**Title:** Impact of a multidisciplinary diabetes care program on glycaemic and metabolic outcomes in regional and First Nations communities

**Aim/Background:** Type 2 diabetes mellitus (T2DM) poses a significant public health challenge in Australia, particularly among underserved populations such as First Nations people and rural communities. In response, the Together Strong Connected Care (TSCC) program was developed to address these disparities by offering a culturally appropriate, multidisciplinary approach to diabetes management in a regional hospital setting. This study aims to evaluate the impact of this multidisciplinary program on glycaemic and metabolic outcomes in regional and First Nations communities.

**Methods:** A retrospective observational study was conducted and baseline characteristics including age, gender, ethnicity and clinical measures were collected. The primary outcome was the change in HbA1c over 12 months. Statistical analysis included descriptive analysis, univariate comparative analysis, paired t-tests for change in outcomes, and multivariate linear regression analysis.

**Results:** The study included 119 patients, divided into those who participated in the TSCC program (n=68) and those who declined participation (n=51). The study participants had a mean age of 55.71 years, with 58.82% identifying as female. The mean baseline HbA1c was 8.25% (SD=2.60) and mean baseline weight was 97.38kg (SD=28.81). People in the TSCC group had significantly greater reductions in HbA1c (-1.65%, p<0.001) compared to the no-TSCC group (+0.02%, p<0.001). After adjusting for confounders, TSCC participation remained independently associated with improved glycaemic control (β = -0.78, p<0.001), particularly in patients with T2DM.

**Conclusions:** The TSCC program significantly improved glycaemic control in regional First Nations patients, supporting the effectiveness of culturally appropriate, multidisciplinary care models in managing diabetes in underserved communities. Further research is warranted to evaluate long-term outcomes of similar interventions.