Emergency Physicians Insurance eXchange

EPIX Patient Safety Briefs

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Safe Injection Practices in the Emergency Department

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Safe injection practices should be on the radar screen of all urgent care and emergency department physicians, midlevels and nursing staff. There is an increased focus on safe injection practices by regulators such as the Center for Medicare and Medicaid Services (CMS) in the hospital Conditions of Participations (CoPs) and accreditation organizations like the Joint Commission, DNV Healthcare, the Healthcare Facilities Accreditation Program (HFAP), and the Center for Improvement in Healthcare Quality (CIHQ). The recommendations have come from documents that are discussed in this brief and cited at the bottom of the article. It is recommended that this EPIX Patient Safety Brief be shared among physicians, midlevels, nursing staff, infection preventionists, and pharmacists.

On November 26, 2014 CMS issued three hospital surveyor worksheets. One of which is an infection control worksheet that contains a section on safe injection practices for hospitals. The worksheets are used during any validation or certification survey. CMS recently sent 110 surveyors to hospitals for two days to assess using the three CMS worksheets. CMS suggested that all hospitals use the worksheets as self-assessment tools. In addition, CMS issued separate survey memos for hospitals on safe injection practices June 15, 2012 and another May 30, 2014. (1, 10)

CMS revised ten of the eighteen pharmacy standards and one of the nursing standards on November 20, 2015. Both the CMS hospital CoP sections on pharmacy and nursing contain safe injection practices standards. The interpretive guidelines were rewritten because of a recommendation of the Office of Inspector General (OIG) in a report that was issued January 22, 2015. Not only did OIG recommend to CMS the changes, they also made surveyor training recommendations. The recommendation was that both CMS and the accreditation organizations need to be trained on compounding practices and safe injection practices. This means surveyors will be more educated and more focused on evaluating these practices which is likely to lead to more deficiencies. (8)

The Centers for Disease Control (CDC) has ten safe injection practices found in the 2007 Guideline for

Isolation Precautions. (4) One requirement is that the emergency department physician or provider wears a mask when doing a lumbar puncture. In a recent case, an anesthesiologist went to the OB unit and put in two epidurals for pain relief and did not wear a mask. Both patients got septic and one died and a five million dollar settlement was paid.

There is also a federal law on compounding that includes requirements for safe injection practices. This is known as the Drug Quality and Security Act. (7)

The Institute for Safe Medication Practices (ISMP) recently published a document on IV Push Guidelines for Adults. (2) CMS, in the hospital CoPs, specifically recognizes ISMP as an organization that provides evidenced based standards of care that should be followed. Association for Professionals in Infection Control and Epidemiology (APIC), another respected infection control organization, also has resources on safe injection practices. (13)

The following recommended safe injection practices should be incorporated into your ED/UC policies and procedures and staff orientation guidelines:

- A mask must be worn during all spinal injection procedures and when a lumbar puncture is done.
- Proper hand hygiene should be done before handling medications.
- If the drug is made in a single dose vial, then hospitals need to purchase it in a single dose vial. If the drug is not available in a single dose vial and the hospital must buy it in a multi-dose vial then staff should try and use it on one patient. For many years, multi-dose vials of Lidocaine were used in suturing of patients in the emergency department. Now manufacturers make single dose Lidocaine syringes which must be used instead of multi-dose vials. The manufacturers of Insulin vials have reduced the size to 3 ccs.
- ED and UC providers cannot administer medications from single-dose vials or ampules to multiple patients or combine leftover contents for later use. Single dose vials do not contain a preservative.
- Multi-dose vials should never be taken into a patient's room. CMS does not want these taken into the OR rooms either unless they are treated as single dose vials and disposed of after the case.
- Multi-dose vials expire in 28 days or sooner if the manufacturer requires it. The expiration date should appear on the container. Staff should discard a multi-dose vial that is open and not marked accordingly.
- Staff should know the BUD or beyond use date of a medication. The multi-dose vial has an expiration date of December 2018. This date is how long the vial is good for if it has not been opened. Once opened it is good for 28 days unless noted sooner by the manufacturer. For example, the nurse draws up medication and the BUD might require the provider or nurse to administer that medication within one hour.
- Medication vials must be entered with a new needle and a new syringe.
- The diaphragm on the vial needs to be cleaned off before use even if newly opened. The top is a dust cover and so the lid needs to be cleaned, using friction, with a sterile 70% isopropyl alcohol, ethyl alcohol, iodophor, or other approved antiseptic swab. APIC says it should be wiped off for 15 seconds and ISMP for 10 seconds although a new product on the market now carries a 5 second time.
- Insulin pens can only be used on one patient even if the needle is changed.
- Glucose meters must be cleaned between patients according to the manufacturers' recommendations.

