



A Quality Improvement Project of a Young Adult Diabetes (YAD) Service at a UK Specialist Centre

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INTRODUCTION

- Our joint young adult diabetes (YAD) service facilitates transition from paediatric to adult diabetes care for young people aged 16-25 years.
- The aim of quality improvement interventions initiated since 2018 has been to improve the glycaemic control in young adults. These have included focus groups with young people, joint paediatric and adult specialist nurse appointments and recruitment of a type 1 diabetes educator. The COVID-19 pandemic imposed significant changes to service delivery, with a shift towards virtual communications.
- We present a quality improvement project spanning 3 years to assess the effectiveness of our interventions.

OBJECTIVES

- To analyse engagement of young people aged 19-25 years with the YAD service from 2019 to 2021.
- To analyse effect of COVID-19 on attendance and diabetes control.

METHODS

Data for the YAD service was retrospectively collected for:

- April 2018 to March 2019 (**Year 1**)
- April 2019 to March 2020 (**Year 2**)
- April 2020 to March 2021 (**Year 3 – COVID 19 pandemic**)

Parameters of interest included:

- Basic demographics
- Rates of multiple dose injection (MDI) use versus uptake of technology over time (e.g. Freestyle Libre (FSL), Continuous Glucose Monitoring (CGM), Insulin pump)
- Diabetes control e.g. HbA1c, Admissions with diabetes ketoacidosis (DKA)
- Clinic attendance and 'Did not attend' (DNA) rates

'Did not attend' (DNA) rates were calculated as a percentage of all appointments offered, excluding those rescheduled or cancelled prior to the clinic start.

RESULTS

	Year 1 (n=57)	Year 2 (n=75)	Year 3 (n=88)
Mean age (years)	21	21	21
Male (%)	29 (51)	42 (56)	49 (56)
Minimum 1 appointment attended (%)	79	76	81
'Did not attend' appointment (%)	41	41	27
Appointments rescheduled (n,%)	22 (12)	31 (16)	15 (7)
Appointments cancelled (n,%)	9 (5)	5 (3)	6 (3)
Minimum 1 ED attendance (n)	12	20	7
Total ED attendances (n)	30	35	7
Number with DKA (n,%)	18 (60)	20 (57)	0 (0)
Total hospital admissions (n)	18	22	1
No. DKA (n,%)	16 (89)	18 (82)	0 (0)

Table 1: Demographics, clinic attendance & hospital attendances of young people by year. DKA = diabetic ketoacidosis; ED = emergency department.

	Median HbA1c, mmol/L (IQR)	HbA1c <58mmol/mol (n,%)
Year 1 (n=47; 82%*)	76 (64-92)	8 (17)
Year 2 (n=64; 85%*)	71 (60-86)	15 (23)
Year 3 (n=55; 62%*)	66 (54-82)	18 (33)

Table 2: Glycaemic control of young people by year. *HbA1c result available within each year period for a proportion of the young people as denoted by n (%)

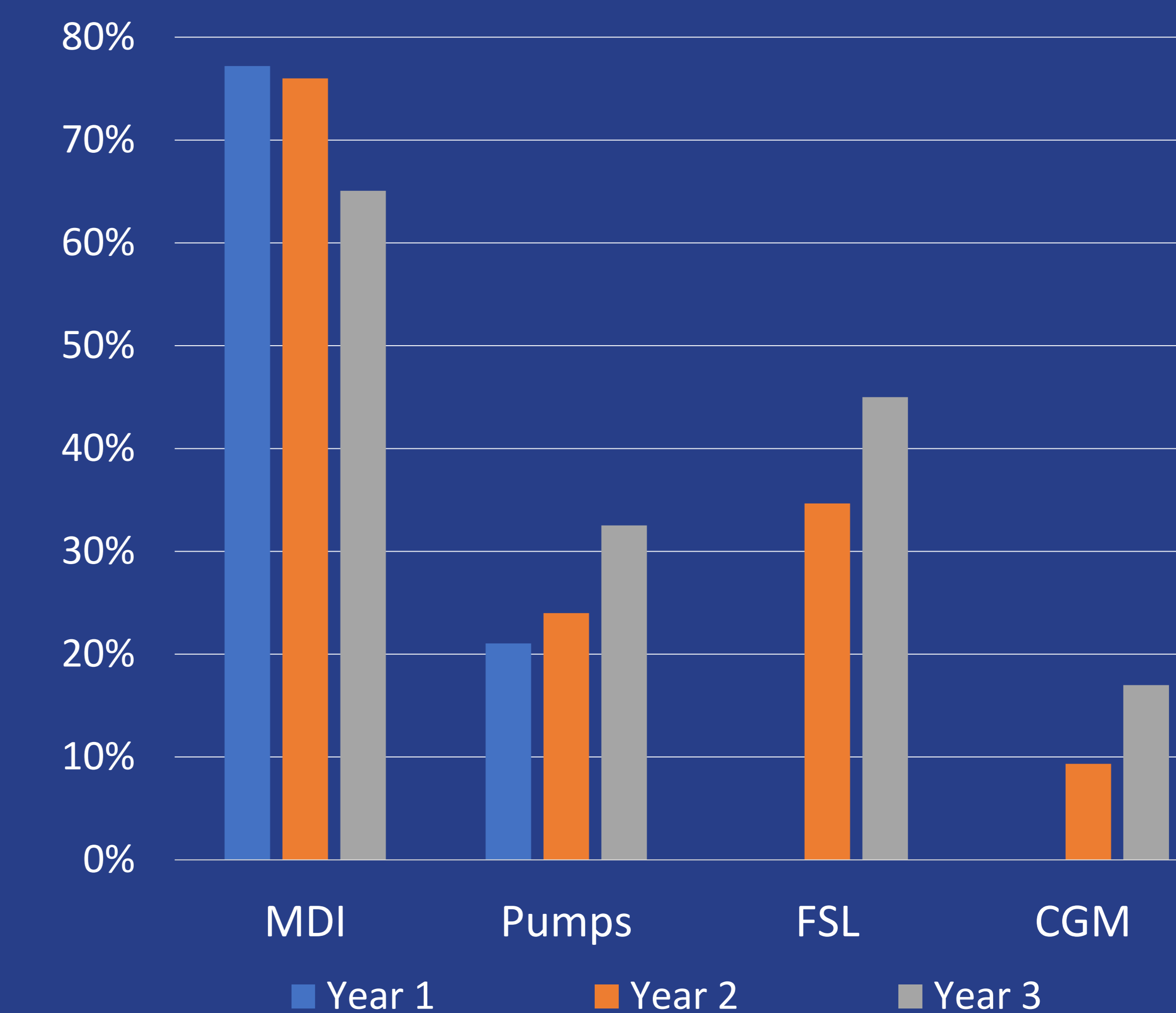


Figure 1: Uptake of technology

KEY FINDINGS

- The number of young people in the service increased over 3 years.
- Year 3 had the lowest overall DNA rate.
- Year 3 had a particularly low rate of young people presenting or being admitted to hospital with DKA.
- Median HbA1c improved over the years.
- Multiple dose injection (MDI) use declined over time and use of pumps, FSL and CGM increased.

CONCLUSION

- There has been an improvement in engagement and diabetes control over time.
- Based on focus group outcomes, we have initiated group education sessions to enable young people to network with each other, a virtual open afternoon and secured charity funding to support these activities.
- We aim to permanently integrate flexible consultations, allowing young people the option of virtual or face-to-face appointments. We also hope to continue enabling young people to network with each other, to integrate the service into the local trust diabetes website, and secure external funding to support our activities.

