

2021 ANNUAL REPORT



FROM OUR CEO



Dear T1D Exchange Community Members,

The year 2021 was transformational for T1D Exchange. While the global pandemic continued to present challenges, we were able to substantially grow our programs and offerings, producing a much larger reach in research, on a wide range of topics important to people with T1D, as well as scaling our quality improvement initiatives for those living with T1D.

While operating remotely, the Quality Improvement Collaborative (T1DX-QI) expanded from 30 to 41 clinics across the U.S., caring for over 55,000 people living with T1D. This growth enabled us to create a greater impact in studying and implementing changes designed to improve outcomes. We helped centers drive improvement in blood glucose control, depression screening, and technology use that is proven to lead to better outcomes. We proliferated the findings from our work through 16 publications in 2021. In addition, we also worked tirelessly to gather non-identifiable Electronic Medical Record (EMR) data from some of our centers, accounting for almost 40,000 individuals with T1D, which enabled us to conduct data-driven research and quality improvement activities.

We completed the COVID-19 study that was begun in 2020, ending with over 1,000 documented cases of COVID-19 and T1D. This seminal work gathered valuable information on the presentation, progression, and outcomes of those COVID-19 cases, which led to numerous publications in top peer-reviewed journals.

We also shared our work with the CDC and other health leaders, which contributed to T1D being prioritized as a chronic condition for consideration in the early days of vaccination prioritization.

The COVID-19 study also served as a springboard for our health equity work, where we have endeavored to reduce inequities in diabetes device use and ultimately diabetes outcomes such as HbA1c levels, which unfortunately are significantly worse for people of color. Two of the centers in our Collaborative demonstrated improvement by reducing these disparities in device use and HbA1c. Additional centers joined a novel, Medtronic-sponsored, health equity pilot on device use, where we began testing various changes to drive reductions in these disparities. While this work is still ongoing, four abstracts will be presented at the ATTD conference in Barcelona, in April, 2022 highlighting this important work.

The T1D Exchange Registry, which is our online registry of information gathered directly from people with T1D or their caregivers, saw rapid growth in 2021. The number of individuals completing our baseline questionnaire increased to 12,500, providing us with extensive data on demographic, treatment, and patient reported outcome information. Furthermore, over 1,200 individuals in the Registry also linked their Continuous Glucose Monitor (CGM) data via the cloud to their Registry online accounts, enabling us to research a wide range of topics and their relationship with glucose levels. A number of abstracts and

manuscripts were generated in 2021 based on the work of our Registry and related research activities.

Our Custom Research team saw impressive growth in project volume, nearly tripling the number of sponsored research projects we conducted in 2021. We examined a range of important topics using our unique combination of patient and provider relationships and associated qualitative and quantitative data. An example of this work included assessing severe hypoglycemia by combining novel surveys with associated CGM data for over 1,000 individuals to assess perceptions and realities of its frequency, severity, and impact. Some of this work will be presented at ADA in 2022. We also examined unmet needs and barriers to CGM usage in both T1D and T2D, to help guide a company looking to bring a new CGM device to market in the future. We began exciting work on the topic of screening those at-risk for developing T1D, incorporating patient and provider market research to help inform how we might track real-world efforts in screening across the U.S. And, we examined operational barriers and drivers to smart pen use at some of the centers in our T1DX-QI to help inform the manufacturer of opportunities to reduce system friction and improve uptake.

Finally, we increased our study recruitment assistance work for third-party researchers, connecting them with individuals from our Registry and online community. We more than doubled the number of studies for which we helped recruit eligible subjects, with some outstanding results. These studies ranged from large market research surveys to in-person clinical studies of treatments like novel cell therapies and biologics. Our recruitment efforts delivered results for these studies in as little as one hour to a few months' time. We believe we can increasingly expedite any study involving T1D subjects and look forward to further expansion of our research services in 2022, including the offering of formal post-market surveillance activities for medical device companies.

In 2022, we plan to continue our strong momentum with program expansion, building our data assets, and conducting important topical research. We will continue to expand our data collection in the EMR, CGM, and psychosocial arenas such as diabetes distress. We will take on a more meaningful role in the screening of those at risk for developing T1D and work to minimize disparities in diabetes care and outcomes through our evolving Health Equity Program.

We're excited to share the progress we've made in 2021 and the very important work we will be doing in 2022. None of this would be possible without the generous funding we've received from The Helmsley Charitable Trust, enabling us to further our mission of improving the lives of people with T1D. I would also like to thank the employees of T1D Exchange who worked diligently throughout the year to deliver these results, as well as the individuals, providers, and researchers in industry and academia who also made all of our work possible.

David Walton, CEO

T1D Exchange

A handwritten signature in black ink that reads "David Walton". The signature is written in a cursive, flowing style with a large, prominent "D" and "W".

EXECUTIVE SUMMARY

DURING A YEAR OF ADVERSITY FOR MANY, T1D EXCHANGE MADE A DIFFERENCE

Throughout 2021, T1D Exchange continued our mission to drive research and improve outcomes for the entire T1D population through real-world evidence and collaborative change. We've seen tremendous growth in our programs and research capabilities by leveraging our reach across the T1D Exchange Quality Improvement Collaborative (T1DX-QI), Registry, and Online Community. We're engaging with more clinics, patients and families, industry and research partners, and advocacy groups than ever before.

T1D Exchange has maintained our focus, delivering and expanding our offerings throughout the challenges of the COVID-19 pandemic. The core of our COVID-19 work contributed to T1D prioritization as a chronic condition for vaccination administration, while providing health inequity insight on device use and outcomes. In response, we're engaging in multiple strategies to understand and reduce health disparities.

Our interventions to improve quality of care include increased scaling of QI initiatives and program growth

and offerings. T1D Exchange had 16 publications in 2021, with focused work on psycho-social factors, blood glucose outcomes, and access to diabetes technology.

T1DX-QI has grown to 41 participating clinics, supporting over 55,000 people with T1D, with data generated from this population having significant impacts on the study and implementation of changes to improve future outcomes.

T1D Exchange Registry expansion is providing increased feedback through baseline questionnaire completion, as are Registry accounts with linked access to CGM data. Custom research volume has tripled over the previous year, including a hypoglycemia study on frequency, severity, and impact, and unmet needs and barriers of CGM use. Study recruitment doubled in 2021, as we cast a wide net between researchers and the T1D Exchange Registry and Online Community.

In this report, we will look closely at T1D Exchange's many contributions and achievements over the last year. Incorporating research findings and quality improvement measures into clinical care will serve to accelerate innovations and improve prevention, treatment, and health equity strategies in T1D care. We commend and congratulate the collective efforts of our staff and partners in research, clinical care, industry, and advocacy.

In 2021, we grew in every measurable opportunity, which dramatically increased our ability to better understand and improve the care provided to people with T1D. Here is a glimpse at our growth and progress in 2021:

- Growth of the T1D Exchange Quality Improvement Collaborative to 41 clinic sites with the addition of 13 new clinics in 2021, supporting over 55,000 people with T1D
- Extensive research on health equity in T1D care
- Surpassed over 12,000 participants with data in our Registry
- Received an average of 400 responses per day to our Questions of the Day — with a record of 549 responses to our most-answered question
- Produced nearly 18 manuscripts on a wide array of topics
- Conducted numerous custom research studies including work with Eli Lilly, LifeScan, Zealand Pharma, Medtronic, and Vertex Pharmaceuticals
- Promoted 10 research studies, including work with: Vertex Pharmaceuticals, University of California, San Francisco (UCSF), Avotres, Inc., Zealand Pharma, Lifescan Diabetes Institute, Jaeb Center for Health Research, Dexcom, Inc., and Eli Lilly

T1D Exchange is devoted to accelerating and supporting research, expanding data collection, and increasing patient engagement. We've made meaningful strides towards delivering our vision of better, longer lives for all people with T1D.

SUCCESSFUL PATIENT RECRUITMENT CONTRIBUTES TO MEANINGFUL RESEARCH

In 2021, T1D Exchange fully demonstrated our ability to recruit highly qualified patients for 10 different areas of research. Through recruitment efforts within the Registry and the online community, we more than met the needs of our sponsors working to change the future of diabetes care and technology.

Through the T1D Exchange Registry alone, we invited 9,195 people to participate in new T1D studies—with thousands qualifying and participating—doubling the number of studies we served compared to previous years. Thousands of people from our online community also participated in T1D studies. Some study recruitment efforts were completed within minutes of sending out invitations!

