

Contact: Jill Petrie, T1D Exchange
617-892-6132, jpetrie@t1dexchange.org

Brianne O'Donnell, Finn Partners
212-715-1571, brianne.odonnell@finnpartners.com

IMPORTANT NOTE: EMBARGO TIMES VARY

T1D Exchange to Present Abstracts on Pressing Type 1 Diabetes Issues at ADA Scientific Sessions

Abstracts demonstrate breadth and depth of T1D Exchange research

BOSTON, June 5, 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 annual [American Diabetes Association Scientific Sessions](#), the world's foremost meeting on diabetes. The findings provide unique insight on a range of issues facing the type 1 diabetes community, including diabetes management, severe hypoglycemia and advanced technologies, among others.

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. Drawing on decades of research and data that have come before, 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 26,000 individuals with type 1 diabetes; a [Biobank](#), a repository of thousands of patient biosamples; and [Glu](#), an active online community of more than 13,000 patients and caregivers.

“The type 1 community faces a myriad of challenges each day across all aspects of living with and treating this disease. Our unique model amplifies the voice of the patient to accelerate research that will reduce the burden of living with type 1 diabetes and improve outcomes,” said Dana Ball, executive director and co-founder of T1D Exchange. “The breadth and range of the T1D Exchange research presented at ADA demonstrates our steadfast commitment to this community—and validates the success of our model.”

Please note embargo times vary.

EMBARGOED UNTIL FRIDAY, JUNE 5 AT 4:15PM ET

Effect of Metformin on Overweight and Obese Adolescents with Type 1 Diabetes

Utilizing the [T1D Exchange Clinic Network](#), researchers examined the effect of Metformin on overweight and obese adolescents with type 1 diabetes. Metformin is an oral medication used primarily to treat type 2 diabetes that helps control blood sugar levels and can be used on its own or combined with other medications.

- **Metformin not effective in improving glycemic control but did reduce weight and total daily insulin requirement.** Six months of adjunctive Metformin therapy did not improve glycemic outcomes in obese adolescents with type 1 diabetes and high HbA1C levels despite initial improvement at the three-month mark. However, researchers observed improvement in cardiovascular risk factors, like weight, body mass index and body fat percentage. Further research is needed to determine whether longer duration of Metformin therapy may improve other cardiovascular disease risk factors. This study was funded by the [JDRF](#).

EMBARGOED UNTIL SATURDAY, JUNE 6 AT 10AM ET

An International Comparison of Adult and Pediatric Patients with Type 1 Diabetes

Researchers compared patient data from the [T1D Exchange Clinic Registry](#), the most comprehensive type 1 diabetes database in the U.S., comprising more than 26,000 patients from 76 pediatric and adult endocrinology practices, with the [DPV Initiative](#), a database with more than 40,000 patients from 209 centers in Germany and Austria. Such comparisons allow researchers to benchmark issues facing the global type 1 diabetes community and subsequent discussions about evidence-based care from the perspective of both registries.

- **Glycemic control is worse among U.S. pediatric patients.** Researchers examined clinical outcomes among pediatric patients, specifically HbA1c levels, severe hypoglycemia, and diabetic ketoacidosis (DKA, in which the body produces excess blood acids, which can lead to diabetic coma or even death). Despite higher pump use among pediatric patients ages six through 18 in the T1D Exchange Registry, pediatric patients of all ages in the DPV achieved better outcomes. This indicates further research is needed to better understand where to target interventions in the U.S. to improve clinical outcomes.
- **Smoking and metabolic control.** Type 1 diabetes patients run the risk of macro- and microvascular complications, which are exacerbated by smoking. Researchers compared smoking's relationship with metabolic outcomes among adult patients; overall, smoking rates in the DPV registry (24%) were higher than the Exchange's (~10%) and patients who smoke had significantly higher HbA1c levels. Researchers attribute U.S. anti-smoking policy and smoking cessation programs for reduced smoking rates and suggest similar interventions be used abroad.
- **Use of non-insulin meds uncommon in both U.S. and Germany/Austria.** Use of non-insulin medications for blood glucose control in T1D patients across the age spectrum is uncommon in both the Exchange and DPV registries, with Metformin being most common non-insulin medication prescribed in both registries.

