Provider Perception of Patient-Initiated Communication for Non-Essential Tasks

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INTRODUCTION

- Consistent and informative patient-provider communication is necessary for information transfer between patients, family members, nurses, physicians, and other healthcare providers (Stewart 1995, Harrington, Noble, Newman 2014). Registered nurses (RNs) and personal care assistants (PCAs) communicate with their inpatients through routine rounds and answering personal calls from the patients.

- Certain healthcare technologies look to further personalize care by providing a digital interface for patient-provider communication. These technologies are aimed to increase patient autonomy by providing access to information about their care plan and medical history. They also aim to improve overall patient and provider satisfaction by streamlining patient-provider communication.

- These technologies have documented effects on patient experience (Kelly, Hoonakker, Dean 2016; EPIC 2015), but, less studied, they also have prominent effects on provider experience.

Primary Objectives:
1. Learn the effect that technology which personalizes patient healthcare has on provider workflow and satisfaction.
2. Identify areas where the EPIC MyChart Bedside application is hindering or helping provider performance.
3. Help fill the gap in the current body of literature in gaining provider feedback on implemented patient-provider communication technologies.

BEDSIDE APPLICATION

- One technology aimed to personalize patient healthcare is the EPIC iPad application, MyChart Bedside. Bedside is designed to keep patients engaged and up-to-date during their hospital stay. The goal of this tool is to increase communication between patients and their healthcare providers about specific, non-urgent tasks such as requesting a glass of water, a thermostat adjustment, a snack, etc. It also provides patients with access to personalized diagnostic educational information and medical information including their electronic health records.

- This study aims to observe and gain feedback on the Bedside application from healthcare providers. The study will look to measure the effects that Bedside has on provider perceptions of patient-provider communication. This data could be used to inform future design updates of the Bedside system and other technologies that aim to personalize patient medical care.
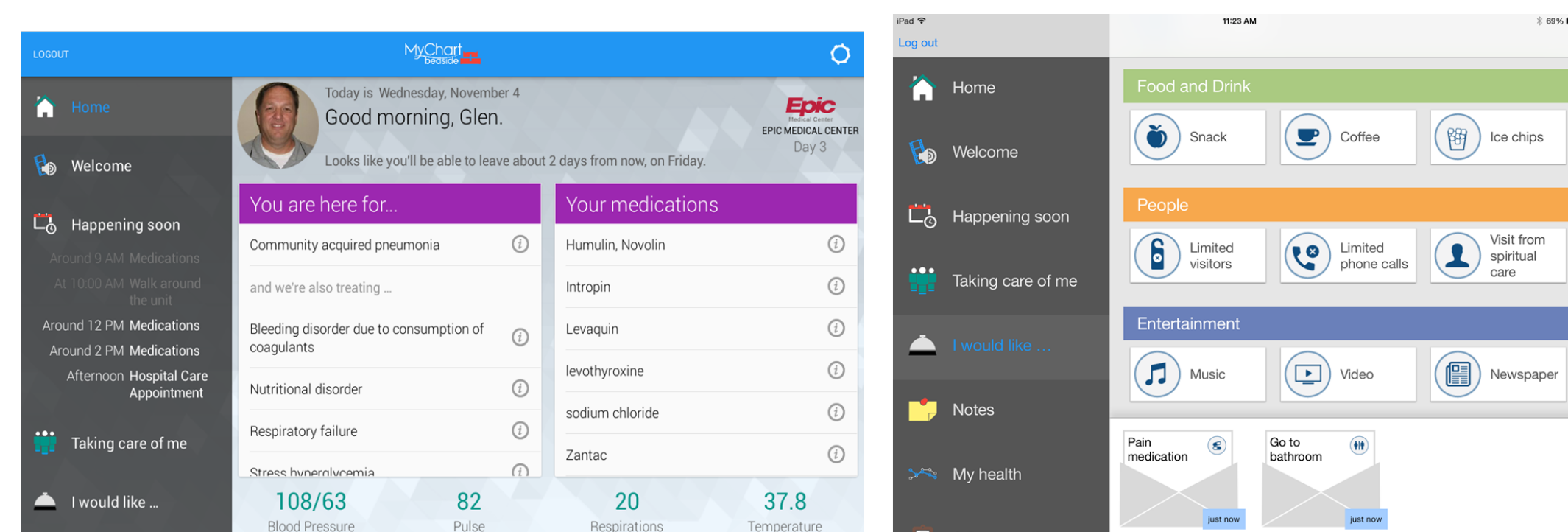
Two screen shots of Bedside. The left image shows the *Home* page with a summary of the patient's complications and medications. The navigation panel is on the left of the screen. The right image shows the *I would like* page where the patients can request a number of services that then appear in the cue bar at the bottom.