The breadth of research included market research surveys, in-person clinical trials, and interventional studies conducted remotely. Here's a glance at the variety of research our extensive recruitment efforts made possible:

- Patient experiences of severe hypoglycemia
- Strategies to reduce diabetes distress and improve diabetes management
- Safety, tolerance, and potential efficacy of cell-based therapy
- Patient experiences with emergency glucagon:
- Patient experiences with continuous glucose monitoring technology
- Patient experiences with closed-loop insulin pump apps
- Patient evaluation of adhesives for an investigational CGM sensor
- Patient experiences of diabetes distress and shared CGM data
- Patient experiences with nasal glucagon and severe hypoglycemia
- Safety, tolerability, and efficacy of islet cell infusion therapy
- Effects of nutrition, diabetes management, and fitness on male reproductive health
- Patient experiences ready-to-use emergency glucagon
- Financial stress related to diabetes for T1D caregivers
- Effects of exercise on blood glucose levels
- Efficacy of a virtual diabetes specialty clinic
- Quality of clinicians' diabetes technology training
- Overcoming barriers to trying diabetes technology



DRIVING REAL WORLD CHANGE WITH THE T1D EXCHANGE QUALITY IMPROVEMENT COLLABORATIVE

Launched in 2016 with the support of The Leona M. and Harry B. Helmsley Charitable Trust, the T1D Exchange Quality Improvement Collaborative (T1DX-QI) works to refine best practices and improve the quality of care and outcomes for individuals living with T1D. Growth has been tremendous, with 41 endocrine clinics from across the U.S. now participating in the Collaborative.

In 2021, the T1DX-QI completed an astounding 61 projects.

Fueled by top leaders in diabetes care, the T1DX-QI has become an engine of innovation and inspiration. By engaging with the shared, data-driven, and systematic methods of the T1DX-QI, clinics have seen unprecedented success in their approach to diabetes management.

The continued objectives of the T1DX-QI include:

- Collecting data to drive improvements and shape T1D decision making
- Collaboratively designing and testing ideas to improve outcomes
- Calculating and understanding measures that make quality improvements
- Developing insights and change packages (how-to guides) to share broadly
- Utilizing the QI portal for benchmarking and improvements in population health

With members working closely together to identify gaps in care, discover and refine best practices, and share research—the process has become knowledge sharing at its very best. While collated data gives clinics a clear sense of “where they are,” it also demonstrates “where they can be” by applying shared, evidence-based methods for improving care.

“I was privileged to be part of the T1DX-QI from the get-go, starting at the design conception. It’s incredibly rewarding and exciting to see how the work has progressed,” states Dr. Sarah Corathers, a pediatric and adult endocrinologist at Cincinnati Children’s and co-chair of the T1DX-QI Clinical Leadership Committee.

“I’m thrilled that we have a network of clinics in the U.S. that are interested in learning from one another—accelerating improvements in care by sharing best practices freely, and by advancing the science of diabetes care delivery. It creates a collective learning opportunity and helps us to adopt changes that make sense.”

The T1DX-QI is comprised of thought leaders, clinicians, people living with T1D, industry partners, and other key stakeholders; clinical partners serve a base of approximately 55,000 people living with T1D. Participating members share generated, institution-based data through the T1DX-QI portal, engage in targeted change and, measure QI outcomes.

Successful, innovative approaches are shared broadly, improving the delivery of care, and in turn, the lives of individuals living with T1D.

T1DX-QI CLINICS

LOCATION

SUNY Upstate Medical University, Joslin Diabetes Center Adult Clinic	Syracuse, NY
Children's Mercy Hospital	Kansas, MO
Barbara Davis Center for Childhood Diabetes, Children's Hospital Pediatric Clinic	Aurora, CO
University of Michigan Hospitals-Michigan Medicine, C.S. Mott Children's Hospital	Ann Arbor, MI
Nationwide Children's Hospital	Columbus, OH
Penn Rodebaugh Diabetes Center, Penn Medicine	Philadelphia, PA
Baylor College of Medicine, Texas Children's Hospital	Houston, TX
Cincinnati Children's Hospital Medical Center	Cincinnati, OH
Stanford Pediatrics, Lucile Packard Children's Hospital	Palo Alto, CA
Barbara Davis Center for Diabetes, Adult Clinic	Aurora, CO
Wayne State University (Adult Clinic)	Detroit, MI
Stanford Adult Diabetes Clinic	Palo Alto, CA
Rady Children's Hospital	San Diego, CA
University of Florida Diabetes Institute (Pediatric)	Gainesville, FL
SUNY Upstate Medical University, Joslin Diabetes Center Pediatric Clinic	Syracuse, NY
Spectrum Health, Helen DeVos Children's Hospital	Grand Rapids, MI
Seattle Children's Hospital	Seattle, WA
NYU Langone Health, Pediatrics	New York, NY
Children's Hospital of Los Angeles	Los Angeles, CA
University of Miami, Miller School of Medicine Adult Clinic	Miami, FL
University of Miami, Miller School of Medicine Pediatric Clinic	Miami, FL

Le Bonheur Children's Hospital, University of Tennessee	Memphis, TN
Cook Children's Medical Center	Fort Worth, TX
Northwell Health, Cohen Children's Medical Center	Queens, NY
University of Alabama at Birmingham (Pediatric)	Birmingham, AL
NYU Langone Adults	New York, NY
Emory University, Children's Healthcare of Atlanta	Atlanta, GA
Weill Cornell Medicine	New York, NY
Indiana University Health	Indianapolis, IN
Lurie Children's Hospital	Chicago, IL
<i>Grady Memorial Hospital *</i>	<i>Atlanta, GA</i>
<i>NYU Langone Long Island *</i>	<i>Long Island, NY</i>
<i>Einstein Healthcare *</i>	<i>Bronx, NY</i>
<i>UCSF Adult *</i>	<i>San Francisco, CA</i>
<i>UCSF Pediatrics *</i>	<i>San Francisco, CA</i>
<i>Children's National *</i>	<i>Washington, DC</i>
<i>Boston Medical Center *</i>	<i>Boston, MA</i>
<i>Mount Sinai, Adult *</i>	<i>New York, NY</i>
<i>Mount Sinai, Pediatric *</i>	<i>New York, NY</i>
<i>Northwestern Medicine *</i>	<i>Chicago, IL</i>
<i>University of Wisconsin, Madison, Pediatric *</i>	<i>Madison, WI</i>

(*) New Clinics as of December 2021



Shining an Even Brighter Light on Health Inequity

"We are still very far from where we should be in caring for people with diabetes, with an equity lens, in part because the issues of health equity, including structural and systemic racism, are so ingrained into our system," said Osagie Ebekozen, MD, MPH, CPHQ, Executive Vice President, Chief Medical Officer at T1D Exchange during the T1DX-QI Learning Sessions.

"This work is urgent and we, as the T1DX-QI, can by sharing our data more widely, bring intentionality to improving diabetes care for everyone."

In 2021, we worked to better understand health inequities in T1D care—and spread what we learn far and wide in an effort to change the real-life experience for these patients. Here is a glimpse at some of the work this past year in 2021.

CREATING THE HEALTH EQUITY ADVANCEMENT LAB (HEAL)

Highlighted by the ongoing COVID-19 pandemic, we have continued our effort to address the dangerously pervasive health inequities amongst racial and ethnic groups in both pediatric and adult T1D care. This work has inspired the creation of the Health Equity Advancement Lab (HEAL). The HEAL program will operate within the T1DX-QI with its own advisory committee.

“HEAL is critical to transforming type 1 diabetes treatment by bringing together a diverse and well-experienced group of health professionals focused on achieving health equity. The group centers on those who experience worse outcomes at a population level and asks why; they pay particular attention to racial inequities and what is changeable to improve the quality of life for those living with type 1 diabetes,” Makaila Manukyan, HEAL Advisor, Senior Project Manager, Office of Equity, Vitality, and Inclusion, Boston Medical Center.

Kicking off in October 2021, the HEAL committee is a group of 20 clinical healthcare professionals who are working strategically on ways to improve the framework of care for people living with T1D.

“We see biases in a number of places in healthcare, and so when we see the stark inequities in technology use, especially in black and Hispanic T1D patients when compared with white T1D patients, it’s definitely a factor worth examining,” explained Ann Mungmode, MPH, CPHQ, Quality Improvement Program Manager at T1D Exchange.

The T1DX-QI HEAL program has a multi-pronged approach with different elements or initiatives to improve health equity. “There are multiple strategies because inequities can occur due to individual or interpersonal reasons, institutional practices and systems, and structural elements that exist in society,” explained Mungmode.

These components include:

- The T1DX-QI Pilot is focused on learning how clinics can improve their current practices to have more equitable health outcomes. Part of this pilot has been looking at provider bias in prescribing CGM and pump technology; this includes interpersonal variables as well. The pilot is about a year in length, so it should be complete by mid-year 2022.
- Data analysis is utilized to quantify, analyze, and display inequities in T1D health. T1D Exchange has access to electronic health record data from across many clinics, not just those participating in the HEAL pilot. There’s also a QI Portal that clinics have access to as members of the T1DX-QI. Once they’ve data mapped with T1D Exchange, that information is transformed into aggregate measures, so they can compare trends over time and key health outcomes such as A1c and diabetes device use. Providers can display data by race and ethnicity, aggregate the outcomes, and determine if inequities exist—and if they’re narrowing this gap through improvement measures.
- The HEAL Advisory Committee will hold quarterly meetings; they provide mentoring for T1D Exchange, advise on the initiatives and how they can be pushed further ahead, and advocate for national change through shared learning.

