EHMA 2021

EHMA ANNUAL CONFERENCE
15-17 SEPTEMBER 2021

digital through the lens of
LISBON, PORTUGAL

HEALTH MANAGEMENT: MANAGING THE **PRESENT** AND SHAPING THE **FUTURE**
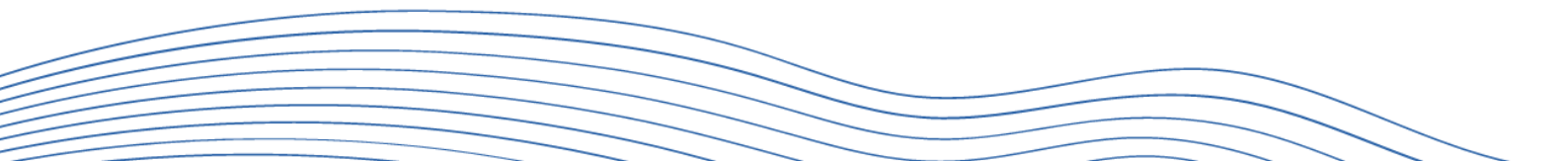
EHMA PIE BOOK

Provocative, Innovative and Encouraging ideas on health management

#EHMA2021

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What is EHMA PIE?

EHMA PIE is a new initiative launched by EHMA in the framework of the EHMA 2021 Annual Conference aimed at debating complex health management topics on 15-17 September 2021.

PIE stands for **Provocative, Innovative and Encouraging** and it is designed to give space to high-level discussions and to stimulate the connections across the entire health management ecosystem.

The EHMA Annual Conference has always been a place to connect health managers, researchers, academics, practitioners, and policymakers and, more than ever, this new initiative is essential to foster connections and support health systems.

All the proposals have been submitted under the overall Conference theme, **Health Management: managing the present and shaping the future**, and within one of the six sub-themes:

- Governance and leadership
- Person-centeredness and care integration
- Managing the digital transformation
- Improving healthcare access and outcomes
- Environmental sustainability of health services
- Health workforce

All these Provocative, Innovative and Encouraging ideas will be presented during the EHMA 2021 Annual Conference on 15-17 September 2021.
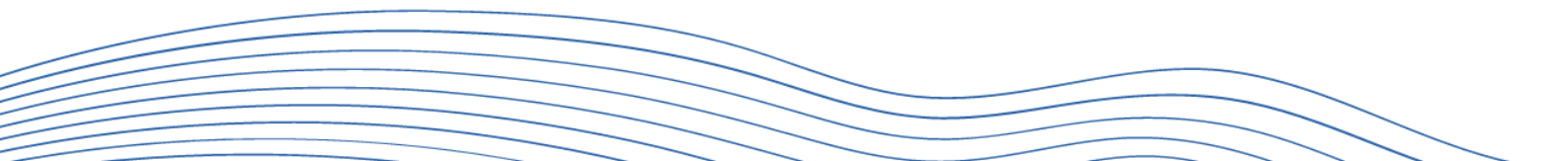
Pandemic Preparedness: What position do the methods in policy surveillance and legal epidemiology have in the legislation provision for future public health pandemics?

Author: **Ms Sharmi Haque**, *Bachelor Medicine & Master Medicine Student, Master Governance and Leadership in European Public Health Student, Bachelor (Hons) Clinical Sciences, Faculty of Health, Medicine and Life Sciences, University of Maastricht*

The COVID-19 pandemic has presented with numerous challenges on a worldwide scale and the European Union (EU) and its Member State(s) (MS) are no exception. Governance in public health denotes the norms, values and regulations and has been central in the immediate responses to the COVID-19 crisis amongst the MS. It lays the foundations of both authority and practices in pandemic preparedness (PP). PP outlines the plans to coordinate the operational strategies required to tackle disease threats to the population. The role of sound governance is imperative as it can facilitate the provision of well-informed decisions and can prevent the failure of respecting human rights.

