

Translating Guidelines into Practice: Improving Continuous Glucose Monitoring Device Validation for Patients Using Insulin Pumps During Hospitalization



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Goal

- Using Model for Improvement PDSA methodology, increase the percentage of patients admitted to the hospital wearing an insulin pump and a continuous glucose monitor (CGM) who have their CGM validated against the hospital approved glucometer at admission and daily per the institutional Clinical Practice Guideline (CPG)

Background

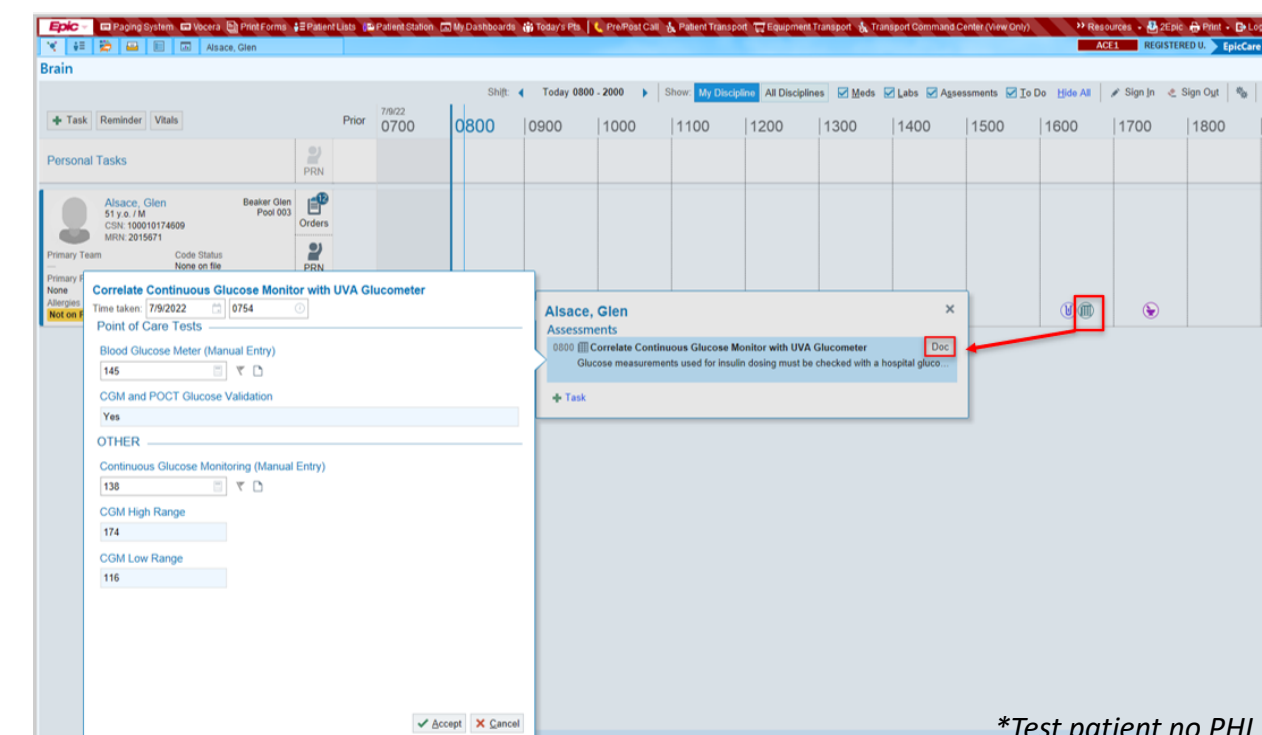
- Wearable diabetes technology (insulin pump, CGM) evolving rapidly
 - Increasing utilization of Automated Insulin Delivery (AID) mode
- Professional societies endorse and patients prefer continuation of insulin pump/CGM during hospitalization
- June 2021, The Joint Commission (TJC) issued Quick Safety 59 which included recommendation that organizations implement a process to validate accuracy of CGM compared to hospital approved glucometer

Review of Literature

- Clinical Decision Support (CDS) embedded in the electronic health record (EHR) that provides actionable information can improve nursing adherence to CPGs

