2019

Conference Report

EHMA

European Health Management Association

Editors

Marcel Venema
Michele Calabro'

Reporters

Grazia Antonacci
Marcel Venema
Mihai Negrea
Ziyoda Rakhimova

Disclaimer

This report was drafted thanks to voluntary contribution of EHMA Young Advisory Committee and young EHMA members. Contents and views do not necessarily reflect the position of any other agency, organization, individual, employer or company.

For any questions, correction or additional information, please contact michele.calabro@ehma.org

About EHMA 2019

European health systems are entering a period where challenges and opportunities have never been greater or starker. Public finances remain constrained and there is evident frustration regarding the pace of change and the ability of teams and individuals to come together to implement more efficient and patient centred care. But as for meeting the challenges to delivering efficient, effective and integrated care, we are now collectively faced with the new opportunities provided by digitalization, medicines innovation and the personalization agenda.

The 2019 EHMA Annual Conference, hosted by our members at Helsinki University Hospital (HUS) and the National Institute for Health and Welfare, Finland (THL) in Dipoli, Aalto University was a unique experience for everyone.

We addressed the challenges head on, helping participants to share ideas and effective practice on the Conference theme of 'Health management 2.0'. We seek to help unlock the change agenda and to see what skills and competencies the current and future Healthcare leaders need in order to make this shift happen.

The event brought the entire healthcare together: universities, researchers, healthcare professionals, hospitals, policy makers and industry for 2.5 days of intensive learning and networking. Over 350 delegates attended the conference in Espoo, together with high-level guests such as the Ministries of Health, EU Commission and the European Observatory on Health Systems.

This report, prepared thanks to members of our EHMA Young Advisory Committee and young EHMA members, 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 #EHMA2019 Annual Conference and relive the exciting debate that took place in Finland!

Table of Contents

EHMA 2019 in a nutshell

- To **meet present and future challenges**, health managers should take a more holistic view of managing and share leadership or pair leadership with other involved entities.

- **Healthcare management** is not only about health systems and services, but also about politics. It is important for health managers to understand the political economy of change.

- **Sharing knowledge and empirical experiences** is one of the best ways to speed up the rate of new and sustainable reforms in healthcare systems.

- **Sustainable integration** of health and social care requires managers' collaboration beyond conventional boundaries, but a tendency to 'lead alone' still seems to steer the everyday work of managers and leaders. Resilience, space for experiential and relational learning and the use technologies can support collaborative works between managers.

- Top managers and middle managers have emphasized the need to have visibility of '**overall hospital performance**' and to make this kind of information accessible to everyone, including patients and clinicians.

- **Maximising value** for patients is at the core of value-based healthcare and that in order to achieve the best outcomes at the lowest cost (according to the value-based approach), the healthcare system should move away from a supply-driven health care system that is organised around what physicians do towards a person-centred system organised around what patients need.

- One way to realise **value-based health care** is by involving patients in the decision-making processes of health research and care practice. An inclusive multi-stakeholder approach, involving scientists, policymakers, industry, healthcare professionals, consumers and patients, is essential to co-create knowledge and will form a new way of working together.

- **Digitalisation** will only be successful and harmonised if all stakeholders are able to capture total value through: (1) improvements in quality of and access to care, (2) reimbursement regulation, (3) network-based organizational benefits such as efficiency gains, learning, or knowledge transfer, and (4) legitimacy gains resulting from institutional isomorphism.

- In **digital innovation of care**, partnership with one does not work. We need to create a shared ecosystem where different stakeholders can propose problems and where we can work together to solve them.

- Moving away from a linear 'take-make-use-dispose' economic model to a **more circular use of resources** requires not only retaining value in products by designing for disassembly, reparability, recoverability or creating new business models, but it also requires a new mindset in organisations implementing these products and services.

- When we talk about **leadership**, education is not enough. We should also focus on soft skills in order to create better leadership, which is a must for resilience and sustainable healthcare.

- Proactive personality and psychological mindedness contribute to the prediction of **leadership self-efficacy**, which summarizes the success of setting a direction for the workgroup, building relationships with followers in order to gain their commitment to change goals, and working with them to overcome obstacles to change. These personality traits may be considered in selections for leadership roles.

Plenary Sessions

I. 'Health Management reloaded: beyond rhetoric and myths.'

Monday, 17th June 2019, 14:00 - 15:00

Moderator: *Anu Partanen*

Speakers: *Dr. Marina Erhola* (National Insitute for Health and Welfare, Finland); *Dr. Markku Mäkijärvi* (Helsinki and Ussimaa Hospital District, Finland); *Prof. Federico Lega* (EHMA and University of Milan, Italy), *Prof. Federico Lega* (EHMA and University of Milan, Italy), *Dr. Josep Figueras* (European Observatory on Health Systems and Policies, Belgium), *Dr. Markku Mäkijärvi* (Helsinki and Ussimaa Hospital District, Finland), *Assoc. Professor Dr, Eva Turk* (EHMA, Belgium; University of South-Eastern Norway)

Summary

In *Professor Federico Lega's* keynote speech, "Health Management Reloaded Beyond Rhetoric and Myths," he discussed how the landscape and content of jobs in healthcare management have changed over time. He detailed different factors that have changed:

- New Normality: The new challenges that make many healthcare systems today struggle to survive. These challenges include the financial crisis, low morale amongst professionals, unstoppable consumerism, selective universalism, and volume-based quality.
- New Paradigms: The new ways of thinking that intend to improve healthcare delivery. He talked about how we have moved from patient empowerment to co-creation and co-delivery, both of which involve citizens in the design of healthcare delivery. He mentioned the great strides the field has taken towards prevention and education—not just curing—diseases.
- New Protagonists: The actors who need to work together in order to rethink medical delivery, reframe management infrastructure, improve management roles, and ultimately, pass the baton to the next generation.
- New Posture: The need to rethink existing structures in order to improve health care management. These include avoiding micromanagement, explaining why things are done, thinking outside the box, and being consistent in their leadership.

At the panel discussion after *Professor Lega's* presentation, other health care and management professionals stated their views on what was said in his speech:

- *Dr. Josep Figueras* suggested that public health is not only about the health system, but also about politicians and civilians, and insisted on the importance of understanding the political economy of change and bringing all pertinent actors to the table. In this sense, explained the need to bring civil society to hospital boards and have patients co-produce decisions with clinicians.
- *Dr. Eva Turk* added that it is essential that we concretely implement the changes we keep talking about in theory in order to upgrade our healthcare systems.
- *Dr. Markku Mäkijärvi* concluded the panel by describing the need for a bottom-up approach, in which patients and healthcare professionals work together and redesign care processes.

Take home messages:

- In order to enhance our current healthcare systems, we need to create a new setting for training people with experience and a different type of training for younger generations.
- Public health is not only about the health system, but also about politicians, and it is important for health managers to understand the political economy of change.

- We should upgrade healthcare systems through innovations and with this, not only learn the new healthcare technologies and types of machines, but also create a new mindset that embraces innovation.
- When we talk about leadership, education is not enough. We should also focus on soft skills in order to create better leadership, which is a must for resilience and sustainable healthcare.
- Health management is not anymore just as issue of effective or efficient delivery, it is about envisioning and executing new paradigms.

II. "How data impacts lives: towards a zero patients' vision by 2030"

Tuesday, 18th June 2019, 11:30 - 12:30

Moderator: *Mrs. Anu Partanen*

Speakers: *Dr. Elia Stupka* (Life Sciences Business, health Catalyst, USA), *Mr. Alexandre Lourenço* (Associação Portuguesa de Administradores Hospitalares, Portugal), *Dr. Natasha Azzopardi Muscat* (European Public Health Association (EUPHA), The Netherlands), *Dr. Usman Khan* (European Patients' Forum (EPF), Belgium) Dr. Liisa-Maria Voipio-Pulkki (Finnish Ministry of Social Affairs and Health, Finland)

Summary

In Finland, healthcare used to perform exceptionally well, started *Dr. Liisa-Maria Voipio-Pulkki*, but because of demographic changes, the varying size of the municipalities and fiscal difficulties, this situation changed. There is a need for a health and social system reform, and from a healthcare system point of view it could help in reducing health inequality and improve equal access to high-quality services. *Dr. Liisa-Maria Voipio-Pulkki* also pointed out that, compared to other EU members, the health expenditure on prevention needs to be increased. However, in order to achieve that, new innovative methods on health promotion and disease prevention are required. She believes that the new era of data-intensive tech and Artificial Intelligence will enhance people's functional capacity.

Dr. Elia Stupka shared the "zero patient" ideology, which means every patient can be diagnosed in the earliest stage and have access to appropriate treatment. He explained, however, that this is not always achievable because of unequal access to health advancements. Unfortunately, people's health outcomes still depend highly on their zip code, which indicates the uneven development within countries and even cities. *Dr. Stupka* thinks that the solution must be considered on a global scale, as it is not enough to only look at our own region, country or hospital. He stated three major solutions to the accessibility problem:

- "Amazon Health": Making technological advances more accessible, cheaper and straightforward around the globe.
- "Dropbox Health": Expanding digital portability and giving more people in different hospitals around the globe the opportunity to participate in health trials that could save lives.
- "Tesla Health": Enabling the dissemination of health knowledge. We should learn from each other instead of us all trying to race towards the same goal. It is vital to strengthen the connection between hospitals, which organizations like Health Catalyst are trying to achieve.

He also pointed out that although Artificial Intelligence could help us in building new models, leadership and governance are irreplaceable and essential for creating an adoption strategy for data analysis. After Dr. Stupka's presentation, different public health professionals hosted a panel in which they expressed their points of view:

- *Dr. Natasha Azzopardi Muscat* said that from a public health perspective, we already do prevention and treat the whole population in the same way. She asks, given that everyone is trying to save on resources and reduce waste, to what extent do technologies allow us to make the health interventions more specific?
- *Dr. Usman Khan* stated that utilizing databases and health technologies to reduce health inequality between geographical settings is essential. He mentioned the "data saves lives" campaign to set governance under pressure in modifying data policies.
- *Mr. Alexandre Lourenço* added that we do have technologies to cure infectious diseases, but the reason that we are not achieving the right results is because health systems do not know how to apply the technologies correctly. The first steps should be facing the health inequalities within Europe and achieving universal health coverage by using health technologies, all while being wary of referring to health care as a commodity.
- *Mrs. Anu Partanen* raised the issue about how different types of privacy laws between different countries could form a barrier in data dissemination.
- *Dr. Elia Stupka* maintained that people always have concerns about data as it could be sold, purchased and exchanged, but it could also be utilized by universities, non-profits organizations and companies

to create benefits for the community. Therefore, good governance and right incentives are necessary to secure health databases and make it a public good.

Take home messages:

- Artificial Intelligence could help us in building new models, but leadership and governance are irreplaceable. They are essential for creating an adoption strategy that analysis what data is telling you.
- The reason that we are not achieving the right results with health technologies, is because health systems do not know how to apply the technologies correctly.
- The first steps should be facing health inequalities within Europe and achieving universal health coverage by using health technologies.
- Good governance and right incentives are necessary to secure health databases and make it a public good.

Partner Sessions

Take home messages on Partner Sessions

I. “Special Interest Group on Governance”

- EHMA and the Good Governance Institute (GGI) are establishing a Special Interest Group (SIG) on Governance with the aim to debate/discuss pertinent/topical common issues and challenges. Those interested in shaping the programme and content for publications are invited to join at https://www.good-governance.org.uk/ggi-ehma-sig/.

II. "State of Health in the EU" - European Observatory on Health Systems and Policies, OECD and European Commission

- The initiative ‘State of Health in the EU’ has its objective to help Member States improve the health of their citizens, by providing a concise and policy-relevant overview of health and health systems in all EU countries (Including Iceland and Norway), emphasising on the particular characteristics and challenges in each country.

- Experiences of using the ‘State of Health in the EU’ initiative revealed how having external views of experts from other countries, helped to identify areas for improvement and new solutions (e.g. drawing on best practices). In some countries it has been instrumental to drive reforms or review reimbursement schemes.

III. "Mentorship, leadership and management: round table discussion" by International Hospital Federation (IHF)

- Success of an IHF mentoring program would be best achieved by: exploring “in-country” mentor relationships to provide local benefits where needed, exploring topic specific mentors (e.g. assigning quality mentors to discuss quality metrics such as Virginia Mason) and by creating a program that enhances long-term relationships that could last outside the mentor-mentee relationship period.

- It is very important to identify the right match between the mentor and the mentee and to develop a learning plan with goals and expectations in order get the best results for both sides.

IV. "Best practices to advance Healthcare: Integration of Laboratory Insights in Healthcare Management" by Abbott Diagnostics

- The workshop highlighted the importance of laboratory testing and how lab testing can contribute to the goal of having the patient, and its wellbeing in the centre of the system with cost-effective transformation of healthcare.

V. "Digital Therapeutics Start-up’s & EU Policy" by Allied for Startups

- It is important to involve entrepreneurs/ start-ups representatives into the policy making process - they should be part of the conversation with governments on topics that impact their business.

- “Entrepreneurs should be empowered to be compliant to EU regulations on data protection and digital health as much as possible and as early as possible. Providing practical guidance to support digital health start-ups and the practical application of EU and national/ local regulations would be helpful.”

I. "Special Interest Group on Governance" by Good Governance Institute

Monday, 17th June 2019, 15:15 - 16:30

Speakers: *Dr. John Bullivant* (Good Governance Institute, United Kingdom), *Mr. Ian Brandon* (Good Governance Institute, United Kingdom), *Ms. Laura Botea* (Good Governance Institute, United Kingdom), *Mr. Andy Payne* (Good Governance Institute, United Kingdom)

Summary

EHMA and GGI are establishing a Special Interest Group (SIG) on Governance with the aim to debate/discuss pertinent/topical common issues and challenges (both now and in the future) on:

- The future of healthcare delivery and how governance will need to adapt and can support new delivery models.
- Disseminating lessons and best practice internationally on identified governance themes.
- Serve as a pool of expert advice and input into member's initiatives: including research, publications, events, visits and study tours.
- Facilitated master classes on specific governance challenges led by the Good Governance Institute.

Outputs for this network will include:

- Production of one publication annually and blogs contributed by members of the SIG on key themes, challenges and opportunities identified within the group.
- 1 or 2 annual member meetings (either in person or online).
- Visits between members and organised study tours to encourage sharing of ideas, learning and best practice across Europe.
- Building a European Body of Knowledge on Governance for the benefit of individual members and their organisations.

The Good Governance Institute (GGI) is a management consultancy situated in London and has its focus on providing good governance. The session made use of 'Slido' to have a more interactive discussion and participation from the audience. This first meeting of the SIG on Governance focused on establishing and agreeing the key themes and focus for this interest group, reflecting the most important issues that the members would like to explore, and identify what this pan-European group can achieve through this membership that they would not be able to access elsewhere.

