

Addressing Skin and Soft Tissue Infections in People Who Inject Drugs

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Background & Significance

- **Problem.** People who inject drugs (PWID) experience adverse health outcomes and present for medical care more frequently than the general population. Skin & soft tissue infections (SSTIs) are common among PWID and occur when bacteria from an individual's own skin or from using non-sterile injection materials is introduced via intravenous drug use. SSTIs are one of the most common reasons that PWID present to the emergency department or are admitted for inpatient hospital treatment. It is estimated that in the previous month between 6 and 32 percent of PWID experienced abscesses, with lifetime rates of abscesses at nearly 70 percent.
- **Current practice.** Treatment of SSTIs varies based on the infectious agent, but generally includes antibiotics. A substance use disorder (SUD) medical consult or referral to SUD treatment is also considered the standard of care in hospital settings.
- **Limitations in current practice.** Harm reduction principles acknowledge that certain ways of using drugs are safer than others. Current practice does not incorporate harm reduction techniques or address modifiable behaviors, such as hygiene practices, that could reduce the frequency of SSTIs among PWID. SUD consultations & referrals to treatment may be appropriate, but they assume that PWID want to engage in treatment, & this may not be the case, nor is it a patient-centered approach to care.

Purpose

- Evidence was reviewed to determine if harm reduction interventions that promote hygienic injection drug practices are effective in reducing SSTIs among PWID.
- Harm reduction interventions examined include face-to-face behavioral interventions focused on educating PWID on skin hygiene, including hand hygiene & injection-site skin cleaning.

Methodology

- **Database:** The National Library of Medicines database, pubmed.gov, was used to conduct this search.
- **Keywords:** "skin & soft tissue infections or skin infections," "people who inject drugs," and "hygiene or skin cleaning."
- **Exclusion criteria:** Studies published prior to 2016, non-peer-reviewed articles.
- **Results:** 26 articles were reviewed, 21 were discarded as they were non-experimental, & 5 were included in the evidence synthesis.

Evidence Synthesis

Authors	Intervention Description	Results	Level of Evidence & Quality
Ivan et al. (2016).	Examined the effects of hand hygiene & injection technique education.	McNemar test for paired proportions was used to assess changes in self-reported behaviors. Post-intervention, significantly fewer participants reported not cleaning their hands ($p = 0.039$).	III, C
Mezaache et al. (2021).	Examined the effects of hand-hygiene education, using a three-step alcohol-based hand rub.	McNemar tests for paired proportions was used to assess the intervention. Post-intervention, hand hygiene frequency was significantly higher, & rates of injection-related infections were lower. At baseline, 56 percent of participants reported at least one SSTI in the prior month; at the 6-weeks, this dropped to 33 percent ($p = 0.021$).	III, C
Mezaache et al. (2018).	Examined the effects of safer injection education, including proper hygiene.	Mixed logistic regression was used to evaluate the intervention. Post-intervention participants were more likely to set up a clean preparation area ($p = 0.002$), wash their hands ($p < 0.001$), & clean their skin ($p < 0.001$).	III, B
Phillips et al. (2021).	Examined the effects of education on hand hygiene, injection site skin cleaning, & needle cleaning.	Mixed effects generalized linear models were used to assess the intervention. The intervention group reported 35 percent fewer infections, equating to a difference of nearly one infection per year ($p = 0.179$). The rate of uncleaned skin injections was 66% lower ($p < .001$).	II, B
Stein et al. (2020).	Examined the effects of education on hand hygiene, injection site skin cleaning, & needle cleaning.	Negative-binominal regression was used to evaluate the intervention. The mean rate of total ED visits in the 12 months following the intervention was not significantly higher when compared to usual treatment ($p = 0.152$). Mean rates of IDU-related ED visits were significantly lower among the intervention group over the 12-month period ($p = 0.019$).	II, B

Summary & Conclusions

- Findings reinforce prior evidence; baseline knowledge among PWID about SSTI complications is poor.
- Results present a hopeful outlook; PWID are receptive to harm reduction techniques & can benefit from educational interventions on hygienic injection techniques.
- PWID are capable of behavior change. Studies examined for this project demonstrate statistically significant improvements in the percentage of participants conducting proper hand hygiene, declines in unclean skin injections, & increases in the number of participants setting up clean injection drug use preparation areas.
- While not the focus of this project, a decline in SSTIs among PWID has significant implications for quality of life.

Implications for Nursing Practice

- **Social justice.** Social justice is a foundational value of the nursing profession. Nurses are well poised to deliver interventions focused on safer injection practices.
- **Front line staff.** Nurses are often the first health care workers that PWID encounter when they seek care. These interactions can dictate whether harm reduction practices will be implemented.
- **Connecting research to practice.** Translating study findings to nursing practice is supported by recent efforts to identify nursing competencies as it relates to SUD.
- **Challenges.** While findings are promising, translating research to practice will be difficult. There are lengthy delays in translating research into practice, which is exacerbated by nursing challenges in caring for patients with SUD, including stigma & lack of knowledge.

CNL Role

- **Lifelong learner & change agent.** It is the ethical obligation of nurses to translate evidence-based science and support its integration into practice. CNLs are prepared to serve as change agents & apply research within their respective organizations.
- **Educator.** CNLs must embrace their role as compassionate educators to help PWID achieve their maximal level of functioning & wellness. This includes promoting non-judgmental harm reduction practices & helping other health care professionals feel equipped to have frank conversations with patients about IDU, assess patient knowledge of safer IDU-practices, & provide evidence-based teaching. This type of compassionate care is needed to reduce stigma & foster connections to the health care system.
- **Advocate.** The ability of nurses to protect and promote the health of the public is dependent on CNL leadership. CNLs can serve as advocates for PWID. They can assume positions in policy & regulatory agencies. In these organizations, CNLs can encourage legislation & policy as it relates to harm reduction, including syringe exchange programs, & advocating for safer drug consumption policies.

Bibliography & Acknowledgements



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