Short-Stay Palliative Pain Management for Southwestern VA: Process Improvement Plan

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Background of Problem

- Pain: common symptom affecting patients with a life limiting diagnosis
  - Personal and unique to the person experiencing it
  - Majority of patients do not understand the importance of reporting pain while having limited opportunities to participate in their pain management plan of care
- Palliative pain management:
  - Essential to providing optimal care for patients with a serious chronic and/or life-limiting diagnosis or disease (Morrow, 2016).
  - Lack of pain management knowledge among healthcare providers is the main barrier to patient pain management success (Pathmawathi et al., 2015).
  - Assessing pain accurately and communicating the diagnosis and plan to the healthcare team are essential for effective palliative pain management (Hughes, 2012).
- Patient Care:
  - Nurses are inadequately prepared to care for patients requiring palliative care (Levine et al., 2017).
    - Reasons include inadequate curriculum and lack of structured education related to palliative care / symptom management.

Project Site

- Southwestern VA Medical Center
  - Part of the VA Desert Pacific Healthcare Network, Veterans Integrated Service Network (VISN) 22 which is based in Long Beach, CA.
  - Affiliated with a four and two year college
  - 310 bed facility
    - 36 bed Community Living Center (CLC) which houses the facility's hospice and palliative care unit
  - SWVAHCS has more than 2,100 employees whom an estimated one third is Veterans

Background of Problem

- SW VA Medical Center (SWVAMC) has challenges delivering effective palliative pain management which includes:
  - **inadequate preparation of the palliative healthcare professional (nurse)**
  - **flawed process**
  - **less than optimal delivery**

Purpose / Objectives

- Purpose
  - To enhance the level of palliative pain management at the SWVAMC for short-stay Veterans through implementing a “hands-on” pain management simulation training for nursing professionals working on its CLC.
- Objectives
  - Lower SAIL scores below internal benchmark of 30.5%% (FY18 Q1/Q2)
  - Increase palliative nurse knowledge (pre-test and post test)
  - Apply knowledge of palliative pain management in simulation exercise (Approved Evaluation Tool)
  - Evaluate effectiveness of exercise (focus group)

Significance

- **SAIL quality management data**
  - Indicates it is necessary for the SWVAMC to improve its short-stay palliative pain management program and subsequent outcomes through enhanced delivery of care as quality care has a vital impact on patient, family,
  - institutional, and costs of care outcomes (Chong et al., 2004).
- **Optimal Implementation: Palliative pain simulation education**
  - With simulated learning followed by a debriefing period learners reported an increased level of confidence in their ability to assess and manage acute pain (Dzulkarnain, Wan Mhd Pandi, Rahmat, and Zakaria (2015); Kirkpatrick, Cantrell, and Smeltzer (2017); Salam, Saylor, and Cowperthwait (2015)

Problem Statement

Given the SWVAMC's difficulty in managing Veteran centered palliative pain, does simulated palliative care education and standardized preparedness for nursing (RN/ LPN) staff when compared to current standards alone, impact the quality of palliative pain management delivered to Veterans determined by SAIL MDS short-stay pain management data at the SWVAMC with an initial baseline fallout rate of 30.5%?

Terms & Variables

- Short-stay pain data is collected for patients remaining in the moderate to severe pain level (to include very severe pain) based on SAIL data for patients who spend <90 days in a VA Medical Center, retroactive 180 days.
- Short-stay palliative care statistics are gathered utilizing the Minimum Data Set (MDS) 3.0 Nursing Home Comprehensive Version 1.15.1 and reported to the regional office in Austin, Texas for SAIL publication.
- Veterans are evaluated by a CLC nurse utilizing the verbal descriptor scale no pain (0), mild (1-3), moderate (4-6), severe (7-8), or very severe /horrible (9-10) on a 0-10 pain scale upon admission and follow up pain (after diagnosis and a subsequent nursing intervention). Patients unable to rate their pain are excluded from data collection.
- Data is compiled and the overall number of patients' falling into the moderate to severe pain category as documented in section J0600 of nursing driven pain assessment flow sheet are taken as a % versus those Veterans comprising the overall patient population of the CLC

