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IMPORTANT NOTE: EMBARGO TIMES VARY

T1D Exchange to Present Several Abstracts at the 51st European Association for the Study of Diabetes (EASD) Annual Meeting

Research sheds light on treatment/management issues and common disease comorbidities

BOSTON, September 15, 2015 – Investigators from T1D Exchange, a nonprofit dedicated to accelerating discoveries and delivery of new treatments, will present several abstracts on pressing type 1 diabetes issues during the 51st European Association for the Study of Diabetes (EASD) Annual Meeting, held in Stockholm, Sweden from September 14th through September 18th.

The findings provide insight on a range of issues facing the global type 1 diabetes community, including a promising new treatment for severe hypoglycemia for both pediatric and adult patients; the relationship between type 1 diabetes and other autoimmune diseases; and how patients use the bolus calculator on their insulin pumps.

Founded in 2009, T1D Exchange acts as a convener for the thousands of people working to improve patient outcomes—by connecting them to one another and to the patient community at large. T1D Exchange aims to be the translational engine that enables the entire type 1 diabetes ecosystem to collaborate in truly novel ways via the integration of a Clinic Network of 250 investigators at over 75 sites who follow more than 100,000 patients; a well-characterized Clinic Registry comprised of more than 27,000 enrolled individuals with type 1 diabetes; a Biobank with a repository of thousands of patient biosamples; and Glu, an active online community of more than 14,500 patients and caregivers.

"T1D Exchange's unique model makes patients an equal partner in better understanding the disease and speeding the pace of new research discoveries," said Henry Anhalt, DO, chief medical officer at T1D Exchange. "The model gives researchers greater access to patient data and information to help them benchmark issues facing the global type 1 diabetes community in order to improve standards of care in diabetes treatment and management."

Please note embargo times vary.

EMBARGOED UNTIL TUESDAY, SEPT. 15 AT 3:01pm CET

New Intranasal Glucagon Effective in Children and Adolescents. Preliminary clinical trial data have demonstrated that a new, user-friendly, needle-free delivery system is as effective in children and adolescents as the injected form of glucagon. Known as Glucagon Nasal Powder and developed by Locemia Solutions, this represents a major step in advancing a treatment that has been largely unchanged for roughly 25 years.

Rapid treatment of severe hypoglycemia (SH) has long depended on emergency medical services or on caregivers using a glucagon kit that involves reconstituting the medicine prior to injection. The delivery process is subject to human error, often leading to sub-optimal use of an otherwise effective medication, dangerous delays in treatment and use of costly emergency medical services.

Researchers tested the efficacy of intranasal glucagon among pediatric patients ages four through 17. This novel glucagon preparation successfully increased blood glucose levels across the entire age range, showing that it is an effective alternative to the intramuscular glucagon currently available. Researchers previously presented pediatric data at the annual American Diabetes Association Scientific Sessions in June and study results on adult patients at

the Advanced Technologies & Treatments for Diabetes (ATTD) conference in February.

This study was funded principally by The Leona M. And Harry B. Charitable Trust, with additional support from Locemia Solutions.

EMBARGOED UNTIL TUESDAY, SEPT. 15 AT 11:59pm CET

Autoimmune disease comorbidities in children and adults with type 1 diabetes

Type 1 diabetes is often associated with other autoimmune diseases (AD), but currently well-characterized, evidence-based screening guidelines for diagnosing those diseases in type 1 patients does not exist. To better understand factors associated with and the prevalence of AD in type 1 diabetes patients, researchers analyzed data from the nearly 26,000 patients in the T1D Exchange Clinic Registry.

According to the data:

- Diagnosis of one or more autoimmune disorders in addition to type 1 diabetes is common, particularly among women (71%), older patients and non-Hispanic whites (89%). Patients with a longer disease duration (approximately 15 years) were also likely to have an additional autoimmune disorder.
- 26% of patients in the registry were diagnosed with at least one additional autoimmune disorder; and
- Of the most common autoimmune disorders, 19% were thyroid diseases (e.g., Hashimoto's disease and hypothyroidism); 6% of participants were diagnosed with celiac disease.

Further studies are needed to better understand contributing factors and the prevalence of new diagnosis of autoimmune disorders to aid in the development of screening recommendations for patients with type 1 diabetes.

This study was funded by The Leona M. and Harry B. Charitable Trust.

EMBARGOED UNTIL TUESDAY, SEPT. 15 AT 11:59 CET

Do patients use their insulin pump's built-in bolus calculator?

A built-in bolus calculator in an insulin pumps uses personalized settings to make bolus doses (doses of fast-acting insulin) more accurate and curb insulin stacking (repeated insulin injection at close intervals) – but it remains unclear if the calculator is crucial to pump management, a reflection of user ability or simply a feature of the device.

Researchers analyzed data from the T1D Exchange Clinic Registry to assess the frequency of bolus calculator use and determine associated demographics, clinical characteristics and outcomes. Among the nearly 1,950 participants, they found:

- 79% of participants using an insulin pump reported frequently using a bolus calculator;
- 82% of participants who reported using a bolus calculator frequently checked their blood glucose levels compared with 66% of participants who infrequently check;
- Adolescents, women, participants with a shorter diseases duration and patients with lower education level (a high school diploma or less) were most likely to use a bolus calculator;
- There were no significant differences between frequent versus infrequent use of the bolus calculator in number of bolus doses per day, HbA1c levels, occurrence of diabetic ketoacidosis in prior three months and occurrence of severe hypoglycemia in the prior three months;
- There was no significant difference among participants who reported giving a bolus dose prior to a meal versus during/after a meal; and
- Frequent use was not a significant factor in the safe/effective use of insulin pumps.

Researchers believe that the overall common use of the bolus calculator should drive the development of further technology, as well as support the need for automatic entry of blood glucose values into the pump.

This study was funded by The Leona M. and Harry B. Charitable Trust.

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