The WHO International Health Regulations (20050 (IHR) is instrumental in assembling the worldwide plans to respond to health emergencies and underpins the principles to steer national pandemic preparedness. EU Decision 1082/13 is a significant law instrument for cross- border threats to health and is in accordance of IHR articles (6), (12) and (26). In relation to the IHR and Decision 1082/12, MS in the EU are required to develop their own national plans for pandemic preparedness as signatory PP states. Good governance and legal frameworks are advocated by both WHO and EU to create pp plans. In response to the COVID-19 pandemic, the EU response has been perceived to be inconsistent amongst the MS particularly the absence of solidarity.

Although the EU does not possess the sole exclusive legislative authority to health, the EU does have the soft law Treaty based competencies to motivate a cohesive response to the COVID-19 pandemic. Public health legal mapping can be defined as the determination of laws that exist in public health, collation of information to analyse what the legislation denotes and evaluate the effect of legislation on public health outcomes. It provides the basis to draw comparisons and parallels in the pandemic legislation amongst EU MS. Public Health policy surveillance is the systematic method of following the impact of law over time. Pandemic legislation in the MS paves the path for public health compliance and MS are stimulated to provide legal framework to prepare for future pandemics. Given the autonomy of the EU MS, such sovereignty permits MS to orientate the legislation to cater to its own legal system. Sovereignty in each MS allows the provision of cultural and politically appropriate governance.

However, there is a risk of inconsistent coherence within both EU MS and the international response system. The COVID-19 pandemic has illustrated that there has been a wide range of responses to the crisis in the EU. Understanding the existing COVID-19 responses from the MS and EU governance can provide useful insight into how PP should be implemented currently and what more must be done in the future. It is unclear what each individual national pandemic governance exists in the MS as it has not been mapped. Legal analysis and empirical evaluation of the pandemic legislation has been possible, but more research needs to be conducted to reveal the effectiveness of such legislation and measures. Quantitative and qualitative analysis will need to execute to identify and evaluate which laws, policies and measures were successful in tackling the COVID-19 pandemic. Through the identification of both successful and ineffective pandemic laws, policies and strategies, PP can be refined to approach future pandemics with more confidence.

The key objective of pandemic governance is to protect public health and such governance must characterise lawful and ethical consideration to ensure public compliance to maintain both trust and support.
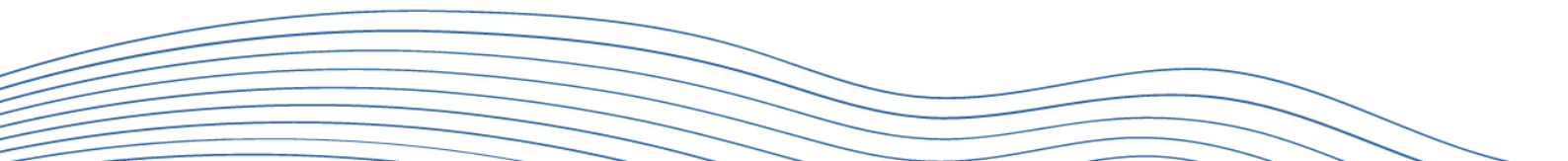
Moving beyond RCTs: Tapping the potential of Real–World Data for advancing clinical research and improving post–treatment in breast cancer

Author: **Dr Ioannis Sarafis**, *Postdoctoral Researcher, Aristotle University of Thessaloniki*

Randomised Controlled Trials (RCTs) are the golden standard when it comes to studying the underlying causal disease mechanisms and assessing the effectiveness of therapies, but there are certain limitations. Complex Chronic Conditions (CCCs) such as cancer, with several associated comorbidities and disabilities, induce a large number of factors with multiple levels per factor (e.g., drug type and dosage).

Performing RCTs leads to a combinatorial explosion, making infeasible to study all parameter and level combinations, and also researchers cannot control the progression of comorbid conditions, or the behaviour and compliance of participating patients.

Additionally, planning and execution of long and large-scale RCTs is impractical and as a result only a small sample of the patient population and a subset of the relevant variables are examined. This leaves a gap between RCTs and clinical practice for managing CCCs. In the era of Internet of Things, Big Data and Machine Learning it seems that clinical research can go beyond Randomised Control Trials.