“We established the HEAL Advisory Committee as part of our broader T1DX-QI Health Equity Strategy,” said Osagie Ebekozien, Executive Vice President, Chief Medical Officer, T1D Exchange, “We’re honored to bring together such great leaders in the field because effectively addressing health equity is a team sport.”

CONTINUING OUR WORK IN COVID-19 AND HEALTH INEQUITY

T1D Exchange continues to recognize the unique potential impacts that the COVID-19 pandemic can have on the T1D community. Research remains underway to support the health of individuals with T1D and to better understand and inform decisions in their care.

In April 2020, COVID-19 data collection began and quickly grew to more than 65 participating clinics. T1D Exchange produced a 32-question survey that clinics completed for any individual with T1D suspected of, or diagnosed with, COVID-19. The data collection effort continued into 2021, with over 800 case submissions from healthcare centers across the country.

Four QI studies related to COVID-19 and health inequities in the T1D population were published in national medical journals, bringing more attention to this ongoing crisis.

- Equitable Post-COVID-19 Care
- COVID-19 Hospitalization in Adults with Type 1 Diabetes: Results from the T1D Exchange Multicenter Surveillance Study
- Full Inequities in Diabetic Ketoacidosis among Patients with Type 1 diabetes and COVID-19: Data from 52 US Clinical Centers
- Diabetic ketoacidosis drives COVID-19 related hospitalizations in children with type 1 diabetes

This research continues as the pandemic wages on.

T1DX-QI: ADVOCACY AND POLICY

New technology and care resources can only make a difference in the lives of people with T1D if they have access to this technology and care. In 2021, we advocated for two significant changes that came to fruition:

- **CGM Medicaid Access:** Despite the advancements in diabetes technology over the last 15 years, many people still do not have access to this life-changing technology. In 2021, the T1DX-QI supported state Medicaid access for CGM coverage in TX, MI, NY, PA, and MO. Shared materials, data, and recommended advocacy talking points provided clinicians with the tools and leverage to speak with state Medicaid offices, state houses, and other elected officials. Already, the impact of this new policy is changing lives: At Texas Children’s Hospital, the number of Medicaid-insured children with access to CGM rose exponentially over the course of a single month.
- **Psychological Support Systems:** T1DX-QI advocated for mental health support for individuals living with T1D in 2021. With a data-driven approach from depression screening research, hospital administrators were able to identify mental health as a gap in T1D care. In turn, diabetes divisions are now successfully staffing professional positions to identify, support, and connect individuals to necessary mental health professionals and services.

We are grateful to be part of the larger diabetes community that continues to work together, advocating for the policies that influence T1D care.

T1DX-QI LEARNING SESSIONS CELEBRATES 5 YEAR ANNIVERSARY

In 2021, our annual Learning Sessions event—“Five years of T1DX-QI Collaborative and Reimagining the Future of Diabetes Care”—took place virtually, in partnership with Boston Medical Center, on November 8th and 9th. The Learning Sessions explored T1D quality improvement (QI) initiatives underway across the U.S., in addition to novel therapies, strategic approaches, and interventions to improve type 1 diabetes care.

“We’ve been on a journey, and it’s been shared by many. This learning session really reflects on the last five years, what we’ve achieved, and what the future holds for us as a network,” said Osagie Ebekozen, MD, MPH, CPHQ, Chief Medical Officer and Executive Vice President at T1D Exchange in his opening remarks. Ebekozen went on to express his gratitude for the Helmsley Charitable Trust, diabetes leaders, and innovators who have helped to sustain the Collaborative’s important work.

While Dr. Ebekozen reflected on the T1DX-QI goals, accomplishments, and gains, he expressed excitement about future objectives, too. “We should be proud to celebrate this as a network. We’re excited for 2022 and beyond, and to continue to partner with Helmsley and other funders to really expand the work that we’re doing: transforming QI culture, A1c improvements and beyond, real-world data, psychosocial care, and health equity.”

During the 2021 Learning Sessions, 21 abstracts were presented and published in the Journal of Diabetes. They included work on infrastructural support of the T1DX-QI, developing population health initiatives, improving T1D psychosocial support, and closing inequities in access to diabetes technology.

“We are still very far from where we should be in caring for people with diabetes with an equity lens,” added Ebekozen, “in part because of health equity issues, but structural and systemic racism are so ingrained into our system.”

“This work is urgent, and we, as the T1DX-QI, can share our data more widely and bring intentionality to improving diabetes care for everyone.”

Breakout sessions included:

- Improving Healthcare Equity among T1D Patients using Glucose Technology, Kajal Gandhi, DO, MPH, Nationwide Children’s Hospital, Columbus OH

- Pediatric T1D Caregiver's Technology Use: Black Parent's Perspective, Mariaester Makacio-Morillo, MD, University of Miami
- Improvement in Equity of CGM Prescriptions after Targeted Interventions, Priyanka Mathias, MD, Albert Einstein College of Medicine/Montefiore Medical Center
- T1D Technology Equity Improvement Project: Baseline Analysis of Insulin Pump Use, Ori Odugbesan, MD, MPH, T1D Exchange
- Increasing Access to Continuous Glucose Monitors for Alabama's Children with Diabetes, Jessica Schmitt, MD, University of Alabama at Birmingham
- Medicaid Coverage of CGM in Texas: A QI Success Story in Advocacy, Bonnie McCann-Crosby, MD, Texas Children's Hospital, Houston TX

"We are moving the needle on health equity," stated Ebekozen. And this is being accomplished through the combined efforts of T1DX-QI's 41 participating centers with a common goal to close the gap in inequitable care practices those living with T1D.



2021 T1DX-QI AWARDS

Joining the T1DX-QI is a commitment, calling for both time and persistence from the staff within every participating clinic who are devoted to making it a priority.

In 2021, we honored the following individuals and clinics for their contributions to making the program a successful effort in improving the lives of people with T1D.

Outstanding Principal Investigator Award

This award recognized a Principal Investigator (PI) who has gone above and beyond in their leadership, QI methodologies, and population health research across the collaborative.

This past year we recognized two PIs, one in pediatric endocrinology and another in adult endocrinology, who have been exceptional in mentoring other faculty members, leading scholarly initiatives, and impacting patient lives through QI and Population Health projects in the T1DX-QI.

Pediatrics

Mary pat Gallagher, MD

NYU Langone Health

Adult

Shivani Agarwal, MD, MPH

Montefiore Health System



Outstanding Parent Advisor Award

This award recognizes the dedication, hard work, and passion of a T1D Exchange Patient/Parent Advocate.

In 2021, we celebrated an exceptional leader who has been remarkable in supporting families through advocacy and driving improvements in health outcomes for those living with T1D.

Jeff Hitchcock

Outstanding QI Coordinator Award

This award recognizes a QI Coordinator who has gone above and beyond in program engagement, supporting the team's QI and population health project, data sharing, and active contribution to the T1DX-QI's overall success.

Jacob Less, BS

Stanford School of Medicine

Adult Endocrine Clinic in the Division of Endocrinology, Gerontology, and Metabolism

Outstanding Team Award

T1D Exchange awarded Children's Mercy Hospital in recognition of a well-rounded team with diverse team roles, good camaraderie, and the ability to scale QI work in their organization. The team continues working at its highest capacity, supporting peer sites, and inspiring others to track necessary diabetes device measures that support better diabetes outcomes.

Children's Mercy Hospital, Pediatrics

Mark Clements, MD, PhD, PI

T1D Exchange awarded Children's Mercy Hospital in recognition of a well-rounded team with diverse team roles, good camaraderie, and the ability to scale QI work in their organization. The team continues working at its highest capacity, supporting peer sites, and inspiring others to track necessary diabetes device measures that support better diabetes outcomes.

Outstanding Team Award

Osagie Ebekozen, MD, MPH, CPHQ, Chief Medical Officer and Executive Vice President at T1D Exchange, was awarded the 2021 ISPAD Prize for Innovation in Pediatric Diabetes Care.

Every year, this award goes to a group or individual who has made a significant innovation in pediatric diabetes care. This prize recognizes innovations to improve health and quality of care for children and young people.

Dr. Ebekozen's skills and enthusiasm for using Quality Improvement and Population Health to drive innovation in pediatric diabetes care have had a positive impact on so many people with T1D.

Congratulations, Dr. Ebekozen!

