EHMA 2020

CONFERENCE REPORT

EHMA
European Health Management Association

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Disclaimer

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About EHMA 2020

European health systems are navigating through a period where challenges and opportunities have never been greater or starker. While public finances remain constrained, innovation in technology and evolution in therapeutic possibilities have reached unprecedented highs. And every day we get closer to full exploitation of opportunities given by big data, artificial intelligence, and robotics.

At the same time, population dynamics are unstoppable, with sharp acceleration in chronic diseases, aging and frailty. In this perspective, we are collectively faced by the need to generate shared awareness, sense of urgency and visions for transformations and changes within health sectors, healthcare systems, organisations, and for role development of managers and clinical and professional leaders.

The EHMA Annual Conference is the preeminent place for today's and tomorrow's healthcare leaders to share experiences, skills and competencies through interactive workshops and thought-provoking presentations. This year our Conference was held digitally through the lens of Rotterdam.

EHMA 2020, held in collaboration with the Dutch Ministry of Defence, Erasmus School of Health Policy & Management, and Erasmus Medical Centre, was EHMA most attended annual Conference and welcomed over 350 delegates. It brought the entire European health and care stakeholders together: universities, researchers, healthcare professionals, hospitals, policy makers and industry for 3 days of intensive learning and exchanges.

The event elevated the vision of health management by exploring new paradigms that help address health needs; explore how to reconfigure health systems; and develop the ability of all stakeholders. The EHMA Conference provided an in-depth discussion of new and emerging models for health services, governance systems, management practices, and tools to aid in the future of healthcare.

This report, prepared in collaboration with the EHMA 2020 rapporteurs, will take you through three packed days of discussions, speeches and presentations by health management and policy experts from Europe and beyond. Discover the take home messages from our EHMA 2020 Annual Conference and relive the exciting debates that took place!

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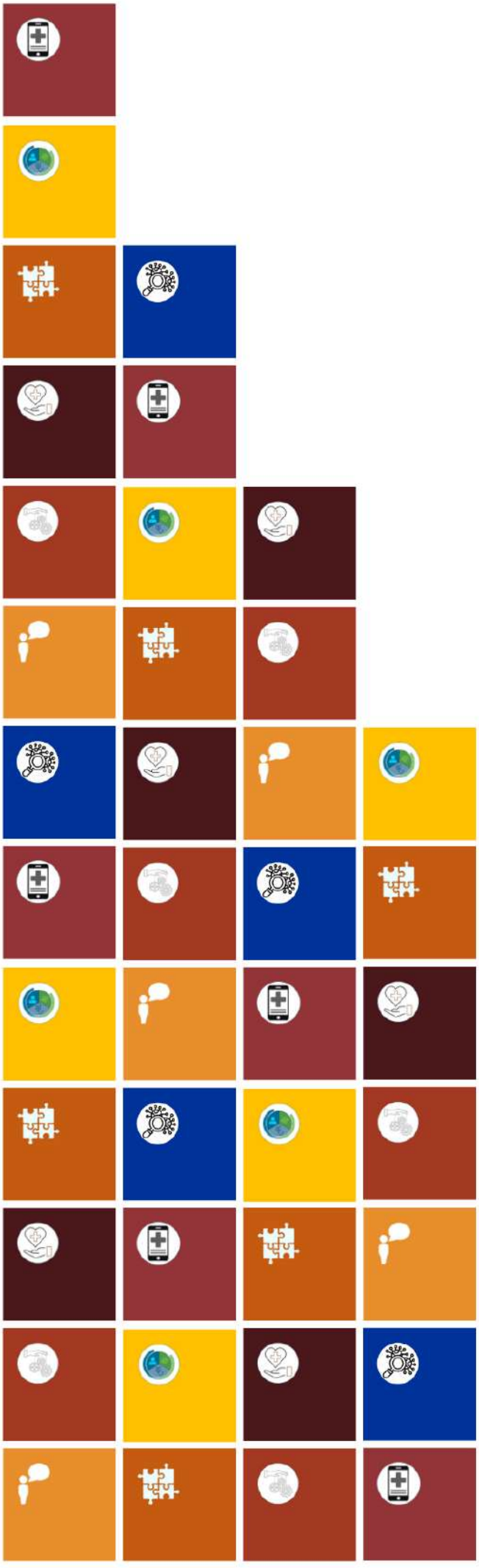
EHMA 2020 in a nutshell

- The pandemic has laid bare the undeniable fact that health and health systems are the **corner stone of societies**; thus, resilient health systems are key for the sustainability of the economy, of our well-being and of our societies.
- Managing the COVID-19 crisis requires a whole of government and **whole of society approach**.
- Amid the pandemic, there has been a new emergence of new ways of healthcare that could be pre-sensing the possibilities for future healthcare. Therefore, health systems are already **learning for the future in the present**.
- **Trust and multi-stakeholder collaboration** are critical to effectively implement changes and overcome challenges. As such, social innovation will be necessary for the transition that is happening in health systems as stakeholders might have to change the way they behave, think, and align.
- To better cope with challenges, we need a better **primary care infrastructure**.
- At the same time, **hospitals are a core public goods,** which have an important role in public health. There needs to be a better understanding of hospitals' capacity, current and possible functions, institutional dynamics, and how they should be managed.
- Person-centred means to ask about what matters to patients/providers/organisations/systems, but patients and population should be **the final judges of value**. Although often used, collecting standardised Patient Reported Outcome Measures is different than asking patients what matters to them
- Value based healthcare should focus on organising relationships and networks around patients before focusing on organising the structure. There needs to be a perspective shift from engaging patients in health systems to **health systems engaging in patient lives**.
- Integrating care is not only a technical project, but also an **ongoing interaction between people**, because one has to collaborate with internal and external partners, across different dimensions, in the daily practice and on the system level.
- Good governance is key for aligning perspectives, values, goals, and priorities. It is one of the **essential ingredients for a strong and resilient health system**.
- Disease prevention, health promotion and literacy are the neglected part of our health systems and must be invested in to empower patients. **Investing more in prevention** means saving more on treatment in the future, therefore having more funding for more services. There is a need for a forward-looking approach to health funding.
- Digital transformation is already happening, but the tools and systems should be co-developed with patients to add real value. The challenge in adopting digital innovation is not just about the technology that is used, it also requires **changing organisational and individual processes** (organisational innovation).
- Human intervention is fundamental because healthcare is about real people; therefore, we need to learn how to **combine the digital and human elements** and ensure that we maintain the human connection.



PLENARY SESSIONS

#EHMA2020
Conference Report

Opening Session – Health management: realigning systems, contexts, and players

Speakers: **Prof. Kees Ahaus** (Erasmus School of Health Policy & Management, The Netherlands); **Dr. Ernst Kuipers** (Erasmus Medical Center, The Netherlands); **Ms. Maya Matthews** (Unit Performance of Health Systems, Directorate-General Health and Food Safety - DG SANTE, European Commission); **Col. Henk Van der Wal** (Ministry of Defence of The Netherlands)

Moderator: **Prof. Federico Lega** (University of Milan, Italy & EHMA Board of Directors)

Summary

The opening sessions started with Prof. Federico Lega, outgoing President of EHMA, who presented the institutional greetings and set the scene for the conference, highlighting the different activities to take place, and introducing the conference co-hosts: Erasmus School of Health Policy & Management, Erasmus Medical Center, and the Ministry of Defence of The Netherlands.

Prof. Ahaus, Dr. Kuipers, and Col. Van der Wal discussed the original plans to host the Conference physically in Rotterdam. They also discussed their organisation's mission and vision for healthcare management; provided thinking points for participants to take with them during the Conference; and finally, highlighted the pressing need to share experiences around the challenges that health systems are facing.

Healthcare and health systems have been brought into the spotlight since the start of the COVID-19 pandemic and the general population has taken more interest into public health. This represents an important responsibility for professionals working in public health and health systems.

Ms. Maya Matthews presented the European Commission's response to COVID-19. The Commission quickly activated all possible resources to support Member States by creating an emergency instrument to buy equipment and goods and creating a joint procurement agreement. The Commission also adopted a package of proposals to reinforce the EU resilience on cross-border health threats, including creating a European Health Union, making changes in the mandates for the European Centre for Disease Control and the European Medicines Agency, as well as creating new agencies and working groups.

Ms. Matthews also provided an overview of the upcoming policies, plans, and proposals of the Commission as it relates to the pharmaceutical strategy for Europe, Europe's beating Cancer plan, European health data space proposal, the EU4Health Programme and all other funding mechanisms for health, which will provide more muscle to the EU health plans.

There is a serious momentum in healthcare in Europe and we need to take advantage of this window of opportunity. The pandemic is bringing forth processes that health systems did not think were possible, such as the fast implementation of digital care, the flexibility in the health systems and the skill-mixing of the health workforce; and health management is at the forefront of these implementations. This is a 'good' time for a transformative agenda for health systems at all levels, and health systems need to focus on three key areas:

1. Evidence-based information to support policy decision-making.
2. Cooperation between Member States and health systems where there is the most added value.
3. Access to healthcare and inequalities have been affected the most by COVID and this imbalance needs to be addressed.

In addition, hospitals are present in responding to the pandemic; however, the primary care level is heavily challenged. One of the recommendations of the EU to its Member States is to strengthen the primary care sector in their health reforms, but also to focus on strengthening the public health sector and linking it with primary care. At the European level, there will be an exchange of best practices to share how to invest and implement innovative approaches to primary healthcare.

Finally, the EU is realising that they might need to have a steering role in European health systems while ensuring the respect of the EU treaty and one important aspect of this conversation is to strengthen the trust between the Member States and the European Commission, as trust is essential for collaboration.

Leading healthcare in a challenging environment

Keynote: Dr. Natasha Azzopardi-Muscat (WHO Europe)

Speakers: Dr. Marjelein Tasche (SFVG hospital and Netherlands Hospital Union, The Netherlands); Dr. Aleksandra Torbica (Centre for Research on Health and Social Care Management, Italy); Dr. Liisa-Maria Voipa-Pulkki (Finnish Ministry of Social Affairs and Health, Finland)

Moderator: Mr. George Valiotis (EHMA, Belgium)

Summary

Dr. Natasha Azzopardi-Muscat opened the plenary by reflecting the ways COVID-19 has 'unmasked' and placed the public lens on some problems that were long standing across several European health systems. Although the vaccines will potentially positively impact the fight against COVID-19, there are still several challenging months ahead for health managers.

When thinking about where we need to be and how to move forward in the short, medium, and long-term, as well as beyond COVID-19, the WHO proposes a dual-track approach to strengthen and adjust public measures throughout the COVID-19 transition phases. Track one is to surge the range of COVID-19 services to remain prepared to manage the pandemic, whereas track two focuses on maintaining the delivery of essential health services, while recovering the services that were postponed during the outbreak peaks.

The WHO has also identified four flagship areas of priority, including mental health, which has been a priority before COVID, but has seen a substantial increase in demand for services; as well as digital health, which has been deployed in unprecedented ways during the pandemic to not only manage COVID, but also support the provision of other essential care services. Primary care and long-term care are also important areas to focus on and ensure the further integration of those areas with hospital care. Health systems will have to ensure that, after COVID, they maintain policies that sustain a high financing of health and social care services, especially for vulnerable groups.

Dr. Marjolein Tasche provided the experience of the Netherlands in both the first and second peak of the COVID crisis. At the start of the second peak, COVID cases are decreasing in individual hospitals throughout the country because health authorities have passed legislations to spread COVID patients throughout hospitals across the country. There is a shortage in the labour market, especially for nurses and specialised nurses, and that shortage was exacerbated during COVID. However, the pandemic has created an increase in recognition and respect of the craftsmanship of healthcare professionals, especially for nurses, which translated into higher enrolment in education for healthcare professionals and laboratory assistants. There is also an increase in flexibility of processes with the use of digital processes, increased professional responsibility, as well as less strict regulations and guidelines. During the first peak, hospitals were the focus of the media and nursing homes were abandoned and experienced disastrous results. This has been changed during the second wave.

Dr. Luisa-Maria Voipio-Pulkki presented the experience from Finland, which is a COVID-19 outlier and experiencing the lowest rate of infections in Europe. In Finland, managing COVID-19 has been a whole of government and whole-of-society approach, and the government enforced an Emergency Powers Act to prioritise human health and life above all other rights. The finish health system disrupted elective services, most remarkably more than one million visits to oral health were cancelled, and they do not yet know the long-term impacts of this decision. When the population started not showing to visits, there was a media campaign to encourage patients with non-communicable diseases to attend their visits or call emergency numbers for acute illness. Financing and other measures were taken by government to support most businesses to continue operating. Digital services and access to data were also primordial to successfully manage the crisis. Access to data will also be useful for adaptive and translational research for academic purposes.

Italy was one of the first European countries to face COVID-19. Dr. Alexandra Torbica presented the Italian situation and how it can support the setting of future priorities. There are several overarching points to be drawn from the Italian experience that can be used to inform decision-making in other countries, even beyond the COVID-19 crisis:

1. Cost-containment pressures on the Italian health systems have created a well performing system, with minimal investments in health infrastructures and less waste. During the pandemic, due to limited funds and strained capacity, the system had to rely on its core resource: the workforce.
2. Having a clear stewardship is important in a centralised system: both during the first and the second wave, the State and the local governments have not been on the same page about the best ways to manage the pandemic, which has caused important challenges. The central government needs to respond faster, communicate more effectively, and increase its capacity to analyse data faster. At the same time, local authorities need to trust the central government.
3. Hospitals, local health authorities, and health professionals found operational solutions on the ground in record time by being flexible and creative – this is crucial in managing a pandemic.

Take home messages

- Managing the COVID-19 crisis requires a whole of government and whole of society approach.
- Digital service and access to data are essential to successfully manage a population-wide public health crisis.
- The pandemic has laid bare the undeniable fact that health and health systems are the corner stone of societies.
- We need to move beyond the idea of resilience as a buzz word to resilient health systems in practice.
- Trust is critical to effectively manage a pandemic and implement a vaccination programme.
- Health systems can be both flexible and controlled. This relies on the ability of health managers to experiment with new solutions and innovate.
- Boosting management capacities at different level is one of the essential ingredients for a strong and resilient health system.

Managing sustainable and resilient healthcare systems

Scene setting: **Mr. Cees Smit** (Dutch Patient Alliance for Rare and Genetic Diseases, The Netherlands)

Speakers: **Dr. Josep Figueras** (European Observatory on Health Systems and Policies, Belgium); **Prof. Dr. Mirella Minkman** (Vilans, The Netherlands); **Ms. Marzena Nelken** (European Patients Forum, Belgium & Federation of Polish Patients, Poland); **Prof. Dr. Kim Putters** (Social and Cultural Planning Office, The Netherlands); **Ms. Lill Sverresdatter Larsen** (Norwegian Nurses Organisation, Norway)

Moderator: **Mr. George Valiotis** (EHMA, Belgium)

Summary

Mr. Cees Smit set the scene by presenting his experience living with several chronic conditions and relating the impact that the progression of medical science and the ability to self-manage his health have had on his life expectancy. Mr. Smit described his, his family's and the international patient community's experience as a roller-coaster of emotions, similar to the experience of uncertainty and adaptation that international health systems have been facing during the COVID-19 pandemic. COVID has highlighted and aggravated existing issues in European systems, and European governments need to pay more attention to health to ensure their health systems' sustainability and resilience by adopting relevant policies, such as facilitating self-management of patients, addressing climate, food, and housing issues.

