

PHARMACY & THERAPEUTICS NEWSLETTER

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MEDICATION ADDED TO FORMULARY

Cetirizine is replacing loratadine on the CHS drug formulary.

This is primarily related to antihistamine therapy requirements for some biological and chemotherapeutic medications administered in our infusion centers.

(continued on page 2)



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UPDATE TO THE CONTRAST ALLERGY ORDER PANEL

After a review of the literature, a revision to the contrast allergy panel was recently completed. Descriptive guidance was placed to assist the provider in patient assessment and necessity to order steroids and an antihistamine. Categories of **mild**, **moderate**, and **severe** reaction are now included.

Contrast Allergy Premedication

IV steroids have not been shown to be effective when administered less than 4 to 6 hours prior to contrast injection, therefore must know time of imaging to correctly administer premedications.

 **History of mild immediate iodinated contrast media hypersensitivity**

Symptoms include localized urticaria, sensation of itchy/scratchy throat, nasal congestion, sneezing, conjunctivitis, rhinorrhea, limited N/V, isolated flushing/warmth/chills

Premedication is not necessary for history of mild reactions; however, the decision is deferred to the ordering Provider.

- Non-Urgent - scan not immediately required
- Urgent - Scan needed as soon as possible
- STAT - Scan needed immediately to assess life threatening pathology
- History of moderate immediate iodinated contrast media hypersensitivity
- History of severe immediate iodinated contrast media hypersensitivity

History of moderate immediate iodinated contrast media hypersensitivity

Symptoms include diffuse, rapid spreading urticaria, facial angioedema, mild throat tightness/hoarseness without dyspnea, mild wheezing/bronchospasm, chest pain, self-limiting vasovagal event

Premedication may be considered. Weigh side effect profile of medications and delayed scan time vs presumed systemic benefits/avoidance of reaction.

History of severe immediate iodinated contrast media hypersensitivity

Symptoms include facial angioedema with dyspnea, throat tightness/hoarseness +/- stridor, wheezing/bronchospasm with hypoxia, hypotension, arrhythmia, seizure, hypertensive emergency or systemic reaction involving two or more moderate symptoms

Consider alternative image modality (ultrasound, MRI). If not feasible, premedication is required.

Specifically, there is now guidance on the role of the antihistamine. The inclusion of it in the contrast allergy protocol is considered to be based upon historical precedent versus firm evidential support. Antihistamine therapy is deemed not to be always necessary. It also exposes the patient to potential adverse effects. Please see how this therapy is now described in the allergy to contrast panel. (Continued on next page)

Diphenhydramine: Considered optional
Must adjust start time for initial order to begin 1 hour prior to contrast.

Considered optional: the risk of anticholinergic, sedative effects and delaying scan time must be weighed against the presumed benefit of only reducing mild dermatologic reactions

diphenhydramine (BENADRYL) capsule/tablet 50 mg
50 mg, oral, Once, today at 0830, For 1 dose
Give 1 hour prior to contrast media. Ren

Or

diphenhydramine (BENADRYL) injection 50 mg
50 mg, intravenous, Once, 1 dose, today at 0830
Administer IV if patient is unable to take orally or via feeding tube. Give 1 hour prior to contrast media. Ren

We thank Bob Gibson, ANP for reviewing the literature and getting a workgroup together to review the best practice for contrast allergy

LOPERAMIDE PRESCRIBING

Please note we have added a warning into the loperamide order in Epic:

loperamide (imodium) capsule Accept Cancel

Order Instructions: Loperamide is not recommended in bradycardia or cardiac arrhythmia, diphenoxylate-atropine is the preferred choice in those disease states.

Reference Links: • ClinicalPharmacology

Dose: mg 2 mg 4 mg

Route: oral oral

Frequency: 4 times daily PRN TID PRN 4x daily PRN

Use loperamide **with caution** in patients with a baseline QT prolongation or who have conditions that may increase the risk of QT prolongation or torsade de pointes, including bradycardia, congenital long QT syndrome, hypocalcemia, hypokalemia, hypomagnesemia, geriatric adults, structural abnormalities that interfere with electrical conduction. The use of other medications that have been associated with QT prolongation or torsade de pointes may also further increase the risk of an adverse cardiac effect.

MEDICATION ADDED TO THE FORMULARY (CONTINUED FROM COVER)

Cetirizine has more clinical literature in the area of efficacy and safety for premedication versus loratadine, and it has shown to be just as effective as diphenhydramine with a more favorable side effect profile.

