RISING T1DE ALLIANCE UPDATE

RISING T1DE ALLIANCE | **Children's Mercy** KANSAS CITY

Welcome!

Welcome to the latest edition from the Rising T1DE Alliance (RTA) team.

In this newsletter, you will find information on the following:

- RTA Background
- Current Happenings: Research Interventions and Quality Improvements
- New Publications
- New RTA Members
- Announcements
- Next Steps: Fall 2023

RTA Background

RISING T1DE ALLIANCE | **Children's Mercy** KANSAS CITY

In 2020, we launched a new effort called the Rising T1DE Alliance, funded by a 3-year, $8.5M grant from The Leona M. & Harry B. Helmsley Charitable Trust.

The following lead this exciting effort:

- **Dr. Mark Clements (Children's Mercy) and Dr. Sanjeev Mehta (Joslin Diabetes Center)** Advisors and Chair of the 12-member stakeholder advisory committee
- **Dr. Susana Patton (Nemours Children's Health System):** Intervention development and selection
- **Dr. Ryan McDonough (Children's Mercy):** Quality improvement work
- **Dr. John Lantos:** Bioethics
- **Emily Hurley:** Foundational research (use of AI in healthcare)
- **Emily DeWit (Children's Mercy):** Project coordinator

To learn more, click the button below:

Learn more here

Current Happenings:

Research Interventions and Quality Improvements
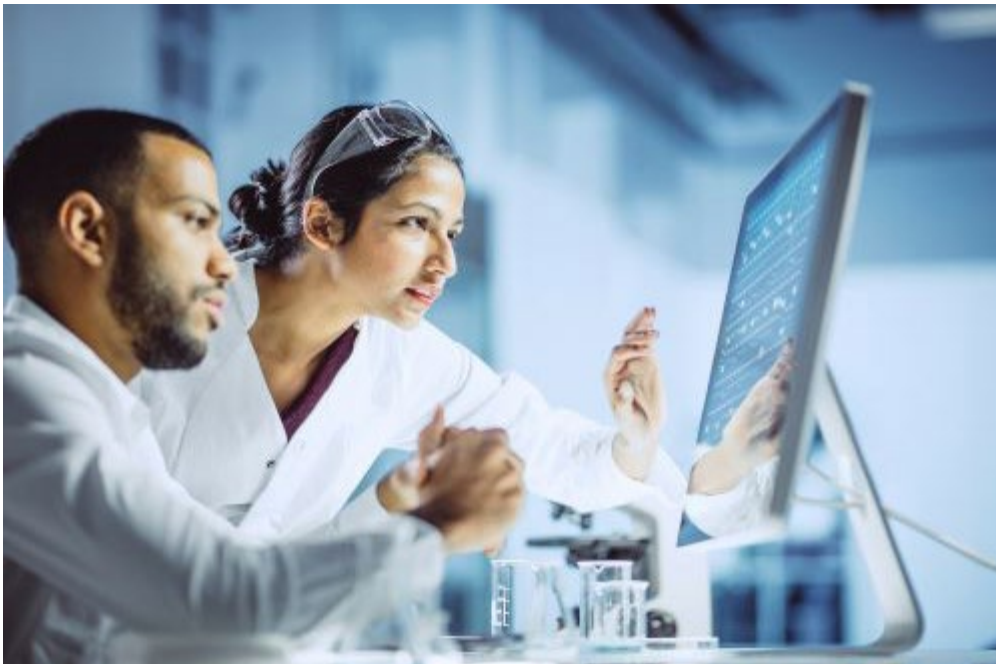
Research Interventions

- I am Strong
- Nudge
- Let's Chat
- Coin2Dose
- CORE SDoH
- Spotlight
- Structured Eating
- POPS!

- PEEPs
- TIDE Dashboard
- MyCare app
- QUEST
- Garmin PACT
- KIDDO
- Happy Bob
- Dipper Academy

Read more about each of these interventions below:

Learn more here

Active Interventions

- KIDDO
- HCT Coin2Dose
- QUES
- Happy Bob

For additional details about active interventions, please email us at risingT1DE@cmh.edu or visit our website on childrensmercy.org.

Quality Improvement Highlights

Social Determinants of Health (SDOH) Survey Highlights

- A highly successful response rate

- Total of 8,113 CORE Surveys completed

- 392 positive CORE surveys

- 68 Care Navigator requests

- Utilities and food are most requested resources

Additional quality improvement highlights:

- Screening for Diabetes Distress has also had great success with a response rate of 1,414 (parent participants) and 316 (child participants).

