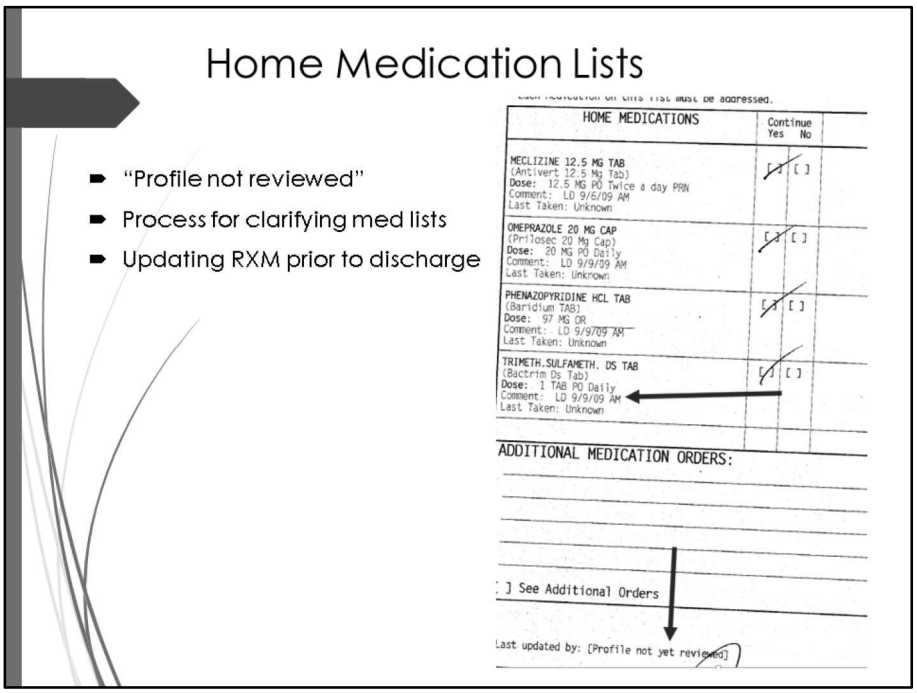

Pharmacist Meeting
March 2017



Please follow the below process if/when you encounter a home medication sheet that either has NOT been updated ("profile not reviewed") or contains information that appears blatantly wrong (example: Lantus ___ units, 4 times daily). It is important to get these med lists clarified so that inaccurate information is not continued throughout admission and then subsequently is still incorrect when patients are later readmitted.

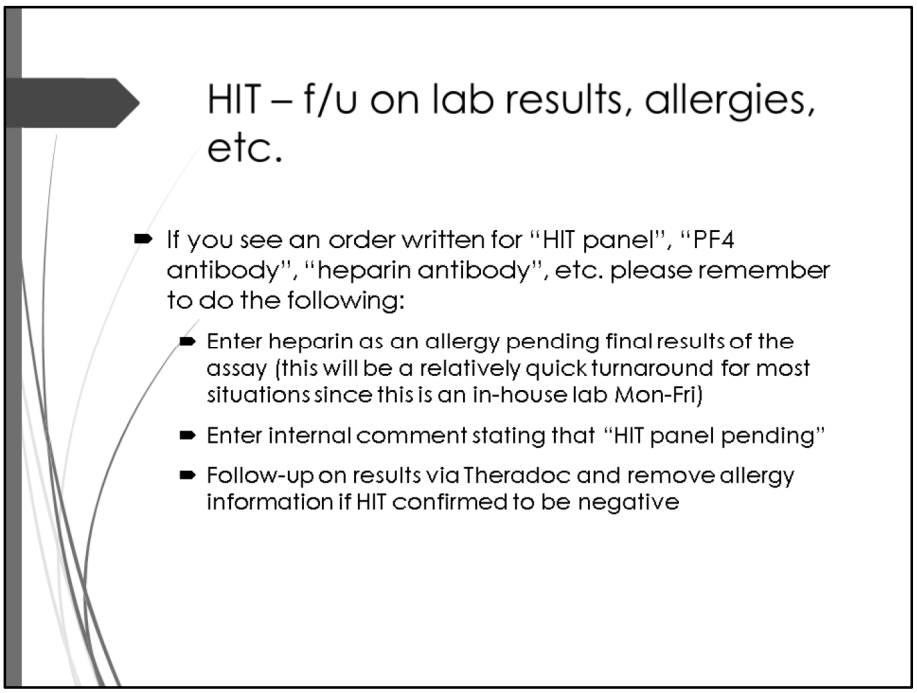
Call pharmacy tech @6684 and give them the information that needs to be clarified. If after hours, please enter a detailed CI explaining what specifically needs to be clarified and who did the original list (RN, surgery, or simply not updated).

Enter an "EDTECH F/U ED TECH – Med History F/U" intervention and leave this open to ensure that the issue is reviewed.

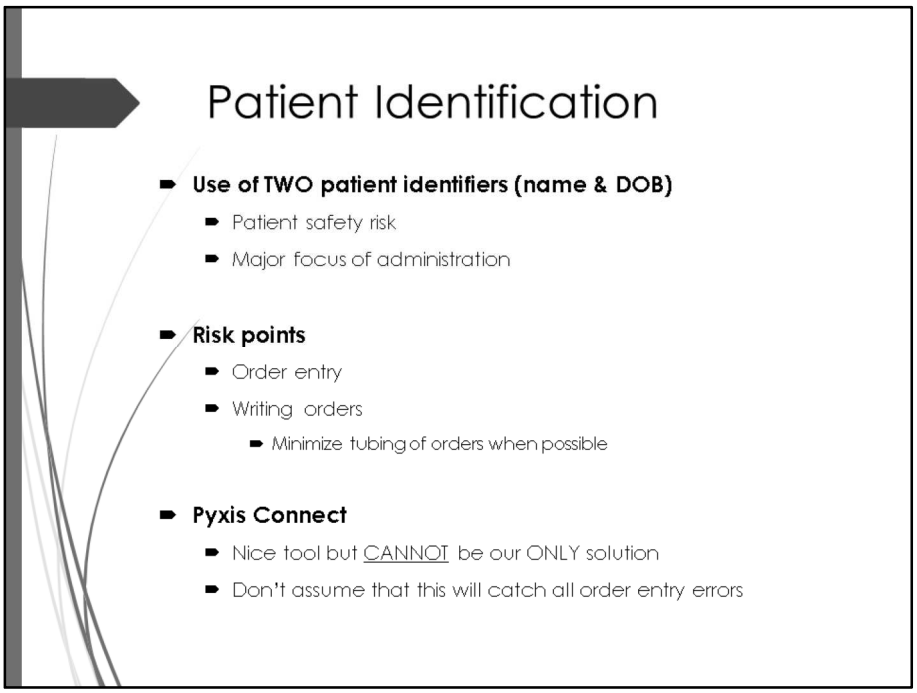
FYI – please note that we have 2 different ED tech F/U interventions and it needs to be entered as the "Med History F/U" and not the "Direct admit F/U"

We have recently had several edtech follow-up CIs entered by pharmacists without the tech's knowledge. The techs run an active CI report (similar to the kinetics report) each morning and use this as their working list. Entering a CI without directly notifying the technician would be like entering a kinetics CI without notifying the pharmacist. These will likely not be seen until the following morning.

