Understanding the factors that contribute to patient-doctor trust or distrust will lead to guidelines that can help doctors more effectively interact with their patients.

Previous studies have found that patient trust in care providers predicts quality variables such as:

- sustained enrollment in health plans (Zheng, 2002)
- patient satisfaction (Thom, 2002)
- utilization of preventive services (Pearson, 2000)
- adherence to medical advice (Thom, 2002)
- malpractice litigation (Pearson, 2000)
- health status and (Pearson, 2000)
- health service seeking behaviors (Pearson, 2000)
BACKGROUND OF HEALTHCARE AND TECHNOLOGY

Trust in technology - a person’s belief that electronic or mechanical devices used to replace or augment human labor will perform effectively (Sheridan, 2001)

SPECIFIC AIMS

Quantify doctor-patient interactions using a validated behavioral coding methodology

Quantify doctors’ use of computers as an interaction variable

Collect patient ratings of trust and attitudes about technology

Development of new ways to measure trust

METHODOLOGY/APPROACHES

Participants: 100 volunteer patients ≥18 years of age and their doctors in a primary care clinic

Two forms of data will be collected:

- observational and questionnaire
- Audio/ video will be collected with three channels
  - 1) doctor face at computer
  - 2) patient face
  - 3) doctor-patient wide angle of exam

Questionnaire will include existing measure about the interpersonal trust and demographics
CODING SCHEME

What is coding?
- Assigning attributes to each nonverbal behavior
- Describing behavior in an accurate and quantitative way
- Determining the occurrence of physician and patient’s nonverbal behavior

Why is it important?
- The classification of nonverbal behavior (gazing, touch etc.) enables us to understand the relationship that these nonverbal behaviors have to patient satisfaction, empathy, and trust of the doctor

PREVIOUS STUDIES USING CODING IN HEALTH CARE

- Coding patient-centered behavior in the medical encounter (Zandbelt, 2005)
- Doctor, patient and computer—a framework for the new consultation (Pearce, 2009)
- Primary care physicians’ use of an electronic medical record system: a cognitive task analysis (Shachak, 2009)

OUR CODING SCHEME

The proposed coding scheme has 3 parts:
- Subject (Doctor and Patient)
- Behavior (Gaze, Typing, Task Touch, Social Touch)
- Object (Doctor, Patient, Computer, Chart, Tool etc.)
**OUR CODING SCHEME**

- Standard procedure for each coders
- Reliability check between each coders
  - For inter-coder reliability, a Kappa value of 0.60 to 0.75 could be considered good and over 0.75 could be considered excellent (Bakeman, 2000)

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*Human Computer Interaction Laboratory: Study: Reliability results

**NOLDIS/ ONBOARD**

This software is used to code videos in a systematic way and also sync videos with other measurements.
The contribution of the project to the future studies

- Development and validation of a behavioral trust in physician instrument
- Evaluation of work system characteristics and negative interactions
- Evaluation of effect of technology implementation over time
- Allows caregivers to review their performance to improve the quality of their patient interaction

Thank You

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