NATIONAL PBM BULLETIN

MARCH 10, 2011

VETERANS HEALTH ADMINISTRATION PHARMACY BENEFITS MANAGEMENT SERVICES (PBM), MEDICAL ADVISORY PANEL (MAP), & CENTER FOR MEDICATION SAFETY (VA MEDSAFE)

DICYCLOMINE AND DOXYCYCLINE: LOOK-ALIKE/SOUND-ALIKE (LA/SA) CONFUSION

I. ISSUE [1]

One local facility noted two instances of look-alike/sound-alike (LA/SA) errors where dicyclomine 10mg (manufactured by Mylan) was filled instead of doxycycline 100mg (manufactured by Major). Both medications are available as blue capsules with red print and come in bottles of 500 capsules.

II. BACKGROUND [1-2]

Dicyclomine and doxycycline are a medication name pair recognized by the United States Pharmacopoeia (USP) as having the potential for look-alike/sound-alike (LA/SA) confusion. Dicyclomine is an anticholinergic used for treating irritable bowel syndrome (IBS). Patients with narrow-angle glaucoma, prostatic hypertrophy, or bladder-neck obstruction who are inadvertently administered dicyclomine could experience worsening of symptoms due to anticholingeric effects. Patients taking other anticholinergic-containing medications who are inadvertently administered dicyclomine concomitantly could experience additive anticholinergic effects. On the other hand, doxycycline is a tetracycline antibiotic used to treat bacterial infections, including respiratory tract infections; infections of skin, genital, and urinary systems; Lyme disease; and anthrax (after inhalational exposure). It is also used to prevent malaria. Patients with active infection that do not receive proper antibiotic therapy may experience a worsening of their symptoms and/or condition.

Last year, two near misses occurred at one local facility. The first event occurred during the filling of an outpatient medication. Dicyclomine was filled for doxycycline since both medication bottles remained on the counter as several manufacturer bottles were not yet restocked after use. Staff realized the incorrect drug while labeling the prescription and subsequently replaced it with the correct drug. The second event occurred during order verification for an ER outpatient. The prescribed medications were dicyclomine and guaifenesin syrup. The odd combination prompted the pharmacist to confirm the order with the physician, since the patient was to be treated for a respiratory infection per the electronic medical record. The ordering physician clarified that correct medication was doxycycline, and that the dicyclomine was intended for another ER patient. The order was corrected. In both of these instances, no adverse events or harm occurred. To prevent future mix-up between the two products, the pharmacist used a red pen to circle and write on the dicyclomine bottle to distinguish it from the doxycycline bottle.

III. PHARMACY RECOMMENDATIONS

1. Pharmacy should inform providers of the potential for look-alike/sound-alike confusion between dicyclomine and doxycycline when ordering these medications via the computer order entry system, especially if both medications remain orderable via the alphabetic medication list in CPRS.
2. Pharmacy should carefully check the name, dosage, and indication when either dicyclomine or doxycycline is ordered, especially if both medications remain orderable via the alphabetic medication list in CPRS.
3. Pharmacy should ensure that a method is in place to return unused stock of dicyclomine and doxycycline to designated pharmacy area(s) when not ordered for a particular patient.
4. Pharmacy should add warning stickers/labels on bottles of dicyclomine and doxycycline to help differentiate the products in order to avoid future LA/SA confusion.

IV. REFERENCES

1. Field Information Report.
2. USP Quality Review: Use Caution, Avoid Confusion. Rockville, MD: USP Center for the Advancement of Patient Safety. 79; 2004 April.

ACTIONS

- ***Facility Director*** *(or physician designee): Forward this document to the Facility Chief of Staff (COS).*
- ***Facility COS and Chief Nurse Executives:*** *Forward this document to all appropriate providers who handle these medications (e.g.,* ***pharmacy staff****, including contract providers, etc.). In addition, forward to the Associate Chief of Staff (ACOS) for Research and Development (R&D). Forward to other VA employees as deemed appropriate.*
- ***ACOS for R&D:*** *Forward this document to Principal Investigators (PIs) who have authority to practice at the facility and to your respective Institutional Review Board (IRB).*