

Multiple injection safety violations found in New Jersey septic arthritis outbreak

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Multiple violations of injection safety and infection prevention practices—from lack of handwashing to inappropriate re-use of medication vials—were identified after an outbreak of septic arthritis at a New Jersey outpatient facility in 2017, according to an investigation published today in *Infection Control & Hospital Epidemiology*, the journal for the Society for Healthcare Epidemiology of America. Investigators found 41 patients with osteoarthritis contracted the rare, painful infection following injections in their knee joints, including 33 who required surgical removal of damaged tissue.

"This large, costly outbreak highlights the serious consequences that can occur when [healthcare providers](#) do not follow [infection](#) prevention recommendations," said Kathleen Ross, an epidemiologist with the New Jersey Department of Health. For 31 affected Medicare patients alone, charges claimed for treatment topped \$5 million.

Following initial reports of three cases from a local hospital to state and local health departments and multiple complaints directly to the facility in March of 2017, the facility voluntarily stopped performing procedures. A state infection prevention assessment team identified 41 cases along with multiple breaches of recommended infection prevention practices, including inadequate hand hygiene, unsafe injection practices, and poor cleaning and disinfection processes.

After collecting medical records and self-reported data, the team of medical and public health professionals from state and county health

departments, along with the New Jersey Division of Consumer Affairs, conducted an unannounced visit to the facility. The site visit included staff interviews, reviews of [medical records](#), evaluation of regulated medical waste handling, and observation of mock procedures performed by the staff while the facility was closed.

The assessment team found multiple breaches of proper infection prevention and injection safety practices, including the lack of handwashing stations or alcohol-based rub in the exam rooms, exposed syringes, syringes with injectable substances drawn up to four days in advance, and inappropriate handling and re-use of single-use and multi-dose vials. In addition, exam tables where injections occurred were cleaned "at most" once a day, while surface cleaning prior to each preparation is recommended unless a clean barrier is used.

"Nationally recommended infection prevention and control practices are applicable to all settings in which health care is provided; however, outpatient settings sometimes fail to provide the infrastructure and resources needed to support infection prevention activities, and often lack regulatory oversight," said Ross.

Before the facility re-opened, state officials provided recommendations from the Centers for Disease Control and Prevention's 2016 Guide to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care. An infection prevention consultant was recommended to review practices and assist with changes. No additional cases were reported after the prevention recommendations were implemented.

Further research is needed to identify how to best provide infection prevention training and education to healthcare providers in outpatient settings, Ross said. Infection prevention training should be emphasized at all levels of professional training for all healthcare personnel upon hire and on an ongoing basis, with oversight to ensure competency.

"Outbreaks related to unsafe injection practices indicate that certain healthcare personnel are either unaware, do not understand, or do not adhere to basic principles of infection prevention and aseptic techniques, confirming a need for education and thorough implementation of infection prevention recommendations," Ross said.

More information: Kathleen M. Ross et al, Bacterial septic arthritis infections associated with intra-articular injection practices for osteoarthritis knee pain—New Jersey, 2017, *Infection Control & Hospital Epidemiology* (2019). [DOI: 10.1017/ice.2019.168](https://doi.org/10.1017/ice.2019.168)

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