Take home messages:

- There is a wide variety of ideas on what good governance means, but the most important characteristic regarding good governance is the capacity to learn from any decisions and experiences made.
- EHMA and the Good Governance Institute (GGI) are establishing a Special Interest Group (SIG) on Governance with the aim to debate/discuss pertinent/topical common issues and challenges. Those interested in shaping the programme and content for publications are invited to join at https://www.good-governance.org.uk/ggi-ehma-sig/.

II. "State of Health in the EU" - European Observatory on Health Systems and Policies, OECD and European Commission

Monday, 17th June 2019, 15:15pm - 17:00

Speakers: *Dr. Josep Figueras* (European Observatory, Belgium), *Mr. Philippe Roux* (European Commission, Belgium), *Mr. Gaetan Lafortune* (OECD, France) & *Ms. Marina Karanikolos*, (European Observatory, Belgium)

Summary

In this session, participants discussed the initiative: 'State of Health in the EU' through a mix of presentations and audience interactions. 'State of Health in the EU' is a recurring two-year cycle of knowledge on Health Systems and Policies launched by the European Commission in 2016 in partnership with OECD and the European Observatory. Its objective is to improve the health of EU citizens and performance of their health systems by providing evidence-based policy making. It provides policy makers, interest groups, and health practitioners with factual, comparative data and insights into health and health systems in EU countries.

During the session, speakers showcased the four main stages of the two-year State of Health in the EU two-year continuous cycle:

1. The Health at a Glance: Europe, prepared by the OECD, gives a horizontal starting point.
2. Individual Country Health Profiles, adapted to the context and specificities of each EU country, assess the strengths and challenges in their respective health systems.
3. A Companion Report published along with the Country Health Profiles draws cross-cutting conclusions, links common policy priorities across EU countries, and explores the scope for mutual learning (e.g. solutions and pollical tools that exist and that can be applied at national level).
4. At the close of the two-year cycle, health authorities in EU countries can request voluntary exchanges with the experts behind the State of Health in the EU, to discuss findings and potential policy responses.

Participants discussed how the four components of the cycle can be used by national policy makers and other stakeholders.

Take home messages:

- The initiative 'State of Health in the EU' has its objective to help Member States improve the health of their citizens by providing a concise and policy-relevant overview of health and health systems in all EU countries (Including Iceland and Norway), emphasising on the particular characteristics and challenges in each country.
- Experiences of using the 'State of Health in the EU' initiative revealed how having external views of experts from other countries, helped to identify areas for improvement and new solutions (e.g. drawing on best practices). In some countries it has been instrumental to drive reforms or to review reimbursement schemes.
- The 'voluntary exchange' section within the 'State of Health in the EU' cycle provided many useful insights to identify local problems.

III. "Mentorship, leadership and management: round table discussion" by International Hospital Federation

Tuesday, 18th June 2019, 12:30 - 14:00

Speakers: *Dr. Rulon F. Stacey* (Navigant, USA) & *Dr. Med.Sc. Risto Miettunen* (Kuopio University Hospital, Finland)

Summary

This session consisted of a round table discussion during the lunch on the topics of mentorship, leadership and management. The discussion focussed mainly on answering the following questions:

- Is mentorship a good response is for health leader's capacity development?
- Is there room for an international program versus/in addition to national programs?
- What can be the role of EHMA community in such an international program?

During the session, the benefits of mentoring programs were outlined and there was a discussion on how to best engage both mentors and mentees in the process. There was an emphasis on the forms of reports and action plans for improvement purposes.

The International Hospital Federation (IHF) explained its own involvement with mentorship. In 2018 the IHF launched its CEO Circle Mentoring Program, which connects CEOs from different markets, cultures, backgrounds and governmental oversights with the aim to share information on how to effectively run an efficient hospital, develop quality metrics, create new products and networks. There was also a specific discussion on international mentoring programs and how they have been successful and on the areas that need improvements.

Take home messages:

- Success of an IHF mentoring program would be best achieved by: Exploring "in-country" mentor relationships to provide local benefits where needed, exploring topic specific mentors (e.g. assigning quality mentors to discuss quality metrics such as Virginia Mason) and by creating a program that enhances long-term relationships that could last outside the mentor-mentee relationship period.
- Mentorship is a two-way process (advantages for both parties) and to get the most from a mentorship program, it is important to start the mentorship with an open mindset.
- It is very important to identify the right match between the mentor and the mentee and to develop a learning plan with goals and expectations in order get the best results for both sides.

IV. "Best practices to advance Healthcare: Integration of Laboratory Insights in Healthcare Management" by Abbott

Tuesday, 18th June 2019, 14:00 - 15:15

Moderator: *Prof. Federico Lega* (EHMA and university of Milan, Italy)

Speakers: *Prof. Dr. Michael Haase* (Otto-von Guericke University of Magdeburg, Germany), *Mr. Khosrow Shotorbani* (Lab 2.0 Strategic Services, USA), *Mr. Mathias Neelen* (Socialist Mutualities, Belgium) & *Ms. Patricia H Ravalico* (Abbot Diagnostics, USA)

Summary

The dichotomy of cost pressures and reduced resources with increasing workloads, patient expectations and disease complexity, has caused tremendous pressure to health systems across the globe. Teams who have been successful in "doing more with less" have unified across the care continuum to pioneer change and achieve measurable benefits. This workshop reviewed representative best practice examples of integrated care teams who have strategically mobilized data from the clinical laboratory. The workshop highlighted underlying trends across other best practices as well as the goal of inspiring continued patient-centric, cost-effective transformations in healthcare.

An introduction to the session was made by Prof. Federico Lega who highlighted the importance of lab physicians and the role they play within the health system. We are dependent on the laboratories as they are the first responder in addressing health problems, said Mr. Shotorbani. Lab physicians are the first to notice when there is a health problem developing on any scale and can respond in time. They stay in real-time contact with health issues and have the largest touchpoint with patients.

However, the laboratory doesn't work alone. Prof. Haase presented the challenges of acute kidney injury and how earlier detection can improve the well-being and safety of patients directly while also preventing chronic kidney failure. It was said that lab testing can play a larger role in prevention, but diagnostic tests should not be over-used either. Therefore, it is essential to find the optimal level of screening. Ms. Ravalico discussed how -sex-specific cut-offs for laboratory tests can change outcomes for patients, payors, clinicians and health systems. Her message included the importance of timely and accurate clinical pathways for patients with suspected heart attacks. The workshop highlighted overall the role of laboratory testing and how lab medicine is a strategic asset to the health system with cost-effective opportunities to transform of healthcare. Representative best practices where integrated clinical care teams have worked together for measurably better outcomes can be found at www.UnivantsHCE.com. The UNIVANTS of Healthcare Excellence program is a global initiative across 8 leading healthcare organizations including EHMA and Abbott to inspire and recognize best practices in healthcare.

Take Home Messages:

- Lab physicians are the first to notice when there is a health problem developing on any scale and can respond quickly to improve outcomes.
- The workshop highlighted the importance of laboratory medicine as a strategic asset to the health system for transformational healthcare.
- Integrated clinical teams are important to maximize insights and achieve measurably better healthcare performance.
- We should look at moving from reactive to proactive (and preventive) care, and clinical laboratories play a crucial role in this effort.

V. "Digital Therapeutics Startups & EU Policy"

Wednesday, 19th June 2019, 11:45 - 12:45

Moderator: *Mr. Lenard Koschwitz* (Allied for Startups, Belgium)

Speakers: *Mr. Moritz Matschke* (Well IT, Germany), *Ms. Anna-Maria Henell* (Disior, Finland) & *Dr. Sari Palojoki* (Ministry of Social Affairs and Health, Finland)

Summary

In this interactive session, participants discussed the importance to harness the right environment that allows Digital Health Start-ups to succeed. *Ms. Anna-Maria Henell* introduced the company "Disior" that she is leading as CEO. Disior develops an analytic software which turns medical images into numerical data to support fact-based diagnosis and treatment planning for medical doctors. According to Ms Anna-Maria's experience, people with an IT background often struggle to navigate the healthcare system. Although Ms. Anna-Maria didn't experience problems with regulation, she struggled with the practical application of regulations. She also pointed out that they often need to hire external (and expensive) consultants to help them with the application of regulations. Therefore, *Ms Anna-Maria* advocates for more support from authorities/ public bodies regarding this aspect (e.g. practical guide on how to comply with existing regulations). She concluded with emphasizing on the need for more incentives for healthcare professionals to use digital health technologies.

Mr. Moritz Matschke introduced Well IT - a digital health start-up working in the area of oncology. He reported that putting patients at the heart of processes and technologies is key to the success of the company that he founded and is leading as CEO. From the policy-side perspective, *Dr. Sari Palojoki* mentioned the importance of Digital Health Start-ups as catalyst of innovation and socio-economic development. On one hand, following Start-ups is a priority for policy makers as they are the fuel for innovation and economy (for example e-health solutions could support patient empowerment, a relevant subject of the Finnish political agenda). On the other hand, governments hold the responsibility to protect citizens from a patient safety perspective. In this regard it is essential to provide a more practical guidance on how to comply with existing regulations. She highlighted how Finland has started with building a supportive environment for digital health innovation by increasing investments in this area by building networks and fostering collaboration between diverse stakeholders of the health care ecosystem (e.g. Test Beds to test new sets of innovations to tackle some top health and care challenges). (e.g. a guide to support digital health start-ups to apply EU GDPR regulations in practice is currently missing). The aim is to build a successful entrepreneurial ecosystem that supports new innovations and Digital Health Start-ups.

Take home messages:

- It is important to involve entrepreneurs/ start-ups representatives into policy making process - they should be part of the conversation with governments on topics that impact their business.
- Entrepreneurs should be empowered to be compliant to EU regulations on data protection and digital health as much as possible and as early as possible. Providing practical guidance to support digital health start-ups and the practical application of EU and national/ local regulations would be helpful.
- More collaboration across all the stakeholders in the health care ecosystem is required in order to create an open culture and share knowledge and experience (e.g. IT companies/ digital health start-ups need more support to navigate the healthcare system).
- The co-creation of solutions is key to produce effective products and/or services that meet users' needs (digital health start-ups should engage clinicians and patients to develop shared solutions and increase their impact on practice and patient outcomes). Moreover, digital health start-ups should collaborate with other big players in the IT industry in order to develop solutions that are interoperable with other IT systems operating in the market.
- More Test Beds are needed to conduct rigorous, transparent, and replicable testing of scientific theories, computational tools, and new technologies.
- Although that on an average 9/10 start-up companies fail, the knowledge, learning and experience that they have generated with this failure will be used for future successes.

Systems & Organisational Governance

Take home messages on Systems & Organisational governance

I. Parallel thinking on Systems & Organisational governance

- Proactive personality and psychological mindedness contribute to the prediction of leadership self-efficacy, which summarizes the success of setting a direction for the workgroup, building relationships with followers in order to gain their commitment to change goals, and working with them to overcome obstacles to change. These personality traits may be considered in selections for leadership roles.

- Political actions to restrict the cost of personal in regional health systems merely caused this cost to shift to the purchase of more services. Although the personnel cost was reduced, the total costs increased with the consequence of limiting the autonomy of healthcare professionals and managers.

II. Parallel Thinking Systems & Organisational Governance

- Informal controls positively influence quality of care to the patient and are mainly focused on socialization mechanisms such as regular organized meetings, organized face-to-face-contact and the active promotion of sharing norms and values.

- Social- and healthcare organisations should set goals to managers' work wellbeing and clearly take these goals into policies and practice.

- To meet the future challenges, health managers should take a more holistic view of managing and share leadership or pair leadership with other involved entities.

- Consistent leadership is linked to organisational capacities and skills to support performance improvement.

III. Workshop on "Governance: what is it, why it matters, and how to strengthen it?" by the European Observatory on Health Systems and Policies

- Not even the best technology can safe you if you do not have a good governance system in place. Governance is important as it reflects on how we make and implement decisions in order to get good health policies.

- The TAPIC framework is a framework that can guide you in developing good governance by focussing on Transparency, accountability, participation, integrity and policy capacity. It helps in defining a common language to address governance.

I. Parallel thinking on Systems & Organisational governance

Monday, 17th June 2019, 11.00-12.30

Moderator: *Prof. Kim Putters* (Netherland Institute for Social Research; Erasmus University, Netherlands)

Speakers: *Mr. Philipos Gile* (Ethiopian Higher Education Partnership, Ethiopia), *Dr. Sarit Rashkovits* (Yezreel Valley College, Israel), *Mr. Paolo Belardi* (Scuola Superiore San `Anna, Italy), *Dr. Steven de Waal* (Public Space Foundation, Netherlands), *Dsc. Iiris Horhammer* (Aalto University, Finland)

Abstracts: On page 9 to 13 of the abstract book.

Summary

The session started with an abstract presentation on the effect of Human Resources Management on the performance of hospitals in Sub-Saharan Africa. *Mr. Philipos Gile* said that the overall message of their findings is, that they have evidence that offers an opportunity to shed light on how different Human Resource interventions result in different performance under different contexts.

In order to make a change we need transformer leaders who are ready to confront organizational inertia and lead improvement efforts said *Dr. Sarit Rashkovits.* Leadership self-efficacy is the main element in the search of transformer leaders and refers to the person's judgement to successfully exert leadership through setting a direction for the workgroup, building relationships with followers in order to gain their commitment to change goals and working with them to overcome obstacles to change. There is a lack of research regarding personality traits that are associated with Leadership self-efficacy. In her study she found that a proactive personality and psychological mindedness contribute to the prediction of the three Leadership self-efficacy aspects mentioned above. These personality traits may be considered in selections for leadership roles.

In another presentation *Paolo Belardi* explored the effects of expenditure cuts policies within the Italian healthcare sector aimed at controlling the expenditure on health and, in particular, the costs of personnel. In this study they found, that the policies restricting the cost of personal in regional health systems merely caused this cost to shift to the purchase of more services. Although the personnel cost was reduced, the total costs increased with the consequence of limiting the autonomy of healthcare professionals and managers.

Dr. Steven de Waal talked about the Public Space Foundation, which is a thinktank to promote active citizenship, social entrepreneurship and civil leadership. Public services are still delaying impact by using protection of state, laws and lobbies. This is not sustainable and traditional politics will quickly learn that there is a new civil leadership rising, the one harnessing the disruptive power of citizens. There is a need/demand for co-production and co-creation as the passive consumer is disappearing. With so many civil initiatives and cooperation's, the monopoly is gone he said. Political attention to active citizenship in health, social welfare and social security is positive, but still too political with a top down approach and too much linked to the political agenda.

In the last presentation, *Dsc. Iiris Horhammer* gave us an insight on what healthcare professionals expect from diabetes care performance management system. They found that overall the healthcare professionals' and their supervisors' act positive towards monitoring and benchmarking quality of care, outcomes and efficiency in the pre-implementation phase. However, good organizational practices in the implementation of the monitoring system and the development of the management system are essential to keep this positive view of diabetes care performance management systems.

