform; Board Member, European Patients Forum (EPF), Belgium
Prof Dr Kris Vanhaecht, Associate Professor in Quality in Healthcare, Leuven Institute for Healthcare Policy, KU Leuven, Belgium

Facilitator: **Prof Dr Dirk De Ridder**, Head of the research unit for Healthcare Policy, Leuven Institute for Healthcare Policy, KU Leuven, Belgium

Summary

The plenary session explored how health systems can better manage partnerships between patients and healthcare providers and balance evidence-based healthcare management and patient preferences. The session aimed to reflect on how processes such as value-based healthcare and integrated care achieve better patient-reported outcomes and experiences, and the types of multisectoral collaborations which can support holistic practices and decision-making.

Ms Elisabeth Kasilingam, as CEO of the European Multiple Sclerosis Platform and Board Member of the European Patients Forum (EPF), spoke on behalf of patients and reflected on the importance of meaningful partnerships between everyone involved in health systems. She emphasised that people-centredness is also about including families and carers around the patient in a meaningful way.

Ms Kasilingam highlighted the importance of working towards systemic changes that will lead to meaningful transformation based on shared information and real-world data and developing tools and services that strengthen the link between health systems and the population. She stated that the COVID-19 pandemic has shown us that engaging with the population while designing healthcare solutions has led to success.

Ms Maya Matthews highlighted the European Commission initiatives that support people-centred care and health systems, such as the European Health Data Space for *information*, the Public Consultation and Health Policy Platform for *participation*, EU4Health and Horizon Europe for *support*. **Ms Matthews** presented data exemplifying the enormous negative impact the COVID-19 pandemic had on life expectancy across Member States, showing that the pandemic was a wake-up call for the European Commission as, in these times of need, they were not able to help Member States.

The European Health Union is a new way of reaching out to Member States, to look at how health systems can be improved and strengthened, and people can be better involved. Finishing her keynote with a strong message, **Ms Matthews** said *“We don't have the luxury of time. We need to start addressing key healthcare challenges now and we can only do it together”*.

Dr Elly Breedveld amplified the message of Ms Matthews by saying that healthcare providers should assess to what extent the care they provide leads to improvements in the patients' quality of life. Providing patients with good care has everything to do with quality of life as much as quality of care.

When it comes to data, it is not only about quantitative but also about qualitative data such as patient stories and experiences. Patient-reported outcomes are important. Further, **Dr Breedveld** talked about the transformational impact COVID-19 had on governance, stating the importance of bringing different stakeholders to the same table to have a dialogue, yet she questioned how to do that.

Prof Dr Kris Vanhaecht stated that initiatives like the European Health Data Space could bring major opportunities for partnerships but the first step is to define goals in healthcare and reflect on what the vision is.

There is a lot of evidence and evidence generation, but much of this is not implemented in a meaningful way; an example is patient checklists that are only taken up when there is an inspection. **Prof Vanhaecht** reminded that the technical dimensions that have to do with standards of care are not what matters to patients. Instead, they value dignity and respect, empathy and kindness – the fundamentals of care.

Ms Matthews noted that as health systems recover from the pandemic, improving our ways of working is also important. The pandemics brought attention on digital skills and digital technologies that should be used to help health workers. During the pandemic using digital solutions, such as teleconsultations, was the only way to provide care. Now some healthcare professionals tend to go back to face-to-face consultations as they feel somewhat uncomfortable with new technologies having been trained for real-life care.

Ms Matthews concluded saying that digital technologies are at our disposal, and it is important to assess what works well and what doesn't, while also ensuring training programmes to provide health workers with the right and up-to-date digital skills.

Ms Kasilingam followed saying that during the pandemic it was possible to have effective multistakeholder collaborations for making quick decisions on investing in Multiple Sclerosis (MS) medications for example and questioned why it is difficult to have such multi-stakeholder collaborations in normal times. The speakers concluded by agreeing on the importance of a multistakeholder approach, considering the different perspectives and values at each level.

Take-Home Messages

- To support better partnerships among healthcare stakeholders, people at the governance level should have access to the needed data to make informed decisions.
- It is paramount to keep using digital innovations that offer value to patients and families and ensure the implementation of training programmes that provide health workers with the correct up-to-date digital skills to properly and comfortably use new technologies.
- It is important to rethink how to use resources to obtain data, achieve results and shift more towards the implementation side within the innovation cycle.
- Better methods are needed to translate the patient's voice and implement it into both policymaking and care pathways, instead of treating it as a box-ticking exercise.

Partner session ‘Building a comprehensive approach to lung cancer in Europe’

Speakers: **Dr Dariusz Adamczewski**, Director Government Affairs & Policy, Johnson & Johnson, Belgium
Dr Alexandre Lourenço, Hospital Administrator, Coimbra Hospital and University Centre; Professor and PhD Programme Coordinator, ISEG – Lisbon School of Economics and Management, Portugal
MEP Manuel Pizarro, Member of the European Parliament; Co-Chair of the MEP Lung Group, Portugal
Dr Joan Prades, Researcher, Catalan Cancer Strategy, Health Department; Associate Professor, University of Barcelona (UB), Spain
Dr Suzanne Wait, Managing Director, The Health Policy Partnership, United Kingdom

Facilitator: **Ms Sara Doguelli**, M.A. International Health and Social Management, MCI, Austria

Summary

Lung cancer remains one of the biggest causes of cancer-related mortality and is widely unaddressed across Europe. Accounting for 20% of all deaths caused by cancer, it incurs a higher economic toll than any other cancer. Overall lung cancer survival continues to remain low. This is in large part because a high proportion of people with lung cancer are diagnosed at an advanced stage. The rate of surviving more than 5 years after diagnosis varies from 10% when diagnosed at an advanced stage, compared with up to 92% when detected early.

The burden of lung cancer can be reduced, but it requires a comprehensive and integrated approach. Early detection needs to be enhanced by implementing large-scale screening programmes, alongside smoking cessation programmes. Complementary approaches, such as incidental pulmonary nodule identification, management protocols and rapid referral pathways from primary to secondary care, are also important to improve early detection. Improvements to lung cancer care pathways are needed to ensure all people have access to multidisciplinary care that encompasses specialist diagnosis, personalised treatments, and palliative and survivorship care. Finally, targeted efforts are required to reduce geographical and socioeconomic disparities in access and outcomes.

These changes can deliver benefits beyond lung cancer, such as reducing the overall burden of non-communicable diseases (NCDs) on societies and contributing to greater health system sustainability. However, progress in lung cancer has been significantly hampered by the COVID-19 pandemic that has caused delays and reduced access to diagnosis and care.

Dr Suzanne Wait highlighted that it is important to change the perception of lung cancer. Lung cancer is primarily seen as a smoker’s disease, which comes with the associated stigma that it is a self-inflicted condition. However, 25% of cases are not caused by smoking. Furthermore, while lung cancer mortality rates in men have been on a downtrend, the same rates in women have been increasing. Early detection is key for the patient’s survival and more investments in screening are needed.

Dr Dariusz Adamczewski continued by saying that population-wide screening programmes, which can be managed by regions and communities, should be introduced. But especially, investments are needed in Research & Development (R&D) to find the biomarkers that can detect lung cancer in the early stage. At the same time, it is extremely important to ensure universal access to precision diagnostics of lung cancer.

In a video contribution, **MEP Manuel Pizarro** supported these statements and pointed out that people who used to smoke remain at risk of lung cancer for many years. Air pollution has also become more of a concern, and it is important to act at the European level to streamline inequalities in treatment, prevention, and care.

Dr Alexandre Lourenço referred to his experiences relating to lung cancer care on the health systems side, where it was difficult to implement projects that assess the use of value-based healthcare (VBHC) methods such as bundled payments in hospitals when there are no appropriate data collection systems in place.

Dr Joan Prades spoke about different strategies being used in Catalonia to improve care and diagnosis and mentioned the importance of external quality assessments. He also spoke about the NELSON Trial that Catalonia will be participating in.

From the audience a discussion came forth on the use of multidisciplinary teams and that care should not all be provided centrally but within communities where patients feel safe. Dr Lourenço mentioned that it is essential to reorganise hospitals and clinics in a way that patients can get all the care they need, but the speakers agreed that unspecialised care or even chemotherapy can be offered in a community setting. Coordination and data exchange is crucial in facilitating this.

Take-Home Messages

- Lung cancer should no longer be associated with smoking and actions should be taken to reduce stigma, as 25% of the cases are unrelated to smoking.
- Early detection is crucial in achieving better outcomes in lung cancer care; greater investments in population-wide screening programmes are needed to prevent lung cancer mortality.
- Europe-wide investments should address waste and inefficiencies in health systems to deliver comprehensive care and make effective use of multidisciplinary approaches. Time is limited for lung cancer patients, and the care pathway needs to be efficient.
- Comprehensive care does not necessarily mean centralised care. It is necessary to go beyond hospital organisations and allocate parts of the care pathway to communities.

This session was organised thanks to the support of Johnson&Johnson.

Partner session ‘Hearing loss in the ageing population: exploring beyond the obvious’

Speakers: **Dr Patrick D’Haese**, MBA, PhD, Corporate Director of Awareness and Public Affairs, MED-EL Medical Electronics, Belgium
Dr Axel Kaehne, Reader Health Services Research, Edge Hill University; Director, Evaluation and Policy Analysis Unit of Edge Hill University; Editor in Chief, Journal of Integrated Care (Emerald), United Kingdom
MEP Alex Agius Saliba, Member of the European Parliament, Malta
Ms Yuliya Shcherbina, Market Development Lead, International Accreditation, Health Assessment Europe and Accreditation Canada, Belgium
Prof em. Dr Paul Van de Heyning, Vice-Chairman, HEARRING Group, Antwerp University Hospital, Belgium

Facilitator: **Ms Emma Cracknell**, Senior Vice President, Director, Head of Healthcare, Fleishman Hillard; Hearing Health Forum EU, Belgium

Summary

In the European Union, 34 million adults live with a disabling hearing loss, of which 22.6 million are not treated. When left untreated, hearing loss reduces a person’s ability to communicate with others but also impacts speech and language development, educational outcomes, quality of life, employment, relationships, and cognition. In Europe, one-third of people aged over 60 are living with a disabling hearing loss. Ageing is the most common contributing factor to hearing loss and hearing loss is in turn, often seen as a normal part of ageing. Untreated hearing loss has an estimated economic impact of 185 billion euros each year in the EU.

The session opened with a recorded message from **MEP Alex Agius Saliba**, who mentioned that hearing loss is a pressing issue that is being undertreated and although hearing screenings are cost-effective, they are not promoted as much as screenings for other diseases. Hearing disorders not only affect the individual’s quality of life but also have an economic impact on both the individual and the system. **MEP Saliba** stressed the need for more research, advocacy, and increased access to everyone in need.

The session continued with a presentation from **Prof em. Dr Paul Van de Heyning**. He stressed that because hearing loss is an invisible disorder, people affected can experience a lack of empathy, becoming more likely to experience social isolation or suffer from dementia. Unemployment rates of working-age adults with untreated hearing loss are double compared to those who use hearing amplification and twice that of normal-hearing peers. Untreated hearing loss amounts to €185 billion to the EU in terms of lost productivity value and quality of life. **Prof Dr Van de Heyning** mentioned that hearing loss erodes oneself through its effects on mental health, including low self-esteem, depression, isolation and cognitive decline. However, evidence shows that hearing loss is preventable, and ear and hearing care can reverse its negative effects. Reducing the burden of hearing loss is possible, but only through ambitious actions that include public health strategies supported at global level; training of health professionals and providers; and individual support, empowerment and inclusion.

Dr Patrick D’Haese reflected on the presentation and mentioned that although there is a lot of available evidence on hearing loss and its treatment and it is known what the costs are for the individual and the society of not treating hearing disorders, access to appropriate aid is not available to everyone. **Dr Axel Kaehne** mentioned that there is also a need for healthcare managers to take action to increase access to ear and hearing care. Another essential aspect to consider is why patients do not seek help or care even when they have access to it. Considering the patient’s perspective can help healthcare systems to increase access. **Ms Yuliya Shcherbina** who is working directly with providers such as hospitals but also with stakeholders providing EU funding, mentioned that part of her role is to spot gaps in the delivery of services. One of these

gaps exists in the current care integration across all levels, for example between prevention at primary care, and the involvement of the community, partners, patients, and their families.

Ms Emma Cracknell stated that although 10% of people in Europe live with hearing loss, hearing disorders do not receive the appropriate attention. Dr D'Haese responded that the reason for this is countries tend to focus on diseases that have the biggest economic and health impact on their population. Therefore, there is a pressing need for hearing disorders to be included higher up in the political agenda.

Take-Home Messages

- Hearing loss is preventable, and ear and hearing care can reverse its negative effects.
- Health literacy, hearing promotion and prevention – such as wide-spread population screenings – can increase access to care, prevent hearing disorders and reduce the perceived stigma around people living with hearing loss.
- Digital health tools can assist in improving access to care, especially for the elderly population. Investment in hearing health is cost-effective for the individual and for health systems.

This session was organised in collaboration with the Hearing Health Forum EU and supported by MED-EL Medical Electronics.

Partner session ‘Transferring digitally-enabled integrated person-centred care good practices to heterogeneous contexts – The JADECARE Joint Action’

Speakers: **Ms Roberta Papa**, Project Manager and Researcher, Regional Health Agency of Marche Region, Italy
Mr Justin Rautenberg, Senior Manager Project Development, Optimedis, Germany
Dr Josep Roca, Senior Researcher, August Pi i Sunyer Biomedical Research Institute, Spain
Mr Kuno Strand Kudajewski, Project Manager, Region of Southern Denmark’s health innovation office, Denmark

Facilitator: **Mr Jon Txarramendieta**, Kronikgune Institute for Health Services Research, Spain

Summary

The ageing population and the burden of chronic conditions are increasing the demand for more comprehensive, efficient, and smarter care. [JADECARE](#) (Joint Action on implementation of Digitally Enabled integrated person-centred CARE) intends to reinforce the capacity of health authorities to successfully address the transition to digitally enabled integrated person-centred care. It enables the transfer and adoption of four Good Practices (GPs) to the contexts of 21 Next Adopters (NA) in Europe. The Goods Practices are the Basque Health strategy in ageing and chronicity: integrated care (Spain); the Catalan open innovation hub on ICT-supported integrated care services for chronic patients (Spain); the OptiMedis Model-Population-based integrated care (Germany); the Digital roadmap towards an integrated health care sector (Denmark).

The workshop explored the factors that need to be addressed when transferring Good Practices to heterogeneous health systems with different needs, aims and scopes. **Dr Josep Roca**, **Mr Justin Rautenberg**, **Mr Kuno Strand Kudajewski** and **Mr Jon Txarramendieta** presented the four Original Good Practices (OGPs), while **Ms Roberta Papa** shared her experience as a ‘Next Adopter’.

