

0060 - REAL-WORLD GLYCEMIC OUTCOMES OF THE MINIMED™ 780G ADVANCED HYBRID CLOSED-LOOP SYSTEM IN YOUNG CHILDREN AGED 2–6 YEARS: A CHILEAN REAL-WORLD ANALYSIS

Mode: Research paper

Thematic Unit: Diabetes Mellitus

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Background/Objectives: In Chile, the Ley Ricarte Soto (LRS) program has enabled thousands of individuals to access advanced diabetes technologies nationwide. Within this framework, very young children (2–6 years), a particularly vulnerable group, have been prioritized; however, the use of these systems in this age group remains off-label in some geographies including Chile. The LENNY randomized controlled trial (RCT) demonstrated that the MiniMed™ 780G (MM780G) advanced hybrid closed-loop system safely improved glycemic outcomes compared with sensor-augmented pump (SAP) therapy in children aged 2–6 years. This study evaluates whether these benefits are replicated in real-world clinical practice by characterizing glycemic outcomes, insulin delivery parameters, and device configuration in a Chilean cohort of young children with T1D using the MM780G AHCL system.

Methods: Carelink data from 109 users aged 2–6 years using the MM780G system with Guardian 3 sensor from eleven diabetes centers in Chile were included. Glycemic metrics included were time in range (TIR 70–180 mg/dL), time in tight range (TITR 70–140 mg/dL), time above range (TAR 180, and 250 mg/dL), time below range (TBR

Results: Mean system use and sensor use were 426.9 ± 302.4 days and $93.9 \pm 6.3\%$, respectively. Mean TIR, TITR, and TBR were $69.0 \pm 6.6\%$, $47.5 \pm 6.4\%$ and $4.4 \pm 2.0\%$, respectively. Daytime TIR, TITR, and TBR were 66.7%, 45.1%, and 4.5%, respectively, whereas nighttime TIR, TITR, and TBR were 75.8%, 54.5%, and 4.3%, respectively. Subjects achieving TIR >70% and GMI 70% and GMI

Conclusion: The MM780G AHCL system demonstrates a glycemic profile closely aligned with outcomes reported in the LENNY study in this Chilean real-world cohort, supporting the generalizability of trial findings into clinical practice in Latin America.