Take home messages:

- Bundles of Human Resource Management remain hugely under prioritized in Sub-Saharan Africa hospitals. Further empirical research on the effect of Human Resource practices on patient outcomes in Sub-Saharan Africa contexts is called for.
- Health organizations have a need for 'transformer leaders' who are ready to confront organizational inertia and lead improvement efforts.
- Proactive personality and psychological mindedness contribute to the prediction of the three Leadership self-efficacy: Setting a direction for the workgroup, building relationships with followers in order to gain their commitment to change goals, and working with them to overcome obstacles to change. These personality traits may be considered in selections for leadership roles.
- Political actions to restrict the cost of personal in regional health systems merely caused this cost to shift to the purchase of more services. Although the personnel cost was reduced, the total costs increased with the consequence of limiting the autonomy of healthcare professionals and managers.
- Traditional politics will quickly learn that there is a new civil leadership rising, the one harnessing the disruptive power of citizens. There is a need/demand for co-production and co-creation as the passive consumer is disappearing.
- Politicians and managers should change the way they relate to citizens and clients. This can be achieved by sharing experiences and stimulating innovative ways to use new insights in policies.

II. Parallel Thinking on Systems & Organisational Governance

Tuesday, 18th June 2019, 9:30 - 11:00

Moderators: *Dr. Matthijs Zwier* (European health futures forum, United Kingdom) & *Dr. David Somekh* (European Health Futures Forum, United Kingdom)

Speakers: *Dr. Hilco Van Elten* (Erasmus University Rotterdam, Netherlands), *MSc Niina Herttula* (Health Sciences, Faculty of Social Sciences, Tampere University, Finland), *Dr. Damian Greaves* (St George`s University, Grenada), *MHS. Vuokko Pihlainen* (University of Eastern Finland, Finland), *Dr. Maarten Janssen* (Erasmus University, Netherlands), *D. Sc. Ira Haavisto* (Nordic Healthcare Group, Finland), *Prof. Mark Exworthy* (Unversity of Birminghamm, United Kingdom)

Abstracts: On page 15 to 21 of the abstract book.

Summary

Different types of controls have different effects on hospital performance. Controls could be divided into formal and informal controls. *Dr. Hilco Van Elten* presented the role of informal control on the quality of care in Dutch hospitals. To what extent do informal controls affect quality of care, over-and-beyond traditional formal controls? They found that hospital managers use both formal and informal controls to steer employee behaviour. Informal controls positively influence quality of care to the patient and are mainly focused on socialization mechanisms such as regular organized meetings, organized face-to-face-contact and the active promotion of sharing norms and values. How does the work wellbeing of managers fit in this picture? *MSc Niina Herttula* the discussion with a study on factors that support and factors that prevent managers' work wellbeing. In this study they identified that there are five type of factors that maintain work wellbeing: Individual, Social, Organisational, Work and Professional support from one's own manager. Social- and healthcare organisations should set goals to managers' work wellbeing and clearly take these goals into policies and practice.

One of the most energetic presentations was given by *Dr. Damian Greaves* on the Integration of health and social services in the Caribbean. The Caribbean states have 15 islands along with 15 million people, this gives the region a unique geography. In their study they explored and assessed the leadership challenges of Health and Social services Integration within this context. There is a clear national policy framework for Health and Social services Integration missing which is the cause of obsolete and dysfunctional public service model, ad hoc nature of relationship with stakeholders, absence of culture of evidence-based quality decision-making, inadequate financial and human resources and obsolete legislation, inadequate documentation and recording of information and a divergent professional culture.

Healthcare managers continuously face challenges and driving forces for changes such as the transition to digitalised service delivery, increasing patients' involvement, and adapting to the needs and requirements of future workforce. *Vukko Pihlainen* challenged us to imagine which skills and competencies would be necessary in the management and leadership of hospitals in 2030. According to Finnish experts, the 2030 healthcare manager would need to combine personal development with patient centred care. To meet the future challenges, health managers should also take a more holistic view of managing and share leadership or pair leadership with other involved entities.

How do innovation programs foster management development and learning for participants and their innovative practices? *Dr. Maarten Janssen* talked about 'learning to lead', a process analysis of how innovation programs facilitate management development in healthcare. They found that:

- Innovation programs do not offer normatively neutral context for learning and development.
- By processes of facilitation, legitimation and prioritization a program influences learning processes of managers and leaders of the future.
- The programs themselves can be viewed as 'performative accomplishments' as they are strongly intertwined with the learning processes of their participants.
- Educating managers; management development for the participants and working on practical cases can go hand in hand.

D. Sc. Ira Haavisto talked about how information management and knowledge management matures in healthcare networks, and how levels of maturity can be identified. The purpose of this study is to design and test, in the Finnish healthcare setting, a profiling model for knowledge and information management. Within this study they found that the profiling model can serve as a framework for evaluating maturity of information and knowledge management. Most of the existing maturity models have the assumption that more is better as it is always desirable to obtain more sophisticated technologies and practices. The model developed in this study creates profiles which combine satisfaction of organisation and the maturity of information and knowledge management.

Leadership comes with experience they say. With the crisis, there is a decline in the number of long serving CEOs in the NHS, which could threaten the performance rate of the NHS hospitals. *Prof. Mark Exworthy* discussed the characteristics of long serving NHS CEOs in order to improve resilience in the NHS top leadership. They concluded that "Consistent leadership" is on one hand linked to "organisational capacities and skills to support performance improvement" and on the other hand to persistent strategies dependent on the level of managerial discretion. However, there is a need for further research on the set of skills and attitudes that are linked to longevity in CEOs in NHS, especially around management of self and others.

Take home messages:

- Informal controls positively influence quality of care to the patient and are mainly focused on socialization mechanisms such as regular organized meetings, organized face-to-face-contact and the active promotion of sharing norms and values.
- Social- and healthcare organisations should set goals to managers' work wellbeing and clearly take these goals into policies and practice.
- To meet the future challenges, health managers should also take a more holistic view of managing and share leadership or pair leadership with other involved entities.
- Consistent leadership is linked to organisational capacities and skills to support performance improvement.

III. Workshop on "Governance: what is it, why it matters, and how to strengthen it?" by the European Observatory on Health Systems and Policies

Tuesday, 18th June 2019, 15:45 - 17:15

Speakers: *Dr. Josep Figueras* (European Observatory for Health Systems and Policies, Belgium) & *Dr. Matthias Wismar* (European Observatory for Health Systems and Policies, Belgium)

Summary

Governance is crucial to successful policymaking and implementation. It affects the likelihood, that workable policies are adopted, that they are implemented and that they produce the intended results. Many definitions and frameworks have been developed over the years by agencies, academia etc. However, a common language or definition on governance was still missing.

The TAPIC framework will be able to shed some light on this. It was developed by drawing on an extensive literature review and can help with organising governance work. This framework exists of five categories that attribute to good governance:

1. Transparency - Make the decision making and process of it clear and understandable for others. This way you can build up trust.
2. Accountability - Clear reporting to principals who has the power to sanction.
3. Participation - Affected parties are engaged in the decision making and have the power to influence and improve decisions (e.g. patients, healthcare professionals).
4. Integrity – Reach good management of the organisation by making rules, roles and processes clear and understandable (e.g. Weberian virtues: clear jobs, hiring, tenure etc.).
5. Policy Capacity – To have the ability to develop policy that is aligned with the organisations goals and resources, to transform theoretical ideas into practical policies. Skills in analysis and research are important for this (financial, technical-e.g. IT, evidence, HR Skills, political).

More information on the TAPIC framework can be found with this link.

The five categories mentioned above can be a guide for a public body who is reviewing or considering their governance arrangements. It is useful in a way if you are thinking about organising your governance work on all stages of policies, from development to implementation. During the session participants split in groups to analyse cases of health policy development and implementation using the TAPIC-framework as lenses for the analysis. The strengths and weaknesses of the governance systems in these cases were assessed and discussed using the TAPIC framework.

Take home messages:

- Not even the best technology can safe you if you do not have a good governance system in place. Governance is important as it reflects on how we make and implement decisions in order to get good health policies.
- The TAPIC framework is a framework that can guide you in developing good governance by focussing on transparency, accountability, participation, integrity and policy capacity. It helps in defining a common language to address governance.
- Healthcare systems are characterized by the interaction of many different stakeholders having many accountability relationships (policymakers, citizens/clients, providers, etc.). It is key that we analyse and address these relationships in order to get a good governance system.
- Choose policies that matter for your governance system. Make sure to focus and prioritize reforms based on their policy capacity and identify high risks for governance.

Sustainability

Take home messages on Sustainability

With the introduction of the UN Sustainable goals in 2016, the term sustainability got a lot of attention. Within healthcare the aim has always be to make healthcare available, adequate, accessible, affordable and appropriate for everyone. This chapter will summarise the discussions on providing sustainable health services.

I. Parallel thinking on Sustainability

- Sharing knowledge and empirical experiences is one of the best ways to speed up the rate of new and sustainable reforms in healthcare systems.

- Patients need to be involved in the planning and implementation of healthcare reforms, as this is one of the fundamental ways to ensure the success of new reforms.

II. "Climate and energy smart healthcare" by Nordic Centre for Sustainable Healthcare

- Climate change and healthcare are interlinked in a circular motion: climate change is not only fuelled by the large amounts of carbon emission produced by healthcare services and devices, but it also causes people to develop illnesses.

III. Parallel Thinking: Sustainability

- Sustainable change in the efficiency of healthcare professionals involves the sharing of the same ambition for sustainable change, in which the professionals are aware of the reasons for change and the need to improve efficiency in healthcare.

IV. "Implementing circular economy in healthcare" by Nordic Centre for Sustainable Healthcare

- Moving away from a linear 'take-make-use-dispose' economic model to a more circular use of resources requires not only retaining value in products by designing for disassembly, reparability, recoverability or creating new business models, but it also requires a new mindset in organisations implementing these products and services.

- Value chain needs to be created nationally and globally in order to tackle the lack of hospital plastics recycling.

I. Parallel thinking on Sustainability

Monday, 17th June 2019, 11:00 - 12:30

Moderator: *Dr. Maarten Janssen* (Erasmus Center for Health Care Management, Netherlands)

Speakers: *Dr. Steve Brookes* (Alliance Manchester Business School, United Kingdom), *Assoc. Prof. Dr. Eva Turk* (University of South-Eastern Norway), *Prof. Dr. Marija Jevtic* (University of Novi Sad, Serbia), *Dr. Eva Krczal* (Danube University, Austria), *Dr. Lill Sverresdatter Larsen* (The Arctic University of Norway, Norway), *MSc Marisca de Jong* (Institute for Defence and Partner hospitals, Netherlands), *Mrs. Giulia Padovano* (SMETT, Italy), *Dr. Marius-Ionut* (Babeș-Bolyai University, Romania)

Abstracts: On page 29 to 35 of the abstract book.

Summary

The session involved seven speakers, all of whom had very different topics, yet whose presentations were in line with the theme of sustainability. They discussed the building of a sustainable future for healthcare and pointed out the implications for healthcare management. Examples were presented from countries such as Finland, Austria and Romania, which provided a broad overview of different sustainability challenges and solutions inform throughout Europe.

For sustainable healthcare systems, Assoc. Prof. Dr. Eva Turk mentioned healthcare literacy as one of the key issues that needs attention to ensure improvement in management and in order to build up public trust in healthcare professionals. Dr. Steve Brookes also highlighted this, as he talked about blended learning, which essentially integrates face-to-face and online learning. This could build partnerships and communities and allows professionals to share good practices. The Romanian examples showed how internationalisation is put into practice by Romanian medical schools that start new schools in in other European countries. This allows methods to be used elsewhere and to be taught and learnt in new places.

In order to implement sustainable reforms, patient involvement is key in ensuring that the right changes are implemented in the right way Only their involvement can ensure that patients are treated correctly, do not lose trust in healthcare professionals, and are content with the treatment they receive. Several methods for including patients were discussed, ranging from (online) questionnaires, pilots in small areas and absolute transparency aboutthe process.

Once each speaker had finished his or her presentation, there was a small panel discussion where the audience had a chance to ask questions and where speakers made their final remarks. The questions were primarily based on the internationalisation of healthcare education; the workforce challenge of shortages in well trained staff and the need to educate and motivate workers on changes and reforms of healthcare systems with respect to sustainability. It was concluded that there is a need to learn from one another and to work together in order to achieve sustainability.

Take Home Messages:

- Patients need to be involved in the planning and implementation of healthcare reforms, as this is one of the fundamental ways to ensure the success of new reforms.
- Healthcare professionals and managers need to be motivated to accept and implement new reforms in the workplace, as they play a key role in determining whether new reforms work well.
- Internationalisation and blended learning are being called-for. Sharing knowledge and good practices and inspiring examples with each other is one of the best ways to increase the success rate of new and sustainable healthcare system.

II. "Climate and energy smart healthcare" by Nordic Centre for Sustainable Healthcare

Monday, 17th June 2019, 17.00 – 18.30

Speakers: *Mr. Johannes Brundin* (Nordic Center for Sustainable Healthcare, Sweden), *Ms. Irina Linquist* (Schneider Electric, Sweden), *Mr. Jani Valkama* (HUS Environment Center, Finland)

Summary

Although climate change is a widely recognized phenomenon and many people agree that it must be reversed, the impact of healthcare on climate change is often overlooked. Hence, this session not only highlighted the huge impact healthcare made on climate change, but also brought out some possible solutions and work procedures that can be implemented to improve the energy efficiency of healthcare activities.

Healthcare activities can affect climate change issues through several ways such as the heating of hospitals, energy consumption from heavy medical equipment like X-rays, production of plastic waste from medicine packaging and much more. These healthcare activities contribute to 5 percent of the total climate impact in Europe, which is quite significant compared to the air industry which contributes 3 percent. This came as a shock to most of the audience as they were unaware of this fact, and it was even joked that climate wise it is better to take a holiday to a foreign country than to break a leg.

With this statistic in mind, the audience was then introduced to ways in which healthcare activities can be altered in order to improve energy efficiency and reduce the climate gas emissions. Examples of what is already being used to save energy use in different countries were explained by the speakers, all of whom brought their expertise from an array of backgrounds. Such examples included insulated buildings, self-energised hospitals which reuse heat energy, collection of snow during winter months to use in summer for cooling, use of geothermal energy and many more. These different solutions give hope that the impact of healthcare activities on climate change can be reduced in the years to come, and that more sustainable hospitals can be built, but also highlight the importance of the willingness of individuals and companies to implement and accept these changes. Of course, it is impossible to have carbon neutral hospitals or healthcare services, but as users of these services which allow us to live a healthy life, it is important to give back, and also maintain the health of our climate.

