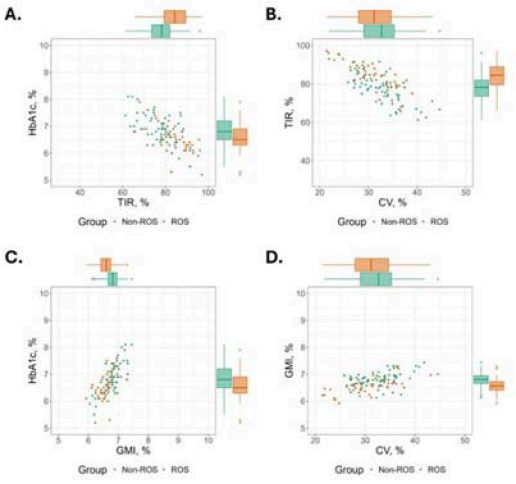
Methods: CGM-derived metrics and the relationship between HbA1c and TIR, GMI, and the coefficient of variation (CV) of adults (N=107) from the three-month SUCCEED study period were determined. Data were stratified by use and non-use of recommended optimal settings (ROS, glucose target of 100mg/dL and an active insulin time of 2hrs, both for ≥95% of the time).

Results: The overall correlation between HbA1c and %TIR was R^2=0.4316 (p<0.01), while that between HbA1c and GMI was R^2=0.4785 (p<0.01) (Figure). There was large dispersion of HbA1c for a given %TIR; and %TIR for a given HbA1c. A higher CV was correlated with a lower %TIR (R^2=0.5751, p<0.01). ROS users (N=44) achieved a significantly lower HbA1c (6.6±0.5% vs. 6.9±0.5%, p<0.01) and GMI (6.6±0.3% vs. 6.8±0.3%, p<0.01), compared with non-ROS users (N=63). Their mean SG (136.5±12.0mg/dL vs. 146.2±12.0mg/dL, respectively, p<0.01) and SD of SG (42.8±9.4mg/dL vs. 47.6±9.1mg/dL, respectively, p<0.01) were, also, significantly lower. There was no significant difference in CV of SG (31.1±4.9% vs. 32.4±4.3%, respectively, p=0.1712).

Conclusions: The SUCCEED trial in adults demonstrated that MM780G CGM-derived GMI closely matched to HbA1c, and ROS users achieved better HbA1c and %TIR outcomes. Although well-correlated, %TIR alone is not a sufficient predictor for HbA1c due to the wide range of values.

Figure 1. Relationship between HbA1c and CGM-derived metrics and glucose variability with CGM-derived metrics, during the MiniMed™ 780G with Simplera™ Sync sensor pivotal trial



Relationship between (A) HbA1c and %TIR, (B) %TIR and the coefficient of variation (CV) of sensor glucose (SG), (C) HbA1c and the glucose management indicator (GMI), and (D) the GMI and CV of SG among ROS and non-ROS users from the MiniMed™ 780G with Simplera™ Sync sensor pivotal trial.

OP026 / #112

Oral Presentation Topic: ***AS03. Closed-loop System, Algorithm and Artificial Pancreas***

CAMBRIDGE HYBRID CLOSED LOOP IN VERY YOUNG CHILDREN WITH TYPE 1 DIABETES (KIDSAP STUDY): POSITIVE EXPECTANCIES OF PARENTS OVER 18 MONTHS

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Background and Aims: Type 1 diabetes (T1D) management in young children is challenging, with variable glycemic control carrying risks for development and family well-being. Automated insulin delivery (AID) systems have shown metabolic benefits across age groups. Positive effects on caregiver burden and parental well-being have also been described. However, less is known about parents' long-term satisfaction and trust in these systems. This study examined parental expectancies during an extended period of hybrid closed-loop (HCL) insulin delivery in the home setting.

Methods: Data was collected for 65 parents of young children with T1D who participated in a multinational crossover trial. We compared assessments at baseline, post HCL trial phase and after 18-month HCL extension in home setting. Glycemic outcomes (HbA1c) were recorded and parental expectancies were assessed using the INSPIRE questionnaire, which evaluates parents' expectancies of AID systems. Linear mixed models compared outcomes across time.

Results: Initial CL use improved HbA1c (baseline: 55.97 ± 7.25 mmol/mol vs. trial: 50.52 ± 6.93; p < .001), with benefits maintained over the 18-month extension (49.04 ± 5.48; p = .24). Parental expectancies did not change during trial (baseline: 44.11 ± 34.38 vs. trial: 42.10 ± 38.11; p = .71, d = 0.05) but increased after 18 months of home use (89.83 ± 9.35; p < .001, d = 1.14).

Conclusions: Prolonged HCL use in young children supports stable glycemic benefits while fostering greater parental trust in AID. Findings suggest that while initial adaptation may be required, continued experience with improved metabolic control enhances parental confidence in system safety and reliability.

OP027 / #438

Oral Presentation Topic: ***AS03. Closed-loop System, Algorithm and Artificial Pancreas***

GLYCEMIC OUTCOMES WITH THE OMNIPOD® 5 AUTOMATED INSULIN DELIVERY (AID) SYSTEM IN INFANTS AND TODDLERS

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Background and Aims: The Omnipod 5 System is indicated for use in individuals with T1D aged ≥2 years. Infants and toddlers <2 years old, who are highly insulin-sensitive and vulnerable to glycemic variability, remain outside current indications despite potential AID benefits, partly due to limited data. Thus, there is a need to understand real-world Omnipod 5 System use among this vulnerable population.

Methods: We analyzed real-world CGM and insulin delivery data from Omnipod 5 System users <2 years of age with T1D in the U.S., between January 1, 2022 to July 30, 2025. Outcomes were evaluated in users with sufficient CGM data (≥14 days with ≥1 reading and ≥75% of days with ≥220 readings) inclusive of data up to 1 day before their 2nd birthday.

Results: Data from 288 users were analyzed (mean±SD age: 11±2.4 months, TDI: 7.9U/day). Average target glucose settings