Although Real-World interventions may differ from the idealised RCT interventions, monitoring patients in their Real-Life conditions closes the gap.

REBECCA, REsearch on BrEast Cancer induced chronic conditions supported by Causal Analysis of multi-source data, is a new project funded under the European Union's Horizon 2020 research and innovation programme (http://rebeccaproject.eu/). REBECCA aims to tap into the potential of Real-World Data to support clinical research and to improve existing clinical workflows by combining clinical data with data describing patients' real-life behaviour including their physical activity, eating habits, sleep and also information related to their online interaction.

These new forms of Real-World Data will become available thanks to sensor and log data collected via mobile and wearable devices and analysed by the REBECCA 360° platform. REBECCA 360° offers a combination of minimally obtrusive, non-stigmatising mobile applications to breast cancer survivors as a means of supporting their everyday life and enhancing their interaction with health experts. The same system will collect details of patients' functional and emotional status during their participation in clinical research campaigns.

Innovative Causal Analysis models will process the data collected by REBECCA 360° with focus on the complex array of chronic comorbidities developed during breast cancer recovery. The new forms of Real-World Data in combination with novel methods for Causal Analysis aims to overcome many of the limitations of traditional RCTs as well to close the gap between clinical research and patient management.
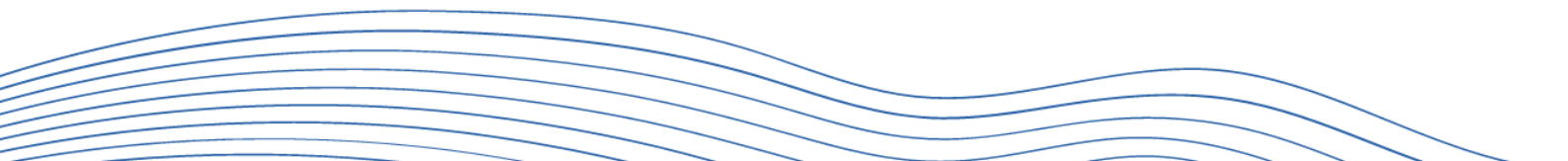
Linking Blockchain and Environmental Sustainability in Healthcare Management

Author: **Dr Rui Dang**, *Senior Lecturer in Health Economics at Westminster International University in Tashkent and Visiting Professor in Demographic Economics at Gdansk University of Technology*

Blockchain technology is one of many emerging technologies that has the potential to help solve some of the sustainability questions that we face today. The blockchain applications for tackling challenges in health management, health services and environmental sustainability revolve around but not limited to: supply chain monitoring and tracking, safe and effective medical data storage and transmission, innovative healthcare financial instruments, enabling decentralized systems of information sharing among healthcare providers and patients, and common-pool resources.

Applications of blockchain technology could be useful when monitoring actors' compliance to and progress with Sustainable Development Goals (SDGs) implementation. However, adopting the technology on a larger scale for healthcare systems will require overcoming current and future challenges in establishing various mechanisms that enhance its understanding amongst policymakers, scientists and blockchain solution developers, beyond developing blockchain technology. Blockchains technologies are equipped with enhanced record-keeping, transparency, value transferring, tokenized ecosystems, and cost reduction.

Therefore, blockchain technologies shows the potential to add values in healthcare management and services such as electronic Health Record, person-centered care, continuity of care, planning of primary and community care and so on. In addition, blockchain technologies also help tackling environmental challenges by addressing issues like climate change, energy saving, biodiversity conservation and etc. For a technology in its rudimentary stages of development, blockchain is being implemented by businesses, startups, and health care organizations collaboratively to address various social, health and environmental issues.

Potential gains from innovative policy interventions, addressing legal and regulatory frameworks, and knowledge sharing between policymakers, scientist and blockchain practitioners present opportunities to address issues such as environmental sustainability in healthcare management and health services. Blockchain technology may have great potential to boost continuity of the environmental sustainability of health services and serve as a valuable support for the already overwhelmed healthcare sector frontline staff, and particularly for the nurses.