Take home messages:

- Healthcare has a huge impact on climate, more than aviation and this is something which must be considered when making changes in healthcare.
- Climate change and healthcare are interlinked in a circular motion: climate change is not only fuelled by the large amounts of carbon emission produced by healthcare services and devices, but it also causes people to develop illnesses.
- There is a need to be sustainable in every form possible when planning and implementing healthcare services, however it is important to realize that we can never be carbon neutral as this is only reached when there are no healthcare services at all.

III. Parallel Thinking: Sustainability

Tuesday, 18th June 2019, 9:30 - 11:00

Moderator: *Prof. Ronald Batenburg* (Institute for Health Services Research, Netherlands)

Speakers: *Mrs. Roxane Borgès Da Silva* (Université de Montréal, Canada), *Ms. Petra Fadgyas-Freyler* (National Health Insurance Fund, Hungary), *Professor Yoshinori Nakata* (Teikyo University, Japan), *MSc. Iris Geerts* (Tilburg University, Netherlands), *Prof. Carl-Ardy Dubois* (Université de Montréal, Canada)

Abstracts: On page 36 to 42 of the abstract book.

Summary

This session focused on the activities, productivity and management of healthcare professionals and how these can be analysed and improved in order to offer the best possible services to patients. Moreover, it also provides a sense of accomplishment and efficient time and skills use to the healthcare professionals performing these activities.

Several ways of measuring and distributing healthcare professionals' activities places sustainable and more effectively were presented from countries such as Canada, Hungary, The Netherlands and Japan. From the very interesting research that was conducted by each speaker, it became clear – among others – that professionals' effectiveness in the workplace can be measured through different means. For instance, when looking at revenue as a means of measuring surgeons' technical efficiency' in Japan, it was shown that, as revenue increases, their technical efficiency also increases. But interestingly, as the number of surgeries increased, their technical efficiency actually decreased. Moreover, it was discussed why task sharing within Canadian healthcare organisations is a clear opportunity to improve efficiency, but is hampered by many factors in practice. For the Canadian health workforce, it became additionally clear that their productivity requires human resource management that includes specific attention to workers over 45 to retain capacity and avoid early and unintended outflow. The presentation on the optimal regional allocation of (human) resources within Hungary, showed that a systems and model-driven approach can support health policy in avoiding regional inequalities in access. Finally, it was learned from a case study on an innovation network in dementia care in the Netherlands that open innovation requires shared and known/transparent ambitions among all network partners.

For sustainable change in the efficiency of healthcare professionals, it is hence important that professionals are aware of the reasons and importance of change, and hence must share the same ambition for change and development. This way, we can produce better satisfaction in the workplace, improve efficiency and deliver better results to patients.

Take home messages

- It is difficult to select a single method of measuring productivity and efficiency of healthcare professionals, as this can be subjective, and change for each professional.
- In healthcare, there is more room for task sharing and redistribution of activities than is actually used in practice.
- Retention and supporting all health workers, including those over 45, is crucial to avoid unintended outflow, loss of productivity, and knowledge of healthcare organisations.
- Collaboration in networks of healthcare professionals involves the sharing of the same ambition for sustainable change, in which the professionals are aware of the reasons for change and the need to improve efficiency in healthcare.
- Reducing regional inequalities is not only a mater or social, but also economic policy to optimize the allocation of (often scare) resources in health.

IV. "Implementing circular economy in healthcare" by Nordic Centre for Sustainable Healthcare

Tuesday, 18th June 2019, 15:45 - 17:15

Speakers: *Ms. Elena Prokofyeva* (Health Startup Association of Finland, Finland), *Mr. Daniel Eriksson* (Nordic Center for Sustainable Healthcare, Sweden), *Ms Lieke van Kerkhoven* (FLOOW2 Healthcare, Netherlands), *Mrs. Virpi Vuori* (HUS Helsinki University Hospital Environment Center, Finland)

Summary

Moving away from a linear 'take-make-use-dispose' economic model to a more circular use of resources requires not only retaining value in products by designing for disassembly, reparability, recoverability etc. or creating new business models, but it also requires a new mindset in organisations implementing these products and services. To reach a circular model in healthcare services, behavioural change is vital. We need to talk about how we get our colleagues and managers to act in a more conscious manner and procure products or services with more than just monetary value in mind.

This session involved experts from different backgrounds and fields discussing how to implement circular economy in healthcare from a behavioural point of view. *Ms. Elena Prokofyeva* talked about 'Upgraded - Health Start-up Association' of Finland. She said it is their goal to ensure that start-up innovations have an established role in society as a source of health and well-being solutions. Finland is moving closer to a circular economy. It was the first country in the world to prepare a national road map to a circular economy in 2016-2025. Finland aims to make a transit based on new business and technology innovations. They see HealthTech as an enabler of circular healthcare. For example, by: Replacing old materials with advanced renewable ones and applying 3D printing, deliver goods and services virtually, by promoting the sharing of product or prolonging the product life span through maintenance and design.
Mr. Daniel Eriksson talked about the 'Nordic Center for Sustainable Healthcare'. The Nordic Center for Sustainable Healthcare is a network that aims to raise the status and awareness of sustainable healthcare, boost innovation and investments in sustainable healthcare, bring world class solutions and ideas to the Nordics and deliver those solutions & knowledge to the world. Sustainable Healthcare is cross-sectorial and not assigned to specific industry sectors. We need to understand how one thing affects another and act on it!

Ms Lieke van Kerkhoven talked about FLOOW2 Healthcare. The term "sharing economy" has become a staple in our current society. Making more efficient use of what we have as a company can be important for us, but also for others. FLOOW2 is the first company in the world, working locally and internationally, to identify the need, and the opportunities of asset sharing. Sharing assets is an integral part of the development towards a more circular economy, where collaboration creates stable, safe, open communication between and within businesses, organizations and countries. *Mrs. Virpi Vuori* talked about the role of Helsinki University Hospital (HUS) in circular economy. HUS aims to be more resource wise by combining energy efficiency with material efficiency through the whole cycle. This is only possible through staff; they are key in decreasing material use. For example: operating units increase use of washable textiles, IT solutions decrease printing, procurement criteria reward sustainable solutions and logistics services help the wards to keep material losses at a minimum.

Take home messages:

- Moving away from a linear 'take-make-use-dispose' economic model to a more circular use of resources requires not only retaining value in products by designing for disassembly, reparability, recoverability etc. or creating new business models, but it also requires a new mindset in organisations implementing these products and services.
- To reach a circular model in healthcare services, behavioural change is vital. We need to talk about how we get our colleagues and managers to act in a more conscious manner and procure products or services with more than just monetary value in mind.
- Value chain needs to be created nationally and globally in order to tackle the lack of hospital plastics recycling.

Digital Transformation

Take home messages on Digital Transformation

We are living in a fast-paced environment where new innovations are developed every day. Within this chapter we will look at new possibilities and opportunities for the health care sector.

I. Parallel thinking: Digital transformation

- A digital network will only be successful and diffuse if all participants are able to capture total value through: (1) improvements in quality of and access to care, (2) reimbursement regulation, (3) network-based organizational benefits such as efficiency gains, learning, or knowledge transfer, and (4) legitimacy gains resulting from institutional isomorphism.

II. The Digital Health Agenda: Are you a winner or a loser?

- Digital transformation in healthcare is still very challenging due to education, political will, health literacy/digital health literacy, engaging stakeholders in co-creation processes, replication of best practices in different contexts/countries, etc.

- The potential market for innovative products and services offered by public procurement can help governments to boost innovation at both national and local community and ultimately improve productivity and inclusiveness.

III. The Finnish National Katan Services: Part of Finnish Digital Health Revolution

- Pharmacies are in favour of using the online service of 'My Kanta', that allows patients to arrange renewals for their own prescriptions, because it has improved the efficiency of medications. They are now able to monitor the use and misuse of medicines, since information is sent to them directly from the service.

- The next steps in digitalizing health in Finland, is to get an up to date list of prescriptions that are currently being used and a second-generation of electronic health records that is suited for secondary purposes.

IV. "Profiling the health worker of the future: digital skills, innovation and collaboration to meet the new demands of care" organized by Health First Europe

- European healthcare systems should create the right conditions to promote new models of care, that are more integrated, preventive and closer to the patients (e.g. new models are more focused on population health, self-management/ chronic diseases – new business models should focus on engaging citizens, partnerships and integration).

V. Coaching session on "Combination of new knowledge and coaching on digital transformation" by European Health Futures Forum (EHFF)

- The advantages of digital transformation can only be reached if everyone within the care pathway or process implements the digital changes in the same time. It is not enough if one actor within the care pathway starts the digital transformation and others stick to the old procedures as this forms an obstacle to make real improvement and can result in a real burden on the actor that started the change.

VI. Parallel Thinking: Digital Transformation & Interactive discussion on" Health Village and AI in Helsinki University Hospital" by HUS

- In AI, partnership with one does not work. We need to create an ecosystem where one can propose problems and where we can work together to solve them. This might be challenging for companies,

to sit around the same table and share their knowledge with competitors, but it is a way quicker method to get results and work towards solutions.

I. Parallel thinking: Digital transformation

Monday, 17th June 2019, 11:00 - 12:30

Moderator: *Dr. Alexandre Lourenço* (Associação Portuguesa de Administradores Hospitalares, Portugal)

Speakers: *Dr. Stefanie Steinhauser* (University of Regensburg, Germany), *Dr. Joyce Bierbooms* (*Tilburg University*, Netherlands), *Ms. Emilia Riikonen* (HEMA Institute, Aalto University, Finland), *Ms. Teressa Lyly* (Aalto University, Finland), *Prof. Andrew Walton* (Leeds Becket University, United Kingdom), *Assoc. Prof. Dr. Eva Turk* (University of South-Eastern Norway, Norway)

Abstracts: On page 53 to 57 of the abstract book.

Summary

A major challenge in the healthcare systems within digitalization is the design of business models that support digital innovations such as telemedicine. *Dr.Stefanie Steinhauser* presented an extended business-model framework for network-based digital innovations. She suggests, that integration of institutional bodies into a business model (as key partners) can foster implementation and diffusion. The implementation of new technologies from healthcare professionals is however still hindered by the lack of skills and experience for finding and using online technologies.

Dr. Joyce Bierbooms talked about her study that aims at describing 'personas' as part of user requirements in the design of a game-based learning environment (GBLE) for mental healthcare professionals (eMental Health). she highlighted that a "one fits all" approach is not effective when designing GBLE, especially when it comes to Health care systems. There is a need to manage the increasing number of both cancer patients and cancer survivors as they all need long-term follow-ups. Digital solutions offer the possibility to scale-up these procedures by making use of a structured and systematic digital format. *Ms. Emilia Riikonen* explored the mechanisms adding or diminishing value of a digital follow-up system by interviewing health care professionals. She explained how this system allowed health care professionals to prioritise and manage their tasks more freely and to improve allocating patients to the correct level of care.

The effective use of medicine information sources is important when it comes to patient safety and ensures a more efficient use of hospitals' resources. The new digital medicine information tool Lääketiedon Tukimateriaalit of Lääketietokeskus and Helsinki University Hospital (HUS) was piloted in the Hoitotyön Pharmaca Fennica web portal and it showed that nurses use medicine information constantly and spent a lot of time searching for the right information. By using this new information tool, nurses spend less time searching for the right medicine information (Tukimateriaalit-portal 2 minutes 46 sec compared to the traditional way > 5 minutes).

The use of clinical outcome measures is important when determining the health benefit of an intervention and to foster improvement. The EQ5D questionnaire is a commonly used questionnaire to asses health status. *Prof. Andrew Walton* said that in order to increase the completion rate of the EQ5D questionnaire, they at 'Connect Health' use electronic templates, which can gather a variety of personalised data sets to clinicians, over a chosen time period (e.g. collection rates, diagnosis made, treatments and patient rated health outcomes). Data can be used by clinicians to assess their own performances or as comparison with peers to share learning outcomes and best practices. It can also be used to inform commissioners and policy makers as well as global research aimed at improving quality of care.

To help each other in entering international markets and embracing change of healthcare through cooperation and introduction of digital solutions, the DIH.HealthDay.si was established in 2014. The objective of DIH.HealthDay.si is to accelerate the transfer of innovations into the Slovenian health system by providing a community said *Assoc. Prof. Dr. Eva Turk.* By forming an Expert Council, mentors, and a special program they can speed up the start of respective innovation.

Take home messages:

- A digital network will only be successful and diffuse if all participants are able to capture total value through: (1) improvements in quality of and access to care, (2) reimbursement regulation, (3) network-based organizational benefits such as efficiency gains, learning, or knowledge transfer, and (4) legitimacy gains resulting from institutional isomorphism.
- The identification of personas (lively descriptions of distinctive user groups for a technology) delivers important information for designers to create a product that enhances effective onboarding and application of a game-based learning environment (GBLE), as it allows to identify solutions addressing different requirements and needs.
- The use of digital follow up systems seems to improve task prioritising and patients' access to the right level of care, compared to traditional phone hour or face to face follow-ups. Challenges that still need to be addressed include improving the integration of EMR with follow up systems and clarifying user roles of professionals.
- Effective use of medicine information sources is important to improve patient safety and ensure a more efficient use of hospitals' resources. The use of new tools can help nurses reducing their time spent with searching for the right medicine information.
- A data warehouse can transform performance by making data easily accessible to clinicians so that assess their own performances or for a comparison with peers to share learning outcomes and best practices, but also to inform commissioners and policy makers as well as global research aimed at improving quality of care.
- DIH.HealthDay.si shows how a community of innovators representing the field of digital health contribute to the Slovenian healthcare system and accelerates innovation by offering a communication platform that supports innovators and facilitates a dialogue with regulators and other relevant stakeholders.
- Compared to pharma industry, the sector of digital health solutions is not regulated well enough (e.g. rules on digital health technology adoption and reimbursement). Many countries are missing a clear roadmap on digital health technologies, which hinders the development and adoption of health innovations.
- Partnerships between universities and IT organisations could improve the successful development and implementation of new innovations, however this has proven to be difficult due to the different goal settings between academics and industry (e.g. academics aim to educate students, while clinicians aim to treat patients). Universities should become more flexible and adapt quicker to the market.
- Networks are very important for the digital revolution as they support trust between stakeholders, allowing more effective use of scarce resources.
- Human and social barriers represent a major obstacle to digital health innovation still and trust between different stakeholders is needed in order to create capacity. Healthcare professionals should for example be trained to manage the empathetic contact with patients in a digital environment.
- It is important to recognize human factors when dealing with patient care to have successful transformations of digital solutions in the healthcare setting. Many patients are open for digitalization, but most of them prefer to have a choice on the type of contact according the situation.

II. "The Digital Health Agenda: Are you a winner or a loser?"

Monday, 17th June 2019, 17.00 – 18.30

Moderator: *Dr. Alexandre Lourenço* (Associação Portuguesa de Administradores Hospitalares, Portugal)

Speakers: *Mr. Simo Sorsakivi* (Inscripta, Finland) & *Ms. Kristine Sorensen* (Global Health Literacy Academy, Denmark)

Summary

Without a doubt, technological change could make a huge impact across different health settings such as acute care, primary care, home care, etc. The future of healthcare is "virtual"; the use of big data, AI, electronic health records shall create an "open healthcare", and the increasing coverage of 4G and 6G and decreasing costs of robots will make remote surgeries (telesurgeries) more common.

