Identifying Home Care Providers' Information Needs for Managing and Reducing Fall Risks

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Dari Alhuwail[1], Güneş Koru[1]

F ALLS are the leading cause of home injuries for older adults,[1–3] often cause hospital admissions,[4] and are costly.[5] In 2013, more than \$34 billion was spent as a direct medical cost for falls.[6] In home care, the Centers for Medicare and Medicaid Services (CMS) reports that, injuries from falls contributed to unplanned ER visits and ranked as the highest amongst potentially avoidable events (PAEs).[7] PAEs reflect a serious health condition or decline in health status for a patient that potentially could have been avoided while the patient was under care at a home health agency (HHA).[8] Unfortunately, home care providers often start the episode of care devoid of information[9] critical to fall risk management and quality care. This study aims to (i) identify information needs of home care provider, (ii) classify them, (iii) and identify gaps in existing workflows as they relate to managing and reducing the risk falls.

Methods: A qualitative research approach was preferred as it allowed the research team to obtain rich and context-specific information.[10–12] A detailed and rich literature review on the topic was conducted initially. Data from three branches of a Maryland HHA were collected through: (a) direct observations (n=6), (b) face-to-face focus groups (n=22), (c) a face-to-face meeting (n=19), and (d) semi-structured interviews (n=20) sequentially. Participants included, nurses, physical and occupational therapists, home aides, care transition employees, managerial staff, and health IT administrators. The Framework Method was used for the analysis of the results.[12,13]

Results: Broadly, information needs of home care providers were clinical and non-clinical in nature. These needs were categorized into four main domains: (i) clinical, (ii) educational, (iii) social, and (iv) administrative. Overall, home care providers had similar information needs, but emphasis on the required information varied based on discipline. There was general agreement amongst providers on the importance of having a brief history of the patient and their journey throughout the healthcare system. When asked about important information needed for managing falls, one home care nurse notes that "There are a lot of information that referral sources doesn't give us, we just have to do our own investigation". Home care providers deal with inconsistent data about their patients; often times the information in the HHA's electronic health record (EHR) and printed hospital discharge record are different. A physical therapist states: "What is an issue is been able to get the same information, that's available for a patient when they are in the hospital." Specifically for falls, a clinical supervisor notes that "The biggest complaint I get from the therapists is weight bearing status being inaccurate and that's a big problem." Not knowing the weight bearing status of a patient can potentially lead to harm during and after a home visit. Often medical orders are imprecise; "The orders are often just so vague." Specifically for fall risk management, prior rehabilitation notes, are extremely helpful to evaluate a patient's fall risk; "Did they go to rehab. If they did, I would read some of the therapy notes from the rehab. that is really helpful to know." Additionally, due to the nature of home care and the provider's inability to continuously monitor the patient for falls, it is important to know "Who they live with and availability of caregivers and willingness of those caregivers." Information gaps were attributed to (a) the HHA not being part of a local/state Health Information Exchange (HIE), (b) no integration or information exchange between HHA or hospital system, or (c) the HHA intake staff did not pass through the required information.

Discussion: Our results concur with earlier studies that home care episodes remain devoid of important information that informs the plan of care.[9] Our study provides specific evidence to HHAs and reports on essential data required to better manage and reduce the risk of falls. Breaks in the information flow, as well as incompleteness in the exchanged information for fall risk management, creates gaps in the continuity of care and challenge home care providers.[14] Important non-clinical and contextual information is critical to personalized medicine, care workflows, and safer care practices in home health; having such information helps providers tailor their care to better manage and reduce the risk of falls. Having a correct address and contact information of the patient and their care giver can improve providers' utilization of time and direct their attention to better care for their patients. While some information might be assumed to be available and error-free, providers often find themselves "Making sure that the addresses are correct. Making sure that the physicians that they have in the system are the ones that are going to be following the patients." Our results also confirm that the focus of exchanged and documented information is on the clinical condition,[15] however, information in the educational and social domains such as patient preferences, culture, and psychosocial state, are rarely exchanged in either written or electronic formats; it remains in the memory of providers.[16] To date, fax and phone remain the predominate mode of exchanging health information. Currently, EHRs, HIEs, and information flows are fragmented, disconnected and do not allow for full capturing of important contextual information. Better integration and exchange of information between EHRs, participation in HIEs, and designing

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[1]University of Maryland, Baltimore County

health IT solutions capable capturing non-clinical and contextual information can help close these gaps.

Conclusion: Evidence from this study highlights essential information for managing and reducing fall risk and categorizes them into four domains. Results highlight the importance of capturing essential information, both clinical and non-clinical, throughout the patient's journey to and in home care. Without understanding the information needs of home care providers, improvement opportunities to manage and reduce falls will not be realized.

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