**Abstract title**

A Survey of Glucose Levels in Adults with Type 1 Diabetes Attending Clinic Using Automated Insulin Delivery Compared with Those Using Manual Insulin Dosing.

**Abstract content**

**Aim:** Comparing real-world metabolic outcomes in adults with Type 1 Diabetes (T1D) using Automated Insulin Delivery (AID) vs. those not using Automated Insulin Delivery (AID).

**Methods:** This is a prospective study involving a survey and data collectedfrom 2024-2025. We collected data on consecutive attendees at T1D clinics, including: Socio-Economic Indexes for Areas (SEIFA), education, cultural and linguistic diversity (CALD), Aboriginal and Torres Strait Islander (ATSI) status, HbA1c and continuous glucose monitoring (CGM) metrics.

**Results:** 282 patients competed the survey (174 females [62%], age 49 ±16 years, 25.6 ±14.5 years T1D duration. (Subsidised) CGM was used by 86.5%. AID was used by n= 94 (33%), with 44% non-users expressing interest in commencing AID. AID use was most common among those with a tertiary education, vs. secondary and primary educations (53.2%, 26.6% and 4.3% respectively, p<0.0001), and greatest in the most advantaged (SEIFA 5). AID use vs non-use was associated with lower HbA1c (7.3 ± 1.5% vs 7.9 ± 1.6%; p<0.0001), Glucose Management Indicator (GMI, 90 days) (7.0 ± 1.5% vs 7.9 ±1.3%; p<0.0001), Time Below Range (TBR) (1.5 ± 1.8% vs 3.0 ± 3.6%; p=0.0004), and higher Time In Range (TIR) (71.9 ± 18.9% vs 50.2 ± 19.6%; p<0.0001). In the past year AID-users also experienced less severe hypoglycaemia (n=2 [2.1%] vs n=24 [12.8%]; p=0.002) and diabetic ketoacidosis (n=2 [2.1%] vs n=8, [4.2%]; p=0.5).

**Conclusion:** Real-world Australian data indicates substantially better metabolic outcomes with AID use which was more prevalent in advantaged individuals. We strongly advocate for equitable AID access based on need rather than financial means.

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