

CRITERION BASED TAILORED APPROACH TO EDUCATION FOR NEWLY DIAGNOSED TYPE 1 DIABETES IN PEDIATRICS

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Category: Health Outcomes / Services Research

Background

Intensive insulin management (IIM), insulin dosing based on insulin to carbohydrate ratio (ICR) plus correction factor (CF), is associated with improved glycemic control, when compared to fixed insulin doses. Prior to implementation of this project, newly diagnosed patients with diabetes at Texas Children's Hospital were taught fixed doses. There was noted to be a delay in transition to IIM and improved glycemic control. We sought ways to reduce the delay in transition to IIM.

Objectives

1. 60 % of eligible new onset diabetes patients (diagnosed at Texas Children's Hospital from March 1 to May 1, 2018) to be discharged on insulin to carbohydrate ratio (ICR).
2. By 6-12 months after diabetes diagnosis, obtain a 10% increase in patients on IIM compared to previous year.

Methods

A multidisciplinary focus group was created to determine eligibility criteria for patients to be taught ICR at diagnosis. Eligibility criteria was determined to include age > 5 years of age, proficiency in basic numeracy skills, and stable family environment with 2 adult caregivers. A patient eligibility algorithm, numeracy skills assessment, and a psychosocial stressor screen were created. Bedside clinical nurses were trained to assess numeracy screen and teach ICR. Social workers performed the psychosocial screen. Proficiency with ICR was assessed prior to discharge.

Results

Of all patients > 5 years of age, 67% were discharged on ICR during the initial two months. Of those that were eligible, 100% were discharged on ICR. The most common reason patients were excluded was due to the absence of a second adult learner. By 3-6 months of diabetes diagnosis, 50.8% were on IIM, compared to 33.5% at baseline. For those 6-12 months after diagnosis of diabetes, 56% were on IIM, compared to baseline of 48%. There were no increase in number of phone calls, hospital length of stay, or hypoglycemia events.

Discussion

With implementation of ICR teaching at diagnosis, there was a significant increase in the percent of patients on IIM at 6 months and 12 months after diagnosis. The program was effective and there were no safety issues, thus the criteria was expanded to include families with a single adult caregiver. The implementation of ICR at diagnosis has been so successful that it has now been adopted as standard of care for new onset diabetes patients > 5 years of age presenting to Texas Children's Hospital.