The innovative blockchain solutions may positively impacts the delivery of patient-centered and personalized healthcare, through enhancing the interaction between the patients and the healthcare provider, ensuring sharing of accurate, complete, and trustworthy health data. Blockchain solutions may help with measuring the frontline health worker's workloads precisely with a quantifiable rebalancing of tasks from administrative support towards care delivery. For example, in consideration of the pertinent role that nurses play in primary and community care, it is crucial to ensure that frontline nurses can independently deliver high quality and safe care by developing advanced capabilities in managing the chain of care.

Despite of the above-mentioned foresights of the potential useful applications of blockchain technologies in the environmental sustainability in healthcare services, immaturity of the technology still poses challenges for large scale applications in healthcare systems to achieve environmental sustainability and SDGs goals. Currently, a shortage of professionals who are familiar with both blockchain technology and health issues may have prevented an adequate understanding of the technology's potential for environmental sustainability in healthcare services among relevant stakeholders.

Therefore, it is important to recognize the opportunities the blockchain technologies may create for the prospects in more equitable, efficient and environmental-friendly healthcare services, and overcome the challenges may emerge.
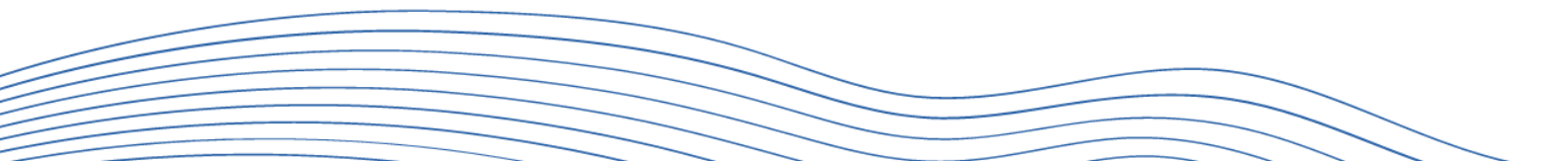
The European Collaborative Action on Medication Errors and Traceability Patient safety project

Author: **Ms Laura Cigolot**, *Head of Secretariat, European Alliance for Access to Safe Medicines (EAASM)*

The European Collaborative Action on Medication Errors and Traceability www.ecamet.eu "All medication errors are potentially preventable. They can be reduced or avoided by improving systems and practices in medication, including purchasing, prescribing, preparation, dispensing, administration and monitoring" World Health Organisation (WHO) 2017 World Health Organisation. Patient safety.

The third WHO Global Patient Safety Challenge: Medication Without Harm. [Online] 2017 Medication errors are a common cause of harm to patients in acute care settings and can include prescribing, preparation, dispensing and administration mistakes which can result in morbidity, mortality and poor quality of life for the patient as well as a lack of efficacy of medication, suboptimal patient adherence and poor patient experience. They also effect HC personnel – the so called "second victim".

ECAMET Project objectives:

• To reduce medication errors and promote, at European and national levels, the implementation of comprehensive electronic traceability systems in acute care settings, thus enhancing patient safety and quality of healthcare.

• To create awareness of the importance of medication patient safety in the hospital environment

• To call on European institutions and Member States' authorities via a White Paper to promote regulations and guidelines on medication traceability to prevent medication errors.

We believe that this topic fulfils the criteria of PIE - Provocative, Innovative and Encouraging and will greatly help shape the future of health management to the benefit of patients and HC providers alike. Questions that participants could ask would be around what measures are needed to increase digitalisation in the hospital setting.
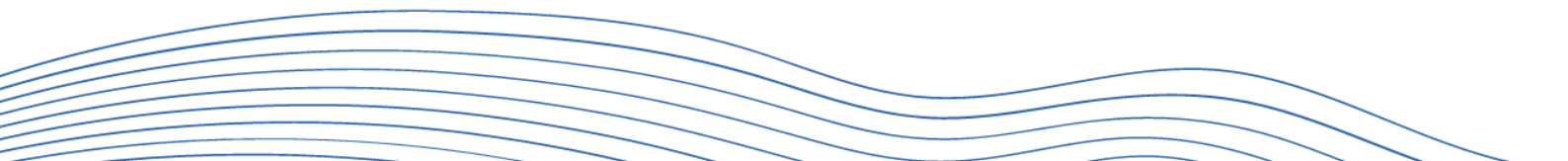
Transition of Care Consultation

