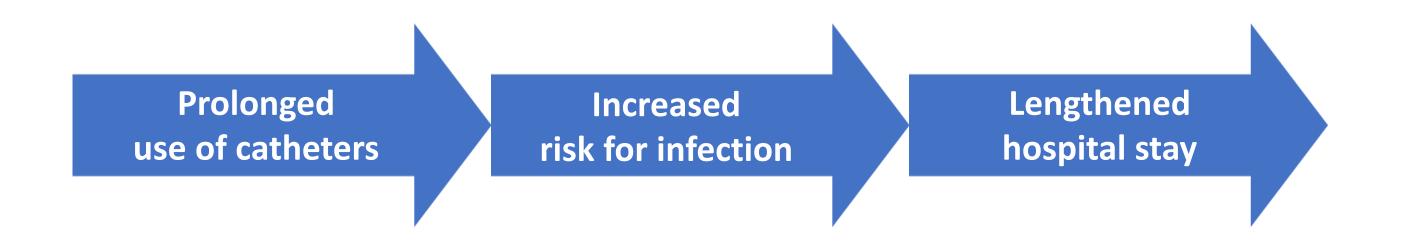
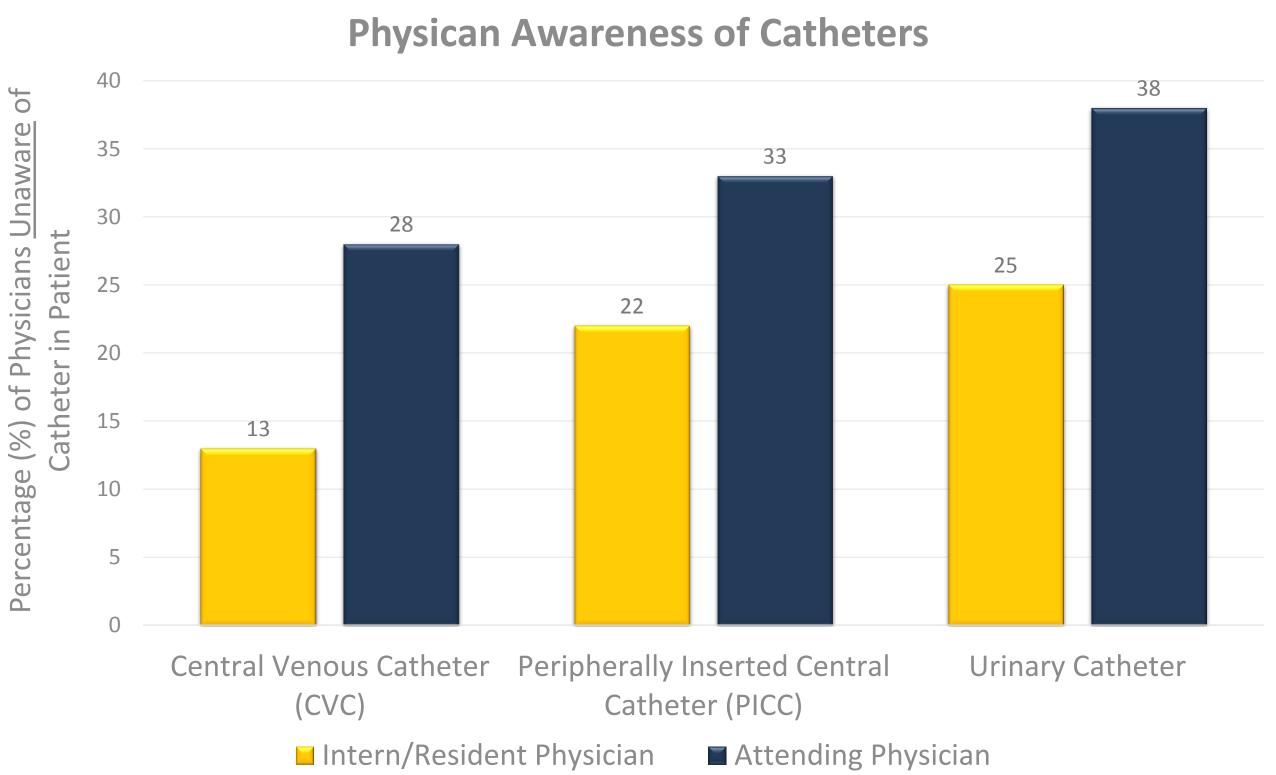
# M-Safety P1: Improving Awareness of Catheters and Skin Wounds to Reduce Hospital-Acquired Infection Lauren Hirth, Jhuree Hong, Sheridan Tobin, Kristine Wang, Jessica Ameling, MPH, Amy Cohn, PhD, Jennifer Meddings, MD

