Using Evidence-Based to Prevent Unintentional Retained Foreign Objects (URFOs)

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Introduction

• An unintentional retained foreign object (URFO) is an item used during a surgical procedure left in the patient after the incision is closed. These items include sponges, needles, instruments, and fragments of these items.
• The physical, emotional, and economic consequences to the patient brought on by URFOs result from pain, infections, obstructions, reoperations, increased hospital length of stay, readmissions, disability, and loss of time from work. Healthcare institutions are impacted financially by lawsuits and the loss of revenue from second party payers (AORN, 2020).
• The Joint Commission has identified retained surgical items as a sentinel event, which is a patient safety event that results in severe, temporary harm, permanent harm, or death (TJC, 2013).
• The time frame used was January 2010 through February 2020. In the CVT OR, there were three documented URFOs during CY 2019.
• As part of the hospital's yearly quality and patient safety goals, URFO incidence needed to decrease in the JHH ORs.
• Using evidence-based practice, what changes in processes or practices could be made to decrease the incidence of URFOs.

Search Strategy

• This literature search was done through the WelchWeb Digital Library at Johns Hopkins.
• The databases searched included CINAHL Plus, PubMed, Scopus, and the Cochrane.
• The time frame used was January 2010 through February 2020.
• The following keywords were used: retained surgical items, surgical count procedure, surgical instruments, foreign bodies, postoperative complications, adjunct technology, and human error. Combinations of these keywords were also used to decrease the number of results.

Practice Question

• The Johns Hopkins Hospital (JHH) has recently seen an increase in the incidences of URFOs throughout the hospital during fiscal year 2020 compared to fiscal years 2018 and 2019. In the CVT OR, there were three documented URFOs during CY 2019.
• As part of the hospital's yearly quality and patient safety goals, URFO incidence needed to decrease in the JHH ORs.
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Level and Quality of Included Evidence

• All articles had to be research studies or systematic reviews. There was no randomized control research related to URFOs because it would be unethical to inflict harm as a result.
• Additional inclusion criteria were studies related to URFOs in the OR, the counting process, causative factors, and adjunct technology.
• Exclusion criteria included studies done in procedural areas or labor and delivery and those involving broken catheters, guidewires, or instruments.
• The topics of safety and the variety of areas where URFOs can occur mean it is difficult to study with a randomized control research because it would be unethical to not implement a URFO policy in each area.
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• The twenty articles were summarized using The Johns Hopkins Evidence-Based Practice Model Individual Evidence Table.
• Of the twenty studies, nineteen were quantitative, and one was qualitative. In addition, three articles were a meta-analysis of prior studies done. All were rated as a IIa or IIb for strength and quality.

Synthesis

• This review has shown that there are a multitude of studies related to URFOs with more research being done by nurses.
• In the past, research has concentrated on the incidence of URFOs, identifying risk factors, and the clinical manifestations. The more recent research emphasizes human factors and the prevention of errors during the counting process, and the use of adjunct technology to identify URFOs before the incision is closed.
• Since the incidence of URFOs is very low, the sample sizes were smaller, and the direct causation of variables cannot be proven.
• Many studies relied on reporting the event to TJC, a hospital, or a database making it susceptible to selection bias.

Recommendations for Translation into Practice

The following were identified as actions needed to minimize contributing factors associated with the incidence of URFOs:
• Implement a standardized, evidence-based URFO policy and annual education competencies for all staff across all Johns Hopkins Medical System ORs and procedural areas to standardize the counting process;
• Initiation of a URFO Procedure Checklist when a miscount is identified so reconciliation is consistent throughout the ORs;
• Implementation of a Root Cause Analysis (RCA) with the surgical team involved in a URFO or near-miss within 24 to 48 hours to identify the causes or possible strategies for prevention and track on the Perioperative Dashboard;
• In collaboration with the Armstrong Institute, initiate Speed Feedback Sessions with the Cardiac OR team so they can practice communication, feedback skills in addition to speaking up; and
• Investigate the pros and cons of the use of adjunct technology.

References