METHODOLOGY

Participants
- 34 RNs and PCAs from three different units of a large hospital in Southeastern Texas. Participants were in a ratio of 1 PCA : 2 RNs , 1 male : 15 females, and a mean age of 33 (sd = 12) .
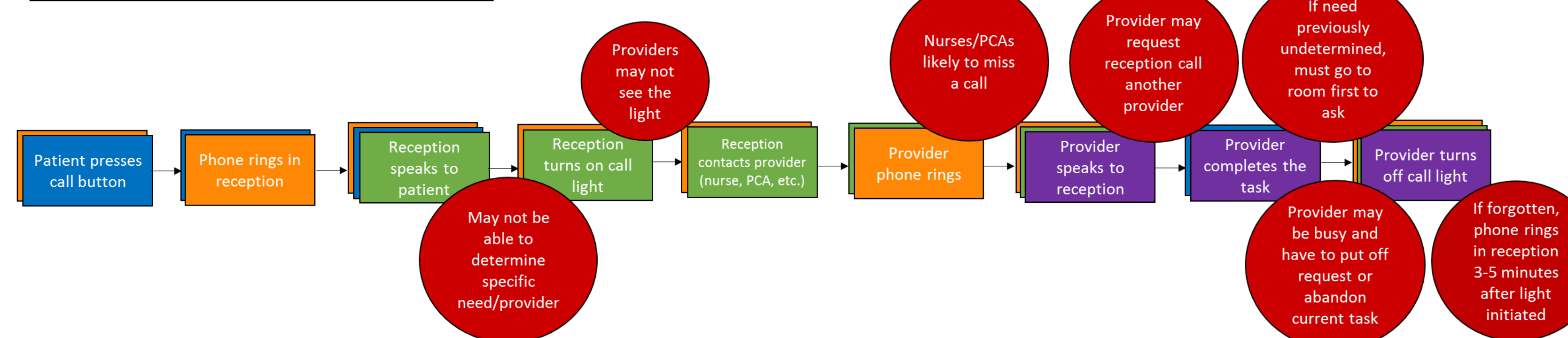
Procedure
- Observational data was collected by shadowing individual providers.
- A ten question survey was given to each of the RNs and PCAs

RESULTS

Observational Data

Observational data was used to generate workflow diagrams for patient-initiated, patient-provider communication tasks. In the top workflow, the patient uses a general call button on the hospital room remote to contact the provider. In the bottom workflow, the patient dials the provider's direct line. Areas of commonly observed complications are marked by red circles at the point of the complication.

Patient Uses General Call Button
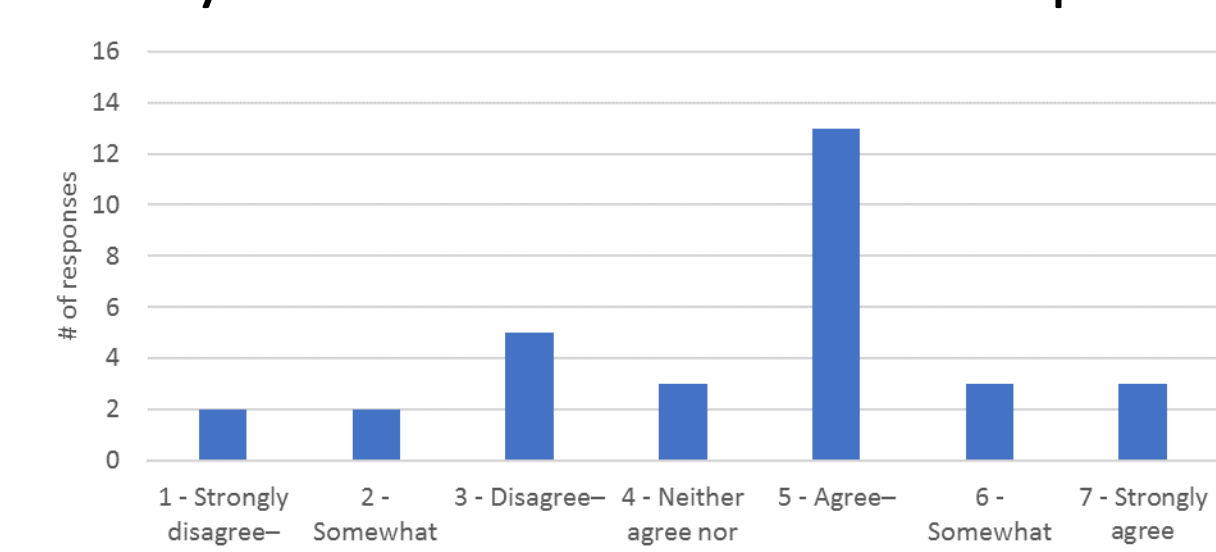
Patient Directly Calls Provider