Dr. Josep Figueras provided a definition of resilience of health systems as well as some key avenues to strengthen that resilience, and therefore also the sustainability of health systems. Resilience is in the public eye right now due to the COVID-19 pandemic, but Europe has not learned from previous shocks (financial crisis, migration crisis, etc.). During the pandemic, communities developed different resources, such as improved communication, skill-mix of the workforce, flexibility, reallocation of services, digitalisation, as well as community and patient involvement. The important question now is whether we can harness the resources developed during this shock to prepare and be ready for the next shock.

Prof. Dr. Mirella Minkman provided some of the insights from COVID-19 and concerning the need to resolve the fragmentation in our systems and to decide on the scale of different actions. Insights were also provided on the role of the health and social care workforce and organisations within shared governance models; as well as on the need to see COVID-19 as a societal issue and not a health issue, as it affects and is impacted by people's broader context. To create policies and make decisions that contribute to the future development of health care settings and communities, both knowledge and values are necessary. There are universal values to all stakeholders within heath systems that lie underneath decision-making, but the ways in which they are prioritised are different. Taking that into consideration will facilitate the decision-making processes about actions and policies.

Mrs. Marzena Nelken provided the perspectives of the European patients' community. Challenges around access to care, health inequalities, or gaps in digital health access did not originate during the pandemic. COVID-19 has highlighted the importance of strong public health policies and the need of collaboration on different levels. At the same time, responses to the crisis have resulted in changes that patients have been advocating for, such as virtual consultations, access to online communication tools, off-site access to health records, and home delivery of medications. However, too few patients are benefiting from those solutions, thus exacerbating inequalities, particularly in the field of digitalisation which has been heavily relied on during the pandemic. Digital transformation is already happening, but the tools and systems should be co-developed with patients to add real value. Although theoretically, the benefits of involving patients are clear, but it is not happening, yet is needed for the sustainability of health care.

Prof. Dr. Kim Putters described the transition from welfare state to investment state in several European countries. In those countries, governments focus more on the self-reliance of patients and their social networks. This creates further inequalities for the most vulnerable people, as many do not have the

appropriate health literacy level or the social network as a resource. It is also complicated to integrate formal and informal care, and this does not always lead to more efficiency and less cost. COVID has created a society with new vulnerabilities, such as loneliness, stress, possibility of losing a job, in addition to the classical ones that are being deepened. In this context, there are different challenges for health care leaders:

1. Need to connect quality of life and quality of care services (medical and social services).
2. Creatively develop new ways of working, also renovate, and improve existing solutions.
3. Prioritise those who are vulnerable, and need help the most by redefining solidarity.
4. Health care researchers should find ways to include healthcare knowledge in the policy system.

Mrs. Lill Sverresdatter Larsen provided insights on the nurses' experience. The gaps between the needs of services and the resources available has been aggravated by COVID-19. The pandemic has underlined the shortage of nursing staff, and this limited capacity has driven several decisions on how countries handled the pandemic, emphasising the need for a strong, autonomous, and competent workforce of nurses, who feel their necessities in terms of working conditions are met. Nurses are the largest part of the healthcare workforce and need to be represented at different governance and leadership levels. Nurses are key stakeholders in the resilience and sustainability of health systems. Health systems should also provide universal care coverage to also provide services to the most vulnerable citizens to be sustainable.

Take home messages

- COVID has uncovered our frailties in terms of international [European] cooperation, ability to protect vulnerable populations, governance, communication, and relocation of resources. But on the other hand, it has also showed the ingenuity and resourcefulness of our workforce (medical, IT, etc).
- If we do not have health systems resilience, we will not have sustainable societies.
- Resilient health systems are key for the sustainability of the economy, of our well-being and of our societies.
- We need to redesign healthcare systems according to a patient centeredness perspective, by facilitating patient empowerment and involvement, not only in their own health, but also on the policy and systems level.

Closing Plenary – Innovations that are transforming healthcare

Speakers: **Prof. Mats Brommels** (Medical Management Centre, Karolinska Institutet, Sweden); **Dr. Menno Kok** (EIT Health Belgium-Netherlands); **Prof. Federico Lega** (University of Milan, Italy); **Dr. Patricia Ravalico** (Abbott, USA)

Moderator: **Dr. Axel Kaehne** (Edge Hill University, UK & EHMA Board of Directors)

Summary

As healthcare systems and organisations face unprecedented challenges, innovative solutions are becoming increasingly necessary to address those challenges and ensure the quality and sustainability of health systems. Innovation can be used to increase efficiency, effectiveness, safety, and affordability of healthcare, while improving prevention, diagnosis, treatment, and access. The question remains how to foster innovation among healthcare stakeholders who are already under incredible pressure. Cross-sectoral collaboration is the answer.

In the closing plenary, Dr. Kaehne started by providing a quick overview of the conversations that happened during the conference and introduced the different activities aimed to highlight how interdisciplinary teams around the world can and are transforming healthcare delivery and governance with their innovations.

Dr. Kok presented the EHMAthon, the healthcare hackathon by EHMA and EIT Health on 'How to secure healthcare delivery during pandemic episodes. The event took place the weekend prior to the Conference and included 23 contestants divided into 6 teams. Those teams brainstormed and proposed solutions to the challenge, excellently pitched their innovative solutions and answered the judge's questions about their innovation. At the end of the session, the judges announced the winning teams of the EHMAthon: The first prize was awarded to team SOCIALBOX. The runner-up prize went ex aequo to teams rapid repurpose and pandeMIX for their original ideas.

Dr. Ravalico represented the UNIVANTS of Healthcare Excellence program, which is a call to action for healthcare teams to UNIFY with laboratory across disciplines in innovative ways to create novel thinking, processes, and use of laboratory insights to achieve measurable value for patients, clinicians, payers, and the entire health system. The program highlights and celebrates best practices throughout the world and thrives to facilitate the translation of knowledge to inspire other care teams to implement multi-stakeholder initiatives to achieve excellent outcomes and to measure the impact of their outcomes.

The prestigious global award was established by Abbott in partnership with seven leading professional societies, institutions, and associations, across healthcare disciplines with a common vision to inspire and celebrate healthcare excellence, and EHMA is one of the partners of the UNIVANTS program. Throughout the Conference, participants were able to read about the insights from the first and second editions of the program and participated in conversations around the topic. At the end of the conversation with Dr. Ravalico, the 24 winning teams of the 2020 UNIVANTS of Healthcare Excellence Awards and the diversity in their projects, teams, and their solutions were presented and celebrated.

For the past 18 years, the EHMA Conference has announced the winner of the Karolinska Medical Management Center / EHMA Research Award. This award was established to stimulate early career researchers to engage in healthcare management research and it recognises the best PhD research thesis in the field of health management. Prof. Brommels summarised the four projects that were presented at EHMA 2020 and provided an overview of the selection process. Due to the excellence of the dissertations and the quality of their presentations, the award committee decided to present not one, but two winners:

- 'Built to order: patient profiling to tailor type 2 diabetes care' by Dr. Dorijn Hertroijs, Maastricht University, The Netherlands
- 'Citizen participation: bargaining over boundaries in the organisation of care services' by Dr. Ludo Glimmerveen, Vrije Universiteit, The Netherlands

Finally, before concluding the Conference and thanking participants, hosts, partners, and sponsors, Prof. Kaehne presented the winners of the EHMA awards:

- Best European Paper

  'Why the presentation of outcome information is indispensable in making treatment decisions for Multiple Myeloma' by Dr Mirjam Garvelink; Kirsten Daniels, MSc; Dr Okke de Weerdt; Dr Paul van der Nat (St. Antonius Hospital, The Netherlands)

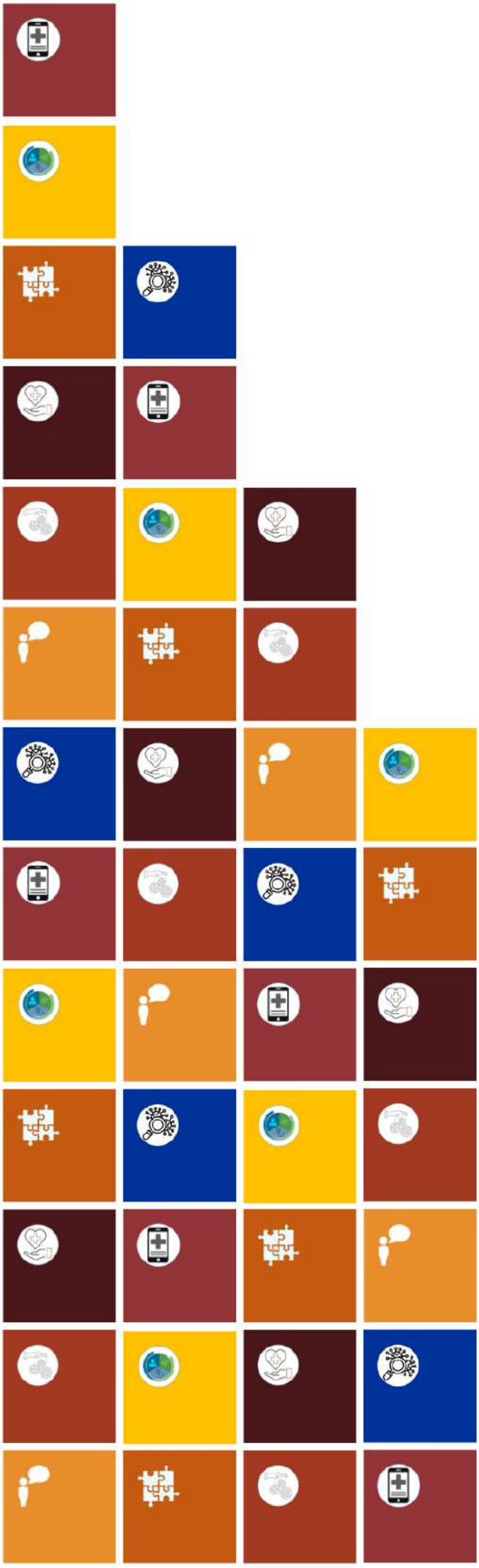
  'Magnet4Europe: a EU-funded cluster randomised trial of a targeted multifaceted intervention to improve clinical work environments in European hospitals by Mr Simon Dello; Ms Dorothea Kohnen; Mr Luk Bruyneel; Mr Matthew McHugh; Ms Linda Aiken; Mr Walter Sermeus (KU Leuven, Belgium and University of Pennsylvania, USA)

- Best Non-European Paper

  'Examining health workforce governance through the lens of the profession–A re-analysis of New Zealand's primary care workforce policy actors' by Dr Gareth Rees (ESAN University, Peru)

- Best Poster

  'The economic burden of COVID-19 hospital management: results from a pilot study' by Dr Caterina Bianciardi; Dr Annalisa Roveta; Dr Antonio Maconi; Dr Noemi Virto; Dr Angelica Bollano; Dr Sara Barooty; Dr Roberta Volpini; Dr Giacomo Centini; Dr Daniela Kozel; Dr Lucrezia Ferrario; Dr Fabrizio Schettini; Dr Daniele Bellavia; Dr Emanuela Foglia; Dr Emanuele Porazzi.



VALUE-BASED HEALTHCARE

#EHMA2020
Conference Report

Value-based healthcare: what, how and why

A session offered by the University of Groningen

Speakers: **Dr. Esther Metting** (University of Groningen, The Netherlands); **Dr. Oskar Roemeling** (University of Groningen, The Netherlands); **Mr. Ewoud Stapersma** (Wilhelmina Hospital, The Netherlands); **Dr. Marjolein van Offenbeek** (University of Groningen, The Netherlands); **Mr. Daan Westra** (Maastricht University, The Netherlands)

Moderator: **Dr. Oskar Roemeling** (University of Groningen, The Netherlands)

Summary

This session discussed the topic of value-based healthcare (VBHC) from various perspectives. Three statements were presented to the audience and used as discussion points to start a debate:

- **What:** VBHC is not an innovation in itself, but triggers innovation in healthcare.
- **Why:** VBHC ideas are adopted because volume driven care is obsolete. Porter's initial VBHC concept needs to be enriched by including prevention.
- **How:** Stakeholder involvement is essential. VBHC can only be effectively implemented if patient-centred value is the ultimate yardstick.

The concept of value is not new. Healthcare managers have been working on finding ways to bring value to their patients; however, the term VBHC has increasingly gained popularity and is now used to describe different things, even those that do not meet the criteria put forward by Porter. VBHC can be described as an architectural innovation, since the different elements within it were put together by Porter to provide a framework that is flexible and can be interpreted and adapted in different ways. VBHC does not necessarily bring about innovation, but the framework enables health organisations to look at healthcare through the patients' viewpoint.

Patient-centred healthcare is an important concept that is needed for VBHC. As the number of people with comorbidities is increasing, integration of services is needed. Therefore, we must invest in technology and innovation to integrate services and provide more control to patients. In this sense, VBHC can be described as a trigger for innovation. It can also serve as a mean to create boundaries in the world of health management and clinicians by encouraging multidisciplinary collaboration to restructure and organise healthcare services and processes.

VBHC requires practitioners to translate system-wide ideas into their individual activities, which can be a challenging undertaking as it does not necessarily provide practical guides on how and what to change. Thus, the local adoption of VBHC can vary greatly among providers. For example, VBHC has been used as innovation strategy to create value for the patients, or as a vehicle for multi-disciplinary collaboration within the facility. Those different approaches to VBHC within one system can create challenges for integration.

Managers have a task, resources, and allocation logic and patients only see good interactions and good care. The challenge is that VBHC asked for managerial and clinical tasks to now focus mainly on the needs of the patient and not necessarily on cost-effectiveness. Therefore, Lean projects might be more attractive to managers that VBHC. However, the latter brings in not only managers and clinicians, but also the patients to the conversation.

Is VBHC shifting the responsibility to the purchasers and not on the providers to operationalise it? If insurers and governments want the implementation of value-based healthcare, they should take a leading role to provide incentives to providers and managers to try to move towards a more value-driven system. A central organisation cannot manage the implementation of VBHC. The right commitment of all participants to the objectives of VBHC and trying to build the right incentives are necessary. Otherwise, the implementation of VBHC might be hindered.

Quality, value, and cost should not be separate conversations. There are many patient-related outcome measures, but what the patient, as an individual, wants is missing from VBHC. Prevention is still missing from the concept, although it would also bring value to patients. The value of prevention would also be hard to determine for patients because prevention happens before the point of collecting patient-reported outcomes. Prevention does impact business models of health facilities, and less patients mean less market-share. Facilities such as hospitals would probably need to change the way they work for prevention to become more important.

In the Netherlands hospitals are the main active push for VBHC, and it is usually defined in the scope of a specific hospital. When it is extended beyond the hospital, however, it becomes problematic, and insurers would need to get a commitment from different hospitals – commitment is key. In the UK, VBHC is mainly driven by training of health-care professionals and through professional associations.

Take home messages

- To have value-based healthcare, patient-cantered care must be a priority. Where the focus is on the patients' perspectives and needs.
- VBHC is a proposal for system wide change.
- VBHC is dependent on the number of slack resources organisations have and the number of resources that you have to spare that you can use to allocate to innovative projects. Slack resources are very important for improvement activities in general. If organisations do not have some sort of slack resources that they can draw on to spend money or spend time on, they will innovate less.
- Prevention needs to have a role in value-driven care.
- The roles of different stakeholders need to be made clearer in the implementation of value-based healthcare, instead of just giving the responsibility to one player.
- Value-driven care could be a mechanism to bring both the managerial side and the care side together.
- Value-based healthcare is not necessarily a cost efficiency approach, therefore not necessarily linked to a lean approach. It should allow for value to increase, even if that means increasing cost.
- The entire health system must buy-in to implement value-based healthcare, it cannot only be done at a local level or within one organisation.
- VBHC is not persuasive as such; it needs a full implementation program to change services. Similar to other innovations, you need more upfront resources to see changes in the medium and long-term.

