Proposed practice change to perform ultrasound lung scans immediately following upper extremity peripheral nerve blocks to rule out a pneumothorax

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Abstract
Regional anesthesia is a technique that can be used for a variety of surgeries. There are risks involved when regional anesthesia is performed. Specifically when upper extremity nerve blocks are performed a potential complication is a pneumothorax. The purpose of this DNP project was to propose a practice change to perform ultrasound (US) lung scans immediately following upper extremity peripheral nerve blocks to rule out a pneumothorax. A needs assessment was conducted at the host facility to determine if the anesthesia providers were aware that US was a method that could be useful for detection of a pneumothorax. Currently, the majority of anesthesia providers at the host facility where the practice change was proposed are unaware that US lung scans are a useful and accurate method to detect a pneumothorax. The information collected from the literature review revealed that US was a technique that was more accurate, sensitive, and specific to diagnose a pneumothorax than CT. An evidence based presentation was presented to 10 anesthesia providers at a level II facility in the southeastern United States. Following the presentation, anesthesia providers completed a pre intervention survey and were asked to implement the practice change for a month. After a month, a post intervention survey was completed to determine if a practice change occurred. The results were evaluated by using descriptive statistics. The results of the project determined that 25% of the participants changed their practice to use US for detection of a pneumothorax following upper extremity nerve blocks.