Dr Roca introduced the core features of the Catalan open innovation hub on ICT-supported integrated care services for chronic patients (Catalonia, Spain). **Dr Roca** stated that the main challenges of transfer and adoption of the Catalan OGP concern the population-based health risk assessment due to the structure of datasets, strategies, and the coordination of stakeholders.

Next, **Mr Rautenberg** presented the OptiMedis model – integrated population-based care (Germany), which aims to create health and value outcomes, such as better population health, reduction of healthcare costs and improved work satisfaction and patient experience. **Mr Rautenberg** reported that the main challenges of transferring this strategy are regional governance structures, availability of data for assessing efficiency gaps and contract management as well as variations in health care financing models and insurance schemes.

The third OGP, the Digital roadmap to an integrated health care sector (Southern Denmark Region) was introduced by **Mr Strand Kudajewski**. The purpose of this project is to provide patients with a coherent and safe journey through the different sectors and actors in the Danish Healthcare system. **Mr Strand Kudajewski** emphasised that the division of the different healthcare actors is one of the main challenges.

Mr Txarramendieta elaborated on the Basque health strategy on ageing and chronicity: Integrated care (Basque Country, Spain), which aims to improve the health and quality of life of the population and enhance the quality, efficiency, and sustainability of the health system. **Mr Txarramendieta** reported that different deployment scales, limited resources and unavoidable deviations are the main challenges in the implementation process.

The core learnings from one of the 21 Next Adopters of JADECARE, the Italian NA, were presented by Ms Papa. Taking the Catalan Open innovation hub as a model, the aim is to implement a risk stratification tool based on adjusted morbidity groups and to build a dashboard of citizens' health, risk, and available services. Ms Papa addressed that practice transfer is a long and challenging process and collaboration with the practice owner is essential.

Take-Home Messages

- The key elements to consider for the successful implementation of good practices in a new healthcare setting are financing, legislation, political support, and collaboration. It is important to clearly define the implementation goals and needs for a new setting.
- The main challenges to the implementation of good practices in heterogeneous healthcare settings are fragmented service structures, governance structures for regional health networks, availability of data, and different deployment scales.
- The implementation and adoption of innovation to a local setting require planning and collaboration among stakeholders. They should be based on a needs assessment and followed by clearly defined goals.
- The JADECARE Joint Action demonstrates that the evaluation of the implementation of innovations can facilitate the implementation and spread of good practices in other settings.

This session was organised in collaboration with the Kronikgune Institute for Health Services Research and the Joint Action (JA) on implementation of digitally enabled integrated person-centered care (JADECARE) that is co-funded by the Third Health Programme of the European Union under Grant Agreement No. 951442 (HaDEA).

Abstract Session 'Management, operations and practice of people-centred systems'

Speakers: **MSc Sebastian Griewing**, Institute for Health Care Management e.V., Philipps-University Marburg, Germany
Ms Ilyse Kenis, KU Leuven, Belgium
Prof Ana Rita Pedro, NOVA National School of Public Health, Comprehensive Health Research Centre, Portugal
Ms Irati Erreguerena Redondo, Kronikune Institute for Health Services Research, Spain
Prof Stefano Villa, Catholic University of Sacred Heart, Italy

Facilitator: **Prof Naomi Chambers**, Professor, University of Manchester, United Kingdom

Summary

This session addressed innovations and challenges towards the development of patient care pathways and patient centrisms, as well as the differences in perception of healthcare delivery by health professionals as compared to patients.

MSc Sebastian Griewing presented a study carried out together with the German Association of Gynaecology and Obstetrics and investigated the application of Artificial Intelligence and distributed ledger technology to develop a digital workflow for breast cancer care. Currently, when patients move between different care providers, their data is often not shared. Having a blockchain-based solution in place would enable breast cancer centres to share patient data – upon patient's consent – and help care providers to rapidly make informed clinical decisions.

Ms Ilyse Kenis looked at the effects of implementing a transmural patient-centred care pathway in ten Belgian hospitals to standardise care for patients on oral anticancer drugs. As these drugs are taken by patients at home, the traditional roles and responsibilities of oncology healthcare professionals change and there is a need to reorganise care. The study identified five factors needed for a successful co-design process: 1) an intrinsically motivated, interdisciplinary project team and coordinator, 2) the presence of a coordinator with leadership competencies, 3) involvement of the physician, 4) involvement of primary care stakeholders, and 5) support by an external coach.

Prof Ana Rita Pedro compared the impacts of Type 2 Diabetes Mellitus (T2DM) on daily life, as perceived by health professionals and people living with T2DM. The study found that the point of view of people living with T2DM and health professionals were divergent. Health professionals reported more negative impacts of the disease, especially with regards to social impact, employment, and family life. Differently, people living with T2DM reported positive impacts of the disease on daily life, which were not valued by HCP. Prof Pedro concluded that is important that perceptions are aligned to improve chronic disease management.

Ms Irati Erreguerena Redondo presented the Gatekeeper project, carried out by the Basque Country, which investigates the use of information and communication technologies (ICT) to support the management of chronic diseases and polypharmacy. The project mainly looks at improving medication adherence and optimising pharmacological prescription, thus reducing health complications and leading to efficient use of healthcare resources. The future aim of the project is to demonstrate that ICT-supported integrated care can be flexible and deployed and replicated at large in different contexts.

Lastly, **Prof Stefano Villa** looked at the impact of care perceived as 'integrated' on the satisfaction of people with epilepsy in six Italian specialised centres. The study found that patients who perceive their care as being integrated were statistically more satisfied with the management of their epilepsy. Co-production and satisfaction were found to be crucial for redesigning care pathways. Having integrated and comprehensive care also resulted in fewer hospitalisations and emergency room visits.

Take-Home Messages

- While patients are moving between different healthcare providers, the data rarely connects. Making use of the latest technology – such as blockchain-based solutions – can facilitate the sharing of patients’ data and help care providers make informed clinical decisions. Ensuring patients’ ownership over their data and how it is shared remains nevertheless the priority.
- The emergence of new treatments – such as new oral anti-cancer therapy – changes the traditional roles and responsibilities of healthcare providers. Co-designing care pathways together with patients is, therefore, crucial to successfully re-organise care.
- Chronic disease management can be improved when patients and healthcare providers have a shared perception of a disease’s impact on daily life.
- Using digital solutions and interoperable and secure platforms can optimise pharmacological prescriptions and treatment adherence.
- Integrated care pathways lead to higher satisfaction amongst people with complex diseases and benefits the healthcare system by reducing hospitalisations and emergency room visits.

Abstract session 'Management, operations, and practice for improving healthcare access, delivery, and outcomes'

Speakers: **Ms Pascale Brasseur**, Miracor Medical, Belgium
Ms Monica Georgiana Brînzac, Babeş-Bolyai University, Romania
Dr Lucrezia Ferrario, LIUC University and LIUC Business School, Italy
Dr Bart Noort, University of Groningen, The Netherlands
Ms Laura Pitkänen, University of Helsinki, Finland

Facilitator: **Dr Ellen Coeckelberghs**, Postdoctoral Researcher, Leuven Institute of Healthcare Policy, KU Leuven, Belgium

Summary

Facilitating access to healthcare implies improving the affordability, accessibility, acceptability, availability, and adequacy of care services. Effective management, operations and practice are key to reducing waste of time and resources. The abstracts in this session explored methods of improving access, delivery, and outcomes of healthcare through improved management, operations and practice.

Ms Pascale Brasseur presented her study about the epidemiology and management of Heart Failure (HF) in ten European countries to better understand its burden and map available resources. HF is a complex clinical syndrome which can be chronic or acute, and the number of people affected is increasing. She found many problems with the treatment for HF such as diagnosis not often being rapid or detailed enough, or that many people do not see the right specialist. There is a lack of screening programs in Europe and vast variation in heart failure care processes among European countries. Patients leave hospitals with substantial needs and few patients are followed up after discharge. She concluded by emphasising that there is a stark difference in resources between and within countries and that more awareness of these issues is needed.

Ms Monica Georgiana Brînzac spoke about community healthcare in Romania and how services have developed in the past three years. Using a mixed-methods approach she found that the number of community health workers (CHW) is linked to the number of health services delivered at the regional level. During the pandemic, there was an increase in the number of services provided by CHW by 114%. In 2020, there was no significant relationship between the number of CHW and the number of services delivered at the county level. The study found that there is a lack of trained personnel and a lack of continuous medical education for the existing staff. Throughout the study, the importance of well-trained health workers was highlighted. There is an untapped potential that these workers can offer.

Dr Lucrezia Ferrario presented her study on factors influencing automated dispensing solutions for in-hospital medications in six European countries. Automated systems for dispensing hospital drugs are becoming an increasingly strategic asset as they offer the possibility to track drugs, reduce errors from prescription to administration, and limit the use of expired and falsified drugs. Using a mixed-methods approach she concluded that technology improves efficiency in patient's clinical pathways and positively impacts trust between healthcare providers and patients. While the benefits of using automated systems were positively recognised, there is a trade-off in terms of time and internal efforts in the learning curve. Education to support technology adoption could facilitate the change management process in European hospitals.

Dr Bart Noort spoke about his multi-case study on reusable medical equipment where he investigated leasing systems of wheelchairs with one of the biggest providers, Rivas-Vegro. The system provides an opportunity to pool durable medical equipment which reduces volumes, centralises management and improves ease of use. Although the system works well and contributes to the speed of ordering equipment, insights and choice, there were no improvements in patient satisfaction and care quality, safety and transfer of equipment

between locations and departments. From his study, there is confusion about who oversees the coordination of these types of services; furthermore, the distinction in domains of care (rehabilitation, home, and nursing home) makes it difficult to market this service.

Lastly, Ms Laura Pitkänen presented her study on measuring the outcomes of physical rehabilitation in early-stage Alzheimer's patients using Patient Reported Outcome Measurements (PROMs) and Patient Reported Experience Measures (PREMs). Rehabilitation has the potential to improve functioning. Thus it can delay the need for more intensive services and, therefore, promises an intervention that can be beneficial for the elderly. Real-effectiveness data is needed to increase the use of rehabilitation interventions. While measuring the outcomes for this patient group was feasible, the subjects needed help with filling in the questionnaires. All questionnaires were considered too difficult and many subjects had difficulty understanding the scales. Simpler questionnaires will be needed for cognitively impaired persons.

Take-Home Messages

- There is a stark difference in resources between and within countries directed to tackling Heart Failure.
- There is an untapped potential for community health workers and the contributions they can make to deliver health services at community level. More attention is needed to develop this role further including interprofessional collaboration and adequate financing.
- Technology acceptance is not dependent on the level of solutions integration but is related to the professionals' role and perception.
- Management competition in The Netherlands is still not fully realised and for making reusable medical equipment services work, policymakers may consider abandoning various care domains or giving regional care providers monopolies based on tendering processes.
- While Patient Reported Outcome Measurements (PROMs) and Patient Reported Experience Measures (PREMs) can be used in early-stage Alzheimer's patients, they will need to be adapted and translated better to maintain their function if used within this population group.

Abstract session 'Management, operations, and practice of people-centred systems'

- Speakers:** **Mr Federico De Luca**, Politecnico di Milano, Italy
Dr Rabiga Khozhamkul, Kazakh National Medical University, Kazakhstan
Mr Rick Overkleeft, 4MedBox Europe B.V., The Netherlands
Ms Laura Pitkänen, University of Helsinki, Finland
Ms Sofia Silvola, LIUC – Università Cattaneo, Italy
- Facilitator:** **Prof Naomi Chambers**, Professor, University of Manchester, United Kingdom

Summary

This session covered the theme of management, operations, and practice in a primary care setting, addressing barriers and facilitation to integration, patient perspectives, innovation, and improvement to the delivery of and engagement with primary care.

Mr Federico de Luca presented a study on the integration of formal and informal care concerning long-term care services at Casa della Salute in Italy. His findings indicated that within the health, social and integrated ecosystems of health and social care, numerous challenges need to be addressed. Community members should be involved earlier in the planning process, and a community nurse is needed. The municipality and association lack cooperation and economic recognition of the association are needed to recruit new workers. Information systems lack interoperability, and a shared access point can help to build trust and belonging, space to share feelings and observations, identify barriers together and co-produce solutions.

Dr Rabiga Khozhamkul followed with a presentation on community empowerment in Kazakhstan, following a reform of primary care in 2019, which moved the focus from disease-centredness to community health. The project called MIOMOS was initiated with a needs assessment through focus groups and a public committee and aimed to empower communities to improve primary healthcare. Results of the project included training, healthy school projects and rehabilitation services development in remote areas. Dr Khozhamkul concluded that bold political decisions, followed by actual engagement with the community lead to gains in health service delivery.

Mr Rick Overkleeft presented the use of personal genomic data within primary care, which relates to the personalisation of medicine. For pharmacogenomics to be implemented, it needs to be brought from the scientific world to the life of patients and doctors. A personal genetic locker can help to circumvent trust issues, so the person controls their genetic and genomic data. Some limitations to implementation remain on regulatory, business, and technological levels. Further benefits presented are the cost and sustainability of this process: in fact, if a person can keep their data, the data can be reused to reduce costs.

Ms Laura Pitkanen presented her study that analysed the needs and expectations of occasional users of primary care services. As primary care functions as a gatekeeper for specialised care and diagnostic examinations, she conducted a study to find out more about the needs and expectations of this segment of the population (occasional users) and who may get a health benefit from this appointment. The occasional user is often overlooked in service development. Future findings of the study will indicate whether and how the service should be adapted to the needs of this segment.

Ms Sofia Silvola presented a method for performance measurement in healthcare including the perspective of the patient. In 2017, Italy approved legislative decree 74/2017 which strengthens the role of users in performance management and introduces the participatory evaluation model. The method coined the 'mystery patient' in 1960 was introduced to test and evaluate medical training from the patient's perspective. The objective of Ms Silvola's study is to understand how this methodology can be used to evaluate patient experiences. Her findings

indicated that the method is inexpensive, feasible and credible; however, it presents ethical issues and is only feasible for one-time interactions between patient and healthcare provider.

Take-Home Messages

- Primary care delivery can be improved through personalising medicine, understanding the needs of under-recognised segments of the population and bold political decisions which allow fast and effective reforms.
- To improve long-term care services, it is important to make greater investments in the voluntary sector, integrate the community early on, develop cooperation between municipal and health services and improve interoperability.