Building on value-based health care: towards a health system perspective

A session offered by the European Observatory on Health Systems and Policies

Speakers: Dr. Nigel Edwards (Nuffield Trust England, UK); Dr. Anna Krohwinkel (Leading Health Care Foundation, Sweden); Dr. Peter Smith (University of York and Imperial College Business School, UK)

Moderator: Dr. Anna Sagan (European Observatory on Health Systems and Policies, UK)

Summary

The workshop addressed the new approach called 'value-based healthcare' (VBHC) proposed by Prof. Michael Porter and his colleagues at Harvard Business School about 15 years ago. It was promoted as the ultimate and universal way to achieve value. But does it actually work in practice? Is it really universal and can it be implemented everywhere? And is it the ultimate model of value or can we come up with something better?

A policy brief was recently released by the European Observatory on Health Systems and Policies and the WHO. The policy brief notes the long-standing interest in VBHC that can be traced back to the early days of cost-effectiveness analysis that economists started working on in the 1980s, which is essentially trying to say how much health we can get for our money. Porter's work extended that considerably and looked more broadly at the value that is created with a specific emphasis on provider organisations as health factories where people have tried to implement these techniques. There are different perspectives on what this VBHC means. The policy brief lays out what we should be working towards; It is not just VBHC but a value-based health system in which all policies and actions are aligned towards creating some common concept of value.

The policy brief also puts forward a diagram to encapsulate five important outcomes that create well-being, as well as five groups of actors and how they contribute to value within the health system. Different policies focus on different aspects of value and therefore different aspects of well-being. Good governance is essential to ensuring that all policy actors and policy leaders are operating effectively and that they are all working towards a common concept of value. Therefore, it is important to have a change of perspective away from VBHC towards a value-based health system.

The original value equation of Porter still focuses on the value created by providers and their induced costs, while many values that are important in most European countries are not covered, i.e., equality. The equation also presupposes that patient can choose the providers that create the most value for them, which is not the case in most European countries. In addition, Porter based the notion of measuring what matters to patients on the idea that they could be standardised, and does not include a qualitative component to ask individual patients about their preferences. In practice, Porter proposed several different measures, from the policy to the provider level, to create the system where value-based competition can proceed; one of which is to build an enabling information technology platform. This was the argument presented for why Sweden would be a good pilot country for VBHC. Sweden have something called 'quality registers', which are diagnosis-based databases where patient level data is collected on several outcome measures.

The actual implementation of VBHC in Sweden was seen through the three biggest university hospitals in the country, and they all implemented VBHC in similar ways. The observations were that the VBHC logic fits quite well with easily defined elective care procedures, such as certain elective surgeries (e.g., hip or knee replacement); but it is not well suited to organise or measure more complex care. In addition, organisational reforms within hospitals based on care flows did not increase efficiency, probably because the reform was only done partially. The hospitals that tried this maintained a double structure with both clinics and care flows, which created confusion and excessive administrative burden. The Swedish government, however, did not make a central political decision to make VBHC a guiding national strategy; VBHC was implemented at the organisational level and those organisations did not continue with the implementation.

The speakers endorsed the view that the Porter view of value is somewhat narrow and that health systems need to think more imaginatively, particularly given that the context in which many of our systems are operating may limit the scope to adopt Porter's approach. The patients with multi-morbidity and complex problems also do not fit into Porter's framework. There are well known tools and techniques at both the micro and macro level to increase technical efficiency and the quality of outcomes. However, there are not a lot of good outcome measures that capture value, as the approaches tend to focus on the organisation of care and the technical efficiency or the production process. Health leaders also tend to assume that the efficiency work that they are doing is producing the right outcome for patients. Finally, health leaders also often look at individual patients without looking at the wider system or population health.

A study by Al Mulley, showed that there are often gaps in what patients want and what doctors think they want. The study also showed that when given complete information about a procedure, particularly the side effects against the benefits, patients tend to make different decisions. Some of the methods to ensure that patients' needs and preferences are being met can be to change current health practices; develop new measurements to capture patient preferences; be more interested in population health; adjust payment mechanisms; align regulation and non-financial incentives; as well as develop different approaches to strategic purchasing to help support the aforementioned actions.

When implementing VBHC, there has been a tendency to assume that it is about payment systems governance and management structure, but while those things are important, they do not of themselves guarantee success. Productive relationships and trusts between the different stakeholders in the system are quite important ingredients. Unfortunately, they are quite hard to drive via regulation governance or financial incentives; they take time to develop; it might be difficult to scale up those relationships if the network grows.

Even more fundamental than finding what value is, is redefining what need is and identifying how to go beyond managing one patient towards creating health in the system. This is a challenge that requires many changes and careful adaptation of business skills for healthcare. The challenges in healthcare are complex and health providers are engaged in treating people with very different sets of needs, thus need to be suitably humble in terms of assuming that they have a big answer.

Take Home Messages

- Patients and population should be the final judges of value.
- The role of policymakers is to find the balance that maximises the overall value that the health system creates from the resources at its disposal.
- Health systems need to consider explicitly what concepts of value they are seeking to create.
- Different actors have different perspectives and create different aspects of value; therefore, good governance is key for aligning perspectives on value.
- Enhancing value often means doing things incrementally, while keeping in mind the overarching vision that should drive all stakeholders.
- Standardisation of outcome measures works best for certain kind of care, but it does not really address the complex coordination needed for patients that have multi-morbidities or that cannot follow a clear flow.
- Collecting standardised PROMs is different than asking patients what matters to them
- VBHC should focus on organising relationships and networks around patients before focusing on organising the structure.
- Health systems should look more towards nurturing professionalism and relationships to achieve value.

Value-based management of healthcare organisations

A session offered by the Nordic Healthcare Group

Speakers: Paulus Torkki; Riikka-Leena Leskelä; Laura Pitkänen (Nordic Healthcare Group, Finland)

Summary

This session started with the definition of value-based healthcare based on Michael Porter's work:

Patient Value = Patient-relevant outcomes / cost per patient to achieve these outcomes.

Value is seen here as cost-effectiveness and to achieve it one must have resources that are used to produce a service that will create outputs, which will have outcomes. Finally, that will lead to a broader impact. There are different ways to measure outcomes and in healthcare, the measurement can be divided based on the source of the data:

1. Patient: Patient-Reported Outcome Measures (PROM) or Patient-Reported Experience Measures (PREM)
2. Clinician: Clinician-reported outcomes
3. Clinical: Clinical measures and functioning tests, service use.

The implementation of value-based healthcare requires a combination of top-down and bottom-up approaches. Organisations must 'think big' by defining a value-based vision and 'start small' by starting to measure at the same time. This entails to keep the big picture in mind and think beyond a single patient, while also starting to do measure, gather experience, and analyse data.

NHG proposed the following methodology for value-based management of healthcare organisations:

Think big

1. Define your value-based vision and objectives
   - define objectives in a measurable way to be able to see if you are achieving your goals
   - know who your patients are and what the value you can provide them

   In principle, value should be an integral part on every level (strategy - goals - metrics - activities), yet the practical measures and the actions do not always reflect the strategic objectives.

2. Cooperate, network, and use international standards.

   Cooperation is key to save resources, align actions, and finding benchmarking parties. It is important to find comparable units and compare results with them to see what can be achieved.

3. Segment your patients based on needs or expected outcomes.

   Outcomes and value are most relevant at the individual level, but since that is impossible, data should be aggregated. Therefore, segmentation based on expected outcomes can be useful. For example, you can differentiate between patients with curative vs chronic as the expected outcomes are different. This helps in building the measurement logic and make the measures relevant for specific patient groups. There cannot be a basic classification to do segmentation as it depends on volumes, patient groups, case mix, etc.

Start small

4. Once the segmentation is done, choose a significant segment.

   The first patient segment can be chosen based on many criteria, such as total cost, patient volume, where personnel are most interested in value-based healthcare, great need for integration, expected scalability of solutions developed, etc.

5. Define goals in more details than at the strategic level to plan outcome measures

It is good to start with standard sets of outcome measures and not make significant changes to ensure comparability between segments, but you still need to review and adapt the inclusion criteria, what and when to measure, etc.

It is important to keep thinking beyond the chosen segment for the pilot and include some general measures to be able to compare between segments. To keep the momentum going, it is important to have a measuring moment soon after starting to start. You should also think about how to collect the data, if special software is needed, can existing data be used for different purposes, do you need to hire a data scientist, etc.

6. Measure outcomes and costs

   Measuring should become a part of the normal care process for patients. To motivate them to participate, patients must see that the data is used and that their answers matter. It is also important to ensure cost and resource usage when measuring, especially when planning on using international benchmarking.

7. Utilise the data: data must be turned into information

   The data must be turned into meaningful information for those who will read the results. When interpreting the data, benchmarking is important to know what is good, bad, normal, etc. and benchmarking can be done at different levels, form the patient to the team to other countries.

   Then the speakers presented three case studies on the implementation of value-based healthcare at organisational levels, including an example of public/private partnerships with outcomes-based remuneration, as part of a percentage of the payment contract.

   The most important is to make use of the measurement, on different levels for different purposes: in daily interaction with patients; to share information with professionals on a monthly basis; for managerial purposes to identify needs in the services; and at a strategic level to increase comparability and standardisation.

   Further interactions with participants highlighted that most discussions around value-based healthcare is focusing on patients and not always on how to motivate and incentivise professionals to change, which is an important element in the implementation of value-based healthcare.

   In the UK, the segmentation methodology presented is called ‘population-health management’, which does not take individual, therefore person-centred care as a priority. However, it is a challenge to make system wide changes at an individual level and starting by including PROMS and patient engagement into the process is a step forward.

Take Home Messages

- To implement value-based healthcare, combining top-down and bottom-up approaches is key.
- In a value-based organisation, value should be visible at every level
- Ensuring that measurements are relevant for patients is one of the most difficult things to do when implementing value-based healthcare at a systemic or organisational level.
- In motivating the patients to fill in the PROM questions, using the data is key
- Sharing information with patients, motivates them to collect information.
- Some of the biggest challenges in implementing value-based healthcare is turning data into information, then information into action.

Alternative payment methods: showcasing the Dutch experiences

A session offered by Erasmus University

Speakers: **Dr. Frank Eijkenaar** (Erasmus University Rotterdam, The Netherlands); **Dr. Arthur Hayen** (Menzis & Leiden University Medical Center, The Netherlands); **Dr. Misja Mikkers** (Tilburg University & NZa, The Netherlands); **Dr. Jeroen Struijs** (Leiden University Medical Center & RIVM, The Netherlands); **Marit Tanke, MD, PhD** (Coöperatie VGZ, The Netherlands)

Moderator: **Prof. Erik van Raaij** (Rotterdam School of Management & Erasmus University Rotterdam, The Netherlands)

Summary

In this session, participants discussed several initiatives around Alternative Payment Methods (APM) in the context of the Dutch healthcare system.

Prof. Erik van Raaij began the discussion with a brief overview of the Dutch system and the challenges it faces, namely the concerns around the financial sustainability of the system due to the expenses mainly in the long term. In fact, within the Organisation for Economic Co-operation and Development (OECD), the Netherlands is the country has the highest percentage of gross domestic product (GDP) spent on long-term care. The Dutch health system has a purchase/provider split, involving the providers, the purchasers, and the patients/citizens. These relationships are managed by the government and form a regulated competition. Prof. van Raaij presented the three laws that govern the largest part of the Dutch health system, as well as which stakeholders are involved in the purchasing of services within those laws. The Netherlands has four major insurance providers and uses several traditional payment methods such as fee-for-service, capitation, DRG-based, and global budgets.

During the session, speakers presented different experiments with alternative payment methods that are undergoing in the Netherlands, covering models such as bundled payments, integrated payments across providers, value-based payments, shared savings agreements, and population-based agreements.

The Netherlands is predicting an important increase in healthcare costs and in demand for care in the next 20 years, but their main challenge remains the accessibility of care, as the country is already experiencing healthcare workforce shortages. Therefore, the Netherlands is trying to go towards payments that add value, and take into consideration social contexts, multimorbidity, prevention, etc. In addition to payment models, this change should also apply to the culture and the organisation of the system. The different payment experiments are carried out throughout the country, thus are affiliated with different insurers. The decentralised nature of the Dutch health system facilitates the experimentation process. Those experiments have in common that they speak about integrated care, they measure health status of citizens, and they involve risk sharing through multi-contracts.

The Netherlands wants to increase quality, accessibility and financial sustainability, and the system has incentives to reach those goals. However, there is a misalignment between the current incentives, the perceived roles of stakeholders within the system and the goals. Alternative payment methods are trying to align those incentives, roles, and goals by shifting the financial accountability and related risks from payers to providers. Therefore, providers have an incentive to produce more value for the system. The session provided the case study of a bundle payment model for maternity care that was experimented between 2017 to 2019. Preliminary analysis show that after implementing an APM in maternity, there were changes in utilisation and smaller spending growth early in the pilots, but there were not any noticeable differences in health outcomes. Further analysis of the experiments will take into consideration the qualitative data.

Health insurers do not know what works best in the transformation of health payments. The importance of the individual professional in these experiments is paramount, especially in identifying low-value care that can be scrapped and best practices that should be replicated. In organisation that transformed to more appropriate care programmes, there was a decrease in treatment volume for lower value care, but not in

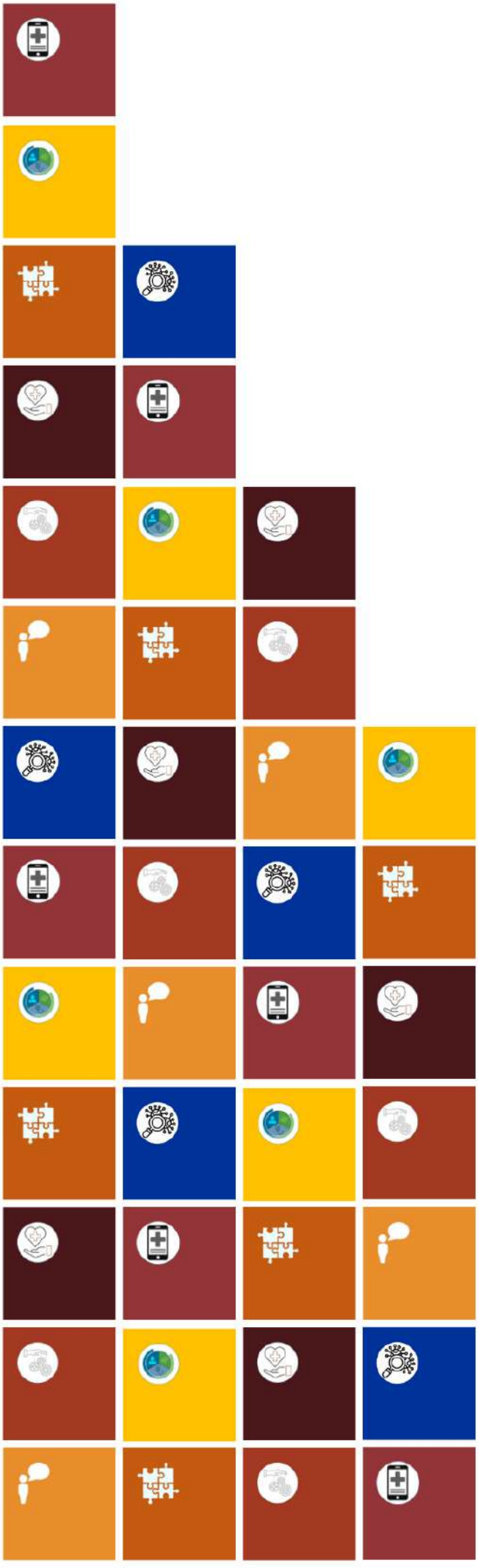
the quality of the service. To have the appropriate care culture change within a facility, there must be intrinsically motivated professionals who are willing to connect and be change ambassadors with their peers. The willingness to change must be throughout all level of the organisation and the necessary financial agreements must be set up. Those agreements must guarantee financial revenue with a fixed budget as volume might be decreasing, they also need to align with the internal financial agreement between physicians and their hospitals. These ensure that doctors and nurses are more willing to implement initiatives that can improve care while decreasing costs.

