HEALTHCARE PERSPECTIVE

SUPPLEMENT 2

2015 ISSUE 3

Medication Safety: A Self-assessment Tool

MEDICATION SAFETY PRACTICE	COMPLIANT? (YES/NO)	ACTION REQUIRED
PATIENT AND DRUG DATA MANAGEMENT		
1. **A complete drug history – including current prescription medications; over-the-counter medications and supplements; alternative therapies; and alcohol, tobacco and illicit drug use – is electronically accessible,** as are drug therapy records from recent episodes of care.		
2. **Medication profiles are readily available at the point of care** in electronic or paper form, and reflect up-to-date medication orders.		
3. **Medication profiles include an allergy notation**, along with a tiered severity rating to alert staff of drug intolerances.		
4. **Allergy alerts are visible** on all screens or pages of the patient medication administration record (MAR).		
5. **Patient weight and height measurements are always recorded in metric units** to avoid possible confusion.		
6. **Laboratory values and diagnostic reports are easily accessible to prescribing practitioners**, either through an electronic health record tracking program or conspicuous placement in paper records.		
7. **Machine-readable coding is used to check patient identity and drug data prior to administration of drugs** or, if this is not possible, two patient identifiers (such as patient ID number and birthdate) from the original prescription are used for verification.		
8. **Documentation occurs simultaneously with medication administration** to prevent critical gaps or oversights.		
ORDERING AND DISPENSING SYSTEMS		
1. **The computer order entry (COE) system is linked to patient profiles**, in order to alert ordering practitioners of comorbid or chronic conditions.		
2. **The COE system interfaces with a pharmacy dispensing system**, if feasible, to facilitate information sharing.		
3. **Patient allergies are noted and coded in the COE system** before medication orders are accepted.		
4. **The COE system screens against patient profiles for allergies**, as well as contraindicated medications, potential interactions and inappropriate doses.		
5. **The COE system requires practitioners to explain why they are overriding an alert message** regarding allergy status, maximum dose or potential drug interactions.		
6. **The COE system incorporates precautions for look-alike and sound-alike drugs**, such as placing them on different screens, showing names in boldface and/or uppercase letters, and triggering alerts for similar suffixes, such as XL, SR, ED and CD.		

MEDICATION SAFETY PRACTICE	COMPLIANT? (YES/NO)	ACTION REQUIRED
ORDERING AND DISPENSING SYSTEMS (CONTINUED)		
7. **COE software expressly prohibits use of problematic notations and abbreviations** (such as q.i.d., Sub q and D/C), as well as improper use of trailing/leading zeros.		
8. **Automatic drug dispensing cabinets (ADCs) are available in treatment areas** and are customized, when possible, for specific patient populations (e,g., endoscopy, interventional radiology, surgical post-op).		
9. **A portable electronic or paper MAR is available next to each ADC**, with instructions on how to prepare medications that require manipulation.		
10. **ADCs exclude potentially hazardous compounds,** such as vials of neuromuscular blocking agents and undiluted electrolytes.		
11. **ADCs are double-checked by staff** to ensure that no high-alert medications are present, and these checks are documented.		
12. **ADC security databases are updated annually** to remove expired access codes and create new passwords.		
13. **ADC override reports and blind counts are monitored and reviewed** via quality assurance processes.		
HANDOFF COMMUNICATION		
1. **All medication containers prepared in advance – including IV and oral syringes, vials, bowls and basins –are appropriately labeled** with the name of the patient and the drug's name, strength and dosage.		
2. **Unit-doses of medications remain packaged up to the point of handoff/ administration**, in order to facilitate a final check of the MAR.		
3. **All handoffs of prepackaged medications are preceded by a spoken exchange of information**, which includes patient and drug name, as well as the dose, route and frequency of administration.		
4. **Verbal drug orders from practitioners are acceptable only during emergencies or sterile procedures**, and require the receiving party to transcribe the order, read it back to the prescriber and document the read-back for verification.		
5. **Potential drug side effects are clearly communicated at points of transition** and are documented on accompanying patient care plans and/or handoff reports.		
6. **Written protocol addresses the safe use and disposal of anesthesia-related medications**, requiring that syringes be prominently labeled with drug name, strength/concentration and expiration date.		
7. **Patients receiving high-alert drugs via IV or epidural infusion are accompanied by a qualified nurse or licensed practitioner when transported between treatment areas**, and the exchange from the accompanying practitioner to the receiving staff member involves a formal handoff.		
8. **Staff members responsible for the ordering, transcribing, dispensing and/or administering of medications participate in documented simulations of higher-risk situations,** in order to reinforce effective communication techniques and other safe practices.		
9. **Patients are included in the handoff dialogue**, when possible, in order to prevent errors, reinforce their awareness of the medication regimen and bolster post-discharge compliance.		