## **Problem Statement**

Catheters are often necessary for patients with prostate problems, following surgery, or needing medicines over a long period. However, prolonged catheter placement does pose risks that must be managed.



Unfortunately, the literature shows that physicians are often unaware of the presence of catheters in their patients.



Communication between nurses and physicians is often reduced due to lack of physical interaction and dependence on the electronic medical record.

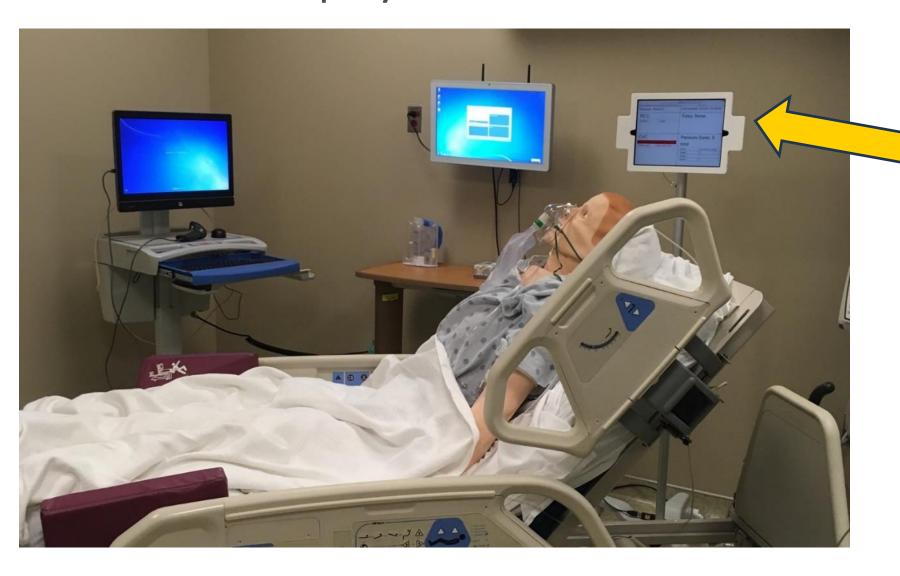


Ameling, J., Quinn, M., Forman, J., Sankaran, R., Fowler, K.E., Manojlovich, M., Peterson, L., & Meddings, J. (2017 larch). Clinician-identified barriers to removing unnecessary urinary and vascular catheters. Poster presented at The Society for Healthcare Epidemiology of America Spring 2017 Conference, St. Louis, MO.

Human Components: Communication & Teamwork Decision-Making Meta-Cognition & Mindfulness Networking

> Technical Components: Wireless Sensors Artificial Intelligence **Risk Profiles** Information Systems

Prototyping was conducted in simulation labs in order to receive feedback on the display.



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"I should be able to find all of this information [catheter and skin wound] by doing an exam, so this [our display] is sort of a cane... something to help."



"That [looking at catheter durations] immediately starts me asking questions like 'why?'"