T1DX-QI CLINICAL STUDIES: 2021 HIGHLIGHTS

This was a big year for the T1DX-QI. Growing from 30 to 41 endocrinology clinics, we took big strides in our ability to study potential improvements and pervasive issues in the care provided to people with T1D. Additionally, we took our first step into supporting the care and needs of people with type 2 diabetes with the Type 2 Diabetes QI Pilot.

Serving more than 55,000 patients, the T1DX-QI worked arduously in conjunction with our new HEAL program to identify and address shortcomings of patient care, access to technology, mental health, emerging treatments, and much more.

The T1DX-QI continues to gain traction and immense credibility in the diabetes research space. In July, the Clinical Diabetes medical journal featured a special collection of articles about the T1DX-QI detailing the work we are doing to share information across clinics and strategize on how to improve treatment and care for the T1D patient population.

With five articles covering our work in the quality improvement space, it was an honor to be featured in this publication.

Here's a glance at some of the impactful research from our participating T1DX-QI clinics this past year:

- **COVID-19 Surveillance Project:** This project was a multi-center study (52 centers) with monthly data collection of critical variables over 15 months, assessing outcomes and racial-ethnic health disparities in T1D patients with COVID-19. Results revealed adverse outcomes that included DKA, severe hypoglycemia, and hospitalization. (Sponsors: Embargoed)
- **Smart Pen Qualitative Study:** This study examined the barriers, perspectives, and operational challenges a provider may encounter in prescribing smart insulin pens. Results revealed that the provider's effort to prescribe this type of insulin pen outweighed the reported barriers (cost of copay, insurance coverage, overall prescribing process). (Partner: Medtronic, Helmsley Charitable Trust)
- **DKA and New-Onset Trends Project:** This project analyzed EMR and aggregate data to compare DKA and new-onset trends in people with T1D during the COVID-19 pandemic. Eight clinics submitted data for this analysis, and findings demonstrated that compared to 2019, in 2020, there was an increase in newly diagnosed T1D and a greater proportion presenting in DKA at diagnosis during the COVID-19 pandemic. (Partner: Helmsley Charitable Trust)
- **Fear of Hypoglycemia Screening Project:** Goals of this ongoing project include analyzing what resources and clinical processes a clinic and healthcare provider would need to adequately screen for fear of hypoglycemia (FOH). It also seeks to determine the prevalence of FOH among adults with T1D and implement routine screening to identify FOH.

- **Real-World CGM Analysis:** The goal of this ongoing project is to analyze outcomes for T1D patients using real-time continuous glucose monitoring (rtCGM) products in comparison to those not using rtCGM. This project will use the T1DX-QI EMR database to analyze outcomes. The scope of work was finalized, a kickoff meeting was held in December 2021, and is on track to complete the Q1, 2022 goals.
- **Diabetes Device Equity QI Pilot:** This ongoing pilot is evaluating the effectiveness of a provider unconscious bias training, and other clinician health inequities, as an intervention to address systemic inequality in T1D care management. Seven T1DX-QI clinics are using the T1DX-QI Equity Framework to test changes in clinical practice that support more equitable CGM and insulin pump prescriptions. This project is part of the T1DX-QI Health Equity Advisory Lab (HEAL).
- **Telemedicine Project:** This ongoing project is analyzing changes in telemedicine trends during the COVID-19 pandemic in a 1-year follow-up to a 2020-2021 paper. The project team collected aggregate data on 13 T1DX-QI clinics for current telemedicine practices and surveyed 33 clinics for barriers and perceptions of the existing clinic telemedicine state.

As 2022 gets underway, we are also looking forward to continued work and partnerships with a strong focus on health equity and accessibility to improve care and outcomes for everyone living with T1D.

IMPROVING CARE FOR PEOPLE WITH TYPE 2 DIABETES

The goal of this ongoing pilot is to expand the T1DX-QI data platform to include individuals with T2D and pilot the T1DX-QI model in two T2D adult clinics. In this pilot, SUNY and Stanford Primary Care aimed to improve clinical outcomes and to increase medication prescribing by 10% for people living with T2D, in eligible populations, by February 28, 2022.

Six months of baseline data has been collected and analyzed. The clinics are actively participating in monthly QI check-ins and are exploring clinic practice improvements and standardization (such as regular screening for social determinants of health and improving data reports and documentation).

Both clinics designed new workflows in collaboration with pharmacists to improve medication education and support. Care teams followed guidelines for prescribing T2D medications and related comorbidities, such as heart disease, hypertension, and hyperlipidemia, to support patient outcomes.

In addition, clinics screened patients for depression and social determinants of health (SDOH), including food security, housing, employment, and transportation — with individual referrals for identified needs in these areas. One of the clinics has expanded SDOH screening practice-wide for their T2D population.

We are eager to continue using our programs and strategies to better support people with T2D.

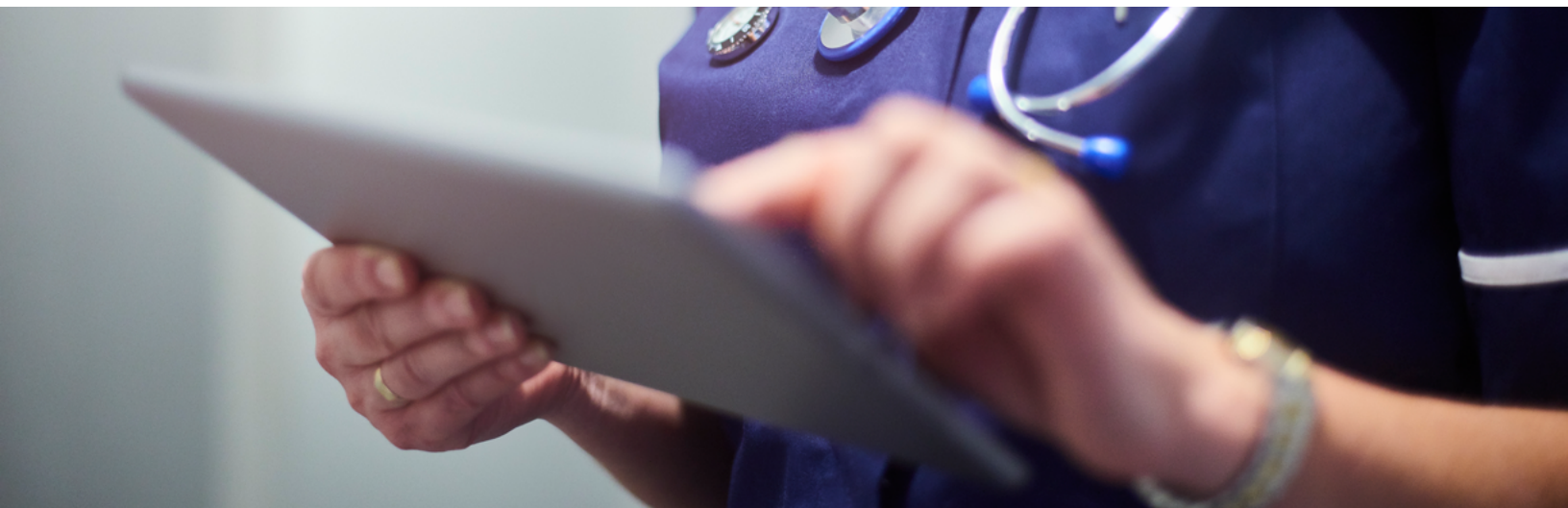
QI “CHANGE PACKAGES” PAVE THE WAY FOR REAL-WORLD IMPROVEMENTS IN PATIENT CARE

A “change package” is the result of many clinics testing a single hypothesis, running and completing a study, analyzing the data, and using this data to determine best practices. By packaging best practices, successful changes can be shared and implemented in other endocrinology clinics.

Change packages:

- Are documents that describe the improvement methodology for a clinical or operational process.
- Include a collection of ideas and resources that, once enlisted, have a high likelihood of resulting in system improvements.
- Function as pragmatic guides of best practices, testable ideas, tools, and strategies that are adaptable to new settings and help to accelerate implementation.
- Offer everything a clinic will need to replicate the work, resulting in improvements in T1D care and measurable outcomes.

Involved clinics don’t need to reinvent the wheel. Instead, the T1DX-QI enables them to start at a significantly more advanced stage. This means that clinics who are following a change package’s recommendations can rapidly apply tested and proven methods of improving care.



IMPROVING GLYCEMIC MANAGEMENT FOR HIGH-RISK PATIENTS

Patients designated as “high-risk” are those with an A1c value above 9% between the ages of 12 and 26 years old. This group of patients has a higher risk of experiencing diabetic ketoacidosis (DKA)—which can lead to hospitalization, coma, and death. They have a significantly higher risk of diabetes-related complications associated with chronically high blood glucose levels.

Ten clinics used an adaptation of the Institute for Healthcare Improvement (IHI) Breakthrough Series Model to address this high-risk patient population. It includes test ideas employed by the different participating sites and is shaped by their experiences. These change ideas can be tested quickly using the IHI Model of Improvement. The change package aims to provide a robust framework of interventions to help high-risk patients in a variety of clinical settings improve their day-to-day glycemic health.