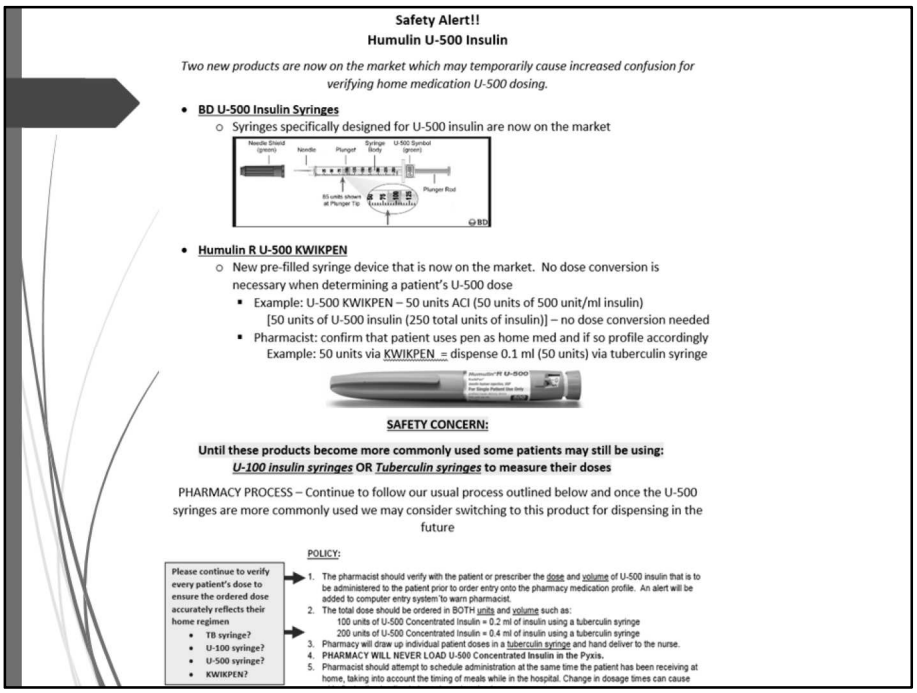
Please also continue to enter IRIS reports for inaccurate or lists that have not been updated (or leave them for me and I'll enter IRIS reports). We need to continue to document these so we can continue to shine a light on the danger of these not being obtained correctly and accurately.



In addition to the above 3rd shift reviews a daily report to identify ANY patients (including discharged patients) that have resulted antibody assays. For inpatients: they will update the allergy information and relay this information to the appropriate unit based Rph. For discharged patients they will modify any allergy information as appropriate…BIG thank you to 3rd shift for helping us out with this!



Please continue to be VERY diligent to ALWAYS use 2 patient identifiers prior to filing orders and writing any orders in the chart. This is critical to ensuring patient safety.



Safety Alert!!

Humulin U-500 Insulin

Two new products are now on the market which may temporarily cause increased confusion for verifying home medication U-500 dosing.

- **BD U-500 Insulin Syringes**
  - Syringes specifically designed for U-500 insulin are now on the market

- **Humulin R U-500 KWIKPEN**
  - New pre-filled syringe device that is now on the market. No dose conversion is necessary when determining a patient's U-500 dose
    - Example: U-500 KWIKPEN – 50 units ACI (50 units of 500 unit/ml insulin) [50 units of U-500 insulin (250 total units of insulin)] – no dose conversion needed
    - Pharmacist: confirm that patient uses pen as home med and if so profile accordingly
      Example: 50 units via KWIKPEN = dispense 0.1 ml (50 units) via tuberculin syringe

SAFETY CONCERN:

Until these products become more commonly used some patients may still be using:
***U-100 insulin syringes* OR *Tuberculin syringes* to measure their doses**

PHARMACY PROCESS – Continue to follow our usual process outlined below and once the U-500 syringes are more commonly used we may consider switching to this product for dispensing in the future

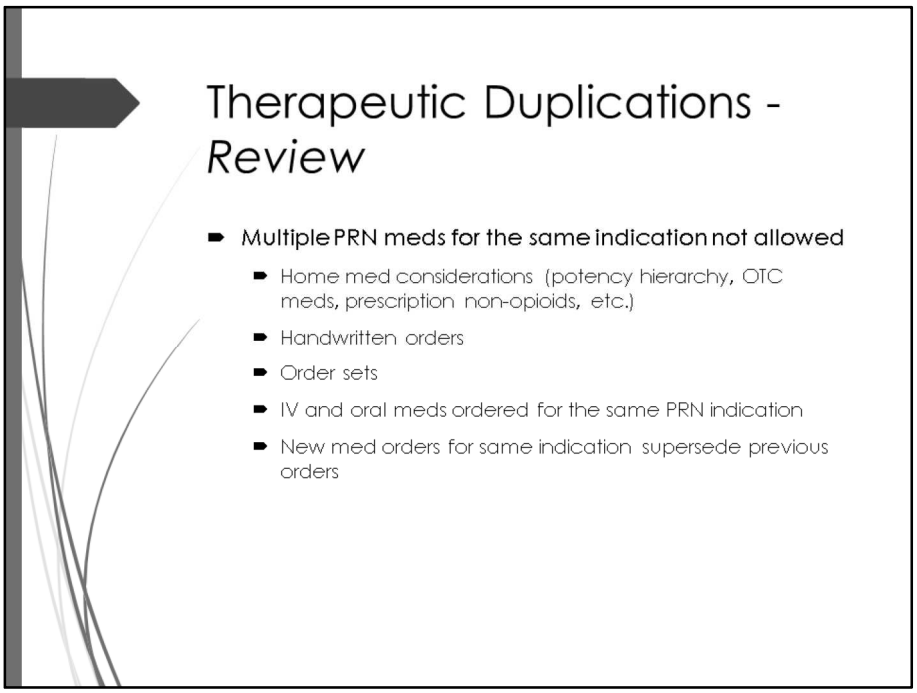
Please continue to verify every patient's dose to ensure the ordered dose accurately reflects their home regimen
- **TB syringe?**
- **U-100 syringe?**
- **U-500 syringe?**
- **KWIKPEN?**

POLICY:

