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The Role of Certified Diabetes Care and Education Specialists in the Development of the **4T Program**

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Background

- The 4T Program (Teamworks, Targets, Technology, and Tight control) at Stanford Children's aimed to intensify new onset type 1 diabetes (T1D) education.
- In the Pilot 4T Study, HbA1c improved by 0.5% at 12months compared to historic controls.
- Certified and education specialists (CDCES) were key to the development and implementation of the program.

Objectives

To describe the role of Certified Diabetes Care and Education Specialists (CDCES) in the development and implementation of the 4T Program at Stanford Children's Diabetes Clinic.

Methods

- Youth with new onset T1D start continuous glucose monitoring (CGM) the first month of T1D diagnosis and CDCES review CGM data weekly.
- CDCES (n=10) sends families electronic health recordbased education and dose adjustment messages.
- Plan, Do, Study, Act (PDSA) cycles were utilized to determine the best workflow for the CDCES and for families to develop a scalable process for CGM review.
- All CDCES received an email with a link to an anonymous 6-question RedCap survey to assess their experiences with the study.

Table 1: Participant Characteristics		
Participants	(n=135)	
Age at TID diagnosis, median (Q1-Q3), years	9.7 (6.8,12.7)	
Sex (M/F)	M = 71 / F = 64	
Insurance Type	77% Private / 23% Public	
English	117 (86.7%)	
Spanish	18 (13.3%)	
HbA1c (%) at T1D Diagnosis, mean (SD)	12.2 (2.1)	

for T1D new onset patients at Stanford Children's Diabetes Clinic.



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Table 1 Continued

Participants	(n=135)
Non-Hispanic White, n (%)	50 (37%)
Hispanic	25 (18.5%)
Asian/Pacific Islander, n (%)	17 (12.6%)
Other	11 (8.1%)
Unknown	32 (23.7%)



Conclusions

•Intensive Diabetes Treatment and Cardiovascular Outcomes in Type 1 Diabetes: The DCCT/EDI C Study 30-Year Follow-up. Diabetes Care. 2016 May;39(5):686-93. doi: 10.2337/dc15 -1990. Epub 2016 Feb 9. PMID: 26861924 • Prahalad P, Ding VY, Zaharieva DP, Addala A, Johari R, Scheinker D, Desai M, Hood K, Maahs DM. Teamwork, Targets, Technology, and Tight Control in Newly Diagnosed Type 1 Diabetes: the Pilot 4T Study. J Clin Endocrinol Metab. 2022 Mar 24;107(4):998-1008. doi: 10.1210/clinem/dgab859. PMID: 34850024





Outcomes

During the 4T pilot study, a total of 135 youth were started on CGM (Table 1). The team developed a workflow for CGM initiation, follow-up, and education as well as

The CDCES team reviewed the CGM tracings of a subset of participants (n = 89) and helped co-develop a population health dashboard to facilitate CGM data review. CDCES input helped engineering colleagues define a workflow (Figure 1) that allowed the growth of this program without increasing the number of CDCES on the team.

The survey was completed by 90% of CDCES. Some CDCES (n=3) felt that the process of starting CGM on all patients with new onset T1D and a 1-week follow-up added burden to their workload. Another 44% (n=4) felt that weekly CGM reviews added to the workload (Figure 2).

While the 4T Program added to the CDCES workload, they all felt that the program was beneficial to patients and families and rewarding for the CDCES team.

Incorporating CDCES perspectives into program development can lead to successful program development and increased job satisfaction.

CDCES teams should play an essential role in program development for the care of youth with T1D. References