Effect of Electronic Charting on the Patient-Psychiatrist Relationship
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Abstract
The impending implementation of an electronic medical record (EMR) within Behavioral Health facilities at the University of New Mexico (UNM) offers a unique opportunity to study the effects of EMR usage on a psychiatric patient population. A pre-test and post-test design using a satisfaction survey will test for changes to the patient-psychiatrist relationship before and after implementation. To date, 51 subjects have participated in the pre-implementation portion of the study.

Problem Addressed
Since the 1980’s, numerous studies have shown little change to overall patient satisfaction when physicians use computers in the clinical setting. These studies have shown, however, that certain aspects of the patient-physician relationship (viz., confidentiality concerns, communication style, anxiety, and idealism) are altered by computer use.

None of the published studies have specifically included psychiatric patients. Moreover, those aspects that do change are potentially more influential for psychiatric patients than for non-psychiatric patients.

We hypothesize that overall patient satisfaction will decrease when Behavioral Health changes from paper-based to electronic charting.

Methodology
Setting
UNM Behavioral Health facilities are preparing to transition from a paper-based to an electronic charting method. During clinical encounters, psychiatric services already use the Cerner\textsuperscript{\textregistered} product PowerChart Office\textsuperscript{\textregistered} for writing prescriptions and for retrieving lab results. Thus, when these facilities transition to an electronic charting system, the only change will be from paper-based to electronic documentation of encounters. This provides a unique opportunity to isolate and investigate the use of paper vs. electronic charting in the psychiatric setting.

Study design
We chose a quasi-experimental, pre- and posttest design as the method best suited to the EMR implementation schedule. The quasi-independent variable is use of either paper-based or electronic charting. The dependent variables are aspects of the patient-psychiatrist relationship as measured by scores on a self-administered, pen-and-paper, patient satisfaction survey.

Subjects are being recruited from clinics at the UNM Psychiatric Center. This facility sees adult, chronic, mentally-ill outpatients, with a broad range of psychiatric diagnoses including mood, anxiety, psychotic, substance use, and personality disorders. An approximately equal number of males and females are seen. Subjects will be unmatched and may participate in the pre-implementation survey group, the post-implementation group, or both. Their diagnosis information, as a covariate, is also collected from their psychiatric record.

Evaluation
We have developed a satisfaction survey of 23 five-point Likert scale questions. 18 of these were derived from the Rand Corporation’s publicly available Patient Satisfaction Questionnaire-18 (PSQ-18). Five questions were generated locally.

We grouped survey questions into those factors most likely to be affected by electronic charting:
- Overall Satisfaction
- Computer Use
- Competency \& Trust
- Listening \& Attentiveness
- Communication \& Education
- Stress \& Anxiety
- Confidentiality \& Stigma

Results to Date
We have started the pre-implementation phase of the survey. Power analysis estimated the need for 161 subjects per group; 51 have participated to date. Recruitment has been lower than anticipated. Female-to-male response bias has been almost two-to-one.

Based on preliminary review of available data, it tentatively appears that the lowest-scoring factor is “Stress \& Anxiety” (3.06) and “Communication \& Education” is the highest (3.92). No diagnosis-associated effects have been identified.

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