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Original Article

Impact of implementing the pain best practice guideline in a long-term care home using the knowledge-to-action framework

Impacto de implementación de la guía de buenas prácticas del dolor en una residencia de cuidados a largo plazo utilizando el marco del conocimiento a la acción

Impacto da implementação do guia de boas práticas para o manejo da dor em uma casa de cuidados de longo prazo usando a estrutura do conhecimento para a ação

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Author Contributions

NM. Conceptualization, validation, investigation, supervision, data curation, funding acquisition, writing original draft, writing and editing. **SN.** Conceptualization, methodology, validation, software, formal analysis, data curation and visualization, writing-original draft, review and editing. **SV.** Conceptualization, investigation, data curation, supervision. **JC.** Writing- original draft, Writing- Review & Editing. **DG.** Conceptualization.

ABSTRACT

Introduction. Assessment and management of pain in older adults can be challenging, with persistent pain prevalence ranging from 25% to 80%, especially in long-term care homes (LTCH), where most seniors are unable to verbalize their pain. This article describes the implementation of the Registered Nurses' Association of Ontario (RNAO) Assessment and Management of Pain (Third Edition) best practice guideline (BPG) in a LTCH in Toronto, Canada. **Methodology.** Using mixed descriptive study methodology, this 391-bed home housing older adults over 80 years implemented the Pain guideline using the knowledge-to-action framework and audit procedures to evaluate the impact of implementing this guideline. Key implementation activities included educating residents, families, and staff about pain while integrating validated pain screening and assessment tools into practice. A mixed methods approach of qualitative and quantitative data was utilized to monitor improvements in clinical and organizational outcomes. **Results.** The impact of implementing Pain BPG is: improved utilization of pain assessment and management tools, reduced incidence of worsening pain, improved pain scores and improved resident quality of life. The structured and integrated, evidence-based approaches to pain assessment and management reflected that long-term care residents don't have to live with pain regularly, which leads to a better quality of life and resident/family satisfaction. **Discussion.** In conjunction with the structured approach of the knowledge-to-action framework and the Pain BPG, the LTCH utilized tailored approaches to meet the needs of their resident population. Recognizing the unique needs of seniors in a residential setting, organizational structural facilitators, and barriers and cultural needs, the LTCH developed multi-modal approaches based on a person and family-centred approach. This evidence-based and resident-focused approach was the key to the successful implementation and subsequent outcomes that were resultant. **Conclusion.** The systematic implementation of the RNAO pain BPG and the utilization of the knowledge-to-action framework was shown to improve resident outcomes, improve organizational processes and generate staff satisfaction. Participation and engagement of residents, their families and health professionals in the process was one of the greatest facilitators.

Keywords:

Practice Guidelines as Topic; Implementation Science; Long-Term Care; Nursing Homes; Frail Elderly; Pain Measurement; Pain Management; Quality Improvement

RESUMEN

Introducción. La evaluación y el tratamiento del dolor en los adultos mayores puede constituir un desafío, con una prevalencia de dolor persistente que oscila entre el 25 al 80%, especialmente en residencias de cuidados a largo plazo (LTCH por sus siglas en inglés), donde la mayoría de los ancianos son incapaces de verbalizar su dolor. Este artículo describe la aplicación de la guía de buenas prácticas (BPG por sus siglas en inglés) de la Asociación de Enfermeras Registradas de Ontario (RNAO por sus siglas en inglés) para la Evaluación y el Tratamiento del Dolor (Tercera Edición) en un centro de cuidados a largo plazo de Toronto, Canadá. **Metodología.** Utilizando una metodología de estudio descriptivo mixto, esta residencia de 391 camas que alberga a adultos mayores de 80 años implementó la guía sobre el dolor, utilizando el marco de conocimiento a la acción, al igual que procedimientos de auditoría, para evaluar el impacto de la implementación de la guía. Entre las actividades clave de la implementación se incluyeron la educación de los residentes, las familias y el personal sobre el dolor, así como la integración en la práctica de herramientas validadas de detección y evaluación del dolor. Se utilizó un enfoque metodológico mixto de datos cualitativos y cuantitativos para supervisar las mejoras en los resultados clínicos y organizativos. **Resultados.** El impacto de la implementación de la BPG sobre el dolor es: mejoría de la utilización de las herramientas de evaluación y manejo del dolor, reducción en la incidencia de empeoramiento del dolor, mejoría en puntuaciones del dolor, así como en la calidad de vida de los residentes. Los enfoques estructurados e integrados basados en la evidencia, dirigidos a la evaluación y manejo del dolor reflejaron que los residentes del LTCH no deben vivir con dolor habitualmente, lo que conduce a una mejor calidad de vida y satisfacción del residente y/o familia. **Discusión.** Junto con el enfoque estructurado del marco del conocimiento a la acción y la BPG del dolor, la residencia de cuidados a largo plazo utilizó enfoques adaptados para satisfacer las necesidades de su población residente. Reconocer las necesidades únicas de los mayores en un entorno residencial, los facilitadores estructurales organizativos y las

barreras y necesidades culturales, permite a las LTCH desarrollar enfoques multimodales, centrados en la persona y la familia. Este enfoque basado en la evidencia y centrado en el residente fue la clave del éxito de la implantación y de los subsecuentes resultados obtenidos. **Conclusiones.** Se evidenció que la implantación sistemática de la BPG del dolor de la RNAO y la utilización del marco del conocimiento a la acción mejoraron los resultados de los residentes, los procesos organizativos y generaron mayor satisfacción en el personal. La participación y el compromiso de los residentes, sus familias y los profesionales de salud fue uno de los mayores facilitadores en el proceso.

