EFFECTIVENESS OF INCENTIVE SPIROMETER IN POST OPERATIVE PATIENTS
Evidence-Based Practice
By: Linh Tran, RN.

Objectives
The objective of this study is to examine current scientific literature to determine best practice for: In postoperative patients, how does incentive spirometer use, compared to no incentive spirometer use, affect postoperative pulmonary complications rates?

Background
An Incentive spirometer is a breathing device that helps expand the lungs and is encouraged after surgery to help prevent pulmonary complications, such as pneumonia, atelectasis, and fever.

Methods
• The method for literature review for this topic started with research through scholarly and credible articles on State College of Florida’s (SCF) library databases
• The databases used for this literature review include PubMed, Google Scholar, EBSCOhost, Cochrane Library, and MEDLINE
• Search strategies include using controlled vocabulary when searching with key terms such as incentive spirometer, postoperative, pneumonia, and postoperative pulmonary complications
• Limits such as language, age, date, and type of article were also placed
• The articles had to be published within the last five years and offered as a full PDF available to download.

Results
• Patients with incentive spirometer use are less likely to suffer respiratory complications post surgery than patients who do not (Lamar, 2012).
• Flow oriented and volume oriented was helpful in improving pulmonary functions. While both showed promising results, the study suggested the flow volume help improved respiratory muscle function while the volume oriented spirometer for muscle training post-operatively (Kapre & Shukla, 2016).
• Incentive spirometer use helps decrease length of hospital stay, mechanical ventilator use, pneumonia, and mortality (Brown & Walters, 2012).
• Incentive spirometer, deep breathing, early ambulation, oral care, and having the head of bed above 30 degrees (ICOUGH) reduced the risk of postoperative pulmonary complications such as pneumonia and unintended intubation (Cassidy et al., 2013).

Conclusions
After reviewing the six peer-reviewed articles, it is safe to conclude that incentive spirometer plays an important role in pulmonary functions after surgery. Different types of incentive spirometers have different functions and targets different muscles.

Discussions and Implications
Education is the first thing nurses can do to help speed up the recovery process for patients and to avoid being transfer to the intensive care unit due to pulmonary complications. Incentive spirometers should be available for all surgical patients along with proper education and encouragement to decrease preventative respiratory and pulmonary complications.

References