Key
- Patient
- Reception
- Care Provider (ex: nurse, PCA)
- Technology
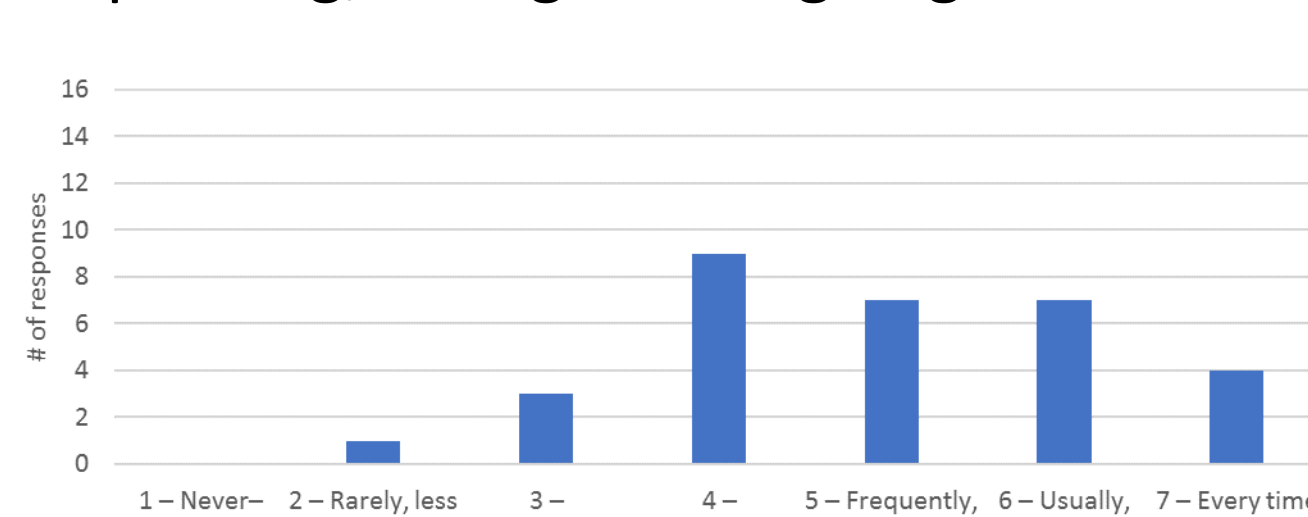- Commonly observed complications
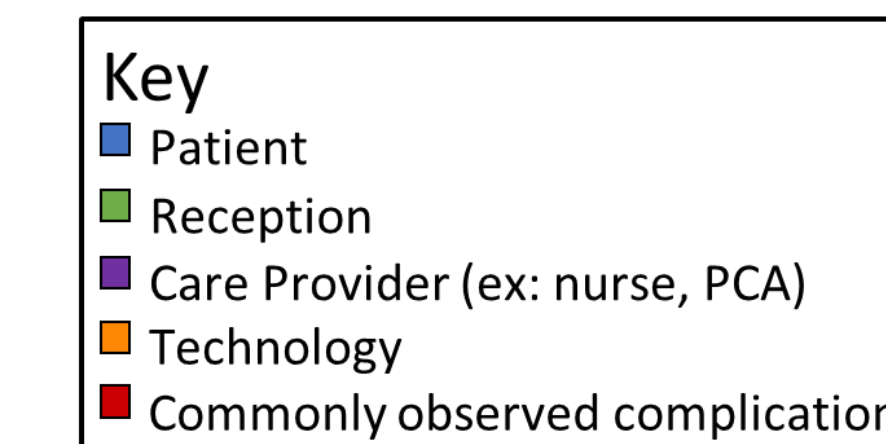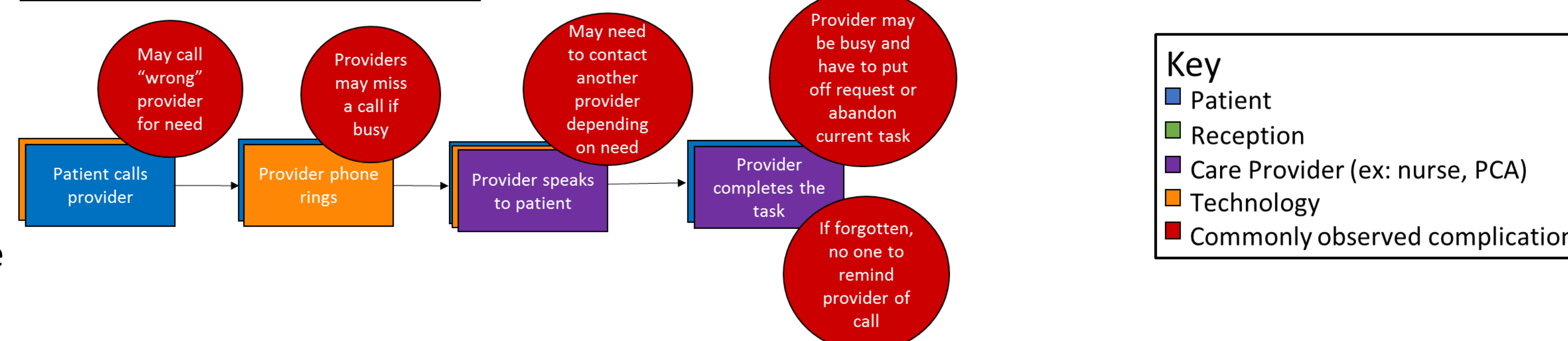
Survey Data
- Through the 10 question survey, we aimed to gain understanding of provider perceptions in two areas: Related to patient-provider communication, what sort of tasks they are engaging in and are the types of tasks they are engaging in affecting their workflow? Prominent results displayed.