Palabras clave:

Guías de Práctica Clínica como Asunto; Ciencia de la Implementación; Cuidados a Largo Plazo; Casas de Salud; Anciano Frágil; Dimensión del Dolor; Manejo del Dolor, Mejoramiento de la Calidad

RESUMO

Introdução. A avaliação e o tratamento da dor em idosos podem ser desafiadores, com a prevalência de dor persistente variando de 25 a 80%, especialmente em hospitais de longa permanência (LTCH por suas siglas em inglês), onde a maioria dos idosos não consegue verbalizar sua dor. Este artigo descreve a aplicação do guia de boas práticas (BPG por suas siglas em inglês) da Associação de Enfermeiras Registradas de Ontário (RNAO por suas siglas em inglês) para Avaliação e Tratamento da Dor (Terceira Edição) em uma instituição de cuidados de longo prazo em Toronto, Canadá. **Metodologia.** Utilizando uma metodologia de estudo descritiva, essa casa com 391 leitos que acolhe idosos com mais de 80 anos de idade implementou o guia para o manejo da dor, utilizando a estrutura do conhecimento para a ação, bem como procedimentos de auditoria, para avaliar o impacto da implementação do guia. As principais atividades de implementação incluíram a educação dos residentes, famílias e funcionários sobre a dor, bem como a integração na prática de ferramentas validadas de detecção e avaliação da dor. Foi utilizada uma abordagem metodológica mista de dados qualitativos e quantitativos para monitorar melhorias nos resultados clínicos e organizacionais. **Resultados.** O impacto da implementação do BPG para o manejo da dor é: melhoria na utilização de ferramentas de avaliação e manejo da dor, redução na incidência de piora da dor, melhora nos escores de dor, bem como na qualidade de vida dos residentes. Abordagens estruturadas e integradas baseadas em evidências, destinadas à avaliação e manejo da dor refletiram que os residentes do LTCH não devem conviver rotineiramente com a dor, levando à melhoria da qualidade de vida e à satisfação dos residentes e/ou familiares. **Discussão.** Juntamente com a abordagem articulada da estrutura do conhecimento para a ação e o BPG para o manejo da dor, a casa de cuidados de longo prazo utilizou abordagens adaptadas para satisfazer as necessidades da sua população residente. O reconhecimento das necessidades únicas dos idosos num ambiente residencial, dos facilitadores estruturais organizacionais e das barreiras e necessidades culturais, permite que os LTCH desenvolvam abordagens multimodais, centradas na pessoa e na família. Esta abordagem baseada em evidências e centrada no residente foi a chave para o sucesso da implementação e os resultados subseqüentes obtidos. **Conclusões.** Ficou evidente que a implementação sistemática do BPG para o manejo da dor da RNAO e o uso da estrutura do conhecimento para a ação melhoraram os resultados dos residentes e os processos organizacionais, e geraram maior satisfação do pessoal. A participação e o comprometimento dos residentes, seus familiares e profissionais de saúde foi um dos maiores facilitadores do processo.

Palavras-chave:

Guías de Prática Clínica como Assunto; Ciência da Implementação; Assistência de Longa Duração; Casas de Saúde; Idoso Fragilizado; Medição da Dor; Manejo da Dor; Melhoria de Qualidade

Introduction

Pain is one of the critical health concerns linked to ageing and the reduction of quality of life in older people (1) Worldwide, unrelieved or poorly managed pain burdens the person, the healthcare system, and society (2). The prevalence of persistent pain has been shown to increase with age, and persistent pain has been identified in approximately 65 percent of the older adult population (> 65 years of age) living in the community and 80 percent of older adults living in Long-term care homes (LTCH) (2,3).

Poor pain management in people with cognitive decline is associated with sleep disorders, functional disabilities, falls, depression, cognitive impairment, anxiety, restlessness, decreased physical activity, isolation, polypharmacy, and malnutrition (2,4,5). Pain management is also very challenging in older adults with renal, cardiovascular, gastrointestinal, and respiratory risks associated with nonopioid and opioid pharmacological treatments (6). There are multiple guidelines published on the topic of pain assessment and management by other organizations worldwide, including the United States Department of

Health and Human Services (7), the Centers for Disease Control and Prevention (6), and the National Institute for Health and Care Excellence (8,9). The focus of this article is on the Registered Nurses' Association of Ontario (RNAO) *Assessment and Management of Pain (Third Edition)* (Pain BPG) as it is the most systematically produced best practice guideline on the subject (10,11).

