

**Florida**  
**Critical Access Hospital**  
*Medication Safety Program*

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Gainesville, FL

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**Project Background**

- Joint effort between State of Florida Office of Rural Health, FMQAI, and UF College of Pharmacy
- Funding source - Office of Rural Health (Bob Pannell/Joel Libby)
- Overall project goal – to improve the safety of medication use in Florida’s CAHs
- Currently completing project year 7

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**Methods**

- Annual site visits
- Annual Gainesville Summit
  - ◆ Site visit summary report
  - ◆ CAH networking
  - ◆ Topic discussions
- Teleconference support
- Website development
- Medical staff meetings

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### Pharmacy Service

- Consultant Pharmacist with minimal involvement (3-10 hours/wk)
- Onsite Pharmacist (40 hours/wk)
- Remote Pharmacist coverage (24/7)
  - ◆ Cardinal
  - ◆ ePharmPro
  - ◆ Healthsystem (Shands, Florida Hospital)
- Combination of onsite and remote

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### RANK ORDER OF ERROR REDUCTION STRATEGIES



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### Medication Safety Infrastructure Improvements

- Pharmacy security (locks, nursing access)
- Implementation of Automated Dispensing Cabinets
- Pharmacist review of medication orders
- Removal of concentrated electrolytes
- Removal of heparin 10,000 unit/mL vials
- Storage and labeling of neuromuscular blockers
- Increase use of unit dose packaging
- Increase use of pre-mixed IV solutions
- Standardization of emergency drug supplies and references
- Availability of drug references
- Increase use of pre-printed, standardized medication orders
- Increase in medication error reporting and investigation
- Enhanced medication reconciliation process

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### PY7 – Engage Medical Staff

- Shift focus to clinical areas of opportunity while maintaining infrastructure gains
- Integrate presentation into existing medical staff meetings
- CAH to choose focus area for presentation
- Multiple potential focus areas:
  - ◆ Venous thromboembolism (VTE) prophylaxis
  - ◆ Inpatient diabetes management
  - ◆ Pain management
  - ◆ Antibiotic selection and duration
  - ◆ Evaluation of nephrotoxic medications

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### Barriers to acceptance

- Outsider (advantage and disadvantage)
- Knowledge
- Incentive
- Auditing and individualized feedback

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### VTE Prophylaxis

- Surgeon General "Call to Action"  
Issued September 2008  
Public Health Priority
- Every hospital develop a formal strategy that addresses prevention of VTE
  - ◆ Passive methods such as educational materials and meetings are NOT recommended as sole strategies
  - ◆ Locally developed strategy
  - ◆ Written, institution-wide policy
  - ◆ CPOE, pre-printed orders
  - ◆ Periodic audit and feedback

Antithrombotic and Thrombolytic Therapy: American College of Chest Physicians Evidenced-Based Practice Guidelines (8<sup>th</sup> Edition). Chest June 2008

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### VTE Prophylaxis Initiative – Ideas for Evaluation and Follow-up

- Percent admissions with VTE risk screening
- Percent admissions with VTE risk re-screening
- Percent admissions with risk-appropriate prophylaxis selection
- Percent discharges on appropriate prophylaxis (agent and duration)

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### Data Ascertainment

- Generated list of patients who were charged for capillary glucose monitoring
- Consecutive list of 30 patients in fall 2007 and another 30 patients in fall 2008 after implementation of standardized insulin order set

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### Results

Total number of Glucose Readings	394
Hyperglycemic Event $\geq$ 150 mg/dL	63
Hyperglycemic Event $\geq$ 200 mg/dL	39
Severe Hyperglycemia ( $\geq$ one glucose reading $\geq$ 400 mg/dL)*	4
Prolonged Hyperglycemia (at least three consecutive glucose readings $\geq$ 250 mg/dL)*	8
Total Number of Blood Glucose Readings $\geq$ 150 (%)	191 (48.5%)
Total Number of Blood Glucose Readings $\geq$ 200	114 (28.9%)
Average Time in Hyperglycemia ( $\geq$ 150) during the time of glucose readings per patient	50.80%
Average Time in Hyperglycemia ( $\geq$ 200) during the time of glucose readings per patient	25.96%

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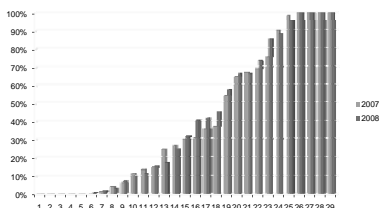
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### Re-Evaluation after Implementation of Order Set

○ Percent time in BG < 150 mg/dL

⇒ 2007: 39.9%

⇒ 2008: 40.9%



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### Diabetes Management: Next Steps

- Individualized feedback
- Investigate root causes of hyperglycemia
  - ◆ Protocol inadequate
  - ◆ Physician compliance
  - ◆ Nurse compliance
  - ◆ Patient compliance

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### The Future – Project Year 8

- Continue annual site visit and summit
- Continue supporting ongoing clinical projects with data retrieval and analysis
- Incorporate chart review into site visits to better determine list of new medication-related quality improvement projects

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