UNIVERSITY of VIRGINIA HEALTH SYSTEM

Clinical Staff Executive Committee

MEDICAL CENTER POLICY NO. 0259

A. SUBJECT: Medication Management

B. EFFECTIVE DATE: April 1, 2012 (R)

C. POLICY:

The University of Virginia Medical Center follows safe medication management practices. The Pharmacy and Therapeutics (P&T) Committee grants approval and provides oversight of the closed formulary. For the purposes of this policy "medication" includes prescription and over the counter products, diagnostic agents, and complementary and alternative products. The Department of Pharmacy Services ("Pharmacy"), in conjunction with the Pharmacy and Therapeutics Committee, Patient Care Committee and the Quality Committee, defines and monitors practices related to medication management. All Medical Center personnel involved in the medication use process are responsible for adhering to safe medication management practices as well as relevant formulary and Medical Center policies.

D. PROCEDURE

1. Patient Specific Information

The medical record contains the following information for use by all clinicians ordering, preparing, administering and/or monitoring medications for each patient:

a. Age
b. Gender
c. Current medications
d. Diagnosis, co-morbidities, and other conditions
e. Relevant laboratory values
f. Allergies and sensitivities (See Patient Allergy Information)
g. Height/weight
h. Pregnancy/lactation status as appropriate

Selection and Procurement

The P&T Committee has institutional oversight of the use of pharmaceutical and other therapeutic products. The committee is authorized by the Clinical Staff Executive Committee (CSEC) to develop and maintain a Medical Center formulary that is financially responsible and clinically effective utilizing current literature and evidence-based medicine. Medical Center Policy No. 0212, "Closed Formulary System" describes the process for requesting a medication be added to the formulary.

2. Storage

a. In order to ensure stability of admixtures, the Pharmacy follows guidelines in accordance with United States Pharmacopoeia 797, Board of Pharmacy Regulations, manufacturer guidelines, and medical literature.

Single dose sterile ampules are discarded immediately after opening.

i. Single dose sterile vials are discarded within one hour of opening unless manufacturer guidelines specify otherwise.

ii. Multiple dose sterile vials including sterile eye preparations are discarded within 28 days unless manufacturer indicates shorter expiration dating. At the time a sterile medication is first used, staff must label the product with the discard date.

b. In order to restrict unauthorized access, medications are secured upon receipt from Pharmacy in the following ways:

i. Medications are secured in automated dispensing cabinets, such as Pyxis, locked drawers or locked cabinets in patient care areas or are under constant surveillance by appropriate personnel.

ii. Medications removed from the automatic dispensing cabinet and secured in the workstations during the workshift must be returned to the cabinet at the end of the shift.

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iii. Additional mechanisms are in place regarding oversight of controlled medications in order to prevent diversion. Controlled medications are defined as sedatives/hypnotics, narcotics, and medications classified by the Virginia Board of Pharmacy and/or the Drug Enforcement Agency (DEA) as scheduled II, III, IV, and V. (See Medical Center Policy 0299 "Controlled Drugs")

c. Expired, damaged and/or contaminated medications are identified, segregated from the unit/floor stock, and returned to the pharmacy as soon as possible for destruction.

d. Look-alike, sound-alike medications are segregated in storage areas and not adjacent to look-alike, sound-alike designated items. In the Pharmacy, look-alike, sound-alike medications are physically segregated in the storage locations and require bar code scanning prior to product removal. The list of look-alike, sound-alike medications is reviewed annually by the P&T Committee.

e. Standard drug concentrations are established by the P&T Committee.

i. Volumetric and syringe pumps contain libraries of standard concentrations used throughout the Medical Center.

ii. Order sets in the electronic medical record system contain only standard concentrations for selection.

f. The following concentrated electrolyte preparations are allowed as stock in patient care areas, either as floor stock or as medications in the Emergency Drug Boxes.

- Calcium Chloride 10%
- Calcium Gluconate 10%
- Magnesium Sulfate 50%
- Sodium Bicarbonate 1 mEq/1ml
- Sodium Bicarbonate 0.5 mEq/ml

The following concentrated electrolytes shall be stored only in the Pharmacy unless approved by the P&T Committee as an exception.

