

Equity and Efficiency in Technology Adoption: Evidence from Digital Health

Itzik Fadlon, PhD, *UC San Diego and NBER*
Parag Agnihotri, MD, *UC San Diego*
Christopher Longhurst, MD, MS, *UC San Diego*
Ming Tai-Seale, PhD, MPH, *UC San Diego*

Abstract: Digital technologies are bringing vast improvements to modern society, but also carry the risk of exacerbating relative disparities if adopted at lower rates by underserved communities. We investigate the efficiency and equity aspects of technological advancement in digital health by studying an original intervention of remote patient monitoring that enabled patients to transmit real-time clinical data for timely treatment. From an efficiency standpoint, we find significant and persistent reductions in cardiovascular risk, which were notable across all subgroups of gender, age, race/ethnicity, and geographic affluence. But from an equity standpoint, we find that the new technology is systematically adopted at lower rates by Black/Hispanic patients and by patients from disadvantaged geographic communities, who are less likely to take up or to adhere to the program. Our analysis highlights the simultaneous promise and hazards of digital technologies, as it places across-the-board improvements in health against the drawback of uneven adoption that can deepen relative health disparities. Evidence suggests that physicians can have a promising role in promoting more equitable adoption of new technologies in digital health.