UPTAKE OF HYBRID CLOSED LOOP IN YOUNG PEOPLE WITH TYPE 1 DIABETES: A CLINICAL AUDIT

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Background

Type 1 diabetes (T1D) presents significant challenges for young people (YP), who are at increased risk of physical and mental health complications. Hybrid closed loop systems (HCL) improve glycaemic control and quality of life. National guidelines recommend proactively offering HCL to all eligible YP, but access remains inequitable due to socioeconomic factors, healthcare professional bias, and service capacity.

Aim

To evaluate whether the local YP diabetes service meets the national standard that 100% of patients aged 16–17 years with T1D are offered HCL, and to identify barriers to HCL offer and uptake, as well as opportunities for service improvement.

Methods

A standards-based audit of electronic health records assessed offer and uptake of HCL. Surveys of healthcare professionals and YP explored attitudes, experiences, and perceived barriers. Quantitative data were analysed using descriptive statistics, and free-text responses underwent Qualitative Content Analysis.

Results

Of 98 YP audited, 45 (46%) used HCL. Of the 53 non-users, 48 (90.6%) had been offered HCL, falling short of the 100% standard. Most non-users had not completed structured education, a local prerequisite for referral. Healthcare professional surveys highlighted assumptions about readiness, literacy, and safety as barriers to offering HCL, while YP surveys emphasised lack of information, limited shared decision-making, and practical concerns. A disconnect between healthcare professionals and YP perspectives was evident.

Conclusion: This audit identified suboptimal HCL offering and uptake among YP, with gaps in structured education and misalignment between YP and healthcare professional perspectives. Bias and assumptions among healthcare professionals also influenced access, underscoring the need for anti-bias training and strengthened shared decision-making, with learning relevant to other services implementing HCL technology.

Findings led to service improvements, including *Tech Cafes* – informal, peer-supported technology information sessions - with positive feedback. Planned interventions include reviewing HCL referral pathways, enhancing education provision, and re-audit to complete the audit cycle and encourage continued and sustained improvement. Broader policy changes and research are needed to address systemic inequities and optimise HCL access for YP.