Review of Literature

- **Need for palliative pain care management**
  - Current estimates suggest that approximately three quarters of people approaching end-of-life may benefit from palliative care.
- **VHA palliative care program**
  - VA has been a leader in program development and service delivery in palliative care for decades
- **Role of the palliative pain management nurse**
  - The nurse is at the center of optimal pain management as the relief of pain and suffering is consistent with the philosophy and goals of nursing as a profession therefore, a nursing responsibility
- **Preparedness of palliative pain management nurse**
  - Nurses and other health care professionals are inadequately prepared to care for palliative care patients
- **Palliative pain simulation education**
  - Simulated learning is an optimal and effective tool for clinical training
- **Continuous quality improvement in palliative pain management**
  - Nursing initiatives in the areas of education, practice, research, and health policy are ongoing and represent important contributions toward improving palliative care

Methods

Design

- Intervention was comprised of eleven sessions.
  - Each session was a 2.5 hour hands-on palliative pain management simulation involving RNs/LPNs working on the CLC based on theoretical concepts endorsed by the NHPCO and HPNA.
  - Goal: To improve short-stay palliative pain management for Veterans at the SWVAMC when compared with the results prior to implementation of the hands on pain management simulation.
    - participant was observed by two Certified Hospice and Palliative Nurses (CHPN) (RN's) who provided feedback on what went right and areas that required process improvement based on a 14 item evaluation tool mirrored after CHPN best practices (Hospice & Palliative Credentialing Center, 2017).

Methods

Benefit/ Risk Assessment

- Benefits outweighed the risks.
  - Benefits:
    - Included improving short-stay palliative pain delivery for Veterans at the SWVAMC through improved knowledge and functional ability of nurses' in regard to palliative patient pain management over time.
    - There was not any subject or participant recruitment and the presentation itself was given to a captive audience.
    - Implementation of the project was approved by Jacksonville University and SWVAMC Institutional Review Boards.
    - Cost associated with this palliative pain management process improvement project was minimal.
    - Self-determination, full disclosure, and voluntary consent by hospital actors were obtained.
    - Questions were answered prior to launching the implementation and consent was not necessary, regarding nursing staff as the simulated training was part of mandatory hospital based education.

Methods

Sample

- Population studied included the 23 staff nurses (RNs/LPNs) providing palliative pain management to Veterans on the CLC regardless of diagnosis over FY18Q1/Q2 (pre-implementation), & FY18Q3 (post-implementation)

Methods

Instrumentation/ Data Collection

Pre-Test / Post-Test

- Immediately prior to palliative pain simulation implementation, each participant was presented with an ANCC endorsed 10 question pre-test to measure general palliative pain knowledge. This test was repeated immediately post-implementation prior to session completion (Measuring responses at pre and post implementation time intervals confirmed participant engagement, learning, and retention).
  - Validity: Pre-Test / Post Test design improves internal validity but sacrifices external validity to do so as there is no way of judging whether the process of pre-testing influenced the results because there is no baseline measurement against groups that remained untrained (Shuttleworth, 2009).
  - Reliability: ANCC endorsed palliative pain questions
    - The ANCC Pain Management Nursing board certification examination is a competency based examination that provides a valid and reliable assessment of the entry-level clinical knowledge and skills of registered nurses in the pain management after initial RN licensure (American Nurses Credentialing Center, n.d.)

Palliative Pain Management Evaluation (PPME)

- After implementation of the hands-on simulation for RNs/LPNs a joint evaluation containing no identifiers based on essential palliative pain practices was completed on each nurse by CHPNs and results analyzed
  - Each of the fourteen essential items on the PPME worksheet was determined satisfactory (addressed and completed by nurse), unsatisfactory (not addressed/ not completed by nurse), or non-applicable (based on the acted out scenario/ dialogue) for the participant by the CHPN RNs. Combined “satisfactory” group average was compiled for each item. Satisfactory= 1 point, unsatisfactory equaled 0 points, and a N/A response was omitted from the calculation. The total percentage equaled earned points divided by total points. Any evaluation item falling below 80% (rating of good) was reviewed for a separate QI initiative.

