UNDERSTANDING INTENSIVE CARE UNIT CLINICAL COMMUNICATION USING KNOWLEDGE REPRESENTATION

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ABSTRACT

Medical errors are a major cause of death among Americans, and clinical miscommunication is considered the leading cause of medical errors. The aim of this study was to analyze clinical communication behaviors and interruptions by further understanding Human-Human and Human-computer interactions.

A systematic literature search was conducted to identify and extract reported medical error cases caused by clinical communication problem. An ICU observational study was combined with medical error reported cases to better understand communication. Researchers shadowed the ICU team, for 55 hours during patient rounds, to capture 6 main communication factors. Simultaneously,

242 reported communication errors were collected from literature, 279 patient visit was observed at the ICU, and 147 survey responses were gathered. As to the observation data, the most frequent communicator during ICU patient rounds was the Attending Physicians. The ratio of interruptions caused by clinicians to technology-aided devices was 3:1 per patient visit.

To further understand clinical communication, primary and secondary data were collected and analyzed and as a result, human-human and human-computer interaction models were developed to build a communication framework that puts into perspective the various factors involved in the communication process among care givers.