Catholic Health

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PHARMACY & THERAPEUTICS Newsletter

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Surgical Antibiotic Prophylaxis

- Dr. Shiley, the infection control team, and pharmacy have worked to ensure our pre-surgery orders in EPIC contain the most appropriate antibiotic surgical prophylaxis for a variety of procedures.
- Our evaluation is based upon the following:
  - Current literature and society / IDSA practice guidelines
  - Local bacterial susceptibility patterns
  - Recent CHS surgical site infections and bacterial pathogens
  - Current literature on cephalosporin use in patients with reported penicillin allergies
- We continue to see prescribing that is not in accordance with our guidance, utilizing second-line agents, especially in patients with reported beta-lactam allergies.
- The latest evidence supports a more rational approach to consideration of cross-reactivity between different agents in the overall beta-lactam class, taking into account the propensity for allergic reactions based upon structure and side chains.
  - That is the rationale for the recommendation that cefazolin is used in most patients despite an allergy history to penicillins or cephalosporins.
  - A recent article highlights the consequence of using "second line agents."
- A study in over 1000 patients having orthopedic surgery evaluated surgical site infections and the risk of hypersensitivity reactions[1].
  - Patients included had a listed penicillin or cephalosporin allergy.
  - First line therapy, which was cefazolin, was compared with alternative therapy, vancomycin or clindamycin.
  - The surgical site infection rate was statistically significantly less with cefazolin (0.9%) as compared to the other agents (3.8%).
  - The incidence of hypersensitivity reactions was not significantly different, cefazolin 0.2% versus the other agents at 1.3%

[1]Norvell et al. Cefazolin vs Second-line Antibiotics for Surgical Site Infection Prevention After Total Joint Arthroplasty Among Patients With a Beta-lactam Allergy. Open Forum Infectious Diseases – IDSA. April 24th, 2023 https://doi.org/10.1093/ofid/ofad224

Medication for Opioid Use Disorder

- Medications for opioid use disorder (OUD), buprenorphine and methadone, can not only be offered, but also initiated during admission if the patient expresses interest.
- For buprenorphine, in addition to inpatient prescribing, providers are now able to e-prescribe buprenorphine products at discharge regardless of whether they have X DEA or not via the MAT Act of 2023.
- Methadone can also be initiated and further up-titrated during hospitalization if the patient is agreeable to continuing outpatient methadone treatment. This requires them to present to a methadone clinic daily for doses.
- Regardless of medication used, an important note for either situation is the discharge plan and outpatient follow up.
- Continued on page 4