1. The pharmacist should verify with the patient or prescriber the dose and volume of U-500 insulin that is to be administered to the patient prior to order entry onto the pharmacy medication profile. An alert will be added to computer entry system to warn pharmacist.
2. The total dose should be ordered in BOTH units and volume such as:
   100 units of U-500 Concentrated Insulin = 0.2 ml of insulin using a tuberculin syringe
   200 units of U-500 Concentrated Insulin = 0.4 ml of insulin using a tuberculin syringe
3. Pharmacy will draw up individual patient doses in a tuberculin syringe and hand deliver to the nurse.
4. **PHARMACY WILL NEVER LOAD U-500 Concentrated Insulin in the Pyxis.**
5. Pharmacist should attempt to schedule administration at the same time the patient has been receiving at home, taking into account the timing of meals while in the hospital. Change in dosage times can cause

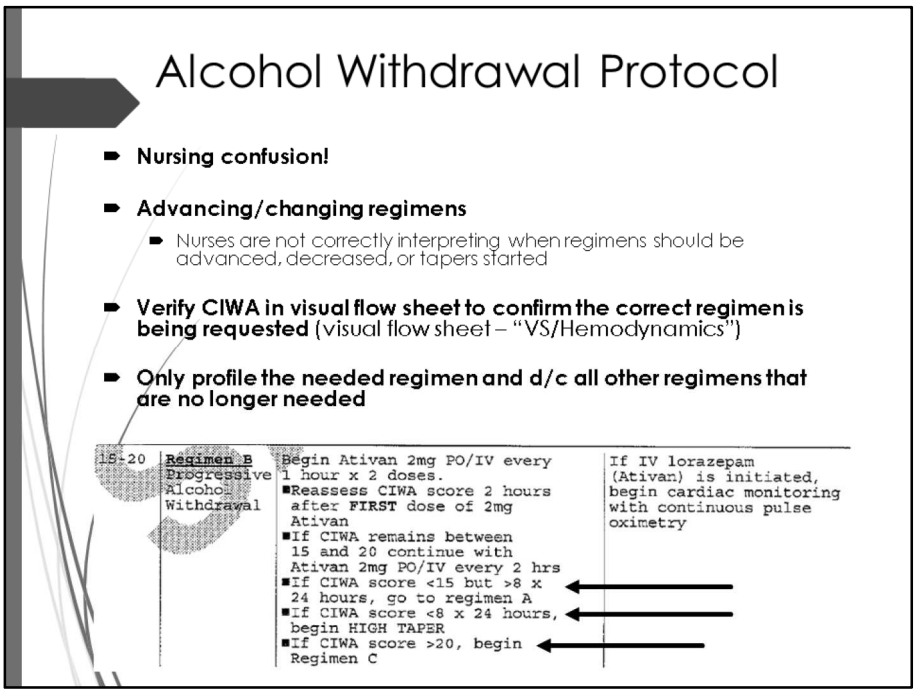
Reminder about U-500 insulin. Don't take any orders for U-500 at face value ("50 units of U-500 insulin"). We must continue to verify how the patient draws up their insulin (U-100 syringe, U-500 syringe, Qwik pen). Most of the patients that we are admitting seem to primarily be using U-100 syringes but we should expect an eventual increase in U-500 syringe use.

Everyone is doing a GREAT job of clarifying orders as expressed in ml and dispensing in TB syringes. Thank you!



Home meds:

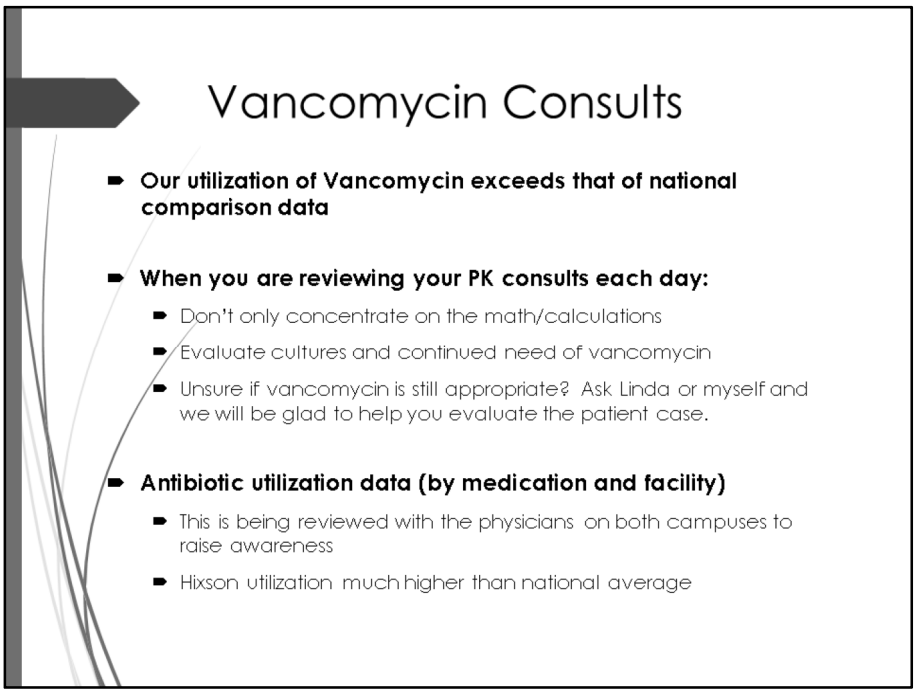
- No preference specified for prescription opioids:
    - Use potency hierarchy to determine which meds to be active on MAR and most potent agent will be used
    - This is on formweb
    - Post-op orders trump home med orders
- OTC pain meds (NSAIDs, etc.)
    - PRN mild pain indication
- Prescription PRN pain home meds (Mobic, Celebrex, etc.)
    - PRN moderate pain indication
- Handwritten orders
    - If only one medication is written then "PRN PAIN" is acceptable
    - If other pain meds are active on the MAR then a type of pain (mild, moderate, severe) must be indicated and clarified
- Order sets
    - 1st agent written in the list of orders will be considered to be the provider's choice
- IV and oral meds for the same indication
    - We must designate the IV option as "for ___ pain uncontrolled by or unable to take oral meds"



