

CLINICAL QUESTION:

What method of wound preparation is most effective in promoting wound healing and reducing infection for emergency department patients with acute wounds (e.g., lacerations, punctures)?

PROBLEM:

Patients frequently present to the emergency department (ED) with acute wounds (Bonham, 2016; Mankowitz, 2017; Navanandan, Renna-Rodriguez & DiStefano, 2017). The goal of wound preparation is to reduce the risk of infection and promote wound healing (Nicks, Ayello, Woo, Nitzki-George & Sibbald, 2010). Wound preparation takes into account the type, location, age, and size of wound (Beam, Buckley, Holcomb, & Ciocca, 2016; Bonham, 2016; Mankowitz, 2017; Nicks et al., 2010) as well as infection risk associated with type of wound (e.g., bites) (Kennedy, Stoll, & Lauder, 2015).

The standard of care for wound preparation includes cleaning and irrigating acute wounds. The role of irrigation includes removal of wound debris, loose devitalized tissue, bacteria, and foreign bodies to reduce the risk of infection and promote optimal healing (Beam, 2016; Bonham, 2016; Mankowitz, 2017; Nicks et al., 2010). There are multiple considerations in wound management including type, location, age, and size of the wound, as well as patient factors such as age and co-morbidities (Hollander et al., 1998).

Description of Decision Options/Interventions and the Level of Recommendation		
Solution	Potable tap water may equivalent to normal saline for laceration cleansing and irrigation in patients of all ages. Tap water quality, type of wound, patient condition and comorbid conditions should be considered in wound cleansing. (Fernandez et al., 2012; Weiss et al., 2013).	A
	Normal saline, povidone-iodine and pluronic F-68 may be equally effective as irrigation solutions for wound cleansing. (Dire & Welsh, 1990; Ghafouri et al., 2016; Gravett et al., 1987).	B
Technique	Bulb syringe irrigation is less effective than high pressure irrigation with a syringe and needle/catheter for laceration cleansing and irrigation. (Longmire et al., 1987; Stevenson et al., 1976).	B
	In both adult and pediatric patients with clean, non-contaminated lacerations with no significant co-morbidities (e.g., diabetes, renal disease, or immunocompromise), wound cleansing and irrigation may not be necessary for wounds less than 6 hours old. (Hollander et al., 1998).	C

Level A (High)	Based on consistent and good quality of evidence; has relevance and applicability to emergency nursing practice.
Level B (Moderate)	There are some minor inconsistencies in quality evidence; has relevance and applicability to emergency nursing practice.
Level C (Weak)	There is limited or low-quality patient-oriented evidence; has relevance and applicability to emergency nursing practice.
N/R Not Recommended	Based upon current evidence.
I/E	Insufficient evidence upon which to make a recommendation.
N/E	No evidence upon which to make a recommendation.

ENA Clinical Practice Guidelines (CPGs) are evidence-based documents that facilitate the application of current evidence into everyday emergency nursing practice. CPGs contain recommendations based on a systematic review and critical analysis of the literature about a clinical question. CPGs are created following the rigorous process described in ENA's Requirements for the Development of Clinical Practice Guidelines. The purpose of CPGs is to positively impact patient care in emergency nursing by bridging the gap between practice and currently available evidence.

Access the full clinical guideline at: <http://bit.ly/2utqLSv>