Focus group (conducted on the CLC four weeks post final simulated session)

Methods

Simulation

- Live simulated training exercise involved the RN/LPN interacting with a trained, VA approved hospital volunteer actor who simulated a short-stay palliative care patient pain scenario.
- Each nurse participated in one of three randomized scenarios.
- The other team members repeated the process respectfully, utilizing different scenarios.
- Upon conclusion, the CHPN RNs demonstrated each of the three scenarios with the opportunity for a question and answer period.

Methods

Scenarios

Palliative Pain Management Scenario #1 (RN/LPN Scenario)

- Transfer from ICU prior to shift change. It is 8am and you have received report from the ICU nurse and are walking in to perform your initial assessment as the CLC nurse. In report, you learned that your patient, Mrs. Walker, who has a diagnosis of cancer with bone and brain metastasis, has received a dose of PRN Roxanol 20mg/ml 0.5ml 1hour ago for breakthrough pain (6/10).
  - Scheduled Medications: Roxanol 20mg/ml 1ml q4 hr SL (0400,0800, 1200, 1600, 2000, 0000)
  - As Needed: Atropine gtts 1% 2 gtts q 4hr prn excessive secretions; Roxanol 20mg/ml 0.5ml q2 hr SL prn pain or sob; Lorazepam 0.5mg tab PO/SL q 4hr prn anxiety; Haldol 0.5mg tab PO/SL q 4hr prn delirium/agitation; Phenergan suppository 12.5mg q 6hr prn nausea or vomiting; Tylenol 650mg suppository q 8hr temp >100 prn

Palliative Pain Management Scenario #2 (RN/LPN Scenario)

- New admission prior to shift change. You received report and are walking in to perform your start of shift assessment. In report you learned that your patient, Mr.Walker who has liver cancer with metastasis to bone and brain, received the following medications: Roxanol 20mg/ml 0.5ml SL and 600mg ibuprofen 1 hour ago (for pain of 9/10). He had his scheduled MS Contin 60mg 4 hours ago.
  - Scheduled Medications: MS Contin 60mg po BID (0800, 2000); Senna Plus 2 tablets po BID (0800, 2000)
  - As Needed: Roxanol 20mg/ml 0.5ml SL q 2 hr prn pain or SOB; Haldol 0.5mg po q 6 hour prn delirium or agitation; Ibuprofen 600mg po tid prn; Zofran (solutab) 8mg po bid prn

Palliative Pain Management Scenario #3 (RN/LPN Scenario)

- New admission prior to shift change. You received report and are walking in to perform your start of shift assessment. In report you learned that your patient, Mr. Perez who has pancreatic cancer received the following: Roxanol 20mg/ml 1.5ml SL 30 minutes ago (for pain 10/10) and is gaging on sips of water. Mr Perez also had his scheduled MS Contin 60mg 4 hours ago.
  - Scheduled Medications: MS Contin 60mg po BID (0800, 2000); Senna Plus 2 tablets po bid (0800, 2000)
  - As Needed: Roxanol 20mg/ml 1.5ml SL q 2 hr prn pain or SOB; Haldol 0.5mg po q 6 hour prn delirium or agitation; Ibuprofen 600mg po tid prn; Zofran (solutab) 8mg po bid prn

Methods

Evaluation Tool (Elements)

Items come directly from the requirements necessary to become a Certified Hospice and Palliative Nurse as defined by the Hospice and Palliative Nurses Association and endorsed by the National Hospice and Palliative Care Organization (Hospice & Palliative Credentialing Center, 2017)

Key:

Satisfactory: Addressed and Completed by nurse

Unsatisfactory: Not addressed / Not completed by nurse

N/A: Based on the acted out scenario/ dialogue

A. Assessment

1. Performed comprehensive assessment of pain (e.g., verbal vs. non-verbal)
2. Identified etiology of pain
3. Identify types of pain or pain syndromes
4. Identified factors that may influence the patient's experience of pain

B. Pharmacologic Interventions

1. Identified medications appropriate to severity and specific type of pain
2. Titrated medication to effect using baseline and breakthrough doses
3. Administered analgesic medications
4. Identified dosage equivalents when changing analgesics or route of administration
5. Administered adjuvant medications