Important Information on Ordering Respiratory Medications

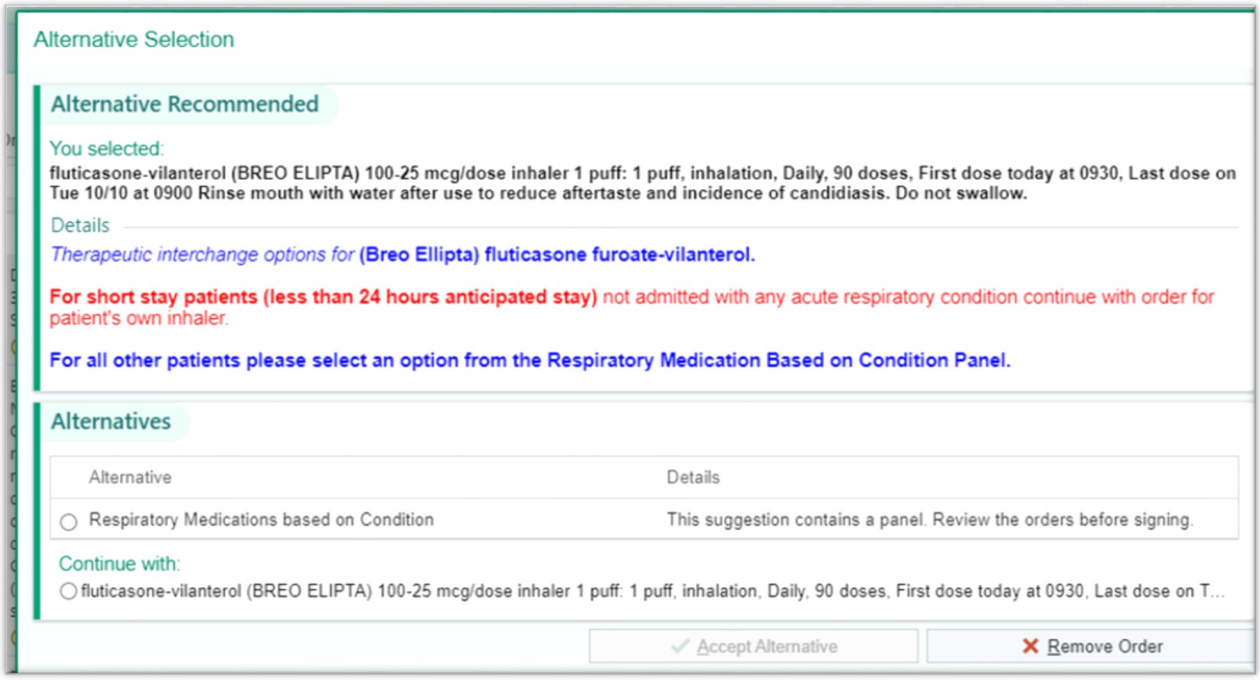
- We are undertaking a modification in the ordering process of respiratory products beginning on **October 17**.
- We need to efficiently manage the respiratory therapists' time as they administer many treatments to patients across our hospitals.
- In addition, we have to ensure that ordered respiratory treatments encompasses only those who truly have an established indication.
- A large percentage of patients in our hospitals are ordered on some type of respiratory treatment.

The new procedure will be:

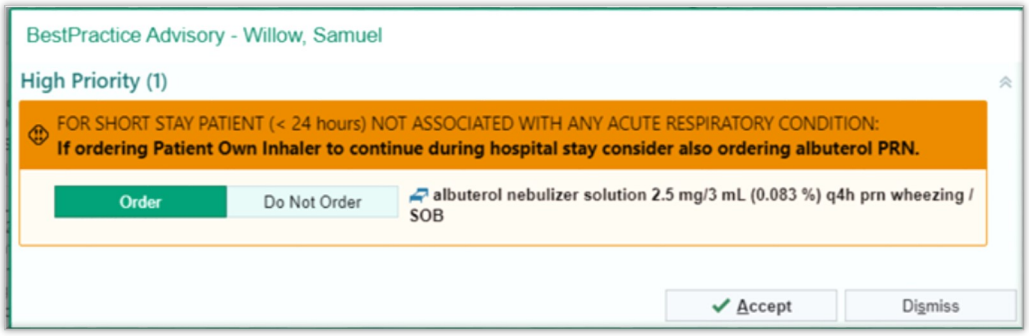
- Pushing across a patient's own inhaler from the med rec process will lead to the following menu:

- Using an example of Breo as the home med inhaler, you will be presented with two options:

1) Making a selection from the respiratory condition panel—appropriate for admitted medical or surgical patients on inhaler therapy prior to admission who are likely to be hospitalized for >24 hours.
2) Choosing to continue the patient's own inhaler—appropriate for a short stay patient—such as for a procedure or obs stay—but not admitted with any acute respiratory condition.

