University of Maryland Baltimore Graduate School

Announcement of Doctoral Dissertation Defense*

Candidate: Charlotte Seckman

Date, Time, and Place: Monday, April 21, 2008 from 3:00pm – 5:00pm in Room 503

Dissertation Title: Clinicians' perceptions of usability of an electronic medical record over time

Dissertation Abstract**:

The purpose of this study was to evaluate clinicians' perceptions of usability with an electronic medical record (EMR) over time. This was a descriptive retrospective longitudinal design using secondary data obtained as part of a performance measurement plan. Data were collected via survey at five different points in time over four years. Matching of individuals was not possible due to the anonymous nature of the original responses therefore thirty cases were defined by grouping clinicians by age categories, gender, and role. Each response was considered to be a repetition of measurement of the case. The research questions explored the overall pattern of change in usability related to an EMR implementation, the short term and long term change in usability, and if the patterns of usability were influenced by frequency of use, gender, age, length of service (LOS), or role. The short term impact or wave 1, included evaluations at baseline before, four months, and 16 months after the implementation of an EMR. The long term impact or wave 2, included evaluations before, four months, and 16 months following a system upgrade.

Linear mixed model analysis was used to examine patterns of change over time including the contribution of frequency of use and user characteristics on the outcome variables. Each variable had curvilinear and linear patterns following the initial EMR implementation but not after the system upgrade. Usefulness, ease of use, supports clinical care, and supports research had significant linear and/or quadratic changes over the short term. There were no significant changes in wave 2 except for ease of use. Frequency of use was a significant predictor for usefulness and supports clinical care but not for ease of use. Age, LOS, and role contributed significantly to usefulness, ease of use and supports clinical care but gender did not. Role and LOS combined were significant predictors for usefulness, supports clinical care, and ease of use in wave 1. The findings indicate significant short term changes related to the initial EMR implementation but not the upgrade. This has implications for system development related to education, clinical practice and research.

Dissertation Committee Chair:
Mary Etta Mills, Sc.D., RN, FAAN, Professor

Dissertation Committee Members:
Erika Friedmann, PhD, Professor
Meg Johantgen, PhD, RN
Barbara Covington, PhD, RN
Rear Admiral Carol Romano, PhD, RN, FAAN, Assistant Surgeon General and Chief of Staff, U.S.A.
Chief Nurse Officer, US Public Health Service National Institutes of Health

The Open Presentation is open to the university community and invitees of the candidate. Any member of the Graduate Faculty may observe the Final Examination. Only committee members may vote. For more information, see* ***Procedures for Examination of the Doctoral Dissertation.*

***You must type your abstract on this form in the space provided.*

Updated: February 24, 2006