Abstract session 'Management, operations and practice in people-centred systems: a value-based perspective'

Speakers: **Prof Naomi Chambers**, University of Manchester, United Kingdom
Dr Gillie Gabay, Achva Academic College, Israel
Ms Veerle van Engen, Erasmus University Rotterdam, The Netherlands

Facilitator: **Prof Dr Dr Wilfried von Eiff**, Professor, University of Münster; Head, CKM Center for Hospital Management, Germany

Summary

In this session, researchers presented their work on patient-centred care from the perspective of the patient; the hospital; and the healthcare professional. The topics covered were shifting perspective toward patients, organising care around patients, value-based consultations, and the determinants of clinical engagement in healthcare organisations.

Dr Gillie Gabay presented a study on the ability of hospital directors to deal with complexity and adopt a patient-centred approach. The study method was interviews using vignettes and collected reflections on the directors' perception of comprehensibility, manageability, and meaningfulness. While results showed that directors perceived a high level of comprehensibility and manageability at a system level, the directors reported not to be aware of patients' needs. This is because directors do not communicate directly with patients and do not know how to establish trust. Dr Gabay stressed the challenge of coaching clinical directors to see beyond the patient and to look at the person as a whole to be able to provide patient-centred care.

Prof Naomi Chambers discussed the gap between rhetoric and reality around patient-centred care. Her research collected the patient's voice through the powerful method of storytelling. Her findings reflected what is truly important to patients about their care: (1) kindness; (2) attentiveness; (3) empowerment, which is about working with the people; (4) organisational competence, which is about efficient and effective organisation; and (5) professional competence. Prof Chambers emphasised that healthcare systems need all five pillars to deliver patient-centred care.

Ms Veerle van Engen explored the key activities of the patient and/or the professional for an ideal value-based consultation aiming to foster and evaluate value-based healthcare (VBHC) in the consultation room. Her research unveiled different barriers to applying VBHC, such as the limited time of physicians and it not being appropriate for all conditions. Ms van Engen mentioned that bringing VBHC into practice can be efficient with the use of digital technology and data exchange. Moreover, shared decision-making and patient-reported outcome measures (PROMs) are required to include patient-centredness in VBHC practices. She concluded that bringing VBHC into practice requires customisation and an enabling system.

Take-Home Messages

- Directors should see the whole picture and expand their focus beyond the hospital's needs to also include the patient's perspective in their decision-making. A hospital manager should be aware of how patients experience the hospital's workflow.
- Patient-centred care is about transforming the role of patients from a passive recipient to an active individual, with knowledge and decision-making power about their health condition.
- Incorporating patient-centred care into value-based healthcare can lead to tensions as healthcare systems need to change and adapt their current workflow and must take into account limited resources.



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Partner session ‘Better information, better decisions! Advances and challenges in pan-European health information systems during the COVID-19 pandemic’

- Speakers:**
- Ms Favelle Lamb**, Expert in Emergency Preparedness and Response, European Centre for Disease Prevention and Control (ECDC), Sweden
 - Mr Manuel Palazuelos Martinez**, Re-Open EU Coordinator, Joint Research Centre (JRC), European Commission, Belgium
 - Dr Marilia Paulo**, Senior Researcher, Comprehensive Health Research Center, Nova Medical School, Universidade Nova de Lisboa (UNL), Portugal
 - Dr Hanna Tolonen**, Research Manager, Finnish Institute for Health and Welfare (THL), Finland
- Facilitator:**
- Dr Matthias Wismar**, Programme Manager, European Observatory on Health Systems and Policies, Belgium

Summary

The pandemic has highlighted the need for a rapid exchange of population health and health policy information across countries. An informed comparison of data across Europe can provide crucial leads for researchers to model future scenarios and measure the impact of health policy measures. Further, cross-national data exchange can inform decision-makers to conceptualise responses to threats and support citizens to navigate their daily lives and travel across Europe. However, there have been numerous obstacles to the rapid and effective cross-country exchange of information long before the pandemic.

Recently, progress has been made in building new structures as well strengthening existing platforms for data and knowledge transfer and presentation. The [Population Health Information Research Infrastructure \(PHIRI\) project](#) was rolled-out to facilitate and generate the best available evidence for research on the health and wellbeing of populations impacted by COVID-19 in Europe. The PHIRI project joins other information sharing platforms such the ECDC and JRC joint Rapid Response Measures Database, and the Re-open EU platform.

This session hosted pivotal stakeholders who presented their research, platforms, and approaches to explore synergies between different sources and dissemination methods for cross-country health information exchange. They also discussed how better information can further international impact assessment of policy measures and ultimately aid in addressing shared threats with cohesive action.

Dr Hanna Tolonen presented the case for joint platforms and gave an overview of the PHIRI project as a source of health information, capacity-building activities, and research networks. **Dr Tolonen** then introduced the Health Information Portal and its users ranging from researchers to policy and decision-makers, and non-governmental organisations and students. Speaking about the opportunities joint platforms provide, she mentioned mutual learning at many levels, easy and fast exchange of transparent information among countries and enhancing access to data and research opportunities on health-related topics. As for the challenges, **Dr Tolonen** highlighted the technical struggles, the variable extent and coverage of information between countries, and the willingness of countries to engage in information sharing via the portal.

Mr Manuel Palazuelos Martinez introduced the Re-Open EU platform which is aimed at informing the general public of active COVID-19 response measures, particularly travel and entry restrictions, as well as in-country measures in the EU. **Mr Palazuelos Martinez** discussed the challenges in providing public-facing health policy information during fast-moving health emergencies and questioned the future sustainability of the Re-Open EU platform.

Ms Favelle Lamb offered the perspective of the ECDC, one of the key stakeholders of the PHIRI project. **Ms Lamb** presented an overview of the information collation and exchange activities the ECDC has engaged in since the pandemic, primarily featuring non-pharmaceutical

interventions (NPIs). She expressed that compiling Member States' data into one database has filled a gap that many Member States and their respective Public Health Agencies could not fill. Ms Lamb noted that in the future the ECDC would like to continue to gather greater data and collaborate with other sectors outside of public health to create a centralised source of information for research and decision-making.

Dr Marilia Paulo talked about the ongoing research at the Nova Medical School of the Universidade Nova de Lisboa conducted under the PHIRI project to identify new strategies to better monitor health policies that have impacted COVID-19. Dr Paulo and her team tracked and analysed the NPIs implemented by countries during the COVID-19 pandemic. NPIs are used because they are often the first pieces of data released by countries, therefore forming the first data that researchers and decision-makers can use in developing new health information policies for capacity-building efforts and the engagement of more health information experts.

Take-Home Messages

- The EU should invest in building a system that enables the prompt communication of health data that is accessible to all countries. Having access to this data would enable Member States to make informed public health and health policy decisions.
- Investing in cross-country data exchange can provide benefits for multiple stakeholders, from decision-makers to citizens; however, solutions are required to the challenges that persist such as the variety in extent and coverage of information and the willingness of Member States to engage in data sharing.
- Capacity building is key. Whether this is through human capital or advancing technology, the ability to use better technology to make better decisions only goes as far as capacity allows.

This session was organised in collaboration with Gesundheit Österreich GmbH (GÖG) and the PHIRI project that receives funding under the European Union's Horizon 2020 research and innovation programme (grant agreement No 101018317).

Abstract session 'Governance and leadership of people-centred systems: a value-based perspective'

Speakers: **Dr Dolf de Boer**, Nivel, The Netherlands
Martha Kidanemariam, MD, Leiden University Medical Center, The Netherlands
Dr Jordi Mercé, Hospital Universitari de Bellvitge, L'Hospitalet, Spain
Dr Crispin Sachikonye, University of Manchester, United Kingdom
Dr Hilco van Elten, Erasmus School of Health Policy & Management, The Netherlands

Facilitator: **Prof Dr Dr Wilfried von Eiff**, Professor, University of Münster; Head, CKM Center for Hospital Management, Germany

Summary

This session brought together researchers who investigated how value-based healthcare (VBHC) can be more inclusive considering social values, patient's perspectives, as well as performance management perspectives.

Dr Dolf de Boer presented the OECD PaRIS survey which focuses on measuring the experiences (PREMs) and the outcomes (PROMs) of patients living with chronic conditions, aiming to capture the patient's perspective. Although there is only preliminary data available, there was a big interest from countries to join the survey, reflecting a desire to move towards people-centred care systems. The study is already making an impact on policy and has led to legislation to facilitate patient surveys. The challenge the study faces is to involve providers. Looking ahead, the goal is to apply the results of the PaRIS survey with knowledge of healthcare systems and social and political processes within a country and have a policy impact, improve the health system and achieve better experiences and outcomes.

Dr Jordi Mercé presented Ritmocore, a Public Procurement of Innovation (PPI) project, which shifts the focus from procuring devices to procuring services with outcome-based contracts for purchasing pacemakers supported by remote monitoring. As the ageing population is rising there is a growing demand for pacemakers. At the same time, hospitals have high expenses and limited budgets reflecting a need for innovative solutions. The approach of the project is to implement long-term contracts (5 years) with service providers and a risk-sharing model that aligns the interests of providers, patients, clinicians, and the healthcare system. Alternatives such as Ritmocore seem to have benefits as the financial risk is being shared between parties, and patients receive better quality of care and feel empowered as they get involved in their care.

Dr Crispin Sachikonye presented a community-first framework for social value. As the national health service in England faces challenges such as a growing and increasingly diverse population, a need emerges for new ways of working. The research aims to discover how to ensure social value creation in Voluntary, Community and Social Enterprises (VCSEs). The study identified nine mechanisms in academic and grey literature about diversity, equality and inclusion that drive social enterprises to be more inclusive, including the use of language, stakeholder engagement and advocacy. Identifying mechanisms was proven to inform content and practice and helped to move the language from a deficit approach to a dialogue of community-based assets and organisational action.

The research of **Dr Martha Kidanemariam** aimed to determine if what is measured in studies assessing value-based healthcare (VBHC) relates to dimensions of patient-centred care. Although there is no standard definition of patient-centred care, the term is always associated with specific concepts available in the literature such as coordinated care. Results showed that the patient's perspective is poorly involved in VBHC, and quality of care measures are rather defined from a provider, institution, or a payer's perspective. Patient-reported measures can assess VBHC from a patient-centric perspective and involving the patient could provide an understanding of measures that matter.

Dr Hilco van Elten looked at value-based healthcare (VBHC) as a strategy from a performance management perspective. Although VBHC is a popular topic, there is a shortage of studies discussing how it integrates performance management systems. The lack of such studies could be due to tensions between physicians, patients, and managers as they all interpret differently what good care entails. However, recognising these tensions can foster VBHC practices. Further findings from the analysis of the literature indicated a lack of cross-organisational cooperation and a focus on the technical aspects of VBHC. In the future, recognising the tensions and developing performance management can help to bring the value-based healthcare agenda forward.

Take-Home Messages

- Compiling data on patient experiences and outcomes can support policymakers and healthcare providers to make better decisions and deliver better healthcare outcomes and experiences for patients.
- There is a need for health systems to be more inclusive by looking at mechanisms such as language, stakeholder engagement and advocacy. Including communities can support healthcare providers with the challenges they are facing such as the increasing demand and increasingly diverse population.
- Patient-reported measures can assess value-based healthcare from a patient-centric perspective and patient involvement could provide an understanding of quality-of-care measures that matter.

Abstract session 'Management, operations and practice in managing the digital transformation'

Speakers: **Ms Helen Baxter**, University of Manchester, United Kingdom
PhD Student Francesca De Domenico, University of Messina, Italy
PhD Student Susanne Eriksen, Western Norway University of Applied Sciences, Norway
PhD Student Marzia Di Marcantonio, Università Cattolica del Sacro Cuore, Italy
Dr Guido Noto, University of Messina, Italy
Dr Manlio Vinciguerra, Medical University Varna, Bulgaria

Facilitator: **Prof Jill McCarthy**, Associate Professor, University of Manchester, United Kingdom

Summary

In this abstract session, the presenters introduced and discussed new models of integrating digital innovation into healthcare delivery and management. They elaborated on the barriers and determinants of technology usage in healthcare settings and hospitals.

The first abstract was presented by **Ms Helen Baxter** and addressed the introduction of virtual action learning (VAL) in the two healthcare leadership development programmes in the National Health Services (NHS) in England. Through a mixed-method study consisting of surveys and semi-structured interviews, the integration of VAL was investigated. Survey participants reported clear leadership outcomes and improved relationships with peers and managers after participating in VAL. The interview outcomes showed that what facilitates great action learning is clear process, facilitation, safety, openness to challenge, and ability to challenge. Some differences between virtual and in-person communication occurred, especially regarding presence, the acceptance of silence and concerns about interrupting, which indicated the need for clear rules. VAL was found to add value in leadership development programmes and provided opportunities to maintain action learning in an environmentally sustainable way. The challenges perceived were reduced 'flow' of conversation and reduced 'richness' gained in person.

The second presentation was given by **Ms Francesca De Domenico** about the spread of technology innovation in the healthcare sector. Her research method was a bibliometric analysis to compare the two streams of health and management literature. Her findings were that innovation adoption has been researched in the management literature for only ten years, whereas health literature maintained a constant interest to research this phenomenon. Different groups of authors popularised the streams of literature that were analysed and Italian groups of authors were found mainly in health literature. She found that the two streams had a strong interest in the same theme with different purposes. The management literature mainly develops generalisable innovation theories, whereas the health literature focuses on solving contextualised healthcare problems.

Ms Marzia Di Marcantonio presented a literature review regarding the introduction barriers of Digital Therapeutics (DTx) to manage chronic diseases such as diabetes in Italy. DTx are evidence-based therapeutic interventions driven by high quality software programs to prevent, manage or treat medical disease or disorders. The objective of the study was to understand the obstacles to introducing DTx within two frameworks: costs and professionals' literacy. One obstacle identified is European reimbursement law which considers medical devices without distinguishing DTx. Another issue addressed is the perception of DTx as Digital Health and Digital Medicine, of which it is a subcategory. The introduction of DTx in the Italian healthcare system needs to be further investigated by analysing the perceptions of health professionals towards the technology.

Ms Susanne Eriksen presented the implementation of eHealth solutions in municipal healthcare and hospital settings. Research participants were either exposed to the technical

tools or tested them. The main findings demonstrate that limitations such as the lack of time and resources can be tackled by eHealth solutions when innovation readiness is given in a context. When workers in health are ready for innovation, eHealth solutions can be customised to the context and taken up. Innovation fatigue on the other hand led to resistance and lack of support. The speaker concluded that healthcare workers need to be trained in digital skills to adapt to new ways of working and learning.

Barriers and determinants of technology adoption were also examined by **Dr Guido Noto**, who provided insights on healthcare professionals' perceptions. The aim was to understand the decision-making processes that drive health professionals in the adoption and acceptance of new disruptive AI technology. Support from top management levels is needed to ensure trustworthiness when implementing technology. Lack of data management across levels and professional groups was reported to be a barrier. The preliminary results of this study demonstrate the importance of adapting the technology to the work setting and staff and fostering collaboration among other professionals.