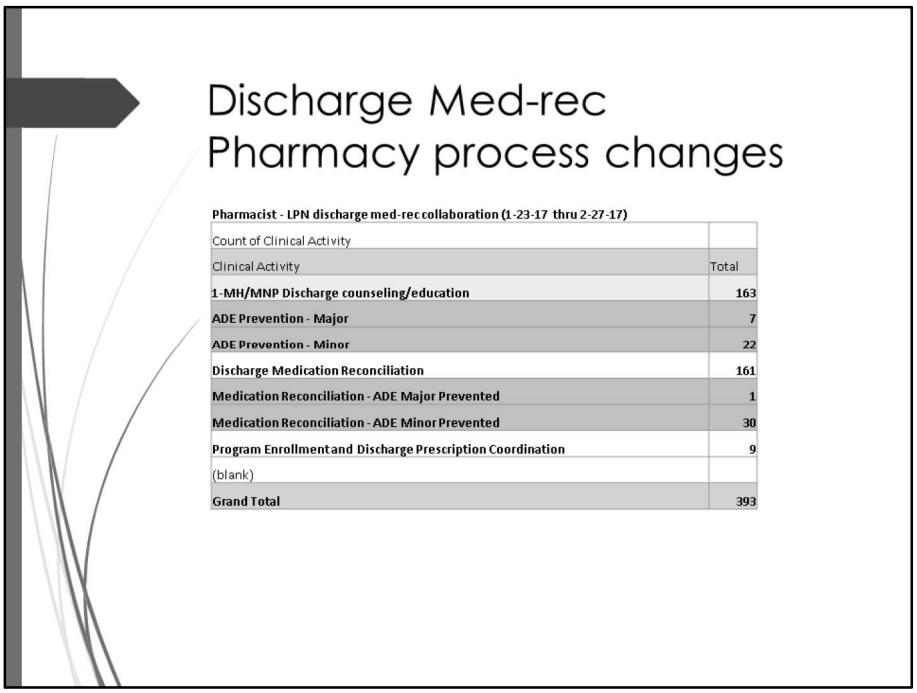
This order set is currently being audited by clinical informatics. These is obviously much confusion from nursing on how to execute these orders and the actual order set will likely be reassessed for needed changes in the coming weeks.

For now please do not advance/decrease regimens or begin tapers requested via phone calls unless you verify that the CIWA scoring warrants an adjustment.

It was discovered that some requests to do so were not actually needed b/c nurses did not interpret the orders correctly. The CIWA scoring can be found in the visual flowsheet as indicated on the above slide.



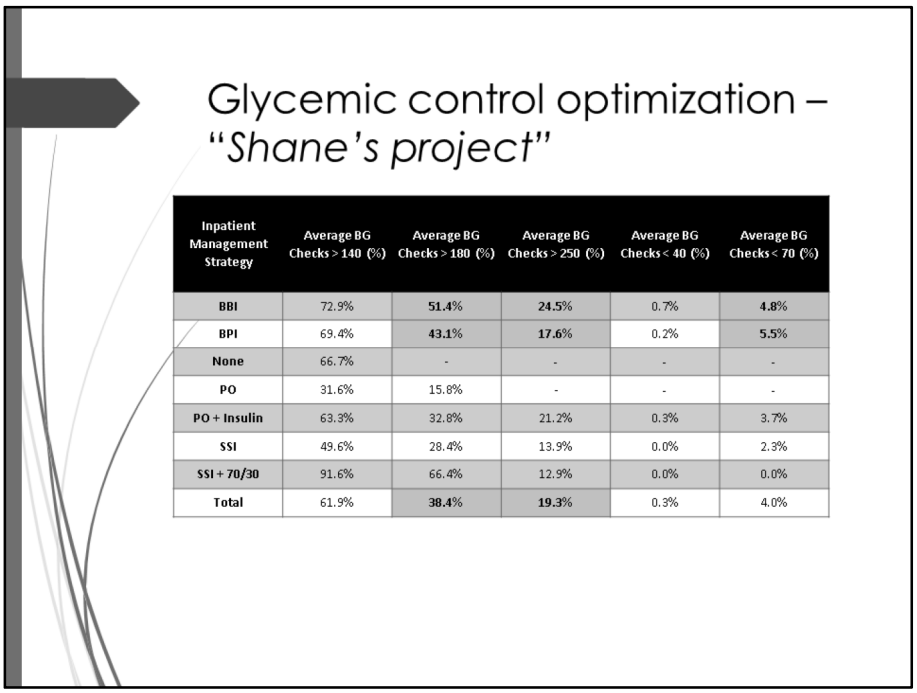
Stewardship committee asked that we in pharmacy be as proactive as possible in critically evaluating necessity of continued vancomycin use and suggest discontinuation when/where appropriate. Since we dose virtually all vancomycin in the hospital we have many opportunities to evaluate appropriateness if cultures negative or other data indicates continued empiric use not necessary.



Modification to our process (collaborating with LPNs) has resulted in a significant increase in our patient encounters (discharge med-rec review & discharge counseling). This work is still confined to the NT only and even without using the LACE tool to target patients we are still intervening on ~30% of patients and making adjustments and/or correcting errors and omissions prior to patients being discharged home.

This work is not focused on high LACE score patients but rather on ANY patient that the LPN is involved in preparing discharge paperwork. This allows us to focus our efforts on reviewing the clinical data, ensuring d/c med orders are accurate, and discussing d/c med plan with patient. This prevents us from spending as much time on non-clinical, clerical activities (updating RXM, copying/printing forms, etc.).

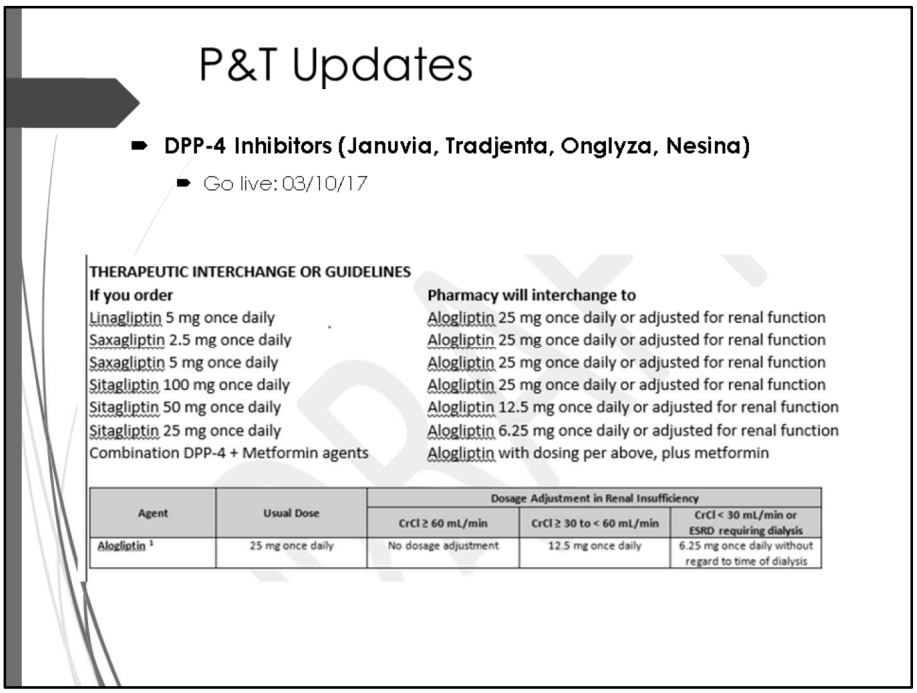
We are evaluating next steps and potentially consider focusing these efforts on patients with specific diagnoses (COPD, etc.).



