

# *Hospital Pharmacist Monthly*

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Welcome to the current issue of *Hospital Pharmacist Monthly*.

- The October 22<sup>nd</sup> issue of the ISMP Medication Safety Alert! Newsletter reviewed an old issue that continues to be a problem - the importance of not using parenteral syringes to prepare or administer small volumes of oral or enteral products. The ISMP noted that they have discussed this subject over 60 times in the newsletters but reports of harm to patients continue to be received. The harmful errors that have occurred include not only medication errors, but the administration of feeding solutions intravenously.
  - **HPM Recommendation – Make sure that you don’t allow parenteral syringes to be used to prepare or administer oral or enteral products. Even if you think you have addressed this in the past, make a pass throughout all of your med rooms and verify that oral syringes are readily available and nurses know to use them.**
- In the November 15<sup>th</sup> edition of the ISMP Medication Safety Alert! Newsletter the risks of confusion between seasonal and H1N1 flu vaccines were discussed. Confusion between Flumist (seasonal flu vaccine) and H1N1 flu vaccine has been reported. Some staff appears to believe that the H1N1 vaccine was not needed if the seasonal vaccine was administered. Another problem has been Look-Alike Sound-Alike administration errors due to the similar packaging of the products.
  - **HPM Recommendation – Ensure that nursing and pharmacy staff are aware of the differences between the seasonal flu vaccine and the H1N1 flu vaccine, due to the similar packaging, leading to potential for medication dispensing and administration errors.**
- An article titled “**Medication Room Madness – Calming the Chaos**” (*J Nurse Care Qual. ePub October 16, 2009 - doi: 10.1097/NCQ.0b013e3181c3695d*) was discussed. The authors describe how they improved the medication administration process, decreased medication errors and improved nursing satisfaction by improving the physical design and organizational layout of the medication room, creating a standard medication process and decreasing nursing interruptions. The team used Lean Six Sigma to improve workflow and eliminate waste. Through this process they were able to demonstrate a 22% decrease in reported medication errors the first year and, by the end of the third year, a 53% total decrease in the reported medication error rate. One key area related to pharmacy services was that nurses had to search for medications in up to 5 different locations with each medication administration.
  - **HPM Recommendation – Obtain this article and review with nursing leadership. Provide support to make system changes from pharmacy to improve the process and safety of medication administration.**
- On November 13<sup>th</sup> the FDA released a warning about the potential dangers of chondrolysis (necrosis and destruction of cartilage) with the use of continuously infused local anesthetics, particularly when administered into the intra-articular space with elastomeric infusion pumps. FDA has received 35 reports of chondrolysis, almost all post shoulder surgery, with symptoms commencing several months after surgery.
  - **HPM Recommendation – Ensure that surgeons are aware of this potential complication.**

