Engaging Home Care Patients And Caregivers For Better Fall Risk Management: Challenges, Opportunities, And Leveraging Information Technology

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EMERGENCY room visits due to falls constitute the largest group of potentially avoidable events in home care.[1] In addition to increasing healthcare costs,[2] all injuries can easily lead to further serious health problems and even death for home care patients who are often elderly and vulnerable.[3] Therefore, achieving better fall-risk management (FRM) becomes critical in improving the quality of care provided by home health agencies (HHAs).[4] In working towards this goal, better engaging home care patients and caregivers in FRM can be both effective and efficient because they are often the least utilized resources in healthcare.[5,6] Information technology (IT) can play a catalyst and even an enabler role in improving the quality of care.[7] Therefore, this qualitative research identified the prominent challenges and opportunities associated with engaging the patients and their caregivers in FRM during home care episodes, and it explored how IT solutions can be leveraged to positively impact their engagement in FRM. On these topics, there has been a lack of evidence prior to this study.

Methods: After obtaining the ethics approval, four focus groups were conducted to elicit the perspectives of a professionally diverse group of home care professionals in Maryland. Twenty participants were recruited based on maximum variation sampling[8] strategy by considering the participants' professional background as well the characteristics of their organization (e.g., size, business model, geographical areas served). The discussion was audio-recorded and run by an experienced facilitator assisted by a scribe. Each participant reflected his or her notes individually on the provided handout sheets before discussing within their focus group. Each focus group summarized their ideas on a flip chart. Raw data were collected from the participants' individual handouts, group flip charts, transcripts of the audio recordings, and the scribe notes. The Framework[9,10] method was used to analyze the raw data resulting in a number of recurring themes.

Results: **Challenges and Opportunities** – The participants noted that while physiological problems such as gait and balance issues increased fall risks, some patients with such problems also had cognitive issues preventing them from fully comprehending the FRM advice. This combination requires an even higher degree of caregiver involvement in home care. Additionally, the participants noted that some of the caregivers did not fully understand their role in FRM or what was required of them to keep the patients safe either. Among the challenges for FRM was the lack of physical presence of caregivers with the patient most of the time. The participants also noted that some patients fall because they are in denial of their physical abilities and limitations. Additionally, cultural differences and language barriers hindered the clinicians from providing effective FRM advice to both the patients and their caregivers. The participants also reported that the lack of knowledge and literacy among some patients and caregivers increased fall risks due to their inability to understand and follow directions. Some home environments did not support effective FRM; these homes had uneven surfaces, poor lighting, and no hand-rails. **Leveraging IT** – The participants noted that making patient portals available to patients and caregivers on mobile devices, such as smart-phones, can increase their engagement in FRM. Patient portals have the potential to make the FRM information easily available as well as keep the patients and their caregivers informed of the care plan and progress. However, the acquisition, maintenance, and training costs limited the adoption of portals. Cellular network coverage limitations and the Internet affordability were also mentioned as barriers to patient portal use. Sensors, such as those installed in the home or integrated into devices, can possibly increase engagement by providing the patients and caregivers with data about activity levels as well as movement and gait patterns. However, cost and privacy issues still impede their adoption to reduce fall risks. The participants believed that if telehealth solutions can be economically feasible and adopted widely, they can help clinicians address FRM-related questions in a timely manner, such as those about durable medical equipment use.

Discussion: Similar to other studies,[11–13] the results indicate that for effective engagement in FRM using IT, clinicians must consider the literacy and comprehension levels of patients and caregivers. HHAs should consider involving the motivated patients and caregivers more directly in some of the FRM-related quality improvement discussions and meetings. As the IT adoption for FRM increases, it will be important to provide patients and caregivers proper training and continuous support to use the adopted solutions.

Conclusion: This study provided evidence about the issues related to effectively engaging patients and caregivers in FRM during home care episodes. It also identified patient portals, sensors, and telehealth as the most promising solutions to

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increase patient and caregiver engagement in FRM.

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