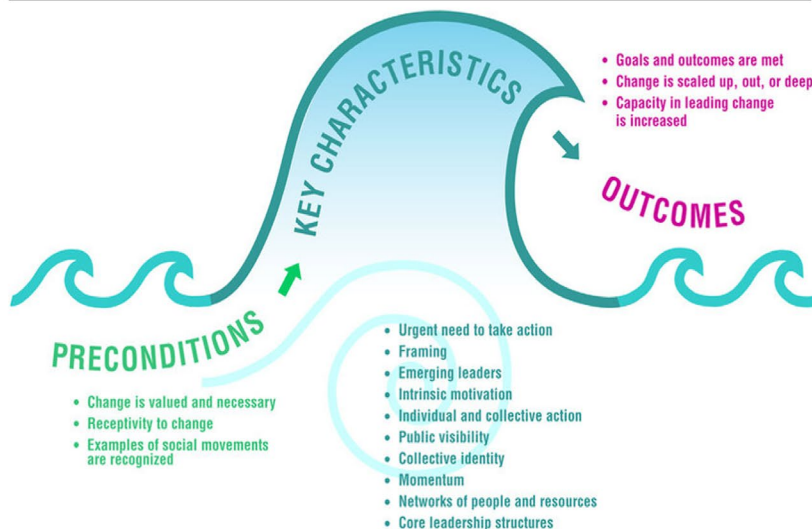
As part of RNAO's Best Practice Guideline program, RNAO systematically develops BPGs on a variety of clinical topics and actively supports the implementation and evaluation of BPGs in all health sectors. In particular, the Best Practice Spotlight Organization® (BPSO®) program was created to support health service and academic organizations in implementing and evaluating the impact of BPGs. This descriptive study focuses on Pain BPG, which provides evidence-based recommendations for healthcare professionals assessing and managing the presence or risk of any pain.

To guide the implementation of BPGs, BPSOs use the Leading Change Toolkit (12–15), which is comprised of the Social Movement Action Framework (SMA) and the Knowledge-to-Action (KTA) framework

(Figure 1). Specifically, the KTA framework guided the implementation and evaluation of the Pain BPG, which is comprised of seven steps. The first step is to “Identify the problem”, which consists of identifying the problem and gap in practice or knowledge and selecting knowledge or evidence to apply. The second step is to “Adapt knowledge to local context”, where the practice changes are tailored to the implementation context. Next is “Assessing the barriers/facilitators to knowledge use”, which includes identifying and overcoming barriers while capitalizing on facilitators to optimize positive outcomes. After this step, one must “Select, tailor, implement interventions”, which involves planning, selecting and tailoring implementation strategies to the context of BPG implementation. Following that step is “Monitor knowledge use”, which consists of routine collection and analysis of data to determine how well practices are being implemented. Next is “Evaluate outcomes”, where one determines if there are any differences before and after the implementation of practice changes via collection data on structure, process and outcome indicators. Finally, one “Sustains knowledge use” by maintaining implemented practice changes after a defined period.

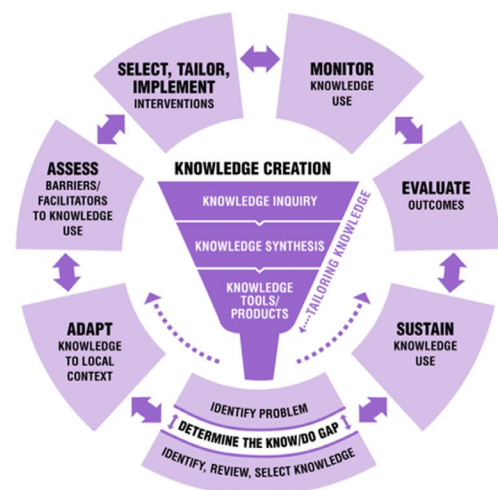
SOCIAL MOVEMENT ACTION FRAMEWORK FOR KNOWLEDGE UPTAKE AND SUSTAINABILITY

Grinspun, D., Wallace, K., Li, S.A., McNeill, S., & Squires, J. (2020, Spring). Leading change through social movement. *Registered Nurse Journal*, 32(1), 15.
Grinspun, D., Wallace, K., Li, S.A., McNeill, S., & Squires, J.E., Brujalance, J., ... & Zhao, J. (2022). Exploring social movement concepts and actions in a knowledge



KNOWLEDGE-TO-ACTION FRAMEWORK

Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, Robinson N. (2006). Lost in knowledge translation: time for a map? *Journal of Continuing Education in the Health Profession*. 26(1), 13-24. Used with permissions.



LEADING CHANGE TOOLKIT™

Figure 1. SMA Framework and KTA Framework
Source: <https://rnao.ca/leading-change-toolkit>

Given the prevalence of pain in older persons, pain assessment and management interventions continue to be the focus of many LTCHs in Canada, including Villa Colombo Toronto (VCT), an LTCH in Toronto, Canada. VCT implemented the Pain BPG across their organization to address pain assessment and management gaps. This descriptive study aims to describe the implementation of the Pain BPG according to the steps of the KTA framework in VCT.

