Quality of Clinical Encounter Notes in AHLTA

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PURPOSE:

The purpose of this study is to develop a quality rating instrument (QRI) to measure the quality of an individual clinical encounter note (whether paper or electronic)within a patient's medical record. Our focus is the quality of the note itself, not simply the care rendered, and whether the note satisfies the espoused values of those who are affected by the use of medical records.

Specific Aims:

1. To develop a Quality Rating Instrument for clinical encounter notes. We will conduct focus groups with major stakeholders (physicians, patients and caregivers or family, administrators, nurses and ancillary staff) to identify what they consider to be "essential" attributes in terms of defining a 'quality' progress note. Using a grounded theory approach, qualitative data will be analyzed to derive criteria for the data abstraction instrument (Quality Rating Instrument or QRI). We will additionally interject the opinion of "experts" by introducing published findings from systematic review of the peer-reviewed literature.

2. To validate the QRI before use. The reliability of the instrument will be studied in different settings (free-standing clinic, community hospital, and tertiary care facility) and across encounter types (acute problem or continuity of care visit) to calculate internal consistency, precision of measurement and inter-rater agreements.

3. To determine if the quality of the clinical encounter note has changed since the implementation of AHLTA. We will use the instrument Quality Rating Instrument to conduct a quantitative assessment of clinical encounter note quality across diverse sites and appointment types within our health system. We will specifically compare rated quality of clinical encounter notes from a paper medical record (before AHLTA) – our baseline data and at a defined point after implementation of AHLTA.

RESEARCH HYPOTHESES:

H_1 The reliability of our Quality Rating Instrument (QRI), will not vary by the type of patient encounter (known or unknown clinical problem; acute or chronic visit type).

H_2 Our QRI will detect differences in the "aggregate quality score" and various "dimensions of quality" when clinical encounters are compared within appointment type ("known" (established diagnosis) or "unknown" clinical problem; acute or chronic visit type).

H_3 Our QRI will detect differences in both the "aggregate quality score" and the various "dimensions of quality" when comparing documentation of clinical encounters by note format (i.e. paper or electronic).

METHODS:

This large study is a qualitative-quantitative approach to collecting data to address the specific aims and hypotheses identified above:

***Specific Aim #1:* To develop a Quality Rating Instrument (QRI) for clinical encounter notes.** Our research team will conduct a formal systematic review of the literature and engage in a series of focus groups with stakeholders for the purpose of developing our QRI.

Including the Opinion of Experts from Published Literature: Our Research Team will complete a systematic review of the literature regarding quality in medical notes. We will search the following electronic databases:

- Medline (medical/healthcare literature)
- Cinahl (nursing and allied health literature)
- Embase (European medical/healthcare literature)
- PsychInfo (psychological literature)
- Current Contents Connect (life science, medical, arts and humanities literature)

Major Stakeholder Focus Groups for Aim #1 Research (8-12 total per site):

Clinicians = Physicians + Nurse Practitioners (both military & civilian employees/contractors of the MHS)

Admin = Billing staff + Medical Records + Risk Management/Quality Improvement/Patient Safety/Utilization Management + Case Management + Health Benefits + Managed Care Staff

Nurses / Ancillary / Support = Clinic nurses + Social Workers + Case Managers + Physical Therapists + Occupational Therapists + Respiratory Therapists + Nutritionists

Patients / Caregivers = Chronic care patients + parents of well children + parents of sick children + Active Duty members + Retirees (without chronic care needs)

Proposed Site Locations for Aim #1 Focus Groups:

Site location	Projected site visit	Type of facility
Malcolm Grow Medical Center, 89th Medical Wing, Andrews AFB, MD	Fall 2008	Community Hospital (USAF)
11th Medical Group – Bolling USAF Health Clinic, DC	Fall 2008	Outpatient Clinic (USAF)
Naval Medical Clinic, Annapolis, MD	Fall 2008	Outpatient Clinic (USN)
National Naval Medical Center – Bethesda, MD	Fall 2008	Medical Center (USN)
Dewitt Army Community Hospital – Ft. Belvoir, VA	Winter 2009	Community Hospital (USA)
Walter Reed Army Medical Center, DC	Winter 2009	Medical Center (USA)

***Specific Aim #2:* To validate the QRI before use.** Validation is a two-step, quantitative process involving reliability (the internal consistency of rating instrument, and inter-rater agreement in its use) and validation in comparison with an external standard. Reliability will be established for the abstractors who will be doing the Aim # 2 scoring. Validity of the rating process will be by comparing QRI rating scores of the chart abstractors with the four groups of stakeholders.

Reliability chart selection process	Tertiary Facility	Community Hospital	Outpatient Clinic
Location	NMC Portsmouth, Portsmouth, VA	1st Medical Group Langley AFB, Hampton, VA	McDonald Army Health Center, Fort Eustis, VA
Prior diagnosis (return visit)	Pre-AHLTA (10) Post- AHLTA (10)	Pre-AHLTA (10) Post- AHLTA (10)	Pre-AHLTA (10) Post- AHLTA (10)
New complaint	Pre-AHLTA (10) Post- AHLTA (10	Pre-AHLTA (10) Post- AHLTA (10)	Pre-AHLTA (10) Post- AHLTA (10)

***Specific Aim #3: To* determine if the quality of the clinical encounter note has changed since the implementation of AHLTA.** Using our validated QRI, Lockheed Martin record abstractors will collect data from a sampling of clinical encounter notes both in paper (before AHLTA) and electronic format (AHLTA records). The data will be analyzed, compared, and assertions about changes in quality of documentation will be offered.

Sample matrix (number of notes abstracted) by appointment type

Patient / Appointment Type	Acute Care	Chronic Care
Patients in internal medicine, family medicine, primary care, pediatrics general surgery, and obstetrics/ gynecology clinics, flight surgery	PA 270 A 270	PA 270 A 270

PA denotes abstraction from pre-AHLTA clinical encounter notes within a paper medical record
A denotes abstraction from AHLTA clinical encounter notes

Proposed abstraction sites by geographic region and Service (target: 2009)

Service	Tertiary Facility	Community Hospital	Outpatient Clinic
Army			McDonald Army Health Center, Fort Eustis, VA
Air Force		1st Medical Group Langley AFB, Hampton, VA	
Navy	Naval Medical Center Portsmouth, Portsmouth, VA		

Data Analyses: Multiple statistical analyses will be performed on this three phase qualitative-quantitative research project. Techniques will include:

- Grounded theory approach (open, axial & selective coding)
- Rasch analysis
- Univariate statistics
- Analysis of variance (ANOVA)
- Confirmatory factor analysis
- Multiple analysis of variance (MANOVA)

ANTICIPATED FINDINGS / IMPLICATIONS:

A validated tool for measuring the quality of documentation in clinical encounter notes and empirical evidence on changes in quality of documentation with the transition from paper to electronic records will prove valuable to MHS leaders, program managers, and staff when considering AHLTA design changes or quality improvement efforts.

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