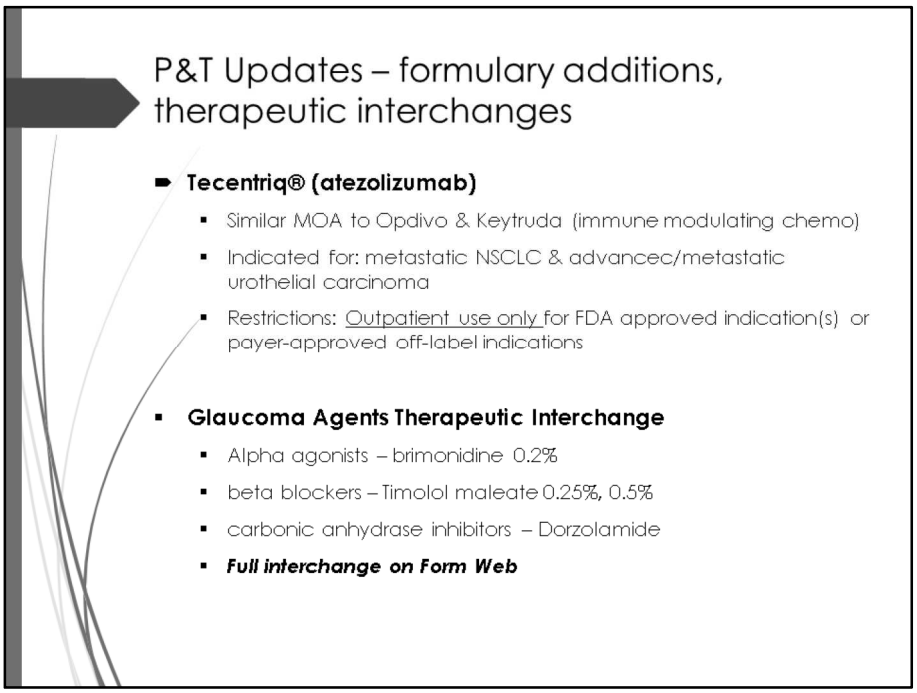
Reviewed 3 months of ALL patients with any ICD-10 diagnosis for DM.

Findings: The biggest opportunity for improving glycemic control are patients that are already on basal insulins. As you can see in the above slide patients on BBI (basal+nutritional+correctional) and BPI (basal+correctional) have the worst glycemic control. Most of these patients were already on some sort of basal insulin at home. We have found that most home regimens are simply restarted and not titrated up or down based on inpatient glucose values.

Next steps: After discussing with physicians, we are going to pilot a process on 6-north in which we are going to use Theradoc to identify patients who can benefit from glycemic optimization and work with physicians directly to improve control. The physicians indicated that glycemic control is not usually among their top priorities and they felt that closer oversight could help improve patient care.



New interchange – now LIVE.



Tecentriq

- Monoclonal antibody that inhibits PDL-1 (program death ligand) and prevents it from binding to various receptors which in turn allows immune system to decrease tumor growth

Glaucoma agents – only the above drugs are now listed in our drug dictionary – see form web for full conversion details if a non-formulary med is ordered.

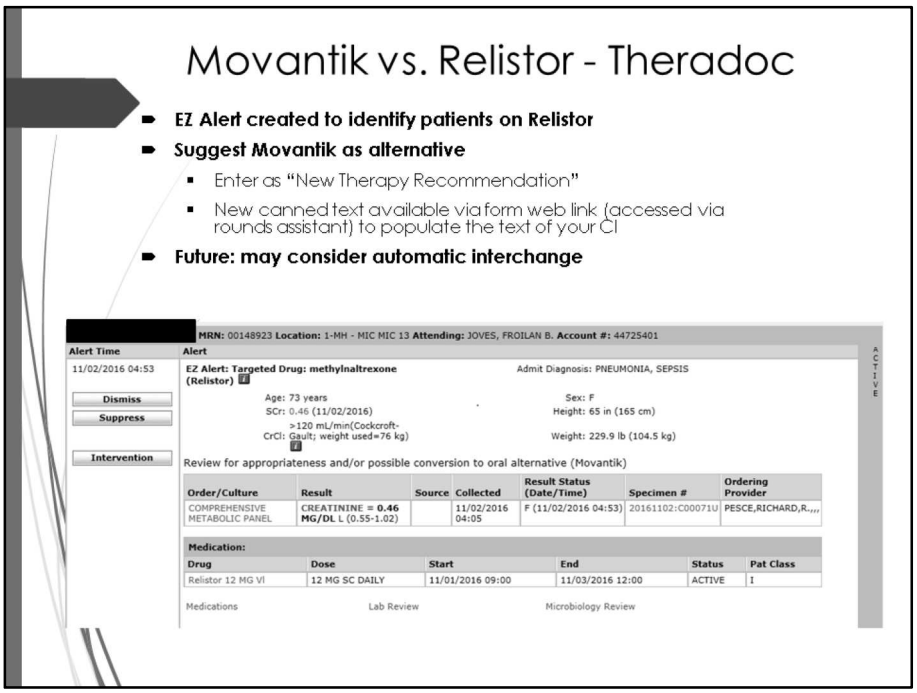
P&T Updates – formulary additions, therapeutic interchanges

- **Cetylev® (N-acetylcysteine)**
  - Effervescent formulation of NAC
  - No clinical benefit compared to oral/liquid formulation
  - Automatic Interchange to liquid/nebulizer solution

Antidotes	
ORDERED	**SUBSTITUTION**
Acetylcysteine (CETYLEV®) 140 mg/kg x 1 dose (loading dose) 70 mg/kg every 4 hours x 17 doses	Acetylcysteine oral liquid (nebulizer solution) 140 mg/kg x 1 dose (loading dose) 70 mg/kg every 4 hours x 17 doses

- **Relistor® (methylnaltrexone) oral formulation**
  - Oral formulation of methylnaltrexone
  - NON-FORMULARY with auto-substitution to Movantik

When you order this	You will receive
Methylnaltrexone (Relistor®) 450 mg once daily	Naloxegol (Movantik®) 25 mg once daily
Methylnaltrexone (Relistor®) 150 mg once daily	Naloxegol (Movantik®) 12.5 mg once daily