Although we want care providers to provide more value for their patients, they are not incentivised to do so. The current payment models encourage volume over value. The presentation presented an example of how an insurer is using payment models, such as shared savings, and workshops for providers to tie incentives for cost-containment and quality improvement. They saw within the first year that there was a decrease of 3.5% in health care expenditure, but there was not any important effect in quality of care. Although this is promising, there are several challenges that affect the potential of the payment reform, such as the fragmentation of the Dutch reimbursement systems, the long billing times, or the privacy laws regarding exchange of data.

International scientific evidence shows that the effectiveness of pay for performance has not been confirmed. There are no silver bullets in APM's, and models need to be adjusted to the local reality, because not all regions are faced with the same challenges (staff shortage in rural areas vs. induced demand in urban affluent areas for example). In evaluating these initiatives, it is important to account for incentives in underlying payment systems, namely any components of care that are still being contracted in a Fee for Service model, as these may create perverse incentives at a provider level. Available research shows a stronger empirical basis for the impact of bundle payment and global payment on lower cost. In the Dutch experience, the impact of bundled payment on costs and quality are not known yet; and there is not any evidence regarding global payment. But more research is being made to learn more about APMs in the Netherlands.

Take home messages

- The way a system is organised does not have an important impact on most health outcomes.
- Alternative Payment Models (APM) are trying to align the incentives, roles, and goals of health systems by shifting the financial accountability and related risks from payers to providers.
- Value-based payment not only provides incentives for higher quality, but fosters learning and innovation
- Labour shortages are acting as barrier to the implementation of value-based healthcare initiatives because organisations are focused on hiring and retention. But implementing payment reform initiatives would drive down the intensity or resource use, ultimately help to save resources.
- Conventional payment models are just volume-based and do not differentiate payment between providers based on quality of care. To counter this, one needs to infuse value-based payments in the purchasing policy of insurers.
- The quality effect of APMs is either not there or in the process of being measured, yet a lot of experiments have a clear effect on expenditures.
- For the moment, the focus seems to be on the payment aspect of APMs, but perhaps we should focus on rewards, namely non-financial rewards for individual providers.



PERSONALISATION

#EHMA2020
Conference Report

Patients in the driver's seat! Co-research on patient-driven innovations

A session offered by Karolinska Institutet

Speakers: **Dr. Maria Reinius** (Karolinska Institutet, Sweden); **Dr. Mathieu Boudes** (European Patients Forum, Belgium); **Dr. Paola Zaratin** (Italian MS Society and MULTI-ACT project, Italy)

Moderator: Laura Cande (EHMA, Belgium)

Summary

This session highlighted findings and learning from a partnership research program on the implementation of patient-driven innovations (PIF-program) at the Medical Management Centre at Karolinska Institutet. The program's duration is from 2018 to 2021.

The PIF-Program is co-created by researchers, patients, and family caregivers. It is built on six patient-driven innovations to promote self-care and co-care. The innovations are in different phases of implementation (development, pilot testing, already implemented, and scaling up) and all have different users and network. They also vary in types, from app and web applications to peer-to-peer education, to social innovation, to paper and pen. The PIF-program is a co-research, for which there is a clear description of stakeholder rights and responsibilities, a management team, coordination meetings, and research team meetings. One of the challenges in the program is the time it is taking to deliver research results, as well as the limited time that patients and caregivers can give to the program.

The research program is implemented in two phases:

1. Implementation of patient-driven innovation and development of patient-valued outcome measures.
2. Impact of the innovations on clinical practice, organisation of care, patient-valued outcomes, as well as the scale-up and production of best practice guidelines.

At the start of the program, the researchers did a scoping review to examine the extent and use of patient-driven innovations in literature. In this study, patient-driven innovation is any innovation that is initiated and driven by patients or their informal caregivers to meet the unmet need(s) of the innovator. Dr. Reinius presented the research methodology and preliminary results of the research, which included the characteristics (country, innovation name, year of publication, type of article, type of journal, and scope of articles) of the 153 articles that were included in the review.

The results have started identifying knowledge gaps in the implementation process of patient-driven innovation, such as the experience of healthcare professionals, or the mechanisms to explain success, failure, and scale up of the innovations.

Following the presentation of Dr. Reinius, Dr. Boudes presented the outcomes of the PARADIGM project, a public private consortium with the aim of making patient engagement in medicines development easier for all. They started by gathering the missing pieces in patient engagement by consulting with all stakeholders to implement a project and create tools that would fill in those gaps. PARADIGM developed a patient engagement toolbox including tools around 10 topics and in three different steps of the patient engagement process (planning, conducting, and reporting and evaluation). The outcomes also include a patient engagement monitoring and evaluation framework with metrics to help stakeholders in the self-evaluation of their progress and impact. PARADIGM focused on creating the feeling of community and created the Patient Engagement Open forum, with the goal of turning patient engagement into reality by providing a holistic perspective on the implementation of patient engagement.

Dr. Zaratin followed up by providing an overview of the MULTI-ACT project, which intends to enable multi-stakeholder mission-oriented patient engagement strategy for better health research and care. The mission-oriented aspect is important and complement the aspect of expert patients that the PIF-program is also referring to. The project proposes to meet the need for mission-oriented multi-stakeholder governance

models, which is behind the responsible research innovation thinking, which argues that patient involvement is crucial for excellent, valuable, and relevant research. Dr. Zaratin further presented the MULTI-ACT Collective Research Impact Framework, which includes a digital toolbox with a patient engagement guidelines and roadmap, a governance model, a master scorecard, etc. The presentation also highlighted some driving factors of effective patient engagement, as well as the updates from a case study implementing the project's framework.

Depending on the projects, the engaged patients can be patient activists or patient experts, but the experiential knowledge and the anecdotal experience of all patients bring added value to projects. Therefore, the empowerment of patients is needed while also remembering that all type of patient experience is necessary.

The PIF-program is a paramount example of capturing patients' experiential knowledge and the uptake of those patient-driven innovations is important and more should be done to increase its impact. The program is trying to explore what happens when the idea comes from patients, how the health system reacts, and how the system can be adapted to empower patients to keep bringing ideas forth.

Take Home Messages

- Patients in the driver's seat = patients are leaders of public-private consortium to drive more meaningful engagement of patients
- To make patient engagement effective, you need to enable co-accountability focused on different dimensions, starting from the mission of the initiative.
- The make a sustainable agenda for patient engagement, we need to ensure that all research stakeholders have a return on their investment.
- Investing in stakeholder engagement creates exponential return on investment.
- Engagement is time and resource demanding and not just for patients. Resources and money are instrumental for transformational mission.
- Availability and time of patients in co-creation is a challenge and effective communication is essential to maintain patient engagement.
- Tokenism is a challenge that patients encounter in their engagement and researchers must actively be aware of that and work to prevent that situation.
- In some patient populations, such as children or patients with dementia, the engaging partners must adapt the materials, the time, and the process to the patient situation to have meaningful patient engagement.
- There needs to be a perspective shift from engaging patients in health systems to health systems engaging in patient lives.
- Patient engagement should start with co-creation and not creation. Health managers should incrementally start engaging patients by using the tools and different frameworks that do exist.

Improving healthcare quality in Europe – how can we align different strategies?

A session offered by the European Observatory on Health Systems and Policies

Speakers: **Dr. Dimitra Panteli** (European Observatory on Health Systems and Policies, Belgium); **Dr. Mirella Cacace** (Catholic University of Applied Sciences Freiburg, Germany); **Dr. Wilm Quentin** (Technische Universität Berlin, Germany); **Dr. Reinhard Busse** (Technische Universität Berlin & European Observatory on Health Systems and Policies, Germany)

Moderator: **Dr. Matthias Wismar** (European Observatory on Health Systems and Policies, Belgium)

Summary

Quality is one of the most often quoted principles of health policy and a priority, but it is hard to measure because the understanding of the term and its components varies. A comprehensive study by The Observatory, in collaboration with the OECD, aimed to provide a clear definition of 'quality'; what different types of concepts can be used to measure, share, and improve quality; how they are linked together; and how policy makers and managers can prioritise and align strategies to ensure improvement in the healthcare system. This study is presented in the 'Improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies', on which this session is based.

Quality and performance are often not clearly differentiated, but in the book quality of care happens at the heath care service level, when looking at how services for individuals and populations are effective, safe, and people centered. While performance is at the health systems' level when looking at whether the system achieves the overall goals of improving health, responsiveness, financial protection, and efficiency.

The book brought together different frameworks that have been used in the past to operationalise quality and provided a five (5) lens framework, which is a cyclic pattern that includes from the center outwards: the 3 dimensions of quality; the areas of care to be the focus of the improvement strategies; the activities of quality; the Donabedian's triad; and the target of the quality action.

There are many strategies that can be used in the implementation of quality; the book covers 12 strategies in individual chapters that follow an identical structure to enable the reader to compare the quality strategies. In the session, two of the 12 strategies were presented: public reporting (PR) and pay-for-quality (P4Q). For PR to be used as a quality strategy, it is important that quality related information is reported to the public in a clear and concise manner. The information must be non-anonymous whereas the providers are identifiable, and the comparative data needs to be collected systematically. To make the data on quality presentable to the public, health systems also need to make sure the indicators are risk provided. This means that the systems need to be under constant review to prevent gaming.

There are two pathways by which PR can stimulate quality improvement:

1. the *selection pathway* (performance information enables the user to make informed choices about their care, for example physician-rating websites). Historically, this pathway has not been the most effective driver for change.
2. the *change pathway* (performance information enables the provider to implement changes). This pathway seems to be the most important driver for change but requires the publication of quality information for the providers.

Many international healthcare systems are using and investing in PR, across many health sectors. Government sponsorship is also increasingly common in the PR process. It is difficult to isolate the effects of PR as it comes with many other measures of quality; but there is a clear hint that the quality and healthcare outcomes are improving through public reporting, as demonstrated by Campanella et al. (2016).

P4Q and PR are often interlinked. There are two defining characteristics of P4Q:

1. Performance of providers is monitored in relation to pre-specified quality indicators and

2. A monetary transfer is made conditional on the achievement or improvement of measured quality of care

Traditional payment systems do not provide direct incentives for high quality of care. The assumption of P4Q is that providers will improve quality if they have a direct financial interest to do so. This is a controversial payment model with both proponents and opponents. The book includes a chapter that describes different P4Q programmes in primary and hospital care in Europe.

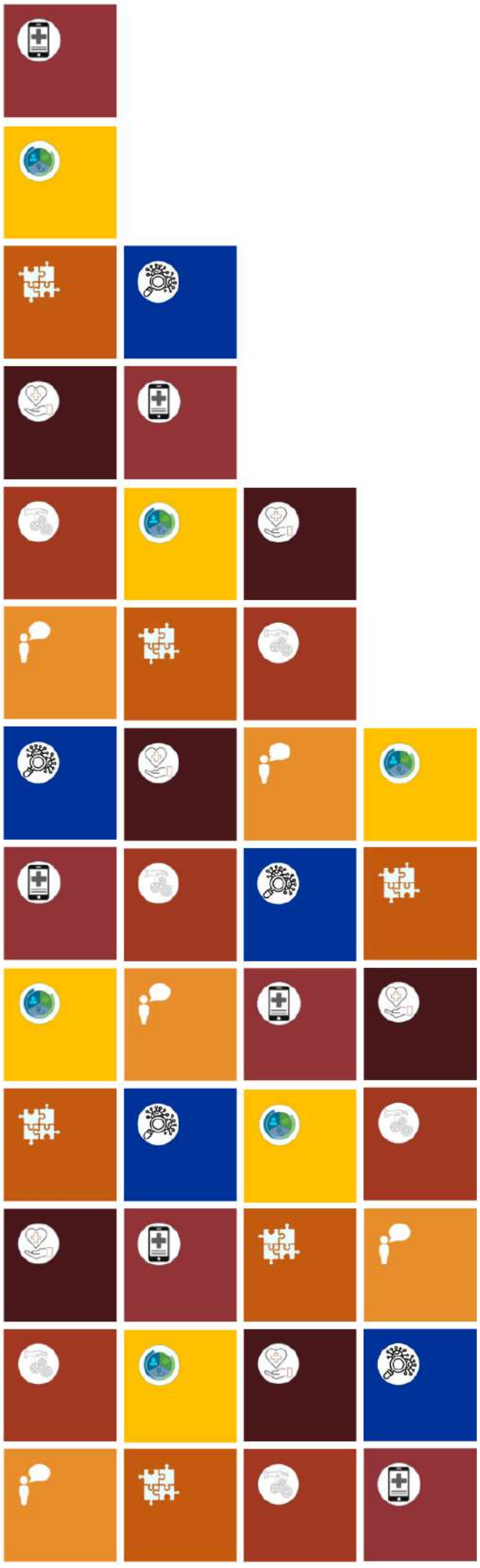
P4Q is increasingly used in European Countries, however, there is relatively limited evidence that pay for quality is effective in Europe, except in the United Kingdom. The studies that report positive effects are for process (not outcomes) measures, demonstrate short-term improvements, and are based on low-quality evidence.

Quality strategies are being increasingly implemented in Europe and several strategies are effective, primarily regarding process indicators, although the effects are modest. Unfortunately, the data on effectiveness and cost-effectiveness are often inconclusive or unavailable. This was one of the motivations for the five lens frameworks, to enable policymakers and managers to understand where the problem is, what they can do to address it, and how the chosen strategy aligns with other strategies in the system for an overall coherent quality strategy.

The lack of evidence brings many questions about using quality strategies, but quality improvement strategies are necessary in health systems. Therefore, policy makers should make decisions to move the quality agenda, but better research on the effects should always be embedded in the policy.

Take Home Messages

- To zero in on how to improve health care quality, we must zero in at the healthcare service level and differentiate between the quality of health care service delivery and the performance of the health system.
- Health consumers do not seem to be effective drivers of quality implementation. Providers seem to be more responsive to operate changes when receiving quality information, although this has many limitations.
- It is best to use Pay-for-Quality programs when planning to pay in rewards to quality of care, because Pay-for-Performance programs do not always measure quality of care.
- Implementation is politically and technically complex. Studies should focus on both implementation and evaluation of quality programmes.
- There is not a lot of data on the effectiveness of quality strategies in Europe.
- Quality strategies which are implemented in many European countries are often not coordinated or placed within the coherent policy or overall strategic framework
- Quality strategies are complementary but do not often form a coherent quality policy: this should be one of the priorities of policymakers and managers in the future.
- If there are no studies on the effectiveness of a quality strategy, that does not mean that the strategy is not effective.
- When it comes to indicators to measure quality, European countries need to work together to develop common quality indicators and standards to facilitate comparison across countries.



