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A Multidisciplinary Diabetic Collaborative

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Background

An Endocrine Collaborative was formed in 2019 with staff from Pediatric Endocrinology, Pharmacy, I&T, Nursing & Physician leaders to discuss safety concerns about the care of pediatric inpatients with diabetes.

- Monthly meetings occurred to gather information over the year.
- Practice gaps were identified through yearly needs assessments surveys, SRS's, staff communication, and unit CPC meetings.
- Meetings were held with Pediatric Medication Safety Committee to get pharmacy input.

Problem

Lack of knowledge in types, actions, and timing of insulins, different pump types & continuous glucose monitoring devices, and lack of standardized ordering processes led to medication errors, provision of care errors, and staff frustration.

Goals and Objectives

- The overall goal of the Collaborative is to improve glucose management and outcomes in pediatric in-patients with diabetes and to decrease diabetes-related safety reported events
- Objectives include:
  - Increase staff knowledge & competence by providing diabetes educational opportunities via in-services
  - Increase accuracy of ordering by implementing a standardized Insulin/Carb Ratio sliding scale in a Power Plan
  - Educate providers on long-term insulin ordering

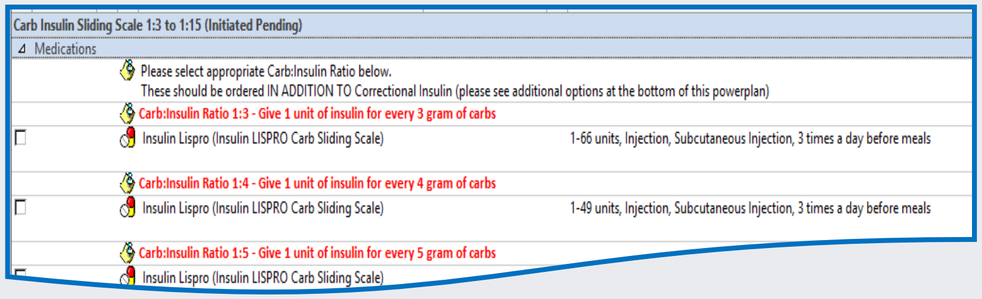
Methodology

- Staff initially surveyed in 2018; requests for education indicated gaps in the following:
  - Insulin pumps and use, types and use of glucose monitoring devices, diabetes knowledge, and knowledge of insulin types
- Identified and trained unit-based champions 2018-21
- Gaps were addressed via educational opportunities:
  - Unit-based in-services on Diabetic Care 2019-21
  - Monthly educational Diabetic Brown Bag Lunch series for staff 2019-21
- Created and implemented annual web-based training 2021
- Created and implemented standardized order set for Insulin/Carb Ratio sliding scale active in CIS 2021
- Created "Tip Sheet for Ordering Meds" for providers
- Resurveyed staff in 2021 and 2022

Results

- Staff participated in 10 educational opportunities specific to Diabetic Care over 24 months
- Participation ranged from 4 to 41 employees, with a mean of 18 at each session
- Increases noted in staff feeling "Competent" (36%) and "Proficient" (27%) in diabetes-related care and knowledge
- 100% use of Insulin/Carb Ratio Power Plan for sliding scales
- Increased awareness of diabetes management issues; 69% increase in SRS's related to diabetes management

By Question	Overall comfort in care of Diabetic	Understand different insulin types	Knowledge of patients own insulin pump policy	How to calculate correction factor	Understand carb counting	Understand glucose monitoring devices	Understand insulin pumps
Shift towards:	Proficient	Proficient	Competence	Competence	Competence	Competence	Proficient



Challenges

- Conducting training during COVID-19 was difficult
- Increased acuity of patient care during pandemic may have affected submission of adverse events in SRS
- There was high staff turnover during pandemic; post-implementation knowledge assessments could not capture original learners
- There was an unexpected increased time to build the program for pharmacy and for IT build into CIS after requested

Practice Implications

- Increasing staff knowledge & competence when caring for patients with diabetes
- Standardizing processes whenever possible
- Optimizing safe, quality care
- Preventing medication errors related to Insulin/Carb orders
- Sharing lessons learned to other care areas

Acknowledgements

- Pediatric Endocrinology, Baystate Children's Hospital
- Pediatric Pharmacy, Pediatric Emergency Department
- Informatics & Technology

References

- CDC: Diabetes
- Pediatric Endocrine Society

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