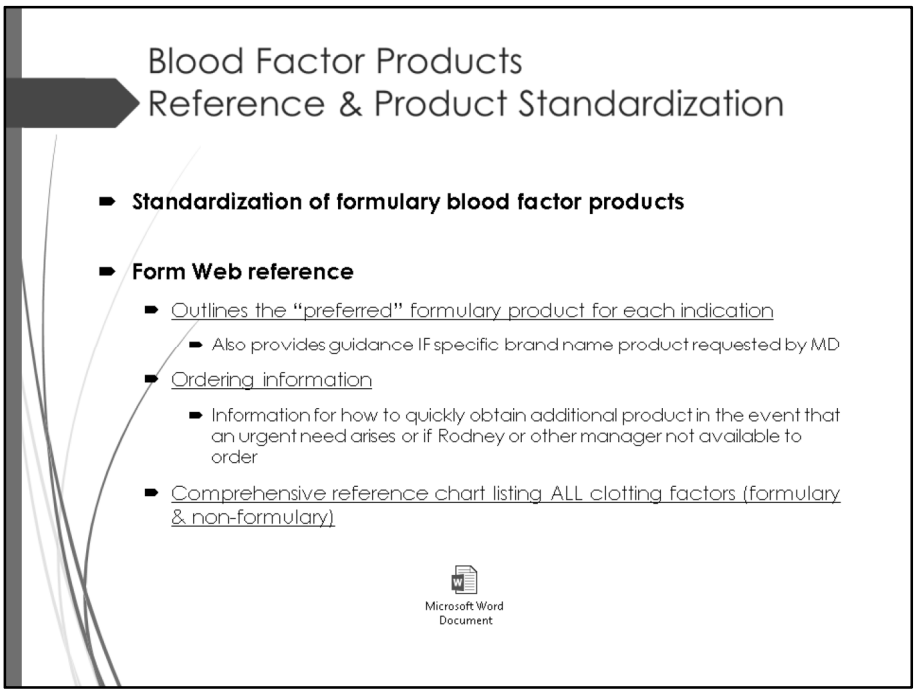
The above EZ alert has been created to identify patient on injectable Relistor

Based on the previous slides Movantik can be a more cost effective option for patients able to take PO meds.

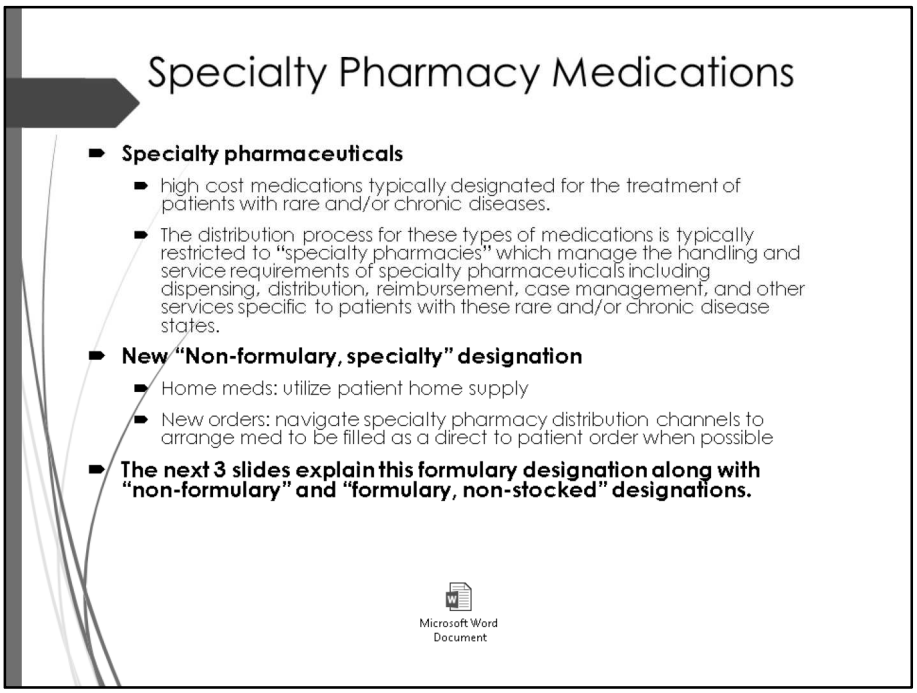
If you are on the floor and you see this ordered please suggest Movantik as an alternative to Relistor. For ongoing orders the EZ alert will help us identify patients on Relistor and suggest Movantik as potential alternative.

We have added canned text to rounds assistant in Theradoc so you can easily generate a note that contains some brief verbiage about this potential conversion (rationale, dosing, etc.).

We will likely pursue an auto-conversion in the future for patients able to take PO but for now I would like for us to begin to move the needle in use toward Movantik when possible so MD's can gain familiarity with it so we will be better positioned in the future to implement an auto-sub process.



See attached document (click on Microsoft work icon to open document) for new process for ordering and choosing formulary preferred blood factor products.

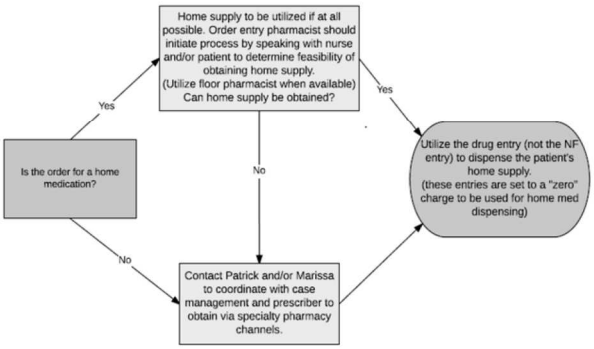


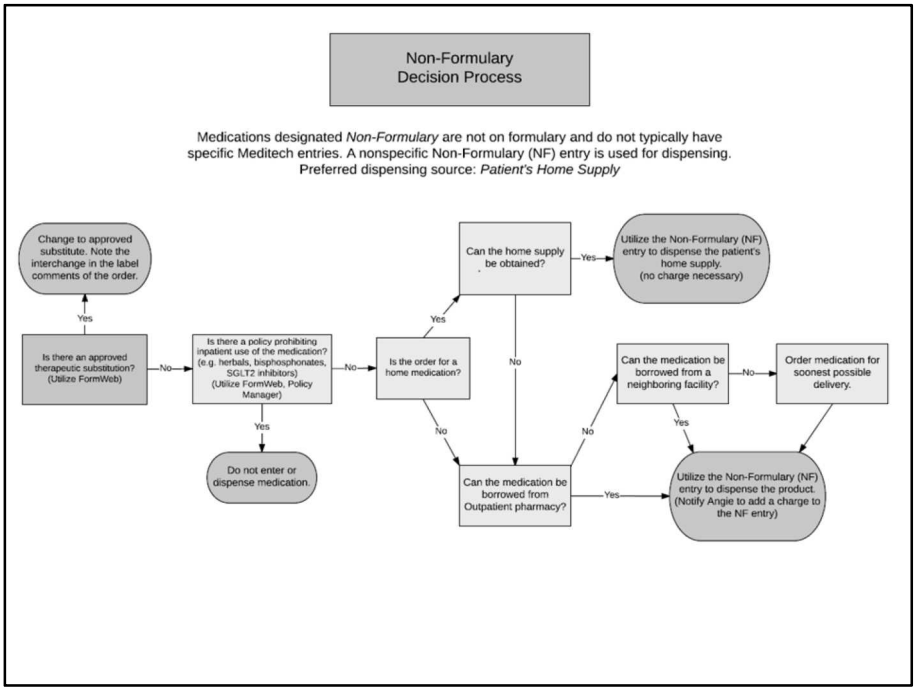
See slide above and attached document – the next three slides explain new formulary designations and processes for handling these different scenarios.

