

CREATING LEARNING SYSTEMS WITH MOBILE TECHNOLOGY TO IMPROVE COORDINATION IN PERIOPERATIVE SERVICES

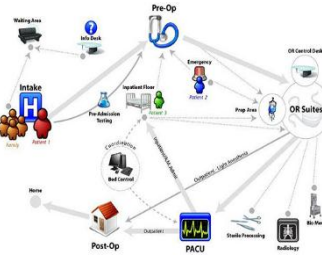
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PROJECT GOALS

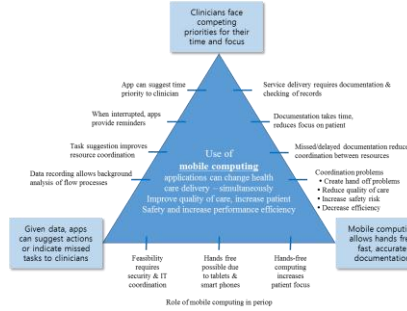
Create new tools for healthcare providers to achieve improved coordination among Perioperative Services (Periop) departments by

- Improving individual workflows
- Resolving systemic issues
- Changing staff behavior



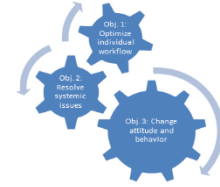
PROJECT MOTIVATION

A focal point of this project is to embrace and enhance mobile technology to facilitate patient flow through Periop (from Pre-op to PACU) by improving coordination between units and advancing post-hoc analysis.



RESEARCH OBJECTIVES

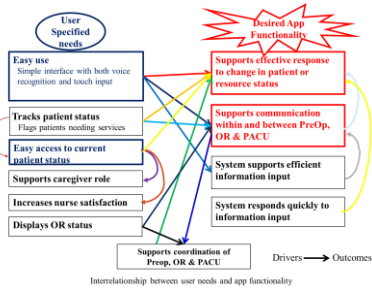
1. Enhance communication and coordination among Periop staff and quality of care by gathering important workflow milestones and introducing artificial intelligence techniques through the use of a smart-app.
2. Analyze workflow data (gathered with smart-apps) using data analytics to provide intuitive displays of real-time information for frontline staff and a daily performance dashboard for managers.
3. Induce behavioral and cultural change in healthcare systems through training and education.



The three proposed objectives reinforce each other to create new methods for healthcare providers to achieve improved coordination among POS departments by improving individual workflows, resolving systemic issues, and changing staff attitude and behavior

SMART-APP DEVELOPMENT: PHASE 1

Structured interviews identified 390 user needs, from which the team organized them into 37 categories of app functionalities.



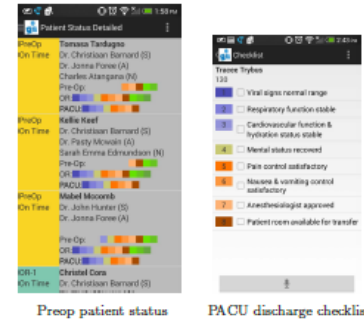
SMART-APP DEVELOPMENT: PHASE 2

The layout of the app was developed using wireframes to elicit input and feedback From users.



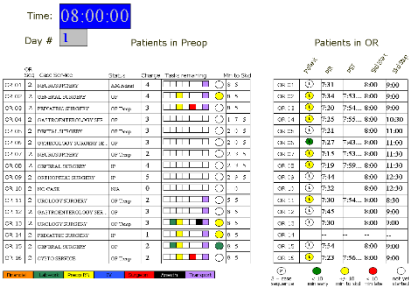
SMART-APP DEVELOPMENT: PHASE 3

A prototype of the app was developed using Google Android API (Level 19).



SMART-APP DEVELOPMENT: PHASE 4

Training Simulation developed for OR staff and managers



NEXT STEPS

- Pilot study of OR Turnover time app
- Simulations with historical data
- Pilot study of entire set of apps at GHS

ACKNOWLEDGEMENT