SYSTEMS & ORGANISATIONAL GOVERNANCE

EHMA2020
Conference Report

Resilient health systems: evidence from the State of Health in the EU country profiles

A session offered by the European Observatory on Health Systems and Policies, the European and the OECD

Speakers: **Dr. Guillaume Dedet** (Organisation for Economic Co-operation and Development - OECD, France); **Dr. Josep Figueras** (European Observatory on Health Systems and Policies, Belgium); **Dr. Anna Maresso** (European Observatory on Health Systems and Policies, Belgium); **Mr. Federico Pratellesi** (European Commission, DG SANTE, Belgium); **Dr. Anna Sagan** (European Observatory on Health Systems and Policies, UK)

Moderator: **Dr. Ewout van Ginneken** (European Observatory on Health Systems and Policies, UK)

Summary

The session brings together the European Commission, the OECD, and the Observatory to discuss their work on the assessment of the resilience of health systems in Europe, particularly in the time of COVID-19.

The State of Health in the EU is an infrastructure to make health system information expertise and best practices easily accessible to policy makers and relevant stakeholders. Without access to timely and comparable health system information and data, health policy makers are forced to operate in the dark, without seeing partial effects of their policies, and prone to establishing erroneous cause-effect relationships within their interventions and changes. The COVID-19 pandemic has resurfaced how important governments need robust and comparable information on health systems. Simple count of number beds or ICU units have been a large obstacle to setting up an effective response in several EU countries.

In the health policy field, even in non-emergency situations, policy makers are obliged to make decisions. The State of Health in the EU two-year project cycle is geared to support policy makers in their activities. It includes a 'country health profile', which is a standalone reference for knowledge and information on a country's health system. The Country Health Profiles look at various aspect of the health systems in EU countries and resilience sits in the assessment section.

The concept of resilience is relatively new, and literature reveals a lack of consensus on the scope of the concept and whether it adds value to health policy. Resilience is defined as the health system's capacity to adapt effectively to changing environments, sudden shocks, or crises (i.e., economic shocks such as the crisis in 2008, 2009; epidemiologic crisis such as the zika virus and COVID-19). There are three dimensions to the conceptual framework of resilience. For each of the dimensions there is a comprehensive list of associated quantitative and qualitative indicators, and related policy measures that could be explored.

1. How can the health system ensure long-term sustainability of resources?

   It refers to the capacity to protect or generate the necessary and adequate financial resources (diversification of funding sources), as well as physical, human, information, and knowledge resources to address any upcoming major challenge.

2. Does it respond efficiently?

   It refers to the ability to manage the health system with limited resources through achieving efficiencies, while not sacrificing key priorities, benefits, access, or entitlements. It also refers to a health system that can withstand shocks to supply or demand and must be able to best use its available resources. Are the system's infrastructures suitable for meeting needs, including resources for national emergency response plans or crisis preparedness measures? Is it capable of making good use of resources; assess existing inefficiencies; and examine efforts to improve efficiency?

3. What are the mechanisms for strengthening governance?

Strengthening governance refers to the capacity to steer the system to adapt quickly to new objectives and priorities, and to respond to major challenges through a range of governance tools and strategies. Formulating long-term strategy, accountability and transparency mechanisms, participation and stakeholder involvement and evidence, monitoring, and stakeholder involvement.

The health impact of COVID-19 has been different in European countries, because not all countries started at the same point or reacted in the same way. The resilience of EU health systems was shown in their creativity to find solutions and continue to provide care to patients. Member States need stronger health systems, to improve their primary care infrastructure, to continue delivering care to non-COVID patients, to flatten their hierarchy for quicker decision making, and to focus more on the most vulnerable citizens.

Resilience plans are based on history of trauma, such as heath waves or cyberattacks. Most EU countries have at least framed their idea of resilience in terms of financial resilience so having necessary buffers from a financial standpoint to withstand a financial shock is necessary. In addition, many countries considered addressing the health workforce challenges, such as skill-mix, ageing doctors, workers' salaries, and workforce planning within their resilience-enhancing strategies.

The European Commission, the OECD, and the Observatory are complementing each other and converging to a new model to assess, measure, compare, and create policy lessons to strengthen resilience in Member States.

Take Home Messages

- In the light of the current COVID-19 outbreak, it is precisely Germany's high bed stock (both acute beds and ICU beds) that could accommodate an upsurge of patients and has indeed contributed to the health system's resilience.
- Resilience is also measured as the ability to give, to remain inclusive, and to look after the most vulnerable of the population.
- Experiencing a shock is not necessary for a system to be resilient and the resilient health system may be one that is prepared for a shock, but this shock may not necessarily happen.
- There is congruence in the findings of the research being carried out by the different organisations around resilience.
- Resilience studies need to take the national context into account.
- To cope better, we need a better primary care infrastructure.
- The quicker it is to decide and the flatter the hierarchies, the earlier it is to get an answer.

Healthcare systems challenges to managing respiratory syncytial virus (RSV) infections

A session offered by Sanofi Pasteur

Speakers: **Prof. Harish Nair** (Usher Institute, The University of Edinburgh, UK); **Dr Javier Diez-Domingo** (Centre of Public Health Research of Valencia-FISABIO, Spain); **Dr. Juan José García** (Sant Joan de Deu Barcelona Children's Hospital, Spain); **Dr. Simon Drysdale** (St George's University Hospitals NHS Foundation Trust and St George's, University of London, UK); **Dr. Simon Nadel** (St Mary's Hospital and Imperial College London, UK)

Moderator: **Prof. Federico Lega** (University of Milan, Italy)

Summary

This session provided a systemic and holistic overview of RSV, by presenting its risks factors, impact, and management in different settings of the health ecosystem.

Prof. Harish Nair started by presenting the Respiratory Syncytial Virus Consortium in Europe - RESCUE Project, which is the largest RSV consortium in Europe with partners from the public sector, academia, and the pharmaceutical industry. RESCUE's goal was to build evidence base on the burden of RSV disease and associated economic impact in Europe, and engage relevant stakeholders to impact planning and decision-making on RSV. To date, RESCUE had published 22 papers in various scientific journals. Among those, the project implemented a prospective cohort study to identify the burden of RSV in older adults in Europe; conducted systematic reviews and meta-analysis to estimate the global burden in older adults in 2015 and the economic burden of RSV in young children globally. Although the duration of symptoms of RSV is longer for older adults, they do not often experience severe cases of the disease or deaths. For children, globally there are 33.1 million episodes of RSV, of which 6.3 million are severe. Over 42% of those hospitalisations are in infants of 6 months old or younger. Management of RSV for children, in 2017, costs approximately 5 billion euros globally. 35% of this amount is in industrialised countries and 55% goes to cover hospitalisation costs.

Spain: Dr. Javier Diez-Domingo and Dr. Juan José García presented the experience of Spain as it relates to RSV. Paediatricians are well aware of the disease; however, there is a lack of testing to diagnose RSV in children and therefore not a lot of epidemiology data on the topic in the country. General practitioners also order very few RSV tests for patients, which indicates the need to raise awareness on RSV at the primary care level. At the management level, more surveillance is needed at the regional level to have information on the detection rate, circulation in regards of seasonality, comparison with influenza, etc. There are not public health recommendations for screening of RSV in children, this is left to individual hospitals. In winter, hospitals are very crowded – doubling the number of cases per day - at every level (emergency departments, wards, and intensive care units) making the workload very heavy. In acute care services, most specifically in winter, to successfully manage RSV, paediatric hospitals can implement structural changes, such as changes in patient flow; improve their communication by organising 10-15 minutes hurdles with their administrative and clinical teams; consider new models of hospitalisations, such as hospital at home; work on standardisation of their practices to update their protocols; and ensure the continuous training of clinical staff. Hospitals are apprehensive of how COVID-19 will impact the hospitalisation of patients with RSV. In other countries in the southern hemisphere, it seems that admission for acute lower respiratory tract infections have decreased and the same phenomenon is being seen in Spain. Health management must be able to adapt quickly by practicing flat management; manage external relationships with primary care and other hospitals, consider implementing the hospitalist model, and increase the rate of hospitalisation at home.

UK: Dr. Simon Drysdale and Dr. Simon Nadel presented the experience of the UK. Every year, during winter, hospital wards are full of children and hospitals must cancel elective surgeries and increase capacity to accommodate the surge in admission of babies to their paediatric intensive care unit. Sometimes they must transport children to facilities far from their homes due to a lack of intensive care bed. Most of the admitted

children are under a year old, of which the majority admitted at Paediatric Intensive Care Unit (PICU) are less than 6-month-old. The impacts are various: hospital disorganisation, huge economic impact but also an sever impact on families, for which it is a real problem. The same protocols used to manage RSV surge are currently being used by hospitals to accommodate the surge of patients who must be admitted because of COVID. In terms of management, there is not an active treatment for RSV, the only medicine available has a lot of side-effects and is not highly effective and reserved for very severe unusual cases; therefore, clinicians mostly rely on supportive care to treat patients such as feeding and respiratory support. This is a major global unmet need, and a solution needs to be found. There are currently ongoing research and clinical trials to develop vaccines and monoclonal antibodies that are showing promising results. Although there are cases of nosocomial infections, there are not a lot of data on those cases; however, with COVID-19, hospitals have increased the use of personal protective equipment, which will decrease the rate of possible nosocomial RSV infections.

Take home messages

- RSV causes a considerable disruption of healthcare systems every year, especially in hospital paediatric services.
- There is an important awareness issue on RSV. Considering its social and economic impact and the incidence of infections, the health literacy and awareness level on RSV of health professionals, the general population, and parents must increase. Moreover, due to the small number of studies on RSV, the social-economic impact might be higher than it is currently assessed.
- At a national level, more European policymakers need to include RSV in their agenda. This is especially needed in the context of COVID-19 where we must ensure the sustainability of healthcare systems. This is one of the objectives of the RESCUE project.
- One of the main challenges is the lack of treatment or prevention solutions against RSV in all infants.
- The new measures that are being taken because of COVID, might have a positive impact in the long-term in the prevention of RSV infections, as well as the management of RSV hospitalisation surges in winter.

A fresh look at hospitals: where do they fit in healthcare systems?

A session offered by Radboudumc

Speakers: Dr. Antonio Durán (AllDMhealth, Spain); Prof. Dr. Patrick Jeurissen (Radboud University Medical School & Ministry of Health, Welfare and Sports of The Netherlands, The Netherlands); Dr. Stephen Wright (University College London, UK)

Moderator: Laura Cande (EHMA, Belgium)

Summary

In this session, the speakers discussed their book 'Understanding Hospitals in Changing Health Systems', which provides perspectives and seeks to reframe policy discussions on hospitals by setting out a construct which links social concepts (governance-processed and tools for control), healthcare ones (models of care-physical and clinical processes), and economic ones (business models transforming resources into socioeconomic value).

Besides the army and the Catholic church, hospitals have the longest circle of life and can be described as a record of resilience. Yet, when researching to find a definition of 'hospitals', the authors found many definitions, and none took into consideration the full spectrum of facilities that are currently described as 'hospitals'. In one Central Asian country, they reported having 34 hospital categories. In addition, hospitals are often deemed as a problem; one definition described hospitals as "very complex systems, very badly understood, extremely expensive and full of inefficiencies". As such, they have been removed from global health dialogue and their existence is questioned because "public health and primary care are all that matters".

Although not an issue in most European countries, access to safe and affordable emergency and surgical services, which are often offered in hospitals, are necessary, but lacking in developing countries. And to address this issue, it is important to have a better understanding of hospitals. The book suggests that hospitals require attention to the models of care, the business models, and the governance. Then it is essential to look at payment mechanisms, the spectrum of ownership, and finally make decisions, taking in consideration the context and geographical variations.

The model of care (who does what to the patients and where) is different now compared to 50 years ago in many countries. The model of care is also different from country to country, and COVID-19 has shown that depending on how the country had managed their models of care (primary, public, and hospital care), their capacity to manage the pandemic has been different. When talking about the governance of public hospitals, there are several stakeholders and external pressures involved. Coordination is a central issue of governance and the book proposes a framework to operationalise hospital governance, knowing that the solution is context specific.

Over the past 20 to 40 years, we witnessed a change in economic trends to active purchasing, privatisation and autonomy, and value-based payment, yet hospitals remain. The question is whether COVID-19 will change it all. Dr. Jeurissen co-wrote an article in which the authors described the impact of the pandemic, such as hospitals being back at the centre, and proposed the reforms that they would like to see post COVID-19. Currently, we are seeing changes from economic frameworks to care frameworks, and the question is if those changes will last. The coordination of care is a challenge and hospitals could play a role in supporting the integration of patient care. The fundamental challenges for hospitals remain and they are in essence, not physician-made: expensive specialised care and precision medicine, high rate of indirect costs, and the need for a new delivery system for multi-morbidity.

There are similarities between the health business and other businesses. Hospitals are expensive and popular for the countries they service, yet we are uncertain of what output and outcomes we get out of them and there is a lot of unexplained variation in hospital performance. Therefore, it is not possible to make a secure connection between investments in hospitals and the health systems and the added value. The business

model is the mechanism used in the book to try and think through that link, and it applies for both public and private hospitals

A healthcare business model starts with a value-added proposition (something more than 'better healthcare') and that can be defined by using a value-added formula, which is a blueprint for how the institution aims to deliver value. To give this value, there are physical processes, which have economic resources attached to them. This structure might not be the better one, but it provides several insights in the concept of business model.

There are three business models in health:

1. Solution shops (institution that deals with unstructured problems): most hospitals and primary care are like this.
2. Value-added processes: this could be the true domain of lean healthcare.
3. Facilitated networks: patient as the producer of its own care, which is most of what healthcare is and the area where health systems seem to be going more.

In healthcare, there are several decision-making frameworks, but they tend to be short-term. They do not capture both the physical processes and the economic impacts of handling the care in a certain way. They very rarely have any kind of causal explanation in there, and they are very much oriented towards a facility rather than a system. System wide modelling is, however, necessary and there are many aspects to learn from other sectors: investment appraisal, optimisation models (look at the whole life and the whole system).

Take Home Messages

- There is not a clear definition of what a hospital is, thus there is a confusion around the term.
- For people who lack access to quality services, hospitals are a true source of hope.
- There needs to be a better understanding of hospitals' current and possible functions, institutional dynamics, and how they should be managed.
- To understand hospitals, "the number of beds is not important, what matters is models of care".
- We need to work and structure hospital governance differently and articulate the relationship between different institutions more effectively.
- For a health policy community that talks all the time about systems, we spend almost all our time looking at what happens to individual institutions and individual facilities.
- Optimisation models at the whole system can help in determining hospital capacity and facility cost.
- COVID-19 has shown that health systems need more of everything, but system modelling might be able to tell how much more is needed.
- Hospitals are a core public goods which have an important role in public health.
- Health systems often consider 'hospital capacity', and the meaning of this term is not clear. Often, it is described as the number of beds, but although important, that is not a useful measure of the actual capacity of the hospital.
- It is not worthwhile talking about a hospital's capacity or a hospital's cost, they need to be put in the context of a system/network to find the best way to deliver care.
- When considering developing a hospital, the initial capital expenditure is unimportant. What matters is the flow of clinical expenditures.

Special interest group on governance

A session offered by the Good Governance Institute (GGI)

Speakers: **Dr. Andrew Corbett-Nolan** (Good Governance Institute, UK); **Prof. Dr. Eileen Fairhurst** (East Lancashire Hospitals NHS Trust, UK); **Dr. Usman Khan** (KU Leuven, Belgium; FIPRA, UK)

Summary

At the EHMA 2019 Conference the Good Governance Institute (GGI) launched a Special Interest Group (SIG) on governance and during the 2020 conference, the SIG met to explore good governance across Europe, starting with an example from the English National Health Service

The governance approach in NHS England is mostly collaborative and systems-based, it was borrowed from the City of London (commerce). The belief is that competition and creating a faux internal market would drive reform in the system. This model is being transformed into a Long-Term Plan, which is gradually shifting to focusing more on population health, integration, and systems approach.