- The Values Study asked youth (11-18-year-olds) about their values via surveys adapted from adult values studies. We will use the information to adjust the MyCare app and help youth make health-related decisions based on their values. This study concluded on March 7, reaching its goal of 200 surveys completed.

New Publications

"All Data On Hand"
DKA Model Manuscript by David Williams

Authors: David D Williams 1, Diana Ferro 2 3, Colin Mullaney 4, Lydia Skrabonja 4, Mitchell S Barnes 3, Susana R Patton 5, Brent Lockee 3, Erin M Tallon 3, Craig A Vandervelden 3, Cintya Schweisberger 3, Sanjeev Mehta 6, Ryan McDonough 3, Marcus Lind 7 8 9, Leonard D'Avolio 4, Mark A Clements

Abstract highlights:

- Clinicians struggle to predict dangerous episodes of diabetic ketoacidosis (DKA.)

- We asked whether we could apply advanced machine learning, specifically the use of a long short-term (LSTM) model, to accurately predict the 180-day risk of DKA-related hospitalization for youth with type 1 diabetes (T1D.)

- We found that an LSTM model identifies individuals at the highest risk of experiencing DKA-related hospitalization with reasonable precision.

- Our findings suggest that clinics use lists rank-ordered by the probability of DKA-related hospitalization to identify at-risk individuals for targeted intervention. This finding will enable future research to design and test

interventions to prevent DKA-related hospitalization in at-risk patients.

If you would like to read the abstract in its entirety, please click the button below:

Read full abstract here

New RTA Team Members

Let's extend a warm welcome to the newest additions to the RTA team!

Rachel Dixon, RN, MSN, CNL, CDCES

Rachel has worked as a nurse educator on the diabetes team for the last five years. Before working at Children's Mercy, she was an elementary and ESL teacher. Rachel will join the QI and Research team part-time in addition to her primary role as Diabetes Nurse Educator II.

Sally Jercha, MBA

Sally Jercha has a background in chemical engineering and business. She has volunteered in many capacities in her community and brings a parent perspective to the Rapid Learning Lab project and the Rising T1DE Stakeholder Advisory Committee. She is currently interning with Children's Mercy from KUMC School of Nursing and is assisting with interviews, survey management, and data analytics for the NUDGE and QUEST studies.

Harsh Joshi, MS

Before joining Children's Mercy, Harsh completed his

master's in Data Science and Analytics in High-Performance Computing at the University of Missouri, Columbia. He has over four years of experience as a Data Engineer, working on various projects in private organizations and collaborating with non-profit organizations across the United States, including Building Pipelines, Automation, and Development.

Kelsey Panfil, MS, PhD

Before joining the Data Science team in March, Kelsey completed her MS and Ph.D. at Kansas State University. She now works as a data scientist on various projects, including statistical analyses related to the glycemia risk index and testing new variables in our machine learning models to improve future predictions. She will also be joining the Garmin PACT study as a statistician.

Announcements

Camp Planet D
Linwood, KS | July 23-28

Tie-dye, slip-n-slide kickball, gaga ball, swimming, and more! Camp Planet D is run by the American Diabetes Association, and the Children's Mercy medical team is on site to provide all medical services.

There are camper openings for ages 7-15, and counselor-in-training openings for ages 16-17. Registration now open.

Register here

Dinobetes Newsletter | Patient Spotlight Opportunity

The Rising T1DE Alliance team within the Children's Mercy Diabetes Center is excited to share Issue 1 of our Dinobetes Digest! We have a section dedicated spotlighting a patient. If you would like your child to be spotlighted, click the below to provide details.

Sign up

Next Steps | Fall 2023

- MyCare app further study development

Happy Bob app development within the Children's Mercy Endocrine department

- A new study, in collaboration with the University of North Carolina, Chapel Hill (UNC), Seattle Children's Hospital, and John Hunter Children's Hospital, Newcastle, Australia, will be submitted to the IRB: Improved Screening for Disordered Eating, Exercise, and Insulin Perceptions and Behaviors Among Adolescents with Type 1 Diabetes.

Contact Us

Questions? Please email us at risingT1DE@cmh.edu or visit our website on childrensmercy.org.