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Community Health / Policy

**Abstract Title**

BrightSpark Care Lab: How Youth-Onset Type 2 Diabetes Reshapes Everyday Life, Relationships, and Belonging

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## Background

Youth-onset type 2 diabetes (T2D) can affect young people's emotional wellbeing, relationships, everyday activities, and sense of self. Limited longitudinal research examines how these interconnected experiences develop over time.

## Objective

To examine how individuals diagnosed with T2D during childhood or adolescence experienced and made sense of T2D over time.

## Methods

We conducted a multi-stage, longitudinal, qualitatively driven mixed-methods study using Interpretive Description within the BrightSpark Care Lab, a virtual Living Lab co-designed with youth and parent co-researchers. Twenty-six participants aged 13–34 years (Mean 18.5), all diagnosed with T2D at or before 18 years of age, enrolled. Among 26 enrolled participants, 16 completed three baseline psychosocial measures: the Center for Epidemiologic Studies Depression Scale (CES-D), the Beck Anxiety Inventory (BAI), and the Diabetes Distress Scale (DDS-17). Eleven contributed longitudinal, multimodal, qualitative data across 12 asynchronous modules, with individual participation ranging from several days to approximately three months; six completed all 12 modules. Six subsequently participated in interpretive feedback, priority setting, and knowledge translation co-design.

## Results

Fifteen of 16 participants (93.8%) reported elevated depressive symptoms and 15/16 (93.8%) reported moderate-to-high diabetes distress. Limited variability in these measures constrained meaningful subgroup comparisons; instead, they contextualized qualitative accounts of substantial emotional and management burden. Qualitative analysis generated five interconnected themes: disruption of diagnosis and early adaptation; uneven coping and adaptation; relational dynamics of support; the everyday emotional and practical work of managing youth-onset T2D; and reshaping identity and belonging. Across these themes, adaptation was variable and non-linear rather than a fixed endpoint, as participants repeatedly negotiated diabetes management alongside relationships, available resources, cultural practices, social participation, and changing understandings of self. In subsequent priority-setting and knowledge-translation co-design, participants identified young people, families, peers, healthcare providers, and schools as priority

audiences for accessible knowledge products.

**Conclusion**

Care should recognize that young people's capacity to manage T2D is shaped by their relationships, resources, routines, cultural contexts, and everyday circumstances. Supporting effective diabetes management, therefore, also requires supporting their capacity to remain connected to the relationships, activities, cultural worlds, and futures they value.