

Importance of Team Functioning as a Target of Quality Improvement Initiatives in Nursing Homes: A Qualitative Process Evaluation

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Introduction: Quality improvement interventions demonstrate variable degrees of effectiveness. The aim of this work was to (1) qualitatively explore whether, how, and why an academic detailing intervention could improve evidence uptake and (2) identify perceived changes that occurred to inform outcomes appropriate for quantitative evaluation.

Methods: A qualitative process evaluation was conducted involving semistructured interviews with nursing home staff. Interviews were analyzed inductively using the framework method.

Results: A total of 29 interviews were conducted across 13 nursing homes. Standard processes to reduce falls are well-known but not fully implemented due to a range of mostly postintentional factors that influence staff behavior. Conflicting expectations around professional roles impeded evidence uptake; physicians report a disconnection between the information they would like to receive and the information communicated; and a high proportion of casual and part-time staff creates challenges for those looking to effect change. These factors are amenable to change in the context of an active, tailored intervention such as academic detailing. This seems especially true when the entire care team is actively engaged and when the intervention can be tailored to the varied determinants of behaviors across different team members.

Discussion: Interventions aiming to increase evidence-based practice in the nursing home sector need to move beyond education to explicitly address team functioning and communication. Variability in team functioning requires a flexible intervention with the ability to tailor to individual- and home-level needs. Evaluations in this setting may benefit from measuring changes in team functioning as an early indicator of success.

Keywords: evidence-based practice, communication, evaluation

DOI: 10.1097/CEH.0000000000000238

Care across nursing homes in Canada is characterized by variations in quality¹ and influenced by a range of factors, including system-level policies and incentives, peer pressure, home culture, communication, and resource limitations.² Despite this, interventions to improve the uptake of evidence-based care are often one-dimensional with variable degrees of effectiveness.^{3–5} Lack of staff, high turnover, and limited training have been highlighted as one explanation for the

oft-disappointing effects achieved through interventions in this sector⁶; however, our recent work suggests that poor communication, differing professional expectations, and a mismatch between the outcomes measured and the nature of the intervention seem to explain some findings.²

Attending to the complex environment in which care decisions are made is a key element to achieving improvements in evidence uptake in nursing homes.⁷ A diverse range of providers make up

Disclosures: S.F. is a Physician Consultant with the Center for Effective Practice and works in the nursing home sector in Ontario. N.M.I. has received grant funding from the MOHLTC. The remaining authors declare no conflict of interest. Funding was provided through an Applied Health Research Question Grant from the Ontario Ministry of Health and Long-Term Care held by N.M.I. Funders received regular updates regarding study progress and results but were not involved in data analysis or interpretation. N.M.I. is supported by a New Investigator Award from the Canadian Institutes of Health Research and a Clinician Scientist Award from the Department of Family and Community Medicine at the University of Toronto.

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of this article on the journal's Web site (www.jcehp.org).

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the health care team, and poor interprofessional communication can hinder team functioning, whereas good communication requires specific skills and technique.⁸ Furthermore, although individuals in these interdisciplinary environments often consider themselves a “team,” previous research on teamwork suggests that, in reality, they may only function as a group of providers working beside each other.⁹ A successful team requires understanding and respecting team roles, recognizing that teamwork requires work, understanding the care setting, having the practical “know how” for how to share patient care, and effective communication.¹⁰ Aspects of team functioning are associated with improved patient outcomes¹¹ and have improved in response to training,^{12,13} suggesting the possibility that addressing team dynamics could be a fruitful approach for improving clinical care in a sustainable fashion in nursing homes.

Acknowledging complexities across care environments, policy makers in Ontario, Canada, partnered with a third-party, non-profit organization with expertise in academic detailing to trial an intervention to address the quality of care and uptake of best-practice evidence in nursing homes.¹⁴ Academic detailing, also frequently described as educational outreach, involves a personal visit by a trained individual to a health care provider with the objective of determining barriers to appropriate practice, followed by a tailored intervention.^{15,16} Participation in the academic detailing intervention was voluntary and included individual needs assessments, persuasive communication, and the provision of education for the entire nursing home team, focusing on a series of evidence-based key messages targeting change.¹⁷ The initial phase of the intervention focused on antipsychotic prescribing and the management of residents with behavioral and psychological symptoms of dementia (BPSD).² Interim quantitative findings showed no change in outcomes, while qualitative findings suggested that positive changes in communication and team functioning were beginning to occur,² suggesting a need to reconceptualize how best to quantitatively evaluate success.