Methodology

Study Settings

VCT recognized the importance of pain as a major contributing factor to the older person's experience and quality of life. This 391-bed LTCH provides individualized care for Italian-Canadians within an ethnic-specific environment. VCT has served the Italian community for over 45 years and remains a unique facility with a tradition of excellence and quality care. Villa Colombo Toronto primarily operates as an LTC facility, which serves as a home to those who can no longer care for themselves in their own homes. In addition to the care services provided, VCT provides residents with complete meal service, daily exercise and other activities, and religious and spiritual services, all provided while being culturally sensitive to our predominantly Italian clients. VCT has 391 licensed beds, including five floors, with an average daily census of approximately 380 residents. The home has a total of 550 permanent staff. Twenty-four hour care is provided with three, eight hour shifts per day. This includes approximately 130 personal support workers and 40 registered staff. Nursing Leadership positions include one Director of Resident Services and four Nursing Directors overseeing a resident population of 88-117 residents' per Nursing Director. Each Nursing Director holds a corporate portfolio in addition to their home areas and about 85 staff each. They also oversee resident referrals, assessments, care planning, evaluation, discharge, and training. Responsibilities also include restorative care programs and oversight of all health care disciplines.

In 2018, the LTCH identified that resident pain was likely underreported, there were gaps in their practice compared to evidence-based best practices, and they were not using the proper assessment tools to evaluate and monitor resident pain. Therefore, VCT implemented the Pain BPG to address these gaps in their residents' pain assessment and management.

VCT has used the following organizational approaches to improve pain management, including:

1. *Implementing the Pain BPG*
2. *Digitizing evidence-based practices (15) using RNAOs' Assessment and Management of Pain Order Set™ (Pain OS)*
3. *Continuously monitoring and evaluating the impact of guideline implementation on resident and organizational outcomes and*
4. *Incorporating pain identification and management into synergistic programs such as palliative care, wound care, and behaviour management*

This descriptive study describes how VCT implemented the RNAO Pain BPG as part of the more extensive BPSO Program. Villa Colombo Toronto (VCT) is a non-for-profit ethno-specific LTCH that serves the Italian community by encompassing all aspects of Italian life and culture in its care and services.

First, in January 2018, VCT began its BPSO journey. In addition to the Pain BPG, four other RNAO BPGs were selected to support resident care: Person- and Family-Centred Care, A Palliative Approach to Care in the Last 12 Months of Life, Promoting Safety: Alternative Approaches to the Use of Restraints, and Preventing and Addressing Abuse. Over the three-year qualification period to become a designated BPSO, this LTCH collected data at baseline (2018), during implementation (January 2019- February 2021) and post-implementation (March 2021 onwards). The PainBPG, initially piloted on two floors of the five floors (2F and 4F), was subsequently implemented across all care areas after the pilot phase. For each floor, a comparison between implementation and post-implementation was conducted. The data represented here focuses on the pilot implementation data.

Participants

All residents at VCT LTCH meet the eligibility criteria for admission to an LTCH in Ontario, including having healthcare needs that cannot be met with any combination of caregiving in the home or community. There were no exclusion criteria for this study. The management at VCT did not feel that it was ethical for only some seniors to receive pain interventions when others did not. Therefore, all residents who lived on the pilot floors were included in the original pilot phase. Subsequently, all residents in the entire VCT LTCH were eligible and included in receiving pain interventions. On the pilot floors, residents were above 65 (older adults) and in their 80s and 90s. At the time of the pilot, the LTCH population was 73 percent female and 27 percent male. The most common diagnoses included heart/circulatory disease, neurological

disease, hypertension, dementia/Alzheimer's disease, and musculoskeletal disease.

Quality Improvement (QI) Program: This report describes VCT's implementation of the Pain BPG according to the steps of the KTA framework. This framework supports VCT in advancing the successful transition of evidence into practice.

Identify the Problem: The first success factor in VCT's Accountability Framework (Figure 2) is "quality care and services". The reduction and management of Pain was identified as a priority to improve resident quality of life. A gap analysis was conducted to compare the actual practice to the best practices in the Pain BPG guideline. The main practice gaps identified were in screening and assessment of Pain and interpretation of pain scores.