Dr Manlio Vinciguerra presented how Artificial Intelligence (AI) transforms human liquid biopsies in the context of liver disease. The study proposed an alternative to traditional liver biopsies, by using AI to detect circulating histones in humans' serum samples using flow cytometry. The method was found to be fast, robust, and more importantly, non-invasive. In addition, the method of "ImageStream" does not require advanced skills from the operator. Dr Vinciguerra emphasised the strong potential for novel therapeutic approaches based on machine learning. He further elaborated on the importance of strong collaborations with numerous departments of oncology, ministries, and the European Union to implement the use of Artificial Intelligence in the context of liver disease.

Take-Home Messages

- Technology implementation within the health care sector is a complex process and many factors (facilitators and barriers) need to be considered. Innovations need to be adapted to the context and readiness of the system.
- Technological innovation should not be seen as a supplement for human workers in healthcare but rather as collaborative and as an add-on to detect what humans cannot diagnose. Machine learning in AI can provide benefits in screening and predicting illness progression.
- Technological innovations should be implemented with a patient- and healthcare-centred focus. There is potential to decrease the workforce burden and increase the quality of diagnosis and treatment through technological innovation.
- Future implementers should adapt innovations to their setting and workforce and plan the implementation through assessment of barriers and facilitators. It remains important to involve stakeholders in a multi-level approach.

Abstract session 'Management, operations and practice in managing the digital transformation'

Speakers: **Dr Natalie Cole**, Tallaght University Hospital, Ireland
Dr Inês Antunes Ferreira, CHUC, Portugal
Mr Joonas Turunen, Mehiläinen, Finland
Prof Dr Dr Wilfried von Eiff, University of Münster; CKM Center for Hospital Management, Germany

Facilitator: **Prof Jill McCarthy**, Associate Professor, University of Manchester, United Kingdom

Summary

In this session the presenters shared their findings on enhancing patient safety, developing effective case management, and improving access to healthcare through digitalisation. The session had a focus on the patient and health care provider perspective on digital transformation.

The first speaker, **Dr Natalie Cole** provided insights on the establishment of an innovation centre within the Tallaght University Hospital (TUH) aiming to transform the health and well-being of patients and position the hospital as a leader in accelerating innovation that transforms the health and wellbeing of patients. The first objective of this project was to develop a project pipeline that meets the needs of patients and service users. The second objective was to evolve the internal operating model and invest in the infrastructure and capacity. The third objective was to strengthen the relationships between the TUH and partners for maximum benefits of health care delivery. A challenge that emerged was the fragmentation of stakeholders such as academia, industry, patients and/or service users and the public sector, and it was addressed using a Quadruple Helix Innovation Model. TUH implemented stage-gating in the planning of projects, a process defined as breaking up large projects into a series of stages and decision points between them. Dr Cole highlighted the importance of using already existing structures to implement change.

Dr Inês Antunes Ferreira introduces the project WoW (Wireless biomonitoring stickers and smart bed architecture: towards Untethered Patients) which aims to biomonitor patients and centralise data collection, processing and transmission. The wireless biomonitoring sensor patches detect vital signs, motion and emotions and feed them into a smart box. After that, a biomonitoring software (smart gateway) translates data interfaces between the smart box and the Globalcare software. A pilot evaluation demonstrated that biostickers had better outcomes than the traditionally used chest strap due to a better algorithm and connectivity. Nevertheless, the developer team acknowledges that improvements in areas such as ethical considerations need to be undertaken. The impact of WoW is predicted to retrieve better data collection and management from the biosticker to the evaluation and analysis of data by using machine learning. Patients can be monitored from their home setting, which can be more comfortable and reduce the workload on health workers.

Another novel innovation, BeeHealthy, was introduced by **Mr Joonas Turunen**. BeeHealthy is a digital healthcare platform which enables healthcare providers to open a digital clinic. Features of this platform are digital triage, guided patient journey, online booking, 24/7 access for patients and a chronic care platform. An evaluation of the digital clinic, introduced in Finland in 2021, shows a cut down in waiting times, solving of patient cases by first digital contact and a fluid transition from digital channels to in-person contact. The overall patient satisfaction was found to be high, though younger patients showed a stronger preference for using the app. In a discussion between the moderator and all speakers, the advantages of the digital clinic were approved, but scepticism remains regarding the quality of care compared to face-to-face care. Nevertheless, the pandemic is seen as a facilitator to test digital health services. The discussion

also led to the acknowledgement that digital clinics can solve acute problems and shift more healthcare capacities towards the care of chronically ill patients who need in-person contact.

Prof Dr Dr Wilfried von Eiff presented a project on Closed Loop Medication Administration based on electronic cabinets and patient-centred medication management. This project aims to enhance patient safety and reduce the work burden for medical staff. The need for this innovation lies within failures causing harm to patients and leading to avoidable deaths and complications. The German government passed a law on enhancing patient safety by implementing a closed-loop medication administration system, mandatory for all hospitals. The realisation of this system is legally requested by January 2025 at the latest, otherwise, penalty fees must be paid. The effects of digitalised medication management are increased patient safety, workload reduction and increased economic resources for healthcare by reducing opportunity costs, such as costs for counter therapies, blockage of beds and loss of capacity. Real-time inventory leads to automated, failure-proofed ordering, delivery, and billing processes of medicines with a prospective check of expiry dates. Survey results on the opinion of hospital managers in Germany indicate that the proposed innovation needs to be established based on values, piloting and change management. To ensure successful implementation, financial restrictions, insufficient information, lack of economical evidence and the fear of change need to be overcome.

Take-Home Messages

- COVID-19 served as a facilitator for the uptake of digitalisation in healthcare services. Digital innovations can reduce workforce burdens and increase patient safety and outcomes.
- Digital care services simplify acute care for patients, reduce waiting times, and shift more capacities towards face-to-face care for chronically ill patients. Nevertheless, digital and face-to-face services do not replace but rather complement each other.
- The systems' and patients' readiness for digital innovations in healthcare are critical for successful implementation. Therefore, it remains important to foster digital innovations exceeding the end of the pandemic to be prepared for future crises.
- Potential ethical consequences must be considered in the process of innovation development and implementation. Data protection is crucial to building and maintaining trust, and regulations need to be regularly adapted to the evolving digital health services.



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Abstract session 'Management, operations and practice in the context of the COVID-19 pandemic'

Speakers: **Dr Eugenio Di Brino**, Università Cattolica del Sacro Cuore, Italy
Dr Padraic Fleming, Trinity College Dublin, University of Dublin, Ireland
Ms Charlotte Jewell, Université de Liège, Belgium
Dr Francisco Ribeiro-Mourão, European Junior Doctors Association, Belgium
Dr Ellen McCourt, European Junior Doctors Association, Belgium
Prof Kris Vanhaecht, Leuven Institute of Healthcare Policy, KU Leuven, Belgium

Facilitator: **Dr Ellen Coeckelberghs**, Postdoctoral Researcher, Leuven Institute of Healthcare Policy, KU Leuven, Belgium

Summary

In this session the speakers discussed the impact of the COVID-19 pandemic in hospital settings across Europe. All healthcare systems experienced a shock, and all capacities were shifted to respond to unprecedented challenges. The healthcare workforce had to interrupt their regular way of working, adapt to new circumstances, and take fast decisions to maintain quality of care and protect patients and personnel. This session summarised the impact of COVID-19 across breast cancer units, junior doctors, paramedics, nurses, doctors and managers.

Dr Eugenio Di Brino presented a research project which assessed how breast units (BUs) in Italy were affected during the pandemic. In the study, three hypotheses were tested. The first hypothesis was that the higher levels of stress perceived by the BU team leader, the higher the patients perceived the quality of care. The second hypothesis was that social distancing during the pandemic negatively impacted the patients' perception of the quality of care they received. The third hypothesis stated that the changes to the composition of teams during the pandemic negatively affected the patients' perception of the quality of care. All three hypotheses were confirmed, leading to the conclusion that it is crucial to give proper attention to teamwork and teambuilding practices, as positive relationships among team members can influence patients' perceptions of the quality of care provided.

Dr Padraic Fleming presented implications for health system reform, workforce recovery and rebuilding based on lessons learnt in Ireland between two time periods: during the economic recession and the COVID-19 pandemic. Both of these periods challenged the resilience of the health workforce. Although towards the end of the recession there were almost equal numbers of staff working in the community as in the acute care setting, the study observed a growing gap during the recovery period, which only got bigger during the pandemic revealing that healthcare systems are organised around a hospital-based model of care. Staff absence rates were higher during the recession as compared to the recovery period and rose again during the pandemic. During the COVID-19 pandemic, more supportive policies were introduced to combat presenteeism. He concluded that action is needed to maintain some of the temporary measures that aligned with policy.

Dr Francisco Ribeiro-Mourão presented a study assessing the sustainability of working environments from the perspective of junior doctors in the light of the COVID-19 pandemic. He highlighted the importance of a good working environment and well-rested and well-trained doctors for patient safety and improved outcomes. In institutions that were not prepared for the pandemic, violations of the European Working Time Directive (EWTd) increased, and healthcare workers suffered from working overtime. Study findings indicated that 83% of junior doctors exceeded the maximum working hours set by EWTd. In comparison, only 12% reported a penalty system in case of transgressions/non-compliance. He concluded that the working culture should transform into a safety culture, reducing working hours and ensuring rest, adhering to EWTd and proper planning and strategic investments in the workforce.

Dr Ellen McCourt presented the impacts of COVID-19 on the postgraduate training of Junior Doctors and how this has changed between 2020 and 2022, as well as the readiness to mitigate

disruptions in a future pandemic. In 2020, 88% of nations reported a negative impact on postgraduate training; 38% of nations reported training stopping completely. Two years into the pandemic, 45% of nations reported that postgraduate training was delayed or stopped. All nations reported that Junior Doctors were redeployed and there was no consistent solution to the impact on postgraduate training. Potential solutions identified were adapting the training and examination to the online environment, extending training funding and protecting training in the future by recognising the long-term impacts of short-term disruptions on healthcare.

Ms Charlotte Jewell emphasised the changes implemented during the pandemic by presenting a specific case from a university hospital in Belgium where the logistics and the medical department collaborated to address an equipment shortage. The collaboration led to unprecedented knowledge and information transfer and a greater understanding of the different professions. Ultimately, it emphasised the distance between the logistical and healthcare departments and put forth the need for better communication between them. She concluded that change is expected after the COVID-19 pandemic and it is important to take a closer look to understand how these changes evolve and establish their effects.

Lastly, **Prof Kris Vanhaecht** presented a study on the Flemish healthcare workforce, analysing the evolving impact on healthcare professionals during three COVID-19 waves. The study captured the stress reactions of healthcare workers before and after the pandemic. Respondents reported an increase in stress factors such as hypervigilance, fatigue, and difficulty sleeping during the pandemic as well as professional doubts such as feeling alone, uncomfortable within their team and considering leaving their profession. Although acute reactions seemed to be decreasing over time, chronic reactions remained high. On the other hand, there was an increase in reported feelings of being part of a team and making a difference. He introduced the concept of post-traumatic growth which can be seen as a positive outcome of the pandemic on the health workforce.

Take-Home Messages

- Increased stress among healthcare teams can lead to better-perceived quality of care by patients. It is crucial to give proper attention to teamwork and teambuilding practices, as positive relationships across teams can influence patients' perceptions of the quality of care provided.
- Poor training programs of current junior doctors will harm future general doctors and patients. Learnings from the pandemic should be implemented to ensure that future crises do not adversely affect training programs.
- The changes implemented during the pandemic can foster change in a broader organisational sense that can benefit the healthcare systems as a whole.
- The pandemic revealed multiple existing problems emphasising the importance of investing in the healthcare workforce.

Abstract session 'Sustainable healthcare systems, leadership and task-shifting'

Speakers: **Ms Sarah Alulis**, Janssen-Cilag, Denmark
Prof Régis Blais, School of Public Health, University of Montreal, Canada
Dr Ines Ferreira, Centro Hospitalar e Universitário de Coimbra, Portugal
Prof Dr Marija Jevtic, Faculty of Medicine University of Novi Sad, Serbia
Dr Eszter Kovacs, Semmelweis University, Hungary
Dr Vibeke Sundling, University of South-Eastern Norway, Norway

Facilitator: **Dr Marius-Ionuț Ungureanu**, Director of Education, Department of Public Health, Babeş-Bolyai University, Romania

Summary

In this session, the research presented outlined changes in health workforce operations and capacity, including task-shifting, towards more sustainable healthcare leadership and delivery.

Ms Sarah Alulis presented the optimised patient treatment initiative (OPT-In), which addressed the current healthcare system thinking that risks leaving patient outcomes as the last consideration. Currently, healthcare systems are focused primarily on the short-term, COVID-19 recovery and cost savings and cutting. The optimised patient treatment initiative, therefore, aimed to demonstrate that adopting the 'best treatment first policy', instead of the 'cheapest treatment first', results in health system sustainability and improves patient outcomes. In all countries where OPT-In has been assessed, patient failures decreased. Interestingly and importantly, OPT-In also demonstrates that the improvement in patient outcomes can be achieved through budget re-allocation.

Prof Régis Blais presented the research of his team on task sharing among healthcare professionals for sustainable health systems. As health systems are under a tremendous amount of pressure due to increasing demand and limited resources, decision-makers are looking for ways to devise more efficient and sustainable health systems. One way is to make better use of the skills of various healthcare professionals. Therefore, the study aimed to identify the types of tasks that could be shared between healthcare professionals, the obstacles and facilitators, and the potential benefits of task sharing. As a result, numerous tasks that can be shared between physicians and nurse practitioners, physicians and registered nurses, nurse practitioners and registered nurses and nursing assistants and care attendants were identified. Additionally, tasks that should not be shared were identified for each health professional category.

Dr Ines Ferreira presented the introduction of an innovation centre at the public hospital Centro Hospitalar e Universitário de Coimbra (CHUC). Like many healthcare institutions, CHUC faces challenges of rising demand, increasing costs and limited resources. To address these challenges, CHUC is introducing health innovations and is implementing an open innovation model established in collaboration with start-up incubators and accelerators. The project consists of a ten-step framework: 1) Define areas of priority within the hospital; 2) Identify challenges; 3) Develop the innovation infrastructure; 4) Establish expected results; 5) Identify potential solutions; 6) Evaluate the solution; 7) Execute the pilot; 8) Measure results and mark conclusions; 9) Expand to more services; and 10) Implement in the structure of the organisation. An important aspect of the project is the involvement of professionals throughout the whole process, aiming to add value to the organisation and the entire region and improve patients' quality of life. A challenge may be the cultural paradigm and people's reluctance to change. The implementation process will be studied to further determine barriers and facilitators.