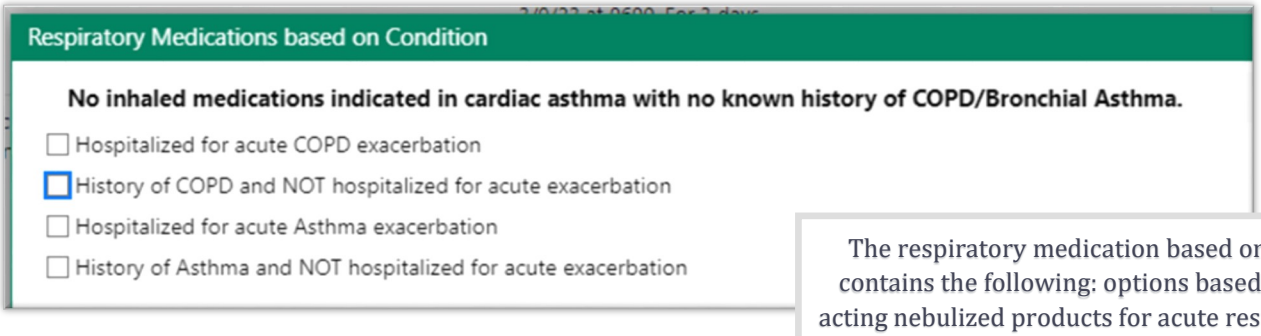


Please note: For short stay patients, when continuing their own inhaler, we have added the option of an albuterol PRN order. This would allow for having a rescue medication on the patient's profile in case of any acute events. This is the BPA that you will see.



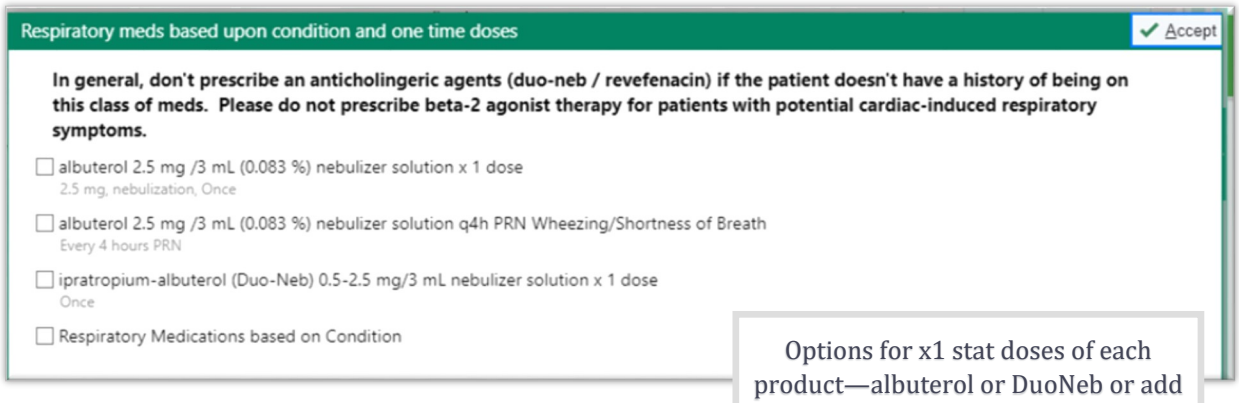
See next page for continuation

Important Info on Ordering Respiratory Medications (Cont.)



The respiratory medication based on condition panel contains the following: options based upon using short acting nebulized products for acute respiratory conditions or long acting nebulized products for those with a history of respiratory disease (but not with an acute exacerbation).

If you are just doing a general search for albuterol or Duo-neb in the "orders" tab to add for a current inpatient, the following panel will show in the search:



