Improving Dyslipidemia Screening and Management in Youth with Type 2 Diabetes

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Background

Cardiovascular disease (CVD) is the leading cause of mortality among individuals with diabetes. Youth-onset T2D is associated with accelerated CVD risk. Dyslipidemia is a major modifiable risk factor for CVD, yet screening and treatment remain suboptimal in youth.

At Seattle Children's Hospital in 2025, of the 328 patients seen in our clinic with T2D:

- 61% met ADA-recommended annual lipid screening guidelines
- 44% were meeting LDL cholesterol targets (< 100 mg/dL)
- Of the 17% with LDL > 130 mg/dL:
  - 57% received nutrition education
  - Only 7% were prescribed statin therapy

SMART Aims

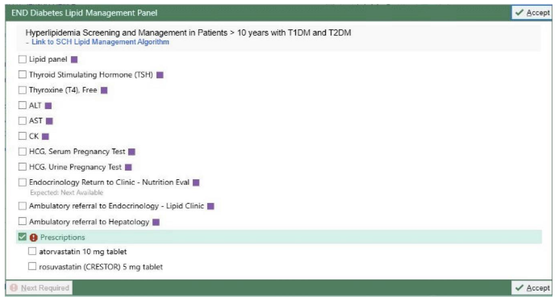
Screening: We aim to increase annual dyslipidemia screening of youth with T2D in our center from 61% to 75% by January 2027.

Management: We aim to increase the percentage of youth with T2D meeting LDL goals from 44% to 60% by January 2028.

Methods

Intervention 1:

- Development of standardized hyperlipidemia screening and management algorithm with supplementary electronic health record (EHR) Order Set (see below)
- Provider education on importance of dyslipidemia screening and management



Key Driver Diagrams

Improving Lipid Screening in Patients with T2D

Primary Drivers	Secondary Drivers
Provider	• Clinician knowledge of screening guidelines • Recognition of patients due for lipid panels • Remembering to order and discuss screening
Patient	• Access to lab • Fasting status • Understanding the purpose of lipid screening

Environment	• Access to lab
	• SDOH Barriers:
	  ○ Transportation to and from appointments, lab
	  ○ Health literacy
	  ○ Culturally relevant education

Equipment	• External labs not easily visible
Process	• Standardized process (no standardized screening method and response algorithm)

Change Ideas

• Standardize screening (utilize EHR Care Gaps)
• Make screening easier w/ POC lipid assay
• Provider Education
  ○ Present current guidelines on lipid screening and management
• Create response algorithm for positive screen
  ○ When to Refer to Lipid Clinic

Improving the Number of Patients with T2D Meeting Lipid Goals

Primary Drivers	Secondary Drivers
Provider	• Provider knowledge and comfort with treatment • No standardized treatment protocol for positive screen • Time to discuss treatment
Multidisciplinary Team	• RD comfort with lipid counseling • RD availability to see patients • Exercise physiologist availability to see patients • Lipid clinic availability for initial and follow-up visits • SW availability to see patients to address SDOH
Patient	• Understanding the benefits of treatment and potential side effects • Support at home for healthy lifestyle behaviors

