Improving the Pain Experience for Cancer Inpatients: A Quality Improvement Project

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Background/Significance

- 50% of persons with cancer report pain
- 80% of those with advanced disease report moderate to severe pain
- Inpatient Solid Tumor Unit Pain Satisfaction
  HCAHPS Composite Top Box Score = 57.7%
  Goal ≥ 70%

Evidence Summary

Project Aims

Determine the effect of a Pain Stoppers bundled intervention on:
1. HCAHPS pain satisfaction scores
2. Actual pain intensity scores
3. RNs’ Knowledge and Attitudes on Pain (KAP) Survey scores

Measures/Instruments

HCAHPS surveys
- Random sample
- Press Ganey
- Two pain management-related questions
- Pain intensity
- EHR
- Likert scale (0–10)
Knowledge and Attitudes on Pain survey
- Email invitations
- Qualtrics

Statistical Analysis

SPSS 25 (IBM)

RN KAP Scores: Two Questions (Fisher’s Exact Test)

Patient Demographic Data

- No HCAHPS demographic data available from Press Ganey

Data Extracted from Electronic Health Record

- Pre-intervention N = 173
- Post-intervention N = 157
- No statistically significant differences in age, sex, race, length of hospital stay, or having received radiation therapy within the past 30 days
- Post intervention group: less likely to have received chemotherapy within the past 30 days at 65% compared to 76.3% (χ² (1) = 5.12, p = .024)
- Fewer post-intervention patients admitted for chemotherapy administration: 8.3%, compared to 15% (χ² (1) = 3.6, p = .058)

RN Demographic Data

- Pre-intervention N = 11 (31% response rate)
- Post-intervention N = 9 (25% response rate)
- 5 RNs completed both surveys
- 100% BSN in both groups
- Attendance at End of Life (ELNEC) training: 18.2% pre-intervention and 0% post-intervention
- Mean years RN experience: 16.7 (SD = 11.8) pre-intervention and 9.4 (SD = 12.3) post-intervention
- No statistically significant differences between the groups

HCAHPS Pain Satisfaction Scores

Pre-intervention = 73.7 %
Post-intervention = 57.7 %
**exceeds goal of 70%**

Results achieved with post-intervention group having higher mean actual pain intensity scores
Post-intervention group may have had more advanced disease
KAP scores improved on two questions that were addressed in follow-up education

Limitations

- Small sample size
- HCAHPS groups
- RN groups
- Pre-post intervention design
- Generalizability
- Altered KAP survey
- Early implementation

Conclusions

- Supports findings of previous studies
  - It is possible to improve pain experience without impacting actual pain intensity scores
- Main aim of study realized
  - HCAHPS “How often did staff do everything to help with your pain?” improved from 61.5% to 90% answering “always” post-intervention
- Nurses can improve cancer patients’ pain experience using:
  - Enhanced communication, caring behaviors, timely responses
  - Appropriate patient education materials
  - Strategies to maintain analgesic levels

Discussion

HCAHPS top box pain scores improved following implementation of the Pain Stoppers intervention

Composite pain score:
Pre-intervention = 57.7 %
Post-intervention = 73.7 %

• Results achieved with post-intervention group having higher mean actual pain intensity scores
• Post-intervention group may have had more advanced disease
• KAP scores improved on two questions that were addressed in follow-up education

RN KAP Scores: Two Questions (Fisher’s Exact Test)

- Question 5 (% correct)
  Pre-intervention (N = 11): 36.4%
  Post-intervention (N = 9): 88.9%
  p-value: 0.025
- Question 16 (% correct)
  Pre-intervention (N = 11): 45.5%
  Post-intervention (N = 9): 88.9%
  p-value: 0.058