An Electronic Patient Safety Checklist Tool for Interprofessional Healthcare Teams and Patients

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Introduction:
Fragmentation of healthcare poses a threat to patient safety, and leads to inefficient care[1]. Several studies have demonstrated the usefulness of checklists to improve the quality of care such as increasing treatment compliance and reducing complications and medical errors in the clinical setting[2,3]. In the current model of care, however, physicians and nurses have separate patient care checklists to organize, manage, and hand off critical patient-based tasks. The goal of this study is to facilitate and support interaction and communication among all the members of a patient care team by developing, implementing and evaluating an electronic Patient Safety Checklist Tool (PSCT). Physicians and nurses will enter data into the PSCT and the contents will be shared with multidisciplinary team members and patients and family to review and provide input. The PSCT is an electronically integrated interdisciplinary suite of tools that will incorporate adaptations of existing validated safety checklists for healthcare providers to use during team rounds. Information dashboards can also be generated to provide a better overview of a patient's care for healthcare providers and patients than the current method of tracking a patient's hospitalization. Information will flow from electronic patient platforms to a Rounding Checklist and from the Rounding Checklist to the Care Team Dashboards. The PSCT would allow all members of a healthcare team to add, edit, and view a patient's safety items and plan of care.

Methods:
1) A problem analysis phase consisted of the study team performing workflow observations, document review, and interviews for healthcare providers; current workflow information sharing and team decision-making during interdisciplinary rounds, team communication, and utilization of safety bundles and to do lists were identified through nine focus groups and observations of clinical teams. Clinical documentation (e.g. physicians' notes, nursing plan of care, flow sheets, personal to do checklists, and notes on white boards) were reviewed to determine the contents of the PSCT. 2) Using knowledge gained in the problem analysis phase we designed the PSCT; 3) We evaluated the feasibility of implementing the checklist and evaluated the impact on workflow and patient outcomes.

Results: Based on workflow analysis, a prototype of a rounding PSCT was designed. Based on healthcare provider and patient feedback, patient risk/status reminder icons were developed for display in a web-based patient portal with detailed educational contents for patients and care partners. Results showed that there were some challenges with implementing an interdisciplinary PSCT. If physicians and nurses share checklists in real time, the timing of documentation is crucial for the checklist to be effective. Another limitation to an interdisciplinary checklist is assigning responsibility for specific content and ensuring completeness.

Discussion: The PSCT has great potential to facilitate efficient and collaborative patient management; however, it is important to identify the best way to use the new tool to share mutually beneficial information between interdisciplinary team members and patients/families. We will conduct additional focus groups and group interviews to identify a new information flow and efficient workflow for care team members.

References

1. Enthoven, A.C., Integrated delivery systems: the cure for fragmentation. Am J Manag Care, 2009. 15(10 Suppl): p. S284-90.
2. McDowell, D.S. and S.A. McComb, Safety checklist briefings: a systematic review of the literature. AORN J, 2014. 99(1): p. 125-137 e13.
3.Treadwell, J.R., S. Lucas, and A.Y. Tsou, Surgical checklists: a systematic review of impacts and implementation. BMJ Qual Saf, 2014.