Public Abstract
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Clinical communication failures are considered the leading cause of medical error. The complexity of clinical cultures and the significant variance in training and education levels form a challenge to enhancing communication within the clinical team. To further study communication among care providers, namely at the Intensive Care Unit (ICU), reported medical error cases were combined with observation data to create a data repository that serves as a knowledge base to this research. Over 55 hours of ICU observation were conducted to capture communication instances while the clinical team conducted patient rounds. Out of 279 patient visits, the most frequent communicator during ICU patient rounds were the Attending Physicians. The ratio of interruptions caused by clinicians to technology-aided devices was 3:1 per patient visit. The mean frequency of an Attending Physician interacting with a computer was once per patient visit. The data was captured and stored in a database management system, and along with reported cases in literature, we consolidated our findings into the first ICU clinical communication models, to our knowledge, with an emphasis on human-computer and human-human interactions. This research aims at building an exhaustive representation of the communication framework to be implemented in error reporting systems through an ontological approach.