Title: Digital Health Strategy deployment: role of an ethical framework to promote adoption

Keynote Speaker:
Pr. Brigitte SEROUSSI, MD, PhD, FIAHSI, FACMI, Sorbonne University, LIMICS UMR_S 1142 & Assistance Publique – Hôpitaux de Paris, Digital Health Delegation of the French Ministry of Health

Abstract: The benefits of digital technology in healthcare are well known and include the improvement of patient data exchange and sharing among healthcare professionals within the care team managing the patient, a better coordination of all health professionals of the care team, and ultimately the optimization of care quality.

However, the development and deployment of digital technology in healthcare has taken time to reach a certain level of effectiveness. For example, in France, efforts initiated in early March 2018 under the theme "Accelerating the Digital Health Shift" aimed to produce an operational roadmap covering the period 2018-2022, with the objective of strengthening the digital transformation in the healthcare system. Despite high expectations for digital technology and the genuine maturity of stakeholders engaged during the consultation phase, it appeared that several major factors were still to impeding the acceleration of the digital transformation in healthcare: the patient was left out of the digital shift, healthcare professionals had to face a fragmented digital health offer that complicated its use in daily practice, essential "basic" tools and functionalities necessary for coherent e-health development in France were incompletely deployed, the national digital health strategy was not well understood by stakeholders and remained incomplete, governance and organizational structures were insufficiently organized to effectively implement the national digital health strategy despite the interest and momentum of public and private stakeholders in this area.

Following this observation, recommendations were drawn up, embodied in the first digital roadmap represented as the "e-Health House," with two foundational levels for core standards and services and, on the ground level, three platforms: My Health Space (a digital health space under the control of users), the Health Data Hub (which consolidates clinical databases into a single point of access, facilitating transparent, secure, and unified access to health data to improve the quality of care and patient support), and the Service Catalog for healthcare professionals that provides a list of digital services and tools that comply with core standards.

After the first three years spent in implementing the first digital roadmap, an evaluation was conducted, demonstrating a national uptake of digital health, thus justifying the creation of the second roadmap, "Putting Digital Technology at the Service of Health." This roadmap is a continuation of the previous one, structured around four key axes: (1) "Prevention", with actions fostering prevention efforts and empowering individuals to take charge of their health, (2) "Care Management", aimed at freeing up time for all healthcare professionals and improving patient care through digital technology, (3) "Access to Healthcare", aimed at improving healthcare access for individuals and health professionals that guide them, and (4) "Enabling Framework", aimed at deploying a conducive framework for the development of digital health usage and innovation.

In parallel, two major programs have enabled the funding of ecosystem actors to encourage their engagement: the Ségur of Digital Health (€2 billion), which brings together a series of programs with "the ambition of generalizing the fluid and secure sharing of health data between professionals and patients", and the Digital Health Acceleration Strategy, made of five steps: developing training, preparing the next generation of digital health technologies and facilitating the rapid transfer of research outcomes, supporting the maturation of key projects, promoting the implementation of real-world experiments, and creating favorable conditions for large-scale deployment.

From the very beginning of the digital health roadmap implementation, the development and deployment of the digital health strategy has been rooted in a digital health ethics framework. The ethics of digital health lies at the intersection of clinical ethics, as outlined in the Hippocratic Oath, and digital ethics, with digital technology being regarded as a tool serving its users. Clinical ethics is grounded in four well-known principles: beneficence, non-maleficence, respect for patient autonomy, and justice or fairness. In addition, digital being considered as a tool, digital health services are expected to be easy to use, accessible to all, serve its user, and be environmentally responsible to minimizing environmental impacts and their harmful consequences on human health.

A presentation of Keynote Speaker

Brigitte Séroussi is an engineer from the École Centrale Paris (one of France's top 3 engineering schools). She is a professor of biomedical informatics at Sorbonne University, and a hospital practitioner in public health at the Assistance Publique - Hôpitaux de Paris (hôpital Tenon). She also serves as Project Director at the Digital Health Delegation (DNS) of the French Ministry of Health in charge of the definition of the national e-Health strategy. Her research is conducted at the LIMICS UMR_S 1142 and focuses on the development, implementation and evaluation of decision support systems with a specific interest to the management of breast cancer patients. She developed various decision support methods, using logico-symbolic (knowledge-based) approaches, semantic web approaches (ontological reasoning) and connectionist artificial intelligence approaches (machine learning, deep learning). At the French Ministry of Health, she is responsible of Digital Health Ethics, defining ethical guidelines for software developers including digital health sustainability and the development of tools to measure the environmental impact of digital health services. She is currently President of the International Medical Informatics Association (IMIA), a fellow of the inaugural class of the International Academy of Health Sciences Informatics (F-IAHSI), and a fellow of the American College of Medical Informatics (F-ACMI).