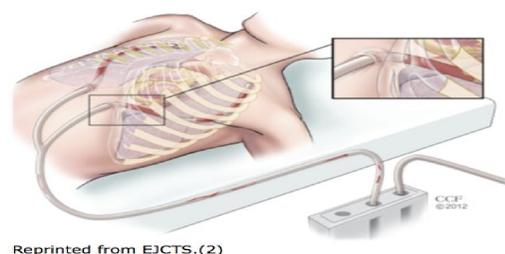


Introduction

The management of patients with chest tubes policy was reviewed by Surgery standards of care team which consists of clinical nurses, educators and clinical nurse experts. The literature review prompted an evidence-based project (EBP) as there are not well established guidelines on this topic.

	The Johns Hopkins Hospital	<i>Policy Number</i>	GEN312
	Nursing Practice and Organization Manual Vol II: Clinical Clinical Protocols and Procedures	<i>Effective Date</i>	03/26/2019
		<i>Approval Date</i>	01/15/2019
	<i>Subject</i>	<i>Page</i>	1 of 6
	Chest Tubes, Management of the patient requiring...	<i>Supersedes Date</i>	01/22/2015



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Search Strategy

Our group completed a systematic review of the literature using numerous search terms (ex. nursing, chest tubes, dressings, pain) in PUBMED and CINAHL. All articles underwent a title, abstract, and full text screening for relevance to the practice question by two reviewers, independently. The articles were graded and organized by levels and quality using the Johns Hopkins Nursing EBP Model. The group then organized the results using more specific categories.

Level and Quality of Included Evidence

Level	Quantity	Quality
Level 1	5	A-B
Level 2	4	A-B
Level 3	5	B
Level 4	11	A-B
Level 5	6	A-B

Initially, the research yielded 173 articles. Of these, 31 articles met inclusion criteria using the PRISMA model.

The evidence included 6 random control trials, 11 clinical practice guidelines, 3 quality improvement projects, with the remainder being quasi experimental, systematic reviews, prospective descriptive and quantitative manuscripts.



Synthesis

- Overall, there lacked compelling evidence to make significant changes to our chest tube policy.
- Our current dressing practice for accidental tube removal was consistent with the literature.
- Other evidence supports our current practice of intermittent clamping and discourages milking and stripping of chest tubes.
- The evidence does not indicate a superior method for tube-to-tube securement or chest tube dressing.
- Several articles support digital drainage systems over analogue drainage systems.
- Delivering education to nurses by self-learning modules is effective and the use of a bedside checklist may prevent adverse events.
- To decrease pain, use of cold therapy was effective.

Recommendations for Translation into Practice

Due to minimal research and low level applicable evidence, we will make minor changes to our policy. Since there is Level I evidence supporting the use of cold therapy for pain management, this recommendation will be added. We will create an online module for nursing education. As a resource for bedside nurses, we have created an appendix that includes a checklist for chest tube management. Further evidence is needed regarding topics such as dressings, tube-to-tube securement, and digital versus analog drainage systems, creating a number of research study opportunities.