PHARMACY & THERAPEUTICS COMMITTEE

InPharmation

The official publication of the P&T Committee

Volume 1, Issue 1

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Formulary Changes

DepoDur (liposomal morphine) was recently deleted from the formulary due to manufacturer discontinuation.

Nimbex (cisatracurium) **restrictions**:

- Atracurium and cisatracurium are both benzylisoquinolinium neuromuscular blockers currently on formulary.
- Both have similar pharmacokinetic and pharmacodynamics properties.
- Atracurium has a higher risk of causing hypotension when bolused, but is safe for continuous infusion.
- **Nimbex is restricted to use by anesthesia in the OR setting or for bolus dosing of ICU patients receiving atracurium continuous infusions. (*Note: these restrictions apply to the adult patient ONLY*)**

FormWeb: The Online Drug Information Resource Center

www.formweb.com/ololrmc

FormWeb is the hospital's customizable, online drug information resource center. It provides a transparent, easy to use, and accessible formulary, as well as providing other commonly used medication information. It can be accessed via LakeMD, under the references tab, or by simply typing www.formweb.com/ololrmc.

FormWeb will serve to communicate the most current medication related information including:

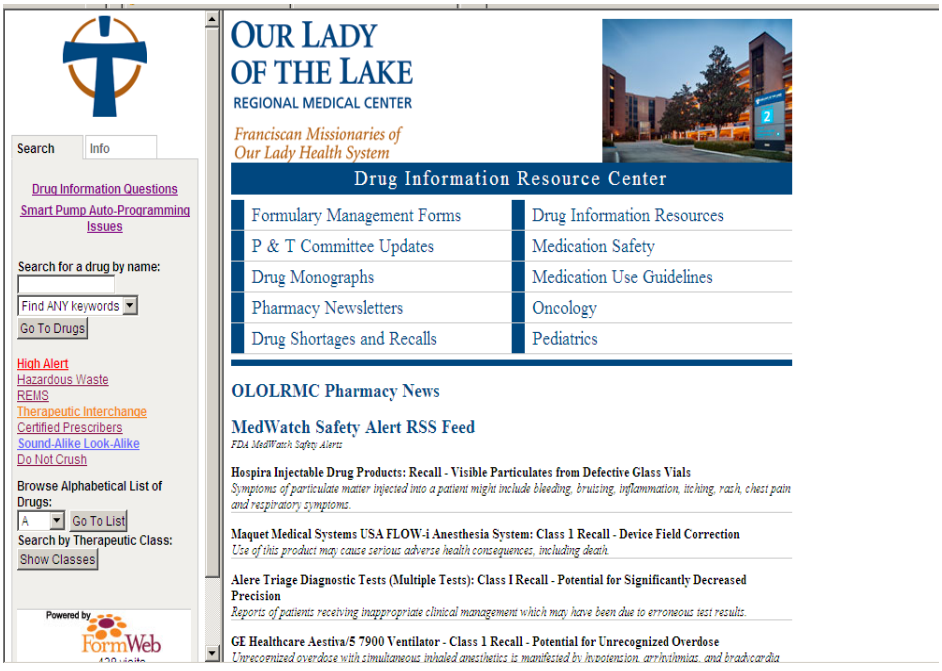
- Formulary changes
- Medication safety alerts
- Drug shortages and recalls

FormWeb is equipped with a search engine that accepts brand names, generic names, or partial drug names. It also provides the ability to begin a search by therapeutic class. FormWeb provides a prescriber with the ability to see formulary options available, as well as provide direct links to pertinent drug information including:

- Micromedex
- Up to Date
- CareNotes

Have a drug information question? Enter it by clicking the link on the top left corner of the homepage. The question will then be directed to a member of the clinical pharmacy team for timely review and response.

We encourage all staff to visit the site and become comfortable with our new formulary tool.



Drug Shortages

The following drug shortages are currently affecting OLOL's medication supply:

Medication	Alternatives
Etomidate inj.	Injectable benzodiazepines (e.g. midazolam)
Pancuronium inj	Vecuronium, rocuronium, atracurium, cisatracurium
Leucovorin inj.	Automatic substitution to levoleucovorin at 50% of prescribed dose
Prochlorperazine inj.	Automatic substitution to promethazine 12.5mg q6hp N/V (no change in prescribed route)
Calcium carbonate 1250mg/ml oral suspension	Automatic substitution to 1250mg chewable tablets (no change in prescribed dose/route)
Fosphenytoin Inj (all strengths)	Automatic substitution to phenytoin inj. (no change in prescribed dose/route)
Lidocaine 1% 30ml Inj.(PF)	Lidocaine 1% 5ml Inj. (PF)

IV Acetaminophen Pilot Protocol

Ofirmev is FDA-approved for the management of mild to moderate pain and for adjunctive treatment for moderate to severe pain with opioid analgesics. It is also approved for the reduction of fever. Ofirmev (IV acetaminophen) was added to the formulary in January 2012. However, its use is restricted to management of fever in adult and pediatric patients with febrile neutropenia unable to receive oral or rectal acetaminophen as a result of mucositis. Since that time, several service lines have requested that the use of the product be expanded to other patient populations.

In March 2012, the P&T Committee approved implementation of a pilot protocol for use of IV acetaminophen at OLOL in patients undergoing abdominal surgery. The protocol would be utilized for 20 patients meeting the following inclusion criteria:

- ≥18 years of age
- undergoing GI surgery and/or colorectal resection surgery
- body weight > 50kg,
- normal liver function, and
- serum creatinine below 2.0.

