Department of Veterans Affairs
Office of Inspector General

Office of Healthcare Inspections

Report No. 16-00693-269

Combined Assessment Program Summary Report

Evaluation of Safe Medication Storage Practices in Veterans Health Administration Facilities

April 20, 2016

Washington, DC 20420

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Executive Summary

The VA Office of Inspector General Office of Healthcare Inspections completed an evaluation of safe medication storage practices in Veterans Health Administration facilities. The purpose of the evaluation was to determine whether facilities established safe medication storage practices in accordance with applicable Veterans Health Administration policy and Joint Commission standards.

We performed this evaluation in conjunction with 54 Combined Assessment Program reviews conducted from October 1, 2014, through September 30, 2015. We noted high compliance in several areas, including: (a) facilities maintained a list of look-alike and sound-alike medications they stored, dispensed, and administered; (b) patient care areas were free from multi-dose high concentration heparin, potassium chloride vials for injection, and multi-dose insulin pens; and (c) patient care areas had readily accessible emergency medications, and employees properly checked crash carts and documented cart lock numbers.

To improve operations, we recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that:

- Facilities' policies include automated dispensing machine user training and competency assessment requirements.
- Employees perform and document monthly inspections of all medication storage areas.
- When employees identify deficiencies during medication storage area inspections, they document corrective actions.
- Facilities have oral syringes available for medication administration and clearly label and store them separately from parenteral syringes.

Comments

The Under Secretary for Health concurred with the findings and recommendations. (See Appendix A, pages 5–8, for the full text of the comments.) The implementation plans are acceptable, and we will follow up until all actions are completed.

JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

Purpose

The VA Office of Inspector General (OIG) Office of Healthcare Inspections completed an evaluation of safe medication storage practices in Veterans Health Administration (VHA) facilities. The purpose of the evaluation was to determine whether facilities established safe medication storage practices in accordance with applicable VHA policy and Joint Commission standards.

Background

In 2013, The Joint Commission reported that 35 percent of health care programs surveyed did not comply with safe medication storage, making this one of the 10 most frequently cited areas of noncompliance. The Joint Commission reported that several things cause serious medication errors, including selecting the wrong medications that look or sound like other medications, not labeling medications, and administering expired medications.[1] Some of these errors resulted in sentinel events, patient harm, and significant increases in health care costs. Maximizing safe medication storage processes prevents medication errors.

Scope and Methodology

We performed this evaluation in conjunction with 54 Combined Assessment Program (CAP) reviews conducted from October 1, 2014, through September 30, 2015. The facilities we visited were a stratified random sample of all VHA facilities and represented a mix of facility size, affiliation, geographic location, and Veterans Integrated Service Networks. OIG generated an individual CAP report for each facility. For this report, we summarized the data collected from the individual facility CAP reviews.

We reviewed facilities' policies and other relevant documents, including medication storage area inspection reports from 221 patient care areas. We also reviewed 1,067 nursing employee training and competency assessment records. Additionally, we inspected 223 patient care areas with medication storage areas and 234 emergency crash carts.

Sampling. We randomly selected the 56 VHA facilities scheduled for CAP visits, which we had stratified by the 12 catchment areas of the OIG's Office of Healthcare Inspections regional offices. We excluded two facilities from the review because they did not provide inpatient care, resulting in 54 facilities. Because we did not use probability samples, the results are not generalizable to the entire VHA.

Inspectors conducted the reviews in accordance with *Quality Standards for Inspection and Evaluation* published by the Council of the Inspectors General on Integrity and Efficiency.

[1] Sentinel Event Statistics for 2012. *Joint Commission Perspectives*. March 2013; 33 (3): 1–3.

Inspection Results

We noted high compliance in the following areas: (a) facilities maintained a list of look-alike and sound-alike medications they stored, dispensed, and administered; (b) patient care areas were free from multi-dose high concentration heparin, potassium chloride vials for injection, and multi-dose insulin pens; and (c) patient care areas had readily accessible emergency medications, and employees properly checked crash carts and documented cart lock numbers.

