Strategies for Ensuring the
Safe Use of Insulin Pens
IN THE HOSPITAL

Ensuring Safe and Effective Use of Insulin Pen Devices

Our Lady of Fatima Hospital
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June 2015

Team Members

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- Karen Zarlenga, RN, BSN, CDE, CDOE, CVDOE, Diabetes Clinical Manager
- Martha J. Roberts, Pharm.D., Lead Clinical Pharmacist
- Susan Mariano, RN, BSN, Infection and Prevention Control Clinician
- Rebecca Pompei, Pharm.D., CDOE, Clinical Pharmacist
- Michele Danish, Pharm.D., FASHP, Director Performance Improvement

Our Lady of Fatima Hospital

- 359-bed community hospital serving predominately older population (med-surg, acute rehabilitation, behavioral health)
- Daily census about 120
- Approximately 35% inpatient population with primary or secondary diagnosis DM
- Certified by The Joint Commission for Advanced Inpatient Diabetes

Our Background and Description

- July 2009: Switched from insulin vials to pens wherever possible
- Decision based upon review of a 44-page document "Recommendations for Safe Use of Insulin in Hospitals", authored by a panel of experts convened by The American Society of Health-System Pharmacists and the Health-System Association in October 2004

Our Background and Description, cont.

- Pens provided greater ease of double checking doses and bedside bar coding
- Documented 50% reduction in insulin-related errors from 2008 to 2012
- Reviewed in 2013 subsequent to ISMP concerns
- Decision: Use pens and provide additional education campaigns; investigate alternate labeling to ensure patient identification

Process Improvements

- Insulin Administration and Storage Policy approved 10/2/14; effective 11/1/14
- 3/30/15: Implemented new process of entering insulin pens in Meditech to enable scanning of patient-specific bar code
- Continual education of nursing regarding time-action profiles of different insulin products

Selected Results: Insulin Injection Observations

- The Diabetes Management Team had completed intensive pen training in February 2014 prior to beginning this mentorship and had incorporated into nursing orientation
- No significant issues were discovered during baseline collection
- Provided continual reinforcement of correct procedures

Selected Results: Pen Storage and Labeling Audit

- All pens were labeled appropriately in both the baseline and post-intervention observations, including expiration date
- Post intervention the RNs were able to scan the patient bar code on all labels
- More pens were found on counter in med rooms during post-intervention audit

Selected Results: Nurse Survey

- Response rate increased from 35.24% baseline to 58.2% post-intervention
- Significant improvement in percentage of correct responses to questions based on time-action profiles of insulin
- Time-action profile chart in med rooms

Lessons Learned

- Proper use and storage of insulin pens is not a “once and done” event
- Continual education required to maintain competency and assure proper use of insulin pen devices
- Meditech issue with the new order entry method: does not work with CPOE and necessitated re-entry by pharmacists

Next Steps

- Continue to observe nurse administration of insulin with pen devices
- Reinforce proper storage and the importance of returning to patient-specific bins
- Provide ongoing continuing education
- Work with our Information Technology Department for order-entry optimization

Mentored Quality Improvement Activity: A Broad View

- With ISMP continuing to suggest the potential for cross-contamination with insulin pens, we believed it was important to review our practice
- This mentorship provided the opportunity to review our practices and ensure that our patients are not harmed by the use of insulin pens
- A team approach ensures success!