Author: Ms. Cláudia Teresa Nelas Dias De Almeida, *Student of specialization in hospital administration, National School of Public Health, Nova University of Lisbon*

We are often faced with patients who come to the health services with a picture of total autonomy, changing, due to pathology, to a situation of total/partial dependence, which can be a temporary or permanent condition, causing a change in their lives, but also in the lives of their relatives/carers.

These patients often spend long periods of hospitalization, from the acute phase of the illness to hospitalization with a focus on rehabilitation. But after the last level of care to which they are subjected, it is necessary to prepare the discharge, it is necessary to look at the subsequent moment when the patient must leave the doors of 24-hour professional monitoring and return to their environment, to their relatives.

In this way, the existence of a multidisciplinary consultation (with the structure depending on the type of pathology in question and consequently on the needs of the user/caregiver) that would allow the identification of the housing conditions and the consequent adaptation needs, teach and prepare the caregivers for the tasks inherent to their family member, empower and support the caregiver and user in the process of transition and adaptation to the home, in order to obtain a controlled transition, the occurrence of adverse events such as falls or the psychological instability of these that often make them have to return to the health units.

Thus, we would have benefits at the level of quality of life, but also of an efficient management of resources, avoiding frequent returns to the emergency services, and even hospital readmissions, because a situation of dependence may cause significant changes both at the level of physical conditions and in the family structure and psychological condition of patients, relatives and carers, which it is necessary to take into account and prevent, in order to avoid hospital readmissions and even degradation of the condition obtained through rehabilitation and with it loss of value.
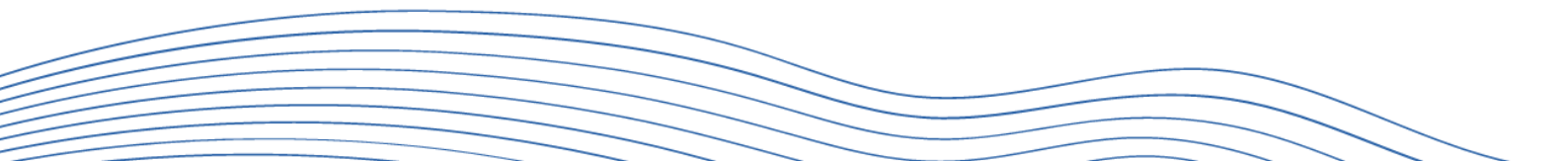
Patient Journey maps – useful tool or gimmick?

Author: **Dr Axel Kaehne**, *Reader Health Services Research, Medical School, Edge Hill University*

There has recently been a proliferation of patient journey tools (PJT) in health services research and management practice. PJTs are often seen as useful in quality improvement processes in health care, where technological or other innovations require radical re-service design. They are also thought to help identify friction points for patients and service users when creating integrated service structures. What is less clear is how useful they really are and what their exact purpose is. PJTs certainly have their proponents and detractors.

This EHMA PIE will discuss with the audience the pros and cons of PJTs. PJTs claim to provide insights for service managers and staff into the patient experience. In turn, patient experience is seen as a pillar of person-centred care and strongly associated with designing services responsive to user and patient needs.

But what is the purpose and added value of PJTs? And how can we investigate their utility for health management? The literature around PJT notes that there are two broad areas in which PJTs can make a difference.

First, they may play a heuristic role by identifying gaps in services which present barriers to access or smooth transition between services for patients and users. Second, they may represent a hermeneutic tool, increasing staff's understanding and empathy about the patient perspective.

But what is the added value of PJTs? In the health management literature PJTs compete with user personas which allow health service managers to create stratified user needs and coordinate services around those needs. PJTs appear to lack the stratification function of personas which is key to building responsive services. That may be a critical weakness of PJTs vis-à-vis user personas.