Although data from the initial phase were being analyzed, the intervention proceeded to the second phase, as planned, to address the prevention and management of falls. A large proportion of falls and injuries resulting from falls among elderly individuals occur due to multiple risk factors, many of which are amenable to modification or elimination with a targeted intervention.¹⁸ In this follow-up work, our primary objective was to qualitatively explore whether, how, and why the second phase of the intervention (focusing on the prevention and management of falls) could improve care and the uptake of best-practice evidence in the nursing home context. The secondary objective was to identify perceived changes that occurred as a result of the intervention, to inform which outcomes might be most appropriate to detect impact when quantitatively evaluating quality improvement interventions in this context. This aligns with the rationale underlying a sequential mixed-methods approach, whereby the qualitative component could inform and thereby enhance subsequent quantitative evaluations.^{19,20}

METHODS

Study Design

This qualitative process evaluation sought to evaluate the second phase of a third-party academic detailing intervention designed to improve falls management and quality of care in nursing homes. The policy makers (the Ontario Ministry of Health and

Long-Term Care and the Ontario Medical Association) provided oversight and dictated the parameters of the project (including topic and timing), while a third-party group (the Center for Effective Practice, <https://effectivepractice.org>) was responsible for the design and delivery of the intervention. The members of the research team (LD, HM, RH, and NI) were responsible for conducting an external, independent evaluation using qualitative methods. The protocol received ethics approval from the Women’s College Hospital Research Ethics Board.

Setting

In the province of Ontario, all personal and nursing care within nursing homes is funded by the provincial government, while residents are responsible for accommodation charges such as room and board. Accommodation costs are set by the Ministry of Health and Long-Term Care and are standard across the province; however, rate reductions are available through a government subsidy for those with low income on a case-by-case basis. Prescription drug costs for individuals who reside in nursing homes are covered by the Ontario Drug Benefit Program.

Intervention

The intervention was delivered to 41 nursing homes from October 2015 to December 2016. The first phase of the intervention was delivered from October 2015 to June 2016 and targeted antipsychotic prescribing and the management of BPSD. The evaluation results for the initial phase have been reported previously.² The second phase of the intervention was delivered from June to December 2016 and included educational content to address two behaviors in nursing homes—the interdisciplinary assessment and management of falls risk and the conservative prescribing, or appropriate deprescribing, of medications that increase the risk of falls. Key messages were developed after a literature search of clinical and implementation evidence, as well as an environmental scan to identify programs, stakeholders, and materials related to the assessment and management of falls, including medications that may increase the risk of falls. A 12-page discussion guide provided a synthesis of available research evidence and is publicly available through the Center for Effective Practice website.²¹ The discussion guide was distributed actively to intervention homes but was publicly available to all nursing homes in Ontario. Detailers were trained to follow a service-oriented approach, conducting individual provider-based needs assessments and providing evidence-informed information around a series of key messages targeting behavior change. Policy makers decided that the intervention would prioritize the engagement of medical directors, directors of care, physicians, pharmacists, and managers. The intervention would engage administrators, nurses, social workers, personal support workers (PSWs), and other direct care providers if senior leadership at individual nursing homes facilitated this connection and intervention resources were available. The flexible nature of the intervention led to inherent variability in the degree of engagement at each home, which was driven by the perceived needs, interests, and availability of staff at each home.