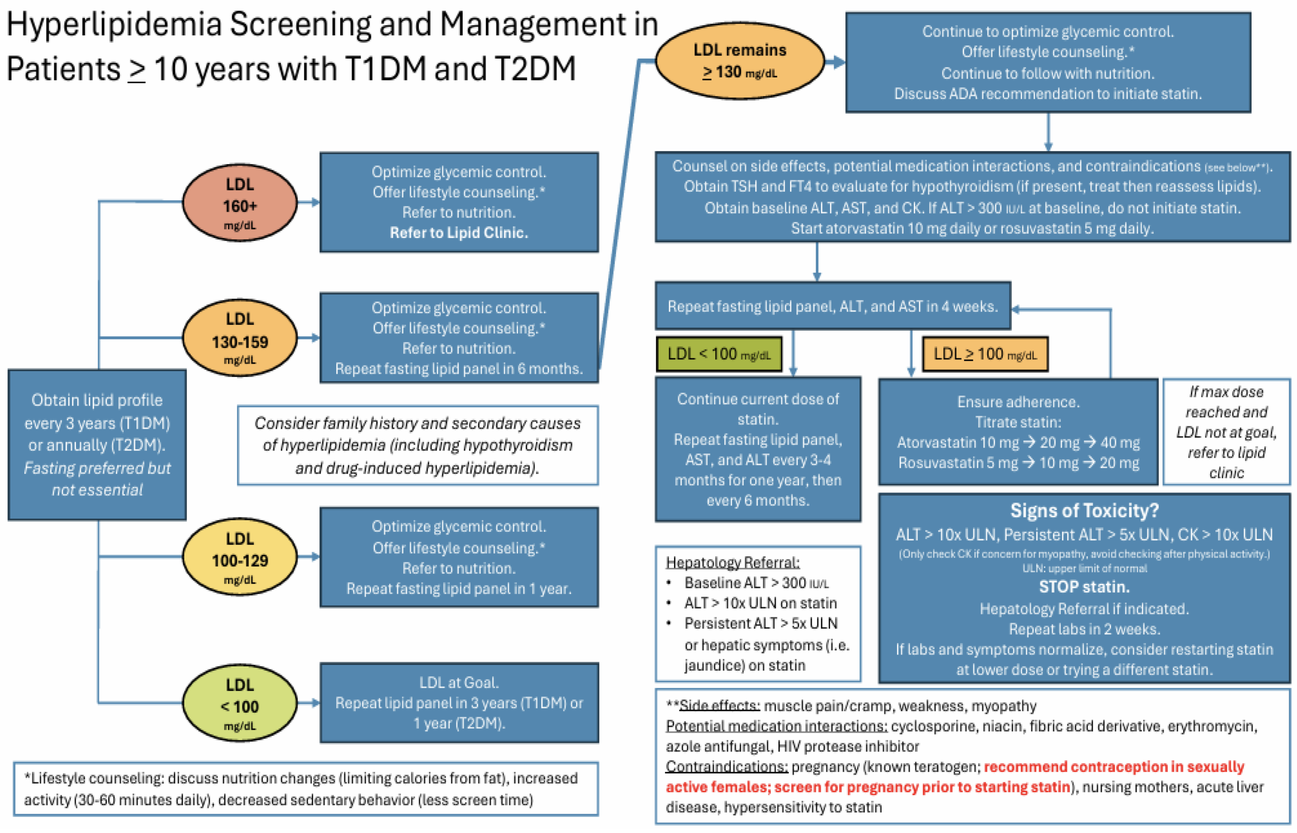
Environment	• SDOH Barriers to Treatment:
	  ○ Access to healthy foods
	  ○ Affordability of healthy foods
	  ○ Access to safe spaces for physical activity
	  ○ Time for physical activity
	  ○ Transportation to and from appointments, lab, pharmacy
	  ○ Health literacy
	  ○ Culturally relevant education
	• Limited time in visit

Equipment	• External labs not easily visible
Process	• Standardized process (no standardized screening method and response algorithm)

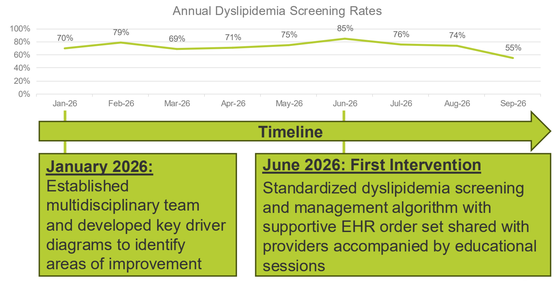
Change Ideas

• Create response algorithm for positive screen
  ○ When to Refer to Lipid Clinic
• Provider Education
  ○ Present current guidelines on lipid screening and management
• Patient Education Materials
  ○ Create educational handout for patients on lifestyle management
  ○ Create educational handout for patients on statin benefits and side effects
• Improve access to lipid-focused patient education
  ○ Group nutrition classes with RD
  ○ Group physical activity class with exercise physiologist
  ○ Telehealth options
• Reduce SDOH barriers to treatment
  ○ Ensure SDOH screening in patients with T2DM
  ○ Provide list of local resources
  ○ Provide 1 on 1 SW support
• Utilize patient-reported motivation to change and nutrition/activity surveys for ease of lifestyle counseling in visit

Hyperlipidemia Screening and Management Algorithm



Results



- Average annual screening rates in 2026 for individuals with T2D are 72% to date.
- Annual dyslipidemia screening rates peaked in June at 85%, coinciding with our first intervention, suggesting that increased awareness of screening guidelines may promote higher screening rates.
- Screening rates dipped to 55% in September. Our team has considered providing quarterly reminders to providers regarding lipid screening.

Next Steps

- In-office point-of-care lipid screening with EHR health care maintenance reminders
- Multilingual educational materials for patients
- Group telemedicine nutrition classes