Patients will be screened by a member of the clinical pharmacy team. Those meeting criteria will receive 1g/100ml of IV acetaminophen infused over 15 minutes upon arrival to the recovery room. Dosing will be repeated every 6 hours for a total of 3 doses. No other acetaminophen-containing products will be allowed in the 24-hour period during which the patient receives IV acetaminophen.

Standard Pain Scales will be utilized and applicable medication use within that 24 hour period (with emphasis on narcotic use and naloxone) will be recorded. Return of bowel sounds and total length of stay will also be recorded.

Results from this study will be compiled and compared to 20 patients previously operated on who had not received IV acetaminophen to determine whether IV acetaminophen improved pain scores and resulted in a decrease in the use of IV narcotics.

The FDA-approved dosing for IV acetaminophen is:

Age	Dose	Frequency
≥ 13 years and ≥ 50kg	1000mg Max 4000mg/day	q6h
≥ 13 years and <50kg	15mg/kg/dose Max 75mg/kg/day	
≥2 to 12 years		

Patient Safety Corner

Tikosyn Drug-Drug Interactions

Tikosyn (dofetilide) is a class III antiarrhythmic indicated for maintenance of normal sinus rhythm or conversion to normal sinus rhythm in patients with Afib/flutter. Concomitant use of dofetilide and the medications listed below cause a substantial increase in dofetilide concentrations and increase the risk of QTc prolongation.

Verapamil	HCTZ ± triamterene
Ketaconazole	Prochlorperazine
Megestrol	Ondansetron
Sulfamethoxazole/trimethoprim (Bactrim)	

Consider alternative medications if a patient is on dofetilide and is prescribed one of the medications listed above.

Risk Evaluation and Mitigation Strategy (REMS)

A REMS is a strategy to manage a known or potential serious risk associated with a drug or biological product. A REMS is required for specific medications (chosen by the FDA) to ensure patients and providers are aware of both the risks and benefits of use.

The ESA APPRISE Oncology Program is the REMS program for erythropoiesis-stimulating agents (ESA) like Procrit, Epogen, Aranesp. It was mandated by the FDA due to an increased risk of death and/or tumor progression or recurrence and increased risk of death from cardiovascular and thromboembolic events in patients with cancer also receiving ESAs.

The process at OLOL is as follows:

- Oncologists must enroll in the program to prescribe ESAs for cancer patients.
- Pharmacists will contact physician offices to obtain a copy of the patient/physician acknowledgement form. The physician may also complete the form with the patient during hospitalization if necessary.
- Once the form is received, pharmacists will dispense the ESA.
- **Each acknowledgement form is valid for ONE YEAR.**

Joint Commission: Are You Ready?

Simple Standards JACHO will be looking for……..

- **Write legibly and print your last name**
- **Date and time each order**
- **Use approved abbreviations, for example:**

  "*units*" instead of "*U*"

  "*daily*" instead of "*qd*"

  "*international unit*" instead of "*IU*"

  "*every other day*" instead of "*qod*"

  "*morphine sulfate*" instead of "*MS or* MSO_4"

  "*magnesium sulfate*" instead of "$MgSO_4$"

  "*morphine 3mg*" instead of "*morphine 3.0mg*"

  "*digoxin 0.25mg*" instead of "*digoxin .25mg*"

- **List prn indications**
- **Qualify prn indications when necessary, for example:**

  Norco 5mg PO q4h PRN pain scale 1-3

  Norco 7.5mg PO q4h PRN pain scale 4-6

  Norco 10mg PO q4h PRN pain scale 7-10

  Morphine 2mg IV q4h PRN pain **(Incorrect)**

Clarify indication from other pain meds

Morphine 2mg IV q4h PRN pain <u>not relieved by Norco 10mg</u> **(Correct!)**

QUESTIONS, COMMENTS OR SUGGESTIONS?

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Automatic Renal Dosing Protocol

In February 2012, the P&T Committee approved the Automatic Renal Dosing Policy & Protocol. Patients receiving eligible medications are screened daily and doses are adjusted based on indication for use and renal function. The following medications are eligible (**see "*Medication Use Guidelines*" tab on FormWeb for full protocol**) :

- Unasyn® (ampicillin/sulbactam)
- Zosyn® (piperacillin/tazobactam)
- Maxipime® (cefipime)
- Carbapenems (all)
- Cipro® (ciprofloxacin)
- Levaquin® (levofloxacin)
- Cubicin® (daptomycin)
- Pradaxa® (dabigatran)
- Xarelto® (rivaroxaban)
- Bactrim® (Sulfamethoxazole/trimethoprim)

Drug Recalls

The following medications are manufacturer recalls. Affected lots have been removed from stock and returned to the manufacturer.

Product	Recall date	Reason
Heparin 20,000/500ml 5% Dextrose IVPB	April 2012	Potency issues
Morphine Inj. 4mg/ml 1ml Carpuject	April 2012	Overfill issues
Cyanocobalamin Inj. 1000mcg/ml, 1ml vial	April 2012	Sterility issues
Hep-lock flush syringe 2 unit/ml 3ml	May 2012	Potency issues
Epinephrine Inj. 1mg/ml, 1ml ampule	May 2012	Particle visibility
Fosphenytoin Inj.50mg PE/ml	May 2012	Particle visibility