Opinion: To boost health care teams' effectiveness, integrate organizational sciences research with tech development

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Health care organizations today are caring for patients with increasingly complex needs and leveraging larger teams that include clinicians with

diverse and specialized expertise. At the same time, high turnover and labor shortages mean that facilities frequently employ a more temporary and mobile workforce.

In a new commentary, researchers point out that, as a result, "the structure of health care teams often defies decades of wisdom from team-design research about the conditions that support the best possible performance."

The article was written by researchers at Carnegie Mellon University (CMU), Johns Hopkins University, Mount Sinai Kravis Children's Hospital, and the University of California, San Francisco. It is published in the *New England Journal of Medicine*.

The authors suggest that common solutions for supporting collective work have come in the form of technology developments that are costly and can fall short of addressing the human-based challenges to teamwork. They call for integrating research from the field of organizational science, which expressly studies human-based challenges related to attention and relationships, as this could reveal useful levers for amplifying the teamwork necessary for patient care.

"Cultivating more robust teamwork in health care requires a deep understanding of human behavior along with advanced technologies," says Anna Mayo, assistant professor of organizational behavior at CMU's Heinz College, the article's lead author. "But progress has been limited in part because findings from research in organizational science and related fields are not yet as incorporated into research and practice in health care as they should be."

The challenges faced by health care teams today include a blurring of health care teams' boundaries due to individual clinicians spanning multiple care teams and care team compositions evolving with patient

needs and shift changes. At the same time, rotations in large organizations coupled with turnover and an increasing reliance on a mobile workforce mean that the clinicians who share a patient often have limited, if any, history of collaboration.

Research from organizational science sheds light on the constraints these conditions create. For instance, while clinicians used to rely on in-person communication, they now often turn to technology-mediated communication. Messaging applications offer the potential to facilitate communication across the dynamic web of patient care team members. Yet, attentional limitations can lead providers to be "out of sight, out of mind."

Similarly, organizational science has documented the social nature of learning—a process critical to teamwork and sustained performance over time. Yet, reliance on technology can limit opportunities to learn by observing others, while a transient workforce can undermine the ability to develop relationships that would otherwise enable knowledge transfer.

Better understanding these challenges can help guide more effective technology-based interventions that would enable coordination and learning. Such tools could include algorithmically-driven recommendations—for example, prompting a primary care team to connect with a particular consultant. Similarly, scheduling technologies could draw on interaction and outcome data to create effective care-team assignments that allow for both shared history that supports coordination and working with varied others that supports learning.

"Attention to improving the coordination and learning practices in health care teams is not new," says Christopher Myers, associate professor of management and organization at Johns Hopkins University, who coauthored the article. "Yet there is a real opportunity to make progress if researchers, developers, and practitioners better integrate insights

from organizational science research into the development of support tools."

More information: Anna T. Mayo et al, Supporting Robust Teamwork—Bridging Technology and Organizational Science, *New England Journal of Medicine* (2023). DOI: 10.1056/NEJMp2300172

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