Recruitment

Details on nursing home recruitment for the intervention can be found in the original protocol.¹⁴ For this study, recruitment was restricted to homes participating in the first wave of the intervention ($n = 20$), as homes in the second wave had not yet been exposed at the time of the study. Purposive sampling was used to

ensure the results reflected the range of participating homes and the interdisciplinary nature of care. Variation in professional roles was sought by purposively recruiting participants who were clinical and administrative leaders (eg, director of care, home administrator, clinical manager, and medical director), attending physicians, pharmacists, and direct care providers (eg, nurses, physiotherapists, and PSWs). To seek variation in the range of participation in the intervention, engagement was categorized by the number of site visits conducted by the detailer and defined relative to the range of observed participation across all intervention homes (0–9 visits per long term care home across $n = 20$ homes participating in wave one). As a result, low engagement home received one to three visits, moderate engagement reflected four to six visits, and high engagement included seven to nine visits. Visits with the detailer could either be one-on-one interactions with a physician, small group visits with a few providers, or larger group visits with multiple team members.

The study team made initial contact by email or phone with the home administrator and/or the director of care explaining the nature of the qualitative study. Interviews were requested with these individuals, in addition to any staff who had engaged with the intervention and/or provided direct care to residents. As a first wave of recruitment, the home administrators were asked to identify individuals who had engaged with the academic detailers. As a second phase of recruitment, snowball sampling was used to seek providers from different professions to capture a range of perspectives on falls management. Recruitment continued until data saturation was reached and no new themes emerged.

Data Collection

Semistructured, one-on-one interviews were conducted with administrative leaders, physicians, pharmacists, and direct care providers to explore their opinions and experiences of both the intervention and processes in place to address the prevention and management of falls within their nursing home (see **Appendix, Supplemental Digital Content 1**, <http://links.lww.com/JCEHP/A44>). Interviews were conducted in person or over the phone, depending on the participant's preference, by a member of the research team. Informed consent was provided before all interviews, which were audio-recorded and transcribed verbatim by a third party.

Data Analysis

Interviews were analyzed using an inductive approach alongside the framework method.^{22,23} Several strategies were used to ensure fidelity and integrity of the data, including creating a chain of evidence that documents all elements of the study database.²⁴ In addition, key collaborators, including members of the Center for Effective Practice and nursing home physicians who were not involved in the study, participated in the triangulation analysis and the return of findings.²⁴ Points of convergence and divergence within and among the data set were examined, and a stepped analysis process was used whereby there is an initial independent review of the data by three reviewers (LD, HM, and RH) who then met to reach consensus around the common themes.²⁴ Once common themes were established across all interviews, the framework method was applied to explore themes using a comparative case study technique.²² During this

TABLE 1.

Understanding the Problem—Qualitative Data Describing Gaps in Practice

Theme 1—Underlying Communication Gaps and Misaligned Role Expectations Impede Team Functioning, Resulting in a Knowledge to Practice Gap

Evidence-based processes exist but are not consistently followed in practice

"We let the staff know that they have to monitor this resident for any behavioural changes or any decreased level of consciousness, so that you have to report promptly. When you report, an intervention is put in place here to decrease the number of falls. At times it doesn't happen automatically. We have to constantly remind them to report when they notice anything with this resident." *Director of Care, ID20*

Discrepancies between communication expectations and reality influence care

"There are definitely gaps. Again, I don't run the home and the way it goes, but when I go in to do rounds, we have a problem list. So, all the residents on this thing . . . there are 30 residents in most units. They have problems listed. Well, anybody can write on that. So, it can be the casual night nurse who has been frustrated by a behaviour and other certain things. So, then you have to go back and ask, okay, this is atypical? Is it typical? I think it would do better if somebody was assigned a nurse, an RN, in each unit. In LTC-X, one of my other homes, things are filtered through so that the information given to me, as the physician, is actually not just an isolated incident, but a typical behaviour." *MD, ID28*

Physicians experience challenges trying to effect change

"If we try and practice good medicine and say, 'put patient to bed earlier in a quieter surrounding,' blah, blah, blah, we're the bad guy. 'Dr.X has no idea how hard it is to shower these people and look after them. All he does is he walks in and writes some orders and he doesn't care.' So the culture has to change where they shouldn't ask us to increase (the antipsychotic). That should actually be a very last thing. Again, I probably went through a similar event, but that's the culture that has to change otherwise it's us against them." *MD, ID26*

Clinical and administrative leaders experience barriers to optimizing team function