- Potassium Chloride 2 mEq/ml
- Potassium Acetate
- Potassium Phosphate
- Sodium Phosphate
- Sodium Chloride >0.9%

g. The Resuscitation Committee approves the medication contents of the resuscitation box.

i. The boxes are stored either in the resuscitation cart or are tethered to a secure site in the patient care area.

ii. Unit personnel check expiration dates as part the routine emergency equipment check.

iii. Pharmacy maintains a list of all resuscitation cart locations and exchanges the medication boxes prior to the expiration date.

iv. If a medication box is used in a non-code situation, unit personnel shall bring the box to the Pharmacy for replacement.

h. The following medications have been designated as acceptable for patient self-administration and storage at the bedside:

- Albuterol inhaler
- Phenol (Chloraseptic®) spray
- Polyethylene glycol (artificial tears) ophthalmic solution
- Sodium chloride (saline) nasal spray
- Wound care ointments

i. Medications that are recalled, discontinued, have expired or go unused will be retrieved by Pharmacy staff or may be returned to the Pharmacy via the pneumatic tube system or messenger.

j. All inpatient units, clinics, and procedure areas are inspected periodically by a registered Pharmacy technician for specific items such as meds in date, refrigerator temperature logs, and sample medications. Results of the audit are reported to the unit/clinic manager. Unit personnel routinely inspect practice areas for expired medications and supplies.

3. Ordering and Transcribing

a. The medical record contains the diagnosis, condition or indication for use for each medication ordered. Medication orders are entered into the electronic medical record, and contain the following required elements:

- Patient first and last name
- Medical record number
- Name of medication
- Strength of medication
- Dosing of medication
- Route the medication is to be administered
- Frequency of delivery

If an order is unclear, a Pharmacist shall contact the responsible LIP[1] and clarify the order prior to dispensing the medication.

b. Medication reconciliation (i.e., get a list, reconcile the list and give a list) shall be performed whenever and wherever a patient receives care (this includes, but is not limited to, the Emergency Department, any procedure area, any inpatient area, any outpatient clinic, and in the event of any unit/level of care transfer). (See Medical Center Policy No. 0300, "Medication Reconciliation")

c. All medications ordered for pediatric patients < 14 years of age or < 40 kg shall be calculated as dose/kg.

d. The P&T Committee establishes "due for renewal" guidelines for the following types of orders:

- Antibiotic orders are evaluated for renewal at 96 hours
- Schedule II drug orders evaluated for renewal at 7 days
- Schedule III-V drug orders evaluated for renewal at 7 days
- Ketorolac orders are active for 5 days

e. Orders that include alternative dosing options such as titrations or tapers shall provide specific guidance to ensure that the dosing will remain consistent and is based on the patient's condition.

f. The Pharmacy compounds medications, which are not commercially available. Orders for compounded medications include specific ingredients and dosages unless the formula for the medication compound is on file in the pharmacy.

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g. Orders for investigational medications shall include the Human Subjects Research number linking the order to the study.

[1] For the purposes of this policy, licensed independent practitioner (LIP) includes physicians, nurse practitioners, and physicians' assistants.

h. Orders are issued for use of all medication related devices on a patient such as Patient Controlled Analgesia Pumps and nebulizers.

i. The following conditions apply for specified types of orders

i. PRN orders require a reason for medication use; orders for "PRN pain" require an associated level of pain.

ii. Protocol orders are entered as such in the medical record. The signed protocol must be retrievable on the patient care unit and retained for 5 years.

iii. Orders placed on hold, such as at transfer to the operating room, must be restarted as individual orders by the LIP. Orders may also be placed on hold and later restarted when appropriate for the patient's condition or status as determined by the LIP. (See Medical Center Policy No. 0063, "Internal Inpatient Transfers")

j. Medications may be ordered by generic name or brand name to reduce risk of look-alike, sound-alike errors. However, the Pharmacy will dispense the generic equivalent of a brand name when clinically appropriate and based on medication availability

For outpatient prescriptions to be filled in the University of Virginia Outpatient Pharmacy the prescriber may indicate "dispense as written" and the pharmacist will fill the prescription with the brand of medication ordered, providing it is stocked.

k. A nurse may order over-the-counter comfort medication for skin, eye, nose, and/or lip care for an inpatient. The Patient Care Committee approves the list of comfort medications available.

l. The prescriber or his/her agent shall enter discharge medication orders into the electronic medical record. Printed prescriptions must be signed by the prescriber before giving them to the patient/family.

4. Preparing and Dispensing

a. A Pharmacist shall review all medication orders prior to preparation and dispensing unless the process is managed by the LIP, such as in procedure areas or in urgent situations.

b. In emergent or life threatening situations, medications identified on the override list may be obtained from the automated dispensing cabinet prior to pharmacist review. The Pharmacy maintains this list and monitors all override activity.

c. Pharmacy shall prepare all sterile products except in emergency situations or when not feasible, such as Factor 7, 8, or 9 injection preparation, or where an on-site pharmacist is not available. When not prepared by a Pharmacist the following apply:

i. The preparer of a compound/admixture shall use aseptic technique in a clean area.

ii. Compounds/admixes shall be visually inspected for integrity prior to dispensing and again prior to administration.

iii. Admixtures shall be hung within 1 hour of preparation and completed within 12 hours.

iv. Labeling shall include the same information as listed in 4D.

d. Labeling for medications prepared by Pharmacy includes:

