Increasing Peripheral Neuropathy Screening Rates in Youth and Adolescents with Type 2 Diabetes Within an Outpatient Diabetes Clinic

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Introduction

In the SEARCH for Diabetes in Youth observational study, 22% of youth with type 2 diabetes (T2D) had diabetic peripheral neuropathy (DPN).[1]

This suggests a need for early screening and better risk management in this population.

At Seattle Children's Diabetes Center, a baseline audit revealed that no comprehensive foot exams were being performed.

Aim: Increase the percentage of eligible youth with type 2 diabetes who receive DPN screening from 0% to **20%** from July 2025 to September 2025 at one regional clinic site.

Methods

Design: rapid Plan-Do-Study-Act (PDSA) pilot, three cycles over eight weeks at South Clinic site.

Measure: percentage of patients with T2D due for an annual comprehensive foot exam with a documented DPN screening

Core interventions

- Michigan Neuropathy Screening Instrument (MNSI), a validated DPN screening tool.[2]
- DPN standard of care management checklist, consistent with evidence-based guidelines.[3]

Supportive interventions

- Provider education for 6 providers at the clinic site.
- Standardized EHR documentation
- DPN screening toolkits
- Patient footcare education

Results

0%	**66.0%**	20%
Baseline audit	Screened during pilot (31 of 47)	Goal

Over the eight-week period, 31 of 47 patients with T2D seen at South Clinic site who were due for a comprehensive foot exam received a documented DPN screening.

Effective diabetes care increased from 0% to 66.0%, surpassing the 20% goal (Figure 1).

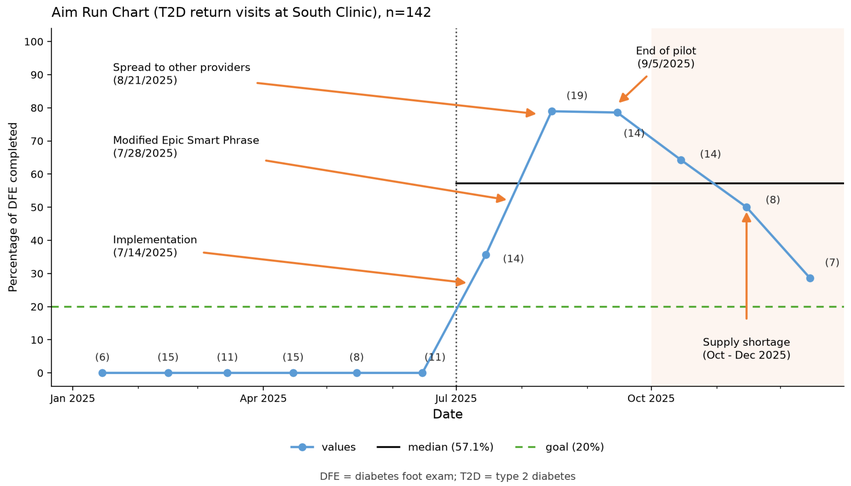


Figure 1. Monthly percentage of patients with T2D due for a diabetes foot exam (DFE) who had one documented, 2025. Numbers in parentheses = patients due that month.

Conclusions

This project improved DPN screening for youth with T2D by implementing a validated DPN screening tool and standardizing the process.

After the pilot ended, monthly rates fell (64.3% October, 50.0% November, 28.6% December 2025) during an exam supply shortage (Figure 1).

Next Steps

- Larger-scale site implementation.
- Optimizing EHR workflow integration through structured data capture of diabetes foot exams.
- Incorporate necessary supplies into clinic demand flow.

References

1. Jaiswal M, Divers J, Dabelea D, et al. Prevalence of and risk factors for diabetic peripheral neuropathy in youth with type 1 and type 2 diabetes: SEARCH for Diabetes in Youth Study. Diabetes Care. 2017;40(9):1226-1232. doi:10.2337/dc17-0179

2. Feldman EL, Stevens MJ, Thomas PK, et al. A practical two-step quantitative clinical and electrophysiological assessment for the diagnosis and staging of diabetic neuropathy. Diabetes Care. 1994;17(11):1281-1289.

3. American Diabetes Association Professional Practice Committee. 14. Children and adolescents: Standards of Care in Diabetes-2025. Diabetes Care. 2025;48(Suppl 1):S283-S305.

Abbreviations: DFE, diabetes foot exam; DPN, diabetic peripheral neuropathy; EHR, electronic health record; MNSI, Michigan Neuropathy Screening Instrument; PDSA, Plan-Do-Study-Act; T2D, type 2 diabetes.