"Sometimes there is that discrepancy or the gap in communication. Usually it's around resident-centered care or, as you said, a change in condition, that may be, for instance if it was a casual RPN or RN, who had been in, maybe didn't communicate to the next shift, or didn't get communication from the previous shift. Then we don't see her, she's only casual, she doesn't come back for maybe another 2 weeks, and that piece of her communication was not forwarded to the next shift." *Director of Care, ID29*

"Critical thinking is definitely one of those learned behaviours. Leadership and critical thinking is definitely on the top of the radar gap, just doing a bunch of performance appraisals, and that's what the RPNs specifically are asking for." *Director of Care, ID19*

"I think that being proactive sometimes takes time, and the staff sometimes don't have the time. They're just so busy, that they do end up being reactive to something that's happened. Whereas, if you actually look back over maybe the three previous days' progress notes, you can see that there was something brewing, or something going on with that resident." *Director of Care, ID29*

Team-based care requires strong team functioning

"I would say the number one challenge is about identifying the individual resident's need, and their particular . . . just to identify their issues, to address them in a collective manner, (so I understand) how I can contribute to that." *PT, ID22*

"I think the other thing is also being presented to the whole staff. I think that has a lot of value, that all the health care aides and nurses and RPNs, I think it's helpful that they're getting the same messages that we're getting. And it helps to work together." *MD, ID01*

"This is what I was trying to do in all my homes. I was successful I have to say in the other homes as well, but this was a bigger home. This had some challenges that were unique. The geography and the population demographics of the home that I was in are very unique and I'm in six homes." *MD, ID06*

MD, physician; PT, physical therapist; RN, registered nurse; RPN, registered practical nurse.

phase, transcripts were indexed using existing codes, and a matrix was created to visualize the presence of codes across cases. For the purposes of this study, we explored cases according to both level of intervention engagement and professional groups (eg, home leadership, physician, pharmacist, and direct care provider) to understand potential sources of variation. Given the predominance of physician-specific findings, emergent themes were reviewed through a member-checking process with five physicians from the study sample to ensure accuracy. As part of this process, a summary of the results was sent to these five physicians, who were asked to confirm whether the findings were accurate based on their experience, or provide suggestions on how to clarify the results in the event that they were not accurate.

RESULTS

A total of 29 interviews were conducted with a range of staff from 13 nursing homes, representing those with high ($n = 4$), medium ($n = 5$), and low ($n = 4$) levels of engagement with the intervention. Interviews ranged from 6 to 49 minutes in length (average = 23 minutes). The participant sample included 11 clinical and administrative leaders, 10 physicians, six direct care providers, and two pharmacists. Twenty-two of the participants were female. Direct care providers (eg, registered nurses [RNs], physical therapists, and PSWs) had less autonomy over their daily schedule and were therefore extremely limited in their time available to participate, resulting in short interviews (6–18 minutes in duration).

The analysis identified key factors that contribute to variations in care in nursing homes and therefore influence evidence uptake and effectiveness of quality improvement initiatives. Supporting quotes organized according to themes can be found in Tables 1 and 2. Cross-case analysis according to profession revealed a disconnection between the information physicians would like to receive and the information that is actually communicated to them in practice. Differences across nursing homes are outlined below and related to the specific factors that contributed to the existence of a knowledge to practice gap within the home. No relationship emerged between baseline communication and team functioning and the level of engagement with the intervention.

Across all interviews, participants described similarly comprehensive approaches to the prevention and management of falls that aligned with best practices. There was little to no perceived need for education targeting awareness around best practice evidence for the management of falls; however, participants consistently described a knowledge to practice gap. Reducing the number of injurious falls was described as an ongoing challenge, often because of a lack of adherence to existing processes. The specific factors underlying the knowledge to practice gap varied across homes.

Differences in communication strategies and documentation processes played an important role in evidence uptake, with poor communication characterizing homes with self-described suboptimally functioning teams. In the absence of effective communication that provides team members with the information they need to identify and meet shared goals, the various providers involved in direct care struggle to understand the whole picture as it relates to a given resident. Clinical and

TABLE 2.