My Kanta is an online service available in Finland, which allows patients above the age of eighteen, to see their own patient data. Data such as documentation for example related to out-patients visits and in-patient treatments. Although digital health technologies offer great potentials, there are challenges related to their scale-up and adoption. *Ms Kristine Sorensen* recognised this and, with a study on the health literacy status in Denmark, she showed that fifty percent of the participants still struggle to find their way in using/accessing healthcare services. Keeping this in mind, the focus should not only be on digital health literacy, but also on the wider health literacy (e.g. patients could be capable of using mobile apps, but they might not be able to navigate through the healthcare system). In addition, the study found the socio-economic status to be a more significant predictor for both health and digital health literacy in comparison to age.

In order to improve health care system, we should start by assessing patient needs and design a patient-centred technical solution that can respond to their needs. This would allow a more effective and adaptable implementation of healthcare technologies. Digital innovation is a great opportunity to reshape healthcare as it is, but integration of digital technology still very challenging. This is mainly caused by manager, clinicians, health care trainers and policymakers who cannot keep up with the change and have a hard time accepting it. Furthermore, the various data protection laws, different cultural values and different health systems between countries form also an obstacle to promote digital transformation.

Take Home Messages:

- My Kata in Finland is a service which allows each citizen above the age of eighteen to see his or her personal patient data. Such as diagnoses, procedures, critical risk information, medication information, and prescriptions.
- Digital transformation in healthcare is still very challenging due to education, political will, health literacy/digital health literacy, engaging stakeholders in co-creation processes, replication of best practices in different contexts/countries, etc.
- Engaging with politicians to promote digital innovation and to address/simplify obstacles related to regulations is needed (e.g. a practical guide for GDPR or other regulations).
- The potential market for innovative products and services offered by public procurement can help governments to boost innovation at both national and local community and ultimately improve productivity and inclusiveness.

III. The Finnish National Kanta Services: Part of Finnish Digital Health Revolution

Monday, 17th June 2019, 17.00 – 18.30

Moderator: *Liisa-Maria Voipio-Pulkki* (Ministry of Social Affairs and Health, Finland) & *Dr. Markku Tervahauta* (THL, Finland)

Speakers: *Dr. Vesa Jormanainen* (THL, Finland), *Ms. Hannele Hyppönen* (THL, Finland), *Mr. Lauri Vuorenkoski*, *Jarmo Reponen* (University of Oulu), *Ms. Charlotta Sandler*, *Ms. Anne Kuusisto*

Summary

Public services have an important role in digitalizing services in Finland. By introducing 'My Kanta' services, citizens can arrange renewals for prescriptions by themselves which is saving a lot of money. The 'My Kanta' page allows users to send in renewal requests for prescriptions. This tells us for the first-time how many prescriptions there exactly are in Finland. Since last year it is also possible to pick up your medicines in Estonia with the digital prescription.

The radiologist *Jarmo Reponen* said, that Finland happens to be the number one European Member State when it comes to digital competitiveness, according to the Digital Economy and Society Index (DESI)[1] of 2019. In Finland, almost fifty percent of the citizens have used e-health services without having to go to a hospital, which is a high proportion if you compare this to an average of eighteen percent in the rest of Europe. Finland has had electronic health records since 1970s and in the last three years, Finland has been progressing their services on digitalization, and it ostensibly helps develop the health systems on user's experience.

The digital services that are produced by 'My Kanta', benefits the citizens as well as social welfare and the health care service providers. The data indicates that half of the Finnish population is using the 'My Kanta' page. This is not only the younger generation, as a third of people with an age above sixty-five are using it as well.

'My kanta' is a great way to generate new data to use in research such as Kanta log files. Now they can start applying the database reports to better report 'what' patients need rather than 'what' researcher want to show in their results. The next steps in digitalizing health in Finland, is to get an up to date list of prescriptions that are currently being used and a second-generation of electronic health records that is suited for secondary purposes as well. This way it will be possible to integrate information flows where data is able to talk to each other.

Take Home Messages:

- Finnish people prefer mobile health data more than other countries. In Finland, almost fifty percent of the citizens have used e-health services without having to go to a hospital, which is a high proportion if you compare this to an average of eighteen percent in the rest of Europe.
- Pharmacies are in favour of using the online service of 'My Kanta', that allows patients to arrange renewals for their own prescriptions, because it has improved the efficiency of medications. They are now able to monitor the use and misuse of medicines, since information is sent to them directly from the service.
- Electronic health records and the 'My Kanta' service have really changed how physicians do their work. The next step is to have an 'up to date list' online of all prescriptions that are currently being used by patients and to work towards a second-generation of health records that is suited for secondary purposes.

[1] The summary of relevant indicators on Europe's digital performance and tracks the evaluation of EU member states in digital competitiveness.

IV. "Profiling the health worker of the future: digital skills, innovation and collaboration to meet the new demands of care" organized by Health First Europe

Tuesday, 18th June 2019, 9:30 - 11:00

Moderator: *Prof. Federico Lega* (EHMA, Belgium; University of Milan, SDA Bocconi, Italy)

Speakers: *Dr. Loukianos Gatzoulis* (European Commission, Belgium), *Ms. Melina Raso* (City-Lab Project and Health First Europe, Belgium), *Prof. Walter Sermeus* (KU Leuven, Belgium), *Ms. Anu Söderström* (COTEC, Germany), *Mr. Hubert Van Caelenberg* (EUROFEDOP, Belgium), *Tanja Valentin* (MedTech Europe, Belgium), *Ms. Marta Simoes* (EPSA, Belgium), *Mrs. Outi Ahonen* (Laurea University of Applied Science Digital, Finland), *Prof. Lasse Lehtonen* (Helsinki University Hospital, Finland)

Summary

Population growth, ageing societies, and changing disease patterns are expected to drive greater demand for well-trained health workers in the next fifteen years. New models of care and new technologies (e.g. Artificial Intelligence) are being developed and gradually implemented. However, these opportunities require a change in workforce capacity and capabilities. As *Ms. Melina Raso* mentioned, the implementation of new models of integrated care requires a radical transformation of skills and core competencies of the health workers. My City-Lab is an initiative financed by the European Regional Development Fund (ERDF), which aims to integrate the innovation of laboratory medicine and mobile digital solutions into the health care system.

Dr. Loukianos Gatzoulis gave a thoughtful overview of changing demand for care and the role of new technologies. A multi-disciplinary approach, where health care workers can safely share patients' data across settings and effectively collaborate in the care plan and work in partnership with adeptly trained social and health workers, is highly useful to encounter the current social and health challenges. Generally, the relations between health care professionals, patients and technology providers need to be assessed and re-organised in order to fit the future care; thus, the education must play an essential role to connect the three of them. However, the latest survey presented by *Ms. Marta Simoes* shows that 75% of pharmacists claim to have no or almost no education on digital health, while 90% of them believe that digitalisation of health care shall change the pharmaceutical curricula and profession and make them better. As stressed by *Mrs. Outi Ahonen*, health care professionals can be bold and innovative in reforming practices if only they have the right education to make it happen, from informatics to media literacy. *Mr. Hubert Van Caelenberg* added, that due to the different resources that EU Member States have, not every country can reward graduates equally. He advocated EU Member States to look deeper into the challenges of workforce shortage and brain-drain, and assess how those challenges impact personal lives, patient safety and quality of care in each country.

During the debate, a wide-ranging list of competences needed for the workforce of innovative primary settings and medical labs (such as soft skills, ethical competences, digital skills, data collection and monitoring skills, service competences, guiding skills and leadership) were brought out by participants. Above all, the key competence that was recognised by most participants is 'partnering skills', which can be defined as the ability to apply a collaborative relationship between settings, professionals and patients. Moreover, flexibility should also be focused as a core skill; those involved must be: convinced of the rationale for change, flexible in changing tasks and settings and strongly supported in implementing it.

Take Home Message:

- Implementing new models of integrated care requires a radical transformation of skills and core competences of health workers.
- European health care systems should create the right conditions to promote new models of care, that are more integrated, preventive and closer to the patients (e.g. new models are more focused on population health, self-management/ chronic diseases – new business models should focus on engaging citizens, partnerships and integration).
- The role of education is essential to meet the new technological challenges and to re-organize the relationship between healthcare professionals, patients and technology providers.
- Advanced digital and eHealth knowledge are required for health and social workers and trainers.
- Use appropriate resources to tackle workforce shortage and promote primary care and laboratory setting. Provide a better social security system, increase wages and create equal working condition across borders for health care providers.
- Empower and involve healthcare professionals in change (e.g. service redesign).
- Partnering skills and skills to navigate the digital environment is important for health care decision-makers to identify the qualified workers of the future.
- Both technical skills and soft skills should involve in healthcare professionals' training.
- With adequate training in flexibility skills, professionals can carry out their function in an integrated team with information sharing.
- Europe shall invest in integrated models and city-lab setting to transform care to better tackle ageing society, changing pattern of disease, new technologies and decentralisation of organisational structures. The vision and expertise of health care workers and managers can shape the health care system of the future.

V. Coaching session on "Combination of new knowledge and coaching on digital transformation" by EHFF

Tuesday, 18th June 2019, 15:45pm - 17:15

Speakers: *Dr. Matthijs Zwier* (European Health Futures, United Kingdom) & *Dr. David Somekh* (European Health Futures, United Kingdom)

Summary

European Health Futures Forum (EHFF) is an open interactive network, seeking out, processing and exchanging knowledge and information to influence the future of health and healthcare in Europe and to provide a better understanding of future possibilities for healthier lives and communities. This session was a combination of new knowledge and coaching on digital transformation.

The session focussed on future thinking and on digital as a lever for change. We all know the classic dilemma for innovation in health systems e.g. barriers to implementation are in most cases resistance to change from different tribes, misperception of threat, bureaucracy (over-regulation), closed systems (inflexibility of existing structures) or the adoption of products that are not co-designed to meet user needs.

The session started with the importance of coaching for making the digital transformation possible and with a discussion around the involvement of digital health start-ups. The first example of applying digital in the community came from digital applications (websites) such as www.huisart.nl from the Netherlands and www.1177.se from Sweden, which provide online information on health and diseases. They form an online community where you can find information on most health issues and where you can share your thoughts with others enduring the same health condition or with health professionals.

Another example in digital transformation came from the United Kingdom, *Dr. Pranav Somaiya* from Princess Alexandra hospital explained how he managed to have paperless health records of patients. This sounds like a great improvement, however in practice you realise it can be a real burden if the partners you are working with are not digitalized. In order to see the advantages, you will need to change the whole process. This was also the main message from the discussion and will become an important task and role for current and future health managers. In order to make digital transformation happen, everyone within the care pathway of the patient would need to work together and adopt digital solutions on a big scale. Only through this way it will be possible to establish a good foundation for digital transformation.

Take home messages:

- Digital applications such as the www.huisart.nl and www.1177.se provide a platform were people are empowered to answer their health-related questions which could lessen the workload of General Practitioners.
- The advantages of digital transformation can only be reached if everyone within the care pathway or process implements the digital changes the same time. It is not enough if one actor within the processes makes a digital transformation and others stick to the old procedures as this forms an obstacle to make real improvement and will form a real burden on the actor that started the change.

VI. Parallel Thinking: Digital Transformation & Interactive discussion on" Health Village and AI in Helsinki University Hospital"

Wednesday, 19th June 2019, 9:30 - 11:30

Moderator: *Assoc. Professor Dr. Eva Turk* (EHMA, Belgium; University of South-Eastern Norway) & *Md. PhD Visa Honkanen* (HUS, Finland)

Speakers: *Mr. Olli Halminen* (Aalto University, Finland), *Eszter Kovacs* (Semmelweis University, Hungary), *Eija Kivekäs* (University of Eastern Finland), *Mr. Matti Holi* (HUS, Finland), *Vesa Jormanainen* (THL, Finland), *Inge Bongers* (Tilburg University, The Netherlands), *Dr. Miika Korja* (HUS, Finland)

Abstracts: On page 58 to 62 of the abstract book.

Summary

The potential benefit of digital health interventions (DHIs) has been widely acknowledged. However, there is still lack of efficient and credible methods to evaluate and demonstrate the value of DHIs. *An Chen* presented a strategic evidence-gathering tool, developed by DiRVa project to create evidence-gathering methods for internationalizing technology companies. A CIMO-based, stage-focused and stakeholder-centered framework of gathering evidence of the value of digital health interventions. With this tool, DHI companies can plan ways to collect and show the evidence that can be beneficial for them to enter, occupy, expand or sustain in the health market, and become a strong competitor.

When we talk about large-scale deployment, implementation and adoption, Norway has been one of the leading countries. *Vesa Jormanainen* worked on examining the national Kanta services in community pharmacies and primary healthcare in municipalities. Their study shows that that it is possible to implement large-scale data systems nationally, but it requires active & well organised, systematic approach and organisation with appropriate legal mandate, power and funding for undertaking the tasks. With digitalization it is important to focus on strengthening e-skills and leveraging the digital health workforce.

Incorporating e-skill development and upskilling of health professionals should be channelled into policy dialogues in order to prepare and educate the future health workforce said *Eszter Kovacs*. In strategic health workforce planning, the policy aims to develop responsive, adaptable, resilient, productive and sustainable health systems and health workforces; thus, health professionals should be prepared and supported in emerging challenges posed by digital transformation. Joining forces with other stakeholders can help with tackling these challenges.