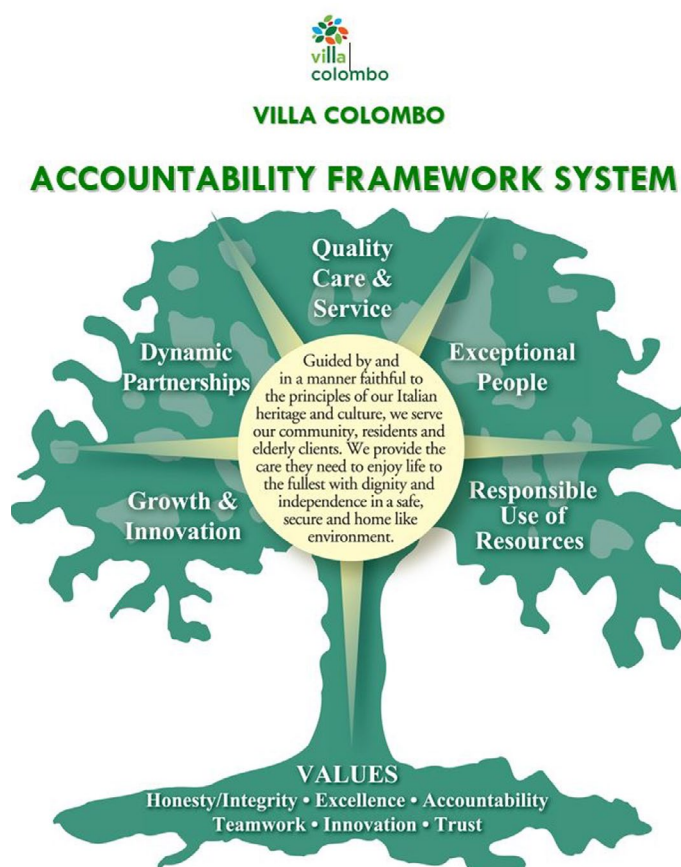


Figure 2. VCT's Accountability Framework

Source: <https://www.villacharities.com/about-us/>

Adapt to Local Context: VCT identified the best practices recommended and used in LTC. Adapting to the local context also requires identifying stakeholders who are vital to the success of this implementation. The leadership team identified that each person in the organization needed to be involved to be successful. The team included nursing, medicine, pharmacy, physiotherapy, and administration.

The resident and family councils were also engaged and received regular updates. A BPSO Interdisciplinary Steering Committee was formed, with a pain sub-committee responsible for conducting a regular gap analysis, developing and implementing action plans, and evaluating progress. The pain implementation discussion was a standing agenda item at many quality improvement meetings.

Assess Barriers/Facilitators to Knowledge Use: Key barriers included staff resistance to change and the COVID-19 pandemic, which impacted all aspects of care provision. The BPSO team worked tirelessly to demonstrate that the new pain processes benefited the residents and improved staff workload by streamlining practices, reducing duplication, and creating more accessible documentation methods. Champions – staff educated by RNAO on the Leading Change Toolkit methodology – were key facilitators during this time. According to Rogers (2003), the recommended number required to reach critical mass is 10%-30% of the target group. VCT built a critical mass of 31 champions (of 70 staff) from the two pilot units, which is 44% of staff as champions from a variety of interdisciplinary roles. The champions relayed messages about the project to the front line, answered questions, and implemented individual and organizational level changes.

Select, tailor, and implement interventions: The VCT implemented a multifaceted strategy when implementing the Pain BPG. The significant recommendations implemented revolved around implementing a validated screening and assessment tool, new documentation, and pain management strategies. VCT implemented the PREVIEW-ED© Screening Tool (12,16) used by personal support workers to identify resident changes in condition. Utilizing this screening tool helped PSWs recognize subtle changes in resident condition, including identifying new or worsened Pain. VCT also implemented the Pain Assessment in Advanced Dementia Scale (PAINAD) (17) to help assess pain in residents who cannot verbalize their pain experience. The implementation of the new screening and assessment tools supported processes of identification of new or worsened Pain, leading to consultations and interventions developed for pain management by third-party partners. Non-pharmacological pain and comfort care measures were also utilized according to resident needs, including sensory stimulation for pain management and distraction, music therapy that could be tailored to resident preferences, ice and heat, and oil usage as part of another ongoing research study. Continuous monitoring, audit, and evaluation were utilized to evaluate the impact on resident and organizational outcomes. Accompanying the introduction of these tools was education to staff, residents, and families. Education topics included updated policies and procedures, new processes and tools related to

screening, assessment, documentation, pain management, pain evaluation, and communication with residents and families about pain.

Other interventions included the incorporation of digitizing evidence-based practices (18) using RNAOs' Assessment and Management of Pain Order Set™ (PainOS). This BPG Order Set™ is intended for nurses and the interprofessional team. It provides evidence-based interventions, a care pathway, and resources to guide the assessment of adults for fall prevention and injury reduction. It is intended to be used with the Order Set from Pain BPG.

VCT recognized very early in implementation that Pain is not an isolated symptom. VCT incorporated pain identification and management into synergistic programs such as palliative care, wound care, and behaviour management. The integration increased opportunities for VCT staff to identify residents requiring pain management support.

Monitor Knowledge Use

VCT used and disseminated monitoring and evaluation reports to all staff and key leadership committees. Updates on the implementation status were shared home-wide with front-line staff in all departments through easy-to-review scorecards. Staff were excited to see results and the impact of changes to practice and organizational processes on residents' outcomes. Audits and electronically generated reports also allowed leadership to create "just-in-time" education to ensure that staff followed the prescribed policies and procedures. VCT provided RNAO with twice-yearly reports through the MyBPSO qualitative reporting system. These narrative reports were reviewed and discussed by the RNAO team and the VCT team to identify areas of success and opportunities for improvement and support.