Prof Dr Marija Jevtic presented actions to strengthen the capacity of the health workforce in an area of the climate crisis. The COVID-19 pandemic showed how fragile the health workforce can be and the need for crisis preparedness emerged as a strong lesson learnt, especially considering future climate changes and related disruptions. The 26th United Nation Climate Change Conference of the Parties (COP26) was an opportunity to highlight and evaluate the

role of health systems in contributing to climate change, hospital carbon footprints, emissions reduction and adaptation and mitigation strategies. Prof Dr Jevtic presented the World Health Organisation 2020 guidance for climate resilient and environmentally sustainable healthcare facilities. Key takeaways from her analysis are that these interventions will require knowledge, skills, and significant changes in working practices. Changes will need to be made to the way the health workforce is educated to shape sustainable systems and achieve the goals of climate-smart healthcare.

Dr Eszter Kovacs presented the potential of Artificial Intelligence (AI) in healthcare, which can be applied in pathology, radiology, and dermatology, by scanning, annotation, machine learning, automated image evaluation and test results. The benefits of using AI are the increased amount of information and data which can be evaluated; the speed with which algorithms can be processed compared to the human brain; and cost savings. Her study focused on digital task shifting in the speciality field of pathology to assess the potential benefits. Results showed that pathology is among the most relevant fields for digitalisation and benefits were recognised in human resource capacity and supply. The use of digital task shifting eased the administrative workload and reduced errors in sample tracking. Further, in pathology sample registration there were savings in time and finances. Human intuition cannot be replaced by machines, and digital task shifting should be seen as a tool for professionals to be empowered and upskilled.

Lastly, **Dr Vibeke Sundling** presented the TaSHI-project, assessing the knowledge, skills and competency required for task shifting. The project identified pre-requisites such as resources, communication skills, a patient referral system, evidence-based guidelines and patient records and record keeping. It also described four foundations, namely 1) interdisciplinary training, collaborative practice; 2) transversal skills; 3) disruptive change and resilience; and 4) cultural sensitivity, flexibility, and readiness. Further research is needed to define models for collaborative learning across disciplines and transversal skills as a foundation for task shifting. The TaSHI-project will develop and pilot a curriculum, including a flexible, digital learning model and learning materials for task shifting.

Take-Home Messages

- Task shifting and task sharing can alleviate the pressure on the health workforce, however, to be successfully implemented, it is important to assess what the workforce needs and provide good communication and specific education on digitalisation and task shifting.
- The COVID-19 pandemic exposed the vulnerability of the health workforce, and health systems must focus on preparing the health workforce for a long-term climate crisis. In addition to developing knowledge and skills, working practices will need to change to reduce the environmental impact of the healthcare system.
- There are multiple stages in the process of implementing innovation in established healthcare institutions. It is crucial to involve the healthcare workers into the innovation process from the beginning to ensure cultural adaptation and the uptake of innovation.

Abstract session 'Management, operations and practice of the workforce of the future'

- Speakers:** **Ms Anoeek Braam**, Erasmus School of Health Policy and Management, The Netherlands
MSc Karin Kee, Vrije Universiteit, The Netherlands
Dr Ellen Kuhlmann, Hannover Medical School, Germany
Dr Minna Kaarakainen, University of Eastern Finland, Finland
MSc Liliana Sousa, EEG- University of Minho, Portugal
MSc Frank van de Baan, Maastricht University, The Netherlands
- Facilitator:** **Dr Eszter Kovacs**, Assistant Professor, Health Workforce Planning Knowledge Centre, Semmelweis University, Hungary

Summary

This session focused on clinical leadership, mental health support, inclusion, and engagement of the health workforce, addressed from several perspectives.

Ms Anoeek Braam presented the importance of clinical leadership in crossing medical specialist boundaries to ensure care for comorbid patients. She investigated the role of clinical leadership in crossing medical boundaries and whether medical specialist groups should be dissolved to stimulate collaboration between specialities. It was found that the coordination of care is more effective within a medical speciality group, rather than among physicians from different specialities. Clinical leadership only plays a limited role in crossing the medical specialist boundaries. Although a focus on collaboration among specialities deserves attention, it should not be assumed that it should replace the base of the own speciality.

MSc Karin Kee elaborated on the shortages of the nursing workforce and the need for their retention. It is important to include nurses in decision-making processes. Though Dutch care organisations state that nurses have opportunities to partake in processes and make their voices heard, nurses report an illusion of influence. The main barriers for nurses to engage in decision-making are fear, lack of information and time due to clinical task sets, and the failure of follow-ups. Nurses' voices remain unheard. It is the responsibility of managers and organisations to integrate nurses into decision-making and provide opportunities that fit into their everyday work situations to overcome the illusion of influence.

Dr Ellen Kuhlmann presented the importance of integrating the needs of small medical specialities in future health workforce management, specifically in the case of rheumatology in Germany. The health labour market analysis found that the absolute number of rheumatologists working over retirement age exceeded those aged 40 and under. 81% of them rated their workload as high or very high and one in six rheumatologists suffered from stress and burnout. COVID-19 was an amplifier of stress with digitalisation being a major stressor, together with the increasing demand for communication and patient education. Further, experiences of gender-based discrimination and sexual harassment and violence were frequently reported, especially by women. In conclusion, healthcare management must listen to healthcare workers' perceptions to improve work conditions, especially by reducing stress and mental health risks and preventing sexual harassment and gender discrimination. Health workforce policy must consider small medical specialities.

Dr Minna Kaarakainen reported on the broken psychological contracts in health and social care among nursing professionals, focusing on Finland and the difficulties to employ nurses and auxiliary nurses. The demographic change affects the nursing workforce in terms of increasing patient demands and decreasing nursing staff. In 2021, 295 stories were collected and analysed from nurses about leaving their profession based on Rousseau's concept of the psychological contract. Nurses reported that the shift from value-based nursing to efficient performance led to feeling rushed and overworked, which influenced the quality-of-care provision. Moreover, they mentioned issues in salaries and leadership as reasons to leave their profession. It is crucial

to recognise factors that breach the psychological contract, show appreciation, and focus on individual, leadership, management, and policy levels.

MSc Liliana Sousa presented the findings of her study on how to effectively support the participation of health professionals in research projects in Portugal. Often scientific research is very complex and can benefit from the engagement of health professionals to include clinical and practical insights. There are numerous enablers to increase health professionals' research engagement, such as funds, equipment, collaborative relationships and having time for research. On the other hand, barriers to engagement are the absence of shared information and the non-recognition of research contributions. Furthermore, Ms Sousa identified numerous cultural, behavioural and capacity-level enablers and barriers.

MSc Frank van de Baan investigated the reasons for the low uptake of psychological support by the health workforce during the COVID-19 pandemic. Mr van de Baan presented the perceptions of health workers towards mental health support. Healthcare workers rely on external social support, do not feel the need for support, or feel that the mental health support opportunities offered at work do not fit their needs regarding the time available, or they fear being stigmatised by their colleagues. A more proactive approach is needed and should be mediated by team leaders, who are responsible to monitor staff well-being. Leaders need to be trained in normalising discussions about mental health issues, realising early signs and promoting mental health support options to address health workers' psychological status.

Take-Home Messages

- Health workforce planning needs to consider a variety of factors to improve working conditions and facilitate transparent and inclusive participation of health professionals in decision-making to prevent health workers from reorientation and promote retention.
- Physicians still have a stronger stake in decision-making processes than nurses. In general, the workforce is dominated by a hierarchical organisation. Quality healthcare requires the crossing of medical speciality groups and collaboration within and across different health workers.
- Stronger collaboration between clinical care and research can benefit clinical outcomes and the quality of care.
- The leadership of healthcare organisations should address the needs of health workers at all levels, ensuring workforce capacities and the well-being of workers. It is important to normalise the discussion of mental health topics and support seeking to prevent psychological distress and staff shortages.

Abstract session 'Policy and regulations for the workforce of the future'

Speakers: **Ms Audrey Fontaine**, European Health Parliament, Belgium
Dr Sule Kurt, KU Leuven, Belgium
Dr Francisco Ribeiro-Mourão, European Junior Doctors, Belgium
Dr Sarah Willis, University of Manchester, United Kingdom
Ms Renate Wit, Nivel, The Netherlands

Facilitator: **Prof Dr Ronald Batenburg**, Research Coordinator, NIVEL; Endowed Professor, Radboud University, The Netherlands

Summary

In this session, the presenters addressed the well-being and future of the health workforce. The speakers provided reflections on planning to build resilient health systems, developing professional competency frameworks, and implementing and enacting policy in practice.

Ms Audrey Fontaine proposed a youth perspective to improve the well-being of the healthcare workforce. She stated that healthcare workers are key to resilient health systems because they must provide essential services while responding to increasing demands and adapting to new technological services. Tackling the workforce shortages is not only about employing new workers but also re- and up-skilling. She gave an overview of the European Health Parliament, as a multistakeholder initiative that connects and empowers youth to rethink European policies and build a healthier and more innovative Europe. The 7th edition of the European Health Parliament was titled 'Recover, Reinvest, Reinvent: Creating a resilient European Health union' and is composed of numerous committees. The Wellbeing of Healthcare Workers Committee proposed policy priorities based on evidence collection, revised them with key stakeholders and harmonised them across committees. The proposed priorities are mental health and self-care; education; working conditions; empowerment; value and recognition; sharing and encouraging new practices.

Dr Sule Kurt presented a study about the status of nursing and midwifery in the WHO European Region. The study aimed to explore the current conditions of strengthening nursing and midwifery with education and training, talent pool, working conditions, work environment and evidence-based health practices. The main findings show that educational programs for nursing and midwifery vary between Member States and are either provided separately or integrated. For midwifery 76% and for nursing 90% of Member States require a bachelor's degree. Master level is required in 59% of Member States for midwifery and 76% for nursing education. Still, the educational programs for both professions are not available in every country and show many variations.

Dr Francisco Ribeiro-Mourão presented a study which assessed the changes to medical workforce planning triggered by the COVID-19 pandemic. The method of the study was moderated and structured as a topic debate on COVID-19 and medical workforce planning (MDWP) in 2021. 19 participants from junior doctor organisations participated. The general trends that were reported showed that all participants experienced a shortage of specialists, an increase in both the number of graduates and healthcare demand in all countries and MWFP problems which lead to resident physicians' work overload. Findings from the general trends of MWFP problems state that working conditions must be improved across Europe to ensure doctors' retention. Greece and Estonia reported emigration/brain drain as a problem due to poor working conditions. All respondents considered that the pandemic had worsened junior doctors' working conditions. To address these issues, policies need to be implemented at the European, national, and local levels. More involvement of professional stakeholders and junior doctor organisations is needed.

Dr Sarah Willis investigated how private providers and health workers adopt or enact policy in practice in the UK. The NHS long-term plan includes the incentivisation of practice change in

the pharmacy workforce to provide clinical and patient-centred care. The plan is to assess the context and meet the increasing patient demands by putting mechanisms such as Pharmacy Integration Fund (PhIF) training pathways in place to enhance pharmacists' skills and confidence to deliver clinical services. Interviews were conducted with employers of and community pharmacists, who were taking part in training to expand their scope of practice. Employees felt positive about enhancing their clinical skills and employers recognised the competitive advantage of advanced training skills. The financial context remains challenging and the lack of contracted services to incentivise sector change constrained the realisation of the policy vision. Putting policy into practice requires the commitment of a range of stakeholders with potentially divergent professional and organisational interests and priorities. A common agenda is needed, and policy managers must manage outside the public sector when working with private providers.

The last abstract was presented by **Ms Renate Wit**, who conducted a document analysis to systematically map the competencies described in the professional competency framework for registered nurses in The Netherlands, Belgium, the United Kingdom, Canada and the United States. Through the professional competency frameworks of the countries, she identified and categorised overarching domains: professional attitude; support of self-management and patient empowerment; health promotion and prevention; organisation of care; communication and collaboration; clinical care in practice; promotion of quality and safety; education; leadership and technology and eHealth. Her recommendations are to get insights into the differences and similarities among countries and healthcare systems and align professional competency frameworks between countries by standardising curricula.

Take-Home Messages

- Many countries have different priorities and approaches for health workforce planning and organisations. This should be seen as an opportunity rather than a problem. Gaining insights into the differences and similarities can be beneficial to aligning professional competency frameworks.
- The health workforce is critical for the resilience of health systems. Therefore, health workers should be engaged in the development and translation of policies into practice, together with a variety of stakeholders who represent potentially divergent professional and organisational interests and priorities.
- The COVID-19 pandemic has exacerbated existing health workforce issues such as shortage of specialists, brain drain and poor working conditions. Working conditions of the health workforce must be improved with appropriate policies that involve all stakeholders.

Abstract session 'Governance and leadership of the workforce of the future'

Speakers: **Prof Mohamad Alameddine**, University of Sharjah, UAE
Ms Monica Georgiana Brînzac, Babeş-Bolyai University, Romania
Prof Tania Gaspar, University/CLISSIS, Portugal
Dr Jill McCarthy, University of Manchester, United Kingdom & **Dr Steve Gulati**, University of Birmingham, United Kingdom
Dr Katherine Perryman, University of Manchester, United Kingdom

Facilitator: **Mr George Valiotis**, European Health Management Association (EHMA), Belgium

Summary

In this session, the presentations provided insights into the current and future trends impacting the health workforce, the effect of COVID-19 on the health workplace, professional stress management, work-life balance, pandemic risk and protection, and innovative solutions with digitalisation.

Ms Monica Georgiana Brînzac presented her research exploring the evolution of the services delivered by community health workers (CHW) in the past three years at the national level in Romania. Using a mixed methods approach she found that the number of community health workers is statistically significant in the delivery of health services at the regional level for the years 2018 and 2019, while in 2020 the number of CHWs did not predict the number of services delivered. Further, the pandemic influenced the number of services delivered by CHWs. She found a strong statistical significance that the number of CHWs positively predict the delivery of health services at the county level for the years 2018 and 2019, while in 2020 there was a lack of statistical significance in the relationship between the number of CHWs and the number of services delivered. In conclusion, the importance of CHWs should be promoted with financing, professionalisation, interprofessional collaboration, and information exchange between counties.

Prof Mohamad Alameddine discussed factors associated with work-life balance among primary healthcare professionals (HCPs) in Oman. Managing work and non-work-related tasks is an issue in all markets, but especially in the health sector due to the heavy workload and the jobs demanding focus. In his cross-sectional study, he assessed the levels of work-family conflict among HCPs, the perceived impact of COVID-19 on work-life balance and the association between the sociodemographic variables and work-life balance. All indicators point toward stress and conflict that can lead to profound consequences correlated with depression, likelihood to quit, lower job satisfaction, and conflict with their partner. Better work-life balance was found with people above 50 years, as with maturity and experience comes the ability to maintain balance. Unmarried HCPs were also more likely to perceive having a work-life balance. Nurses and physicians, and HCPs with a lower income had lower work-life balance. Recommendations were to target mental health services to HCPs to mitigate the burden of the COVID-19 pandemic.

