Navigating the Divide: Informatics as Science and Digitalization as Practice*

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ABSTRACT

The dialogue session "Navigating the Divide: Informatics as Science and Digitalisation as Practice" on the first day of the DigiHealthDayS-2024 proposed a discussion around the intersection of informatics—the science—and digitalization—the practice—and how to navigate these (uncharted) waters safely.

To explore future directions for informatics professionals in bridging the gap between science and practice, the keynote speakers and panelists explored strategies for integrating data-driven insights with digital technologies to enhance patient care and create new knowledge.

KEYWORDS

Health informatics, digital transformation, data-driven healthcare

1. Introduction

The dialogue session "Navigating the Divide: Informatics as Science and Digitalisation as Practice" proposed a discussion around the intersection of informatics and digitalization. One way to apprehend this apparent dichotomy is to search for inspiration in the past. For instance, by drawing parallels between the present and ancient Greek philosophy, one can find harmony in the balance between similarities and opposites and can look forward and envision what Informaticians can contribute together with other specialists.

The session had the following objectives:

- To examine the philosophical foundations of informatics as a scientific discipline and its role in shaping digital health practices;
- To discuss strategies for integrating data-driven insights with digital technologies to enhance patient care and knowledge;
- To explore future directions for informatics professionals in bridging the gap between science and practice.

**DIALOGUE @ EFMI – Navigating the Divide: Informatics as Science & Digitalization as Practice. Hosts: Camila Tomikawa (HIMSS, Germany) & Lars Lindsköld (EFMI, Sweden). Featured Keynote by Prof. Dr. habil. Bernd Blobel (EFMI, Germany): „Why we need to advance from data to knowledge level for successfully transforming health ecosystems". Featured Keynote by Prof. Dr. Evan Brittain (All of Us, USA): „Integrating Wearables and the Electronic Health Record: Insights from the All of Us Research Program"*
Panelists: Helana Lutfi (DIT, Germany), Dr. Dennis Rausch (Dedalus, Germany), Dr. Robin Ohannessian (RAU/AADH, Armenia).

- By leveraging health informatics methodologies and data-driven healthcare approaches, practitioners can ensure that patient-centerd care remains at the forefront of digital transformation initiatives.

2. Key Considerations

The session started with a digital reflection from Prof. Bernd Blobel, which was followed by an extensive webinar on healthcare transformation based on his wisdom and experience for the participants of this year's [2024] DigiHealthDayS. Prof. Blobel discussed "Why we need to advance from data to knowledge level for successfully transforming health ecosystems".

After that, Prof. Evan Brittain presented his keynote "Integrating Wearables and the Electronic Health Record: Insights from the All of Us Research Program". His insights showcased how integrating daily life data and clinical data can be leveraged to advance our understanding of diseases and their effects [1].

The session continued with a detailed discussion of the philosophical divide between informatics, viewed as a science, and digitalization, considered as a practice. Drawing inspiration from Heraclitus' concept of panta rhei ("everything flows") and the Logos as a unifying principle, we aimed for the panel to explore how informatics and digitalization, despite their apparent differences, can be harmonized to advance healthcare.

Heraclitus suggested that opposites are interconnected and interdependent, and our discussion explored how scientific rigor in informatics can work alongside practical digital solutions to create a cohesive healthcare ecosystem.

Another important point was that digitalization is not uniform across all levels. Different departments may experience varying levels of digital transformation within the same hospital.
For example, radiology and pathology are two specialties that share similarities; both involve working with images, providing diagnoses or supporting clinical decisions, handling large volumes of data, and promising future advancements such as GenAI and personalized medicine. However, they also differ in terms of their levels of digitalization, associated costs, available budgets, and the adoption of interoperable standards [2].

Despite these variations in digital maturity, pathology and radiology professionals can exchange knowledge and experiences, enhancing the overall quality of care. Digital transformation journeys are unique to each department, and this notion applies to broader discussions about digitalization in healthcare, both in theory and practice. Therefore, healthcare professionals must embrace solutions that align with the needs and realities of users and patients.

The panelists then shared insights into how data and formal knowledge can be stepping stones to practice and how the wisdom that arrives from practical knowledge can further consolidate into formal knowledge used to benefit the patients.

3. Future Directions

The gap, no matter how lengthy or deep, between science and practice in the digital transformation of healthcare reflects, to some extent, the distance between acquiring raw data and generating actionable knowledge. As a community, professionals engaged in the digital transformation of healthcare can consider disparities in their daily activities and act as facilitators to try and approximate the parties.

4. Conclusion

The "Navigating the Divide: Informatics as Science and Digitalisation as Practice" session explored the interplay between science and practice. Drawing from philosophical foundations and real-world applications, the discussion highlighted the critical role of integrating data-driven methodologies with digital health technologies, the necessity of tailoring digital solutions to diverse healthcare environments, and the potential of interdisciplinary collaboration in bridging the gap between informatics and digital practice.

Ultimately, digitalization in healthcare can be approached as a dynamic and evolving process. By embracing both the theoretical and practical dimensions of informatics, the digital health community can drive meaningful digital transformation, ensuring that technological advancements translate into tangible improvements in patient care and health outcomes.

References

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