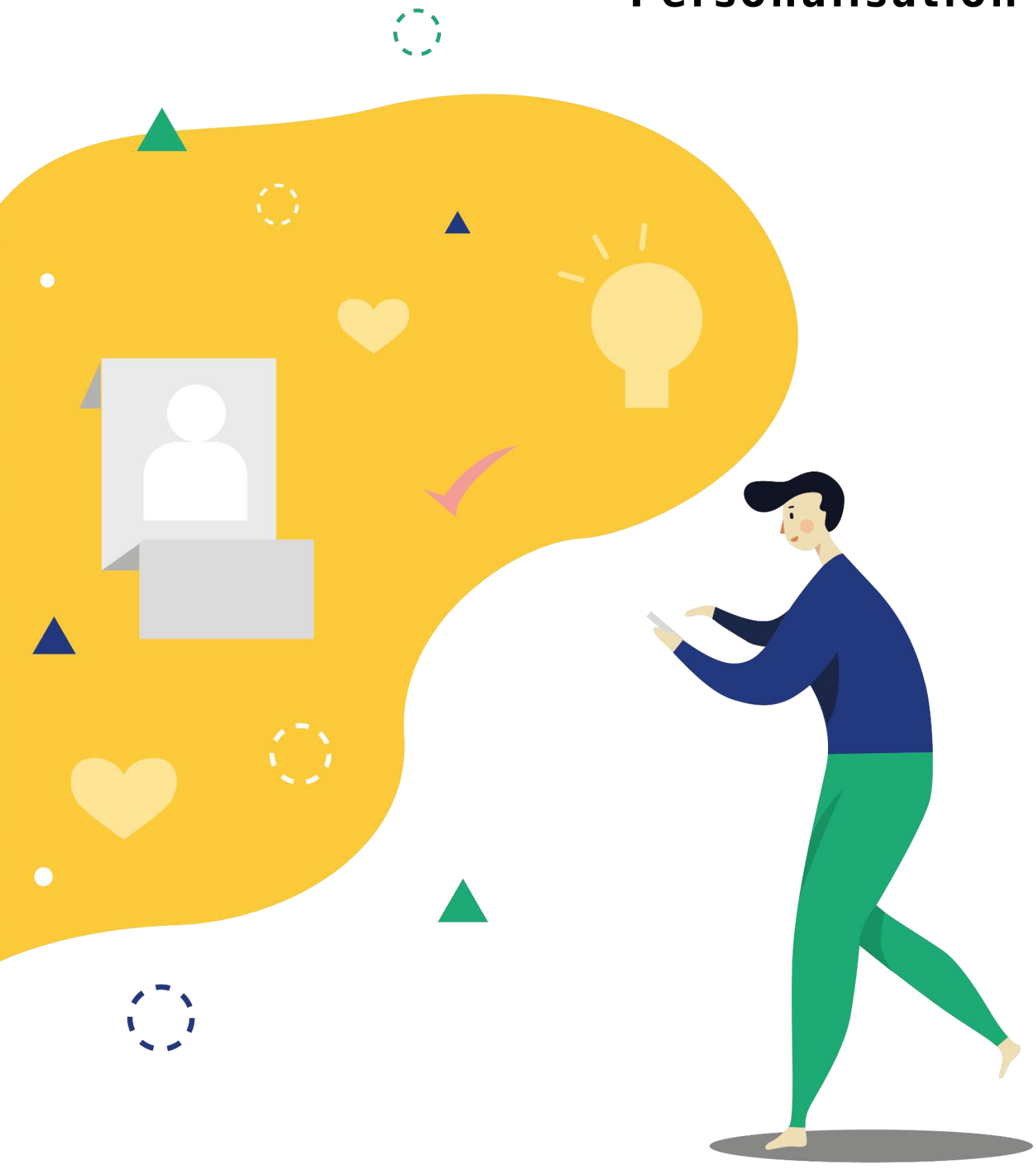
Inge Bongers mentioned that their approach of joining forces has led to several highly relevant projects in three stakeholder domains (clients, professional and organisational level). Within this academic collaborative centre (ACC), both science and practice on one hand, and technological and social innovation on the other collide. We aim for sustainable innovations for mental healthcare that are incorporated in daily practice (systemic change). Documentation of patient's data could be used in coordinating care if patient's well-being data could be mined from electronic health records. *Eija Kivekas* said that they have continued the testing of previously defined triggers in term of their functionality and validity in describing epilepsy patient's well-being. The use of triggers as a methodology enables achieving improvements that affect patient outcomes and safety in different healthcare processes and settings. The results offer healthcare personnel an opportunity to develop epilepsy patients' care documentation.

The Helsinki university hospital (HUS) is very involved in digitalisation. *Dr. Matti Holi* talked about the Health Village, which is a digital health service developed by HUS in collaboration with Finland's other university hospitals. It provides information and support for all, digital care for patients and tools for professionals. It has become an important health information hub for Finns as it attracts half a million visitors per month. The digital services it provides are cost effective and scalable, and they complement the traditional treatment paths. *Dr. Miikka Korja*, the Chief innovation officer of HUS talked about their involvement in new projects such as images of brain tissue. They are now working with a 3d model that can scan for blood clots. They are focussing mainly on images since there is no patient data involved, which avoid restrictions of patient data laws. He also mentioned other plans with using Artificial Intelligence (AI) (e.g. chatbots) and the importance of high-quality data when introducing AI solutions. Further to this he mentioned that there is a need to create an ecosystem where we can work create partnerships and work together on finding AI solutions without worrying on things like competition.

Take home messages:

- Creating a research plan for evidence gathering practices one must consider the Context-Intervention-Mechanism-outcome configuration (CIMO), the development stage and the stakeholders of the digital health intervention (DHI).
- It is possible to implement large-scale data systems nationally, but it requires active & well organised, systematic approach and organisation with appropriate legal mandate and power, and funding for undertaking the tasks.
- Health workforce planners need to estimate the future. They need to focus on the importance and significance of digital transformation and telemedicine as well as the necessary technical development in the health workforce, since digital transformation and telemedicine are supporting tools for harmonized healthcare throughout Europe.
- Academic Collaborative Centre (ACC) aims for sustainable innovations for mental healthcare that are incorporated in daily practice (systemic change) by joining forces with stakeholders and combine theoretical and practical knowledge.
- Documentation of patient's data could be used in coordinating care if patient's well-being data could be mined from electronic health records. Using electronic documentation with reminders and predictive will improve the quality and safety of care provided, by standardizing both structures and content of health records.
- Health Village is a digital health service developed by HUS in collaboration with Finland's other university hospitals. It provides information and support digital care for patients and utilized as tools for professionals. Both effective and scalable digital service and the traditional treatment can be found in Health Village.
- In AI, partnership with one does not work. We need to create an ecosystem where one can propose problems and where we can work together to solve them. This might be challenging for companies, to sit around the same table and share their knowledge with competitors, but it is a way quicker method to get results and work towards solutions.

Personalisation



Take home messages on Personalisation

Personalised healthcare has come more to our attention, because we realise that diseases and treatments cannot be applied to everyone in the same way. Healthcare is moving away from the "One size fit all" approach. In this chapter we will give a summary on the conference sessions dedicated to personalised healthcare. What are new developments and what are obstacles we still encounter today?

I. Parallel thinking on Personalisation

- Genetic risk brings added personalized value to the disease prevention regardless of lifestyle and identifies individuals who are at risk of earlier onset of disease, e.g. diabetes. With adding the genome factor, they can recognize patients with a higher risk and categorise them more precise and thereby start prevention early than with traditional risk factors.

- The Sussex MSK Partnership alliance has significantly improved its performance and patient outcomes through the introduction of changes such as the Clinical Referral and Assessment Service (CRAS), a Patient Director and Patient Care Advisors (PCAs). It took five years to really get the partnership to work, but now clinicians only get the people that are really in need for surgery.

II. Parallel Thinking: Personalisation & Interactive discussion on "Reinventing healthcare: patients as central partners"

- One way to realise value-based health care is by involving patients in the decision-making processes of health research and care practice. Involving insiders (scientists, policy makers, industry) and outsiders (care professionals, consumers, patients) is essential to cocreate knowledge and will form a new way of working.

- Teamwork between nurses and social worker has helped to identify social needs on time to prevent conditions of chronic complex patients worsening.

I. Parallel thinking on Personalisation

Monday, 17th June 2019, 11:00 - 12:30

Moderator: *Prof. Walter Sermeus* (KU Leuven university, Belgium)

Speakers: *Dr. Guanyang Zou* (Guangzhou university, China), *Dr. Merita Shehu* (AQH Project, Kosovo), *Mr. Andy Payne* (Good Governance Institute, United Kingdom), *Ms. Eleonora Gheduzzi* (Politecnico di Milano. Italy), *Colonel Henk van der Wal* (Ministry of Defence, Netherlands), *Dr. Kati Kristiansson* (THL, Finland), *Ms. Kasia Kaczmarek* (Sussex MSK Partnership east, United Kingdom), *Mr. Matthew Carr* (Sussex MSK Partnership east, United Kingdom)

Abstracts On page 71 to 76 of the abstract book.

Summary

What is a better way to personalise healthcare than by using genomics? *Dr. Kati Kristiansson* started the session with a presentation on using genomics to estimate genetic diseases and the development of non-communicable diseases (NCDs). Genetic risk brings added personalized value to the disease prevention regardless of lifestyle and identifies individuals who are at risk of earlier onset of disease, e.g. diabetes. With adding the genome factor, they can recognize patients with a higher risk and categorise them more precise and thereby start prevention early than with traditional risk factors.

The second presentation was led by *Colonel Henk van der Wal* and discussed the topic of value-based military healthcare. The aim of their research is to find out how value-based healthcare enables military healthcare to realise the best and most relevant outcome, that is important for the military patient. This of course with considering the circumstances such as military operations and acute care domain, and optimal use of resources. Military healthcare has been organised around the definition of good care, which says that care must be of a good level and quality. However, it appears that the patient is not involved and that the North Atlantic Treaty Organization (NATO) guidelines do not provide a sufficient answer to this issue either. Testing the model of Value-based Healthcare (VBHC) can provide more insight into the medically relevant outcome for the military patient.

When we talk about care, we should not forget the importance of informal healthcare, said *Ms. Eleonora Gheduzzi*. Life expectancy is increasing, and elders prefer to live at home instead of nursing homes. On the other hand, family care givers do not have the skills and competence to take care of them and the goal of this study is to find new effective solutions for care givers. The Place4Carers project is a community-based participatory research project aimed to cogenerate, develop and implement a new social and community service for family caregivers of elderly citizens in the remote rural area of Valle Camonica.

Mr. Andy Payne, Mr. Matthew Carr and Ms. Kasia Kaczmarek presented the results of establishing Sussex musculoskeletal (MSK) Partnership East and its focus on the triple aim model: Improved efficiency, improved health outcomes and improved patient experience. The Sussex MSK Partnership East is an innovative and effective service model delivering sustainability to a locality that, like the National Health Service (NHS), has traditionally struggled to deliver MSK services efficiently. The local health economy overall has a particularly difficult financial challenge and Sussex MSK Partnership East is one of the few services delivering savings in this environment. Through the introduction of changes such as the Clinical Referral and Assessment Service (CRAS), a Patient Director and Patient Care Advisors (PCAs), the service has significantly improved its performance and patient outcomes.

In China, the community-based health services (CHCs) face challenges of providing effective services to the increased numbers of people living with chronic disease, said *Dr. Guanyang Zou*. Family Integrated Service Centres (FISCs) have emerged in urban centres in response to the increasingly complex social needs of residents. Trust building with older people and families is challenging and this impacts on the ability of SWs to recruit appropriate older people for case management. Social workers can be an important link for integrated health & social care in China. Improving their professional recognition and certain social work skills is important.

Merita shehu talked about the accessible quality healthcare (AQH) project in Kosovo. In particular about an integrated care model in one Municipality that aims to improve the quality of care provided for patients over the age of 65yrs with Type 2 Diabetes, through better coordination of services provided by the health and social sectors. Based on the findings of the geriatric assessment, a joint individualised patient care plan is developed by a multi-disciplinary team comprising Family Medicine doctors, nurses and social workers. Integrated services, person-centred care and care-planning are all new concepts in the Kosovo health care system: "our health information system is not working properly at the moment, but we hope to fix it in time"

Take home messages:

- Different care models are moving away from the traditional healthcare system pathway by making care more personal, patient focused and by including patient participation.
- Genetic risk brings added personalized value to the disease prevention regardless of lifestyle and identifies individuals who are at risk of earlier onset of disease, e.g. diabetes. With adding the genome factor, they can recognize patients with a higher risk and categorise them more precise and thereby start prevention early than with traditional risk factors.
- Testing the model of Value-based Healthcare (VBHC) can provide more insight into the medically relevant outcome for the military patient.
- The Sussex MSK Partnership alliance has significantly improved its performance and patient outcomes through the introduction of changes such as the Clinical Referral and Assessment Service (CRAS), a Patient Director and Patient Care Advisors (PCAs). It took five years to really get the partnership to work, but now clinicians only get the people that are really in need for surgery.
- In China there is a problem of trust, older people misjudge social workers due to external factors such as marketing schemes that are common in the area's, therefore it is important to offer free consultations to older people in order to build that trust in the community.

II. Parallel Thinking: Personalisation & Interactive discussion on "Reinventing healthcare: patients as central partners"

Wednesday, 19th June 2019, 9:30 - 11:30

Moderator: *Prof. Walter Sermeus* (KU Leuven University, Belgium)

Speakers: *Dr. Carina Pittens* (Vrije Universiteit Amsterdam, Netherlands), *Dr. Pranav Somaiya* (Princess Alexandra Hospital NHS Trust, United Kingdom), *Dr. Paola Zaratin* (FISM, Italy), *Dr. Veronica Gomez* (CASAP, Spain), *Dr. Regis Blais* (University of Montreal, Canada), *Dr. Cristian Podoleanu* (University of medicine and pharmacy Tirgu Mures, România), *Ms. Kaisa immonen* (EPF, Belgium), *Mr. David Earnshaw* (MSD Europe, Belgium), *Mr. Lenard Koshwitz* (Allied for Start-ups, Belgium) & *Ms. Taina Matyranta* (Ministry of Social Affairs and Health, Finland)

Abstracts: On page 77 to 81 of the abstract book.

Summary

How can we support researchers to achieve meaningful patient involvement? One way to realise value-based health care is by involving patients in decision-making processes in health research and care practice, said *Dr. Carina Pittens*. In her research she found that most researchers were positive about involving patients, but that there is a need for pragmatic tools and methods to help them realize this. She underlined that involving insiders (scientists, policy makers, industry) and outsiders (care professionals, consumers, patients) is essential to cocreate knowledge and will form a new way of working. With this in mind she introduced the digital road map (online website) that provides relevant information and tools for realising patient involvement. Patients as central partners is also the slogan of the European project MULTI-ACT, who wishes to involve patients and create more impact of health research on people with brain diseases. It aims to do this by creating and implementing a new model to engage stakeholders in defining metrics for a given mission and agenda, said *Dr. Paola Zaratin*. MULTI-ACT states that excellence, validity and relevance are connected through engaging patients and society in the research continuum as key stakeholder, with a decision-making role in the Responsible Research Innovation process.

A different focus on patients was made by a presentation on the Next Generation Surgical Clinics (NEGSC), which is part of the 'NHS for the 22ndCentury' Initiative. Within surgery, Hernias, lumps and bumps (EBL) are common problems that have a significant impact on patients in their working age, said *Dr. Pranav Somaiya*. With a pilot study on the NEGSC he aims to improve the pathways for EBL and improve patient experience by reducing waiting times and deliver value for money. The result of this pilot study showed, that compliance was higher for those patients followed through phone calls than for those followed through classical appointments. NEGSC has been able to bring about a step change in patient care using (simple) telephone technology as a tool. Not all patients need face to face follow-up, in the next stage Skype/Google Glass virtual clinics will be looked at as a model of care.