- Drug name, strength, amount/concentration
- Expiration date and time
- Date prepared and diluent used for all compounded admixtures and parenteral nutrition solutions
- Barcode

Labeling of patient-specific medications prepared by the Pharmacy shall also include:

- Patient name
- Patient location
- Directions for use and any applicable cautionary statements

e. Medications, medication containers (i.e. syringes, medicine cups, basins) and/or other solutions on and off a sterile field must be labeled with the name and strength of the medication.

i. If the staff member who will administer the medication/solution prepares and *immediately* administers the medication/solution with no intervening activity, labeling is not required. In this scenario, preparing two or more medications/solutions at the same time *does* require labeling of *each* container/syringe *even if* the preparer will immediately administer.

ii. The date prepared and the diluent used is required for all compounded IV admixtures.

iii. The label shall be prepared and applied at the time the medication and solution is prepared. Pre-labeling of medications or solution containers is not acceptable.

iv. If two or more people participate in the preparation and administration of the medication or solution, a two-person verification of the accuracy of the label is required.

v. Taping the syringe to the vial is not an acceptable labeling practice.

5. <u>Administering</u>

a. Medications are administered on a current medication order issued by an LIP.

b. Medications shall be administered by or under the control and supervision of an appropriately licensed prescriber in accordance with laws and governmental rules and in accordance with approved medical staff rules and regulations, provided the employee demonstrates satisfactory knowledge and skills of the medication administration. (See Persons Authorized to Administer Medications).

c. Medications shall be administered in accordance with the following standards:

i. Correct patient, correct medication, correct dose, correct time and correct route. In the inpatient setting, barcode medication administration is utilized. (See Barcode Medication Administration Policy)

ii. Complete visual inspection of medication prior to administration

iii. Medication within expiration date

iv. No contraindication to medication

v. Only after informing patient of possible adverse reaction(s) to new medication

vi. Resolution of any significant concerns about the medication

vii. Medications are to be administered within 60 minutes of the scheduled administration time (i.e., 60 minutes before or after)

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d. The preparation, handling, administration, and disposal of hazardous drugs shall be performed in a manner to prevent occupational risks through acute and/or chronic workplace exposure. (See Medical Center Policy No. 0268, "Management of Hazardous Drugs")

e. Patients may receive medications brought from home under limited circumstances. Use of the patient's own controlled medications (Schedule II – V) is not permitted. (See Medical Center Policy No. 0171, "Use of a Patient's Own Medication")

6. Monitoring

a. A patient's response to medications is monitored, including, but not limited to, physiologic response, patient's report of efficacy, any side effects observed or reported and ongoing physical assessment.

b. All adverse drug reactions are reported according to the Adverse Drug Reactions Program. The Adverse Drug Reaction Reporting Program works to improve the quality of patient care by identifying, reporting, and preventing adverse drug reactions.

7. High Alert Medications

The P&T Committee identifies High Alert Medications and defines processes to procure, store, order, transcribe, prepare, dispense, administer and/or monitor these medications. (See High Alert Medications)

8. Evaluation

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a. The P&T Committee conducts an annual review of all formulary medications to ensure safe medication practices. Through this process, the need for Formulary changes (including therapeutic class reviews) is identified. Agents under review are grouped by AHFS classification. Emerging safety information, including Institute for Safe Medication Practices and FDA MedWatch alerts, Joint Commission Sentinel Event Alerts, institution specific medication errors, and utilization data are summarized. Reviews are prepared by Medication Management, Use and Policy Committee staff and reviewed by Pharmacy managers and Pharmacy clinical coordinators. Recommendations for Formulary additions or deletions and medication safety strategies are provided at P&T Committee meetings.

b. Quality reports on medication errors are initially routed to the Pharmacy for review, trending, and extraction of pertinent details. The Medication Use Safety and Informatics Committee (MUSIC) also reviews on a routine basis medication errors and adverse drug reaction trends and regularly reports its findings to the Quality Committee; MUSIC's reports are also shared with the P&T, Patient Safety and Medical Devices Committees as appropriate. In addition, MUSIC advises the clinical areas where errors occurred, or which might be impacted by identified adverse drug reaction trends, so that corrective action can be taken. In all reviews conducted of medication errors, opportunities for improvement are identified and assigned as appropriate.

c. The Pharmacy participates in national as well as internal benchmark studies to identify gaps in medication management. Medication use evaluations are performed regularly to assess current practices. (See Medication Use Evaluation Program Policy and Procedures)

SIGNATURE:

Robert Gibson
Robert S. Gibson, M.D., President Clinical Staff

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3/21/12

DATE:

Medical Center Policy No. 0259 (R)
Approved September 2005
Revised September 2007, January 2009, February 2011, June 2011, November 2011, March 2012
Approved by Patient Care Committee
Approved by the Clinical Staff Executive Committee