

KEY MESSAGES

Morbidity and Mortality Weekly Report (MMWR)

Notes from the Field: Injection Safety and Vaccine Administration Errors at an Employee Influenza Vaccination Clinic – New Jersey, 2015

MMWR Release Date: December 18, 2015

Topline Messages

- Millions of people safely receive vaccinations each year.
- Proper injection safety, vaccine administration, and vaccine storage and handling are critical to ensuring vaccination is safe and effective.
- When infection control breaches occur, they highlight the need for continued education and training of immunization service providers on the Centers for Disease Control and Prevention (CDC) guidelines for injection safety, vaccine administration, and vaccine storage and handling.

Recommended Actions

- Immunization service providers should ensure their staff adhere to CDC guidelines for infection prevention, vaccine administration, and vaccine storage and handling practices.
- Businesses retaining the services of an immunization service provider can use CDC guidelines to help them assess the provider's knowledge and skills regarding vaccine administration, injection safety, and vaccine storage and handling, as well as the provider's procedures for ensuring that vaccination clinic staff follow CDC guidelines.

Incident Overview

- The New Jersey Department of Health (NJDOH) led a coordinated response to an infection control breach that occurred at an employee influenza (flu) vaccination clinic on September 30, 2015.
- At this time, no illness has been reported related to this incident.
- The NJDOH continues to monitor the situation and has coordinated a final testing and vaccination clinic in February 2016 for those who were impacted.

Incident Details

- On September 30, 2015, the New Jersey Department of Health (NJDOH) was notified of an infection control breach that occurred at an employee flu vaccination clinic held earlier that day by a New Jersey-based business.
 - The nurse administering the vaccines changed needles between each patient, but reused syringes for multiple patients.
 - The nurse was contracted by an out-of-state health services company that was retained by the New Jersey business to provide flu vaccination to its employees.
- Reuse of syringes for multiple patients, with or without reuse of needles, is recognized as a serious infection control breach that poses risks for transmitting bloodborne illness, such as

hepatitis and human immunodeficiency virus (HIV), as well as bacterial, fungal, and viral infections.

- A participant in the flu vaccination clinic noticed that the nurse reused a syringe and notified the management of the New Jersey business, who notified the health services company. The health services company reported the incident to the NJDOH.
- Further investigation by NJDOH determined that the nurse also administered less flu vaccine than the recommended dose, which might leave participants unprotected against the flu.
 - The nurse used only two multiple dose vials of vaccine (10 doses/vial) to administer vaccines to 67 adult participants; thus, participants did not receive the recommended dose of influenza vaccine.
- Concerns regarding vaccine storage and handling were also identified.

Response

- The NJDOH reported this incident to the New Jersey Board of Nursing, which licenses nurses and regulates the nursing profession in N.J.
 - As a result of this investigation, the nurse voluntarily gave up her license.
 - At this time, the New Jersey Board of Nursing is still conducting their investigation.
- Although the risk of infection was low, the NJDOH, in consultation with CDC, recommended that all who received flu vaccine at the employee clinic on September 30 get tested for hepatitis B, hepatitis C, and HIV and receive a hepatitis B vaccination. In addition, revaccination with flu vaccine was also recommended.
- The NJDOH worked with the local health department and a local urgent care center to offer testing and vaccination.
- Forty-seven of the 67 flu vaccine clinic participants were tested and vaccinated with hepatitis B vaccine at one of the two public health clinics held in early October. Some were also re-vaccinated with flu vaccine.
 - The testing and vaccination status of the remaining 20 flu vaccine clinic participants is unknown.

Outcome

- At this time, no illness has been reported related to this incident.
- The NJDOH continues to monitor the situation and has coordinated a final testing and vaccination clinic in February 2016 for those who were impacted.

Injection Safety

- Safe injection practices are a basic set of recommendations from CDC that ensure injections are prepared and given to patients safely.
 - A safe injection does not harm the recipient, does not expose the provider to any avoidable risks, and does not result in waste that is dangerous for the community.

- Both needles and syringes are “one and only” items – a new needle and syringe should be used for each injection.
 - Both needle and syringe must be discarded properly once they have been used.
- Reusing a needle or syringe puts patients at risk of contracting bloodborne illnesses, such as hepatitis and HIV, as well as bacterial, fungal, and viral infections.
 - If the reuse of a needle or syringe occurs, the patients who are affected should be notified and tested.

