InHouse Call: Streamlining Communication to Optimize Efficiency and Patient Care in a Hospital

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Disclosures
- Owner of ProviderDirect, LLC
- Winner of the 2021 ECU Pirate Entrepreneurship Challenge
Poor hospital communication has been identified as a root cause of:
- poor patient outcomes
- fatal errors
- decreased time spent in direct patient care
- a significant economic burden to the national healthcare system

The most common communication systems in hospitals today include:
- Switchboard Operators
- Workstation Call sheets or Pocket Cards
- Apps: Secure texting or “sign-in and sign-out dependent” communication apps
Introduction

The InHouse Call app was developed to address the need for improved hospital communication:

- The app’s cornerstone feature is using the patient’s room number as a reference point for all related phone numbers.
- The app also includes department (CT scan, Micro lab, etc) and administration numbers (Security, HR, etc).
- The aim of the project was to improve interprofessional communication by decreasing call time by 50%.
Methods

- A mixed-methods study was used to evaluate InHouse Call using a before-and-after survey methodology combined with objective time trials.
  - A convenience sample of 20 hospital clinicians were surveyed on hospital communication.
  - Participants were timed to complete a task to call a particular healthcare team member (RN, ECHO department, etc) using traditional methods (switchboard operator, workstation sheet, etc).
  - They were then introduced to the IHC app for 45-60 seconds.
  - Participants then repeated the same task using the InHouse Call app.
  - Participants then completed an exit survey.
The baseline survey revealed a significantly poor perception of the current hospital communication system - 75% of respondents reporting frustration over not being able to find the right contact daily or several times per week, and 70% reporting that poor communication impacted patient care and workflow daily or several times per week.

Out of 44 total timed trials, the average time spent to connect to the correct contact via traditional methods was 73.5 seconds, while the average time spent to connect to the correct contact via InHouse Call was 14.6 seconds. By eliminating time-consuming steps, the average time saved utilizing InHouse Call was 58.93 seconds, an 80% decrease.
The variability differed significantly. Calls using traditional methods deviated from the mean by 40 seconds, while a call using InHouse Call deviated from the mean by only 4 seconds.

The InHouse Call app was well received by its users and gave it an overall Net Promoter Score of 95, a powerful indicator of a user’s overall satisfaction with a product and likelihood to recommend to others.
Lessons Learned

- Hospital communication negatively impacts patient care, clinician workflow, and is a source of frustration for hospital clinicians.
- The InHouse Call app decreases the time to make a call in the hospital setting by 80% and significantly reduces variability between calls.
- Users were highly satisfied with the app.
Next Steps

- Since completion of this research project we have developed a beta version of the app which has an improved search function and is now capable of initiating the phone call through the phone. These features will further improve InHouse Call’s efficiency. We also would like to implement a “Web OnCall feature”
- Currently working on initiating a Beta trial with Hospitalists
- Discussing with Vidant’s IT department in hopes to get IHC into the hands of all VMC physicians and APPs
Questions?