MEDICATION SAFETY PRACTICE	COMPLIANT? (YES/NO)	ACTION REQUIRED
HIGH-ALERT, NON-STANDARDIZED AND LOOK-ALIKE/SOUND-ALIKE DRUGS		
1. **Special procedures are in place to prevent wrong dosages or concentrations of identified high-alert drugs** (e.g., anti-coagulants, muscle relaxants, insulin, potassium chloride, opioids, adrenergic agents, dextrose solutions, chemotherapeutic agents).		
2. **High-alert medications are always accompanied by standardized orders and/or computerized safe-dosing guidelines**, and are verified by two persons before administration.		
3. **Pediatric medications are accompanied by standardized orders and/or computerized dosing guidelines**, and are stored away from adult dosages of the same medications.		
4. **Infusions of high-alert drugs – such as IV opioids, epidural narcotic infusions and vasopressors – are standardized to a single concentration** for use in the majority of cases.		
5. **Dosages, formulations and concentrations of drugs on carts and in cabinets reflect emergency drug guidelines** for both adult and pediatric patients.		
6. **Antidotes and reversal agents for medications are available at the point of care**, as are dosing guidelines.		
7. **Patients who require contrast media are screened prior to the procedure for allergies**, as well as for renal dysfunction and contra-indicated medications.		
8. **Appropriate measures are taken to avoid the risk of contrast-induced nephrotoxicity or allergic response**, including use of nonionic contrast, adequate hydration and postponement of treatment, if necessary.		
9. **Non-standardized drugs approved for therapeutic use have accompanying safety enhancements**, including (but not limited to) parameters for use, prescription guidelines, administration checks, monitoring protocols and separate storage areas away from other medications.		
10. **Medications requiring multiple dilutions or extensive calculations are made available only when necessary,** and are maintained in limited quantities for safety reasons.		
11. **Clinical staff are educated about minimizing the risks associated with look-alike and sound-alike products,** and their training is documented.		
12. **Drugs with look-alike and sound-alike names are kept separate from each other**, are not stored alphabetically with other stock medications, and have enhanced labels or other auxiliary warnings.		
13. **Clinical staff are notified when medication stock is relocated or storage areas are reorganized**, in order to reduce the likelihood of confusion or error.		
14. **Pharmacists are available on-site or by telephone** to consult with providers regarding prescribed medications.		

MEDICATION SAFETY PRACTICE	COMPLIANT? (YES/NO)	ACTION REQUIRED
MEDICATION DEVICE SAFETY		
1. **Staff and temporary workers are educated about operating medication devices** – including standard infusion pumps, "smart pumps" and ancillary equipment – and undergo documented competency testing on their safe use.		
2. **Smart pumps and related devices are programmed to deliver maximum-dose alerts** when administering potentially hazardous medications.		
3. **Only one type or model of epidural pump is utilized**, and it differs noticeably in appearance from standard IV infusion pumps.		
4. **The type and number of syringe pumps used to deliver medications are limited**, and all pumps are clearly marked to prevent mistakes.		
5. **IV and epidural infusions are prominently labeled with the intended route of administration**, and dosing concentration is consistent with infusion-pump programming (e.g., mg/kg/min).		
6. **Tubing for epidural infusions differs noticeably from peripheral or central venous IV access tubing** and does not contain Y-connector access ports.		
7. **The distal ends of all tubing are clearly labeled** for patients receiving multiple solutions via different routes, such as peripheral, central venous, arterial, epidural, enteral, bladder or other access sites.		
8. **Syringes containing medications intended for oral/enteral administration are incompatible with the luer-locking mechanisms of IV infusion tubing,** to prevent potentially catastrophic accidents.		
9. **Solutions intended for infusion are verified jointly by two persons**, unless the facility employs smart pump technology that checks doses and verifies bar codes at the point of care.		
10. **The infusion verification procedure includes patient name and ID number**, as well as: - Drug and base solution. - Drug concentration and rate of infusion. - Channel of administration (for pumps that offer multiple channels). - Line attachment.		
11. **Written policy prohibits the administration of IV boluses via an infusion pump**, unless smart pump technology allows programming for bolus doses.		
12. **Trained technicians are available** to provide prompt assistance in the event of a medication device malfunction.		

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