Vaccine Preparation and Administration

- Proper vaccine administration is a key component to ensuring vaccination is safe and effective.
- Vaccine administration incorporates professional standards for medication administration, manufacturer’s vaccine-specific guidelines, and evidence-based safe injection practices.
 - Improper administration of vaccine may injure patients and result in inadequate protection against vaccine-preventable disease.
- Before administering vaccines, vaccinators should receive comprehensive, competency-based training regarding vaccine administration policies and procedures.

Vaccine Storage and Handling

- Proper vaccine storage and handling practices also play an important part in keeping vaccines safe and effective.
- Excessive heat, cold, or light exposure can damage vaccine, resulting in reduced effectiveness.
- To protect vaccine effectiveness, CDC recommends that vaccine be shipped directly to the vaccination clinic site.
 - If vaccine is transported to another location, proper temperature and light conditions must be maintained during transport and confirmed upon arrival.
- Maintaining vaccine quality is the shared responsibility of everyone involved in the storage and handling process, from the time vaccine is manufactured until it is administered.
- To store and handle vaccines properly, health care providers need:
 - Written vaccine storage and handling plans
 - Well-informed, trained staff to implement vaccine storage and handling plans
 - Proper vaccine storage units and temperature-monitoring equipment

Influenza (Flu) Vaccine Safety

- CDC recommends a yearly influenza vaccine for everyone 6 months of age and older as the first and most important step in protecting against influenza disease.
- Flu vaccines have been used in the United States for more than 50 years.
- Millions of people have safely received seasonal flu vaccines.
- Each year, CDC works closely with the U.S. Food and Drug Administration (FDA) and other partners to ensure the highest safety standards for flu vaccines.

- CDC also works closely with the FDA to ensure systems are in place to promptly detect unexpected or unusual patterns of adverse events following vaccination.
- The safety of flu vaccines is closely monitored with long-established systems that have demonstrated their usefulness in detecting vaccine safety problems.

Vaccination Clinics in Non-Traditional Settings

- Approximately 17% of adults receive an annual influenza vaccine at their workplace.
- Immunization service providers must ensure their staff adhere to CDC guidelines for infection prevention, vaccine administration, and vaccine storage and handling practices.
- Businesses retaining the services of an immunization service provider should consider the provider’s knowledge and skills regarding vaccine administration, injection safety, and vaccine storage and handling, as well as the provider’s procedures for ensuring that vaccination clinic staff follow CDC guidelines.

For more information:

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Additional Resources:

- Morbidity and Mortality Weekly Report (MMWR): December 18, 2015 – “*Notes from the Field: Injection Safety and Vaccine Administration Errors at an Employee Influenza Vaccination Clinic – New Jersey, 2015*”:

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6449a3.htm?s_cid=mm6449a3_w

IMPORTANT NOTE: THE MMWR IS EMBARGOED UNTIL 1:00 PM EST DECEMBER 17, 2015. THIS LINK WILL NOT BE LIVE UNTIL THE EMBARGO ENDS.

- General Recommendations on Immunization – Recommendations of the Advisory Committee on Immunization Practices (ACIP): www.cdc.gov/mmwr/preview/mmwrhtml/rr6002a1.htm

- Influenza Vaccination Recommendations, 2015-2016 (training video):
www.cdc.gov/vaccines/ed/flu-recs/index.html
- Epidemiology and Prevention of Vaccine-Preventable Diseases (the Pink Book), 13th Edition: Course Textbook (2015): www.cdc.gov/vaccines/pubs/pinkbook/index.html
- Injection Safety: www.cdc.gov/injectionsafety/providers.html
- Skills Checklist for Immunization: www.immunize.org/catg.d/p7010.pdf
- Vaccine Administration Guidelines and Recommendations: www.cdc.gov/vaccines/recs/vac-admin/default.htm
- Vaccine Storage and Handling Guidelines and Recommendations:
www.cdc.gov/vaccines/recs/storage/default.htm
- Influenza Vaccine Safety: www.cdc.gov/flu/protect/vaccine/vaccinesafety.htm
- Updated - Guidelines for Large-Scale Influenza Vaccination Clinic Planning:
www.cdc.gov/flu/professionals/vaccination/vax_clinic.htm
- Vaccine Administration and Storage and Handling Resources Guide:
<http://www.cdc.gov/vaccines/recs/downloads/vacc-admin-storage-guide.pdf>
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