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Staff Education to Optimize Pain Management in Home Health Care

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Walden University

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Executive Summary: Staff Education Project

Staff Education to Optimize Pain Management in Home Health Care

by

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Summary

This DNP project is a nurse-led quality improvement initiative that responds to the age-old issue of ineffective pain management in the home healthcare setting. The issue is the absence of standardization in staff education regarding pain assessment and intervention, leading to unfavorable patient outcomes and a reduced quality of life.

The purpose of the project is to assess the efficacy of educational interventions delivered by nurses to enhance staff knowledge, confidence, and consistency in the management of pain procedures. The project question is: How effective are nurse-led educational interventions in improving staff knowledge and practices in pain assessment and management, aimed at decreasing patient-reported pain and improving comfort in home healthcare environments compared to routine education or no intervention?

Analytic strategies comprise pre- and post-training knowledge testing, patient-reported outcomes, and validated instruments like the Brief Pain Inventory (BPI) checklist. Staff knowledge improved, having a mean score increase from 79.3 on the pretest to 91.4 on the posttest following nurse-delivered training and a normalized learning gain (NLG) of 58.4%. The findings above validate staff training to promote better pain management in the home care setting. My recommendation would be to continue education and make decisions on improvements using the BPI checklist that would improve quality improvement and enhance evidence based on nursing practice that will close health gaps.

Background

Pain is among the most common and distressing symptoms for individuals receiving home healthcare services. Studies have shown that 45% to 80% of patients in home care suffer from moderate to severe pain on a regular basis (McNett et al., 2021). Despite this high prevalence, pain often remains unrecognized, inadequately assessed, or undertreated in these settings. There is considerable heterogeneity in staff pain management education, with limited formal training on evidence-based assessment instruments for many of the home health aides and nursing assistants. Inconsistent application of standardized tools, such as the BPI, contributes to variable recordkeeping and fragmented communication. Lastly, interdisciplinary communication barriers restrict providers' capacity to establish integrated and effective pain management plans (Anderson et al., 2020).

These deficiencies have detrimental effects, including reduced quality of life, functional decline, caregiver burden, and avoidable rehospitalizations. The literature indicates that poor pain management is linked to increased healthcare expenditures and adverse long-term outcomes, indicating the critical need for specialized treatments in home care (McNett et al., 2021).

Significance for Nursing Practice

Nurses have a singular opportunity to assume a leadership role in advancing deficits in pain management. Nurses, by virtue of their direct and continuous interaction with patients in their homes, can observe subtle alterations in comfort, institute treatments

in a timely fashion, and serve as change agents for revisions in care plans (Park & Lee, 2023). Nursing professional standards stress the accountability of nurses to provide effective pain management as a vital component of holistic care.

Furthermore, better pain management is consistent with the Quadruple Aim of healthcare enhancing patient experience, enhancing population health, lowering costs, and enhancing the work life of health care providers (Boev et al., 2022).

Evidence Supporting Nurse-Led Education

Evidence exists to underpin the success of nurse-implemented programs in enhancing pain management practice. Registered Nurses' Association of Ontario (RNAO) clinical practice guidelines identify the necessity for systematic pain assessment and recording mechanisms to be in place to promote accuracy and consistency (Buchanan et al., 2024). The World Health Organization (WHO) offers a formalized approach to pain management with its developed analgesic ladder that promotes a stepwise approach to pharmacology (Moch et al, 2022).

The Brief Pain Inventory (BPI)

The BPI has been widely validated for both chronic and acute conditions. Law et al. (2025) established its reliability and construct validity for patients with musculoskeletal pain, verifying its suitability for the home healthcare environment. The integration of the BPI into regular assessments and pairing it with nurse-led training enables home health agencies to enhance accuracy, minimize subjectivity, and facilitate communication among team members. Educational programs based on these best

practices have seen reductions in pain level, better procedural adherence, and increased patient satisfaction (Boev et al., 2022).

Strength of Evidence

The evidence base is moderate to strong. Several randomized controlled trials and systematic reviews endorse the benefit of formal nurse-delivered education to enhance staff capability and patient results in pain management (McNett et al., 2021; Park & Lee, 2023). Implementation science emphasizes the importance of integrating such programs into organizational policy to ensure durable sustainability and scalability. In summary, the results underpin the emphasis of the project on guideline-based nurse-led education and its integration into home health care environments.

Staff Education Project Development

Persistent pain in home care may be missed or inconsistently managed when staff lack shared tools and aligned expectations, so a nurse-directed education program was implemented to strengthen evidence-based pain assessment, documentation, and clinical judgment (McNett et al., 2021). Nurse educators trained leadership and frontline staff to clarify roles and improve accountability: the agency director supported workflow alignment, registered nurses led assessment and care planning, and nursing assistants/home health aides provided observations, comfort measures, and timely symptom reporting.

The training was structured according to the Centers for Disease Control and Prevention (CDC) 2022 opioid guideline (CDC, 2022), the RNAO Best Practice

Guideline, and the WHO analgesic ladder (Buchanan et al., 2024; Moch et al, 2022). It incorporated brief instructional sessions, home-care scenarios, simulations, and role practice aimed at enhancing communication, handoff processes, and escalation protocols. A primary emphasis was placed on the standardization of assessment using the BPI checklist to evaluate pain severity and its functional implications, while giving precedence to patient self-reporting and integrating pertinent psychosocial and cultural factors (see Table 1).