Participating clinics using these intervention methods were found to help patients reduce A1c significantly and remove themselves from the high-risk category altogether. For example, a study at Baylor University found that patients were improving A1c levels from 14% to 8.5%, and 11% to 7.4%.

As interventions evolved and as clinics systematized the tests of change, most clinics set goals to expand interventions to eventually reach and benefit all populations. The initial value of starting with a small, focused cohort fit the T1DX-QI methodology and let clinics take more chances while limiting their risks. As improvements were confirmed and operationalized, the cohort focus expanded to

impact and benefit individuals with T1D of all ages and A1c levels.

Interventions varied across clinics, as did successes and impacts. Overall findings indicate that T1DX-QI interventions for T1D are beneficial for improved glycemic management and outcomes. However, reducing A1c across a broad, high-risk population is challenging and requires technical, systematic, and continuous practice changes to support these individuals.



SHARING WHAT WE LEARN: PUBLISHED MANUSCRIPTS & CONFERENCES

In 2021, T1D Exchange published 18 manuscripts covering critical issues in diabetes care, including health inequities, depression, pediatric self-management, hospitalizations related to DKA and COVID-19, and the use of telemedicine in diabetes care.

Here are a handful of the year's published work:

- The association between depression symptom endorsement and glycemic outcomes in adolescents with type 1 diabetes. *Pediatric Diabetes*
- Age and Hospitalization Risk in People with Type 1 Diabetes and COVID-19: Data from the T1D Exchange Surveillance Study. *The Journal of Clinical Endocrinology & Metabolism*
- Patient demographics and clinical outcomes among type 1 diabetes patients using continuous glucose monitors: Data from T1D Exchange real-world observational study. *Journal of Diabetes Science and Technology*
- Adoption of Telemedicine for Type 1 Diabetes Care During the COVID-19 Pandemic. *Diabetes Technology & Therapeutics*
- Increasing Insulin Pump Use among 12-26 Year Olds with Type 1 Diabetes: Results from the T1D Exchange Quality Improvement Collaborative. *Clinical Diabetes*
- Inequities in Health Outcomes in Children and Adults with Type 1 Diabetes: Data from the T1D Exchange Collaborative. *Clinical Diabetes*
- Multi-Clinic Quality Improvement Initiative Increases Continuous Glucose Monitoring Use Among Adolescents and Young Adults with Type 1 Diabetes. *Clinical Diabetes*

T1D EXCHANGE ALSO PRESENTED AT SEVERAL CONFERENCES IN 2021, INCLUDING:

- **Advanced Technologies & Treatments for Diabetes (ATTD):** In June, T1D Exchange presented several studies at the ATTD Conference. These studies covered topics including comparing real-time CGM use with self-monitoring blood glucose, CGM usage in people with T1D and COVID-19, insulin pump usage in people with T1D and COVID-19, and the challenges of transitioning to telehealth during COVID-19.
- **American Diabetes Association's (ADA) 81st Scientific Sessions:** T1D Exchange was honored to present nine posters and an oral presentation at ADA's 81st Scientific Sessions in June. Presentation highlights include A1c trends between 2017 and 2020, insulin pump use, CGM use and A1c, six habits that support T1D outcomes, insights from the T1D Exchange Registry, a new screening tool for fear of hypoglycemia, and more.
- **ADCES:** In August, T1D Exchange presented four posters at the ADCES Annual Conference. These posters focused on severe hypoglycemia, particularly the preparation of glucagon use during an emergency, and the emotional impacts of hypoglycemic events.

- **European Association for the Study of Diabetes (EASD):** At the EASD Annual Meeting in September, T1D Exchange research scientist Jingwen Liu, PhD, presented the validation for a new healthcare provider tool to utilize when screening for fear of hypoglycemia in people with T1D. This tool consistently demonstrated its reliability in assessing the needs of those with T1D in this area.
- **International Society for Pediatric and Adolescent Diabetes (ISPAD):** In October, the T1D Exchange team shared nine presentations at the 47th Annual ISPAD Conference. They included national data on different topic areas such as COVID-19, the T1DX-QI portal for collaborating with other clinics, smart insulin pens, and more.

The more we learn about providing better care to people with T1D, the more we share that knowledge in an effort to change what it means to live with this disease across the nation and the globe.



THE POWER OF PATIENT VOICE

Since 2009, T1D Exchange has been working to improve care and outcomes for people with T1D. We know that fresh ideas, new therapies, and improved healthcare processes can have the largest impact when the T1D community shares their thoughts and experiences.

One of the most critical ingredients in this work is the patient voice. Asking, hearing, and working with our incredible T1D patient community enables us to both identify their greatest hardships and develop tools and resources to support them.

In 2021, we were especially grateful to our community for their priceless contributions to these insightful projects:

PAIRING THE PATIENT VOICE WITH REAL CGM DATA

The patient voice is vital in understanding the T1D experience and breathing life into research that has the potential to improve T1D care. When the patient voice is paired with real CGM data, it allows researchers to stitch the entire patient narrative together.

“While self-reported data and the patient voice is really important, when it’s analyzed in combination with objective data, such as data from diabetes devices, it can widen our lens,” explained Wendy Wolf, PhD, Vice President of the T1D Exchange Registry and Outcomes Research.

“Understanding both perspectives surrounding data gives a fuller picture of the patient experience. We’re still in the early days of looking at this information, and we hope to expand study recruitment to include at least 2,000 more adults with T1D.”

While data may provide further clarity with variances, the full picture is found in relevant, shared experiences. What one patient describes as “severe” hypoglycemia may be considered mild or moderate by another. If a patient struggling with depression is also regularly experiencing roller-coaster blood glucose levels, that insight into real CGM data reveals more than their personal story alone.

At T1D Exchange, we are incredibly grateful for the 1,184 T1D Exchange Registry participants that shared their CGM data in 2021 for ongoing studies, including *CGM Tracing and Perspectives of Adults with T1D*.



FEAR OF HYPOGLYCEMIA STUDY

The prevalence of fear of hypoglycemia (FOH), or anxiety surrounding low blood glucose events, is thought to be more common than reported. While it can be assumed that most everyone has concerns about hypoglycemia, this varies greatly from patient to patient.

Severe hypoglycemic events are largely missing from electronic medical records (EMR) because families and people with diabetes will often manage hypo-events without going to the hospital. Even extremely terrifying experiences with severe hypoglycemia are managed and recovered outside of the healthcare space. While some people are brought to an emergency department to be treated for severe hypoglycemia, the information is only tracked in a reportable field if that emergency department is associated with where that patient goes for routine care. Otherwise, it is up to the patient to share that information with their healthcare team.

Additionally, the constant threat of hypoglycemia can take its toll on a person's mental health and affect their daily self-management. If a patient has a strong aversion to hypoglycemia, it is important for providers to be aware, because FOH can lead a patient to:

- Reduce insulin doses
- Purposefully keep blood glucose at a higher range
- Maintain an increased A1c value
- Increase their risk of diabetes-related complications
- Exercise less frequently
- Struggle with increased anxiety, depression and diabetes distress

This is why patient-reported data is a vital part of understanding the patient experience. Without capturing the patient voice, an individual's experience with T1D cannot be fully and accurately reflected.

A FOH assessment tool will help in terms of data collection because it will prompt the healthcare provider and the patient to talk about hypoglycemia and recent history. If the healthcare provider makes a referral to behavioral health services, that process is tracked and followed up with, better supporting the patient.

In response, a FOH screening tool was developed based on preliminary research, consisting of nine screening questions sent to study participants recruited from the T1D Exchange Registry.

The FOH screener consistently showed that it could reliably assess if a person with T1D needs additional support in this area. Having an effective screening tool in hand is a vital part of understanding how FOH may be impacting an individual's daily experience with T1D.

Study results were presented at the ADA 2021 Scientific Sessions as an oral presentation titled, "Validation of fear of hypoglycemia screener: results from the T1D Exchange Registry." These results highlighted that about one-third of survey participants screened high for FOH.

"We're working with QI sites now to validate that our FOH incidence is on par with their clinic population, and findings indicate that it's underreported in medical records," explained Wendy Wolf, PhD, Vice President of the T1D Exchange Registry and Outcomes Research. There are multiple reasons to study FOH, but having a simple screener will help to identify individuals experiencing FOH, so they can receive resources and targeted support.

This multi-year study is ongoing, with a current focus on understanding how T1D healthcare professionals can best adopt the screener to use in routine patient care. The concept at play is understanding if a provider has a screening tool, will it become part of their best practices and prompt conversation with their patients.