Health providers were first created as NHS Trust, and they operate under a provider license, which requires them to have a specific model of governance, with a unitary board that has both executives and state appointed non-executives. As the appointments to the provider organisation's boards are public, there is a lot of transparency. Most of the board meetings, minutes, and governing documents are made public, unless they are discussing sensitive matters or personnel issues. In addition to the usual corporate governance matters, the boards also have a duty of partnership, so they cannot act in a way that jeopardises the opportunities of other public sector organisations and a duty of quality which is inactive through clinical governance.

NHS England has two main regulators: the quality commission and another regulator that looks at the economic viability of trusts. Due to the payment mechanism put in place by the regulator, the trusts have lost many of its freedom and must go to the regulator for approval of expenses above a certain threshold.

As NHS England develop into care systems, the governance is being segmented into three ways:

1. As an integrated care system that balances risk across a larger population base
2. At the local level with local authorities and engaging with independent sector and citizens
3. As individual statutory organisations that will very increasingly be encouraged to merge into super trusts or chains

The TO-REACH project was set up by high-profile health researchers across Europe to develop a collaboration platform to share effective practice on health systems governance and their potential to be implemented in different health systems. Some organisations have started working on governance, but the work needs to be updated and made more current.

A work done in 2007 anchored hospital governance by creating a reference point, 'one building, one management, one hierarchy', by which they can then analyse health governance across Europe. If we look at European Health Care systems, the concept of the one building is the exception as many hospitals have multiple sites. There are also multiple groups, in different European countries, much like the USA, governance accountability falls upon a wider group network. The study attempted to provide some metrics on governance, such as

- openness: when looking for financial statements of the publicly funded organisations there are many variations, only 1 in 4 hospitals in France made them publicly available, for example.
- Function: some boards had wider governance functions or instrumental daily management functions
- Size: the size of the boards is often linked to the level of political oversight and can range from less than 12 members to up to 36 members
- Make-up and structures: some board members were insiders (from the immediate hospital and clinical team), while other boards were mostly composed of outsiders (stakeholders from outside the immediate hospital or the healthcare system)

- Checks and balances: it seemed that the more autonomy the board had, the greater were the internal systems control

The European Observatory on Health Systems and Policies also presented case study examples on governance and looked at four dimensions of governance:

1. Institutional: looking at credentials, recognition, status
2. Financial: freedom of the board to manage resources, source of revenue, management of capital revenue
3. Accountability: who does the board report to, who they represent
4. Responsibility and decision-making capacity

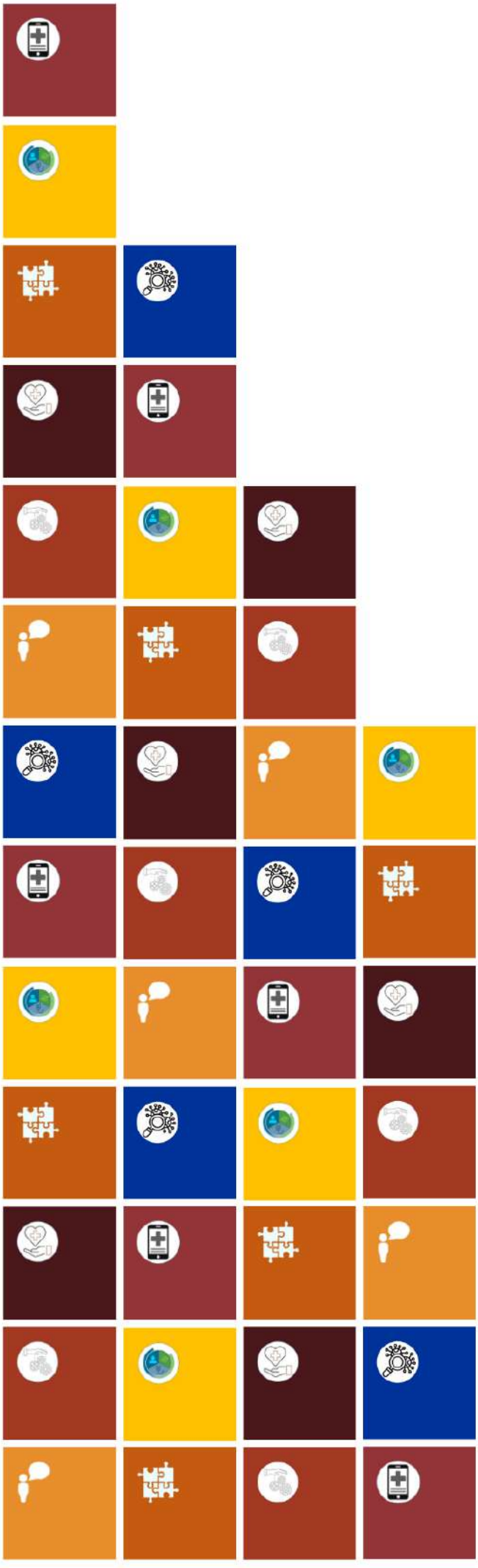
One of the questions to ask about governance is whether the board functions add to transparency and facilitate the integration of care, although in places such as Liverpool, that integration is being translated in the expansion of hospitals into the community to take over community services, which is not a true integration.

While NHS England is moving forward towards integration, there are many challenges such as dealing with the payment system because health services and some hospital services are not integrated. There is also the challenge of accountability and identifying who is responsible for the patient and who will pay which service for the patient. In addition, the prioritisation of the provision of care is centrally driven, and that does not give enough leeway for trusts to actually integrate with their community. Figuring out which type of structural governance and responsibility that can facilitate those is a challenge in itself. It is important to ensure that the governance supports patient-centredness and there is a need to see how different countries meet this objective. In the Netherlands, one example is that some organisations are ensuring that there is a connection between their members and the patient council.

At the end of the session, there was a presentation of the activities of the SIG, the plans for the next year, as well as an invitation to join the SIG.

Take Home Messages

- In Wales, Scotland, and Northern Ireland, the governance structure of the NHS is different than England, albeit certain similarities.
- NHS England's governance is transforming into an individual provider to more of a systemic approach with a focus on population health and integration.
- The salary scales of the bulk of the NHS staff are determined at the national level and not at the trust level.
- Public board meetings could be considered as a safeguarding act to prevent important matters from being missed.
- There are many variations in the way hospitals are governed, beyond having systems such as the NHS or social insurance models.
- Although there is a southern-northern European split into governance, sometimes countries that are next to each other might have important differences in the governance structure of their health facilities.



SUSTAINABILITY

#EHMA2020
Conference Report

Environmental sustainability in the health sector: a shared ambition and collective efforts

A session offered by MSD

Speakers: **Dr Joan Griffith Tell** (MSD, USA); **Mr. Ferenc Marofka** (DG SANTE, European Commission; Belgium); **Ms. Jess McNamara** (European Pharmaceutical Students Association – EPSA, Belgium); **Dr Aimee Murray** (Environment and Sustainability Institute, University of Exeter, UK); **Dr. Kirsty Reid** (European Federation of Pharmaceutical Industries and Associations – EFPIA, Belgium); **Mr. Kawaldip Sehmi** (International Alliance of Patients' Organisations – IAPO, UK)

Moderator: **Mr. George Valiotis** (EHMA, Belgium)

Summary

The session discussed existing regulatory processes for ensuring the environmental sustainability of health systems, including actions taken by different stakeholders. Particular attention was given to Antimicrobial Resistance (AMR).

The Pharmaceutical Strategy for Europe, published at the end of November 2020, aims to cover the life cycle of medicines from manufacturing to disposal, and brings together policies that are relevant for medicines. The strategy also plays into Europe's industrial strategy, digital strategy, and chemical strategy, which are all topics covered in the Green Deal. The environmental aspects of the strategy are related to pharmaceutical residues that impact the environment whether through waste waters or the manufacturing process. The EU wants to revise its environmental risk assessments for all new medicines and review the medicines that came to the market before a risk assessment was required. This will strengthen the legislative framework for environmental sustainability of health systems, including AMR, and increase the incentives and financial stakes on the topic.

The European Federation of Pharmaceutical Industries and Associations - EFPIA and their members have been acting on several of the Commission's policy priorities to ensure the environmental sustainability of the health sector. Environmental factors have been well documented as the cause of important health challenges, such as the current COVID-19 pandemic, the quality of the air, premature deaths, etc. This motivates the pharmaceutical industry to develop ways to respond to these challenges, such as meeting carbon dioxide reduction targets or making changes in their processes through innovations, using different energy sources, creating collaborative environment and actions, and activities to transition toward a more circular economy, which is ensuring that the process is renewable and recyclable, and residues do not end up in the environment. The work of EFPIA members on the European Green Deal also have an influence on at least 8 of the 17 Sustainable Development Goals.

The European Pharmaceutical Students Association - EPSA recently published a position paper in which they highlighted that pharmaceutical students are not educated enough on how pharmaceutical processes impact the environment due to incorrect disposal or overuse of medications. The EU Green Deal highlights the importance of public health in the environmental context and those impacts, as well as concrete mitigation actions, should be included in the training of pharmaceutical students and young pharmacists in the workplace, irrespective of their specialisation.

In the reduction of the impact of AMR on the environment, patients also have a role. Patients need to take actions in their behaviour patterns and engagement in the health system. They should ensure rational use of antibiotics, good stewardship, and rely on the use of preventative solutions, such as changing their diet when possible. This is not possible without decision-makers support in empowering patients and increasing their health literacy about the use and disposal of antibiotics, as well as their involvement in decisions concerning their medications. Health managers and professionals must improve their investments in health promotion and health literacy, patient education programmes, and partnerships between pharmacists and

patients. Policymakers should ensure that patients are included in medication approval processes: they could follow the same example as tobacco products for the labelling of antibiotics. Many health systems should have contact with their patient representatives to support them in improving patients' access to information and literacy.

Human activities promote the increase of AMR in the environment in several ways: antibiotics are not fully broken down in human or animal body and can end up as an active compound in the environment. In addition, chemicals found in disinfectants and detergents, heavy metals, and other non-antibiotics medications can also influence the evolution of AMR in the environment.

Industry is currently working with hospitals and diagnostics but needs to improve patient engagement. To tackle this issue, some of the solutions can be professionals that ensure the use of proper diagnostics to only prescribe antibiotics when necessary. Researchers can develop new antibiotics; vaccines should be explored; tools and training should be developed for health providers. One of the more difficult solutions is related to antimicrobial manufacturing and seeing how factories can best manufacture medications and minimise the environmental impact of AMRs. Currently there are no regulations and policies that enforce that, but the pharmaceutical industry is starting to work on their environmental impact as they recognise the importance for the future. But also, once those regulations get implemented, pharmaceutical industry will already be complying, as changing manufacturing processes can take time.

Academia is ensuring that the evidence is available to support and inform decision- and policy-making processes. In many ways, different stakeholders are working with the evidence, and sometimes ahead of it, to attempt finding solutions to prevent AMR. However, some of the foreseeable solutions are costly and time-consuming. For example, in several countries, water waste management facilities might not currently have the appropriate equipment to remove all harmful compounds in the water.

Take home messages

- Our personal health depends very much on a healthy planet.
- Health promotion and literacy are the neglected part of our health systems and must be invested in to empower patients to prevent the misuse of antibiotics.
- AMR does not only involve the healthcare sector, but also the agricultural sector, clean water, and sanitation.
- There is a global health issue in AMR, and everyone has their part to play in trying to combat it. The only way to successfully do so is through multi-stakeholder collaboration.
- The health industry, as other consumer industries, must involve patients in formal decision-making processes through the whole medicine life cycle and on other patient safety topics, including AMR actions.
- Although the legislative measures do not currently impact health managers, they can make changes in their individual practices, including by paying attention to sustainable procurement

Vaccination and health systems sustainability: how to prioritise vaccines investment in a post-COVID world

A session offered by Sanofi Pasteur

Speakers: **Dr. Cristian-Silviu Buşoi** (Member of the European Parliament, Romania); **Ms. Francesca Colombo** (Organisation for Economic Co-operation and Development, France); **Dr. Dimitra Panteli** (European Observatory on Health Systems and Policies, Belgium); **Prof. Carlo Signorelli** (University of Parma and University Vita-Salute San Raffaele of Milan, Italy); **Mr. Tim Wilsdon** (Charles River Associates-CRA, UK)

Moderator: **Ms. Silvia Romeo** (Young Coalition for Prevention and Vaccination, ThinkYoung, Belgium)

Summary

The session started with an introduction by Ms. Silvia Romeo, who presented some actions of the European Commission relating to vaccination, and the current needs on ensuring the role of vaccination in the sustainability of European healthcare systems. Then the speakers introduced the following aspects to take into consideration when discussing vaccination:

The COVID-19 pandemic is a major global health shock, and its associated economic shock is in its early days. The last time Europe went through an economic shock, the healthcare sector was subject to budget cuts, most specifically within the area of prevention, which also includes vaccination. Historically, when vaccination services were under financial pressure, procurement services received increased pressure to provide better prices, but value-added services, such as awareness, coverage, and supplies sustainability, must also be taken into consideration. Although routine immunisation programmes are mostly already in place in the EU, immunisation levels have recently begun to decline, mainly due to vaccine hesitancy and, in some countries, to lack of funding. Indeed, less than 5% of healthcare spending is allocated to disease prevention programs and vaccine expenditure falls below 0.5% of healthcare spending. The pandemic has highlighted some inefficiencies in the vaccination process and, although vaccination is currently a priority, after COVID health systems will need a more sustainable approach to both prevention funding prioritisation and vaccine procurement.

Within countries, there are differences between national vaccination programs; which vaccines are covered by the statutory health system (i.e., childhood/adults' vaccines); and where the financing is coming from (national/local, primary care/prevention). In the European context, the vaccination financing process for most countries mirrors the predominant financing process of other health technologies and services in those countries. In some countries, cost-sharing is required for certain vaccines, but currently the European Commission is encouraging all Member States to provide the COVID vaccine free of charge to increase access for citizens. The difference between vaccination programs in different countries and all the components of the financing process represent a challenge when making projections for a sustainable financing process.

Vaccines are not only important for health systems sustainability, but also for the economic sustainability of countries. When considering the investment in vaccines, there are different ways in which that process is comparable to other pharmaceutical technologies. However, the market for vaccines is small and vaccines are the 'poor relations' in the pharmaceutical industry. On average, across OECD countries, 0.3% of total health expenditures are allocated to vaccines. This contributes to the fact that the vaccines sector is not as attractive as other sectors, as vaccines are expensive to develop and produce, yet must be priced modestly to be affordable to countries and their citizens. In OECD countries, the financial barriers to vaccines are extremely low, yet there is, for some vaccines, a low uptake of vaccines in the populations. Therefore, health systems must ensure that they create an environment of trust, incentives, and policies to encourage the demand of vaccines. On the point of budgeting, health systems must ensure that further cuts do not happen in vaccination budgets. The impact of COVID might support the rethinking of financial and regulatory approaches for vaccines with new financing models for global public tools and economic incentives for health systems, to ensure resilience in case of future crisis.

