

PS 1.2

TECH-EMPOWERED HEALTH WORKERS: SKILLS FOR THE FUTURE

| BACKGROUND

The rapid advancement of digital health technologies, including artificial intelligence (AI), telemedicine, mobile health, and data analytics, is transforming healthcare delivery worldwide. These technologies hold immense potential to improve efficiency, quality, and access to care, especially in resource-limited settings. This transformation necessitates a corresponding evolution in the skills and competencies required of the entire health workforce, from specialists in urban centers to community health workers (CHWs) in remote areas.

Community health workers, who play a vital role in delivering primary healthcare and preventive services, have proven to be indispensable, especially during public health emergencies like the COVID-19 pandemic. Empowering CHWs with digital tools and knowledge is crucial to extending the reach of healthcare systems and achieving universal health coverage (UHC). Additionally, ensuring that all health workers are equipped to leverage technology for patient-centered care, professional development, and data-driven decision-making is essential for maximizing the impact of these innovations.

The emergence of large language models (LLMs) and other AI tools presents a unique opportunity to not only revolutionize health workforce training but also to raise the overall standard of care by democratizing access to specialized knowledge and decision support. By leveraging AI, we can potentially equip health workers at all levels with tools that augment their skills, enhance their decision-making capabilities, and enable them to deliver more consistent, high-quality care, even in resource-constrained settings.

| OBJECTIVES

Objectives:

- **To identify the evolving skill sets needed by the entire health workforce**, with a particular focus on the unique needs of CHWs, to effectively utilize and integrate digital health technologies into their practice.
- To discuss the strategies for massively scaling up upskilling and reskilling efforts for the health workforce across all levels, leveraging AI-powered tools and platforms to meet the demands of the digital health era, achieve equitable access to training resources, and raise the overall standard of care.
- To explore the potential of LLMs and other AI tools to empower individuals with personalized health information and guidance, fostering a culture of self-care and preventive health.
- To highlight innovative approaches to training and education, such as AI-powered tutoring, mentorship platforms, and personalized health assistants, that democratize healthcare knowledge and skills and promote continuous professional development.
- To facilitate dialogue between stakeholders, including policymakers, educators, health workers, technology developers, and ethicists, to foster collaboration and address challenges in workforce development at all levels, ensuring that the integration of AI is ethical, equitable, and patient-centered.
- To identify key metrics and indicators to measure and monitor the impact of AI-powered tools on health worker performance, patient outcomes, and overall health system strengthening, ensuring the sustainability and effectiveness of these interventions.

Additional points

- burnout intervention? counseling/mental health application
- Platform to communicate between healthcare workers (including PHC)

migration of workforce



Speaker

William Hersh

Professor, Biomedical Informatics

Oregon Health & Science University
United States of America

William Hersh, MD is a Professor in the Department of Medical Informatics & Clinical Epidemiology (DMICE) in the School of Medicine at Oregon Health & Science University (OHSU) in Portland, Oregon. Dr. Hersh served as the Inaugural Chair of DMICE from 2003 to 2022. He is a leader and innovator in biomedical informatics, both in education and research, and continues his work as a professor in the department.

In education, Dr. Hersh served as Director of OHSU's Biomedical Informatics Graduate Program, which is one of the oldest and largest in the world in the field, from its inception in 1996 through 2023. The program has awarded nearly 1000 degrees and certificates. Dr. Hersh also spearheaded OHSU's efforts in online learning in biomedical informatics. He has taught in person and online widely around the world.

Dr. Hersh has led a number of innovations in biomedical informatics education. He conceptualized and implemented the first offering of the American Medical Informatics Association 10x10 ("ten by ten") program, which provides the equivalent of an introductory graduate-level course and has been completed by over 3000 people. He is Editor of the textbook, *Health Informatics: Practical Guide*, 8th Edition.

Dr. Hersh is also an accomplished researcher. His main efforts have been in the area of information retrieval (also known as search) applied to biomedicine. He has authored over 200 scientific papers and abstracts as well as the book, *Information Retrieval: A Biomedical and Health Perspective*, 4th Edition (Springer, 2020). His current work focuses on the application of search techniques to electronic health record data, aiming to improve patient cohort discovery and amplification of signals of rare diseases. He has also led a number of information retrieval challenge evaluations with participation of many research groups from around the world under the guise of the Text Retrieval Conference (TREC).

More information about Dr. Hersh can be found at:

Email: hersh@ohsu.edu

Web: <http://www.billhersh.info/>

Blog: <https://informaticsprofessor.blogspot.com/>

What is Biomedical & Health Informatics?: <http://informatics.health/>

Twitter: @williamhersh

LinkedIn: <https://www.linkedin.com/in/billhersh/>

Facebook: <https://www.facebook.com/billhersh/>

ORCID: 0000-0002-4114-5148