Issue 1: Automated Dispensing Machine User Training and Competency Assessment

VHA requires that facilities establish automated dispensing machine training programs, standardize the use of the machines, and establish minimum competency requirements for all employees who have access to and operate the equipment.[2]

Twenty percent of facilities' policies did not define automated dispensing machine user training requirements, and 19 percent did not address competency assessment requirements.

We recommended that facilities' policies include automated dispensing machine user training and competency assessment requirements and that facility managers monitor compliance.

Issue 2: Medication Storage Area Inspections

VHA requires that pharmacy personnel inspect all approved medication storage areas every 30 days.[3]

We reviewed 6 months of medication storage area inspection reports for 221 patient care areas and found that employees did not inspect 15 percent of these areas monthly.

Additionally, VHA requires that when employees find deficiencies during medication storage areas inspections, they should document planned corrective actions.[4] Of the 81 medication storage area inspections with identified deficiencies, employees did not consistently document corrective action items for 19 percent of the areas.

We recommended that employees perform and document monthly inspections of all medication storage areas and that facility managers monitor compliance. We also recommended that when employees identify deficiencies during medication storage area inspections, they document corrective actions and that facility managers monitor compliance.

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[2] VHA Handbook 1108.06, *Inpatient Pharmacy Services,* June 27, 2006.
[3] VHA Handbook 1108.06.
[4] VHA Handbook 1108.06.

Issue 3: Practices to Reduce Wrong-Route Medication Errors

VHA requires that facilities' pharmacies comply with relevant standards in technical bulletins of the American Society of Health-System Pharmacists. The American Society of Health-System Pharmacists opposes the use of injectable syringes for other than injectable routes of administration and requires the use of oral syringes that are distinctly different from hypodermic syringes to prevent accidental injection of oral medications.[5,6]

In 19 percent of the facilities, clinicians were incorrectly using parenteral syringes,[7] rather than oral syringes, to measure medications when dose amounts differed from unit-dose packages. This practice could lead to a potentially harmful wrong-route medication error.

We recommended that facilities have oral syringes available for medication administration and clearly label and store them separately from parenteral syringes and that facility managers monitor compliance.

Conclusions

We noted high compliance in the following areas: (a) facilities maintained a list of look-alike and sound-alike medications they stored, dispensed, and administered; (b) patient care areas were free from multi-dose high concentration heparin, potassium chloride vials for injection, and multi-dose insulin pens; and (c) patient care areas had readily accessible emergency medications, and employees properly checked crash carts and documented cart lock numbers.

We identified opportunities for improvement in four areas: (1) including automated dispensing machine user training and competency assessment requirements in facilities' policies, (2) performing and documenting monthly medication storage area inspections, (3) documenting corrective actions when deficiencies are identified during medication storage area inspections, and (4) having oral syringes available for medication administration and clearly labeling and storing them separately from parenteral syringes.

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[5] American Society of Health-System Pharmacists Policy Positions 1982–2014. 1018 Standardization of Device connections to Avoid Wrong-Route Errors.

[6] American Society of Health-System Pharmacists Technical Assistance Bulletin on Single Unit and Unit Dose Packages of Drugs. *Am J Health Syst Pharm*. 1985;42:378–379.

[7] Method of administration by other than through the digestive tract (oral or rectal), such as by intravenous, intramuscular, or subcutaneous injection.

Recommendations

1. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that facilities' policies include automated dispensing machine user training and competency assessment requirements and that facility managers monitor compliance.

2. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that employees perform and document monthly inspections of all medication storage areas and that facility managers monitor compliance.

3. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that when employees identify deficiencies during medication storage area inspections, they document corrective actions and that facility managers monitor compliance.

4. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that facilities have oral syringes available for medication administration and clearly label and store them separately from parenteral syringes and that facility managers monitor compliance.

Appendix A

Under Secretary for Health Comments

Department of Veterans Affairs

Memorandum

Date: April 11, 2016

From: Under Secretary for Health (10)

Subject: **Office of Inspector General (OIG) Draft Report, Combined Assessment Program (CAP) Summary Report: Evaluation of Safe Medication Storage Practices in Veterans Health Administration Facilities (Project No. 2016-00693-HI-0596) (VAIQ 7669868)**

To: Assistant Inspector General for Healthcare Inspections (54)

1. Thank you for the opportunity to review the draft OIG CAP Summary Report: Evaluation of Safe Medication Storage Practices in Veterans Health Administration Facilities.