(e.g., NSAIDS, corticosteroids, anticonvulsants, tricyclic antidepressants)

C. Non-pharmacologic and Complementary Interventions

1. Responded to psychosocial, cultural, and spiritual issues related to pain
2. Implemented non-pharmacologic interventions (e.g., ice, heat, positioning, distraction, etc.)
3. Identified the potential benefit of the following non-pharmacologic interventions (e.g., palliative surgery,
4. Identified the potential benefit of the following complementary and alternative therapies (e.g., Reiki, hypnosis, acupressure, massage, pet therapy, music therapy)

D. Evaluation

1. Assessed for and responded to complications (e.g., side effects, interactions) and promoted overall patient efficacy

Analysis of Data

RN/LPN Educational Improvement

- Educational improvement for nurses before and after receiving the pain simulation educational training utilized a paired sample T-test measuring pre-test / post-test scores for the participants. P level was measured against the industry standard of $p<=0.05$.

Quality Palliative Pain Care for Veterans

- Statistical analysis was based strictly on facility level short-stay self-reported moderate to severe palliative pain data as measured by the Minimum Data Set (MDS) 3.0 Nursing Home Comprehensive Version 1.15.1.
  - Post- implementation patient reported short-stay moderate to severe pain data for FY18Q3 at the SW VA Medical Center was compared against pre-implementation FY18 Q1/Q2 combined data to determine whether there was improvement.
  - Two sample Z-Test was run to measure the significance of the difference between means in the two sets of data. P level was measured against the industry standard of $p<=0.05$.

Results

Population

- Of the twenty three nurses currently employed on the 36 bed CLC at the SWVAMC, 20 participated in the palliative pain management simulation for a participation rate of 87%.

Results

Nursing Knowledge (Overall Knowledge Gained)

- Pre-implementation versus post-implementation knowledge.
  - The ten-question ANCC endorsed pre-test/ post-test was administered to each participant directly prior to the simulation and upon immediate conclusion of the 2.5 hour session. Sixteen out of twenty participants showed improvement on the post-test versus the pre-test for an 80% success rate. At the same time the remaining four participants (20%) had equal results on the pre-test and post-test with one of the four participants receiving a perfect score on both exams. A paired sample T-Test showed significant results with p=.001 (p<= 0.05) and T= 6.05, concluding that the pre-test and post-test means are significantly different and that learning did take place.
- The pre-test / post-test design was utilized as a basic tool to measure knowledge gained.

Results

Quantitative Outcomes

- Primary purpose of the project was to improve short-stay palliative pain management for Veterans at the SWVAMC evidenced by SAIL MDS short-stay pain management data for FY18Q3 (post-implementation) versus FY18Q1/Q2 (pre-implementation).
  - **Combined FY18Q1/Q2 data showed a 30.5% failure in the ability for nursing staff to adequately manage moderate to severe palliative pain for short-stay patients at the SWVAMC. FY18Q3 data showed a 41.4% failure rate.**
  - ***p*=0.0354 (*p*<=0.05); Z=-2.12, indicating that there is significance between pre-implementation and post-implementation means verifying what descriptive analysis already showed, that there was no improvement but in fact decline in quality palliative pain management for short-stay Veterans.**

Results

Qualitative Outcomes

Focus Group Results:

- Participants cited the ability to refresh skills; work with other staff to learn new skills in an interactive, simulated forum; valuable feedback and demonstration from CHPN professionals; and the post discussion with immediate feedback as elements of value.
- 3 stated that the training would have been more valuable if it was done during off tour hours.
- Others cited that they were not allowed to assist their fellow staff member during the individual training sessions and that the experience would have been more valuable if it was a true group effort for each palliative pain simulation scenario.
- 3 cited the length of the session (2.5 hrs) as being a limiting factor in the learning experience.
- Being “on stage” was cited as a limiting factor.
- 4 sessions where there was only one participant due to no shows/ call offs was cited by 1 person.
- 5/6 participants surveyed stated that the palliative pain simulation helped to refresh their skills as well as develop new skills.
- 6/6 surveyed took the time to state suggested enhancements for the training moving forward.
  - 1 person cited an optimal level of four participants per scenario
  - Also, stated was the training should be included as part of orientation for all new nurses
  - 2 nurses cited that the training would be equally sufficient if completed in a web based forum.
  - 2/6 nurses expressed interest in being a champion for CQI for palliative pain management although only 1 said they have time to take on the task.

