# A Patient Safety Threat - Syringe Reuse

(Source: Division of Healthcare Quality Promotion (DHQP), Centers for Disease Control and Prevention (CDC), February 2008)

Needle

Healthcare providers (doctors, nurses, and anyone providing injections) should **never reuse a needle or syringe**. Use one needle for only one patient. Never put a used needle into a shared vial. Both needle and syringe must be discarded. It is also never safe to change the needle and reuse the syringe - this practice can transmit disease.

A single-use vial is a bottle of liquid medication that is administered to a patient by injection of infusion (e.g., using a needle and syringe). Single-use vials should only be used for one patient, for one procedure, using a new, clean needle and new, clean syringe. Any medication remaining in the vial at the end of the procedure must be discarded and may not be used on additional patients.

A multi-dose vial is a bottle of liquid medication that contains more than one dose of medication and is approved by the Food and Drug Administration (FDA) for use on multiple persons. A new, clean needle and syringe should always be used to access the medication in a multi-dose vial. The reuse of needles or syringes to access multi-dose vial medication can result in contamination of the medicine with microbes that can be spread to others when the medicine is used again.

The CDC recommends that single-use vials be used whenever possible and that multi-dose vials of medication be assigned to a single patient to reduce the risk of disease transmission.

Reusing a needle or syringe puts patients in danger of getting hepatitis C virus (HCV), hepatitis B virus (HBV), and HIV. When it is discovered that reuse of a needle or syringe has occurred, patients who may have been affected should be notified.

Healthcare providers should always adhere to **Safe Injection Practices** under **Standard Precautions** to prevent disease transmission from needles, syringes, or vials of medication.

# **About the Safe Injection Practices Coalition**

The Safe Injection Practices Coalition was established in 2008. The following organizations are members of the Coalition: Accreditation Association for Ambulatory Health Care (AAAHC), American Association of Nurse Anesthetists (AANA), Ambulatory Surgery Foundation, Association for Professionals in Infection Control and Epidemiology, Inc (APIC), BD (Becton, Dickinson and Company), Centers for Disease Control and Prevention (CDC), CDC Foundation, Covidien. HONOReform Foundation, Hospira, National Association of County & City Health Officials (NACCHO), Nebraska Medical Association (NMA), Nevada State Medical Association (NSMA) and Premier Safety Institute.



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Healthcare should not be a vehicle for infection transmission. However, in 2002, unsafe injection practices in an outpatient oncology clinic in Fremont, Nebraska, led to one of the largest outbreaks of hepatitis C virus (HCV), ever to occur in the United States. Unfortunately, this tragedy is far from an isolated case. Because new cases are usually without symptoms and only manifest several weeks after exposure, cases and outbreaks are difficult to detect and investigate. Nonetheless in the past 10 years:

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Be informed:

- More than 35 outbreaks involving 400 patients with HBV or HCV infections from unsafe injection practices have been investigated.
- In those outbreaks more than 60,000 patients at potential risk of HBV or HCV infections from failure to follow basic infection control needed to be notified and screened for hepatitis B and C and HIV.

In all of these events, HBV and HCV was transmitted from patient-to-patient because of a failure of healthcare personnel to follow basic standards of infection control.

#### Be involved:

To help increase awareness about these events and to help reinforce to patients and providers the safe level of care that should ALWAYS be provided, the Hepatitis Outbreaks National Organization for Reform (HONOReform) and the CDC Foundation co-convened the Safe Injection Practices Coalition (SIPC) to develop an education and awareness campaign to eradicate outbreaks resulting from unsafe injection practices.

