

# Integration and Patient Care Success: A Case Study Using An Integrated Glycemic Management System (GMS)

Paul Chidester, MD, FACP

## OBJECTIVE

- Integration of an GMS into 3 different health system EHRs
- Evaluate the impact on nursing workflow
- Evaluate the effect on glycemic patient care outcomes

## DESCRIPTION OF THE PROJECT

- Sentara Healthcare, Western Tennessee Healthcare and Mountain States Health Alliance were selected as partners for different levels of an IGMS integration into their EHR.
- Sentara Healthcare uses EPIC , Western Tennessee Healthcare uses Cerner and Mountain States Health Alliance is using Siemens Soarian.
- Information Technology teams from both the hospital side and their selected partner for glycemic management worked with clinical leads from Nursing, Pharmacy, Nutrition and Physicians to complete a best practice workflow for each hospital system's EHR application.
- Interfaces were designed with workflow ease and patient care improvement as top priorities.
- Follow up and optimization meetings set 30 days post implementation to gather valuable feedback from front line users and physicians on outcomes.

## RESULTS

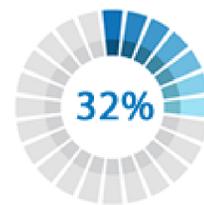
Nursing end users rated the integration high. **Satisfaction scores show a 90-100% rating for survey categories:**



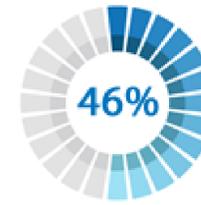
- Ease of use
- Reduced physician calls
- Decreased workload with diabetic patients
- Faster start up times for IV insulin patients

### Deeper integration lead to:

- Fewer insulin errors – Improved BG check times
- Decreased nursing time – 3 minutes saved at each patients IV rate change



**Improved** patient safety with lower hypoglycemia



**Increased** percent of patients to hospital glycemic goal

## LESSON LEARNED

- Strong leadership that can promote the goals of the project and facilitate hospital wide adoption is important, cannot rely on technology alone
- Setting appropriate goals and outcomes data helped to build trust and collaboration among physicians and staff.
- Involvement of stakeholders in work flow design and integration implementation facilitates improved acceptance.
- Collaboration must continue beyond Go-Live to improve workflows and identify new opportunities for enhanced integrations.

## SUMMARY

Many hospital systems are focusing on leveraging the large investments made in their EHR to further improve patient care and workflow efficiencies by adding clinical information technology solutions that focus on clinical decision support, predictive analytics and surveillance to improve outcomes in targeted areas. Three health systems, each with different EHR systems, integrated the same electronic glycemic management system to assist with improving glycemic care. Because the selected GMS was so flexible and integrated with all of their unique EHRs, all three hospital systems achieved improvements in glycemic control metrics, work flow efficiencies and staff satisfaction.