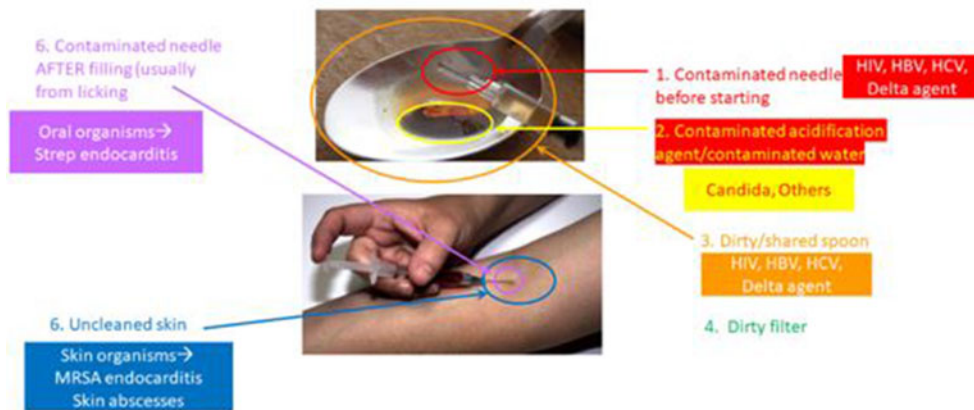


Infection Risks



Clean Skin, Clean (fresh) Needle, Clean filter, CLEAN WATER!

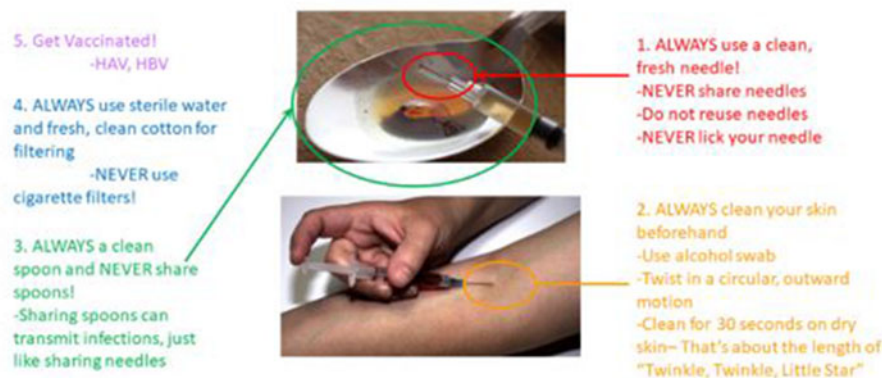


Fig. 2.

knowledge gap identified through the provider survey. **Conclusions:** This novel tool can be part of a comprehensive educational program that translates infection prevention principles and applies them to reduce infectious morbidity and mortality related to injection drug use.

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10 Years of Pulsed-Xenon Ultraviolet Disinfection

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Background: Ultraviolet light (UV) disinfection using low-pressure mercury lamps has been around since the 1940s. The advent of pulsed-xenon UV for hospital use in 2010 has provided a nontoxic and novel technology for hospital disinfection with the first data presented at the 2010 SHEA Decennial. The purpose of this systematic review and meta-analysis is to examine the current body of evidence for pulsed xenon UV disinfection. Methods: The literature search criteria included the following: research conducted in domestic and

international settings using pulsed-xenon for surface disinfection, published between 2000 and 2019, and reporting on environmental effectiveness or hospital-acquired reductions (HAIs). We searched PubMed, Google Scholar, and Web of Science. The meta-analysis included 24 studies: 12 HAI outcome studies and 12 environmental effectiveness studies. Meta-analyses were conducted by calculating the percentage reductions for environmental effectiveness, and for the HAI outcome studies, we used a random-effects model to pool the relative risk of HAI. The outcome studies used 272 and 299 months of data for the experimental and control groups, respectively. Results: There was an overall benefit of using pulsed-xenon UV. The overall relative risk of infection decreased compared to the control arm (RR, 0.64; 95% CI, 0.54–0.76). The percentage reductions in environmental studies were as follows: *Clostridioides difficile* (94.8%), methicillin-resistant *Staphylococcus aureus* (91.5%), vancomycin-resistant *Enterococcus* (99.2%), and aerobic bacteria (94.2%). **Conclusions:** Overall, pulsed-xenon UV was effective for reducing environmental contamination and had the ability to significantly reduce HAIs.

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