NEWLY PUBLISHED STUDY RESULTS: TELEMEDICINE IN T1D

In 2020, Dr. Stephanie Crossen—from the UC Davis Children’s Hospital in Sacramento, CA—surveyed 2,235 people with T1D and caregivers of children with T1D. This population of participants came from both the Registry and our online community. The survey was open to participants between August and October 2020.

Crossen’s goal was to determine the effectiveness and gaps of telemedicine in treating and caring for the T1D population.

“I was hoping for at least 500, with a bigger goal of 1,000,” explained Crossen. “I could have never surveyed 2,000 people with type 1 diabetes without a partnership with T1D Exchange. It was essential and such an easy process.”

In 2021, the results of this work were published. While virtual care was underway prior to COVID-19, it became standard practice during the pandemic. Until this study, we had limited data on the individual’s experience with virtual care—and perceptions about its quality.

Results of the survey include:

- 85% of survey respondents felt virtual care saved them time
- 44% felt it saved them stress
- 29% felt it saved them money
- 65% said they’d prefer to use it for certain circumstances, not all appointments
- 62% felt it was equally or more effective than in-person visits
- 82% said they would like to continue telemedicine care in the future

Further analysis concluded that telemedicine is less effective across the board for households with a lower education level. It also concluded that telemedicine care is less effective for patients with high A1c levels.

Other patients felt telemedicine appointments were simply unnecessary because they were in ongoing contact with their providers via phone or e-mail.

These findings show that virtual visits work well for many people with T1D—but not for everyone—and a person’s individual needs and preferences should be taken into consideration as telehealth evolves.



THE T1D EXCHANGE PATIENT REGISTRY EXCEEDS 12,000 PARTICIPANTS

We ended the second full year of open Registry enrollment with over 12,000 participants! We want to thank all of our participants and hope to continue growing this incredible community in 2022.

The Registry —t1dregistry.org—is a long-term T1D research study for which participants volunteer to provide their de-identified data for research. Participants are asked to take a brief questionnaire. The Annual Questionnaire provides insight into changes year-to-year, allowing researchers to analyze data over time, helping them to explore disease management and progression, blood glucose management, and the utilization of health services, for example.

Once Registry participants have completed the initial questionnaire, they have the opportunity to sign up for other T1D-related studies that are tailored to the information the individual provided. For example, if a study needs people with T1D in a particular geographic area or in a specific age group, we notify Registry participants who meet the inclusion criteria for that study. And by utilizing their T1D Exchange Registry dashboard, participants can view all applicable online and in-person surveys or studies.

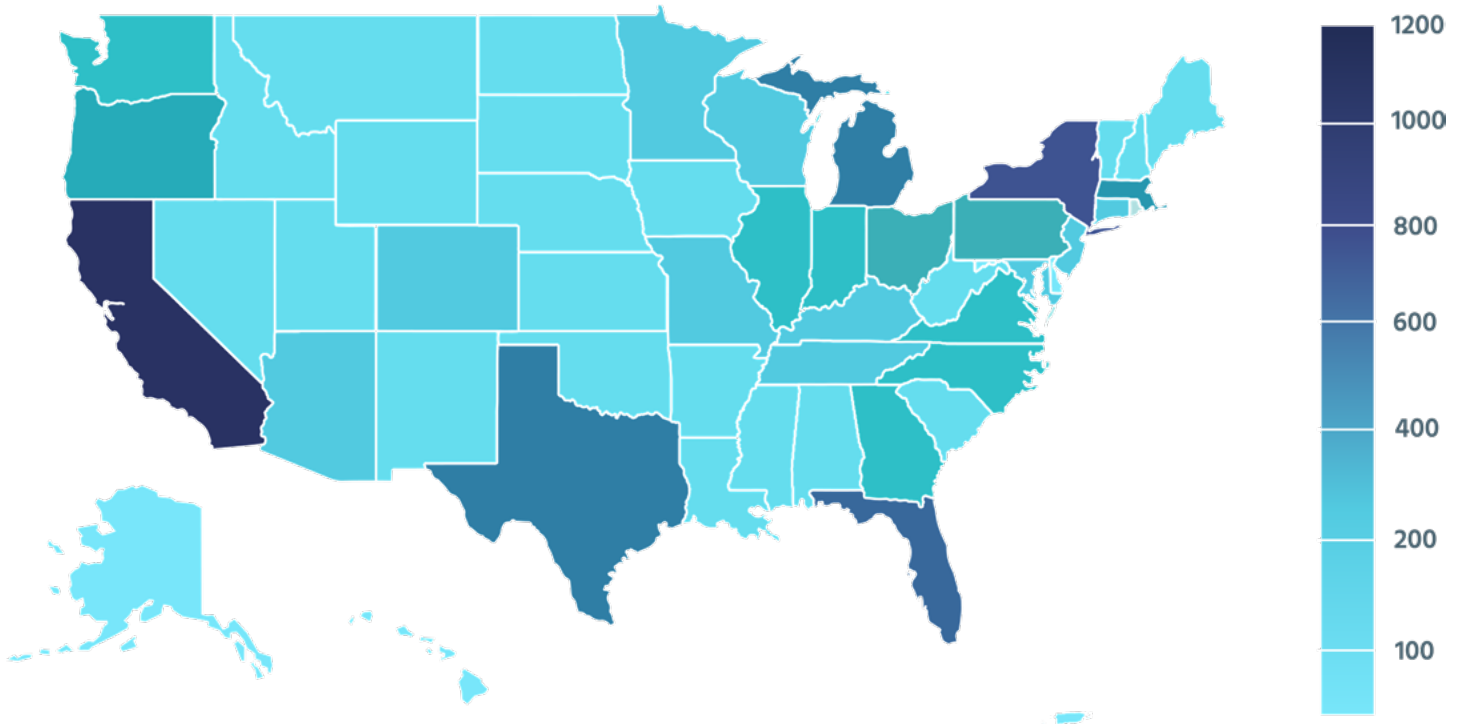
The Registry helps connect researchers directly to thousands of people with T1D who are excited to contribute to research. Being a participant in research through the T1D Exchange Registry allows individuals to contribute to meaningful scientific work that's incredibly helpful for T1D researchers who may otherwise have difficulty finding eligible participants.

"This has been an important year for the T1D Exchange Registry. We're continuing to grow our dataset thanks to engaged participants. We've shared snippets of our insights with participants and look forward to sharing the results at large with the T1D community," said Wendy Wolf, PhD, Vice President of the T1D Exchange Registry and Outcomes Research. By reducing barriers to research participation, we're proud to say that we've connected over 4,400 participants to T1D studies this year. In 2022, we'll have a heightened focus on annual data collection, which is critical to understanding trends in diabetes management and outcomes.

Our Annual Questionnaire is part of what makes the Registry so impactful. We had 3,702 completed responses in 2021. It provides insight into how T1D management can change year to year, allowing researchers to look at this chronic disease longitudinally.



UNITED STATES HEATMAP OF REGISTRY PARTICIPANTS



*As of December 2021

GETTING TO KNOW OUR REGISTRY: PARTICIPANT STATISTICS

With over 12,000 participants, we gathered many new and valuable voices in the Registry. Here's what we've learned about our participants in 2021:

Here are a few interesting facts about our Registry participants:

Fact: About 70% are female, 29% male, with 1% genderqueer or transgender

Fact: About 70% have private health insurance

Fact: About 65% are between the ages of 18 to 55 years old

Fact: Ranging in age from 1 to 90 years old

Fact:

- 42% were diagnosed at 13 years old or younger
- 10% were diagnosed between ages 13 to 17
- 30% were diagnosed between ages 18 to 35
- 15% were diagnosed between ages 36 to 55
- 2% were diagnosed at 56 years old or older

A big thank you to our Registry participants for helping us make a difference!

GETTING TO KNOW THE T1D EXCHANGE ONLINE COMMUNITY

With over 26,000 members, the Online Community is the place to read articles from experts in the field, learn about recent study results, answer the daily Question of the Day, and learn from others in the community.

Questions of the Day are individual survey questions that ask about a certain aspect of T1D, and they're not part of an official research study. Question of the Day answers can influence research, teach people things they were unaware of, and help others feel less alone.

Here are 5 of the most popular questions we asked our Online Community in 2021:

On average, the Question of the Day (QOTD) receives about 400 responses a day: our most popular question received 549 responses.

QOTD: Do you currently use any of the following insulin pumps? (549 respondents)

REPLIES: 40% used the Tandem t:Slm.

QOTD: From which healthcare provider do you receive the majority of your diabetes care? (519 respondents)

REPLIES: 70% of our community sees an endocrinologist for their diabetes care.