These studies were funded by [The Leona M. and Harry B. Charitable Trust](#).

EMBARGOED UNTIL SATURDAY, JUNE 6 AT 10AM ET

Diagnosis and Treatment of Severe Hypoglycemia

T1D Exchange investigators will present several abstracts related to severe hypoglycemia. Mild hypoglycemia (i.e., blood sugar below 70 mg/dL) is common in individuals who use insulin. In some cases, hypoglycemia becomes severe, requiring emergency medical treatment from a third party, and the risk increases with duration of diabetes.

Researchers will present on:

- **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 [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](#).

- **Severe Hypoglycemia in Older Adults.** Severe hypoglycemia (SH) is a burgeoning problem for older adults with type 1 diabetes. T1D Exchange researchers will present three related studies evaluating the relationship between cognitive dysfunction and hypoglycemia; hypoglycemia and glucose variability; and reduced hypoglycemia unawareness (RHA).

Overall, despite advances in therapy, SH remains common among the older adult population – and they're often unaware when they are experiencing such an event. Further, risk factors, like age, disease duration and HbA1c levels, may fail to identify the most vulnerable patients and highlight the need to better assess risk among older type 1 diabetes patients.

This study was funded by [The Leona M. and Harry B. Charitable Trust](#).

EMBARGOED UNTIL SATURDAY, JUNE 6 AT 10AM ET

Additional Research and Panels

- **Glucose Control with Insulin Pump Infusion Sets.** Many type 1 diabetes patients on insulin pumps use infusion sets (IS) longer than the recommended three days. Using data from the T1D Exchange registry, researchers examined characteristics and glycemic outcomes by duration of IS use in adults with type 1 diabetes using insulin pumps; they found that optimal glucose control was not associated with longer-term use of infusion sets.
- **Patient-Reported Data on Symlin Use.** Pramlintide (Symlin) is currently the only non-insulin medication approved by the FDA for use in type 1 diabetes care. Using self-reported patient data from [Glu](#), T1D Exchange's active online community of 13,000 patients and caregivers, researchers found that although discussions about Symlin may be initiated by patients, physician recommendation was the key factor with actually starting Symlin therapy. This study was funded by AstraZeneca.
- **Factors Affecting Provider Satisfaction.** In a second poster presentation based on patient data from [Glu](#), researchers found that greater empathy, sharing of new technology and access to comprehensive care all independently predicated greater patient satisfaction among adults with type 1 diabetes. Researchers conclude that the quality of diabetes care can be more important than quantitative time spent with patients.
- **Insulin Pump Use from the Patient Perspective.** Despite major advances in diabetes technology, many adults with type 1 diabetes do not achieve recommended blood glucose targets. In a recent study, researchers recruited current insulin pump users, former pump users and multiple daily injection (MDI) users from [Glu](#) to complete an online survey designed to identify attributes of insulin pumps and integrated technology that enhance or create barriers to a person's ability to manage type 1 diabetes. Overall, participants considered cost and continuous device attachment to be significant disadvantages of pump use, while the ability to utilize multiple basal rates was considered an important advantage. Interestingly, insulin delivery method was not significantly related to recent measures of blood glucose control. Diabetes technology is rapidly evolving, highlighting the importance of providing evidence-based information on the merits of different approaches to self-management. This study was sponsored by Eli Lilly and Company.
- **T1D Exchange Members as Guest Panelists.** Dana Ball, executive director and co-founder of the T1D Exchange, and George Serbedzija, director of business development at T1D Exchange, will participate in two panels: Artificial Pancreas from Key Stakeholder Perspectives (Friday, June 5) and Use Of Social Media In Parenting With Type 1 (Sunday, June 7), respectively.

###