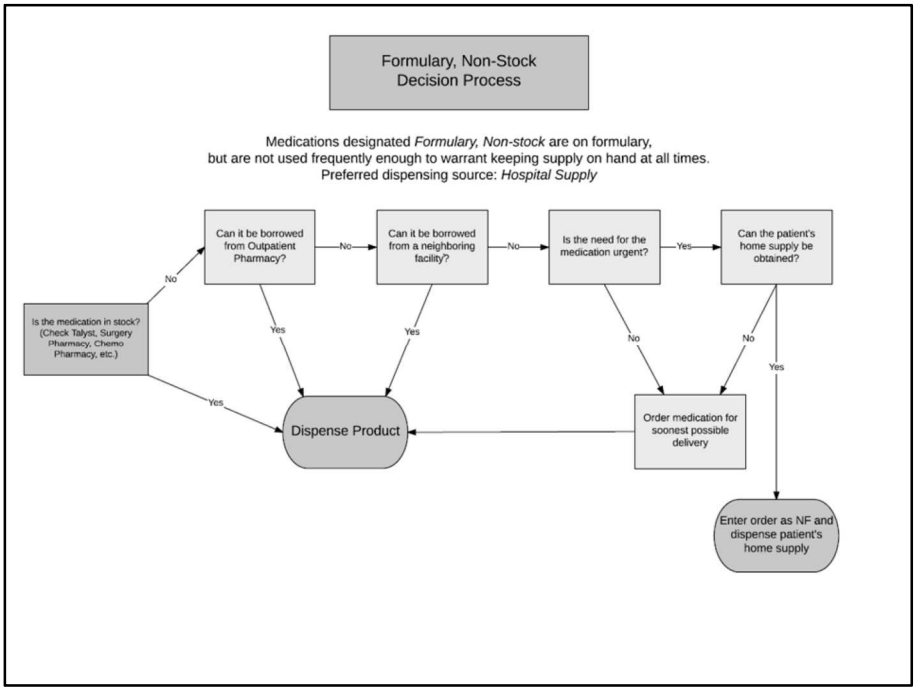
These diagrams and new formulary designations were designed following a comprehensive review of our drug dictionary. We have inactivated MANY drug entries and reclassified many others. It is important that everyone understands these processes – please ask me or Jeff for clarification if you don't understand.

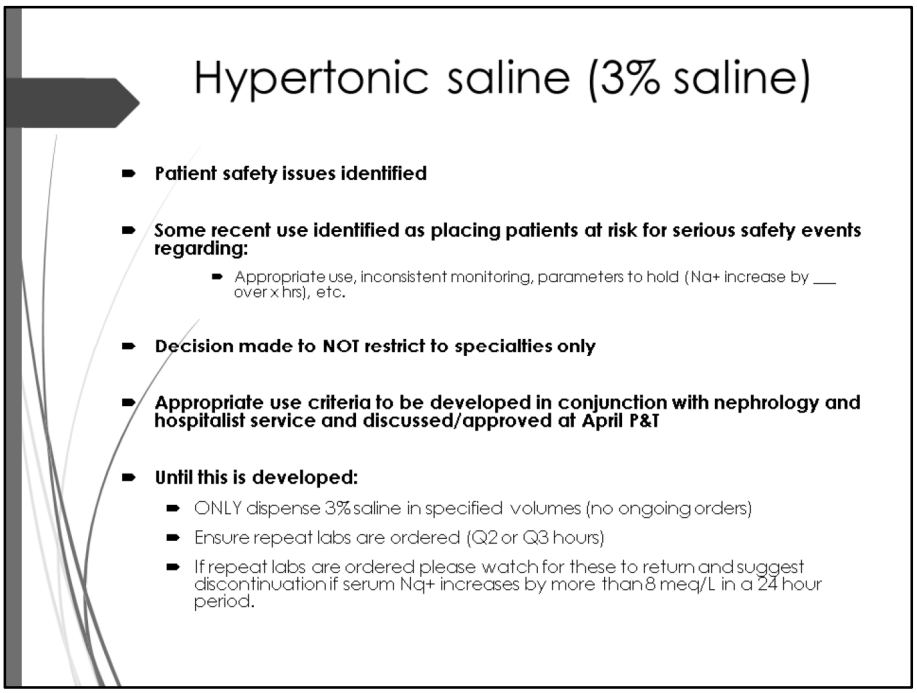
Non-Formulary, Specialty Decision Process

Medications designated *Non-Formulary, Specialty* are not on formulary,
but Meditech entries are maintained for drug interaction checking and other safety checks.
Preferred dispensing source: *Patient's Home Supply*



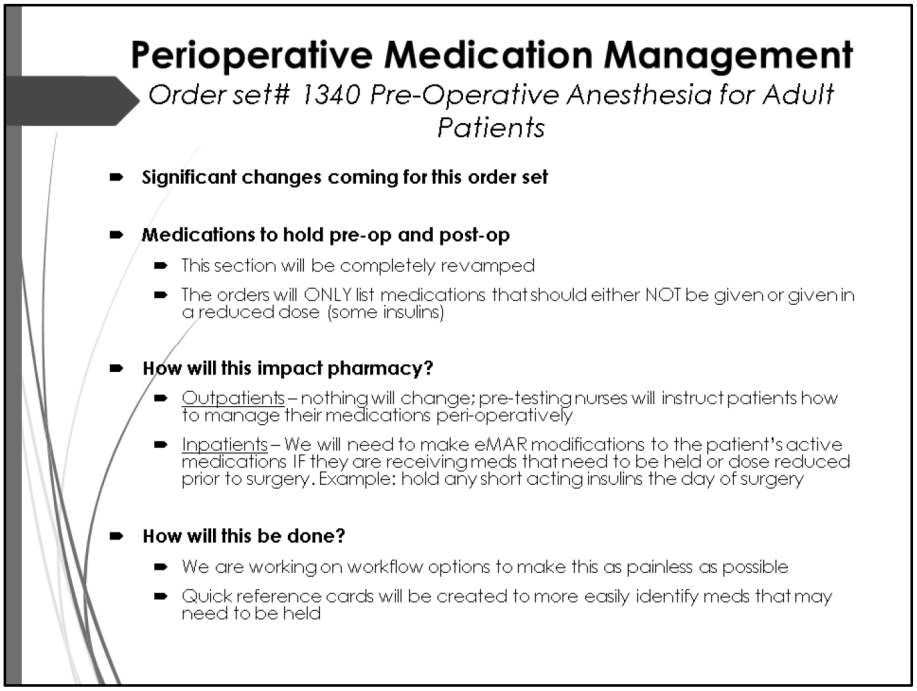

Non-Formulary
Decision Process
Medications designated *Non-Formulary* are not on formulary and do not typically have specific Meditech entries. A nonspecific Non-Formulary (NF) entry is used for dispensing.
Preferred dispensing source: *Patient's Home Supply*
Change to approved substitute. Note the interchange in the label comments of the order.
Yes
Is there an approved therapeutic substitution? (Utilize FormWeb)
No
Is there a policy prohibiting inpatient use of the medication? (e.g. herbals, bisphosphonates, SGLT2 inhibitors) (Utilize FormWeb, Policy Manager)
Yes
Do not enter or dispense medication.
No
Is the order for a home medication?
Yes
Can the home supply be obtained?
Yes
Utilize the Non-Formulary (NF) entry to dispense the patient's home supply. (no charge necessary)
No
No
Can the medication be borrowed from Outpatient pharmacy?
Yes
Utilize the Non-Formulary (NF) entry to dispense the product. (Notify Angie to add a charge to the NF entry)
No
Can the medication be borrowed from a neighboring facility?
Yes
No
Order medication for soonest possible delivery.