Identifying Perceived Changes Resulting From the Intervention

Theme 2—How Nursing Home Staff Work and How They Work Together are Both Amenable to Change

Engaging the whole team encouraged a culture shift toward a more engaged team dynamic

“But I found out one thing which was really capturing me, that is the 4P’s approach (the assessment of pain, position, placement, and personal needs). Whatever we do, we are doing that, I’m not saying we are not, we are doing that, but in an easy, simpler way, so that anybody can follow, so the 4P’s.” *PT, ID22*

“In terms of the intervention, the value add wasn’t in changing your behaviour. It was essential that you were on board and that this was a priority to you, but it really enabled you to kind of spread this mentality across the home, gave you some strategies on how to help facilitate change among your team.” *MD, ID06*

The intervention improved communication across the team

“She did talk about that with the staff, she talked about that with the registered staff, too. What she talked to the personal support workers (PSWs) about is how to recognise certain signs, and then go talk to your charge nurse.” *RN, ID23*

“It has helped me with asking for help from, specifically, the pharmacist. The detailer brought up tools that could be used to help generate automated flags in that way. I have a comprehensive fall assessment already. I felt very confident about the medical literature side of things. But what I appreciated was the idea of catching the fall before the falls happen, in a way, so identifying those who I may think are stable or maybe, necessarily, haven’t fallen, but would be at high risk of that.” *MD, ID08*

“I think the other thing is also being presented to the whole staff. I think that has a lot of value, that all the health care aides and nurses and RPNs, I think it’s helpful that they’re getting the same messages that we’re getting. And it helps to work together. And also, the material is well done, up to date, and very evidence-based.” *MD, ID01*

Theme 3—Tailored Support and an Active Approach Delivered to the Entire Care Team Were Key Factors That Addressed Sector-Specific Gaps

Tailored, home-level approaches are needed to achieve change

“Nursing notes could always be better, but it’s always valuable to talk to staff. Some homes PSWs document and some they don’t. This one they don’t. . . It’s always valuable to get the perspective of PSWs. A lot of times like falls are always documented, but behaviours are not always well documented.”

Pharmacist, ID16

“We see where there’s a lack of knowledge in a specific issue, and so oftentimes the education is based on that specific need. . . . When we do our performance appraisals and I’m looking for staff that have an interest or a particular concern about lack of information or lack of their education in a certain topic, then we would be following up if we have enough staff that are interested.” *Director of Care, ID19*

Active, one-on-one education is a novel component compared with other available supports

“Because when you’re just chatting about it, I think you retain that information better than just sitting and reading it as well. When you’re chatting with that person about what the research says and what the guidelines suggest, it’s a win-win situation I think and that’s what attracts me to it. It helps me find the time. It’s engaging in different ways, in that there’s that verbal conversation as well as reading the literature and discussing it.” *RN, ID10*

Extending education to residents and family members can help to bridge gaps

“The communications with family, with patients and with other health professionals, they are much more efficient. They are much smoother. The language that we use now is a lot more resident-focused or more specific. So, I find that the biggest benefit that I have certainly seen is that it’s helped improve my communication with other professionals, as well as with family members themselves.” *MD, ID08*

“Many of our families come in, and they immediately, if Mom has had a fall at home, then they immediately want a restraint. That’s a whole other issue because we’re moving toward least restraint. I definitely think an Academic Detailer, and the families hearing it from somebody who is a professional, and has extended experience in this would make a big difference.” *Director of Care, ID29*

administrative leaders acknowledged gaps in communication across the team but experienced ongoing barriers to optimizing team function, especially when managing a large number of part-time and casual staff.

Cross-case comparisons revealed that few homes self-reported high functioning teams with strong communication networks. Individuals from these homes often attributed effective communication to a history of working together and strong senior leadership, which may include organizational mandates and/or facilitating regular communication between physicians and all members of the care team. Across all homes (both high and low functioning), participants emphasized the variability in team functioning and communication within the sector and the importance of engaging all members of the care team in a quality improvement initiative. These contrasting narratives illustrate the importance of communication and team functioning as a key determinant of evidence uptake and high quality care in nursing homes. Participants partially attributed the challenges with addressing these factors to the nature of supports available in the nursing home sector, which were described as fragmented, profession-specific, or not accessible to every home.