Evaluate Outcomes: The LTCH evaluated numerous process and outcome indicators using the Nursing Quality Indicator for Reporting and Evaluation® (NQuIRE) data system, including steps to ensure improved documentation, data collection (RAI-MDS), and consistency in applying intervention. The home selected the following two indicators:

1. Pain assessment (process) indicator: The percentage of residents screened positive for pain with a documented comprehensive pain assessment using a standardized tool with established validity.

$$\frac{\text{Number of clients (residents) who screened positive for pain, with documented comprehensive pain assessment during the measurement period}}{\text{Total number of clients (residents) for pain during the measurement period}} \times 100$$

2. Worsening pain (outcome) indicators: Percentage of residents whose pain worsened during the measurement period.

$$\frac{\text{Number of clients (residents) with greater pain (higher Pain Scale Score) on their target assessment than on their prior assessment}}{\text{Total number of clients (residents) with valid assessments whose pain symptoms could increase}} \times 100$$

Sustain Knowledge Use. Sustaining practice is the key to ensuring that all the hard work and changes are maintained. The VCT team acknowledged from the beginning that pain management cannot be an add-on – it must be a routine part of each day. They recognized that integrating pain processes into existing programs electronic documentation, policies and procedures are the key to sustainability.

Data Analysis

Descriptive measures such as mean and standard deviations were calculated based on the longitudinal data submitted for each pain indicator. Since time is an important variable when determining the success of a QI initiative, a pre-post analysis was conducted to demonstrate the long-term impact of the intervention. To illustrate the impact of BPG implementation on resident outcomes, a trend analysis was performed along with a t-test that exhibited the impact of BPG implementation on resident outcomes. The risk of bias was not accounted for due to the indirect implication of BPG implementation on residents' outcomes. At baseline, process, and outcome indicator data were reported as outliers compared to implementation data because of existing practices. No confounding factors were associated with the indicator data.

Results

Table 1 illustrates the mean value of process and outcome indicators collected during implementation and post-implementation of the Pain BPG. Significant improvements were noticed as follows:

- Cumulatively, more than 70 percent of residents (~n=38) had pain assessment on these two floors.
- The results demonstrate a significant reduction in residents' who reported worsened pain on both 2F and 4F (p-value for 2nd floor = 0.045 < 0.05 and p-value for 4th floor = 0.024 < 0.05).
- The 2nd floor showed a relative reduction of worsened pain, 43.7 percent (from 48.7 percent to 5.2 percent), and the 4th floor showed a decrease of 37.5 percent (from 43.5 percent to 6.0 percent). (Figure 3)
- A significant time effect between implementation vs post-implementation (same p-value = 0.56 > 0.05) was found for the outcome indicator on both 2F and 4F.

Table 1. Averages during implementation and post-implementation time

Averages during implementation and post-implementation time		
Process Indicator: Percentage of Clients (residents) who screened positive for pain with documented comprehensive pain assessment		
	Jan 2019- Feb 2021	March 2021- Sept 2022
Floor 2	98.94	85.83
Floor 4	67.30	88.73
Outcome Indicator: Percentage of Clients (residents) whose pain worsened		
Floor 2	32.09	19.37
Floor 4	28.70	19.24

Source: RNAO Nursing Quality Indicators for Reporting and Evaluation® (NQuIRE)

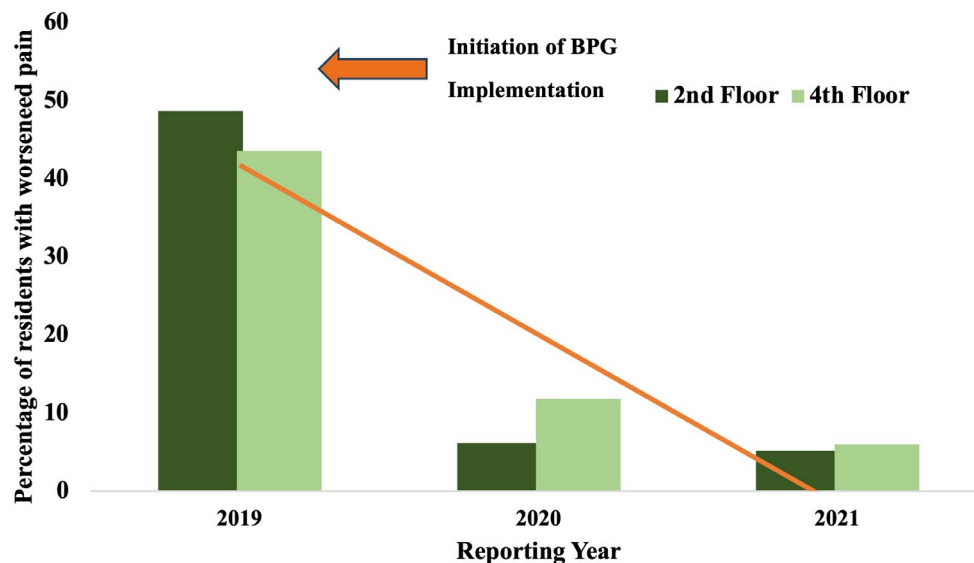


Figure 3. Percentage of residents with worsened pain between January 2019 and December 2021

Source: RNAO Nursing Quality Indicators for Reporting and Evaluation® (NQuIRE)

Other identified impacts of implementing the PainBPG included:

- In 2022, the LTCH initiated screening all residents for pain (screening rate of 100 percent)
- Improved performance was reported for worsened pain (ideal).
- 90% of residents scored their pain lower than 4 out of 10, signifying effective pain management (according to RAI/MDS score).
- Only 2% of residents have worsened pain during the measurement period.