Dr Jill McCarthy and **Dr Steve Gulati** presented insights from their two institutions regarding the conversion of in-person learning to virtual environments. Participants in their programme were all working at the NHS frontline, and virtual teaching allowed them to finish the courses during the COVID-19 pandemic. In the evaluation of the programme, they learnt that it is important to listen to and improve the programme constantly while considering the different learning environments and the wellness of participants. They found that virtual training delivery holds many advantages such as flexibility, family friendliness, convenience, and allowing participants to go at their own pace. Going forward they recommend offering twin programmes of both in-person and virtual learning.

Dr Katherine Perryman presented on the topic of conceptualising leadership development to develop a theory of change. Global healthcare institutions invest in leadership development

programmes; however, there is a lack of robust evidence of the effectiveness of these investments. In her research, she explored four key topics related to the purpose, factors, development methods and impact of leadership development programmes, with nine key stakeholders and 18 participants. The study finding indicated that a collaborative approach to developing a theory of change with key stakeholders was illuminating and insightful. The theory of change provides a systematic basis to inform an evaluability assessment leading to the design of a rigorous and robust programme evaluation. For the future, she suggested using the theory of change to identify existing evidence and gaps in the evidence base regarding the impact of such programmes and inform possible data sources and the development and appraisal of evaluation options.

Lastly, Prof Tania Gaspar presented their study on healthy workplace ecosystems and professionals' stress management during the COVID-19 pandemic. The Portuguese Lab for Healthy Workplaces aimed to study the well-being of professionals and organisations and promote and protect healthy work environments. With the support from the World Health Organisation, the Ecosystems of Healthy Workplaces (EATS) assessment tool was developed including 62 items for nine dimensions that can be used for assessing healthy workplaces in other sectors as well. She concluded that an ecological perspective should be adopted to improve the quality of health organisations, which includes all actors in the planning, implementation and assessment processes. Lastly, mental health and psychosocial risks at work are priorities to improve the quality of health organisations.

Take-Home Messages

- When it comes to work-life balance, health workers require specific mental-health support, in addition to knowledge on methods and tools to manage factors of stress and avoid or resolve conflicts with their families.
- Virtual education has its advantages such as being able to follow courses at their own pace from anywhere but may not be fitted to all types of learners. Courses need to be adapted to the virtual environment by offering short forms of learning and planning longer breaks, which allow for social interaction and activities.
- The theory of change provides a systematic basis to inform an evaluability assessment leading to the design of a rigorous and robust leadership development programme evaluation.
- Mental health and psychosocial risks at work are priorities to improve the quality of health organisations, and the Ecosystems of Healthy Workplaces (EATS) assessment tool can be useful for improving workplaces in different sectors.



EHMA 2022

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AND OUTCOMES**

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Partner session ‘Addressing the burden of paediatric Respiratory Syncytial Virus (RSV): preparing for access to immunisation’

Speakers: **Prof Susanna Esposito**, Professor of Pediatrics, Parma University; Director of Pediatric Clinic, Pietro Barilla Children’s Hospital; President, WAidid, Italy
Mr Richard Osei Yeboah, Research Fellow, Centre for Global Health, University of Edinburgh, United Kingdom
Dr Francisco Ribeiro-Mourão, Pediatrician, CMIN, Porto Centre and University Hospital; Treasurer, European Junior Doctors, Portugal
Dr João Rodrigues Da Silva Breda, Senior Advisor, WHO Office Quality of Care and Patient Safety, Greece

Facilitator: **Prof Federico Lega**, Full Professor of Health Administration, Public Health Department, Milan University; Director, Research Centre in Health Administration, Italy

Summary

Respiratory Syncytial Virus (RSV) is an urgent threat to health care systems accounting for 63% of acute low respiratory tract infections (LRTI) in infants. In infants, LRTI can include pneumonia and bronchiolitis. RSV is a leading cause of hospitalisation for all infants and is so contagious that almost all infants are infected by their second birthday. The severity of RSV is unpredictable, and its burden extends beyond the hospital to primary health care providers and outpatient centres. There is no active treatment for RSV; care is primarily supportive and RSV-infected infants are expected to clear the infection on their own. Before COVID-19, RSV was the leading respiratory virus with implications for both elderly and infant populations. The COVID-19 pandemic raised awareness of the public health threat of respiratory illnesses and the need for new approaches to infection control and prevention. This session provided an overview of the burden of paediatric RSV infections drawing on evidence gathered in EHMA’s Europe-wide survey and report on the burden of paediatric RSV on European health systems.

Mr Richard Osei Yeboah presented an overview of the [REspiratory Syncytial virus Consortium in EUrope \(RESCEU\)](#) project, and shared results from consortium studies on the scale and impact of paediatric RSV in Europe. Study results showed that the highest burden of hospital admissions for paediatric RSV (90%), occurs in children under 1 and hospitalisations are highest for infants aged 2 months. Between 50% and 75% and three-quarters of hospital admissions for children under the age of 5 with respiratory tract infection (RTI) are coded as RSV. Further, RSV infection in the first 2 years of life might be associated with subsequent asthma and wheezing. Hospitalisation rates for paediatric RSV vary widely across the EU, as do variations in clinical practice recommendations for oxygen therapy and pharmacological management of bronchiolitis. While general agreement exists on avoiding the use of unnecessary tests and indicators for admission - conflicts regarding the use of medicinal treatments exist in clinical practice guidelines. Further, there is a lack of systematic processes in the standard formulation and a lack of consultation with families of affected children in developing clinical practice guidelines for the treatment of RSV.

Dr Susanna Esposito referred to EHMA’s recent white paper and survey, ‘[The health system burden of respiratory syncytial virus \(RSV\) in Europe](#)’ which found disruption from the virus affects optimal health system performance at all levels. In Winter 2022, Italy experienced two RSV infection waves. During the first RSV wave, an uncommon increase in respiratory failure in children aged 2-3 years was observed by professionals. Over 50% of bed occupancy during respiratory infection season is due to RSV and during virus peaks, working hours increase impacting healthcare professionals’ feelings of stress, exhaustion, and burnout. RSV treatment across Europe between primary care and hospitals is heterogeneous explaining why 85% of healthcare professionals consider immunisation interventions and the use of monoclonal antibodies to be important preventative measures. Currently, no vaccine is available to protect neonates and infants against RSV in a routine manner. However, when available, immunisation interventions should be prioritised for infants in their first year of life and before peak RSV

season. Preventative measures have the potential to be a great success, especially considering the impact of RSV on children.

Dr Francisco Mourao shared that RSV usually starts mild and then gets very severe contributing to physicians' impressions that RSV is not important unless they have experience treating it. Consequently, there is often an undue burden due to the mistreatment of RSV symptoms, specifically in outpatient centres. Thus, RSV can require multiple admissions in multiple settings contributing to the burden felt across the health system. Peaks in RSV increase healthcare demand, waiting times, and referral times and delay doctors' response times. Figures from EHMA's white paper where 85% of respondents from primary care settings and 95% of professionals in emergency care departments report moderate to extreme disruption during peak virus season are quite frightening as the increased workload from RSV contributes to emotional stress and burnout. Prevention efforts should not be limited to children and the number of RSV infections in older adults cannot be ignored. The health community has experienced the benefits of immunisation for other diseases. Investment in research and development for RSV immunisation was called for. **Dr Mourao** cautioned against the use of unnecessary medications to treat RSV in children and called for harmonisation in treatment interventions across healthcare settings.

Dr João Rodrigues Da Silva Breda, Special Advisor WHO Quality of Care and Patient Safety, addressed the implications of RSV on the quality of health care. From a preventive mindset, **Dr Breda** stated that health systems need to review the low percentage of budgets allocated to prevention to address the burden of RSV. Variabilities in treatment show a need for investment in practices to address RSV and should address gaps in communication and prevention. Interventions to treat RSV should include immunisation measures. This is crucial to address the health system burden caused by RSV infections and is an important element of prevention policies. While patient experience is very important, healthcare professionals' experience should not be neglected in tackling the RSV burden. The presence of misinformation related to vaccines is a significant issue that has been exacerbated by COVID and is not being dealt with appropriately. Public authorities, universities and health systems need to work together to increase trust in science and address the issue of misinformation. A system fit to take care of RSV needs to be organised keeping in mind the large implications for patients' and health professionals' quality of life.

Take-Home Messages

- The highest burden of RSV hospital admission is amongst new-born babies (0-28 days) and infants in their first RSV season.
- Infants might be at high risk of developing wheeze and asthma following an episode of RSV infection.
- Pressures in primary care settings and hospitals increase working hours and affect healthcare professionals' feelings of stress, exhaustion, and burnout.
- RSV treatment across Europe between primary care and hospitals is heterogeneous. Treatment interventions need to be standardised across healthcare settings.
- Equal access to immunisation for all infants is an important part of prevention policies and intervention measures that can improve the quality of care and reduce the RSV burden on health professionals and the health system are needed.

This session was organised thanks to the support of Sanofi.

Partner session ‘The potential of innovative diagnostic tools: personalised disease management for improved health outcomes in COVID-19 patients’

- Speakers:**
- Prof Sandra Buttigieg**, Head of Department Health Systems Management and Leadership, University of Malta, Malta
 - Dr Yvan Devaux**, Head of the Cardiovascular Research Unit, Luxembourg Institute of Health, Luxembourg
 - Dr Damien Gruson**, Chief of Department of Laboratory Medicine, St-Luc Hospital, Belgium;
 - Mr Ed Harding**, Director, Heart Failure Policy Network; Managing Director, The Health Policy Partnership, United Kingdom
- Facilitator:** **Ms Anett Ruszanov**, Director of Policy and Programmes, European Health Management Association, Belgium

Summary

The session was opened by **Dr Yvan Devaux**, who provided an overview of the European Cooperation in Science and Technology (COST) and the COVIRNA project. COST is a funding organisation for the creation of research networks, called COST Actions. The COVIRNA project built on the network within the EU-CardioRNA COST Action, a collaborative pan-European network of multidisciplinary researchers, clinicians, and industrial partners aiming to accelerate the understanding of transcriptomics in cardiovascular diseases (CVDs) and further the translation of experimental data into usable applications to improve personalised medicine in this field. The [COVIRNA project](#) will develop a simple, minimally invasive and rapid molecular diagnostic kit to predict cardiovascular outcomes of COVID-19 patients. He reflected in particular on the expected impact of the COVIRNA solution. The kit will help improve individualised surveillance, care, and follow-up of COVID-19 patients in the context of the current pandemic. This will result in improved clinical outcomes and quality of life of these patients, and reduced mortality rates. Ultimately, the project will reduce the societal and economic burden of COVID-19.

Dr Damien Gruson presented the current management of cardiovascular complications in COVID-19 patients. Dr Gruson provided an overview of the potential long-term consequences of COVID-19, reflecting in particular on cardiovascular manifestations of the disease such as myocardial infarction, coronary heart disease, cardiomyopathy, and arrhythmias. **Dr Gruson** provided an overview of how data science can be used for CVDs management. In addition to being used for early risk estimation and to improve diagnosis of CVDs, data science can also enhance precision care and outcomes monitoring and assist with real-time monitoring of diseases and associated risks. Furthermore, it can be utilised for data aggregation and integration of omics. He highlighted the potential of health-based apps and wearable sensors to support patients and physicians in CVDs management, emphasising that these tools show a degree of variability associated with the imprecision of the point-of-care testing device. **Dr Gruson** concluded underlining the value of a multidisciplinary approach to CVDs management and the need to invest resources in the early prevention of CVDs.

Prof Sandra Buttigieg shared the perspective of health management and leadership on innovation development and uptake in healthcare. **Prof Buttigieg** presented the framework of healthcare innovation. Quality, costs, safety, efficiency, and outcomes are the factors that need to be considered in innovation development and adoption. These will have a direct impact on treatment, diagnosis, prevention, education, research, and outreach. It is important to look through the eyes of the patient, taking into account how the patient is seen and heard and how their needs are met. **Prof Buttigieg** also spoke about the five stages that health leaders should plan for in battling COVID-19: resolve, resilience, return, reimagination, and reform. The COVIRNA solution belongs to the return stage when organisations need to balance the need to re-activate business systems with the possibility that the virus might re-emerge; and the re-imagination

stage when healthcare organisations and their key players need to reimagine how health systems are structured and how to deliver health services more effectively. Speaking about the COVIRNA project, Prof Buttigieg underlined that it is a great example of evidence-based medicine. She suggested that COVIRNA uses technology and research without forgetting about its social and economic dimension and impact. Prof Buttigieg emphasised that in addition to transformational leadership, leadership agility is equally important to facilitate the uptake of innovative solutions in healthcare. Agile leaders are able to understand environmental change, embrace inconsistencies and navigate diverse followers, whilst sustaining some sense of stability and coherence in an ever-changing world.

Mr Ed Harding spoke about the potential of innovative diagnostics for the management of cardiovascular diseases. Mr Harding underlined that CVDs diagnosis is often delayed. He then presented an overview of how innovative diagnostic tools can be used. In addition to helping with CVDs prevention, they can also escalate person-centred planning at hospital discharge and post-discharge review and follow-up. Mr Harding also provided an overview of systemic barriers to CVDs prevention. CVD biomarker tests are often underused and not reimbursed. The initiation of secondary prevention strategies is suboptimal across the care pathway. There is a lack of access to specialist nurse-led disease management programmes and cardiac rehabilitation. Primary care is not equipped to deliver long-term secondary prevention. In addition to the existing gaps in CVD strategic leadership, research, and innovation, diagnostics are consistently under-recognised across health systems globally. Mr Harding concluded by looking at what can be done to ensure better care for people at high risk of CVDs. The first step is challenging political complacency and misunderstandings around CVDs. New opportunities in diagnostics, such as new technologies and digital solutions, can provide value and assist patients who most need it. Policy alliances should be built, linking patients and advocates with diagnostics, cardiac rehabilitation, allied healthcare professionals, and preventive cardiology. Lastly, leading case studies should be used to encourage best practices and promote peer learning.

The speakers agreed that CVD prevention can be raised on the political agenda by demonstrating new and effective opportunities in diagnostics. Case studies, patients and advocates need to be linked with diagnostics, cardiac rehabilitation, allied healthcare professionals and preventive cardiology to build political alliances.

