

## Abstract

**Introduction:** Treatment of frail elderly patients requires complex multi-disciplinary assessment with rigorous communication and handover processes. The ED FIT Team is a group of allied health professionals reviewing patients aged over 75 years of age attending Beaumont Hospital Emergency Department. The team uses traditional paper based tools to facilitate communication and collaboration. This research investigates the ability of healthcare information technology, such as the use of an electronic whiteboard, to facilitate collaborative working in a complex multi-disciplinary environment.

**Objective:** A digital system was designed for the ED FIT process with significant involvement from clinicians and the impact on the efficiency of process, the communication channels utilised by the team and on the quality and availability of data from completed assessment forms was evaluated.

**Methodology:** A clinician led iterative design process was undertaken and combined with a mixed methods evaluation. Assessment of time and steps required to complete the process was used to evaluate efficiency. Communication was assessed by considering the volume of onward referrals generated. Quality and availability of data was assessed using the QNote tool. Semi-structured interviews were then conducted with clinicians to evaluate user experience.

**Results:** Some differences were found between the process pre and post deployment. The new system took slightly longer (20.30 minutes (pre), 23.81 minutes (post)), required fewer steps on average (9.75 (pre), 9.08 (post)) and was met with generally positive feelings from end users. There was an increase in the referrals made and a consensus that automation of process was beneficial. The new system provided improved availability of data with 100% of forms available compared to 67% pre deployment, and a marginal improvement in completeness using the QNote score (69.39 (pre), 73.81 (post)).

**Conclusion:** Users were satisfied with the system and modest improvements in terms of efficiency, communication and data quality were found.

**Keywords:** *Computer Supported Cooperative Work, CSCW, Electronic Whiteboard*

**Key Sentence:** *The design and deployment of a computerised assessment process has improved data quality and availability and communication without negatively impacting on efficiency while creating a positive user experience for therapists based in an acute hospital emergency department.*