

NIH Summer Research Program 2006

POSTER TITLE: Design Efficiencies and Evaluation of Computerized Order Entry

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ABSTRACT:

The need to promote patient safety suggests full compliance with using the electronic health record for provider order entry (CPOE). Compliance has been hindered by the limitations of older technology currently used as well as the perception that order entry is a unit clerk's responsibility. New technology that provides more efficient and user-friendly screen design, flexibility, and decision support capabilities is needed. The Clinical Research Information System (CRIS) being implemented at the National Institutes of Health (NIH) provides these improvements and needs to be evaluated and compared for efficiency and effectiveness.

This is an observational descriptive time study that measures the impact of a new computer system on task flow and duration. It also evaluates the effectiveness of training and system design efficiencies. Types and amount of time spent on entering orders, interruptions or asking for assistance to enter orders will be compared. The results presented in this poster represent data collection using the new system and will be compared to information that was obtained one year ago on the old system.

PURPOSE:

- To evaluate the design efficiencies of the Medical Information System (MIS) and compare with planned improvements in order entry with the Clinical Research Information System (CRIS).
- To compare the amount of time spent on entering a defined set of orders.
- To identify type of assistance required and amount of time spent providing help.

CONCLUSIONS:

- There was a significant difference between the mean scores for total time to complete orders
- There was a significant difference between the mean scores for total time needed for assistance
- Demographic data may have provided insight to differences between groups
- Access and use of order sets may have provided time savings
- Newer technology can provide time savings through:
 - Organized presentation of information
 - Familiar windows based platform
 - Consistent methods for order entry
 - Utilizations of tools for quick order entry
- Implications for further study with a larger group