Formulary, Non-Stock
Decision Process
Medications designated *Formulary, Non-stock* are on formulary,
but are not used frequently enough to warrant keeping supply on hand at all times.
Preferred dispensing source: *Hospital Supply*
Is the medication in stock? (Check Talyst, Surgery Pharmacy, Chemo Pharmacy, etc.)
No
Yes
Can it be borrowed from Outpatient Pharmacy?
No
Yes
Can it be borrowed from a neighboring facility?
No
Yes
Is the need for the medication urgent?
Yes
No
Can the patient's home supply be obtained?
No
Yes
Dispense Product
Order medication for soonest possible delivery
Enter order as NF and dispense patient's home supply



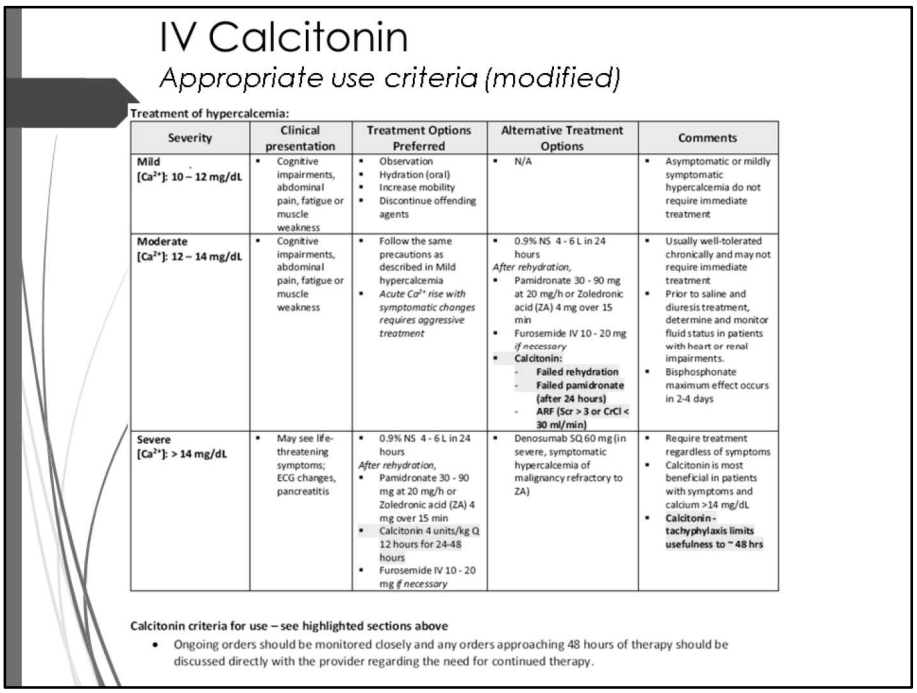
A new policy and mandatory order set is currently being developed in conjunction with nephrology and hospitalist leadership. Until this is developed please be cautious when entering 3% NS orders. In particular pay close attention to the last 3 bullet points above.

More to come after the April P&T on the new policy and order set.



The above changes will be implemented mid to late April.

More education will be provided prior to roll out.



IV Calcitonin

Appropriate use criteria (modified)

Treatment of hypercalcemia:

Severity	Clinical presentation	Treatment Options Preferred	Alternative Treatment Options	Comments
Mild **[Ca^{2+}]: 10 – 12 mg/dL**	• Cognitive impairments, abdominal pain, fatigue or muscle weakness	• Observation • Hydration (oral) • Increase mobility • Discontinue offending agents	• N/A	• Asymptomatic or mildly symptomatic hypercalcemia do not require immediate treatment
Moderate **[Ca^{2+}]: 12 – 14 mg/dL**	• Cognitive impairments, abdominal pain, fatigue or muscle weakness	• Follow the same precautions as described in Mild hypercalcemia • *Acute Ca^{2+} rise with symptomatic changes requires aggressive treatment*	• 0.9% NS 4 - 6 L in 24 hours *After rehydration,* • Pamidronate 30 - 90 mg at 20 mg/h or Zoledronic acid (ZA) 4 mg over 15 min • Furosemide IV 10 - 20 mg *if necessary* • **Calcitonin:** - **Failed rehydration** - **Failed pamidronate (after 24 hours)** - **ARF (Scr > 3 or CrCl < 30 ml/min)**	• Usually well-tolerated chronically and may not require immediate treatment • Prior to saline and diuresis treatment, determine and monitor fluid status in patients with heart or renal impairments. • Bisphosphonate maximum effect occurs in 2-4 days
Severe **[Ca^{2+}]: > 14 mg/dL**	• May see life-threatening symptoms; ECG changes, pancreatitis	• 0.9% NS 4 - 6 L in 24 hours *After rehydration,* • Pamidronate 30 - 90 mg at 20 mg/h or Zoledronic acid (ZA) 4 mg over 15 min • Calcitonin 4 units/kg Q 12 hours for 24-48 hours • Furosemide IV 10 - 20 mg *if necessary*	• Denosumab SQ 60 mg (in severe, symptomatic hypercalcemia of malignancy refractory to ZA)	• Require treatment regardless of symptoms • Calcitonin is most beneficial in patients with symptoms and calcium >14 mg/dL • **Calcitonin - tachyphylaxis limits usefulness to ~ 48 hrs**

Calcitonin criteria for use – see highlighted sections above

- Ongoing orders should be monitored closely and any orders approaching 48 hours of therapy should be discussed directly with the provider regarding the need for continued therapy.

CHI national has implemented CHI-wide use criteria for the use of IV calcitonin. This is largely consistent with our pre-existing reference information that we implemented in 2015.

Key points to remember and to evaluate with all new IV calcitonin orders:

- Should only be used in severe hypercalcemia or if patient has failed or not candidate for bisphosphonate therapy (see highlighted sections above)
- Use should be limited to 48 hour duration only and discontinued earlier if possible.

Cost is ~ $2K per EACH 200 unit vial

Every order should be evaluated for appropriateness prior to entering in Meditech.

Click on the above attachment for instructions on how to access Pharmacist Letter.


Thank you!