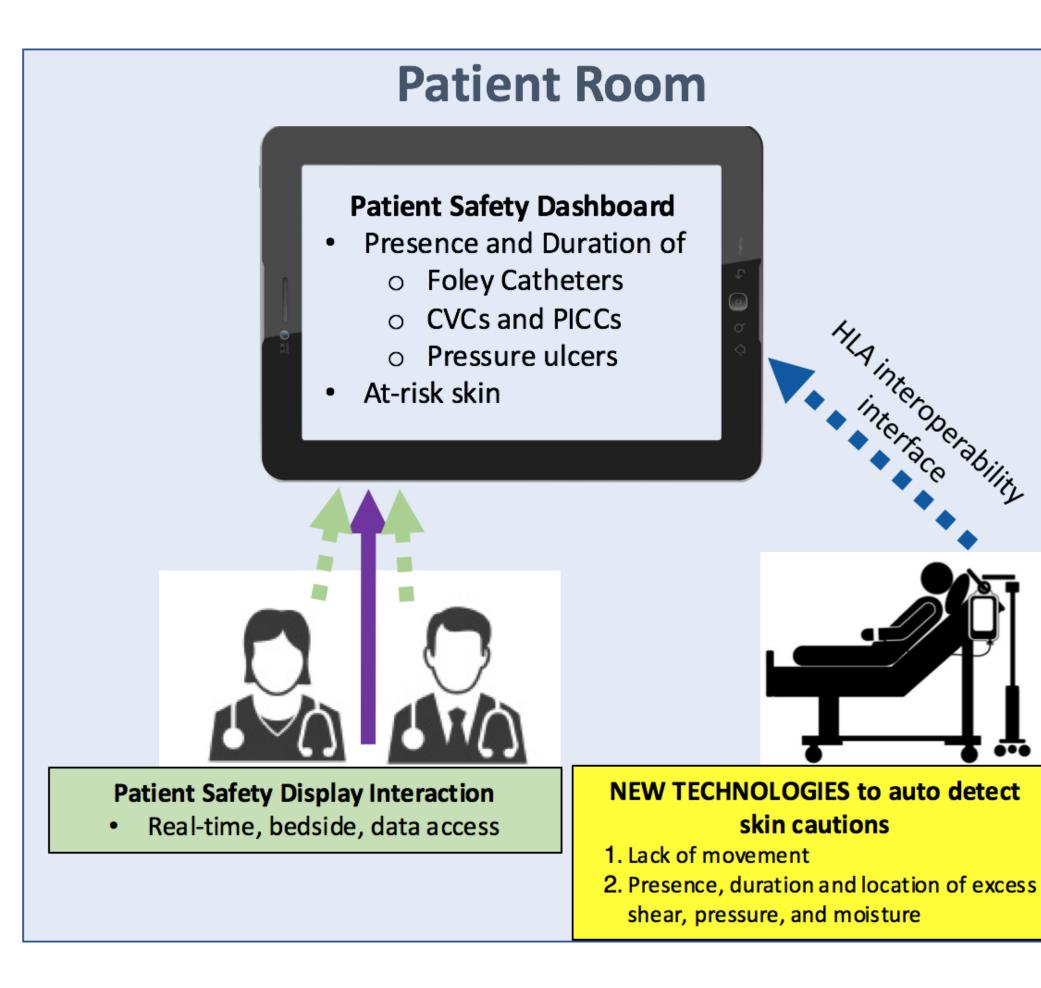
# **Future Work**

- Continue updating bedside display in accordance with research team requests and with special attention to HIPAA compliance and security
- Continue conducting pre-intervention provider awareness surveys and analyze the results
- Implement the display in clinical unit and conduct post-intervention provider awareness surveys

## **Solution Approach**

We propose a bedside display to improve provider awareness of risks due to catheter placement and pressure wounds.

Healthcare Engineering & Systems Redesign



### **Impact & Preliminary Results**

Patient Safety Display Prototype

Our team has collected **317** pre-intervention surveys to assess provider awareness of catheters and pressure injuries.

### Provider Data

• Physicians and PAs complete a paper survey after rounding on their patients

We have completed 16 dates of pre-intervention surveying of Medical providers and have started the same process for Surgical providers.

After the display is introduced into the clinical environment, we will collect similar post-intervention surveys and compare the results.

We would like to thank the full M-Safety Project 1 research team, M-Safety Lab, and CHEPS for their support of this project.



### MiChart Data

• Our team records EMR data on the presence of catheters and pressure injuries

### Nursing Data

• We also record the same data from the Daily Management System, which is maintained by the unit's charge nurse

### Acknowledgements