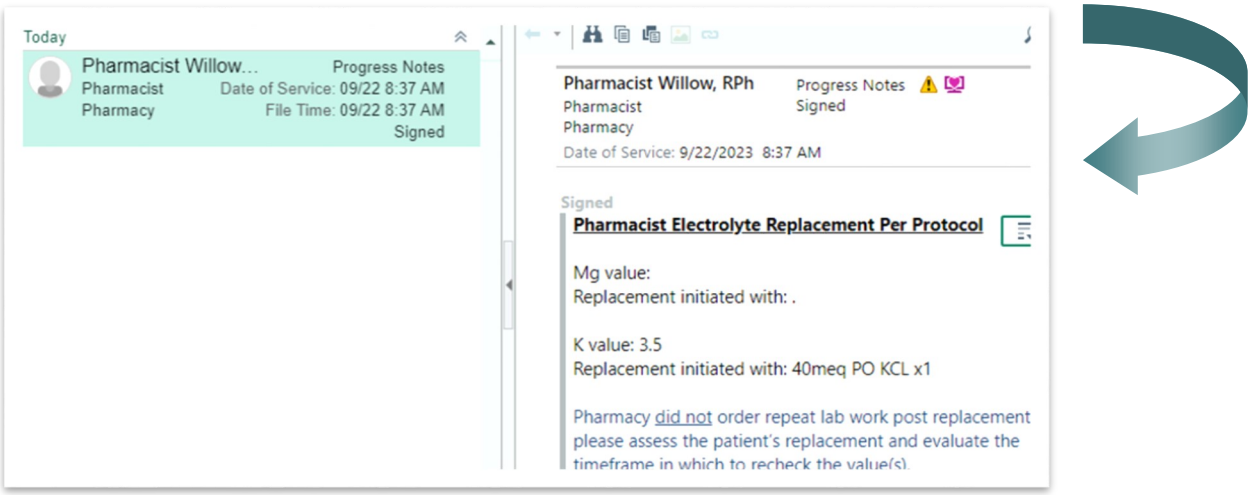
Options for x1 stat doses of each product—albuterol or DuoNeb or add on albuterol q4h prn.

- Please note that anticholinergics (DuoNeb / ipratropium) shouldn't be prescribed routinely if the patient doesn't have a history of receiving that category of agent.
- We see excessive DuoNeb prescribing and want to avoid unnecessary therapy and the potential associated adverse effects.
- We also see excessive beta-2 agonist therapy, specifically in cardiac patients, which can exacerbate and elevated heart rate.
- If the patient does not require on-going scheduled beta-2 agonist and/or anticholinergic therapy, the nebulized options can be selected from within the respiratory meds based on condition panel.
- One additional detail, for those on an albuterol inhaler from home (prn or scheduled), the med rec interchange options will be albuterol prn or albuterol scheduled + a prn order.
- Many patients have a prn albuterol MDI from home which can be turned into a prn albuterol neb order.

Congratulations to pharmacist Michael Bartels and his beautiful wife, Katie, on their recent nuptials!

Pharmacy Electrolyte Replacement Protocol

- Starting on October 17, the pharmacy can act as a backup for providers with the ability to order electrolyte replacement of low potassium and magnesium within certain criteria:
  - Patients with hypokalemia (K < 4.0 mmol/L) or hypomagnesemia (Mg < 2.0 mg/dL) on medical and surgical units
  - Exclusions for pharmacists to replace potassium or magnesium per protocol:
    - ⇒ Patients in the critical care setting (MICU, NICU, CVICU) except ICU at MSM
    - ⇒ PEDS or nursery ICU
    - ⇒ Patients with serum creatinine greater than 2.5 mg/dL
    - ⇒ Patients receiving hemodialysis or peritoneal dialysis
    - ⇒ Patients on continuous IV hydration solution that contains potassium or magnesium
  - Pharmacist decision making process:
    - ⇒ Target potassium levels are 4.0—5.0 mmol/L and target magnesium levels 2.0—3.0 mg/dL
    - ⇒ Enteral electrolyte replacement will be the preferred option for individuals without gastrointestinal problems and can tolerate other oral medications (for potassium)
    - ⇒ Individuals who meet exclusion criteria will have the pharmacist contact the provider to assist with electrolyte replacement therapy
    - ⇒ Documentation:
      - * A progress note will placed in the electronic medical record by the pharmacist describing the ordered electrolyte replacement
- Please note some important points:
  - We will just be acting as back-up to providers and will not be routinely replacing low electrolytes on medical / surgical patients.
  - We will be using the standard electrolyte replacement panel within EPIC as the guidance for our orders.
  - We will <u>not</u> be ordering follow-up labs
  - Pharmacy will place a chart note indicating the electrolyte value and what has been ordered. For example:



Medication For Opioid Use Disorder (Cont.)

