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## Behavioral Health Interventions Positively Impact Adults and Youth Experiencing Diabetes Distress

*Findings Indicate Improvements in Mental and Physical Health as well as a Reduction in Healthcare Costs For People Living with Type 1 Diabetes*

**SAN DIEGO, Ca. (June 24, 2023)** – Results from two studies evaluating the impact of mental health support for diabetes patients found significant benefits in patient outcomes were presented today at the 83<sup>rd</sup> Scientific Sessions of the American Diabetes Association® (ADA) in San Diego, CA.

As the number of diabetes cases continues to rise, addressing mental health challenges is a critical element in helping individuals with diabetes manage their care plan. Diabetes distress (DD) for example includes the fears, worries, and burdens associated with the diabetes experience. DD, which is distinct from depression, is common among adults with type 1 diabetes (T1D). In fact, in any **18-month period, 33% to 50%** of people with diabetes experience heightened levels of DD. Individuals living with diabetes are also **2 to 3 times more likely to have depression** than people without diabetes. Furthermore, **only 25% to 50%** of people with diabetes who have depression get diagnosed and treated. This points to a need to provide proactive behavioral health support as part of the overall care plan.

“People with type 1 diabetes are at a heightened risk for mental health issues, including diabetes distress, depression, anxiety, and disordered eating. However, these are all treatable disorders that can be addressed with personalized treatment plans that go beyond the physical symptoms,” said Robert Gabbay, MD, PhD, chief scientific and medical officer for the ADA. “I’m encouraged by the findings from the studies presented during this year’s Scientific Sessions as we continue to seek out innovative, evidence-based solutions that support people living with diabetes when they need it the most.”

### **EMBARC Clinical Trial: Reducing the Emotional Burdens of Living with Diabetes**

Results from the randomized, controlled EMBARK clinical trial revealed significant reductions in DD, among adults with T1D through three intervention programs.

The EMBARK trial included 300 adults with T1D and elevated distress. Individuals were randomly assigned to receive one of three intervention programs: (1) Streamline, an educator-led education and management program; (2) TunedIn, a psychologist-led program focused exclusively on reducing diabetes distress; or (3) FixIt, an integration of the StreamLine and TunedIn programs. Each intervention was delivered in a group-based, virtual format over a three-to-four-month period, including initial workshops, one-to-one phone calls and follow-up meetings.

The results demonstrated a large and clinically meaningful reduction in DD across all three study arms at the follow-up assessment with 35% of participants no longer reporting elevated levels of distress at follow-up and 74% of participants reported a clinically important reduction in distress. The FixIt intervention, which integrated education and emotional DD-targeted approaches, resulted in the greatest reduction in DD, followed by TunedIn and Streamline. The reductions in DD were significantly greater in the FixIt intervention compared to Streamline.

"The preliminary results of the EMBARK trial are promising for people living with T1D who suffer from diabetes distress," said Danielle Hessler Jones, PhD, Professor and Vice Chair for Research in the Department of Family and Community Medicine at the University of California, San Francisco, and lead investigator. "These findings emphasize the significance of providing comprehensive support that addresses both the educational and emotional needs of individuals living with diabetes."

The authors of this study will be reporting on 12-month follow up findings later this year to understand if these improvements were maintained alongside glycemic outcomes. Additionally, there are plans to expand on this work in DD-ASSIST, a new study in which researchers will train clinical teams from 18 diabetes clinics on how to assess and address DD as part of their care delivery.

### **Late-Breaking Poster: Do The Right Thing: Behavioral Intervention for At-Risk T1D Youth**

Findings from the study evaluating home and community-based behavioral health intervention for youths with diabetes, Novel Interventions in Children's Healthcare (NICH), revealed that in addition to improved health, patients had lower healthcare costs in the years after starting NICH.

The study evaluated direct cost data from three healthcare systems provided for youth with avoidable health concerns who received an intensive behavioral health intervention NICH. Youths were included in analyses if they had T1D and at least one year of cost data prior to and following NICH enrollment. Outpatient, emergency department, and inpatient costs were combined, with variability in the amount and type of cost data present across sites.

The analysis included 53 youth: mean age 14.2±2.4 years; 87% Medicaid; 58% Female, 42% Male; 32% Black, 29% Non-Hispanic White, 28% Hispanic/Latinx, 7% Pacific Islander, 2% Asian and 2% other racial and ethnic groups. Mean yearly direct costs were \$58.1k and \$21.8k, prior to and following NICH enrollment, respectively, but not significantly different. After removing three outliers (> 3 SD from the mean), average yearly costs significantly decreased from \$20.4k to \$9.5k per youth, largely due to inpatient charges.

"These results highlight the benefits of providing access to intensive interventions to pediatric populations experiencing health disparities," said David V. Wagner, PhD and senior author. "Investing early in the lives of youth experiencing health disparities is not only the right thing to do to improve patients' health but it could also positive economic impact down the road."

Researchers are designing follow-up studies and related efforts to further expand access to this intervention nationwide and determine the impact on the lived experience of people with diabetes.

### **Research presentation details:**

Dr. Hessler will present the findings at the following oral presentation session:

- ADA Presidents' Select Abstract: EMBARK—A Randomized, Controlled Trial Comparing Three Approaches to Reducing Diabetes Distress in Adults with Type 1 Diabetes
- Presented on Saturday, June 24, 2023 at 4:30 PM PST

Dr. Wagner will present the findings at the following general poster session:

- Do the Right Thing—Intensive Intervention and Resulting Costs for Youth with High Social Risk and Type 1 Diabetes (T1D)
- Presented on Saturday, June 24, 2023 at 11:30 am PST

### **About the ADA's Scientific Sessions**

The ADA's 83<sup>rd</sup> Scientific Sessions, the world's largest scientific meeting focused on diabetes research, prevention, and care, will be held in San Diego, CA on June 23–26. More than 12,000 leading physicians, scientists, and health care professionals from around the world are expected to convene both in person and virtually to unveil cutting-edge research, treatment recommendations, and advances toward a cure for diabetes. Attendees will receive exclusive access to thousands of original research presentations and take part in provocative and engaging exchanges with leading diabetes experts. Join the Scientific Sessions conversation on social media using #ADA2023.

### **About the American Diabetes Association**

The American Diabetes Association (ADA) is the nation's leading voluntary health organization fighting to bend the curve on the diabetes epidemic and help people living with diabetes thrive. For 82 years, the ADA has driven discovery and research to treat, manage, and prevent diabetes while working relentlessly for a cure. Through advocacy, program development, and education we aim to improve the quality of life for the over 133 million Americans living with diabetes or prediabetes. Diabetes has brought us together. What we do next will make us Connected for Life. To learn more or to get involved, visit us at [diabetes.org](https://diabetes.org) or call 1-800-DIABETES (1-800-342-2383). Join the fight with us on Facebook ([American Diabetes Association](https://www.facebook.com/AmericanDiabetesAssociation)), Spanish Facebook ([Asociación Americana de la Diabetes](https://www.facebook.com/AsociaciónAmericanaDeLaDiabetes)), LinkedIn ([American Diabetes Association](https://www.linkedin.com/company/american-diabetes-association)), Twitter ([@AmDiabetesAssn](https://twitter.com/AmDiabetesAssn)), and Instagram ([@AmDiabetesAssn](https://www.instagram.com/AmDiabetesAssn)).

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