February 8, 2023

Senate Finance Committee
Summary | "Artificial Intelligence and HealthCare: Promise and Pitfalls."

On February 8, 2024, **the Senate Finance Committee, held a hearing titled "Artificial Intelligence and Health Care: Promise and Pitfalls."** Led by Chairman Senator Ron Wyden (D-OR), this hearing focused on the growing use of artificial intelligence (AI) in healthcare, particularly in federal health programs like Medicare and Medicaid.

While AI has the potential to enhance efficiency, concerns arise about bias in big data systems that can discriminate based on race, gender, sexual orientation, and disability. "Congress must set the rules of the road for innovation in healthcare. Striking a balance between protecting innovation and patient privacy is not mutually exclusive", said Senator Wyden.

There is a strong need to strike a balance between fostering innovation and protecting patients. Legislative proposals, such as the Algorithmic Accountability Act, have been developed to address several of these concerns. AI has the potential to alleviate challenges in the healthcare industry, but it is important to be mindful of the need to prevent bias, ensure patient privacy, and promote equity with its use. Additional measures will need to be developed and outlined to protect patients from flawed systems that affect healthcare outcomes, both positive and negative.

Expert testimony was provided by five healthcare providers actively working in telehealth (listed in speaking order):

> **Peter Shen**
> Head of Digital & Automation, North America
> Siemens Healthineers
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> **Mark Sendak, MD, MPP**
> Co-Lead
> Health AI Partnership
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> **Michelle M. Mello, JD, Ph.D.**
> Professor of Health Policy and Law
> Stanford University

Ziad Obermeyer, MD
Associate Professor and Blue Cross of California Distinguished Professor
University of California – Berkeley

Katherine Baicker, Ph.D.
Provost
University of Chicago

Each witness outlined the key components of how AI is being utilized within their organization while highlighting the importance of thoughtful strategic transparent and adaptive regulation for patient safety:

Peter Shen: In his testimony, Peter Shen, the North American Head of Digital & Automation for Siemens Medical Solutions USA (Siemens Healthineers), highlighted Siemens Healthineers' commitment to leveraging AI in healthcare. Siemens Healthineers has been involved in AI for over 20 years, maintaining a powerful supercomputing infrastructure to develop algorithms. While these products are groundbreaking and provide great benefits to the healthcare community, challenges remain, specifically related to inconsistent reimbursement for their technologies by CMS, hindering widespread adoption, especially in rural and underserved areas.

Mark Sendak, MD, MPP: In his testimony, Dr. Sendak, the Population Health & Data Science Lead at the Duke Institute for Health Innovation, highlighted the significant contributions of the Duke team to AI technologies in healthcare. With over a decade of experience in developing and implementing AI technologies, Sendak emphasized their achievements in implementing over 20 AI technologies for clinical care, including being the first in the U.S. to implement a deep learning model.
Like Shen, Sendak urged the Senate Finance Committee to take concrete action to enhance accountability, equity, privacy, and transparency in AI use in healthcare, specifically within the Medicare program. Sendak proposed addressing guardrails and core infrastructure investments to ensure widespread AI adoption. These guardrails, such as broader infrastructure investments, including technical assistance, technology infrastructure, and training programs, support healthcare organizations struggling with clinician burnout, financial challenges, and dependence on external vendors. Bold action to enact Medicare controls and infrastructure investments are key to AI's successful adoption.

Michelle M. Mello, JD, Ph.D.: Dr. Mello, a professor at Stanford University, brought her extensive expertise in health policy, law, and data ethics to the table. Dr. Mello emphasized three key points. First, a need for robust review processes for AI tools in healthcare organizations, as many lack the necessary resources. Second, governance should focus on more than just the algorithm but also consider how the algorithm integrates into the clinical workflow. Third, the importance of federal standards for both organizational readiness and responsibility in using healthcare AI tools. Dr. Mello urged the committee

and the federal government to establish standards for AI tools and the organizations using them, drawing parallels to existing certification processes for Medicare compliance.

Ziad Obermeyer, MD: Dr. Ziad Obermeyer, a professor and researcher at Berkeley and a practicing emergency physician emphasized the potential of AI in healthcare while highlighting concerns. Poorly designed AI algorithms can lead to racial bias, impacting decisions for millions of patients. The algorithms, designed to identify patients at high risk of future health problems, end up prioritizing cost prediction over health needs, perpetuating existing disparities in healthcare access.

To ensure the positive impact of AI in healthcare, Dr. Obermeyer proposed specific actions for programs under the Committee's jurisdiction, such as Medicare, Medicaid, CHIP, and child welfare programs to use their market power to set clear criteria for AI reimbursement. These criteria should include transparency about algorithm outputs, independent evaluation for accuracy and equity, and adherence to established principles from health economics and outcomes research.

Katherine Baicker, Ph.D.: In her testimony, Katherine Baicker, Provost of the University of Chicago and a health economics researcher, highlighted the substantial potential of AI to enhance care delivery, effectiveness, and sustainability in the healthcare system. Baicker discussed AI's ability to integrate diverse data sources which can enrich patient histories and conditions but stressed the importance of public policy to ensure data privacy and security. "Algorithms should complement, not replace, physicians", said Baicker. The testing and validation of algorithms in relevant contexts are crucial, and the presentation of information to physicians should enhance clinical flow. There is a need for large-scale investments, safeguards, and public policy guardrails to realize the potential benefits of AI in healthcare.

In summary, the hearing highlighted the enormous potential of AI to enhance healthcare by improving access, enabling faster and more precise diagnoses, and supporting treatment decisions based on comprehensive patient data. Moving forward, Congress must work together to establish and secure the recommended safeguards to protect patient care, privacy, and maintain standards of care.

CTeL's Analysis: What's Next?

New technologies arise each day. While the use of AI is not a new concept, its emergence and influx into the daily practice of medicine is continuing to grow. There is enormous potential for AI to aid in the delivery of care, while increasing diagnoses, decreasing physician burnout, aiding in staffing shortages, and creating a better healthcare workflow. It is essential to embed safeguards, not only for patients but for our health systems, hospitals, providers, clinicians, and the full healthcare lifecycle.

CTeL will be monitoring the following specific areas as it relates to AI integrations into our healthcare systems:
1. **Regulation and Oversight:** How will we continue to strike a balance between exercising oversight of AI technology while creating space for advanced innovation and development?
2. **Equity and Access:** How can we ensure the AI algorithm is not used to discriminate against patients in medical coverage decisions? AI is often used with other technologies that not

everyone has access to or the skill set to use, how can we bridge the tech gap to reach these populations as well?

3. **Data Privacy and Security:** How will we establish and build in data transparency while not imposing a one-size-fits-all standard of regulation on clinicians?
4. **Education:** How can we adequately educate the incoming and outgoing healthcare workforce with the full gamut of knowledge required to compliantly and safely utilize these technologies?
5. **Medicare and CMS Policies:** When will CMS establish consistent and transparent guidelines for reimbursement and clearly define what "meaningful human review" means in the context of medical coverage decisions?

CTeL will continue to monitor legislation and regulations surrounding AI implementation in the healthcare cycle.

For more information on the hearing, please visit here.

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