MEDICATION ADMINISTRATION PROTOCOL

Hospital: General Medical Center Department: Internal Medicine Effective Date: January 2024 Review Date: January 2025

PURPOSE:

This protocol establishes standardized procedures for safe medication administration in the hospital setting to minimize medication errors and ensure patient safety.

SCOPE:

This protocol applies to all licensed healthcare professionals administering medications in the hospital, including:

- Registered Nurses (RN) - Licensed Practical Nurses (LPN) - Physicians - Nurse Practitioners - Physician Assistants

FIVE RIGHTS OF MEDICATION ADMINISTRATION:

1. Right Patient - Verify patient identity using two identifiers - Check patient wristband and ask patient to state name and date of birth - Match identifiers with medication administration record (MAR)

2. Right Medication - Verify medication name, strength, and formulation - Check for look-alike, sound-alike medications - Confirm medication order in electronic health record

3. Right Dose - Calculate dose based on patient weight when applicable - Use standardized concentration when possible - Double-check high-alert medication calculations

4. Right Route - Verify administration route (PO, IV, IM, SC, topical) - Ensure route is appropriate for medication and patient condition - Check for contraindications to specific routes

5. Right Time - Administer within 30 minutes of scheduled time - Document actual administration time - Consider drug interactions and meal timing

HIGH-ALERT MEDICATIONS:

The following medications require special precautions:

Insulin:

- Dosage: Variable based on blood glucose and sliding scale - Administration: SC injection, rotate sites - Monitoring: Check blood glucose before and after administration - Storage: Refrigerate unopened vials, room temperature for 28 days once opened

Warfarin:

- Dosage: Typically 2.5-10mg daily, adjust based on INR - Administration: PO, same time daily - Monitoring: INR every 2-3 days initially, then weekly to monthly - Interactions: Avoid with aspirin, NSAIDs without physician approval

Heparin:

- Dosage: Weight-based protocol (80 units/kg bolus, then 18 units/kg/hour) - Administration: IV continuous infusion via pump - Monitoring: aPTT every 6 hours, adjust per protocol - Antidote: Protamine sulfate for reversal

Morphine:

- Dosage: 2-10mg IV q2-4h PRN pain, 15-30mg PO q4h - Administration: Slow IV push over 2-5 minutes - Monitoring: Respiratory rate, pain score, sedation level - Contraindications: Respiratory depression, severe asthma

Digoxin:

- Dosage: 0.125-0.25mg daily, adjust for renal function - Administration: PO or IV, same time daily - Monitoring: Serum level (therapeutic range 1.0-2.0 ng/mL), heart rate - Toxicity signs: Nausea, visual changes, arrhythmias

MEDICATION RECONCILIATION:

Upon Admission:

1. Obtain complete medication history from patient/family 2. Verify home medications with pharmacy records 3. Document allergies and adverse drug reactions 4. Identify medication discrepancies

During Hospitalization:

1. Review medications daily on rounds 2. Assess for new allergies or adverse reactions 3. Monitor for drug interactions 4. Adjust for renal/hepatic function changes

At Discharge:

1. Provide written medication list 2. Counsel on new medications and changes 3. Schedule follow-up for medication monitoring 4. Provide emergency contact information

SPECIAL POPULATIONS:

Pediatric Patients:

- Calculate doses based on weight (mg/kg) or body surface area - Use oral syringes for liquid medications - Consider taste preferences and formulation - Involve parents/caregivers in education

Geriatric Patients:

- Start with lower doses ("start low, go slow") - Monitor for polypharmacy interactions - Assess for cognitive impairment affecting compliance - Consider renal/hepatic function decline

Pregnant Patients:

- Verify pregnancy category for all medications - Avoid teratogenic medications - Consider breastfeeding implications - Consult obstetrics for complex cases

ADVERSE DRUG REACTION REPORTING:

Immediate Actions:

1. Discontinue suspected medication 2. Assess patient condition and provide supportive care 3. Notify physician immediately 4. Document incident in medical record

Documentation Requirements:

- Date and time of reaction - Medication name, dose, route, and timing - Description of reaction and severity - Treatment provided - Patient outcome

Reporting:

- Complete incident report within 24 hours - Report to hospital pharmacy - Submit to FDA MedWatch for serious reactions - Update patient allergy profile

PAIN MANAGEMENT PROTOCOLS:

Pain Assessment:

- Use standardized pain scale (0-10 numeric scale) - Assess pain location, quality, duration, aggravating factors - Consider non-verbal pain indicators in confused patients - Document pain scores with vital signs

Opioid Administration:

- Assess respiratory rate before each dose - Hold medication if respiratory rate <12/minute - Monitor sedation level using Richmond scale - Ensure naloxone (Narcan) readily available

Non-Pharmacological Interventions:

- Position changes and comfort measures - Heat/cold therapy as appropriate - Distraction techniques - Relaxation and breathing exercises

CONTROLLED SUBSTANCE MANAGEMENT:

Storage Requirements:

- Secure in locked cabinet or automated dispensing system - Limit access to authorized personnel only - Maintain chain of custody documentation - Count controlled substances at shift change

Waste Documentation:

- Two licensed personnel must witness waste - Document reason for waste (patient refused, order changed) - Complete waste record with signatures - Return unused portions to pharmacy

EMERGENCY MEDICATIONS:

Code Blue Medications:

- Epinephrine 1mg IV/IO q3-5 minutes - Atropine 0.5mg IV q3-5 minutes (max 3mg) - Amiodarone 300mg IV bolus, then 150mg - Lidocaine 1-1.5mg/kg IV bolus

Anaphylaxis Protocol:

- Epinephrine 0.3-0.5mg IM (EpiPen) - Diphenhydramine 25-50mg IV/IM - Methylprednisolone 125mg IV - Albuterol nebulizer if bronchospasm

QUALITY ASSURANCE:

Medication Error Prevention:

- Use "tall man" lettering for look-alike drugs - Implement read-back verification for verbal orders - Avoid dangerous abbreviations - Use leading zeros (0.5mg not .5mg)

Staff Education:

- Annual competency validation - New medication in-services - High-alert medication training - Simulation exercises for emergencies

Monitoring and Evaluation:

- Monthly medication error analysis - Trending of near-miss events - Staff feedback and suggestions - Continuous process improvement

This protocol must be reviewed annually and updated as needed based on evidence-based practice, regulatory requirements, and organizational policies.

For questions or clarifications, contact:

- Pharmacy Department: Extension 2500 - Nursing Supervisor: Extension 3000 - Risk Management: Extension 4000