Table 1

Demographic and Professional Background (N = 14)

Characteristics	Number of staff nurses
Age	
20–29	3
30–39	3
40–49	4
50–59	2
60 and older	2
Gender	
Male	4
Female	10
Years of nursing experience in home health care	
Less than 1 year	2
1–3 years	6
4–7 years	4
More than 7 years	3
Highest level of nursing education completed	
LPN	2
Associate degree in Nursing	3
Bachelor of Science in Nursing	2
Nursing Assistant	2
Home Health aides	5

Evaluation Process

The assessment investigated whether the educational intervention resulted in quantifiable enhancements in home-based pain management practices and patient outcomes. A knowledge assessment consisting of 10 items was conducted prior to and following the training for the analytic sample ($N = 14$). The evaluation of practice adoption involved a thorough review of deidentified data from records, focusing on the completion of BPI, the quality of documentation, the process of reassessment, as well as patterns of communication and escalation. Patient outcomes were monitored using deidentified data by assessing pain severity and functional interference as reported by the BPI.

The indicators of feasibility encompassed surveys assessing acceptability and self-evaluations of preparedness to sustain the changes in practice. Trends were summarized with descriptive statistics (means, frequency, percentages). When suitable, paired comparisons (paired t tests) and categorical testing (chi-square) were used to evaluate statistical change.

Results

The results of the educational outcomes demonstrate significant learning that facilitates safer and more reliable pain management within the context of home care. Following the nurse-led training, the 14 participating nursing aides and staff demonstrated a notable improvement in their evidence-based knowledge, reflected by an increase in mean scores from 79.3 on the pretest to 91.4 on the posttest. The noted rise

suggests that staff have gained a deeper understanding of the principles underlying standardized pain assessment. This involves understanding the importance of using structured tools to evaluate pain severity and its functional effects, carefully recording observations, and applying clinically informed judgment based on guidelines when choosing and adjusting interventions. The improvement noted after training suggests a greater readiness to communicate pain-related findings clearly, perform timely reassessments, and raise concerns when necessary.

Table 2

Participant Knowledge Scores Before and After Training (N = 14)

Participant number	Before exposure to the intervention	After exposure to the intervention
1	80	90
2	80	90
3	80	90
4	90	100
5	70	90
6	90	100
7	70	90
8	90	100
9	80	90
10	80	90
11	70	90
12	80	90
13	80	90
14	70	80
Mean score	79.3	91.4
Minimum score	70	80
Maximum score	90	100

Using the Brigham and Women's Hospital for Nursing Excellence mean-based technique (see Figure 1), the 14-nursing staff sample attained a normalized learning gain (NLG) of 58.4%, showing a moderate-to-large knowledge gain that is comparable with previous education research (e.g., Mohamed et al., 2024). The audits after implementation showed a positive use of BPI checklist, consistency in its documentation, reduced severity of BPI-related pain, and the interference of BPI with function, which showed improved comfort and functioning of the participants. The staff expressed confidence in their ability to handle multimodal pain and their understanding of opioid safety, within the context of the CDC guideline.

Figure 1

Normalized Learning Gain-How to Calculate NLG

$$NLG = \left(\frac{\text{Postlearning score} - \text{Prelearning score}}{\text{Maximum score} - \text{Prelearning score}} \right) \times 100$$

$$NLG = \left(\frac{91.4 - 79.3}{100 - 79.3} \right) \times 100 = \left(\frac{12.1}{20.7} \right) \times 100 = 58.4\%$$

Organization Impact

This education initiative strengthened quality and workflow consistency by standardizing pain assessment and documentation and improving interdisciplinary communication. Clearer expectations around BPI use and reassessment supported earlier recognition of uncontrolled pain, faster escalation when needed, and better continuity across settings. These process improvements are anticipated to reduce avoidable acute care utilization by promoting proactive reassessment and timely plan adjustment.

Limitations

Several constraints affect interpretation. Staffing shortages and scheduling challenges reduced participation opportunities and limited time for repeated skill practice. The limitations of the budget constrained both the intensity and frequency of simulation activities. The single group pre/post design restricts the ability to draw causal inferences, while the limited sample size diminishes the applicability of the findings to a broader population. Self-report measures can potentially indicate a bias in responses.

Implications Beyond the Local Site

This allows for a framework to be developed that can be easily replicated by other home health establishments seeking to bridge these gaps. With the inclusion of staff training led by nurses, assessment using BPI methodology, decision-making through clinical guidelines (i.e., CDC, RNAO, WHO Ladder) to evaluation of documentation quality, it allows for easy improvement in prescribing practices to be replicated. This method fosters improved interdisciplinary collaboration and promotes equitable, patient-centered pain management in home settings.

Conclusions

This staff education initiative demonstrates that a well-organized, nurse-led program can enhance pain management in home care by addressing deficiencies in assessment, documentation, and follow-through, while also clarifying interdisciplinary roles and responsibilities. The implementation of practice changes extended beyond just improvements in test performance. The staff have begun to utilize BPI with greater

regularity to assess pain intensity and its effects on daily functioning. This change facilitated clearer documentation, leading to more reliable reassessment and escalation, which ultimately enhanced continuity and clinical decision-making in the home environment. The training emphasized the importance of patient-centered, multimodal approaches and the implementation of safer medication practices that align with established guidelines. The key point emphasized was the importance of utilizing first-line nonpharmacologic and nonopioid treatments when indicated, along with adherence to the guidelines for the use of opioids, which align with CDC recommendations when indicated.

Recommendation for Sustainability

To foster long-term sustainability, incorporation of the educational module into staff orientation and annual refresher programs is advisable along with adding simulation-based training for greater practical application. Furthermore, developing mentorship programs to foster continuous professional development is warranted.

Consequences of Nursing Practice and Societal Transformation

This project highlights the essential contribution of nurses to closing the gap between evidence and practice . It facilitates constructive social change through addressing inequalities in pain care, especially among the elderly, minority groups, and socioeconomically disadvantaged groups who are most susceptible to inadequate pain care by ensuring that evidence-based interventions are culturally-sensitive, fair, and patient-focused.

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