| Areas of Potential Improvement as a Result of Bedside	Current Issues in Workflow
•Please indicate your level of agreement with the following statement: I spend excessive time explaining repetitive information to patients or family members about their care plan.	•Please indicate your level of agreement with the following statement: I feel that performing tasks outside of my technical job description keeps me from performing more useful tasks.

•When you get a call that asks you to visit a patient's room, how frequently do you have a complete understanding of what your patient is requesting/asking before going to their room?
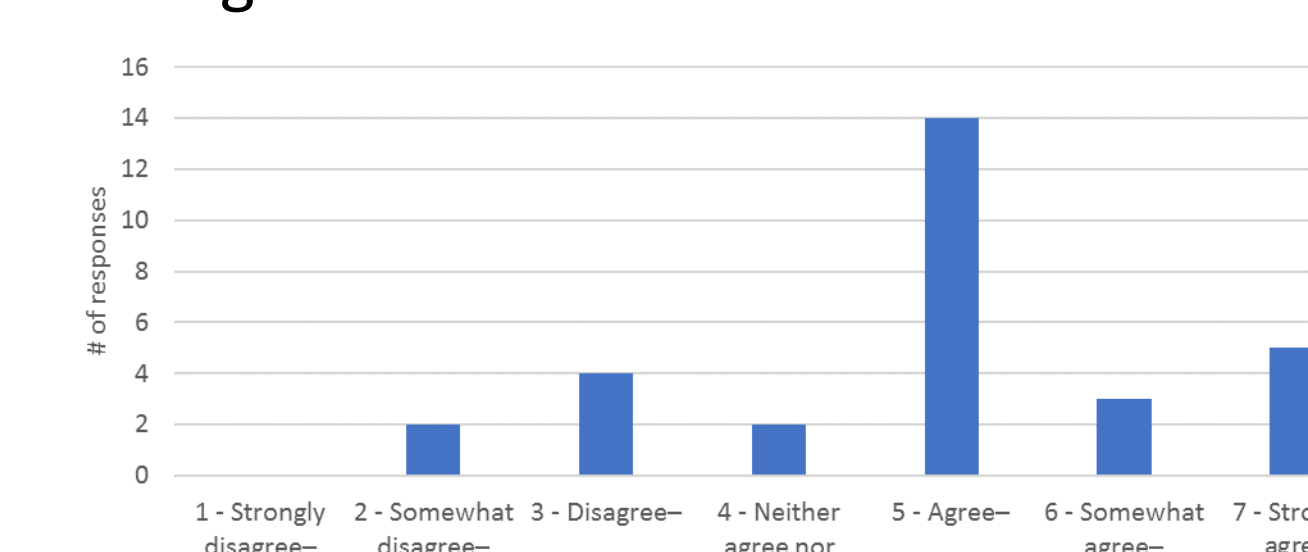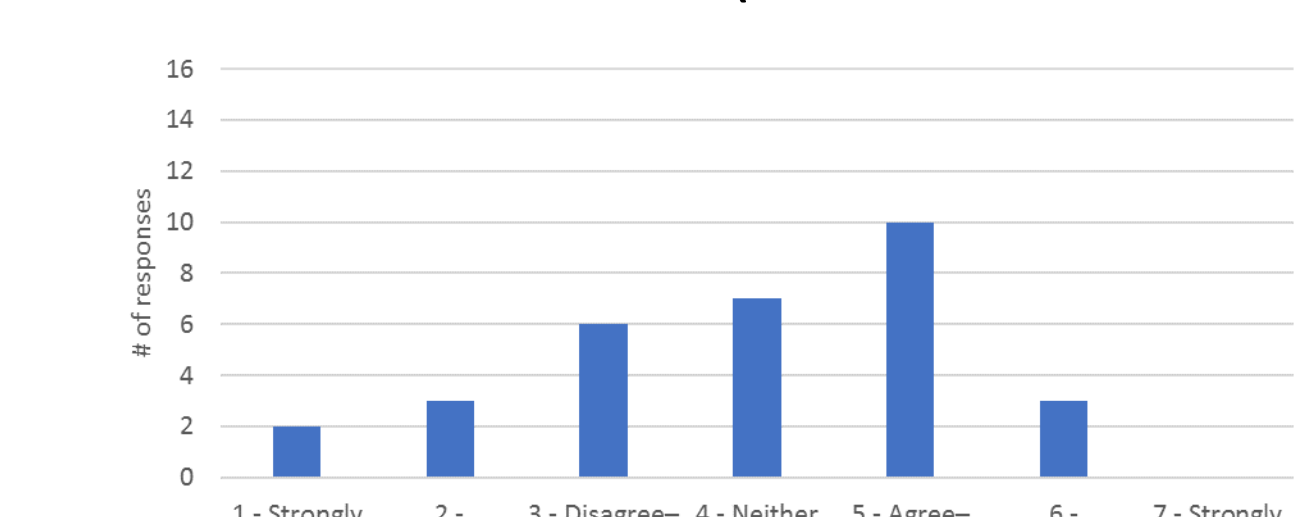
•Please indicate your level of agreement with the following statement: I believe the patient understands the specific roles and expected tasks of each member of their care team (ex. nurse vs PCA tasks)

DISCUSSION

- Implementation of Bedside will streamline tasks such that the correct care provider is notified for a specific task and the patient will have answers to questions typically directed towards the care team about their care plan and patient education at their fingertips.

- Current issues in the task flow of patient-provider care were identified and future work will demonstrate where the Bedside application can alleviate these pain points, and how it may introduce new concerns for providers.

- Potential benefits to the Bedside application include increased patient education, simplification of provider workflow, increased perception of provider attentiveness, increase in ease of communication for speaking impaired patients, and increased use of relevant and novel technology.

- Potential pitfalls could include a reluctance of technology adoption for older patients, difficulty with the technology implementation and unit change management, the patient perception of less personalized care and unforeseen issues in task flow for patient provider communication through the use of a tablet.

- Increase in provider satisfaction and efficiency of workflow can lead to better patient care. Evaluating technology that can assist in increasing this will help justify and encourage the use of such technology to improve overall patient health outcomes.

FUTURE WORK & LIMITATIONS

- Survey responses and observational data will be collected after the implementation of Bedside in the pilot units. By comparing the survey data from the pre-implementation phase with the post-implementation phase through a chi-squared analysis, we will conclude what effect the implementation of Bedside has on provider perceptions of patient-initiated communication and provider workflows.

- A limitation to the survey data is the small sample size of providers. Another limitation is that survey data do not capture specific provider identification information and thus pre- and post-implementation responses will not be paired to the same individual for comparison.

ACKNOWLEDGEMENTS

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