Improving hot flash documentation and knowledge of therapeutic modalities for hot flashes through nurse education

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Introduction & Background

- ***200,000*** diagnoses of ***breast cancer*** are made in the U.S. yearly, with an *average five-year* ***survival rate of 90%*** for invasive diagnoses.
- Patients and survivors experience ***hot flashes***, *a* consequence of early drug induced menopause with prevalence in excess of ***78% among survivors***. These affect ***quality of life*** and compromise ***adherence*** to anti-neoplastic medications.
- Literature and expert bodies support use of ***Gabapentin*** and ***Venlafaxine*** for treatment but nurses may not be knowledgeable about these or assess specifically for hot flashes, resulting in under treatment.
- Integrated into electronic health record (EHR) systems, the ***National Cancer Institute*** (NCI) has ***Clinical Terminology Criteria for Adverse Events*** (CTCAE) to assess and grade adverse events temporarily associated with cancer therapy.
- There is ***no current standardized approach*** for documentation or non-hormonal treatment options for hot flashes thus an intervention to ***improve nurse knowledge*** and ***adverse effect documentation*** exists.

Purpose

The purpose of this project is to implement and evaluate the effects of nurse education on evidence-based treatments and nurse assessment for hot flashes, to determine if knowledge and documentation rates increased.

Aims

1. **Assess baseline hot flash documentation rates using the NCI flowsheet.**
   Measure: EHR report of hot flash documentation rates.
   Analysis: Descriptive statistics.
2. **Deliver tailored comprehensive education to increase nurse knowledge of hot flashes, non-hormonal treatments for these and documentation using NCI best practice guidelines.**
   Measure: 12 question multiple choice knowledge test.
   Analysis: Wilcoxon signed rank.
3. **Assess hot flash documentation rates using the NCI flowsheet at implementation end.**
   Measure: EHR report of hot flash documentation rates.
   Analysis: Descriptive statistics.

Methods

Design: Pre-post test study with a one group educational intervention.
Sample: 7 registered nurses.
Setting: Outpatient oncology center in a for profit facility in the mid-Atlantic region.
Intervention:

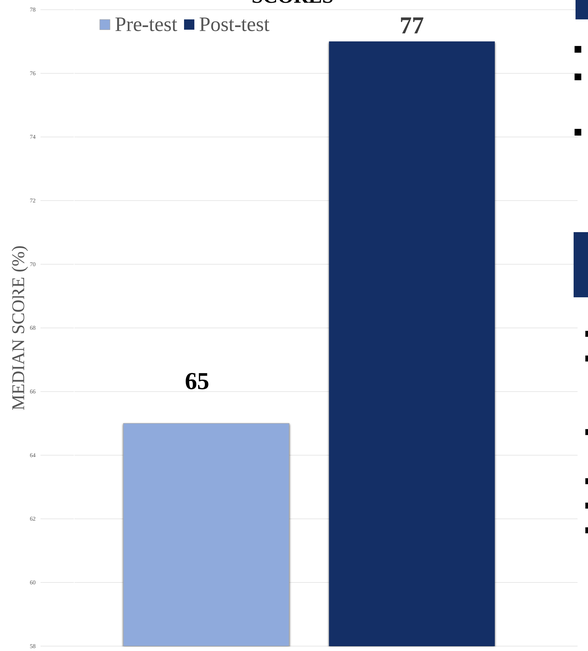
- EHR documentation rate reports at baseline and intervention end after 8 weeks.
- 30-minute didactic education session on hot flashes, non-hormonal modalities of treatment and best practice for documentation.
- Incorporated national best practice guidelines, expert bodies endorsements and an up-to-date literature review.
- Pocket cards with QR codes with ‘how to document’ steps provided.
- Knowledge tests delivered pre and immediately post intervention via hard copies.
- Content for tests from knowledge surveys, continuing education assessments and current literature.
- Statistical analyses - SPSS Statistics version 27.0 and descriptive analysis.

Results

Table 1. Participant characteristics (N=7)

Age	(%)
20-29	14.3
30-39	0.0
40-49	14.3
50-59*	57.1
60-69	14.3
Gender	
Male	0.0
Female*	100
Other	0.0
Education level	
Doctorate	0.0
Master’s	14.3
Bachelor’s*	85.7
Other	0.0
Years with breast cancer patients	
0-4	28.6
5-10	14.3
11-15*	42.9
16-20	0.0
21-25	14.3

Figure 1. **PRE-POST NURSE KNOWLEDGE SCORES**



MEDIAN SCORE: (P < . 028)

Knowledge Findings

- *Aim 1:* Hot flash documentation rates with NCI tool at baseline = 0.
- *Aim 2*: Significant ***12%*** increase in median nurse knowledge with ***p value = < . 028*** (Figure 1). ***86%*** of participant nurses improved knowledge.
- *Aim 3*: Hot flash documentation rates with NCI tool at implementation end = 3.

Conclusion

- The education session **improved nurse knowledge** of hot flashes, non-hormonal treatments for hot flashes and documenting using best practice guidelines with **statistical significance.**
- There is potential to deliver nurse education on any oncology unit as the NCI flowsheet has standardized classification for *all* adverse events related to neoplastic therapy.
- Documentation rates were low given that approximately 500-600 breast cancer patient visits took place during the 8-week intervention.
- Future interventions should have a longer duration for implementation, to determine impact on documentation rates without an acute global pandemic.

Dissemination

- Submission of pilot intervention to *peer-reviewed journals* for publication.
- Results shared with nurse staff, management and providers via *poster display* on the outpatient oncology unit.
- Intervention is to be suggested to *other oncology treatment units* at this institution, for delivery of tailored education of adverse events related to neo-plastic therapies and NCI best practice guidelines for documentation.

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