Results

Evaluative Outcomes (PPME)

- Majority were able to assess pain, identify its etiology, and type with a satisfactory level of success.
- Ability to identify factors such as fear, depression, and patient experience of pain were only addressed satisfactorily by 11/15 participants (73%).
- 16/ 20 participants utilized non-pharmacologic interventions such as ice, heat, positioning, distraction, etc. satisfactorily
- 20/20 participants assessed for and responded to complications in a satisfactory manner to include side effects, interactions of medication given, and promoted overall patient efficacy.

Results

Summary Results:

- Overall Project Outcomes 
  - Short-stay palliative pain management for veterans at the SWVAMC
    - **FY18Q1/Q2 Combined Data (67/220)= 30.5% failure in Short-stay palliative pain management (Pre-implementation)**

      Versus
    - **FY18Q3 Data (58/140)= 41.4% Failure in Short-stay palliative pain management (Post-implementation)**
  - Nurse Education 
    - **80% showed improvement (16/20)**

Discussion

Final Outcomes

- Nursing professionals have been educated and showed improvement regarding knowledge of how to manage short-stay palliative pain management patients: 80% improvement rate on the pre-test / post-test results.
- Continuous Quality Improvement (CQI) initiatives have been identified at the SWVAMC through missed opportunities in certain areas and/or lack of coverage noted on the PPME (Hospice & Palliative Credentialing Center, 2017).
- Two palliative pain management champions have been identified to formulate future CQI projects at the SWVAMC
- Quality Care for Palliative Pain Patients did not improve

Discussion

Limitations

1. Acuity of patient population
2. New Employees (2)
3. Medication seeking patients
4. Incomplete pain simulation (based on evaluation tool and focus group feedback)
5. Lack of education professional to lead the way
6. Small study
7. Limited time frame for post-implementation data collection
8. Patient ability to learn
9. Baseline pain > 0
10. Uniform nurse learning
    a. 11 sessions / 4 sessions with only one participant
11. Dedicated education time
12. Not working with participants post-implementation in real-time

Discussion

Recommendations for Further Research/ Practice

- Elements as identified in the PPME that fell out, along with items identified in the focus group questionnaire should be addressed to promote simulation modification and practice improvement over time.
- At the same time the palliative pain simulation exercise should be looked at as being implemented throughout the VISN and nationally throughout the VA to promote RN/LPN education and CQI for palliative pain patients throughout the VA.
- Acuity effect, Pt. ability to learn, baseline pain > 0, uniform nurse learning, dedicated education time
- Study size (20 participants) and the fact that it took place at only the SWVAMC.
  - Insufficient data/ larger samples needed

Discussion

Implications For Practice

- What has been identified in this study will serve the SWVAMC, United States Department of Veterans Affairs (USDVA) and others well over time.
  - A deficiency in short-stay palliative pain management for the SWVAMC was identified.
  - A palliative pain simulated intervention was identified and implemented.
  - Simulation was identified as a best practice to promote process improvement.
  - Best nursing practices were identified for the palliative pain nursing professional in accordance with the HPNA and NHPCO (Hospice & Palliative Credentialing Center , 2017).
  - Through education, evaluation, and feedback, RNs/LPNs at the SWVAMC improved their knowledge to care for the palliative pain patient population.

- **CQI initiatives were identified and through future promotion, implementation, and study, palliative pain management for VA patients in the VA will improve over time.**

Conclusions

Still Work to be done

Some Success

- Live “hands-on” palliative pain management simulation according to literature is an optimal tool to enhance nurse knowledge and quality of practice however, modification of the palliative pain simulation is likely necessary to promote improved short-stay palliative pain management for the SWVAMC over time.
- Complete, dedicated educational preparedness of nurses along with best processes and practices are necessary to promote optimal care for patients requiring palliative pain management.
- Continuous, quality improvement palliative pain champions have been identified at the SWVAMC
- Larger studies are needed to validate results of simulation

Questions

Questions

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