- On November 4<sup>th</sup> the FDA announced the “Safe Use Initiative,” a program targeted at decreasing the likelihood of preventable harm from medications targeted at both prescription and over-the-counter medications.
  - **HPM Recommendation – Review the FDA Announcement at <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm189081.htm>.**
- An FDA MedWatch alert released on November 17<sup>th</sup> revisited the interaction between clopidogrel and omeprazole. Clopidogrel requires conversion to an active form for drug activity and this occurs through CYP2C19 enzymes. Omeprazole blocks CYP2C19 enzymes, thus reducing effectiveness of clopidogrel. There is the potential that other PPIs may have a similar effect. Ranitidine or famotidine do not have a CYP2C19 interaction.
  - **HPM Recommendation – Review this FDA interaction alert with key medical staff and pharmacy staff so that the risk/benefit of prescribing the two products concurrently is assessed. Alert prescribers of patients with history of concurrent therapy on both of these agents.**
- In response to a subscriber letter we briefly discussed our opinions on how best to address The Joint Commission Standard MM.05.01.01 EP 10. This standard calls for all medication orders to be reviewed by a pharmacist for variation from the hospital’s indication for use. The expectation is that the hospital defines the criteria for use for each product that is on formulary. Many hospitals are using the FDA-approved indications as their criteria for use and we agree with that approach. The next step would be for you to identify the known off-label uses – medications used in pediatric patients are often off-label, misoprostol for cervical ripening and intravenous haloperidol immediately come to mind. Add pediatric use as accepted criteria of use for all medications that have pediatric dosing recommendations in your facility designated pediatric dosing reference (Harriet Lane, Lexi-Comp Pediatric Dosage Handbook, etc.). For misoprostol and IV haloperidol, make sure that you have administration guidelines in place. If you are aware of other off-label uses (supported by the literature) include them as well. Instruct your pharmacists to question orders that appear to represent off-label use and handle those as non-formulary requests. You can then expand your criteria for use to these indications if approved by your P&T. Over time your list will expand, but in the meantime, this good faith effort should serve you well with surveyors.
  - **HPM Recommendation – As described above.**
- The article titled “**Expert Consensus Guidelines for Stocking of Antidotes in Hospitals that Provide Emergency Care**” (*Ann Emerg Med.* 2009;54;386-394) was reviewed. A multidisciplinary expert panel developed recommended types and minimum inventory levels for specific antidotes. The panel recommends that hospitals with emergency departments consider 24 antidotes as noted in the article. Twelve of the antidotes are recommended to be available for immediate administration and another nine are recommended to be available within one hour. The article also provides recommended stocking levels of each antidote for the treatment of one patient weighing 100-kg. The authors recommend that each hospital perform a hazard vulnerability assessment to determine the need for stocking (and the appropriate amount) of antidotes in your facility. We both consider this to be an excellent reference article for hospitals that provide ED care.
  - **HPM Recommendation – In conjunction with ED medical staff, review consensus guidelines against current inventory levels for all critical antidotes listed. Update current minimum inventory levels for emergency care areas, and regularly assess in-house levels to determine if adequate.**
- A perspective article titled “**Mandatory Vaccination of Health Care Workers**” (*N Engl J Med.* 2009;361:2015-2017) was discussed. This is a good public health/legal discussion regarding whether mandatory vaccination of healthcare workers is appropriate.

- **HPM Recommendation – Review article and distribute to hospital staff involved in employee health vaccination.**
  
- In the September issue of HPM we discussed an article by Michael Sanborn that described the need, and provided direction, for pharmacy directors to create a strategic plan for their department. In the October issue of Hospital Pharmacy, a Letter to the Editor by Ernest R. Anderson from Caritas Christi Health Care in Brighton, Massachusetts described his experiences. Anderson tells how he had used a framework discussed in the Sanborn article in the past and how it had benefitted both the pharmacy department and patient care in his facilities. Anderson concluded by calling on hospital leaders to dedicate the necessary time and resources to developing a meaningful strategic plan.
  - **HPM Recommendation – If you have not yet started the process yet, begin working on developing your strategic plan for pharmacy services.**
  
- **Interview with Sara White**

We concluded a two-part interview with Sara White, a well-known pharmacy leader. Sara discussed the need for the Pharmacy Leader to be present at the Senior Leadership level in the organization. Her recommendation is that pharmacy report directly to the CEO or COO, but no lower in the organization. The title of Chief Pharmacy Officer has been used in some facilities, but Sara is not worried about the title, just the reporting lines and the inclusion of pharmacy leadership at the executive table. One of the reasons that pharmacy is generally not at this level in the organization is a failure of pharmacy leaders to market ourselves well. We need to seek publicity within the organization and make sure all of pharmacy work is visible. We can't continue to wait to be discovered. Sara noted that nursing hasn't worried about whether or not they had the resources to accomplish tasks such as primary nursing and just pushed forward. Sara pointed out that we need to get out of the mind set of pharmacy managers – making sure that things are done right and thinking like leaders to make sure that we are doing the right things. Sara's sense is that progress is being made in averting the pharmacy leadership gap, but that more data need to be collected. Sara is currently writing a "Success Skills" series for AJHP talking about pharmacy leadership skills that have not been part of pharmacy training in the past. She is also collaborating on a Pharmacy Leadership book. This is a case-based book providing challenging cases in pharmacy leadership with responses by pharmacy leaders. This book will be published through ASHP next year.

