Big Goals for Little Ones: Improving Outcomes for our Youngest Patients with Type 1 Diabetes

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Background

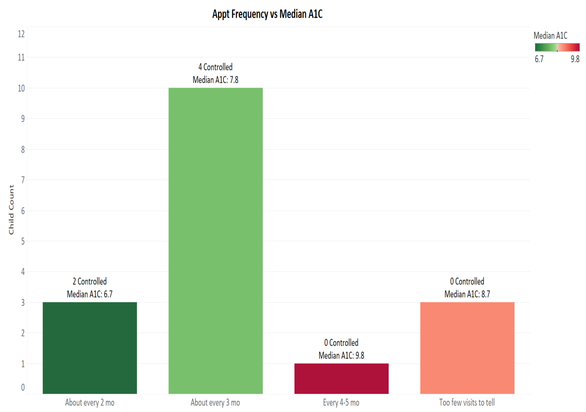
- Managing Type 1 Diabetes in children less than 5 years old can be uniquely challenging compared to older ages
- Inability to communicate, erratic eating and caregiver distress are just a few of the barriers families face
- In November 2023 a specialty clinic was initiated for this age group called the “Littles Clinic”
- **Aimed to have 80% of patients who are in Littles clinic reach a goal A1c of 7.5% in 36 months by increasing appointment frequency and initiating diabetes technology earlier**

Methods

- Created a registry of patients to monitor data
- Patients seen every 4-6 weeks by same physician after diagnosis. This was spaced to every 3 months as comfort and capability increased
- Patients started on rapid education schedule compared to general clinic to expedite pump start
- Monitored outcomes for number and frequency of clinic visits, A1c, and AID use

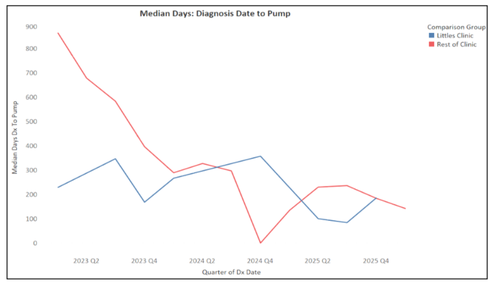
Results

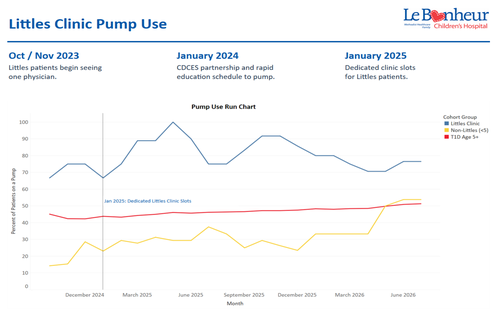
- Average A1c of patients in Littles Clinic was lower (8.3%) than age-matched patients in general clinic (9.4%)
- Patients with more frequent visits were more likely to reach A1c goal
- By visit frequency: median A1c 7.0 for children seen about every 2 months (n=5), 7.3 every 3 months (n=11), 9.5 for newly diagnosed children with too few visits to classify (n=3)
- Among patients reaching target A1c of 7.5%, median time from diagnosis to target A1c was 92 days in Littles Clinic vs 129 days in comparison group



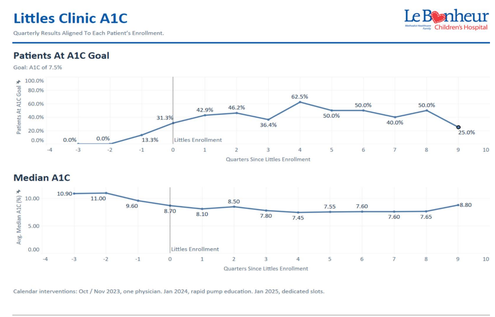
Results

- 43% of Littles patients started a pump within 180 days of diagnosis, vs 14% in general clinic (6 of 14 vs 4 of 28; Fisher p=0.041)
- 71% vs 46% had started by one year (Kaplan-Meier; log-rank p=0.012 across the full curve)
- Within Littles, children who started a pump within 180 days have a lower current A1c: median 7.0 vs 8.0 (p=0.042)

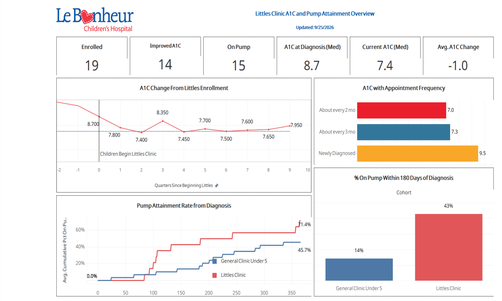




- 62% of Littles patients were at A1c goal by months 9-12 of diagnosis. There was a trend toward higher A1c after 24 months of diagnosis



Littles Dashboard



Conclusions and Next Steps

- Frequent appointments and AID use improved A1c in this small cohort
- Interestingly, patients at the 2 year mark from diagnosis (8th -9th quarter) had higher A1c and were less likely to be at A1c goal
- Investigation is needed to determine if resuming more frequent visits addresses A1c without increasing parental burnout

- Next steps:
  - Additional physician now seeing Littles patients
  - Initiate template for all Littles patients clinic visits to streamline visits and standardize treatment
  - Increase psychosocial support for caregivers in and out of clinic

Fishbone Diagram

Policies and Procedures:
-No formal process for patients diagnosed with Type 1 Diabetes under the age of 5
-Not consistently starting CGM at diagnosis

Product:
-Not all patients able to attend all the education classes needed for technology
-Consistent education for patients only geared for parents and patients >5yo
-Difficulty navigating technology and troubleshooting devices

People:
-Inconsistent care with multiple providers
-Appointment scheduling not set up to meet the needs of <5yo

Place:
-Only see patients at downtown locations
-Pump start requires pump class which is located downtown Memphis only with no online options

Process:
-Not using a dot phrase for younger patient appointments to make sure each family receives the same
-No form in EPIC to track patients <5yo

Global Aim: Increase to 80% of patients who are in Littles clinic reach a goal A1c of 7.5% in 36 months by increasing appointment frequency and initiating diabetes technology earlier

Acknowledgments

Special thanks to the Littles Clinic staff, Le Bonheur Diabetes & Endocrinology team and patient families for their partnership in improving care for our youngest patients with T1D