This will help easing up the workload for doctors, which is also the case when it comes to identifying needs for Chronic Complex patients (CCP). *Dr. Veronica Gomez* talked about how the difficulty of identifying social needs with Chronic Complex Patients lead to unnecessary referrals. In order to achieve excellency in chronic complex patient centred care it is important that they are listened to. Their organisation managed to establish the role of complex demand nurse manager (GIDC) inside the Primary Care Team (PCT). Chronic diseases are linked to social and economic issues, and teamwork between nurses and social worker has helped us to identify social needs on time to prevent conditions worsening. In contrary to the hospital setting, home care has become increasingly important. There is a pressure to reduce hospital costs by discharging patients quicker and the complexity of home care services and clients with multiple chronic diseases as well as limited mobility and cognitive functioning have contributed to the growing vulnerability of home care clients to adverse events. To reduce the adverse events and to ameliorate the care environments *Dr. Regis Blais* presented a study on the Concise Incident Analysis Tool. Healthcare should be consistently planned and delivered by an integrated, interdisciplinary healthcare team to ensure care coordination and to prevent adverse events in home care. The use of cause analysis tools, such as the Concise Incident Analysis Tool to review home care incidents, can provide information to improve care.

The second part of the session formed a discussion around the topic of "Reinventing healthcare: patients as central partners". The session focussed on technological developments to self-care and the role of patients in the clinical process. *Ms. Kaisa immonen* from the 'European Patients Forum' (EPF) talked about the importance of involving patients in the decision making of improving healthcare, not only in therapy and services, but also in clinical studies and policy making on a national level. *Dr. Cristian Podoleanu* also stretched the importance the doctor's ability to make patient feel comfortable. In doing so they can build on the trust relation with patients, grow their confidence and reduce unnecessary testing of patients with a good diagnosis. *Mr. Lenard Koshwitz* from the 'Allied for Start-ups' talked about the importance of a start-up environment and how start-ups can improve healthcare by involving patients, healthcare professionals, different industries. Although for them there are some challenges to overcome within the healthcare industry. The tight regulations for controlling the sensitive market of healthcare from a big barrier in the development and implementation of new health start-ups. Concluding the session, *Ms. Taina Matyranta* from the 'Finnish Ministry of Social Affairs and Health' introduced their agenda which will focus on the economy of wellbeing, changing the paradigm from "what is the matter with you?" in "what matters to you?". It is their mission to put the wellbeing of every citizen in European Union at the centre of EU policy.

<u>Take home messages:</u>

- One way to realise value-based health care is by involving patients in the decision-making processes of health research and care practice. Involving insiders (scientists, policy makers, industry) and outsiders (care professionals, consumers, patients) is essential to cocreate knowledge and will form a new way of working.
- MULTI-ACT will increase the sustainability of multi-stakeholder research initiatives by ensuring continuous commitment and engagement of the stakeholders involved and better alignment of research results with the initiatives mission and agenda.
- NEGSC has been able to bring about a step change in patient care using (simple) telephone technology as a tool. Not all patients need face to face follow-up, in the next stage Skype/Google Glass virtual clinics will be looked at as a model of care.
- Teamwork between nurses and social worker has helped to identify social needs on time to prevent conditions of chronic complex patients worsening.
- Complexity of home care services and clients with multiple chronic diseases, limited mobility and cognitive functioning have contributed to the growing vulnerability of home care clients to adverse events. The Concise Incident Analysis Tool can review home care incidents and provide information to improve care in a home setting.

Integration

Take home messages on Integration

Over the past decade, many definitions, concepts and theories have emerged explaining and defining what integrated care is and what the main building blocks for the successful integration of services are. According to the WHO, integrated care is "The organization and management of health services so that people get the care they need, when they need it, in ways that are user friendly, achieve the desired results and provide value for money (WHO, 2008)." More information of the current understanding of integrated care models can be found here (WHO,2016). However, there is need for a discussion to uncover new models of partnerships and the establishment of new health eco-systems.

I. Parallel thinking: Integration

- Are health managers, managers with specific skills in health/public health, or public health specialists with specific skills in management? An overall definition is required.
- Top managers and middle managers have emphasized the need to have visibility of 'overall hospital performance' and to make this accessible to everyone including patients and clinicians.

II. "Integrated Care at a crossroads?"

- The failure of leadership will have a negative impact on integrated process. Political will is important to bring municipalities together and to create a single vision of what they would like to achieve.
- New financing schemes are important for effective integration, but this will not work without leadership.
- Competences of workforce play an important role. We should look into integrating professions so we can avoid double work and maybe even create new professions if needed.
- When you design services, it is important that the voice of patients is raised and that they are involved in the process, care needs are different for every person. The first step is presenting information in the right way so that patients and family members know what we are talking about.

III. Parallel Thinking: Integration & Interactive workshop: "Who cares for Ella? Critical elements of integrated health and social care."

- Sustainable integration of health and social care requires managers' collaboration beyond conventional boundaries, but a tendency to 'lead alone' still seems to steer the everyday work of managers and leaders. Resilience, space for experiential and relational learning and the use technologies can support collaborative works between managers.
- European health systems do often not meet the needs of patients with complex health and social needs, because they are "disease oriented" and organized around single medical specialties which fragments care. Fragmented care is associated with contradictory medical advice, over-prescribing, over-hospitalization and poor patient satisfaction.

I. Parallel thinking: Integration

Tuesday, 18th June 2019, 9:30 - 11:00

Moderator: *Dr. Antoni Peris* (CASAP, Spain)

Speakers: *Dr. Sanna Laulainen* (University of Eastern Finland, Finland), *Mr. Timo Sinervo* (THL, Finland), *Prof. Sandra C. Buttigieg* (University of Malta, Malta), *Dr. Laurent Chambaud* (EHESP, France), *Dr. Paola Roberta Boscolo Chio Bisto* (SDA Bocconi, Italy)

Abstracts: On page 89 to 93 of the abstract book.

Summary

The aging society still forms a problem for health and social care and new competences are required. *Dr. Sanna Laulainen* looked in her study at the presence of change-oriented organisational citizenship (OCB). She said that according to health and social care professionals and managers, employees have a significant role in planning and implementing changes and integrated services. There is a need to ''boost'' the employees' knowledge, skills and orientation, and novel ways to work and collaborate more actively in reforms and management processes. 'Successful changes/reforms and integration of health and social care requires change-oriented OCB, employees as active and critical management partners.

One model for delivering integrated care is the chronic care model (CCM). *Dr. Paola Roberta Boscolo* mentioned however the limited evidence on CCMs' effectiveness. There is a rapid evolution on CCMs, with new models replacing the old ones, often without any performance evaluation. She suggests it is crucial to promote a wider interest for the evaluation of well-established, as well as experimental CCMs to avoid replicating ineffective solutions and capitalise on past experiences. But which integrated model is the best to sustain changes in Health Systems?

Dr. Laurent Chambaud talked about the gap between academic research and Public Health Practice, including Health management. He says that we need to investigate the role of School of Public Health (SPH) in health care organization and management in Europe. We need to better define specific competencies for health care managers. Who are health managers? Managers with specific skills in (public) health or public health specialists with specific skills in management? Then he mentioned that the EHESP School of Public Health model could be of interest to developing countries, where health systems could benefit from enhanced operational managerial training and skills.

Information is crucial when we talk about management. *Prof. Sandra C. Buttigieg* talked about the visibility of information from bedside to board using hospital dashboards. With these dashboards, management at all levels gained greater visibility of information and improved informed decision making. Information is not only important to managers and front-line managers, but also to clinicians and to patients to create a better understanding. However, there is still the question to what extent dashboards can enhance the visibility of information at different management levels to assist them in achieving quality and performance improvement in an acute general hospital service delivery.

Mr. Timo Sinervo looked at the barriers and facilitators of care integration in Finland. The establishment of the joint health and social care authorities with a strong emphasis on integrated care seems to be successful. The integration at the administrative, organisational level or common facilities, however, does not guarantee integration at the floor level. Changing the long culture of professional and sectorial working practices requires changes in attitudes, common understanding of goals and service system and skill in team working.

Take home messages:

- Successful changes/reforms and integration of health and social care requires change-oriented organisational citizenship (OCB), employees as active and critical management partners.
- CMM may not trigger educational activities and self-management, but it may push for more inter-professional collaborations.
- GPs belonging to integrated group-practices are still unaware of the challenges and opportunities of having a common budget.
- Are Health managers, managers with specific skills in health/public health, or public health specialists with specific skills in management? An overall definition is required.
- Top managers and middle managers have emphasized the need to have visibility of 'overall hospital performance' and to make this accessible to everyone including patients and clinicians.
- Changing the long culture of professional and sectorial working practices requires changes in attitudes, common understanding of goals and service system and skill in team working. What's working in cities does not work in municipalities.
- Most people in the hospital do not really have information on costs. If everyone in the hospital would have a better idea of the cost, clinicians could act more responsibly.

II. "Integrated Care at a crossroads?"

Tuesday, 18th June 2019, 15:45 - 17:15

Moderator: *Dr. Antoni Peris* (CASAP, Spain)

Speakers: *Dr. Bert Vrijhoef* (Panaxea, Netherlands), *Ms. Inez Doelare* (MinDef, Netherlands), *Dr. Toni Dedeu* (IFIC, United Kingdom), *Ms. Alviina Alametsä* (Mielenterveyspooli, Finland)

Summary

The session focused on uncovering the integration of health and social care services with an interest in new models, partnerships and transversal discussions on the establishment of new health eco-systems. Integrated care in Finland is still facing a lot of challenges said *Ms. Alvina Alametsä*. She emphasized on the need for more school psychologists as they currently have one counsellor for every 500 to 900 students. This makes it difficult for students to get the care they need. Defining personalized and integrated care is complicated when it comes to Military Healthcare said *Ms. Inez Neutink-Doelare.* The military healthcare has a different organizational structure than public healthcare and therefore it is unclear how they can remain goal driven, but also listen to their soldiers on what they think is important.

Dr. *Bert Vrijhoef* mentioned that conceptually integrated care is not at a crossroad, whereas when it gets to its evaluation and implementation you may think it is. If integrated care is seen as a strategy, then there are different sets of problems, which requires also different types of solutions. The aim is to transition away from hospital care and provide long-term management of non-communicable diseases (NCDs). He elaborated more on this discussion in his LinkedIn article. When talking about integrated care, the main question is how to provide all services that a person needs within time. *Dr. Toni Dedeu* showed us with pictures, the journey of a patient through the health system. Barbara for example had twelve different touch points with the health system, there was very poor coordination between different care takers. He said that the aim of integration is to make care more effective and easier for the patient. For this reason, he mentions the 'Quadruple aim' goal in health and care systems: 1. Reducing health expenditure, 2. enhancing patient experience, 3. improving population health, but also 4. improving work-life balance of health care providers''. In addition, in his opinion, the building blocks of integrated care are 1. Creating an enabling political environment for health and social care integration, 2. Competences for health and social care (Workforce changing/shift), 3. Integration between health and social care: bridging the divide and building common values. Building social capital and collaborative capacity, 4. Supporting people's empowerment and engagement in health and care, 5. Financial incentives to stimulate integrated care, 6. Effective ICT systems.

Take home messages:

- Integration is about patients and their experience, how to provide all services that a person needs within time.
- Integrated care exists due to chaos within the healthcare system. People experience that nobody feels responsible, they are being moved around from physician to nurse to specialist.
- The failure of leadership will have a negative impact on integrated process. Political will is important to bring municipalities together and to create a single vision of what they would like to achieve.
- New financing scheme are important for effective integration, but this will not work without leadership.
- Competences of workforce play an important role. We should look into integrating professions so we can avoid double work and maybe even create new professions if needed.
- Integrated care is very contextual; one doesn't fit all. Different people have different expectations and attitudes towards the integration of care, and this very much depends on the amount of care you need in your life.
- Patients need information in the right way to speak up. When you design services, remember it's crucial to pay attention on patients' wills and let them involve in the process. Furthermore, to listen what the family members of that person would like to achieve is also important because their needs are different from patients.
- When you design services, it is important that the voice of patients is raised and that they are involved in the process, care needs are different for every person. The first step is presenting information in the right way so that patients and family members know what we are talking about.

III. Parallel Thinking: Integration & Interactive workshop: "Who cares for Ella? Critical elements of integrated health and social care."

Wednesday, 19th June 2019, 9:30 - 11:30

Moderator: *Dr. Axel Kaehne* (Edge Hill University, United Kingdom)

Speakers: *Dr. Charlotte Klinga* (Karolinska Institutet, Sweden), *MSc. Wouter van der Schors* (Erasmus University, Netherlands), *Mrs. Nour Alrabie* (TSM-Research, Université Toulouse Capitole, CNRS, France), *Ms. Iisa* Hokkanen (Etelä-Karjala Regional Hospital, Finland), *Mr. Simone Laratro* (Università Cattolica del Sacro Cuore, Italy), *Mrs. Kirsti Ylitalo-Katajisto* (City of Oulu, Finland), *Prof. Ronald Batenburg* (NIVEL, Netherlands), *Dr. Anneli Hujala* (University of Eastern Finland, Finland), *Prof. Mieke Rijken* (NIVEL, Netherlands; University of Eastern Finland, Finland)

Abstracts: On page 94 to 99 of the abstract book.

Summary

Collaboration between managers is a key prerequisite for the integration of health and social care services. However, it is often the case that managers constrain themselves within their own silos in order to defend their territory. *Dr. Charlotte Klinga* presented her findings on three case studies that were conducted in Sweden, Scotland and Finland on cross-boundary collaboration of health and social care managers (middle and front-line). She revealed that collaborative work contributes to the provision of sustainable integration of services and that it provides a broader competence, continuous learning and joint responsibilities for services. However, collaborative work is challenging and it depends too much on the willingness and personality of each manager. the use of technology could support the development of collaborations into forms of digital inter-organizational relations, but in order to achieve the best effect it should be embedded in the system. *MSc. Wouter van der Schors* provided a systematic overview of collaborations in all the important healthcare sectors, drawing on the perspective of healthcare executives. He revealed that in most cases (63%) collaborations are horizontal and that only 14% are vertical, looking at collaborations from different -upstream or downstream-healthcare domains. Other collaboration (23%) had both horizontal and vertical elements. Furthermore, he said that the most frequent elements of collaboration are the exchange of information and knowledge, coordination of general care and coordination of complex care to increase efficiency or increase market position. However, motives, purposes and involved stakeholders vary substantially across healthcare sectors.

