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PHARMACY & THERAPEUTICS COMMITTEE NEWSLETTER

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Novant Pharmacy

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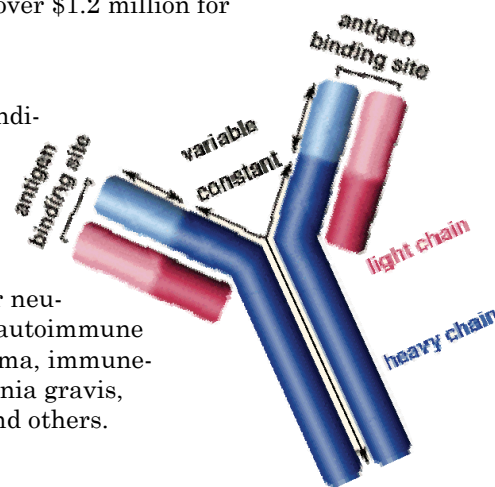


Plasma Program Standardization

Mike Gum, Pharm.D.

Intravenous Immunoglobulin (IVIG) and albumin are the two largest expenditures in the plasma arena for pharmacy. IVIG is priced on a per gram basis, and last year we spent an average of \$71 per gram. Across the system, this translated into a spend of over \$5 million in 2009. Albumin is priced on an equivalent unit (EU) basis. An equivalent unit is defined as 12.5 grams. Therefore the same price is paid for 250 ml of 5% as 50 ml of 25%, both supplying 12.5 g. Last year we spent over \$1.2 million for 30,000 EU.

IVIG has many uses, but the only FDA approved indications are primary immune deficiency, idiopathic thrombocytopenic purpura, chronic inflammatory demyelinating polyneuropathy, chronic lymphocytic leukemia, and Kawasaki syndrome. Labeled indications vary by manufacturer. Off-label uses include Guillain-Barre syndrome, multifocal motor neuropathy, neonatal alloimmune thrombocytopenia, autoimmune hemolytic anemia, red cell aplasia, multiple myeloma, immune-mediated neutropenia, multiple sclerosis, myasthenia gravis, dermatomyositis, bone marrow transplantation, and others.



There are currently 5 primary IVIG products on the market: Privigen (CSL Behring), Flebogamma (Grifols), Gammagard (Baxter), Gamunex (Talecris), and Octagam (Octapharma). All products contain as their primary component gamma globulin, but can vary significantly in their content of IgM, IgA, albumin, sodium, sugar, and osmolality. Sugar content, because of nephrotoxicity, and IgA content because of allergic reactions, are of primary concern. The incidence of IVIG related adverse events range from 12% to 36% and generally consist of headache, fatigue, chills, backache, fever, flushing, dizziness, and tightness in the chest. Many of these effects are related to the infusion rate and improve with rate reductions or to treatment with non-steroidal anti-inflammatory agents.

