Project ADOPT (Agile Deployment of Patient Technology)

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Background: Innovative technologies are created worldwide daily that can transform healthcare. Yet, implementation and scaling new technology to impact patient care at the bedside at most healthcare centers is often complex, inefficient, and expensive.1 Many medical centers have minimal strategy and/or infrastructure devoted to translation of medical technologies to the patients (bench to bedside). A healthcare critical gap at is a seamless process that facilitates identification, approval, deployment, scale, and monitoring of equipment.

Goal: Evaluate the current state and design a future approach to adoption of patient technology.

Methods: An agile implementation framework to design and pilot an evidence-based healthcare solution for a rapid, efficient, scalable, and sustainable workflow for adoption of patient technology. A mixed-methods needs assessment consisting of semi-structured multi-stakeholder qualitative interviews and faculty survey was used to create implementation strategy.

Results: 17% (2/12) department faculty council representatives know how to get new patient technology to bedside. Faculty projected time to new technology at bedside 2 months-10 yrs but described ideal time as 1 month- 2 yrs. Faculty thoughts on need for IRB research approval to deploy technology (25% no; 58% sometimes, 8% always). Barriers identified included unclear processes, financial, multiple layers of bureaucracy, timeline to approval, getting stuck in multiple places to get to get to final approval and entire implementation process transparency is lacking. Central themes:
1) Clarity of approval to implementation processes are lacking.
2) Unclear whether a process map exists.
3) "Wicked" yet important problem in healthcare.
4) Regulatory and approval processes feel "insurmountable" and several have stopped trying

Pilot of technology process demonstrated a prolonged timeline 15 months to achieve approvals, with projected further physician championing through IT and patient implementation sprints, prior to further scaling up of technology across enterprise (estimated 12 to 18 more months). Barriers: approval process, document gathering, financial projections, funding dependent on physician champion. Significant redundancy in approval processes and no clear transparency on the process to follow.

Conclusion: New patient technology has the potential to transform healthcare. However, the journey from needs assessment of technology to bedside implementation is complex, expensive and time consuming. Results from Project ADOPT support a rapid, agile implementation process to that facilitates identification, approval, deployment, scale, and monitoring of innovative healthcare technologies.

REFERENCES: [1] Clark D, Dean G, et al. The technology adoption pathway in healthcare. Health and Technology. 2020 [2] Marwaha JS, Landman AB, et al. Deploying digital health tools within large, complex health systems: Nature Partner Journal: Digital Medicine. 2022.[3] Boustani M, Azar J, Solid C. Agile Implementation. New York: Morgan James Publishing; 2020.[4] Rodriguez Santana, I., Mason, et al. Need, demand, supply in health care. 2023.