Mrs. Nour Alrabie presented a study addressing the gap of rural entrepreneurship and healthcare entrepreneurship. What is the collaborative nature of entrepreneurial processes in this context? In her research she collected data from three Primary Care Centers (PCC) in rural areas in France and Germany where self-employed practitioners continue to be self-employed while sharing resources and health objectives. Results showed that regional embeddedness (leading to trust, social networks, etc.) and peer co-working are the main drivers of collective social entrepreneurship in rural healthcare. When we talk about the effectiveness of integrated care, what and how do we measure it? *Ms. Iisa Hokkanen* presented a study exploring how the concept of effectiveness of integrated care for patients with multi-morbidity is used in scientific literature. Five overlapping discourses on the effectiveness of integrated care were identified:

(i) Effectiveness as a reduction of costs caused by patients with multimorbidity (demonstrate the necessity of integration to control costs in social and health care).
(ii) Integration as an 'ideal' and the only way to organise social and health care services effectively.
(iii) Effectiveness through evidence-based scientific information about patients benefits. Information owned and used only by care professionals, who thus had the ultimate power to define what is effective and what is not.
(iv) Effectiveness connected to how the individual goals of patients were achieved, the importance to involve patients in the decision-making.
(v) Effectiveness dependent on the care professionals' engagement in integrated care.

The use of Supply Chain Integration (SCI) strategies is rapidly expanding between healthcare organisations and their suppliers with the aim to increase productivity and quality. *Mr. Simone Laratro* showed that the most common SCI strategies involve the adoption of 'just in time approaches', collaborative forecasting and consignment stock in areas of operating rooms, medical devices and prostheses. The main organisational benefits that can be reached with SCI are delivery, dependability, speed and traceability, and the main economic benefits are related to the reduction of holding cost and warehouse space. Within SCI it seems that process standardization, strategic relevance of the logistical function plays an important role for the successful adoption of SCI strategies, while software integration can form a barrier.

Mrs. Kirsti Ylitalo-Katajisto presented a research aimed at describing the preliminary customer profiles that might be established in the design phase of a social and health care centre, and among frequent attenders. Profiling frequent attenders from the perspective of joint service planning and knowledge-based management in social and health care services has not been previously studied. Customer profiles shared certain characteristics, but also clearly differed in others, indicating a need for tailored and integrated services at home and at the various units providing social and health care services.

In the last part of the session, participants were engaged in workshop providing insights on integrated health and social care models in Finland and the Netherlands as well as alternative models of integrated care that could fit the need of people with multimorbidity and complex health and social needs. The case of Ella was discussed; an old woman with complex health and social care needs.

<u>Take home messages:</u>

- Sustainable integration of health and social care requires managers' collaboration beyond conventional boundaries, but a tendency to 'lead alone' still seems to steer the everyday work of managers and leaders. Resilience, space for experiential and relational learning and the use technologies can support collaborative works between managers.
- Collaborations between healthcare providers take place on a large scale and are mainly driven by motives related to healthcare provision (followed by efficiency, market or to bargaining position). Insights into mechanisms underlying these collaborations should serve healthcare providers, competition authorities and government institutions, both nationally and internationally, in reaping the efficiency gains from collaboration whilst safeguarding competition.
- Often European health systems do not meet the needs of patients with complex health and social needs because they are "disease oriented" and organized around single medical specialties which fragments care. Fragmented care is associated with contradictory medical advice, over-prescribing, over-hospitalization and poor patient satisfaction.
- Policy-makers can improve care for people with complex health and social care needs by fostering integrated and patient- centred care." This requires a clear strategic vision, such as:
    - Aligning policy, regulatory and financial environments so that they are supportive of integrated care.
    - Developing multidisciplinary guidelines;
    - Developing new professional roles (e.g. care coordinator) or functions and assigning explicit responsibility for coordination and links between sectors;
    - Implementing individualized care planning (supported by integrated electronic health records);
    - Putting in place electronic decision support systems that enable patient-centred care and integrating them with information systems and eHealth applications;
    - Adapting privacy and data protection legislation to allow sharing of patient information;
    - Investing in training and tools that help care professionals adopt patient-centred approaches;
    - Developing the knowledge and skills of patients and their informal carers and encouraging active participation in decision-making and self-management;
    - Promoting collaboration between health care, social care, patient organizations and carers;
    - Including patient-relevant outcomes as performance indicators, as well as clinical outcomes, so that providing integrated care becomes part of quality measurement;
    - Putting in place payment mechanisms to incentivize patient-centred integrated care.

Value-Based Healthcare

Take home messages on Value-Based Healthcare

With the book Redefining Health Care, *Micheal Porter* introduced the concept of Value Based Healthcare. Value-based healthcare is a relatively new area still and the definition of "value" is various in different countries and individuals. Through the last ten years, Value-based healthcare has become a hot topic and within this chapter we will look at new developments that focus on patient value.

I. "Applying value-based social and healthcare in practice"

- Maximising value for patients is at the core of value-based healthcare and that in order to achieve the best outcomes at the lowest cost (according to the value-based approach), the healthcare system should move away from a supply-driven health care system that is organised around what physicians do towards a person-centred system organised around what patients need.

- Compared to a health economics approach, the value-based care: (i) utilizes the cost-outcomes-information proactively for every single patient; (ii) focuses on patient-relevant outcomes; (iii) uses outcomes/cost-information for managerial decisions and development; (iv) and develops value-based reimbursement methods.

II. Parallel Thinking: Value-based Healthcare

- As value-based healthcare is a relatively new area, it is necessary to find and establish its different characteristics so a universal agreement can be adopted in healthcare.

- Value-based health shall play an important role in healthcare management in the future.

III. Parallel Thinking: Value Based Healthcare & Interactive discussion on "Value-Based Innovation in Health Care"

- Although value-based healthcare has the purpose of making healthcare management more efficient, affordable and meaningful, there is yet a lot to be done before it can be fully implemented. There are very few examples of value-based healthcare, and more research into what 'value' means to patients and professionals in terms of 'value-based healthcare', what methods can be invented, and how they can be implemented are areas which still require extensive researched.

I. "Applying Value-based Social and Healthcare in practice"

Tuesday, 18th June 2019, 14:00 - 15:15

Speakers: *Prof. Paul Lillrank* (Aalto University School of Science, Finland), *Assoc. Prof. Paulus Torkki* (University of Helsinki, Finland), *Ms. Riikka-Leena Leskelä* (Nordic Healthcare Group (NHG), Finland)

Summary

The first speakers outlined the current megatrends within health system science and the theoretical basis for a value-based healthcare and social service system. They clarified that maximising value for patients is at the core of value-based healthcare and that in order to achieve the best outcomes at the lowest cost (according to the value-based approach), the healthcare system should move away from a supply-driven health care system that is organised around what physicians do towards a person-centred system organised around what patients need. Speakers also highlighted how implementing value-based care in regional level requires new ways to segment the population that is more focused on state (health, functionality) and risks, rather than service use or specialties.

After a discussion on the main differences between value-based care, health economics and traditional operations management approaches, the speakers provided some practical examples of applying a value-based management approach in social and healthcare services. The first example given was a Health Center/Unit-level approach, which combined public, private and third sector by forming a multi-provider alliance. In this alliance characterizes itself by the following:

(i) Patients are segmented based on age-group (children, work-age, elderly).
(ii) Profits are shared with payer, provider and personnel.
(iii) Providers have a bonus based on outcomes (wellbeing of children based on survey; balance of care in chronic diseases; functionality of home care patients; use of special care services and long-term care; patient experience).
(iv) Outcome measures are published regularly.

The second example given by the speakers, was a social rehabilitation service focussed on multi-morbidity where an only fee for service model was replaced with a Value-based procurement of social rehabilitation and rehabilitative work experience (RWE). This approach is characterized by segmentation of patients based on status/expected outcomes, incentives based on bonus per desired outcomes and continuous data on the customers' status.

Other examples made were on the application of value-based approaches on processes (cancer care, trauma care), revealing the importance of changing the focus from activities to care pathways and patient-relevant outcomes. The speakers highlighted that in order to plan a value-based management system and make it operational, a strategic approach is required combining top-down and bottom-up approaches. Following up on this, a roadmap to build a value-based management system was discussed, which involves:

1. Choosing one significant (volume / outcome development needs) patient group.
2. Defining goals for improving patient-relevant outcomes.
3. Starting measuring outcomes based on international standards to enable comparison.
4. Defining development cycles (Plan-Do-Check-Act).
5. Planning management methods to make value-based management sustainable- Incentives, Information, Dialogue.

After all this information participants were split up in small groups of +/- 5 people to conduct an exercise. They received data on segments in the general population and patients of specific regions. Then they were asked to define their goals for the effectiveness (outcomes) of the primary care services and build a measurement framework based on the goals identified (how they would measure the goals). How would you act if you are in the shoes of a commissioner on primary care services? This exercise was well received and feedback on was given by participants. The discussion showed how important it is to identify segments in the population and define specific, quantifiable measures (derived from the deployment of strategic level objectives) and evidence-based targets to monitor change.

Take home messages:

- Maximising value for patients is at the core of value-based healthcare and that in order to achieve the best outcomes at the lowest cost (according to the value-based approach), the healthcare system should move away from a supply-driven health care system that is organised around what physicians do towards a person-centred system organised around what patients need.
- Compared to a health economics approach, the value-based care: (i) utilizes the cost-outcomes-information proactively for every single patient; (ii) focuses on patient-relevant outcomes; (iii) uses outcomes/cost-information for managerial decisions and development; (iv) and develops value-based reimbursement methods.
- The value-based approach needs to be combined with a public health approach, meaning: population-level segmentation, multi-morbidity patients, people with risk.
- A strategic approach (combining top-down and bottom-up approaches) is required to develop and implement a value-based management system. This should include:
    - Value-based program -" Think big"-: (i) Defining the meaning of value-based, vision and goals; (ii) segmentation of patients based of needs/expected outcomes; (iii) management methods & incentives (information, resource, norms/rules, dialogue); (iv) planning development resources and activities for implementation.
    - Pilots to learn value-based in practice -"Start small and Act fast"-: (i) identify possible changes in clinical decisions and care; (ii) understand how to collect and utilize value-based information for developing patient care pathways and management; (iii) learning cultural change from "resource-based" to value-based; (iv) recognize practical development needs (e.g. data / information systems).

II. Parallel Thinking: Value-based Healthcare

Tuesday, 18th June 2019, 15:45 - 17:15

Moderator: *Prof. Dr. Dr. Wilfried von Eiff* (HHL Leipzig Graduate School of Management, Germany)

Speakers: *Mrs. Tuuli Pajunen* (Prodacapo, Finland), *Dr. Tjerk Jan Schuitmaker* (Vrije Universiteit, Netherlands), *Prof. Shangcheng Zhou* (Guangzhou University of Chinese Medicine, China), *MSc. Dennis van Veghel* (NHR, Netherlands), *Ms. Petra Kokko* (Tampere University, Finland)

Summary

This session was a great way of discussing and identifying the numerous characteristics of value-based healthcare and what it means to the speakers presenting their research. Value-based healthcare is a relatively new area that is under a lot of research, and one that is still changing meaning and being defined and characterised in different ways every day. Defining how one gets 'value' from the healthcare services can be difficult to assess, and often this definition changes from person to person, and country to country.

Interestingly, during the session each presenter talked about their research on value-based healthcare and yet they all offered a new fundamental characteristic to the term value-based healthcare. Some of these characteristics included patient-related outcome, costs, burden of disease, patient engagement, health technology assessment, prevention instead of treatment, compliance and reliable reimbursement systems. Patient engagement, in particular, was a recurring topic in the majority of the presentations, as healthcare management and services can be greatly improved if the stakeholders who are at the receiving end of the services can not only be involved, but also have an influence on the decision-making process. Moreover, this will not only improve services and puts focus on the needs of patients, but also increase the 'value' for the patient as they feel they are being listened to and their wishes are being granted, hence creating greater satisfaction. Of course, this session was not a lecture, but a discussion, hence problems of this characteristic was also highlighted by the speakers and the audience. For example, implementation of meaning patient engagement can be difficult and there still lacks empirical evidence for whether patient engagement truly adds value and it may take years before we see this value.

With a tremendous amount of discussion and research given on the different characteristics that define value-based healthcare, it was concluded that value-based healthcare is one of the most important aspects for future healthcare management, and one that still needs further defining and development.

Take home messages:

- As value-based healthcare is a relatively new area, it is necessary to find and establish its different characteristics so a universal agreement can be adopted in healthcare.
- Value-based healthcare was suggested to have the following characteristics: patient-related outcome, costs, burden of disease, patient engagement, health technology assessment, prevention instead of treatment, compliance and reliable reimbursement systems.
- Defining 'value' is very difficult and changes depending on the circumstance and people. We must remember that not everything that counts can be counted, and not everything that can be counted, actually counts.
- Value-based health shall play an important role in healthcare management in the future.

III. Parallel Thinking: Value-based Healthcare & Interactive discussion on "Value-Based Innovation in Health Care"

Wednesday, 19th June 2019, 9:30 - 11:30

Moderator: *Prof. Dr. Dr. Wilfried von Eiff* (HHL Leipzig Graduate School of Management, Germany)

Speakers: *MSc. Kati Koskinen* (HUS Helsinki University Hospital, Finland), *Dr. Rhodri Saunders* (Coreva Scientific, Germany), *Dr. Oskar Roemeling* (University of Groningen, Netherlands), *MSc. Pirkko Heinonen* (Joint Authority of Päijät-Häme Social- and Health Care, Finland), *Dr. Sehad Draganovic* (University of Klagenfurt, Austria), *Mr. Miika Kuusisto* (Lahti University of Applied Sciences, Finland), Prof. Sandra C. Buttigieg (University of Malta, Malta)

Summary

It became clear from the beginning of the session, that value-based healthcare is a relatively young area of discussion. There is still a need to reach a consensus on its meaning in healthcare, and what criteria we can include in this. Value-based healthcare has the broad aim of delivering healthcare that is affordable, longitudinal, improves processes, empowers patients and professionals and adds something that traditional healthcare methods do not. The presenters gave a variety of different examples of such value-based healthcare innovations they had encountered, one such example being the Granny simulator, an innovative method of recruiting nurses into a care home. In this method, a simulation of an old people's home is simulated, whereby the applicants must pretend they are at work, and demonstrate their way of working in a care home, depending on the different scenarios they are given.

There was a panel discussion and question round with an opportunity for the audience to ask the panel their questions. The panel discussion proved to be highly engaging, as the panel members talked about what value means to them, the importance of innovation in value-based healthcare, the need to ensure that such innovations target the patients, not profit for the producer, and that it is important to realise that acceptance of new processes takes time and convincing.

Take home messages:

- It is important to measure and set out criteria for what we mean by 'value' in value-based healthcare, and some of these include affordability, longitudinal, unbiased access, access to systems, direct, indirect and opportunity costs, enhancement to populations.
- Although value-based healthcare has the purpose of making healthcare management more efficient, affordable and meaningful, there is yet a lot to be done before it can be fully implemented. There are very few examples of value-based healthcare, and more research into what 'value' means to patients and professionals in terms of 'value-based healthcare', what methods can be invented, and how they can be implemented are areas which still require extensive researched.
- Innovations in the area of value-based healthcare are required, which specifically target patients and users, and not just profit, are hence required. This being said, we must also keep in mind that new things take time to be implemented and accepted, as they involve changes to the system, new processes to be learnt and initial higher costs.