2. I concur with the report and the recommendations. Attached is VHA's corrective action plan for recommendations 1–4.

3. Should you have any questions, please contact Karen M. Rasmussen, MD, Director, Management Review Service (10AR) at VHA10ARMRS2@va.gov.

David J. Shulkin, M.D.

Attachment

VETERANS HEALTH ADMINISTRATION (VHA)

Action Plan

OIG Draft Report, CAP Summary Report – Evaluation of Safe Medication Storage Practices in VHA Facilities

Date of Draft Report: December 11, 2015

Recommendations/ Actions	Status	Completion Date

OIG Recommendations

Recommendation 1. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that facilities' policies include automated dispensing machine user training and competency assessment requirements and that facility managers monitor compliance.

VHA Comments: Concur

VHA will take steps to ensure local compliance with requirement identified in recommendations 1–4.

The Deputy Under Secretary for Health for Operations and Management (DUSHOM), in collaboration with the Deputy Under Secretary for Health for Policy and Services (DUSHPS), will direct Veterans Integrated Service Network (VISN) directors to ensure facilities' policies include automated dispensing machine user training and competency assessment requirements. The policies must clearly address which employees will receive ADM [automated dispensing machine] training, timing of training and frequency, and evidence of training/assessment. Additionally, VISN directors will ensure each facility assigns facility managers to monitor and report compliance.

At completion of this action, VHA will provide the following documentation:
1. The DUSHOM memorandum
2. Evidence of compliance monitored by the VISN

Status: In Process

Target Completion Date: September 30, 2016

Recommendation 2. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that employees perform and document monthly inspections of all medication storage areas and that facility managers monitor compliance.

VHA Comments: Concur

To address this recommendation, the DUSHOM in collaboration with the Office of the DUSHPS will direct VISN and facility Directors on the requirements to ensure facility employees perform and document monthly inspections of all medication storage areas and assign and require facility managers to monitor and report compliance with this requirement. Facilities will provide the VISN with a quarterly status update showing a 90 percent sustained compliance for three consecutive quarters.

At completion of this action, VHA will provide the following documentation:
1. The DUSHOM memorandum
2. Evidence of compliance monitored by the VISN

Status:	Target Completion Date:
In Process	September 30, 2016

Recommendation 3. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that when employees identify deficiencies during medication storage area inspections, they document corrective actions and that facility managers monitor compliance.

VHA Comments: Concur

VHA Handbook 1108.06, Inpatient Pharmacy Services, requires documenting planned corrective action when employees find deficiencies during medication storage area inspections.

To ensure compliance with the policy, the DUSHOM in collaboration with the Office of the DUSHPS will require VISN directors to ensure facilities comply with the requirement in VHA Handbook 1108.06. Additionally, VISN directors will require facility managers to monitor and report compliance. Facilities will provide the VISN with a quarterly status update showing a 90 percent sustained compliance for three consecutive quarters.

At completion of this action, VHA will provide the following documentation:
1. The DUSHOM memorandum
2. Evidence of compliance monitored by the VISN

Status:	Target Completion Date:
In Process	September 30, 2016

Recommendation 4. We recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensure that facilities have oral syringes available for medication administration and clearly label and store them separately from parenteral syringes and that facility managers monitor compliance.

VHA Comments: Concur

The DUSHOM in collaboration with the Office of the DUSHPS will require VISN directors to ensure that facilities have oral syringes available for medication administration and clearly label and store them separately from parenteral syringes and that facility managers to monitor compliance.

At completion of this action, VHA will provide the following documentation:
1. The DUSHOM memorandum containing instructions to have oral syringes available for medication administration and clearly label and store them separately from parenteral syringes
2. A copy of the revised checklist containing instructions to have oral syringes available for medication administration and clearly label and store them separately from parenteral syringes

Status:	Target Completion Date:
In Process	September 30, 2016

Office of Inspector General
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