QOTD: Do you currently use any of the following CGM systems? (515 respondents)

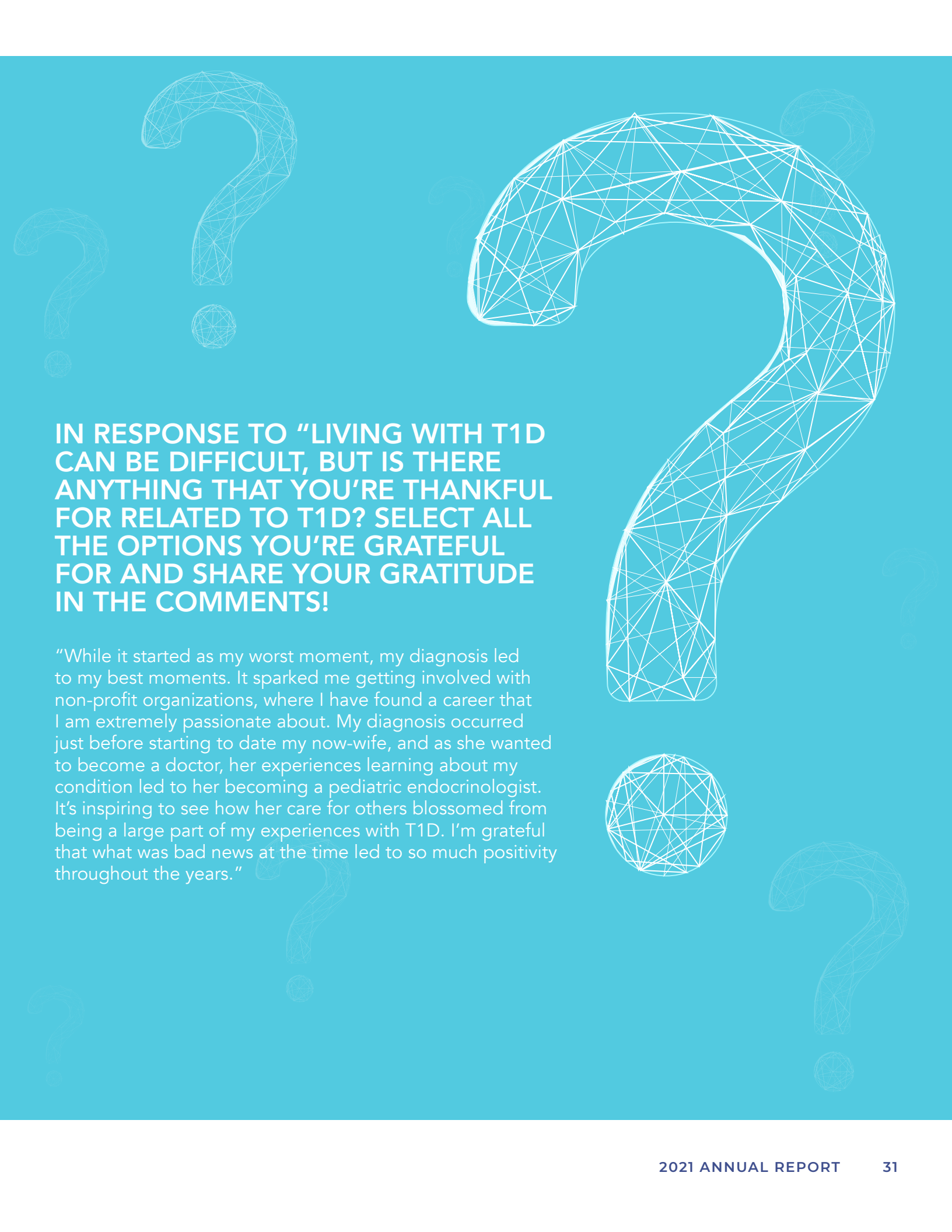
REPLIES: 75% use the Dexcom G6.

QOTD: In what year were you (or your loved one) diagnosed with T1D? (514 respondents)

REPLIES: 67% were diagnosed between 1960 and 1999.

QOTD: On average, how many units of insulin do you typically use in a day? (511 respondents)

REPLIES: Almost 50% use between 20 to 40 units per day.



IN RESPONSE TO “LIVING WITH T1D CAN BE DIFFICULT, BUT IS THERE ANYTHING THAT YOU’RE THANKFUL FOR RELATED TO T1D? SELECT ALL THE OPTIONS YOU’RE GRATEFUL FOR AND SHARE YOUR GRATITUDE IN THE COMMENTS!”

“While it started as my worst moment, my diagnosis led to my best moments. It sparked me getting involved with non-profit organizations, where I have found a career that I am extremely passionate about. My diagnosis occurred just before starting to date my now-wife, and as she wanted to become a doctor, her experiences learning about my condition led to her becoming a pediatric endocrinologist. It’s inspiring to see how her care for others blossomed from being a large part of my experiences with T1D. I’m grateful that what was bad news at the time led to so much positivity throughout the years.”

BOARD MEMBER ANNOUNCEMENTS

In 2021, we welcomed four new members to our board. With each of these board members, we exponentially increase our knowledge and understanding of patient care. Their experience in diversity, health equity, data interpretation, clinical quality improvements, and non-profit management will help us continue to move our most important objectives forward in the years to come!

The T1D Exchange Board expanded in 2021 with the addition of the following newly appointed members:

MARGARITA OCHOA-MAYA, MD

Dr. Ochoa-Maya Margarita is an endocrinologist and CDE with diabetes industry and private practice experience serving those with diabetes. She serves as Head of the U.S. Medical Affairs in Patient Value and Innovation for Biocon, an Indian biopharmaceutical firm that manufactures biosimilar insulins in its product portfolio. Prior to Biocon, Margarita worked at Nova Biomedical as the North American Medical Director of their novel CGM program, and at Novo Nordisk as a Scientific Medical Liaison in Diabetes.

KEVIN LARSEN, MD

Kevin is a physician, and an accomplished healthcare informatics, data, and clinical quality improvement expert. He is the Senior VP of Clinical Innovation and Translation at Optum Labs, with previous experience in industry, government, and private practice. At Optum he is involved in condition-specific initiatives, which includes type 1 diabetes. Prior to Optum, Kevin worked at CMS and the Office of National Coordinator for Health IT where he was involved in clinical quality measure development and use of EMR data to improve quality of care.

GARY PUCKREIN, PHD

Dr. Puckrein is the President and CEO of the National Minority Quality Forum (NMQF), a not-for-profit organization that he founded in 1998. Gary's expertise in addressing health disparities among minority populations, particularly diabetes, furthers T1D Exchange's commitment to address unmet needs in diabetes care and to ensure research inclusivity. Dr. Puckrein is also on the Board of Directors for the National Health Council, which brings diverse organizations together to forge consensus and drive patient-centered health policy.

PHILLIP CAGNASSOLA

Mr. Cagnassola is a business executive and the founder of a private investment firm, Frasier Capital LLC. Mr. Cagnassola is a Board member of the College Diabetes Network, a non-profit organization focused on providing peer connections and expert resources to young adults with T1D. Prior to founding Frasier Capital, he held senior leadership positions with companies that leveraged his ability to identify unusual problems and apply digital tools to unlock value such as Walker Digital's "name your own price" innovation to found priceline.com. His investment in T1D Exchange's mission is also personal, as he has a daughter that lives with T1D.

Thank you all for your dedication to advancing the T1D Exchange mission.



VALUED PARTNERSHIPS AND COLLABORATIONS ARE KEY TO THE T1D EXCHANGE MISSION

In 2021, our relationships with our partners, members, and sponsors grew remarkably in their value to the greater T1D community. By combining the power of the patient voice with the missions of these companies and organizations, we continue to demonstrate our commitment to improving the lives of people with diabetes. These relationships are crucial to every aspect of our mission, and without them, we could not do what we do.