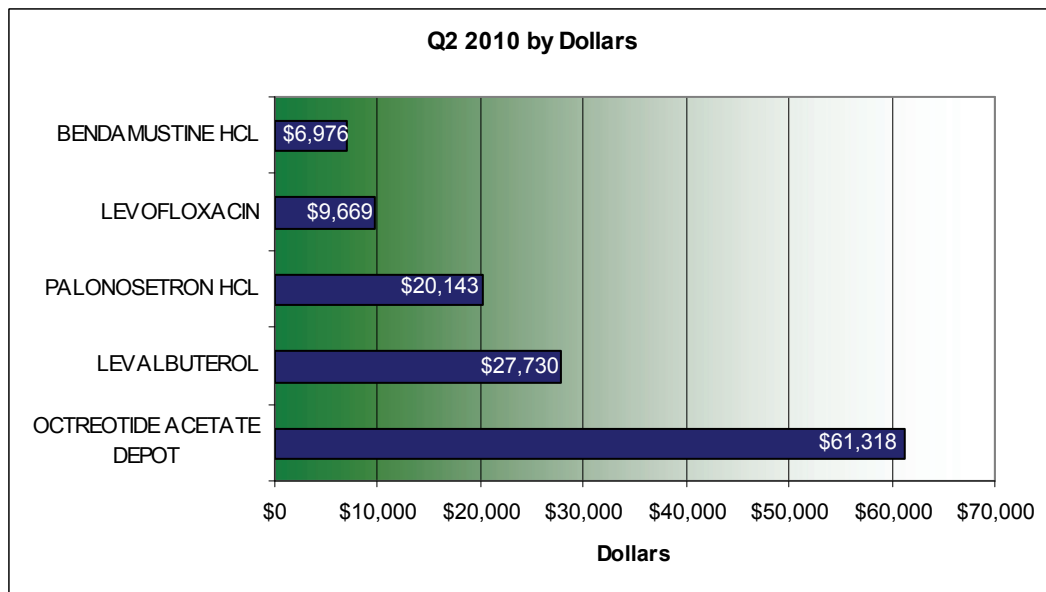
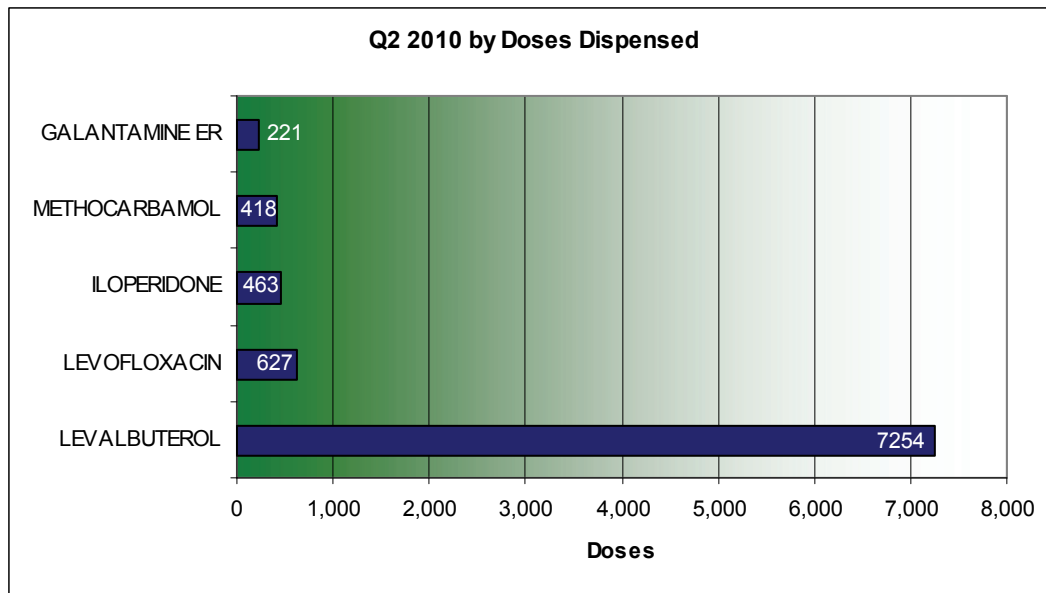
All of the IVIG products are currently being used across the corporation. As a result of negotiations and standardizing to one product, Privigen, we will be able utilize a product that has one of the lowest IgA contents (<25 mcg/ml) and has no sugar. Proline is used as a stabilizer and consequently does not significantly add to the osmolality. Additionally Privigen is available as a 10% solution, may be stored at room temperature, has only trace amounts of sodium, is 320 mOsm/kg, is latex free, and has a 36 month shelf life.

By standardizing to Privigen, Novant will save \$700,000 per year on IVIG and \$215,000 per year on albumin.

Q2 2010 Non-Formulary Drug Report

Chris Lowe, PharmD

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Action Items:

1. Levalbuterol: Existing therapeutic interchange in place - identify drivers of prescribing and follow up with individual practices
2. Octreotide: Current use is outpatient - consider adding to formulary with restrictions at class review
3. Bendamustine: Recommended adding to formulary in this month's class review
4. Levofloxacin: Evaluate use for appropriateness; consider pending generic approval
5. Palonosetron, Iloperidone, Methocarbamol, Galantaine: Evaluate during class review



Formulary Reconciliation—Class Reviews

Chris Lowe, PharmD

This committee will reconcile the formularies across the system by comparing all of the existing formulary agents by AHFS classification and retaining a group of drugs that is determined to be the most beneficial for our patients and will meet the needs of all facilities across the system. Class reviews will be performed by teams of clinical pharmacists from all facilities across the system. The order in which the drug classes will be reviewed was determined by a decision matrix that scored each section by safety, ease and cost. Formulary reconciliation will remain a constant item in this newsletter until the process is complete in 2011.