Conflicting expectations around professional roles emerged as a barrier to evidence uptake in practice. Clinical leaders and physicians relied on direct care providers with a high level of resident contact—often registered practice nurses (RPNs) or PSWs—to observe and report changes in a resident's status. By contrast, PSWs were primarily concerned with completing basic care activities such as bathing and feeding, which occupied most of their attention during a given shift. Clinical leaders highlighted that the reliance on RPNs and PSWs was perhaps misguided, as they do not receive adequate training to promote critical thinking and the identification of potential adverse events. The reactive nature of nursing home care was largely attributed to this overarching lack of critical thinking.

Cross-case comparisons further illuminated discrepancies in perceived professional roles, with many physicians experiencing a disconnection between the type and quality of information they need to receive from colleagues to inform care decisions and what is communicated in practice (eg, whether a reported incident is typical or atypical behavior for a given resident). Despite reporting that their communication expectations for their team members are not being met, physicians experience challenges expressing their expectations to effect change. Communication challenges were complicated by the desire to create and maintain positive working relationships with members of the care team, and supporting colleagues in their ability to provide care. Many physicians described that this sub-optimal communication results in feeling less familiar with residents than other direct care providers, placing them at a contextual disadvantage when evaluating what care decision is best for a given resident.

Participants reported that the intervention increased provider focus on the topic of falls management, which led them to prioritize the topic over other competing interests. The intervention translated existing knowledge into easily usable formats, which was complemented by the provision of appropriate and tailored engagement to a diverse group of care providers. This encouraged a culture shift toward a more engaged and interactive team dynamic that was consistent across cases but was more prevalent with a greater degree of engagement. The

intervention resulted in increased awareness and attention toward falls management across all members of the health care team who were engaged and reframed the focus from prevention to harm reduction. Many participants highlighted the added value of the intervention was that it emphasized the role of consistent communication as a component within the overall management strategy.

For some participants, the intervention addressed the previously described challenges with communication, highlighting the fit between the intervention and the nature of factors that contributed to the underlying knowledge to practice gap. These participants reported improvements in the functioning of interdisciplinary relationships and an overall shift in care from a reactive to a proactive approach.

Participants unanimously emphasized that a key feature of the intervention's ability to impact team functioning was the capability of the academic detailers to effectively convey the same message to the entire nursing home team. Providing the care team with a common language improved communication and helped to clarify professional roles. Engaging staff in an active dialog (versus passively providing them with information) helped to increase retention and provided protected time for staff members to understand how proposed strategies to address the knowledge to practice gap could be easily integrated into their practice. The importance of engaging direct care providers was emphasized by physicians, who described the intervention as a catalyst to facilitate change across an interdisciplinary team.

Many participants described the fragmented nature of external educational supports in the nursing home sector, many of which are profession or role-specific. The intervention addressed the issue of fragmented services by filling existing resource gaps. Participants highlighted the increased relative value of the intervention compared with other available supports, which included the use of active education processes, and personalized, one-on-one education provided by an external source. Participants across all professions highlighted that engaging with the intervention facilitated knowledge sharing across professions and nursing home sites.

Nursing home leadership described the fragmented nature of external educational supports, coupled with limited internal resources, impacts their ability to address knowledge to practice gaps. Prioritization of quality improvement initiatives occurs in a somewhat arbitrary fashion as a result, which often fails to address underlying gaps as the availability resources instead of areas of need drive educational activities. The intervention addressed this gap through the provision of resources, which are intentionally flexible in their ability to meet the needs of individual homes.

By contrast, clinical providers perceived that residents and families are often resistant to changes in care, creating a barrier to evidence-based practice. These providers valued the ability of the intervention to both provide strategies for and directly address residents and family members. Extending education to residents and families has the potential to align expectations and bridge communication gaps, enabling a resident-centered approach to care that is evidence based and adheres to best practices. The integration of resident and family education was viewed as a novel feature of the intervention, as many strategies are designed to target either the provider(s) or the residents, not both.