- Pen-like devices should never be used on more than one patient when sticking the patient to obtain blood for a glucose reading, even if the lancet itself is disposable.
- Do not use bags or bottles of intravenous solution as a common source of supply for multiple patients. Likewise, a 125 cc saline bag cannot be used to irrigate the patient's IV. A single dose saline flush must be used.
- Preparation of medication, including IV medication, needs to be diluted or reconstituted in a clean, uncluttered, and separate location such as a medication room.
- Medication drawn from a glass ampule should be with a filter needle unless the specific drug precludes this.
- Medication should only be diluted when recommended by the manufacturer or in accordance with evidence based practice or approved hospital policies.
- Pre-spiking of an IV is limited to one hour. If the IV is not hung within the one hour it must be discarded.
- A needle or other device should never be left inserted into a medication vial septum for multiple uses. This provides a direct route for microorganisms to enter the vial and contaminate the fluid. This is true even if there is a one way valve.
- Staff should wear a mask when preparing medication when ill. Breathing over the sterile needle and vial stopper can create the potential for microbial contamination.
- Medication should not be withdrawn from a commercially available, cartridge-type syringe and put into another syringe for administration.
- It is also important that medication not be drawn up into the commercially prepared and prefilled 0.9% saline flushes. These are to flush an IV line and are not approved to use to dilute medication.
- Label syringes of IVP medication unless prepared and immediately given with no break in the process.
- Administer IV push medication at rate recommended by the manufacturer or supported by evidenced-based practice. The studies show that IV medication is often given too fast.
- Dispose of all sharps in resistant sharps container and make sure the container is replaced when the fill line is reached.

In summary, anyone who is involved with administering IV or intramuscular (IM) medication in the emergency department should be familiar with all safe injection practices. These practices are necessary to prevent the patient from possibly suffering an adverse event. The fact that surveyors will now be focused more heavily on safe injection practices in assessments is good reason for this topic to be on the radar screen of all emergency department and urgent care centers.

Source

1. CMS Survey Memo: Safe Use of a Single Dose Medication to Prevent Healthcare-associated Infections, Issued June 15, 2012, available at www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/index.html?redirect=/SurveyCertificationGenInfo/PMSR/list.asp.
2. ISMP IV Push Guidelines for Adults, October 2015, at http://www.ismp.org/Tools/guidelines/IVSummitPush/IVPushMedGuidelines.pdf.
3. The CMS Infection Control Worksheet, Section on Safe Injection Practices, Issued November 26, 2014 and available at www.cms.gov/SurveyCertificationGenInfo/PMSR/list.asp#TopOfPage.
4. The CDC 10 Safe Injection Practices, located in the 2007 Guidelines for Isolation Precautions:

Preventing Transmission of Infectious Agents in Healthcare Settings, available at www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html.
5. See Injection Safety Toolkit, CDC's One and Only Campaign at http://www.cdc.gov/hai/pdfs/guidelines/Ambulatory-Care+Checklist_508_11_2015.pdf.
6. See the ASC Quality Collaboration tool kit on safe injection practices at www.ascquality.org/advancing_asc_quality.cfm.
7. The Drug Quality and Security Act (DQSA) at www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/PharmacyCompounding/default.htm.
8. The OIG Report: Medicare's Oversight of Compounded Pharmaceuticals Used in Hospitals at http://oig.hhs.gov/oei/reports/oei-01-13-00400.pdf.
9. CMS Survey Memo: Use of Insulin Pens in Health Care Facilities, Issued May 18, 2012, at https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Policy-and-Memos-to-States-and-Regions.html.
10. CMS Survey Memo: Infection Control Breaches Which Warrant Referral to Public Health Authorities; Issued May 30, 2014, at https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Policy-and-Memos-to-States-and-Regions.html.
11. CDC Clinical Reminder: Spinal Injections Procedures Performed without a Facemask Pose Risk for Bacterial Meningitis at www.cdc.gov/injectionsafety/SpinalInjection-Meningitis.html.
12. USP 797 Guidelines at www.usp.org.
13. APIC position paper: Safe Injection, infusion, and medication practices in healthcare, Am. J Infect Control 2010:38:167-172 at www.apic.org.
14. CDC Guidelines for the Prevention of Intravascular Catheter Related Infections, 2011, at www.cdc.gov/hicpac/pdf/guidelines/bsi-guidelines-2011.pdf.

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