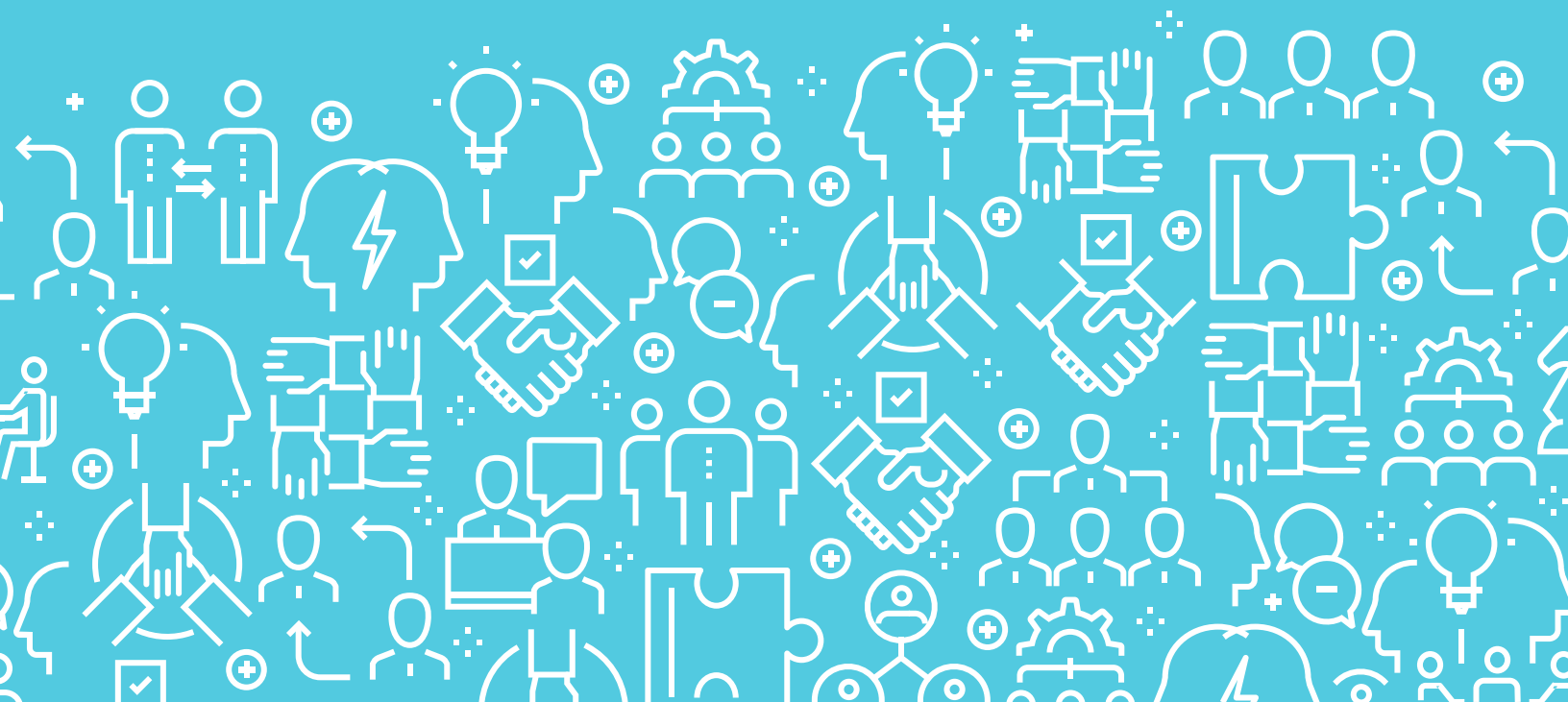
First, we are honored to acknowledge the generous and vital support of the Leona M. and Harry B. Helmsley Charitable Trust. The Trust and its board have been steadfast critical backers and partners over the past decade and are essential partners in advancing the important work of T1D Exchange.

Thank you to our academic study promotion partners, including Stanford, University of California-Irvine, University of California-San Francisco, Zealand Pharma, Avotres Inc., Lifescan Diabetes Institute, Jaeb Center for Health Research, Dexcom, Vertex Pharmaceuticals, Eli Lilly, and Joslin Diabetes Center.

The collective diabetes voices gathered within the T1D Exchange platform—T1DX-QI clinic partners, Registry, and Online Community—have become an invaluable resource for the diabetes industry.

There is no needless accessory within this organization. Everything we have put our energy into growing and developing continues to provide data, collaboration, and progress in changing diabetes care that we strive to accomplish.

With 2022 well underway, our ability to manage the tremendous growth of 2021 is beyond exciting. The work we continue to do is proving to make a difference, and we have so much more to do.





A ROUND OF APPLAUSE AND GRATITUDE FOR OUR DEVOTED TEAM

We could not ask for more dedication, passion, and brilliant effort from the team at T1D Exchange. Year after year, this team grows and continues to support each other in each step of our work. One-third of our team lives with T1D, and every member of this team has a direct connection to T1D.

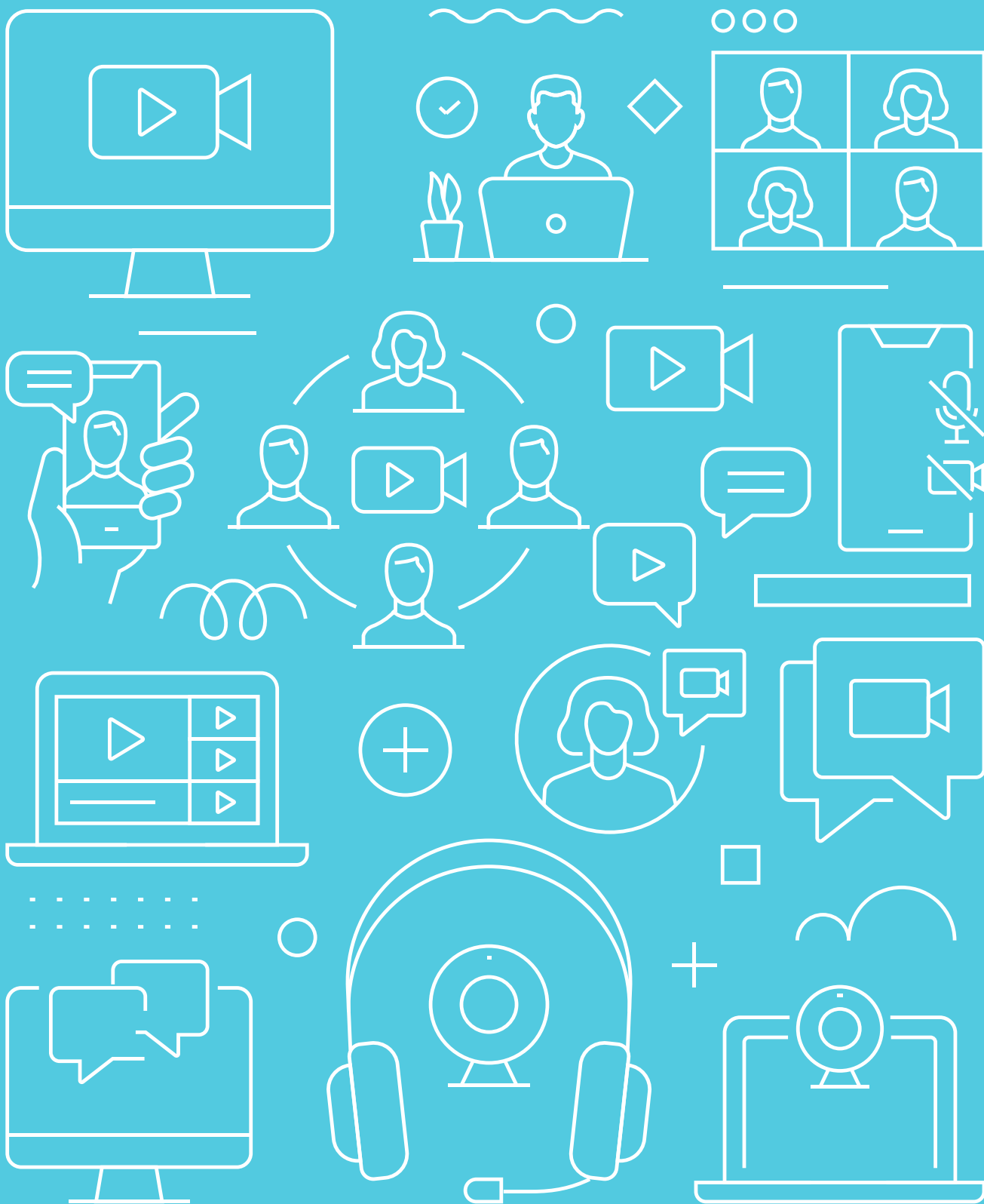
We must thank the members of the T1DX-QI who work on the front lines of patient care, the academic institutions are derived the utmost value from our collected data, and the many members of our team who work behind the scenes to help everything we do flow smoothly and let the world know what we're working on!

The education and experience that our team brings to the table are outstanding. Eight of our employees hold a master's degree, an additional eight hold a PhD, and two hold an MPH./MD degree. This diverse team of individuals hails from a variety of countries, lives in a variety of states across the USA, and brings a wealth of exceptional expertise to the organization.

Thank you to members of our T1DX-QI Patient/Parent Advisory Board and Data Governance Committee for their insights and dedication to our mission.

Last, but not least, we want to thank the people who live with diabetes day-in and day-out in the T1D Exchange Online Community and in the T1D Exchange Registry. Your enthusiasm, courage, and willingness to share your experience with this disease are what enable us to do this work.





NONE OF THIS WOULD BE POSSIBLE WITHOUT . . .

First, we are honored to acknowledge the generous and vital support of the Leona M. and Harry B. Helmsley Charitable Trust. The Trust and its board have been steadfast and critical backers and partners throughout all of our years, helping us build the capacity to do this vital work.

THANK YOU TO OUR PARTNERS, MEMBERS AND SPONSORS

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Beyond Type 1	Lexicon Pharmaceuticals
Children with Diabetes	LifeScan
College Diabetes Network	Medtronic Diabetes
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