  - **HPM Recommendation – Market yourself and the pharmacy department throughout your organization. Push to be included in executive level discussions at your facility. Lead your department into doing the right things.**
  
- **"American Society of Clinical Oncology/Oncology Nursing Society Chemotherapy Administration Safety Standards"** (*J Clin Oncol* 2009;27:5469-5475). A multidisciplinary group which included medical oncologists, nurses, pharmacists, social workers, practice administrators and patient advocates met to develop standards for the administration of chemotherapy to adult patients in the outpatient setting. They developed 64 draft standards and, after the proposed standards were posted for six weeks and 322 comments were received, they were culled down to 31 standards encompassing 7 domains. The domains included are: staffing-related standards, chart documentation standards, practice standards, order standards (including drug preparation), patient consent and education, administration and monitoring, and assessment. The 31 standards within these domains cover all aspects related to the administration of chemotherapy. While not in the published article, a link to sample policies based on the standards is available on the ASCO website <http://www.asco.org/safety>. These standards are an excellent resource to assure the safe administration of chemotherapy. While targeted for the outpatient setting, they certainly can be applied to your inpatients as well.
  - **Review the consensus guidelines with a multidisciplinary oncology team to identify areas for improvement of medication use processes in the ambulatory**

**oncology area. Standards provide a good “self assessment” tool to assist organizations in identifying target areas for improving medication safety in this high-risk medication area.**

- **“Balancing 'No Blame' with Accountability in Patient Safety”** (*N Engl J Med* 2009;361:1401-1406). This Sounding Board article was written by Dr. Robert Wachter from UCSF and Dr. Peter Pronovost from Johns Hopkins. These two physicians are nationally recognized as leaders in patient safety. The authors note that there has been marked improvement in many areas of patient safety in the ten years since the IOM report came out, but there is still much progress to be made. They note that hand-hygiene rates were shameful ten years ago, often less than 20%, but that now most hospitals have rates that range from 30 to 70% with a few having sustained rates over 80%. They believe that low hand-hygiene rates are not a systems problem anymore but are now primarily an accountability problem. They note that, at many hospitals, physicians can lose staff privileges for failure to complete their medical records, but similar penalties do not exist for failure to follow safety rules. They recommend that hospitals and medical staff leadership adopt the practice of holding physicians accountable for failure to adhere to recognized patient safety practices. For example – if a physician is noted to not practice hand hygiene the initial penalty (after at least one warning) would be loss of patient-care privileges for one week. Failure to mark the surgical site to prevent wrong-site surgery would result in loss of operating room privileges for two weeks. Physician patient safety leaders suggesting to hold their colleagues accountable for failure to adhere to safety practices that have been demonstrated to improve patient safety is a refreshing new perspective.
  - **HPM Recommendation – Share this article with your Patient Safety Officer, Hospital Administration and physician leadership. Get discussions going about how something like this could be implemented in your facility.**
- **“Use of Lean Production to Reduce Waste When Compounding Sterile Pharmaceutical Products”** (*Hosp Pharm* 2009;44:974-977) The authors describe the use of lean production concepts to improve the operations of the IV room in a 400-bed community hospital. A multi-disciplinary group which included pharmacists, pharmacy technicians and nurses met for a one-week time period. The focus was on reducing IV room waste, excess inventory, excess transport and motion. The team identified baseline metrics and then developed goals of decreasing waste compounded products by 50%, reducing delivery time for first-dose antibiotics by 50%, and decreasing the number of medication delivery locations by 50%. The team increased the medication prep process from two batches per day to five batches per day. They also decreased the number of delivery locations in the patient care areas by 60%. The implemented actions resulted in a 64% decrease in the number of wasted doses of medication and a 50% decrease (from 52 minutes to 26 minutes) in first-dose to unit delivery time. As a result of lean process review, the hospital increased the number of deliveries per day and reduced overall pharmaceutical expenditures with no increase in staff. The facility acknowledged that approximately 500 hours of labor, at a cost of \$15,000, were incurred to design, implement and refine the process. The savings from the changes made recouped this expense within 4 months.
  - **HPM Recommendation – Review the use of lean production concepts for potential use in the assessment of hospital pharmacy operations with the goal of increasing operational efficiency.**

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Drs. Dan Ross and Amy Gutierrez do not have (nor do any of their immediate family members have) a vested interest in or affiliation with any corporate organization in the past 12 months offering financial support or grant money for this continuing education activity, or any affiliation with an organization whose philosophy could potentially bias their presentation.