Focus on STOPP – Screening Tool of Older Persons’ Potentially Inappropriate Prescriptions

Marti Wdowicki, PharmD

To help prevent adverse drug reactions, STOPP is a screening tool that includes 65 clinically significant criteria that can help flag inappropriate prescribing in older adults. Each criterion is accompanied by a concise explanation as to why the prescribing practice is potentially inappropriate.

In this issue, we’re highlighting the following STOPP criteria:

**CARDIOVASCULAR SYSTEM**

1. Digoxin for heart failure with normal systolic ventricular function (no clear evidence of benefit)
2. Verapamil or Diltiazem with NYHA Class III or IV heart failure (may worsen heart failure)
3. Beta-blocker in combination with verapamil or diltiazem (risk of heart block)
4. Beta-blocker with bradycardia (<50/min), type II heart block or complete heart block (risk of complete heart block, asystole)
5. Amiodarone as first-line antiarrhythmic therapy in supraventricular tachyarrhythmias (higher risk of side effects than beta blockers, digoxin, verapamil or diltiazem)
6. Loop diuretic as first-line treatment for hypertension (safer, more effective alternatives available)
7. Loop diuretic for dependent ankle edema without clinical, biochemical evidence or radiological evidence of heart failure, liver failure, nephrotic

continued on page 2
syndrome or renal failure (leg elevation and/or compression hosiery usually more appropriate)

8. Thiazide diuretic with current hypokalemia (serum K < 3.0 mmol/l), hyponatremia (serum NA < 130 mmol/l), hypercalcemia (corrected serum calcium > 2.65 mmol/l), or with a history of gout (hypokalemia, hyponatremia, hypercalcemia and gout can be precipitated by thiazide diuretics)

9. Loop diuretic for treatment of hypertension with concurrent urinary incontinence (may exacerbate incontinence)

10. Centrally acting antihypertensives (e.g., methyldopa, clonidine, quanfacine) unless clear intolerance of, or lack of efficacy with, other classes of antihypertensives (centrally acting antihypertensives are generally less well tolerated by older people than younger people)

11. ACE Inhibitors or Angiotensin Receptor Blockers in patients with hyperkalemia

12. Aldosterone antagonists (e.g. spironolactone) with concurrent potassium sparing drugs (e.g., ACEIs, ARBs, amiloride, triamterene) without monitoring of serum potassium (risk of dangerous hyperkalemia i.e. > 6.0 mmol/l – serum K should be monitored regularly – at least every six months)

13. Phospodiesterace type 5 inhibitors (e.g., sildenafil, tadalafil) in severe heart failure characterized by hypotension (i.e., systolic < 90 mmHg) or concurrent nitrate therapy for angina (risk of cardiovascular collapse)

The final decision to stop any drug should be evaluated against the symptomatic benefit or prevention of worsening of symptoms.

Your PharMerica Consultant Pharmacist can provide drug evaluations and recommendations for your residents during regular on-site visits. Between consulting visits, PharMerica’s interim medication regimen review (iMRR) can help evaluate a new resident or a resident’s change in condition to prevent the addition of unnecessary medications to their regimen.

For more information on STOPP, contact your PharMerica Consultant Pharmacist.
Insulin pens are a convenient alternative to vials and, for short-stay residents and those on lower doses, they can also be a less costly option. But with many new pens entering the market recently, it is important to ensure that nursing staff is aware of proper storage and handling techniques for the pens being used in your facility. Here are three issues to be aware of, no matter which pens you utilize.

1. **Priming:** Many pens require priming – which removes any air that may have collected in the pen – to ensure that the proper dose is given and the resident does not receive too much or too little insulin. To prime a pen:
   - Turn the dose knob to select two units
   - Hold the pen with the tip pointing up
   - Tap the cartridge holder gently to collect air at the top
   - While the pen is pointed up, press the dose knob until you see “0” in the window
   - Continue holding the dose knob while you slowly count to five
   - You should see insulin at the tip of the pen
   - If you do not see insulin, repeat these steps
   - If you still do not see insulin, replace the needle and repeat these steps

2. **Injection:** The pen should be injected subcutaneously in the stomach area, buttocks, upper legs, or upper arms. Wipe the area of administration with an alcohol pad and allow it to dry before injection. Once inserted into the skin, push the knob all the way in and hold while slowly counting to five before removing the needle. If you see “0” in the window, the patient has received a dose of insulin. If you don’t see a “0,” insert the needle into the skin and finish the injection. Remove the pen and hold the needle with the sleeve, twisting counterclockwise to remove it. Discard the needle into an appropriate container.

