**Abstract title: Self-care behaviours and psychological distress among young adults with a high HbA1c: a multicentre study**

**Background and Aim:**

Transitioning from adolescence to adulthood can be challenging for young adults with diabetes, potentially adversely impacting glycaemia and diabetes self-management. This analysis explored differences in HbA1c, diabetes management and self-care behaviours in young adults with diabetes.

**Method:**

Young adults aged 16-30 years, recruited from eight Australian hospital services (7 in New South Wales and 1 in Victoria), completed baseline questionnaires including Diabetes Empowerment Scale-Short Form (DES-SF), Summary of Diabetes Self- Care Activities (SDSCA) and provided blood for HbA1c. Participants were classified as HiHbA1c (HbA1c≥10.0%) and LoHbA1c (HbA1c<10%). Differences between groups (p<0.05) were assessed using Chi-squared tests (categorical variables) and ANOVA (continuous variables).

**Results:**

Of the 225 participants (mean age 21.6±3.7 years), 123 (54.7%) identified as male, 211 (93.8%) had T1DM and 39 (17.3%) had a HiHbA1c (mean HbA1c 12.4±1.8% vs LoHbA1c 7.7±1.0%, p<0.001). HiHbA1c participants were less likely to have health insurance (30.8% vs 58.6%, p=0.005), and to know their most recent HbA1c (69.2% vs 93.0%, p<0.001) compared to LoHbA1c participants. HiHbA1c and LoHbA1c participants had similar CGM access (74.4% vs 79.0%, p=0.520), pump use (28.2% vs 39.8%, p=0.214) and lifestyle measures. HiHbA1c participants were less confident in coping with diabetes-related stress (25.6% vs 44.6%, p=0.015) and following their diabetes medication plan (43.6% vs 75.3% p<0.001). HiHbA1c participants were less likely to test the recommended number of times during the past 7 days (3.6±2.8 days vs 5.3± 2.6, p<0.001) and less likely to take their medication fully (43.6% vs 75.3%, p<0.001) vs LoHbA1c.

**Conclusion:**

Young adults with diabetes and HiHbA1c were less likely to have technology access (less health insurance), to feel confident in managing diabetes-related distress and reported lower confidence in taking medication and glucose monitoring. Targeted support to improve technology access, self-efficacy and daily diabetes management may be important for improving glycaemia in this group.