Take-Home Messages

- By using biomarkers to objectively measure biological processes that COVID-19 triggers, the COVIRNA project allows health providers to improve clinical decision-making, individualised surveillance, care, and follow-up of COVID-19 patients.
- The COVIRNA project has a strong focus on personalised medicine through technological biomarker diagnostics that can help prevent CVDs by assessing the patients' risk for cardiovascular complications after a COVID-19 infection.
- Health systems can benefit from investments in early prevention of CVDs and by adopting multidisciplinary approaches to the management of CVDs.
- The importance of preventing CVDs can be brought to the political agenda by demonstrating new and effective opportunities in diagnostics. Political alliances can be built by linking case studies, patients and advocates with diagnostics, cardiac rehabilitation, allied healthcare professionals and preventive cardiology.

This session was organised in collaboration with the COVIRNA project that receives funding under the European Union's Horizon 2020 research and innovation programme (grant agreement No 101016072).

Abstract session 'Management, operations and practice for improving healthcare access, delivery and outcomes'

- Speakers:** **MSc Fien Claessens**, Leuven Institute for Healthcare Policy, KU Leuven, Belgium
Dr Ellen Coeckelberghs, Leuven Institute for Healthcare Policy, KU Leuven, Belgium
Ms Lucrezia Ferrario, LIUC University and LIUC Business School, Italy
Ms Charlotte Lens, Leuven Institute for Healthcare Policy, KU Leuven, Belgium
Ms Rossella Pellegrino, CERISMAS, Catholic University of Sacred Heart, Italy
- Facilitator:** **Dr Marius-Ionuț Ungureanu**, Director of Education, Department of Public Health, Babeş-Bolyai University, Romania

Summary

This session focused on understanding the quality and sustainability, as well as the improvement of care processes. More specifically, researchers presented their work analysing the access to, delivery and outcomes of care for the elderly and patients experiencing a variety of health conditions including acute ischemic stroke, dermatological, rheumatological, gastroenterological diseases and colonic cancer.

Ms Fien Claessens presented the Flemish context in which there are heterogeneous perceptions towards quality initiatives and several hospitals left the hospital-wide accreditation. Her study aimed to identify drivers for sustainable quality management and incorporate them into a framework. As a result, a roadmap called the Flanders Quality Model (FlaQuM) was created including steps to incorporate quality sustainably into the daily workflows in hospitals: 1) Quality design and planning; 2) Quality control; 3) Quality improvement; 4) Quality leadership; 5) Quality culture; and 6) Quality context. The combination of these concepts highlights the complexity of sustainability and can be used as a base for creating sustainable quality in the future.

Ms Lucrezia Ferrario presented how the increased utilisation of biosimilar medicines can benefit patients living with chronic conditions and can result in significant economic savings with disease-specific cost optimisation. Early results showed low biosimilar utilisation in Italy compared to other countries. Increased awareness of the economic savings associated with biosimilar prescription and use can facilitate key stakeholders to ensure the safe, effective, and cost-effective use of biosimilars in clinical practice. Further research on the use of biosimilars can lead to a more adequate understanding of the drugs' regional and national flows.

Ms Charlotte Lens presented a study observing variation in ischemic stroke care among Flemish hospitals and the adherence to evidence-based guidelines. Variations in stroke care can affect patient outcomes and lead to disability or mortality. There is a positive association between adherence to care guidelines and patient outcomes. Findings showed large variation within and between hospitals for multiple processes and quality indicators as every hospital seems to have different priorities. Moreover, long-established guidelines seem to be followed, while more recent guidelines have reduced adherence. Focusing on the following essential indicators can improve the care process for patients with ischemic stroke: 1) Measurement of body temperature; 2) Measurement of glycaemia; 3) Swallowing function screening; 4) ADL - screening; 5) Depression screening.

Dr Ellen Coeckelberghs presented an improvement collaborative which was focused on reducing the variation around the implementation of the Enhanced Recovery After Surgery (ERAS) protocol for patients undergoing colon surgery. The collaborative had 20 participating centres and analysed patient records as well as an anonymous feedback report. Although the ERAS protocol has standardised patient care, adherence to the guideline remains challenging. The research outcomes from the collaborative showed that increased adherence is associated with decreased length of hospital stay and lower risk of postoperative complications. She concluded that there is still room for improvement and the collaborative will continue to share feedback and knowledge.

Ms Rosella Pellegrino focused on how the full cycle of elderly care needs to be redesigned to meet the changing needs of both patients and the healthcare systems. She mentioned that a higher life expectancy doesn't always correspond to an improvement in care quality. The study analysed the actual pathways elderly patients follow along the full cycle of care to identify common trends, critical areas, and possible best practices. A set of indicators on health data were measured in four different settings of the care pathway: 1) Emergency department; 2) Hospitalisation; 3) Residential care; and 4) Home care. Outcomes of the study indicate the need for hard and soft solutions, such as a frailty department and the introduction of a frailty score. Further, systemic governance and a network involvement of healthcare professionals are needed to reduce the fragmentation of the care pathway.

Take-Home Messages

- Frameworks and protocols can significantly improve patient outcomes and are therefore an important part of governance for sustainable quality and safety in health service delivery.
- Data is essential to improve healthcare delivery and outcomes. Data collection, data sharing and intra-organisational sharing of best practices can improve care pathways, as well as increase patients' adherence to medical guidance.
- Considering the specific needs of a patient demographic is essential to ensure that they do not get lost in a fragmented care pathway. Understanding the care pathways of specific patient groups can help improve the quality of care delivered, and patient outcomes.

Abstract session 'Management, operations and practice to improve healthcare access, delivery and outcomes during the COVID-19 pandemic'

- Speakers:** **Dr Eugenio Di Brino**, Universita Cattolica Del Sacro Cuore, Italy
Ms Marta Burgos Gonzalez, Spanish School of Rescue and Detection with Dogs (ESDP), Spain
Dr Gareth Rees, ESAN University, Peru
MBA Achillefs Vratimos, National and Kapodistrian University of Athens, Greece
- Facilitator:** **Prof Ann Mahon**, Professor of Health Leadership; Head of the Health Management Group, University of Manchester, United Kingdom

Summary

In this session various research was presented on the disruptive effects of and solutions to the pandemic as well as other crises and disasters. Presenters shared the perceptions of health care providers as well as patients, related to health delivery and receipt, and the digital and operational transformations triggered by COVID-19.

Dr Eugenio Di Brino presented research that analysed the difference in perceived quality of care between patients and providers in a breast cancer unit during COVID-19. Perceived care is a subjective measure that is based on objective quality of care factors. Data was collected by surveying patients and unit team leaders. The findings implied that patient perception is unaffected by the staff perceptions on both quality of care and stress. Patients influenced each other in their perception of safety: the closer they were to one another, the more positively they perceived their safety. Positive influencers of perceived safety and quality of care included the use of technology for communication and stability of the multidisciplinary teams. Therefore, confident and well-trained team leaders are necessary to maintain the stability of their team, even during crises.

Ms Marta Burgos Gonzalez presented on behalf of the Spanish School for Rescue and Detection with Dogs, a partner in the European project INtelligent Toolkit for Reconnaissance and assessmEnt in Perilous InciDents (INTREPID). INTREPID aims to make disaster response safer and more efficient by developing tools that can accelerate the exploration and assessment of hazardous and potentially inhabited sites. Various technologies support first responders, such as Smart Unmanned Ground Vehicles with arms and 5DoF wheels adapted to overcome obstacles and climb stairs; and Smart Unmanned Aerial Vehicles to map the global area and explore cluttered environments. These technologies can automatically map the real-time inner and outer spaces in 3D, aggregate and fuse all collected information for object and people detection.

Dr Gareth Rees presented an exploratory study on the disruptive effects of COVID-19 by assessing EU country responses, best practices and lessons learnt for workforce mobilisation. The research method was a review and coding of health policy, content and reports. The results implied that combinations of policies enabled better-desired effects than others. The combination, sequence, and timing led to different results. Further research into workforce policies and actions is needed to gauge efficacy.

Mr Achillefs Vratimos presented the digital transformation experienced in Greece during the COVID-19 pandemic. Before the pandemic, national resources to be used for digitalisation decreased, as seen in their last placement in the Digital Economy and Society Index (DESI). During the pandemic, Greece utilised its resources to implement changes, such as an e-government portal, paperless prescriptions, vaccination, and recovery certificates, in addition to a text message service to monitor curfew. Millions of citizens in Greece made use of the e-government platform in the 24 months since it launched. In 42 days of use, the text message service processed 110 million messages. The pandemic propelled Greece two positions higher

in DESI for 2021. Digital transformation will impact countries globally, even if they haven't prioritised it, such as the case in Greece. State measures to tackle the COVID-19 pandemic and its aftermath demonstrate the importance of harnessing digital public administration resources, networks and connectivity, and digital skills.

Take-Home Messages

- Well-trained and stable multidisciplinary teams increase the perceived quality of care for patients, even in times of crisis. Confident and well-trained team leaders are necessary to maintain the stability of teams.
- Digital transformation has the potential to increase quality and efficiency across the entire span of the healthcare industry, from the frontline to a higher governmental and international level.
- The COVID-19 responses of countries were more effective when they considered the pandemic holistically and introduced combinations of policies both in the governance of healthcare and across other relevant sectors.

Abstract session 'Finance and economics for improving healthcare access, delivery, and outcomes'

- Speakers:** **MSc Sanne Allers**, Erasmus School of Health Policy and Management, The Netherlands
MSc Marina Borges, Portuguese Oncology Institute of Porto, Portugal
BSc Ana Craveiro, Centro Hospitalar e Universitário do Porto, Portugal & **Ms Susana Ferreira**, Centro Hospitalar e Universitário do Porto, Portugal
Dr Rui Dang, Westminster International University, Uzbekistan
Ms Lucrezia Bianca Ferrario, LIUC University and LIUC Business School, Italy
Prof Maria Teresa Herdeiro, Institute of Biomedicine, University of Aveiro, Portugal
Prof Denise Santos, ESEFSM, Portugal
- Facilitator:** **Dr Alexandre Lourenço**, Hospital Administrator, Coimbra Hospital and University Centre; Professor and PhD Programme Coordinator, ISEG – Lisbon, Portugal

Summary

In this session on finance and economics, the presenters discussed the relationship between healthcare funding and innovation; the journey towards value-based funding models; the economic impact of COVID-19 in the hospital setting; the uptake of palliative and end-of-life care; and the search for better funding models.

MSc Sanne Allers presented her research on the influence of funding and reimbursement on healthcare product innovation. Ms Allers stated that healthcare innovation is needed to deliver health and social value, but also better working conditions for the health workforce. She identified three stages of innovation: 1) development, 2) translation, and 3) implementation. Ms Allers stressed the importance of investing in innovation that may not have large-scale commercial investments but may still be beneficial for the sector. Other vital elements that she identified for innovation to be successful are compatibility, commitment, commercial value, capability, and social capital.

MSc Marina Borges presented FAROL, a project related to lung cancer. Ms Borges conducted a study which assessed the outcomes of implementing a funding model based on outcomes measurement and disease management for lung cancer patients in the Portuguese Oncology Institute of Porto (IPO Porto) using the value-based healthcare (VBHC) model. The project allowed for a better understanding of the patient care pathway. It was identified that a strong commitment of all involved in the care pathway is needed to cope with multidimensional challenges, and the use of such tools must be encouraged by national authorities. The proposed next step is the development of an alternative funding model, considering financial incentives for outcome improvement.

Ms Ana Craveiro presented the findings related to the economic burden of COVID-19 critically ill patients on the Centro Hospitalar e Universitário do Porto in Portugal. She gave some background information on the history of the hospital, which included the bubonic plague outbreak in 1899. The study found that the cost of the pandemic in the 1st year was around 5 million euros. On average, inpatient costs were 18,658€ and the time spent in the ICU was the most expensive (4.4€ million), with other high costs being emergency care, infirmary, and human resource costs.

Next, **Dr Rui Dang** discussed findings from a study on factors affecting end-of-life and palliative cases among people aged 50 and older in Europe before and during the COVID-19 pandemic. Dr Dang stressed the importance of promoting end-of-life care as part of the Sustainable Development Goals, specifically SDG3 which relates to promoting healthcare access. The study findings indicated countries with predominant public financing of end-of-life care and developed long-term care infrastructures had better related economic outcomes. Dr Dang

encouraged states to fund out-of-hospital care, stimulate more people to use formal care at the end of life and reduce unplanned hospitalisation.

Ms Lucrezia Ferrario followed with a presentation of an HTA comparing Intraoperative Radiation therapy (IORT) and External Beam Radiotherapy (EBRT) as local breast cancer treatments in the Italian setting. Ms Ferrario explained that breast cancer is the most common malignancy affecting women and poses a large economic and social burden worldwide. She mentioned that in the oncological setting, innovation plays a key role and presented a research project assessing the validity, effectiveness, and safety of innovative technology (IORT) compared to the traditional one (EBRT). The study found that the innovative treatment was economically favourable from the point of view of the hospital. Significant economic advantages would emerge from IORT, and other benefits include a reduction in productivity loss and process improvement.

Prof Maria Teresa Herdeiro presented the results of a study on educational interventions to reduce the prescription and dispensing of antibiotics in primary care. Worldwide there has been a huge increase in antibiotic use, which is leading to the increased incidence of antibiotic resistance. The costs of drug resistance are also high, estimated at 100 trillion dollars caused by 10 million deaths. Most antibiotic prescribing occurs in primary care. Numerous educational interventions were conducted to improve and reduce antibiotic use. Educational interventions showed to be associated with reduced antibiotic costs in primary care. A quantitative cost analysis will be crucial to support public health investments in this field.

Prof Denise Santos presented her study in search of a better health system funding model. A better funding model is needed because the unlimited health needs cannot be fully met as resources are scarce, decisively affecting health policies. In the current climate, high costs are derived from the COVID19 pandemic and European ageing. Investments are needed to satisfy the need for sustained longevity and healthier life. Prof Santos presented findings that higher GDP per capita, current expenditure on health, the current household out-of-pocket payments, preventive care health expenditure and voluntary prepayment were associated with a reduction of years of life lost.

