Just Breathe...The Importance of the Incentive Spirometer (IS)

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Background

- At LVHN, observation and patient questioning showed that patients were not aware on proper IS use and technique and that nursing staff were not completely sure on IS education and hospital policy and practices.
- Studies have shown that between 17 and 88% of people having abdominal surgery will suffer a postoperative pulmonary complication (do Nascimento Junior et al., 2014).
- These numbers have been shown to decrease with careful treatment that encourages deep breathing, which helps to increase lung volume (do Nascimento Junior et al., 2014).
- Incentive spirometers (IS) are devices that assist patients in deep breathing (do Nascimento Junior et al., 2014).

PICO

Project Purpose: To increase patient use of incentive spirometers post surgery
- PICO Question – In post abdominal surgery patients, does nursing reeducation on IS use compared to patient knowledge prior to nurse reeducation increase patient knowledge on IS use and technique?
  - P - Nurses on 4K and 5K
  - I - Nursing reeducation on proper incentive spirometer technique
  - C - Patient knowledge on incentive spirometer prior to nurse reeducation
  - O - Increase patient knowledge on incentive spirometer use and proper technique

Evidence

- Across the United States, respiratory therapists and nurses were surveyed and responses showed that 86% said adherence is poor and 95% said that this should be improved (Eltorai et al., 2018).
  - Most common reasons for lack of adherence were forgetfulness of patients (83%), incorrect use and technique (74%) and infrequent use (70%) (Eltorai et al., 2018).
- Planned teaching programs have proven to be effective in assessing knowledge and practice on IS use among patients undergoing abdominal surgeries in hospitals
  - Knowledge questionnaires were distributed to sample sizes of 60 – observation checklists were also used (Jerin & Binutha, 2017).
  - Results showed an increase in scores from the pre scores (8.27+/−1.57) and the post scores (16.1+/−20.26) (Jerin & Binutha, 2017).

Implementation

- Direct observation of 20 post abdominal surgery patients that are alert and oriented
  - Showing RN proper use/technique of equipment
  - Observation over a two week period
- After observation of 20 patients, educate nurses on proper incentive spirometer technique
  - Demonstrate proper technique to nurses in morning and evening huddles
  - Show flyer to RNs on proper technique, contraindications and benefits
  - Educate nurses on other available education and resources
- Direct observation of 20 post abdominal surgery that are alert and oriented
  - Showing RN proper use/technique of equipment
  - Observation over a two week period

Conclusions

- 12 out of 20 patients demonstrated proper knowledge of IS use pre-education
- 18 out of 20 patients demonstrated proper knowledge of IS use post-education
- This project could be replicated with a larger sample size and could also include patients hospitalized with other surgeries.
- Nurses should be educated on how to teach patients the appropriate way to use an IS.
- Collaboration with respiratory therapy might be something to consider.

REFERENCES