Intervention

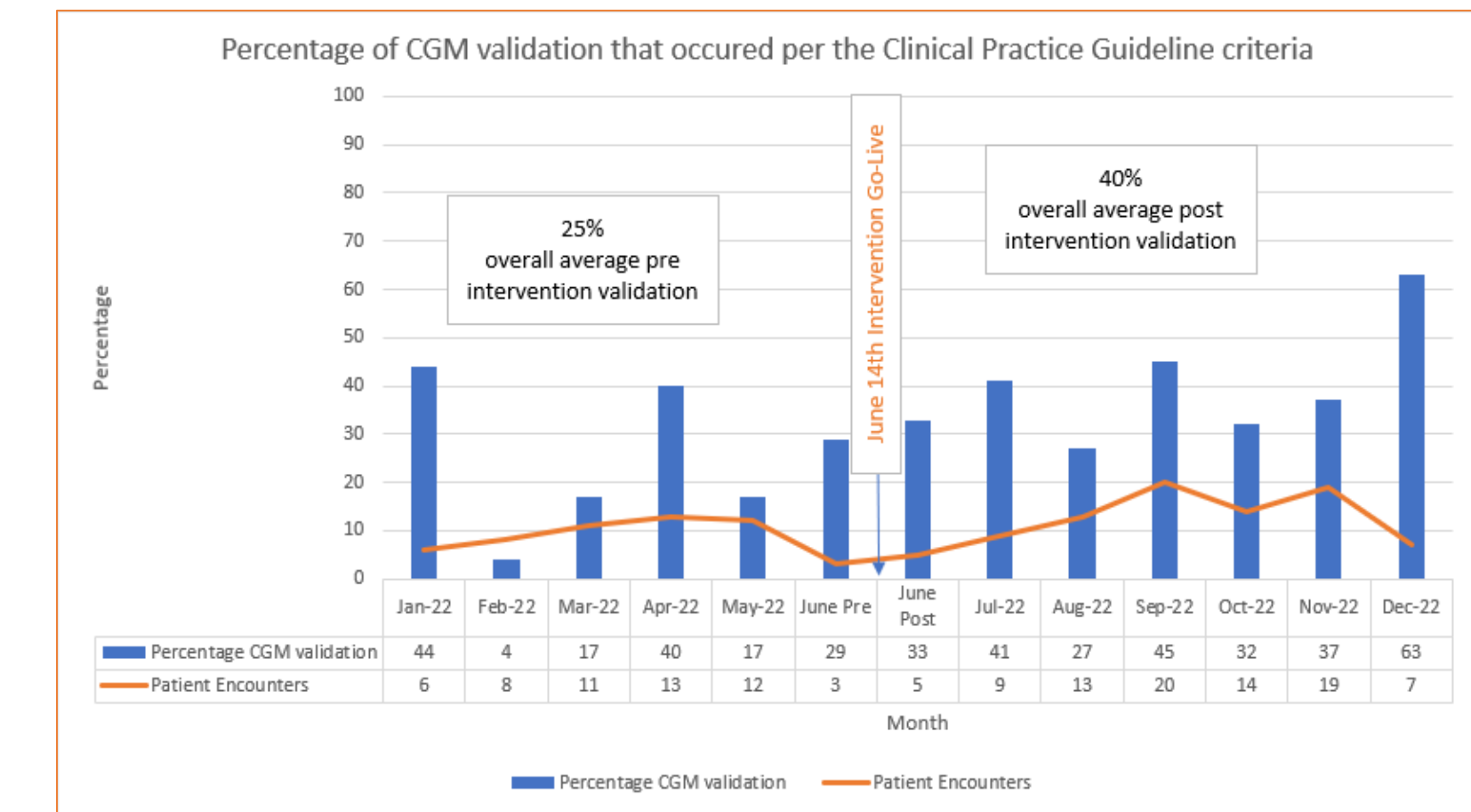
- Implement CDS in the form of an interactive nursing task integrated into standard nursing workflow



Interactive nursing task reduced RN documentation burden from 3 steps (open patient chart, chart CGM on LDA Avatar which auto-populates CGM flowsheet row, open VS flowsheet and document BG and CGM to activate validation calculation rows) to 2 clicks

Results

- Pre implementation CGM validation 25%
- Post implementation CGM validation 40%
- 71 out of 89 post implementation patient encounters continued AID mode during hospitalization



Evaluation

- CDS targeting nursing practices can improve compliance with CPGs
- Contextual factors within EHRs such as customization within modules impacts effectiveness of CDS
- Opportunities for repeat PDSA:
 - Targeting different modules in EHR that don't utilize nursing workspace
 - Targeting admission versus daily CGM validation workflow

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