One of the directions of the EU strategy is to incentivise innovation in vaccines to boost public and private research and development. Since 2018, vaccine hesitancy has been a major concern in the EU and promoting vaccination remains a priority for the Commission. 45.5% Europeans did not think that vaccines were safe and the fake news and campaigns over social media are increasing the vaccination hesitancy; this could have an impact on the willingness of citizens to take the COVID vaccine. We need to find balanced measures to promote vaccination, increase access to accurate information on vaccines, improving communication strategies and boosting immunisation awareness campaigns. In addition, stakeholders must have a better understanding of the behavioural drivers of vaccine acceptance. Joint efforts between decision-makers, patient organisations, and health professionals are necessary to address the challenges around vaccination in Europe and shift from disease to patient-centred systems.

Prof. Signorelli presented the Italian experience with infant immunisation coverage. In 2011, vaccination hesitancy was high around several important vaccines in the country, resulting in less than 35% coverage rate. In 2014, the Council of the EU published conclusions to counteract the vaccine hesitancy challenges in EU countries. Starting 2015, the Italian government elaborated a 'New National Prevention Plan' and passed the 'Mandatory Vaccination Act' to extend mandatory vaccines from 4 to 10, free of charge for patients. Due to those initiatives, by 2019 Italy reached 95% coverage for 9 of the 10 mandatory vaccines. That same year, the EU Health Commissioner identified Italy as a good example for vaccines. Unfortunately, Italy is experiencing a decrease in vaccinations due to the pandemic. Italy has been trying to control the impact on the mandatory vaccines but has not really started acting to mitigate the impact of COVID on other vaccines. The Italian Minister of Health has been taking measures to increase the uptake and acceptance of the influenza vaccine in the country, such as healthcare professionals training to reinforce their trust towards patients. The country does not have a national-level procurement, which represents a challenge in supporting the vaccination campaign for the flu and COVID in the country.

Take Home Messages

- Vaccination is often thought as being for children, but should be seen as a need across the overall life course.
- Vaccination has some of the most convincing evidence in terms of public health benefits and cost effectiveness, yet often it has low shares in health investments and seems to also be the usual victim of budget cuts.
- Focusing on savings on vaccines procurement is not effective for the sustainability of the healthcare prevention services and crisis preparedness. Short-term savings leading to long-term drawbacks.
- We cannot rely on our current vaccination budgets to be well prepared for major health emergency vaccination programs, such as the COVID-19 pandemic.
- Investing more in prevention means saving more on treatment in the future, therefore having more funding for more services. There is a need for a forward-looking approach to vaccines funding with prioritisation inside and outside of healthcare budgets.
- Creative ways of financing vaccination are required when dealing with challenges that are far beyond the regular vaccination programs.

Horizon 2030: seven universal trends for future care

A session offered by NVTZ

Speakers: Marius Buiting (NVTZ, The Netherlands), Matthijs Zwier (NVTZ, The Netherlands)

Summary

In this session, the speakers started by presenting an overview of the transformation that is happening in health care systems in many European countries. Heath systems are transitioning from a completely dependent healthcare, where citizens fully rely on their care providers towards a fully empowered health care system where people are participating in positive health. This means a transition from standardised services to personalised services, and a transition from health professionals and institutions having all the power to patients being empowered and self-managing. There was an emphasis on being a 'patient in a passive mode who waits and having a disease that needed to be delt with. Now the transition is taking health systems to focus on the person as a citizen and ensuring that care support the person in having a good life.

What will be seen in the next decades is a movement towards more flexible and personalised care, that is more locally sources and centred around co-creation. If there are guiding principles, there is a possibility to have deeper movement towards long-term transformation.

The speakers continued by presenting 'The seven guiding principles for future care' and providing examples from the Dutch health system.

1. Co-creation: in the future, there will not be the dynamic where the professional knows best. The patient's knowledge will be recognised. There will be more emphasis on patient literacy to support them in knowing more about their own care, thus participating in shared decision-making. This also takes into consideration that all patients are expert patients on their own behalf and professionals should talk to patients to discover which solutions are best for the patients. The empowerment will also involve communities to help them take care of their citizens.
2. Coherent scale: how to coordinate health systems in the right scale? What should be taken care of at the European, country, region, and local level? Empowerment should start from the citizens and gradually increase to the international level.
3. Frail people staying longer at home: Many health care systems are forecasting to have a shortage in resources to care for people in their organisations and at the same time, people also do want to stay home as long as possible, with the right technology and support in their own environments. There should be a more proactive attitude in responding to this and implement changes to be able to support communities that will be increasingly frail with more sustainable housing, cities, environment.
4. Less is more: The biggest problem in many European health systems is not the costs, but the lack of labour. There should be a better way to adapt and work with less workforce, rather than increasing workforce competition. Some of the trends that can facilitate that are value-based health care and lean management. However, we need to redesign health services in more of a platform than the step-by-step design which causes many redundancies due to all the professionals involved in the process. Of course, trust is needed to implement those changes.
5. Balanced Ecosystem: Not only helping healthcare, but the whole of society and our environment. This principle is linked to the UN sustainable Development Goals and how to make them practical for healthcare systems. Another area is to build on informal healthcare and provide informal care givers with the necessary support. There should also be more integrated arrangements to make services more coherent rather than adding more services.

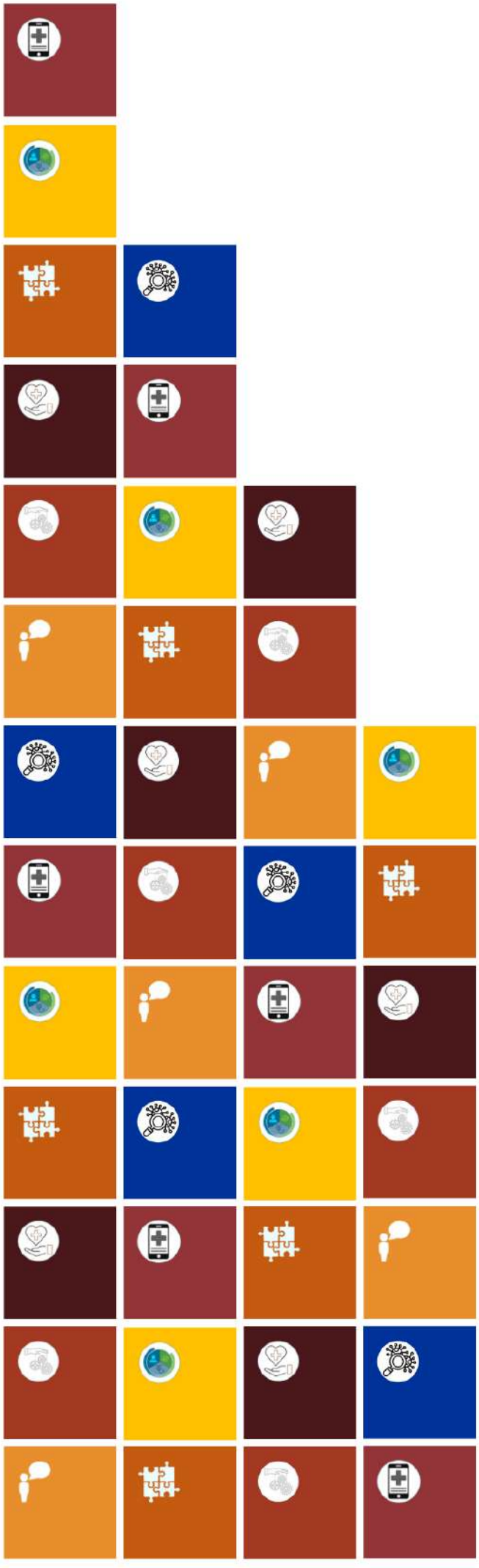
6. **Personalised health/medicine**: Services would not be standardised but can be tailored to each patient and what works best for them. There should also be more lifestyle interventions, which take into consideration the context in which the person lives when providing care.
7. **Positive health**: A new definition of health and health care which takes a holistic interest in the person by looking at citizen participation and their context, doing precautional care, trust in the ability of every individual, motivate them to participate, and invite them to contribute.

There are many lessons to learn from COVID. If we take the Netherlands as an example, the media, parliament, the workforce, the Ministry of health are all thinking about managing the system in the present and making it adaptive to be able to respond to the explicit challenges caused by COVID. Often though, that adaptive strategy is not thought about in-depth while taking the bigger picture into consideration. What should happen is for systems to take into consideration the values of the past. What are the values of the system that motivate people to work in healthcare and stay in the field? And that deeper value to help, by any means necessary, in the Netherlands have shown new ways of doing healthcare, it is bringing about new conversations in the country among citizens and creating conversations around some ethical dimensions in healthcare, but also across society.

In most health systems, whereas prior to COVID, there were many regulatory barriers in progressing in an integrated way, COVID seems to have helped decision-makers in focusing on the needs of patients. For example, many of the difficulties around information sharing and governance were resolve quickly to be able to deliver services to patients. It will be important to remember how those challenges were overcome post-COVID.

Take Home Messages

- Health systems are already learning the future in the present
- People should be made to be independent from healthcare, which means to continue caring for people, but to empower them in a way that they can be co-creators of their care.
- The 7 principles are a mean to an end, which will be supported by technological and social innovation
- When looking at the question of accountability of health facilities, there should also be a consideration of having a board vision that plans on acting on current challenges in a way that helps the facility make a move in the right direction for the future.
- Health systems should not have to choose which of the principles to work on, rather focus which one you are further along in and which works better in the context.
- Social innovation will be necessary for the transition that is happening in health systems as professionals, patients, and informal caregivers might have to change the way they behave, think, and align.
- Amid the COVID-19 pandemic, there has been a new emergence of new ways of healthcare that could be pre-sensing the possibilities for future healthcare.



DIGITAL TRANSFORMATION

#EHMA2020
Conference Report

Digitalisation & AI in healthcare

A session offered by Philips

Speakers: **Mr. Michele Calabrò** (European Patients' Forum, Belgium); **Mr. Ricardo Castanheira** (Permanent Representation of Portugal to the European Union); **Dr. Jan Kimpen MD, PhD** (Philips, The Netherlands); **Dr. Antanas Montvila** (European Junior Doctors Association, Lithuania); **Dr. Andrzej Rys, MD** (DG SANTE, European Commission, Belgium); **Dr. Kristine Sørensen** (International Health Literacy Association, Denmark)

Moderator: **Dr. Petra Wilson** (Health Connect Partners, Belgium)

Summary

This session was held as an Oxford-style debate on the topic of Digitalisation & AI in healthcare. The motion in debate was: 'This House believes that AI-driven innovation is key to alleviate the increased pressures on healthcare systems'. The speakers were divided in two teams, one for and one against the motion and were each given 4 minutes to present their arguments. The arguments brought forward by the speakers reported in this summary do not necessarily represent their or their organisations' standing on the topic.

The main arguments in support of the motion included:

- AI creates opportunity in healthcare to help translate large amounts of clinical data into actionable insights that can empower clinicians, health administrators, patients, and health consumers to achieve better outcomes at lower costs.
- AI improves operational performance and efficiency in workflows in hospital, supports high quality and integrated clinical decision making, and empowers patients and consumers who want to live a healthy life and to pro-actively manage their health beyond the walls of the hospital.
- AI has the potential to improve the development and manufacturing of medicines, improve interaction with professionals, as well as prevention of diseases, promotion, and protection of health.
- AI can support professionals in improving their communication with patients, as well as supporting patients in the management of their health, which can increase treatment adherence.
- AI has the potential to bring about social and economic benefits, but citizens and organisations need to trust it.

The arguments against the motion included the following:

- There are unrealistic expectations and considerable challenges concerning the reliability, safety, transparency of these technologies, as well as ethical questions, the risks of replicating societal biases and limiting human autonomy and oversight.
- The unequal digital maturity between European countries can increase health inequalities.
- There is a lack of infrastructure, formal networks, cooperation, standardised data, and interoperability between institutions and countries, which are barriers to the implementation of AI. In addition to the differences in medicine practice and cultures across Europe.
- AI cannot solve the problems faced by healthcare systems in their current state. If we want to change things, we need to improve working conditions and safeguard the mental health of doctors and other health professionals.
- Not all patients have access to the resources that are needed to use AI, and many have limited knowledge on how to engage with and use AI, and how AI technologies is impacting or could impact their lives in the future.
- There is a lack of proper digital education and training for doctors on how to use AI, both at a national and international levels. Yet to use AI technologies, health professionals need to be trained and skilled.
- More clarity is needed in terms of liability and responsibility in case of errors.

- Investing in AI will considerably increase healthcare expenditure, yet research has not fully proven the health outcomes and benefits of using AI and the comparison between those results and investing in health promotion and prevention
- AI reduces the potential human interaction with health professionals. Instead of helping and supporting the relationship between health professionals and patients and it could increase additional risks and stress on patients physical and mental health.

Take home messages

- AI has the potential to improve services by improving the development and manufacturing of medicine and enhance interactions with users, patients, and doctors.
- AI cannot be seen as the perfect solution to fix all the issues in healthcare.
- AI can empower patients to manage their own health and health workers can use it as tool to support their clinical decision.
- We do not have the right national and international infrastructures (interoperability, regulatory frameworks, health data space, training) to support AI and there remains a digital gap between those who can and cannot use it.
- Countries need to ensure that official training and proper digital health educations is available for healthcare professionals to develop the skills, trust, knowledge, and acceptance needed to use AI.
- Human intervention is fundamental because healthcare is about real people; therefore, we need to learn how to combine the digital and human elements and ensure that we maintain the human connection.
- We need to build trust in AI by investing in research, designing, and testing of ethical, transparent, and safe technologies; guaranteeing the quality of the data; raising awareness and knowledge about AI and how it works; and ensuring that liability regimes are in place.
- Institutions and countries (private, public, and academic sectors) need to cooperate to create evidence on the benefits of AI in terms of return on investments, health outcomes and impact on personalised care.
- There needs to be a community of practice to provide case studies of AI based solutions in practice, clinical evidence, more clarity on how and which type of data will be produced, who will ensure the availability of the data and what resources will be needed to ensure the sustainability of the technology.
- The data used in AI technologies must be accessible, transparent, use a clear language and have an ethical use. National and European institutions need to establish responsibilities in the use, own and reuse of health data.
- To prevent the creation of further inequalities and the risk of leaving certain citizens behind, countries need to invest in improving the digital literacy of their citizens for them to use and benefit from AI technologies

AI transforming cardiovascular care

A session offered by Health First Europe

Speakers: Ms. Birgit Beger (European Heart Network, Belgium); Maria Carvalho (Member of the European Parliament and Co-Chair of the MEP Heart Group, Portugal); Prof. Alan Fraser (European Society of Cardiology, Belgium); Mr. Ed Harding (The Heart Failure Policy Network, Belgium); Dr. Erik R. Ranschaert (ETZ hospital, the Netherlands)

Moderator: Prof. Damien Gruson (My City-Lab; Saint Luc Hospital; Member of the Expert Panel on Effective Ways of Investing in Health of the European Commission)

Summary

This session discussed how Artificial Intelligence (AI) tools provide solutions for cardiovascular diseases. Cardiovascular diseases are the leading cause of death in Europe and account for 1.8 million deaths per year in the world, of which 40% are in EU.

A combination of Machine Learning Techniques, robotics and algorithms and decision-making systems can predict human behaviours and autonomous decisions. AI can help with medical diagnosis by pointing out thousands of cases and indicators. Specifically, within cardiology, it can identify markers, risk of disease, produce images, produce cluster analysis and mechanisms of diseases for early detection and accurate diagnosis. The associated technologies can point out key indicators at an impressive rate. It has the potential to decrease the chance of wrong diagnosis when paired with routine clinical practice. AI can provide better diagnosis and better treatment with ethical principles and clear standards. However, it requires medical doctors to also have specialised skills in the technologies.