1. Ammonia Detoxicants
2. Vitamin E
3. Vitamin B Complex
4. Vitamin A
5. Vitamin C
6. Prostaglandin Analogs
7. Antineoplastic Agents
8. Hematopoietic Agents
9. Central Nervous System Agents, Misc
10. Alpha-Adrenergic Agonists
11. Potassium-Removing Agents

Formulary Class Review Teams:

Medicine Team I: Andrea Fender, Lorie Poole, Deanna Rattray, Christina Roels

Medicine Team II: Sara Shields, Michael Evan, Lauren Gurganus, Dustin Pippin

Medicine Team III: Lisa Brennan, Gwen Mitchell, Chue Lee, Kristine Vaden

Medicine Team IV: Brock Harris, Amy Holmes, Allison Gaddy, Cam Haskett, Randi Bridges

Surgery/Critical Care Team I: Sara Szafran, Susan Smith, Jackie Olin, Patricia Pinder

Surgery/Critical Care Team II: Jeremy Hodges, Susan Wilson, Laura Bruner, Kevin Morris

Infectious Disease Team: Charles Hartis, Susan Smith

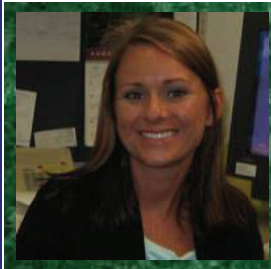
Oncology Team: Christina Ciccarello, Chris Lowe

Pediatrics Team: Amy Holmes, Brock Harris, Shannon Williams

Cardiology Team: Laura Frantz, Ryan Kammer

P&T Member Spotlight

Elizabeth Rebo, PharmD



Elizabeth Rebo has worked with Novant since 2006, starting as the Investigational Drug Studies Pharmacist at FMC, then as the Triad Region Medication Safety Coordinator and most recently, the Novant Medication



Safety Manager. She graduated with a Bachelor of Science from Clemson University in 2000 followed by a Doctor of

Pharmacy from the University of South Carolina in 2004.

Elizabeth enjoys working in the community through various placements of the Winston Salem Junior League and also serves on the local SMAT (State Medical Assistance Team).



September Events:

ID Subcommittee: Wed. Sept 8th

Medication Use Policy Subcommittee: Fri. Sept 10th

MASCOT Subcommittee: Mon. September 13th

Novant P&T Committee: Thu. Sept 23rd



MASCOT Subcommittee Report

Elizabeth Rebo, PharmD

MASCOT (Novant MedicAtion Safety subCOMmiTtee) met on August 9, 2010. As a follow-up to last month's report, the locking of the infusion pump initiative will go forward. This initiative is a result of a recent error at one of our facilities where a patient bolused himself with diltiazem while trying to turn the alarm off on his infusion pump. A second corporate safety initiative that will move forward is documentation of the second nurse check for overrides on reasons that require a second check. Both initiatives will require significant education, and an implementation date for both will be determined at the September meeting.



The team also discussed an OR latex allergy issue in one of our facilities. Staff members were using the OR schedule for allergy information instead of Net Access. A solution on how to address this concern is in development and will be reported at the September meeting.

There have been many reports of administration omission errors related to secondary infusions. Staff have communicated that a contributing factor to these omissions is that the BBraun pump does not provide an audible alarm indicating that the medication is not infusing. Per BBraun, the pumps are equipped with an alert every time a secondary infusion is hung. Education about this alarm and how to utilize the function appropriately will be provided to nursing staff in the upcoming weeks. The education piece will be reviewed at the September meeting.

Eye Drop Therapeutic Interchange

Sara Roach, PharmD Candidate



Prostaglandin F₂-alpha analogues are a popular therapy option for the management of ocular hypertension and open-angle glaucoma. Available prostaglandin F₂-alpha analogues include Xalatan (latanoprost), Lumigan (bimatoprost) and Travatan Z (travoprost). These medications work similarly to decrease intraocular pressure through enhanced uveoscleral outflow. However, there are a few differences between the three drugs that may be clinically significant.

Studies evaluating the use of Lumigan have revealed that it may reduce intraocular pressure by up to 1mmHg greater than Xalatan, but these effects are not clinically significant in most patients. Travatan Z is beneficial for patients that also complain of dry-eye because of the preservative, polyquad, is more soothing than the benzalkonium chloride found in the other two products.

Xalatan has the most favorable adverse effect profile in this class as there is a decreased incidence and severity of adverse effects compared to Lumigan and Travatan Z. The most common adverse effects include blurred vision, eyelash formation, hyperpigmentation of the eyelid, and iris pigmentation. Lumigan has such a high incidence of hypertrichosis of the eyelashes that it is marketed under the brand name Latisse for the cosmetic growth of eyelashes.

Upon review of the medications in this class it is the decision of the P&T Committee that Xalatan be added to the formulary as the preferred formulary prostaglandin F₂-alpha analgue. Lumigan and Travatan Z will remain non-formulary, and a therapeutic interchange to Xalatan will be completed for all orders.