Discussion

The implementation of the Pain BPG led to many positive outcomes related to pain assessment and worsened pain indicators through the education of staff, residents, and family members and the integration of validated pain screening and assessment tools. In particular, given the complexity of pain in older adults, as many older adults have multiple sources and types of pain from a variety of medical conditions (16–19). Other sources of complexity that add to the difficulty in pain assessments in older adults include the cost of pain medication, change in perception of pain with age, use of other medications, and cognitive impairment that may impact how pain assessments are

conducted (20). It is essential to tailor the pain assessments to the visual and cognitive ability of the older adult to complete the assessment. Therefore, it was important for VCT to use the PAINAD scale, which accommodates for the presence of behaviours that may be indicative of pain in older adults with dementia (21). This scale contains five items that assess physiological and psychological pain symptoms, including vocalization, breathing, body language, facial expression, and controllability (21). Factors are scored from 0 to 2 to achieve a maximum score of 10, where a total score of <4 indicates severe pain. A recent evaluation of the PAINAD scale found that the scale demonstrated good reliability (Cronbach's alpha = 0.80) and was especially useful in time-sensitive environments, which may apply to busy LTCHs like VCT.

The implementation team at VCT faced numerous challenges when implementing the Pain BPG, with the most notable being the initial resistance of staff to the new screening and assessment tools. Staff felt that the new tools were much work, and their concerns were valid. The team, understanding the need for change, worked diligently to simplify the workflows through an electronic format. VCT collaborated with their electronic documentation vendor to build the assessments into the electronic medical record, create structured progress notes that reduced the need for narrative documentation, and reduce duplication by removing redundant practices. The integration of the Pain OS, in addition to the electronic tools, helped to streamline processes and encourage buy-in and eventual adoption.

At the heart of any implementation are the residents and families. Involving families in the assessment of pain in residents is essential in understanding how to address pain (16,21–23). Given the involvement of families in pain screening, assessment, and management, this LTCH found a marked difference in the residents' quality of life. When residents were pain-free, they were happy and engaged, attended programs, and participated in events. Families were happy to see their loved ones free of pain and able to be social and engaged daily and during visits.

This study elevates the application of evidence-based practice in recognition of who is at risk for pain through pain assessment and showcases how better pain management can enhance care and reduce residents who reported that their pain worsened by incorporating residents' concerns and beliefs, that support the pain assessment process (resident-and-family centered care).

Conclusion

Pain in the elderly (>65 years old) who experience moderate to severe pain is undertreated mainly because of a lack of assessments (21–23). Based on this study,

systematic implementation of the RNAO pain BPG and the utilization of the knowledge-to-action framework led to the reduction of pain in older adults in LTCHs. Treating pain is complicated, and each resident requires an individualized plan of care and a multidisciplinary approach. In this study, a resident-and family-centered care approach and conducting pain assessment reduced the percentage of residents whose pain worsened, improved organizational processes, and increased staff satisfaction. Participation and engagement of residents, their families and health professionals in the process was one of the greatest facilitators. As pain affects the quality of life and rehabilitation, especially for the aged population, these results demonstrate the importance of implementing evidence-based practices with focused pain assessment. VCT aims to continue to expand to implement more BPGs in the entire home and to develop an evidence-based practice culture to support residents in improving their quality of life.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

Human and Animal Ethics

Consent was obtained or waived by all participants in this work and all authors have confirmed that this study did not involve animal subjects or tissue.

References

1. Minaya-Freire A, Subirana-Casacuberta M, Puigoriol-Juveny E, Ramon-Aribau A. Pain management nursing practice assessment in older adults with dementia. *Nurs Open* [Internet]. 2021;8(6):3349–57. doi: <https://doi.org/10.1002/nop2.880>

