

Learning from the Experts: A Survey of Healthcare Professionals Who have and Provide Care for Type 1 Diabetes Jennifer L. Sherr, MD, PhD¹, Mengdi Wu, MSPH², Robin L. Gal, MSPH², Ruth M. Thomas, BS², Kellee M. Miller, PhD², and William V. Tamborlane, MD¹ ¹Yale School of Medicine, New Haven, CT, ²Jaeb Center for Health Research, Tampa, FL

Background / Purpose

Despite the commercial availability of technologies and treatments to aide with management of type 1 diabetes (T1D), adoption of such therapeutics has been somewhat limited into the care plan of many individuals living with this chronic condition. Indeed, data from the T1D Exchange Clinical Registry (T1DX) highlight this as use of an insulin pump is noted in an average of 60% of adults registry participants (1) with continuous glucose monitors (CGM) noted in less than 25% of registry participants (1). Despite data which show improved A1c with use of pump and CGM, there continues to be a debate as to whether the extra costs of insulin pump therapy and CGM are justified by the clinical benefits of this approach compared to multiple daily injections and fingerstick monitoring. Additionally, insurance coverage of these technologies remains challenging. Since a substantial number of diabetes health care professionals (HCPs) have diabetes themselves, this "learn from the experts" study was undertaken to compare use of advanced diabetes technologies (e.g., insulin pumps and continuous glucose monitoring) among diabetes HCPs with T1D to the general population of those with T1D.

Methods

• The T1DX is a network of 77 leading U.S. diabetes centers and includes data on >26,000 patients with T1D receiving care at these centers. In an effort to learn more about the diabetes self-care practices of HCPs with T1D, we surveyed the HCPs within the T1DX.

- The primary investigator at each T1DX site received an email describing them to ask all site HCPs to consider participation. HCPs with T1D were eligible to participate and those interested in participation consented electronically to complete an anonymous self-reported survey.
- Survey questions assessed method of insulin administration, use of continuous glucose monitoring, and glycemic control measured via Hemoglobin A1c (HbA1c).
- Findings from the group of 82 HCPs with T1D ("Expert" Group) were compared to data from 3031 T1DX Registry participants ("Patient" Group) matched on race/ethnicity. The HCP cohort was >99% non-Hispanic white therefore the patient registry group was limited to include non-Hispanic white only.
- Analysis were adjusted for age, gender and diabetes duration.



All comparisons statistically significant.

Pump Use

CGM Use

*p-value adjusted for demographic characteristics (age, gender, duration of T1D)



Conclusions

- Pump and continuous glucose monitors (CGM) use was nearly 1.5 and 2.5 times higher in the Expert group.
- The expert group were remarkably and consistently well controlled with no self-reported HbA1c in the HCP group >8.2%.

Implications

- The very high percentage of HCPs with T1D who use insulin pumps and CGM, as well as the low HbA1c levels maintained by these individuals, provide strong evidence of the benefit of advanced diabetes technologies in T1D management.
- By doing what the experts do, more patients with T1D may be able to reach prescribed glycemic targets.

Acknowledgement

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References: Miller, K, et al. Current Status of Type 1 Diabetes Treatment in the US: Updated Data From the T1D Exchange Clinic Registry. Diabetes Care 2015; 38:971-978.