- Although buprenorphine can be prescribed at discharge, it is imperative to work with case management so that the patient has outpatient follow up appointment with a provider that is able to continue their buprenorphine prescription.

- For methadone, you cannot send any amount of methadone to an outpatient pharmacy with the indication of OUD.
  - It is required that care is coordinated (while inpatient/well in advance of planned discharge) and that the patient is enrolled with an outpatient methadone clinic (these include local clinics like Pathways, Alba de Vida, Northpointe) so that there is no delay in continuation of the medication.

- NYS OASAS recently released an update to guidance that does not require patients to present to the methadone clinic for enrollment and stated that this care can be set up over the phone so that is an improvement in a previously very difficult process.

Formulary Addition of Plain Senokot® Tablets

- Constipation in the hospital setting is a common occurrence due to a variety of factors including:
  - Lack of mobility
  - Anesthesia
  - Opioids
  - Anticholinergic medications
  - Comorbidities
- Frequently patients receive prophylaxis or treatment with a stool softener or laxative agent,
- Docusate sodium, which has been in use for over 70 years, is a commonly prescribed medication for these scenarios.
- Despite that, its evidence has not been born out in the clinical literature.
- At CHS, it is by far the most commonly prescribed "laxative" agent with almost 7,000 orders year to date.

- Back in 1976, docusate was trialed for constipation prophylaxis in a geriatric population, with no difference observed in the frequency or quality of bowel movements[1]. Subsequently, in the 80's, 90's, and 2000's, small clinical trials have also not revealed clinical efficacy for this agent.
- The potential harm of using this medication involves the wait time for the decision of treatment failure before another product is prescribed.
- A somewhat more recent study in patients receiving opioids found evidence to support the use of polyethylene glycol, lactulose, and sennosides[2].
- Currently, we have a variety of laxative products available on our formulary:
  - Polyethylene glycol
  - Lactulose
  - Senna liquid
  - Bisacodyl
  - Magnesium citrate
- **Senokot® tablets** will be added to the formulary as an alternative non-liquid option (small tablet) for patients when prophylaxis or treatment of constipation is desired.
- Please consider prescribing a laxative with proven efficacy versus docusate.

[1]Goodman J et al. Dioctyl sodium- an ineffective prophylactic laxative. *J Chronic Dis*. 1976;29(1):59-63.
[2]Ahmedzai SH, Boland J. Constipation in people prescribed opioids. *BMJ Clin Evid*. 2010;2010

CHS Pharmacy Residency Updates

- Upcoming Events:
  - WNYSHP lunch time webinars (12—1 PM)
    - ⇒ **10/18/2023**—VTE Prophylaxis in Obesity and TBD Topic (Nathan Webster and Katherine Purdy)
    - ⇒ **01/11/2024**—Topic TBD (Kimberly Gabel)
  - Grand Rounds
    - ⇒ **10/12/2023**—Push Dose IV Pressors (Jenny Wahl)
    - ⇒ **11/09/2023**—PPI Use in Pediatrics (Rachel Duewiger)
    - ⇒ **01/04/2024**—Topic TBD (Casey Zakrzewski)
  - Journal Club
    - ⇒ **10/20/2023**—Topic TBD (Nathan Webster)
    - ⇒ **11/17/2023**—Topic TBD (Madison Lippa)
    - ⇒ **01/12/2024**—Topic TBD (Casey Zakrzewski)
  - National Pharmacy Week (**October 16 –22)**
    - ⇒ Make sure to show your favorite pharmacist(s) some love this week