2. Lynch ME. The need for a Canadian pain strategy. *Pain Res Manag* [Internet]. 2011;16(2):77–80. doi: <https://doi.org/10.1155/2011/654651>
3. Hadjistavropoulos T, Marchildon GP, Fine PG, Herr K, Palley HA, Kaasalainen S, et al. Transforming long-term care pain management in north america: the policy-clinical interface. *Pain Med* [Internet]. 2009;10(3):506–20. doi: <https://doi.org/10.1111/j.1526-4637.2009.00566.x>
4. Eiche J, Schache F. Pain Management in geriatric patients. *Dtsch Med Wochenschr* [Internet]. 2016;141(9):635–41. doi: <https://doi.org/10.1055/s-0041-106307>
5. Montoro-Lorite M, Risco E, Canalias-Reverter M, Rodríguez-Murillo JA, García-Pascual M, Zabalegui A. Integrated Management of Pain in Advanced Dementia. *Pain Manag Nurs* [Internet]. 2020;21(4):331–8. doi: <https://doi.org/10.1016/j.pmn.2019.12.004>
6. Dowell D. CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022. *MMWR Recomm Rep* [Internet]. 2022;71. Available from: <https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm>
7. Pain management best practices inter-agency task force report. Updates, Gaps, Inconsistencies, and recommendations. Draft final report [Internet]. EEUU:HHS;2019. Available from: <https://www.hhs.gov/sites/default/files/pain-mgmt-best-practices-draft-final-report-05062019.pdf>
8. Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain. Nice Guideline [Internet]. London:NICE;2021. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK569960/>
9. Low back pain and sciatica in over 16s: assessment and management. Nice Guideline [Internet]. London:NICE;2016. Available from: <https://www.nice.org.uk/guidance/ng59>
10. Neumann I, Santesso N, Akl EA, Rind DM, Vandvik PO, Alonso-Coello P, et al. A guide for health professionals to interpret and use recommendations in guidelines developed with the GRADE approach. *J Clin Epidemiol* [Internet]. 2016;72:45–55. doi: <https://doi.org/10.1016/j.jclinepi.2015.11.017>
11. Schunemann HJ, Brozek J, Guyatt G, Oxman A, editors. Handbook for grading the quality of evidence and the strength of recommendations using the GRADE approach. GRADE Handbook [Internet]. Australia:GRADE;2013. Available from: <https://gdt.grade.org/app/handbook/handbook.html>
12. Grinspun D, Bajnok I. Transforming nursing through knowledge: Best Practice for guideline development implementation science, and evaluation. In: Grinspun D, Bajnok I, editors [Internet]. Indianapolis, IN:Sigma Theta Tau International;2018. p. 3–27. Available from: <http://hdl.handle.net/10755/624122>
13. Grinspun D, Wallace K, Li SA, McNeill S, Squires JE, Bujalance J, et al. Exploring social movement concepts and actions in a knowledge uptake and sustainability context: A concept analysis. *Int J Nurs Sci* [Internet]. 2022;9(4):411–21. doi: <https://doi.org/10.1016/j.ijnss.2022.08.003>
14. Registered Nurses' Association of Ontario (RNAO). Leading Change Toolkit [Internet]. Ontario:RNAO;2023. Available from: <https://rnao.ca/leading-change-toolkit>
15. Wilson R. RNAO-PointClickCare collaboration enhances LTC homes' compliance programs [Internet]. Ontario:RNAO;2021. Available from: <https://rnao.ca/bpg/ltcbpp-newsletter/summer-2021/rnao-pointclickcare-collaboration-enhances-ltc-homes-compliance>
16. ElBestawi MR, Kohm C. Decreasing preventable emergency department transfers for long-term care residents using PREVIEW-ED©. *Healthc Manage Forum* [Internet]. 2018;31(4):137–41. doi: <https://doi.org/10.1177/0840470417753969>
17. Williams DA, Robinson ME, Geisser ME. Pain beliefs: assessment and utility. *Pain* [Internet]. 1994;59(1):71–8. doi: [https://doi.org/10.1016/0304-3959\(94\)90049-3](https://doi.org/10.1016/0304-3959(94)90049-3)
18. Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, et al. Lost in knowledge translation: time for a map? *J Contin Educ Health Prof* [Internet]. 2006;26(1):13–24. doi: <https://doi.org/10.1002/chp.47>
19. MacSorley R, White J, Conerly VH, Walker JT, Lofton S, Ragland G, et al. Pain assessment and management strategies for elderly patients. *Home Healthc Nurse* [Internet]. 2014;32(5):272–85. doi: <https://doi.org/10.1097/nhh.0000000000000065>
20. Kaye AD, Baluch A, Scott JT. Pain management in the elderly population: a review. *Ochsner J* [Internet]. 2010;10(3):179–87. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc3096211/>
21. Fry M, Elliott R. Pragmatic evaluation of an observational pain assessment scale in the emergency department: The Pain Assessment in Advanced Dementia (PAINAD) scale. *Australas Emerg Care* [Internet]. 2018;21(4):131–6. doi: <https://doi.org/10.1016/j.aucc.2018.09.001>
22. Naik S, Voong S, Bamford M, Smith K, Joyce A, Grinspun D. Assessment of the Nursing Quality Indicators for Reporting and Evaluation (NQuIRE) database using a data quality index. *J Am Med Inf Assoc* [Internet]. 2020;27(5):776–82. doi: <https://doi.org/10.1093/jamia/ocaa031>
23. VanDeVelde-Coke S, Doran D, Grinspun D, Hayes L, Boal AS, Velji K, et al. Measuring outcomes of nursing care, improving the health of Canadians: NNQR (C), C-HOBIC and NQuIRE. *Nurs Leadersh* [Internet]. 2012;25(2):26–37. doi: <https://doi.org/10.12927/cjnl.2012.22959>