Several studies have been helpful in demonstrating efficacy for cetirizine:

- The American Journal of Clinical Pathology looked at cetirizine and loratadine in addition to other regimens for prevention of allergic reactions when receiving blood products. In the logistic regression, cetirizine had an odds ratio of 0.34 versus no cetirizine, and loratadine had an odds ratio of 2.23 when compared to no cetirizine or no loratadine. This suggests that cetirizine was significantly associated with lower risk of reaction whereas loratadine was not.
- While this study was not oral administration, a study completed in 2021 looked at IV administration of cetirizine versus diphenhydramine for the prevention of hypersensitivity reactions post-infusion. They found that IV cetirizine was just as effective as diphenhydramine with less sedation and fewer treatment related adverse effects. A very similar study was completed with oral cetirizine and diphenhydramine prior to administration of a biologic. They found that there were similar rates of infusion reactions in both groups but in the cetirizine group they had less fatigue and increased satisfaction scores.

HYPERKALEMIA TREATMENT

Some instances of hypoglycemia were identified which were a result of patients receiving insulin + dextrose therapy for the treatment of hyperkalemia. The current order panel:

Emergent Treatment of Symptomatic Hyperkalemia
 Calcium IV - contraindicated in patients receiving Digoxin therapy
 Insulin and Dextrose IV
 Insulin and Dextrose IV for Symptomatic Hyperkalemia Treatment

Choose 1 insulin-dextrose option to rapidly shift potassium intracellularly while minimizing risk of hypoglycemia.

Insulin 10 units IV then 25 g Dextrose IV Bolus
 Insulin 5 units IV followed by 25 g Dextrose IV
 Insulin 10 units IV then 25 g Dextrose IV Bolus then Dextrose 10 % IV Infusion

Glucose, POC
Every 1 hour, First occurrence today at 1400, Last occurrence today at 1700, For 4 hours
Contact provider for any result less than 100 mg/dL

A drug utilization review was conducted due to a concerning signal of hypoglycemic events seen from a random review of hypoglycemic inpatients. All of the hypoglycemic patients received the 10 unit insulin + 25 gm dextrose regimen.

As background, there are two other insulin + dextrose treatment options: the 5 unit insulin + 25 gm dextrose regimen can be used if the requirement to lower the potassium isn't as significant or the patient has significant renal dysfunction. This is rarely chosen. In UpToDate, their recommendation is as follows:

The incidence of hypoglycemia depends more upon the dose of glucose than upon the dose of insulin. To avoid hypoglycemia, we recommend infusion of 10 percent dextrose at 50 to 75 mL/hour after the initial 25 g bolus and close monitoring of blood glucose levels every hour for five to six hours.

This is the third option in the treatment panel.

In looking at a sample of 30 patients receiving insulin for hyperkalemia, 26 had underlying renal dysfunction. The average patient age was 67 years, with an average weight of 97.3 kg. Prior to hyperkalemic treatment, the mean blood glucose was 158 mg/dl. Seventeen patients had a history of diabetes, and 11 had received insulin leading up to the event.

The average potassium level was 6.2 mmol/L. All patients were treated with 10 units of IV insulin followed by 25 g of IV dextrose. Glucometer testing every hour x4 **was not ordered for 23 patients (76.7% of patients reviewed)**. Among the few who did receive hourly glucose monitoring x4, the average readings were 157 mg/dl at hour one, 113 mg/dl at hour two, 98 mg/dl at hour three, and 104 mg/dl at hour four. It is difficult to determine why POC glucometers are not seen when it is already preselected in the panel. This should be standard monitoring for all patients. **Please make sure glucometers (q1h x4) are always a part of your order.**

CHS PHARMACY RESIDENCY DATES TO REMEMBER

Journal Club	01/16/2026 – Jazzlyn Igliel 02/20/2026 – Natalie Peunic 03/20/2026 – Bidoura Chowdhury
Grand Rounds	01/22/2026 – Bidoura Chowdhury 02/26/2026 – Emily Austin 03/26/2026 – Amanda Mutka 04/23/2026 – Jazzlyn Igliel
WNYSHP Midday CE Presentations	02/04/2025 – Adam Murphy



Pharmacists enjoying a wellness event

PLEASE HELP US WISH STEVE RICE, PHARMD CONGRATULATIONS ON HIS RETIREMENT

Steve celebrated his last day in the ICU at Mercy Hospital of Buffalo after 25 years of service on 12/31/2025 – please help us congratulate him!