Take-Home Messages

- Innovative ideas in funding and health service delivery are needed to improve health outcomes in a climate where resources are scarce, however, multiple influential factors need to align for bright ideas to turn into practice.
- Antibiotic resistance is costly, especially in lower middle-income country (LMICs); however, the associated costs can be reduced with educational interventions focused on the primary care level.
- Investing earlier into end-of-life care and long-term care can reduce unplanned hospitalisations and decrease public costs

Abstract session 'Governance and leadership for improving healthcare access, delivery and outcomes'

Speakers: **Prof Tania Gaspar**, Lusiada University/ CLISSIS, Portugal
Mr Damir Ivankovic, University of Amsterdam, The Netherlands
Dr Nino Mikava, MD, MBA, PhD, Business and Technology University, Georgia
Ms Sarah Parkinson, RAND Europe, United Kingdom
Dr Joan Prades, Catalan Cancer Strategy, Department of Health, Spain
Dr Sarit Rashkovits, Yezrel Valley, Israel

Facilitator: **Prof Ann Mahon**, Professor; Head, Health Management Group, University of Manchester, United Kingdom

Summary

Dr Tania Gaspar presented a study in which contributions from experts in the areas of public health and health management and administration were used to build a comprehensive, integrated and multidimensional assessment model of health organisations. The assessment model is intended to be a diagnostic and monitoring tool for patient satisfaction, professional satisfaction and economic results. Strengths, barriers and weaknesses that influence the results and quality of healthcare organisations were identified on these levels, in addition to on a political level and with regards to psychosocial risks at work. Further suggestions were made towards improving information and communication systems and innovations. For the future, it was suggested to prioritise governance, financing, articulation between the different levels of care, human resource management, patient satisfaction and literacy and technology and innovation. In conclusion, to improve the quality of health organisations an ecological perspective that involves all actors should be adopted.

Mr Damir Ivankovic presented the abstract of his paper which is under review. The research is focused on Ireland's health information system and its fitness to support a health system performance assessment (HSPA). The health information system is the data collected on an ongoing basis that feeds into the delivery of health and social care. Ireland launched a major 10-year health reform in 2017 called Slaintecare looking to improve its health system performance, governance, and accountability while achieving universal health coverage. An HSPA is a tool for reporting and using performance intelligence which is needed to monitor, manage and improve national health systems, as well as to achieve alignment with strategic policy goals and aims. Through key informant interviews and stakeholder consultation workshops, the HSPA framework for Ireland was developed. The framework revealed that Ireland's health system produces good quality and accurate data but is sub-optimally prepared to provide data on the adaptability, resilience and up- and down-scaling capacity of the system, including its infrastructure, services and workforce.

Dr Nino Mikava presented the challenges the healthcare system in Georgia faces when it comes to treating non-communicable diseases like diabetes. The purpose of the research was to assess the need and role of globally utilised digital technologies for the effective treatment of diabetes in Georgia. In-depth interviews with adult diabetes patients and parents of children with diabetes showed that there is a lack of knowledge on the complications and self-care of diabetes. Specialists do not have time to educate patients as there is a shortage of qualified nurses in the system, especially in rural areas. Based on the results of the research it is recommended to leverage online platforms and digital technologies to satisfy the needs of patients. Specifically, an application should be developed to educate patients, parents and school personnel which provides updated information in Georgian. Further, access to endocrinologists and other specialists can be increased by adopting online consultations. Digital technologies can be additionally utilised in this area by developing webinars and training with psychologists, and nutritionists.

Dr Joan Prades presented the differences in cancer mortality due to location in Catalonia. He addressed the issue of horizontal inequity in which patients with similar needs were receiving different care and had worse outcomes. Dr Prades expected that the centralisation policy in

Catalonia would improve outcomes and decrease mortality in cancer patients. The study assessed the distance from the patient's home to the reference centre and their socioeconomic status in relation to survival, adjusted for factors such as age, comorbidity, or tumour stage at diagnosis in people with centralised oncological diseases. Results did not point to an association between longer distances to cancer centres and mortality, but did show an association between low income and mortality. He concluded that the policy of centralising highly complex oncological pathologies meant that a significant proportion of patients were treated outside their district hospital, but this change was not associated with worse health outcomes compared to the other patients, including for survival. Centralisation of care does not erase the significant impact of socioeconomic status on the survival rate of patients with rectal and pancreatic cancer.

Dr Sarit Rashkovits investigated the impact of collectivistic orientation in nurse leadership on patient safety behaviours of the nursing staff. Patient safety is a major concern in healthcare organisations and the efforts to promote it during the last two decades have not achieved the desired results. Therefore, there is a need to expand the knowledge regarding the drivers of safety behaviours. As part of the study, 650 nurses from 95 nursing teams in various healthcare settings, and 99 of their leaders responded voluntarily and confidentially to validated scales. The results indicated that the nursing team leaders' and nurses' collectivist orientation had significant direct and indirect relations with all safety behaviours, proactive safety behaviours and safety participation via psychological safety. Research showed that common goals and interdependence, rather than competitiveness, need to be promoted on the team and individual level, as there is a proven impact of shared goals leading to better patient safety results.

Ms Sarah Parkinson investigated the use of scientific evidence by board members within health and social care organisations in decision-making. After a literature review and interviews, findings indicate that there is a disagreement about the degree to which evidence has been used in decision-making. How evidence is communicated to board members can be improved by making the communication brief and concise, with a small actionable list of recommendations, and explicit statements about the relevance of findings for decision-makers. Further, a dedicated board member can be assigned the role of bringing research evidence to meetings, and specific processes and mechanisms can be established to encourage the systematic and embedded use of research evidence.

Take-Home Messages

- In order for board members within health and social care to effectively utilise research evidence for decision making, communications should be brief and concise with actionable points, and a dedicated board member can be held accountable for bringing relevant findings. Furthermore, the systematic and embedded use of research evidence should be encouraged.
- Digital innovations can help support patients with self-management, reduce the burden on healthcare workers by providing education to patients and their carers, and facilitate access to health for patients in remote areas.
- Patient safety can be directly and indirectly improved by employing nurse leaders and nurses who adopt a collectivistic orientation.
- The socioeconomic status of patients still has a direct influence on survival rates. New policy and research should focus on reducing this inequality in patient outcomes based on their socioeconomic status.
- To improve the quality of healthcare organisations in the future, it is suggested to prioritise governance, financing, articulation between the different levels of care, human resource management, patient satisfaction and literacy, and technology and innovation.

Abstract session 'Policy and regulations for improving healthcare access, delivery and outcomes'

Speakers: **Ms Simona Anca Ciotlaus** on behalf of **Dr Marius Ionuț Ungureanu**, Babeș-Bolyai University, Romania
MSc Marloes Meijer, Nivel, The Netherlands
Dr Chiara Morlotti, University of Bergamo, Italy
PhD Mirela Mustata, Center for Health Policies and Services, Romania
Mr Dan Vukelich, Association of Medical Device Reprocessors, Germany

Facilitator: **Dr Alexandre Lourenço**, Hospital Administrator, Coimbra Hospital and University Centre; Professor and PhD Programme Coordinator, ISEG – Lisbon, Portugal

Summary

Ms Simona Anca Ciotlaus presented research aimed to provide an overview of the current efforts in reporting and monitoring adverse events in the Romanian health care system and offer perspectives for further improvement in terms of processes, transparency, and use of data. Using the policy and regulatory framework for monitoring and reporting adverse events in Romania, as well as currently available public data and data from the National Authority for Quality Management in Health Care, the researchers carried out a data analysis focused on the system-wide factors related to such events. The results showed that following the introduction of policy and regulatory frameworks to report adverse events, from 2017 to 2022, the number of adverse events has decreased, with the causes of adverse events not changing significantly since 2017. The study recommends improving reporting platforms, training healthcare workers, and efforts directed towards overcoming barriers to accurate reporting.

Ms Marloes Meijer presented a cross-sectional study reporting on the development of solidarity within the Dutch healthcare system between 2013 and 2021. The researchers expected that healthcare solidarity and willingness to pay for other people's healthcare costs have decreased over time. The results of a repeated cross-sectional survey of 1,500 participants indicated that the willingness to pay increased between 2013 and 2021, with the major development being in 40-64-year-olds, highly educated, and males. No differences were found in the development of willingness to pay among age, gender, and educational level. The study concludes that healthcare solidarity in the Netherlands has not declined. The next step is further research into how much people are willing to pay.

Dr Chiara Morlotti presented a working paper that assessed the level of accessibility to primary care services in the Piedmont region in Italy. The study provided insights into the relationship between service provision by general practitioners, and territory. Initially, their findings showed that rural areas have greater access to general practitioners. However, when weighted for a variety of factors, the data changed to indicate that access is 70% lower in rural areas compared to urban areas. The next steps for the team include developing territorial medicine strategies to address this identified gap in the Italian healthcare system.

Dr Mirela Mustata presented the Action for Health and Equity: Addressing medical Deserts (AHEAD) consortium, which addresses the challenge of medical deserts in selected European countries and aims to develop viable tools and solutions to reduce health inequalities. The approach of the consortium was to build knowledge and apply a participatory approach to public health policymaking and improve access to health services. Based on a literature review, they broadly defined a medical desert as an area with challenges relating to physical access, social barriers, and policy barriers. After interviews they will review the data to see what the overall agreed-upon definition is, and which stakeholders are expected to take responsibility for medical deserts.

Representing the Association for Medical Device Repurposing, **Mr Dan Vukelich** addressed the environmental impact of waste generated by the healthcare industry. Although COVID-19 accelerated and highlighted the amount of plastic and disposable medical waste, healthcare

was already a major pollutant of the environment. He presented that 4.6% of global greenhouse gas is emitted by the healthcare sector, with 82% of emissions coming from the supply chain. Potential solutions toward net-zero hospitals are remanufacturing and reprocessing. Remanufacturing recovers and extends the life of materials and can allow designers to cut out harmful environmental emissions. Reprocessing involves the sanitisation and reuse of medical equipment which saves on clinical waste, costs, and CO2 emissions.

Take-Home Messages

- Policy and regulations have proven to be effective in improving healthcare delivery and reducing hazardous outcomes for patients. Further efforts should focus on improving the technology and human resource capacity to implement European and local policies and regulatory frameworks.
- Regulations related to supply chain and single-use products within the healthcare industry must consider environmental hazard and facilitate solutions such as reprocessing and remanufacturing for healthcare institutions to reach the net-zero emission goal.
- Policymakers must acknowledge that people in rural areas experience a lack of access to healthcare due to medical deserts. To provide universal access to care, they must identify and address physical, social and policy barriers and develop medical strategies that take the unique needs of geographical territories into account.

PhD Session - Karolinska Medical Management Centre (MMC) & EHMA Research Award

- Speakers:** **Mr Simon Dello**, Leuven Institute for Healthcare Policy, KU Leuven, Belgium
Ms Gamze Kutlu, Ankara University, Turkey
Ms Nsovo Mayimele, Tshwane University of Technology; University of the Witwatersrand, South Africa
Ms Astrid Van Wilder, Leuven Institute for Healthcare Policy, KU Leuven, Belgium
- Facilitator:** **Prof Sandra C. Buttigieg**, Head of Department of Health Systems Management and Leadership, University of Malta, Malta

Summary

Mr Simon Dello discussed the prevalence and predictors of the complex phenomenon of care left undone involving nursing care. High levels of missed care are associated with higher rates of adverse events, mortality and patient dissatisfaction. Factors such as patient load, workload, work experience and work environment were associated with care left undone. The phenomenon occurs more frequently in hospitals that take a monodisciplinary approach to in-hospital patient care and often no single staff group is responsible for patient outcomes. Care left undone is prevalent in Europe, while there is variation between countries. Reducing the incidence of care left undone has the potential to impact the quality of care and improve patient outcomes.

Ms Gamze Kutlu presented her results that investigated the cost-effectiveness of proximal femoral nail (PFN) and bipolar partial hip replacement (HA) surgeries from the perspective of the payer institution and the patient. Hip fractures are an important and increasing public health problem with the ageing population, leading to disability, social care costs, morbidity and mortality. The study found that HA surgeries were cost-effective in patients over age 60; however, costs of surgical techniques may differ per country. The findings may have valuable implications for the effective use of healthcare resources, identifying the impacts of alternative interventions on the quality of life, and making evidence-based decisions.

Ms Nsovo Mayimele discussed her paper that investigates a forgotten part of the healthcare system: pharmacists within pharmaceutical companies. Pharmacists are key parts of the healthcare system, as their provision of medicines is key to coverage and quality in patient safety. The study aimed to determine the presence of pharmacists in companies in South Africa and globally, focusing on their leadership presence. Responsible pharmacists that participated in the study reported they felt they were given roles of importance as a form of tokenism, they had limited power and were excluded from decision-making processes that had serious consequences for users of the company's products. The findings point out that pharmacists and medical workers were the least represented professionals in the leadership of pharmaceutical companies. Further studies on this topic in a global context are recommended in order to find solutions for reform in the pharmaceutical industry.

Ms Astrid Van Wilder presented a study investigating the unwarranted between-hospital variations on patient outcomes regarding readmission, prolonged length of stay and mortality, focusing on urology patients. Using clustered modelling, her study utilised hospital administrative databases to analyse mortality rates. Her study concluded that between-hospital variation in mortality rates persists. Any reduction in the between-hospital variation could have a large impact and potentially save up to 41% of lives lost. Moving forward, administrative databases need to be increasingly valued, as these can be used as valuable benchmarking tools to reduce between-hospital variations in patient care. Ms Van Wilder stated that the study can be applied to patients with other conditions and exposing variations in healthcare might become the driving force of evolution towards better patient care, with improved outcomes for all those admitted to a hospital.

Take-Home Messages

- Studies found that mortality increased when there were inconsistent practice standards. Benchmarking within and between healthcare institutions produces valuable data that can drive an evolution that leads to better patient care and improved outcomes.
- Healthcare professionals have lost control, leadership and decision-making power within institutions such as pharmaceutical companies. Institutional decision-making bodies must give greater importance to the voice of healthcare workers if they wish to avoid detrimental consequences to both their business and the users of their products.
- Healthcare institutions must consider factors such as the workload, work experience, patient load and work environment of their staff if they want to avoid care left undone and improve the quality of care and patient outcomes.
- Conducting studies on alternative interventions to increasingly prevalent health issues may have valuable implications for the effective use of healthcare resources, the quality of life, and making evidence-based decisions.

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We are particularly grateful to our Member, the Leuven Institute for Healthcare Policy – KU Leuven, that co-hosted EHMA 2022 and was instrumental to connecting the Conference with the hosting country, Belgium, showcasing its health system and health management best practices.

EHMA would like to acknowledge the guidance received by our Board of Directors and Scientific Advisory Committee to identify the most current health management topics that have informed the conference program and associated call for abstracts.

Our appreciation goes to all researchers who entrusted the EHMA Conference to present their health management studies. Equally, we would like to acknowledge the contribution of both the Abstract Review Committee and the Abstract Clustering Committee whose members ensured an expert, thorough and impartial assessment of the 180 submitted abstracts and the development of a high-quality scientific program.

The EHMA 2022 program was complemented by health policy focused sessions organised by our partners and sponsors that we would like to sincerely thank for their support. These sessions ensured that evidence-based health management views and practices were discussed and included in European health policy agendas.

EHMA would also like to thank all speakers, panelists, session facilitators, and participants who devoted their time to our Conference and contributed to the sharing of knowledge on effective health management, thus furthering our vision of excellent health management for a healthy Europe.

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