**BACKGROUND**

- Cardiovascular disease is the leading cause of mortality in patients with Type 1 diabetes (T1D) for 20 years or more.
- Estimated age-adjusted relative risk for cardiovascular disease in T1D is approximately 10 times that of general population.
- Dyslipidemia is a significant risk factor for cardiovascular events and mortality in T1D.
- Each 38.7 mg/dL (1 mmol/L) increase in LDL is associated with 35-50% greater risk of cardiovascular events and mortality.
- Statin therapy reduces the risk of cardiovascular events in individuals with diabetes.
- At the BDC, 3800 pediatric patients and 2700 adult patients with T1D seen annually.
- Goal LDL is ≤100 for cardiovascular risk reduction in diabetes.

**PROJECT AIMS**

- Develop local BDC algorithm for lipid management in T1D.
- Improve the percentage of patients with elevated LDL on statin therapy.
- Improve percentage of pediatric patients with elevated LDL seen by dietitian team.
- Improve cardiovascular health for T1D patients across the lifespan.

**INTERVENTIONS**

**Adult & Pediatric Clinics**
- Smartphones for statin start.
- Heart Healthy Diet Handout automatically prints once per year for dyslipidemia.
- Best Practice Advisory.

**Pediatric Clinic Only**
- For patients with LDL ≥130, dyslipidemia, or on a statin, clinician note automatically pulls in HIP and Discussion text addressing lipid status.
- Pediatric RD Epic Order System (below).

**TIMELINE**

- **October 2019 – June 2020**: Baseline data collection.
- **Baseline data collection**.
- **Clinician & RD workflow evaluation**.
- **Implementation of Peds RD Order (March)**.
- **Creation of note template, Smartphrases, lifestyle handout, and BPA**.

- **July 2020**: Baseline questionnaires sent to clinicians.
- **Educational sessions for BDC staff**.
- **Epic Go-live of interventions**.

- **September / October 2020**: Send post-intervention questionnaires to clinicians.
- Analyze results and plan next PDSA cycle.

**PROCESS & OUTCOME MEASURES**

- Process measures include response to abnormal LDL values as measured by:
  - RD referrals / visits.
  - Statin ordering.
  - Informatics tool utilization.
  - Clinician questionnaires to assess impact on knowledge and workflow.

- Outcome measures include improvement in LDL values for patients age 10-39 with LDL ≥130, and for patients age 40-75 with LDL ≥100.

- Balancing measures include tracking statin side effects (myopathy, hepatotoxicity).