On the other hand, simple PJTs may be useful when implementing technological innovations. The recent pandemic brought about an enormous shift from face to face to remote services in primary care, where consultations are now mainly conducted online. PJTs may be sufficiently simple to help chart this change in illustrating to staff how patients navigate services in a COVID secure health and social care context. So, how shall we assess PJTs and how shall we investigate their utility?

Axel Kaehne will argue in favour of PJTs whilst Anneli Hujala and Mieke Rijken will take up the case against them. Join us for an exciting debate!
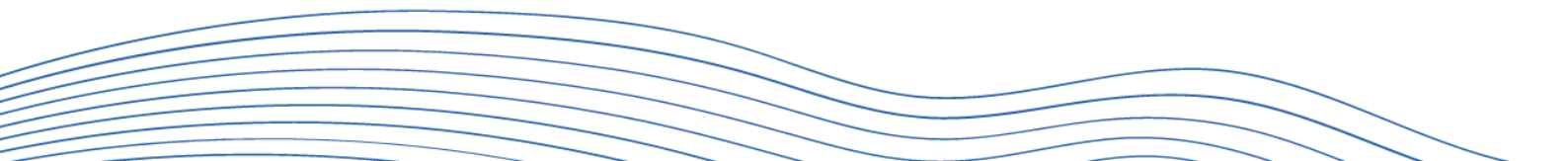
Impact of healthcare funding on patient outcomes

Author: **Dr João André Carracha Frutuoso**, *Hospital Vila Franca de Xira, Clinical practice (M.D.) and Union Delegate, Natura Clínica Médica Partner, and Quality Control Manager*

Introduction
Investment in healthcare is essential to promote economic and social development. However, in a world with scarce resources (funding, doctors, equipment, …) it is necessary to identify and analyse trade offs between costs and benefits in order to optimise the choice of funding and healthcare value.

Objectives
This work aims to assess mechanisms of quantification for healthcare value across different countries, and therefore to quantify choices for funding allocation as part of the annual budgeting process.

Methodology
To analyse the trade offs between costs and value of healthcare, we have chosen the following indicators as proxies:
Costs: healthcare expenditure as a share of GDP as it allows a direct comparison of countries that present very different levels of economic development, and healthcare expenditure in absolute terms;
Value: Avoidable mortality, both preventable and treatable, as it allows to evaluate the effectiveness of healthcare systems in reducing mortality before the age of 75, for reasons that could have been prevented. Hence, we have analysed the relationship between healthcare expenditure as a share of GDP and avoidable mortality, using the latest data published in the OECD health report (2019) for the following countries: Australia, Austria Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, South Africa, Sweden, Switzerland, Turkey, United States.
We have determined correlation (spearman) and regression (linear) in order to quantify the impact of healthcare funding in the mortality of preventable and treatable illnesses.

Results
According to Spearman correlation, the percentage of healthcare funding is proportionally inverse to treatable deaths and preventable deaths per 100,000 inhabitants (respectively, p=0.004 and 0.002).
Further linear regression analysis allows to estimate that for preventable deaths (R^2=0.265) for each 1% increased investment it is possible to avoid 6.9 deaths per 100,000 inhabitants (sigma 0.002) and for treatable deaths (R^2=0.267) it is possible to avoid 4.7 deaths per 100,000 inhabitants (sigma 0.001).
The regression models show the expected mortality for each level of healthcare investment and compare with results for each country. The best results were achieved by Luxembourg, Korea, Turkey, Iceland and Italy. The worse performers were Mexico, Lithuania, Latvia, USA and Slovak Republic.

Conclusion
This work aimed to determine and compare the value of healthcare for several countries, using regression models; to quantify the value of healthcare funding and the impact on patient outcomes and how variations on funding affect patient outcomes; and learn from best in class countries.
In terms of next steps, further analysis is required to identify and quantify causes of avoidable deaths, as well as possible measures to reduce them. Only then, one can consider the most efficient combinations to allocate funding to optimise reduction of avoidable mortality. In addition, it would be important to introduce the distinct healthcare funding mechanisms and link the results with patient experience and satisfaction, using Patient Reported Outcome Measures (PROMs) as proxies.