3. **Expiration Dates:** With all of the new insulin pens on the market, it is important to be aware of the different expiration dates. See the chart below for a quick reminder of when each pen expires after opening.

For more information on Insulin Pen Storage and Administration, contact your PharMerica Consultant Pharmacist.
The RxNow Machine and Temperature Control

By Jeff Herr, PharmD

Extreme temperatures, especially for long periods of time, can have potentially serious impacts on medications, causing them to degrade, lose their effectiveness and even threaten a patient’s health. To ensure the safety and efficacy of medications, it is important to follow storage requirements recommended by the manufacturer.

For non-refrigerated oral medications, “store at room temperature” is the norm, which is anywhere between 68 and 77 degrees Fahrenheit. And room temperature medications should not be stored in high humidity places but instead in cool, dry spots. Medications requiring refrigeration, on the other hand, should be kept between 36 and 46 degrees Fahrenheit. Climate control coolers are available if a medication is going to be outside the refrigerator for a long period of time.

To aid in the proper storage of medications, PharMerica’s RxNow cabinets—which give staff instant access to prescription drugs for better quality care—offer several opportunities to monitor and maintain temperature control.

Although RxNow does not have an internal temperature control mechanism, facilities can take the following steps to preserve the cabinets’ contents:

• Pick an optimal location. The newly designed RxNow cabinets are smaller in size for greater installation flexibility so they can be placed in a controlled environment.
• Monitor the room temperature of the cabinet’s location for specified ranges. Thermometers are available that can be attached to the wall or on the side of the RxNow cabinet.
• Maintain temperature logs, which are required for documentation purposes. Be sure to review the policies and procedures as they vary state to state.
• Train staff on what to do if a cabinet falls out of the proper temperature range.

Elevate the resident experience and your community with RxNow, covering over 80% of all emergent medication needs immediately. With RxNow, you’ll improve quality of care—critical among selective partners and to your reputation, referrals and profits.

For more information on how to protect medications from damage due to extreme temperatures, please contact your Consultant Pharmacist, pharmacy or account manager.
Medication Spotlight: TRULICITY (dulaglutide)
By Derrick Yeagle, PharmD Candidate 2019

In 2014, TRULICITY (dulaglutide), a glucagon-like peptide-1 (GLP-1) receptor agonist, was approved for the treatment of type 2 diabetes. TRULICITY and the entire GLP-1 class are recommended as second-line therapy (behind metformin and lifestyle changes including diet and exercise) for the treatment of type 2 diabetes according to the American Diabetes Association’s 2018 guidelines.

Type 2 diabetes has two primary components: insulin resistance and insufficient insulin production. Insulin resistance leads to increased insulin requirements because it takes higher than normal amounts of insulin to lower blood glucose. With insufficient insulin production, the body doesn’t produce the proper amount of insulin needed to lower blood glucose levels. This insulin pathophysiology can be tracked using a patient’s A1C level, which is a measure of their overall blood glucose control for the previous three months.

TRULICITY affects glucose control through several mechanisms, including increasing insulin synthesis and secretion, slowing gastric emptying (maintaining satiety longer), and reducing postprandial glucagon. TRULICITY has a much larger A1C lowering potential compared to oral agents. In clinical trials ranging from eight to 30 weeks, an average A1C reduction of 1% was observed.

Along with lowering A1C, weight loss is common with all GLP-1 agonists. However, some evidence shows that TRULICITY 0.75mg may cause a lower level of weight loss than other agents. Although this evidence was not tested in head-to-head trials, TRULICITY may be beneficial in elderly patients who are underweight or do not need to lose weight.

TRULICITY is packaged in a pre-filled pen injector available in 0.75mg/0.5mL and 1.5mg/0.5mL. TRULICITY is injected subcutaneously (under the skin) in the abdomen, thigh, or upper arm, with an initial dose of 0.75mg once weekly. A patient may increase the dose to 1.5mg once weekly if they have an inadequate glycemic response. The maximum recommended dose is 1.5mg/week. If a dose is missed, administer it as soon as possible within three days after the missed dose; dosing can then resume on the usual administration day. If there are less than three days until the next dose, then omit the missed dose and resume at the next regularly scheduled weekly dose.

Consult your Consultant Pharmacist or visit www.trulicity.com