## Development of an electronically pre-populated handover tool utilizing research design

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### Background

Miscommunication causes errors at handover (WHO, 2007; AHRQ, 2012)

**Related studies**

- Nelson (2010), a Microsoft® nursing handover template created increased satisfaction, and decreased over-time
- Staggers (2011), handover tools did not support nurses work flow, nurses need portability & accessibility
- Staggers (2012). a qualitative study on electronic tools showed that nurses discontinued organizational electronic tools in favor of **personal paper based forms**

### Purpose

The purpose of this study was to develop an electronically generated customizable paper standardized nursing handover tool and to assess the use and satisfaction with the new tool.

### The Setting

- A 656 bed metropolitan acute care hospital in Southern California.
- This study is part of a 3 part research program to improve patient safety at change of shift.
- **In Phase 1**, nursing report sheets (scraps) from 103 nurses were collected for content analysis.
- We found 28 different “standard” handover tools in use in our facility. All of the report sheets were personally customized (Eusebio et al, 2014).

### Results

- **78 pre and 58 post surveys** were returned for analysis
- Using the **Mann Whitney U test**, the 9 questions asked showed no statistically significant difference in use of the form or tool satisfaction, as compared to previous practice.

### Practical Limitations

- Printing the tool required 6 clicks plus EMR log-in. Font size, printer margins, etc. influenced placement of preprinted items.

### Discussion

- **Nurses used paper handover tools** whether the tool was electronically pre-populated or not.
- There were features in the new design that nurses found to be helpful.
- Utilization of the new handover tool was inconsistent.
- Currently, this handover tool is live and available to our entire hospital system as a print-on demand report. Nurses system-wide are using this tool.

### Implications

Integration of the nursing handover tool with the EMR is a viable means to enhance change of shift standardization. The next step is to learn if this standardized tool leads to better patient outcomes.

### Old Handover Tools

![Image of old handover tools](Image)

### New Handover Tool

![Image of new handover tool](Image)

**Phase 2:** Previously collected data from Phase 1 was used to inform the content for the new electronically generated pre-populated paper handover tool

**Procedure:** The design of the electronically generated handover tool was created from a a Cerner® generated summary report of pre-populated patient information

**Population:** Direct care registered nurses working in an acute care inpatient hospital setting with a patient assignment

**Post utilization data:** Demographic information and a use/satisfaction survey

Institutional Review Board approval # 141286/ References available upon request