



Barbara Davis Center for Diabetes
UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

4th Childhood Diabetes Prevention Symposium General Population Screening for T1D

NOVEMBER 12, 2021 / A VIRTUAL (ZOOM) EVENT

Click to register: <https://redcap.ucdenver.edu/surveys/?s=K8T7PPCNWRPDHD3R>

THE OBJECTIVES OF THIS SYMPOSIUM ARE:

1. Review new preventive approaches
 2. Summarize currently available screening tools (islet autoantibody assays, genetic risk scores)
 3. Propose the optimal age and frequency of screening
 4. Establish essential components of follow-up and monitoring of children who screen positive
- Type 1 diabetes (T1D) affects 1.4 million people in the U.S.
 - Clinical diagnosis is preceded by months to years of pre-symptomatic autoimmunity damaging insulin-producing cells in the pancreas. It can be detected through inexpensive screening for islet autoantibodies.
 - The JDRF, the ADA, and the Endocrine Society have defined “stages” of development of T1D. Based upon this staging, T1D should be diagnosed when a child develops multiple islet autoantibodies (stage 1), irreversibly progressing to dysglycemia (stage 2), resulting in clinical diabetes (stage 3 T1D).
 - Early detection of stage 1 T1D through screening is important because parents and providers often overlook symptoms of diabetes, particularly as 90% of those developing T1D do not have a family history.
 - As a result, half of children newly diagnosed with T1D in the U.S. present with life-threatening diabetic ketoacidosis (DKA). DKA causes brain swelling, permanent memory deficits, and poor long-term diabetes control due to additional loss of insulin-producing cells during.
 - Screening for autoantibodies, combined with monitoring of affected children and diabetes education can reduce the risk of DKA to less than 5% and is cost-effective with a lifetime horizon.
 - In addition, children identified through the screening at stage 1 or stage 2 T1D can participate in clinical trials to delay or prevent clinical diabetes.



The Barbara Davis Center for Diabetes (BDC) specializes in Type 1 Diabetes (T1D) research and care for children and adults. It is one of the largest diabetes institutes in the world. The Center is part of the University of Colorado School of Medicine and has its dedicated building on the Anschutz Medical Campus in Aurora, Colorado.

The Center was funded by Marvin and Barbara Davis, in 1978, and is generously supported by the Children's Diabetes Foundation (CDF).

Clinicians, clinical researchers, and basic biomedical scientists work at the BDC to find the most effective treatment, prevention, and cure for T1D. The Center provides state-of-the-art diabetes care to 4,200 children and 2,800 adults with diabetes from the Rocky Mountain Region as well as receiving national and international referrals. We also provide inpatient care to patients who are seen at the Children's Hospital Colorado with any type of diabetes.

www.barbaradaviscenter.org



* All times MST

7:00am **WELCOME AND INTRODUCTION**
Marian Rewers MD, PhD
Barbara Davis Center for Diabetes

SESSION 1: NEW PREVENTIVE APPROACHES

7:05am **TrialNet**
Kevan Herold, MD
Yale University

7:20am **GPPAD**
Anette-Gabrielle Ziegler, MD, PhD
Helmholtz Zentrum Muenchen

7:35am **PROVENTION BIO**
Francisco Leon, PhD
Chief Scientific Officer & Co-Founder

7:50am **Q & A Panel: A Steck, K Herold,**
A Ziegler, F Leon, K Simmons

SESSION 2: SCREENING TOOLS, OPTIMAL AGE AND FREQUENCY OF SCREENING

8:00am **ISLET AUTOANTIBODIES**
Liping Yu, MD
Kimber Simmons, MD
Barbara Davis Center for Diabetes

8:20am **AUTOANTIBODIES-BASED SCREENING MODEL**
Marian Rewers, MD, PhD
Barbara Davis Center for Diabetes

8:35am **GENETIC RISK SCORES (GRS)**
Stephen S Rich, PhD, FAHA
Director, Center for Public Health Genomics

8:50am **GRS + AUTOANTIBODIES SCREENING MODEL**
William Hagopian, MD, PhD
Pacific Northwest Diabetes Research Institute

9:05am **STATISTICAL MODEL EVALUATION**
Mark R. Trusheim
President, Co-Bio Consulting, LLC

9:15am **COST-EFFECTIVENESS MODEL EVALUATION**
R. Brett McQueen, PhD
*University of Colorado
Anschutz Medical Campus*

9:25am **Q & A Panel: J Dunne, L Yu, K Simmons, M Rewers, S Rich, W Hagopian, M Trusheim, B McQueen, A Korolova, F Martin**

10:00 – 10:10 **Break**

SESSION 3: FOLLOW-UP AND MONITORING OF SCREENING POSITIVE CHILDREN

10:10AM **SPECIALTY CENTER BASED MODEL**
Brigitte Frohnert, MD, PhD
Barbara Davis Center for Diabetes

10:25am **HEALTHCARE NETWORK BASED MODEL**
Kurt Griffin, PhD, MD
Sanford School of Medicine

10:40am **METABOLIC MONITORING OF ANTIBODY POSITIVE CHILDREN**
Andrea Steck, MD
Barbara Davis Center for Diabetes

10:55am **PSYCHOSOCIAL ASPECTS OF SCREENING**
Cristy Geno, PhD
Holly O'Donnell, PhD
Barbara Davis Center for Diabetes

11:15am **AN OVERVIEW OF PEDIATRIC PREVENTIVE HEALTHCARE IN THE US**
Erin Ross
Milken Institute

11:30am **Q & A Panel: B Frohnert, K Griffin, A Steck, C Geno, H O'Donnell, E Ross, D Dalton**

12:00pm **ADJOURN**