DISCUSSION

This study qualitatively explored whether, how, and why an academic detailing intervention (adapted for addressing specific problems in the nursing home sector) addressed the uptake of evidence relating to the prevention and management of falls in nursing homes and examined the changes they attributed to the intervention. The key findings suggest that (1) a knowledge to practice gap with respect to falls management exists despite best intentions and (2) strong team functioning, with effective communication and clarity about roles, seems to mediate improved evidence uptake in an interdisciplinary setting. These findings are particularly relevant for system decision makers, administrators, and managers involved in quality improvement in the nursing home sector, as they have implications for future intervention design and evaluation.

Participants readily identified instances where communication needed to be improved but often encountered difficulties trying to resolve communication gaps. Discomfort with speaking up and unclear professional roles and responsibilities may contribute to this confusion.²⁵ Lack of organizational leadership and active support is frequently cited as a barrier to implementation and practice change,²⁶ underscoring the need to consider broader engagement (ie, beyond direct care providers) within the context of health care improvement interventions. Leadership and mentoring can mediate the impact of contextual factors that surround knowledge exchange and best practice,⁷ indicating the need for targeted support to clinical and administrative leaders to effectively perform this role during interventions aimed to promote change. Education and training requirements for nursing home administrators are significantly associated with home-level performance on a range of patient-level quality indicators,²⁷ as is certification for medical directors.²⁸ In Ontario, the Long-Term Care Homes Act²⁹ requires that a medical director be a physician, and despite the availability of role-specific training,³⁰ there is currently no legislative requirement. Providing mandatory additional training targeting team management and quality improvement or revising requirements for administrators and medical directors may represent an opportunity to influence quality of care.

Participants highlighted that a critical feature of the intervention was the inclusion of direct care providers, such as PSWs, who otherwise have limited access to educational supports. In Canada, PSWs constitute a significant component of the health care labor force in nursing homes, where they may provide up to 80% of the direct care.³¹ An increasing emphasis on measuring performance in the nursing home sectors points to the need to develop initiatives that equip all members of the team, including PSWs, with greater capacity to deliver high quality care.³² Engaging direct care providers, including PSWs, RNs, RPNs, and housekeeping staff, has the potential to improve collaboration, teamwork, support, and communication.³³ Of particular note is the reality that direct care providers in our study were largely focused on their day-to-day tasks and did not offer insights into team functioning, suggesting a potential need to clarify professional roles across team members.

The intervention provided a valuable relative advantage compared with other supports in the nursing home sector, most

notably in the provision of in-person support that could be tailored to all members across the care team (when supported by clinical leaders and administrators). Targeting a wide range of team members with the intervention facilitated a shared understanding across all staff, fostering characteristics of an effective, cohesive team.^{9,34} Our findings align with a recent Cochrane review^{9,35} and represent progress toward identifying key components of interprofessional education interventions. Similar intervention components, including formal, group-based, interprofessional education delivered by a colleague, led to significant improvements in collaborative team behaviors and staff attitudes and a reduction in clinical errors after a formal teamwork training program.³⁶ Underlying changes may represent the establishment of a shared mental model, which allows individuals to more consistently coordinate their efforts to complete interdependent tasks.³⁷ Similarity in mental models contributes to improved processes (eg, communication) and performance (eg, strategy implementation)³⁸ by clarifying understanding of roles and skills of individual professionals.³⁹ Team-based approaches to communication training have the potential to significantly reduce prescribing rates in nursing homes,⁴⁰ further supporting a team-based approach that addresses team functioning and role clarity when targeting prescribing behaviors in this sector.

