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Goldfarb, and Catherine Tucker, editors

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Comment on Chapters 1 and 2 Idris Adjerid

Insights from Adoption of Electronic Health Records

After two days of insightful research questions, rigorous evaluation of these questions, and thought-provoking discussion, it was a comment by David Chan at Stanford that stuck with me. He asked whether many of the questions we were asking about AI in healthcare were largely answered by the body of work evaluating how the diffusion of electronic health records (EHR) (the most recent large-scale digital push in healthcare) impacted different aspects of healthcare delivery.

The insights learned from the study of EHR diffusion and their impact on healthcare will almost certainly apply to the diffusion of AI in healthcare. Like EHR, effective use by clinicians, alignment of incentives, and reworking processes to incorporate insights from AI will be vital to realizing value. New scholarship considering these dynamics in the context of AI will certainly add value to the discourse and should be generally publishable. However, my conclusion from the day is that pathbreaking scholarships will need to think deeply about the unique aspects of AI and how these aspects will impact healthcare. A few examples come to mind of the kinds of questions future work could explore:

- Health economists have extensively studied competitive dynamics in healthcare. This body of work highlights, among other things, how regional healthcare monopolies contribute to reduced quality and efficiency (Gaynor 2007). How will AI impact these dynamics in ways that EHR did not? Will AI's potential to substitute for human capital in healthcare reduce barriers to entry and enable leaner entrants to disrupt healthcare at scale? Or, will data-rich incumbents leverage the AI revolution to further entrench themselves in these markets?
- EHR were largely focused on digitization of healthcare and provided, by and large, deterministic insights (e.g., identifying drug interactions for patients). How will the probabilistic nature of insights from AI impact use and adoption by clinicians? Will the encroachment of AI into domains that were core to physicians' value-add (e.g., diagnosis) impact these dynamics? Considering the potential of clinicians to reject certain types of AI insights, will be it optimal at times to reduce exposure to or scope of AI insights?
- Will integration of AI into healthcare shift patient demand, and in

Idris Adjerid is an associate professor in Business Information Technology at the Pamplin College of Business at Virginia Tech.

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which directions? Under which conditions will lower-cost, more accessible, AI-powered services prosper and when will the human touch present in traditional healthcare prevail? The answer to these questions is not clear *ex ante*. In the context of mental health (a context where privacy and human interaction are key), AI-powered technology platforms for providing mental health services have been highly successful.¹

Overall, the outlook for research at the intersection of AI and healthcare is bright, and there are several exciting areas for researchers to explore. I encourage myself and other researchers to be thoughtful about their pursuits in this space and look forward to research that helps healthcare integrate AI in ways that maximize welfare across the board.

Reference

Gaynor, M. 2007. "Competition and Quality in Health Care Markets." *Foundations and Trends® in Microeconomics* 2 (6): 441–508.

Comment on Chapters 1 and 3

M. Kate Bundorf
and Maria Polyakova

Artificial Intelligence and Decision Making in Health Care: *Prediction or Preferences?*

People make most of their decisions in the context of uncertainty. Because each of our decisions can have many possible outcomes, we can never know with certainty how the choices we make today will affect us tomorrow. In the canonical economic model, people make decisions under uncertainty by assessing both the likelihood of potential outcomes associated with alternative courses of action and their utility of each outcome and then

M. Kate Bundorf is the J. Alexander McMahon Distinguished Professor of Health Policy and Management and a professor in the Sanford School of Public Policy and the Department of Population Health Sciences at Duke University, a core faculty member at the Duke-Margolis Center for Health Policy, and a research associate of the National Bureau of Economic Research.

Maria Polyakova is an assistant professor in the Department of Health Policy at Stanford University School of Medicine, and a faculty research fellow of the National Bureau of Economic Research.

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1. See <https://www.brookings.edu/techstream/the-wellness-industrys-risky-embrace-of-ai-driven-mental-health-care/>.