#### Remember:

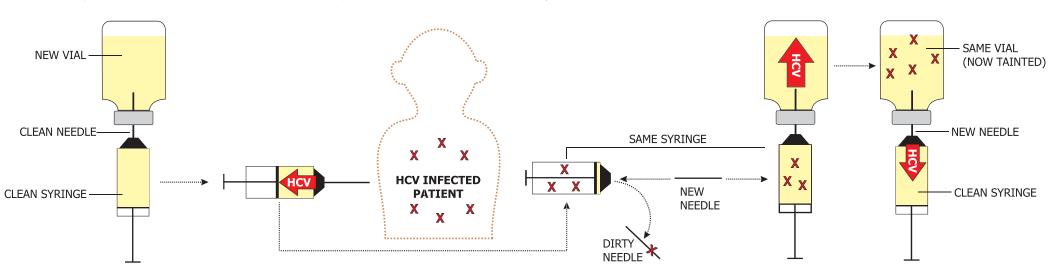
**ONE** Needle, **ONE** Syringe, ONLY **ONE** Time.

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## **UnSafe Injection Practices and Disease Transmission**

(Source: Southern Nevada Health District)

Reuse of syringes can transmit infectious diseases. The syringe does not have to be used on multiple patients for this to occur.



- 1. A clean syringe and needle are used to draw the sedative from a new vial.
- 2. It is then administered to a patient who has been previously infected with hepatitis C virus (HCV). Backflow into the syringe contaminates the syringe with HCV.
- 3. The needle is replaced, but the syringe is reused to draw additional sedative from the same vial for the same patient, contaminating the vial with HCV.
- 4. A clean needle and syringe are used for a second patient, but the contaminated vial is reused. Subsequent patients are now at risk for infection.

### Safe Injection Practices Under Standard Precautions

(Source: 2007 CDC/HICPAC Isolation Precautions Guidelines)

The following recommendations apply to the use of needles, cannulae that replace needles, and, where applicable, intravenous delivery systems:

- Use aseptic technique to avoid contamination of sterile injection equipment.
- Do not administer medications from a syringe to multiple patients, even if the needle or cannula on the syringe is changed.

- Needles, cannulae and syringes are sterile, single-use items; they should not be reused for another patient or to access a medication or solution that might be used for a subsequent patient.
- Use fluid infusion and administration sets (i.e., intravenous bags, tubing and connectors) for one patient only and dispose appropriately after use.
- Consider a syringe or needle/cannula contaminated once it has been used to enter or connect to a patient's intravenous infusion bag or administration set.
- Use single-dose vials for parental medications whenever possible.

- Do not administer medications from single-dose vials or ampules to multiple patients or combine leftover contents for later use.
- If multi-dose vials must be used, both the needle or cannula and syringe used to access the multidose vial must be sterile.
- Do not keep multi-dose vials in the immediate patient treatment area and store in accordance with the manufacturer's recommendations; discard if sterility is compromised or questionable.
- Do not use bags or bottles of intravenous solution as a common source of supply for multiple patients.

## **Injection Safety Tips for Providers**

(Source: Centers for Disease Control and Prevention (CDC), March 2008)

All healthcare providers are urged to carefully review their infection control practices and the practices of all staff under their supervision.

In particular, providers should **NOT** administer medications from the same syringe to more than one patient, even if the needle is changed. Additional protection is offered when medication vials can be dedicated to a single patient.

It is important that:

- medications packaged as single-use vials never be used for more than one patient;
- medications packaged as multi-use vials be assigned to a single patient whenever possible;
- bags or bottles of intravenous solution not be used as a common source of supply for more than one patient; and
- absolute adherence to proper infection control practices be maintained during the preparation and administration of injected medications.

How can healthcare providers ensure that injections are performed correctly?

To help ensure that staff understand and adhere to safe injection practices, we recommend the following:

- Designate someone to provide ongoing oversight for infection control issues.
- Develop written infection control policies.
- Provide infection control training with an emphasis on Standard Precautions and medication handling.

Safe injection practices and sharps safety go hand in hand. By following safe injection practices to protect patients, healthcare providers also protect themselves. For example, the unsafe practice of syringe reuse described in the diagram in this brochure also puts healthcare providers at risk of needlestick injury and potential bloodborne pathogens exposure. Once a needle and syringe are used on a patient, they should be discarded in a sharps container. For more information about sharps safety, please see: http://www.cdc.gov/sharpssafety.

#### Remember:

**ONE** Needle, **ONE** Syringe, ONLY **ONE** Time.