Implementations of these technologies require health systems to act on several factors:

- Health Data Space – There is a need for an organised health data space dedicated to cardiovascular diseases with easy access for academics, researchers, and medical doctors within the European scope and beyond.
- Information fragmentation – There is also a need for more cooperation between Member States' research programs, communities, and governments. This creates a lack of standardisation in information and how it is shared. The COVID-19 pandemic showed that cooperation between institutions and countries is possible. The EU program called 'EU4Health' will help to reduce the information fragmentation.
- Infrastructure – Europe has insufficient access to high computing for health data storage compared to the USA and China. With more computing power, it is possible to create and analyse a bigger data lake. More data and indicators could help decrease the clinical errors, make better clinical decisions, and predict possible outcomes.
- Lack of Skills – Information given by the use Artificial Intelligence must be accessible to all, from the AI experts to the nurses and doctors. In addition, patients must also understand how to correctly use that information. For that, formal certification and digital literacy is needed.
- General Data Protection Regulation (GDPR) – Currently there is not a general method to ensure GDPR with these systems. Although a generalised culture in Europe, there are some ethical questions on how the information will be used that need to be addressed by the European Union and its Member States. Legislative support is needed for sharing and access large data sets and biobanks. The European Commission has launched a BioMedical Research Agency to help remedy this.

The BioMedical Alliance Europe identifies how systems are impacted by environmental influences such as genetic expression, age, gender, and lifestyle. The results of a study to predict mortality showed that traditional methods were 61% accurate in predicting findings. When using Machine Learning, it was 89% accurate. Machine Learning was also used to predict factors in the subset variable of heart failure. Diagnostic imaging was used to analyse the measurement of heart function. Automatic imaging was able to identify

segments and cavities of the heart. However, there was no significant difference found between deep learning models and diagnostic tools.

Chance correlations can be found in big data sets. However, if machines are entrusted with routine tasks but are still under human control, we may not know if they are performing properly. There needs to be an evidence-based approach with high standards of safety and efficacy when using these tools. Studies should report and analyse performance errors in tools.

The European Heart Network finds that the advances of AI provide improvement to risk models, pharma ergonomics, and clinical diagnosis. It can help link data and patients to health and social services and medical care. It can reduce the cost of drug research and lead to new medicines and quicker therapies. But from the patient perspective, there can be an age, financial, and literacy pressure to navigate these systems. There is a need for enhanced patient-doctor relationships.

In addition, tele-medicine has benefits in cases of a pandemic. For example, AI was used to detect abnormalities in a chest x-ray of COVID-19 patients. This is helpful for developing parts of the world where there is a lack of radiologists, but there is no guarantee of reimbursement to the medical system with these technologies. The risk for potential digital hacks must also be considered. The European Heart Network has developed a research platform for joint research within the EU, the US, and the UK. The main problem across Europe is that Information Technology (IT) platforms fail to collect the whole scope of clinical information and lack key features in data sharing between health care professionals. A recent poll in the EU shows that doctors found inadequacies in information systems. Other disadvantages in Europe include poor funding, workforce shortages, and difficulties in referrals.

Within radiology, there is a lack of sufficiency in workflow and trust. There is a gap between developers and users of the software. Radiologists find a lack of algorithms optimised for healthcare specialists in specific conditions. Coordination is needed between managers and board of directors, IT department, and all other stakeholders to implement machine learning tools. A method to integrate the data already collected needs to be established.

Take home messages

- AI is 'a means to an end' that can help to provide support for better diagnosis and better treatment with ethical principles and clear standards.
- AI is not meant to replace professionals in clinical decision making.
- AI requires medical doctors to also have specialised skills in the technologies and requires collaboration across all medical departments.
- Machine Learning may be more reproducible and more accurate but not necessarily better performing. It may be equivalent to current medical practices. Few studies demonstrate a change in clinical outcomes using AI.
- Environmental and social factors need to be considered in the efficacy of these technologies, especially in specified fields.
- There needs to be an evidence-based approach with high standards of safety and efficacy when using these tools. Studies should report and analyse performance errors in tools.
- A cohesive data collection system needs to be established that can be shared between healthcare systems, governments, and countries.
- To reduce data fragmentation to analyse, predict outcomes, and create more evidence in the use of AI in Cardiovascular Care, better infrastructure and more European cooperation is needed.

Lost in translation? Health systems and innovation transfer

A session offered by the TO-REACH project

Speakers: Dr. Nick Fahy (University of Oxford & European Observatory on Health Systems and Policies, UK); Dr. Johan Hansen (Nivel, The Netherlands); Prof. Ellen Nolte (School of Hygiene and Tropical Medicine, UK); Ms. Sabrina Montante (Italian National Health Service, Italy)

Moderator: Mr. George Valiotis (EHMA, Belgium)

Summary

In this session the participants highlighted the challenges that arise in the adoption of biomedical innovations and the role of organisational innovations in putting them into practice. Although frameworks are being created to understand the innovation implementation process, they remain focused on learning within a health system and not between different health systems. The TO-REACH project aims to address this gap by providing a European strategy to advance understanding of the adoption, implementation and potential scale-up of service and policy innovations, while also addressing their translation to other settings within and across countries.

There is an important issue of avoidable waste in health research funding as the findings of research is not underused or the research are not addressing the right questions. The speakers identified key priority areas where research can contribute and where European health systems can benefit most from each other:

- The overarching priority is the transition from disease-oriented to patient-centred, focusing on things such as self-management or health literacy.
- For that transition to be successful, the Integration across health sectors and occupations is necessary.
- This implies the development of Long-term care services to meet the needs of the population; reforms within the roles, tasks, and structures of hospitals; strengthening of primary care services; and the reinforcement of mental health care services.
- These goals cannot be met without investing in the healthcare workforce; adequately use the digital tools for people-centred services; continuous quality improvement and measurements; as well as effective governance and improved financing.

Within each one of those elements, there are different challenges, aspects to reinforce and address. The COVID-19 has also added crisis management and emergency preparedness as a priority.

To facilitate and improve knowledge sharing and the transfer of service and policy innovations between health systems, it is important to take stock of the information that is already available about the process and its main features. Some of the questions to ask are:

- What are the characteristics of the receiving health system, in terms of resource allocation, costs control, and the level of fragmentation of the health system?
- Who are the social actors (local and international) that play a role in decision transfers?
- How does the innovation affect the context within which it is being implemented?
- How do the actors interpret the process of the innovation transfer?
- What are the local 'know-hows' around the innovation?

Some of the key attributes of innovation that allows it to transfer are:

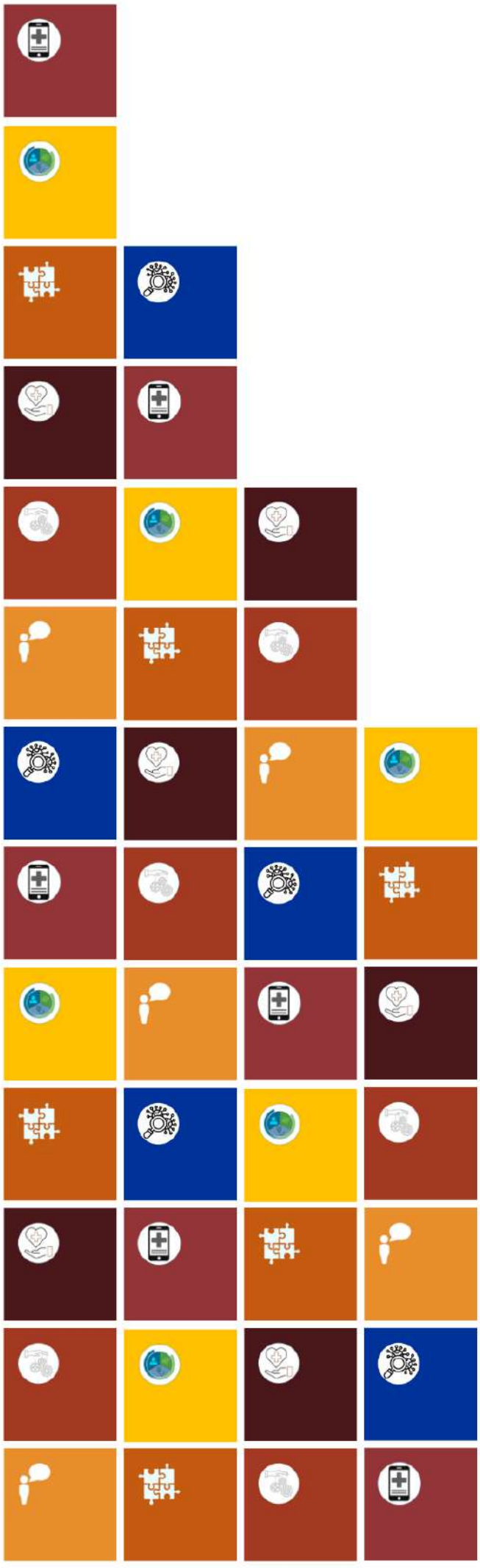
- Flexibility: the innovation can be modified by/for potential users
- It can meet the needs of a range of users
- It adapts to different local contexts

To address the gap in innovation transfer in Europe, the TO-REACH program wants to facilitate a partnership approach through a joint initiative. This will facilitate the cooperation between countries, increased the capacity-building of the stakeholders at different level, and increase the digital and health literacy of citizens

and health and care actors. TO-REACH builds on the experience of related European initiatives and aligns with existing initiatives to realistically tackle the challenge that European health systems are facing.

Take home messages

- The challenge in adopting digital innovation is not just about changing the technology that is used, it also requires changing organisational and individual processes. Organisational innovation is necessary for the implementation of biomedical/technological innovation.
- European health systems have a lot of common values, therefore also have a great potential for systematic and comparative health services and systems research. Not only for technological innovations, but for organisational and service innovations.
- Neighbouring countries, countries with shared history or countries with a shared language for examples of innovation do not necessarily have the characteristics of health systems that are conducive to the transfer.
- To understand the innovation transfer process, we need to understand the context within which the innovation is being implemented; the features of the receiving health system; the type of evidence that is needed; the factors that can facilitate and hinder the transfer of the innovation from one system to another; and the impact of the innovation transfer on the performance of the health system.



INTEGRATION

#EHMA2020
Conference Report

Implementing integrated care: a guidebook for managers

Speakers: **Dr. Axel Kaehne** (Edge Hill University, UK); Ms. Karin Kee (VU Amsterdam, The Netherlands); **Dr. Henk Nies** (Vilans; The Netherlands); **Dr. Carolyn Steele Gray** (Lunenfeld-Tanenbaum Research Institute & University of Toronto, Canada); **Dr. Pim Valentijn** (Essenburgh Research & Consultancy & Maastricht University, The Netherlands); **Dr. Eric van der Heijden** (Talma Institute & Vrije Universiteit Amsterdam, The Netherlands); **Dr. Nick Zonneveld** (Vilans, The Netherlands)

Summary

In this session, several chapters of the book 'How to deliver integrated care: a guidebook for managers', co-edited by Dr. Axel Kaehne and Dr. Henk Nies, were presented by the different authors of the book. The aims of this session were for the authors to reflect how they synthesised their research in the book and provide insights and lessons learned on how to write for health managers.

Person-centeredness is a concept that is easily said but difficult to implement. Integrated care (IC) is a diversified field that spans across many care contexts and targets many groups. If managers were prioritising solutions to overcome challenges, most would not put integration as a main priority because it is a complex task that disrupts tasks and processes and can be difficult to steer as it extends beyond the organisation. Although many managers might know what they would like to integrate and why integrate, they often do not know how to do it. The book presents information on how to bring about organisational change and change in the network in which the organisation is operating.

When looking at the rainbow model of Valentijn, it is essential to pay attention to functional (technical) integration and it is also important to work on the normative aspects (collaboration between actors within different contexts). This chapter pays attention to the human aspects of IC by using the concept of values (what is seen as important). As a manager you should know on which values you build your collaborative efforts and how they are prioritised.

There are 18 frequently appearing values that underpin integrated care. Some of the values can sometimes be contradictory or incompatible, for example: efficiency vs. co-production. Sometimes the values of the collaborators can also be different, which can create challenges. The book provided concrete tools that managers can use to deal with the normative challenges that can arise in the implementation of IC.

When discussing IC, there are also many conversations around funding as a barrier to achieving IC. Almost by definition, funding is fragmented. As a result, it limits integrated care at a patient level, because health and social services are organised and financed separately. This is because the focus tends to be on providers rather than on the needs of patients. The chapter on financing IC presents an answer to how finance can facilitate integration by providing a framework to understand different funding models, which would allow managers to select the best funding model for their organisation and for their specified patient group (can be looked at as a decision tree). The framework integrates different taxonomies of payment models from both public and private health care systems, considering policy and cultural differences between those systems.

The key elements included in the funding framework are the following:

- Funding models can be applied at different level based on who the integrator is: the patient, the provider, or the payer level.
- There is a difference between base payment model (covers close to 100% of the cost for providers) or incremental payment models (are added to the base model to cover some costs for the providers to overcome barriers in the base model).

Once a manager uses the framework to acquire a better understanding of the different funding models, the chapter provides some questions to support them in choosing the best payment model for their situation. For example, is integration patient specific? Is care variable within patient groups? Is extended collaboration between providers needed?

On all levels (system, organisational, professional, and clinical) technology can be used to stimulate IC. The most important in IC is the interoperability of the different systems and technologies. This chapter in the book provides more information on interoperability and presents how technology can enable IC in all the levels. The chapter also made a difference between primary users, secondary users, and tertiary users of a technology. It is important when implementing technology to pay attention to how it impacts care and the users, and if it can inadvertently prevent certain groups from accessing care.

Technologies can come into the integrated care model in two ways: by co-designing new digital health solution considering the needs of all the users or by adopting and adapting off-the-shelf technology to fit in the existing system. The book presents a framework for the latter, which includes questions that managers can use to have a conversation with the teams over time to adapt the system, the people, and the processes. The book also provides information about the key implementation pieces for all innovation (not just technologies), as well as some recommendations to implement technologies for IC.

When looking at the social dimensions of IC, there are three main factors that must be considered when implementing integrated care and the book provide practical examples of how to manage them:

1. Appraise and act in each other's interest. Do you serve the interests of your organisation and yourself, or do you have a joint interest/motivation?
2. Let all voices be heard (voice behaviour). Sometimes not everyone is heard, and partners should create an environment in which it is safe to speak up.
3. Listen, to try to understand what the other person means. This often is more difficult than it seems.

Some of the reflections to have while reading the chapter about social dimensions of IC could be whether those factors are too obvious, too realistic, or too idealistic.

Take home messages

- Integrated care is a means to an end, not an end in itself
- Managers should begin the process of integrating care with the end (clinical outcomes? Values?) in mind
- Integrated care aligns with organisational change, and that confluence contributes to its complexity, as one must collaborate with internal and external partners, across different dimensions, in the daily practice and on the system level.
- Integrated care is not only a technical project, but also an ongoing interaction between people.
- The level of integration providers can achieve is limited by the boundaries within the payment system that providers operate in.
- Regularly new funding models become popular and create a funding fashion. Managers should instead focus on who the integrator is: patients? Providers? Payers?
- Technology also has an important social role as it can perpetuate and shift the values that drive our care models.
- When people are working in IC, they have the values and interests of their own organisation, but they also have joint motives as they have to collaborate with partners.
- COVID has changed the dynamics of collaboration.
- Person-centred means to ask about what matters to patients/providers/organisations/systems. What are their values? What are their interests?