Organizational capacity, including work climate and formulation of tasks, is a key component of team functioning, which influences successful implementation,⁴¹ and is complemented by clarity around professional roles and responsibilities to facilitate evidence uptake and practice change.²⁶ Findings related to team functioning may have been more predominant in this study, as participants perceived little to no knowledge gap with respect to falls management, in contrast to the initial topic targeted by the intervention (antipsychotic prescribing and managing BPSD) where nursing home staff perceived a larger gap with respect to evidence awareness.² These self-reported changes underscore the need to align evaluation outcomes with the actual or hypothesized mechanisms of change for quality improvement interventions. Although the measurement of quality indicators such as falls remains important, it may take a long period to uncover a significant effect in such outcomes.^{2,42} Implementation factors (ie, intensity of program delivery and the uptake of new processes into routine practice) impact the effectiveness of an intervention⁴³ and may be an appropriate intermediate measure to understand potential impact in the early stages of an intervention. Alternative indicators might include organizational factors (ie, organizational climate, available resources, relationships, skill mix, and staff involvement) and provider factors (ie, professional role, philosophy of care, and competencies) known to influence the evidence practice gap in primary care.²⁶ The qualitative nature of this study provides subjective evaluations of impact on team functioning, but further work is needed to objectively evaluate or observe team functioning to more thoroughly understand the potential impact. A range of tools are available for measuring team-level factors that potentially influence the process and outcomes of quality improvement initiatives.⁴⁴ Shortell et al⁴⁵ validated measures specific to the primary care context, including those capturing team effectiveness, skill, and organizational climate, which may

provide a useful starting point for assessing these constructs in the nursing home sector.

Limitations

The results reflect the experiences and perspectives of nursing home providers in Ontario, Canada, and may not be reflective of provider behavior or the actual work that they do in practice. Additional data sources (eg, direct observation of provider behavior and document analysis) are required to further explore the validity of these perceptions. Realist evaluation provides one approach to the triangulation of multiple data sources, which links contextual factors and mechanisms of action to observed outcomes.⁴⁶ Because of a lack of protected time in their schedule, direct care providers (eg, RNs, physical therapists, and PSWs) are underrepresented in this sample compared with their physician and administrator colleagues. Those who were able to participate were extremely limited in their time available to participate, and interviews were often conducted in common areas (eg, hallway or supply closet versus an office) to accommodate proximity to clinical care. Further work is needed to understand the implications of this reality on the effectiveness of the intervention and the nature of team-based care in nursing homes. It is plausible that these individuals could have different perspectives on the intervention, team functioning, or how the two interact. This highlights the tension between clinical and research priorities in the absence of external incentives for research participation. Addressing this tension is central to evaluate effectiveness and generate the evidence that informs the foundation of evidence-based care. This study purposively generated case comparisons at the home level to capture insights from a range of participants across the nursing home sector. Intervention engagement was voluntary and driven by the availability and perceived needs of the nursing home staff, limiting the applicability of our results to those who felt there was a benefit to academic detailing. Future work should explore the perspectives of individuals who do not perceive value in the intervention, specifically with respect to team functioning and communication. Given the prevalence of misaligned role expectations, further work should generate case comparisons at the professional level to explore whether role expectations are constructed as a professional norm and explore opportunities to improve alignment. Finally, this preliminary evaluation did not assess patient outcomes, and it remains unknown whether the intervention improved the quality and/or experience of care from the perspectives of nursing home residents or their families.

CONCLUSIONS

Suboptimal team functioning, involving poor communication and misaligned perceptions of professional roles, is a key factor underlying the evidence to practice gap in nursing homes. An intervention targeting the entire team, from direct care providers to administrative leaders, with a tailored approach based on home-level needs seemed to address this underlying barrier to evidence uptake. A flexible approach, active knowledge dissemination, and in-person engagement (both one-on-one and group format) were key components required to drive change and were described as a relative

advantage compared with other available supports. Future quality improvement initiatives should be mindful that early changes in team functioning, communication, and role clarity may be required to achieve clinical changes. Early evaluations of such initiatives may benefit from measuring these more proximal outcomes to determine whether the intervention is having the desired effects.

Lessons for Practice

- Self-reported suboptimal team functioning contributes to variations in the quality of care across nursing homes;
- Quality improvement interventions should target team functioning to achieve sustainable changes in clinical care;
- A flexible approach, active knowledge dissemination, and in-person engagement are key components required to drive change.

ACKNOWLEDGMENTS

The authors acknowledge the Ministry of Health and Long-Term Care (MOHLTC), the Ontario Medical Association (OMA), the Center for Effective Practice, and participating nursing homes for their support and involvement.

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