Sugar and Spice and Everything Nice: Improving the Oral Glucose Tolerance Screening Experience

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Objective

CFF guidelines for care recommends annual oral glucose tolerance testing for all patients with Cystic Fibrosis aged 10 and over. Screening rates at our pediatric CF Center fell below the median score of eligible pediatric programs in the US in both 2017 and 2018. The goal for our project was to create a system that would make the screening process more easily accessible to our patients.

Introduction

The Maine Medical Center Pediatric Cystic Fibrosis Center is a division of the Barbara Bush Children's Hospital, a 116 bed non-profit organization providing comprehensive, family-centered healthcare for all of northern New England. It is Maine's premier referral hospital, offering services not available elsewhere in the state. Our CF center is a free standing clinic, adjacent to the main hospital. We follow 85 pediatric CF patients. Our patients travel up to 2 ½ hours to be seen at our center. About 50% of our patients live in rural areas of Maine.

Methods

- 2017 and 2018 Patient Registry Program Specific Data were reviewed. In 2017, 42% and in 2018 58% of our eligible patients completed annual screening for CFRD. The national median was 63%.
- A 2019 patient data set was created and OGTT tracked throughout the project.
- A survey was developed. Six questions were asked, covering the following topics: OGTT education in clinic and challenges/barriers to testing (i.e. location of testing, alternative to sugary drink, finger stick glucose test).
- A survey introduction including the CFF guidelines, rationale for screening, and procedure for testing was developed to include with surveys.
- The survey monkey was emailed to 28 families whose child had not completed screening by July 1st.
- We received 15 survey responses.
- **The two highest ranking barriers were:**
  1. 'drinking the sugary drink' and
  2. venipuncture.
- **6 of 15 felt that being able to do testing at CF clinic would make it easier to complete.**
- **4 of 15 had never received education on why screening is important.**

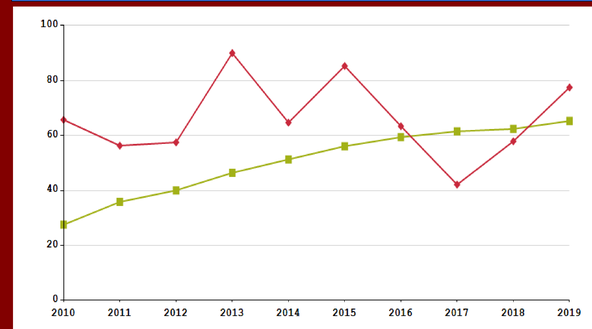
Methods-cont.

- After review of literature and discussion with Endocrinologists at our Pediatric Specialty Practice, it was decided that we would offer patients:
  1. Glucola alternative in the form of jelly beans or juice, and
  2. CF clinic visits for testing, using a Nova Glucose Monitor (hospital grade) and finger stick blood samples. If results were not consistent with the norm of fasting and post prandial BS, we would follow-up with full laboratory testing.
  3. Standardized, clinic based education on the importance of annual screening.

Results

- OGTT screening rates at our CF center increased from 42% in 2017 to 78% in 2019. 15 tests were completed between October and December 2019. No patients chose Glucola alternative. The NOVA Glucose Monitor was not available for use during the 2019 data collection period.

Results



OGTT screening	2016	2017	2018	2019
Our program	63%	42%	58%	78%
National Average	59%	61%	63%	65%

Conclusions

By using a QI systems approach to examine OGTT screening in our clinic, developing a tracking tool, recruiting patient/family input, improved targeted education, and offering alternative testing options, we were able to improve our outcomes significantly. We were able to conclude that patient/family education and a team approach to emphasizing the importance of testing were key factors in improving our outcomes. Future plan includes use of NOVA glucose monitoring option, continued education for families with alternatives to standard screening, and continued efforts to achieve our goal of 100% of eligible patients being screened each year.