

The Rotherham NHS Foundation Trust Children and Young Peoples Diabetes Team

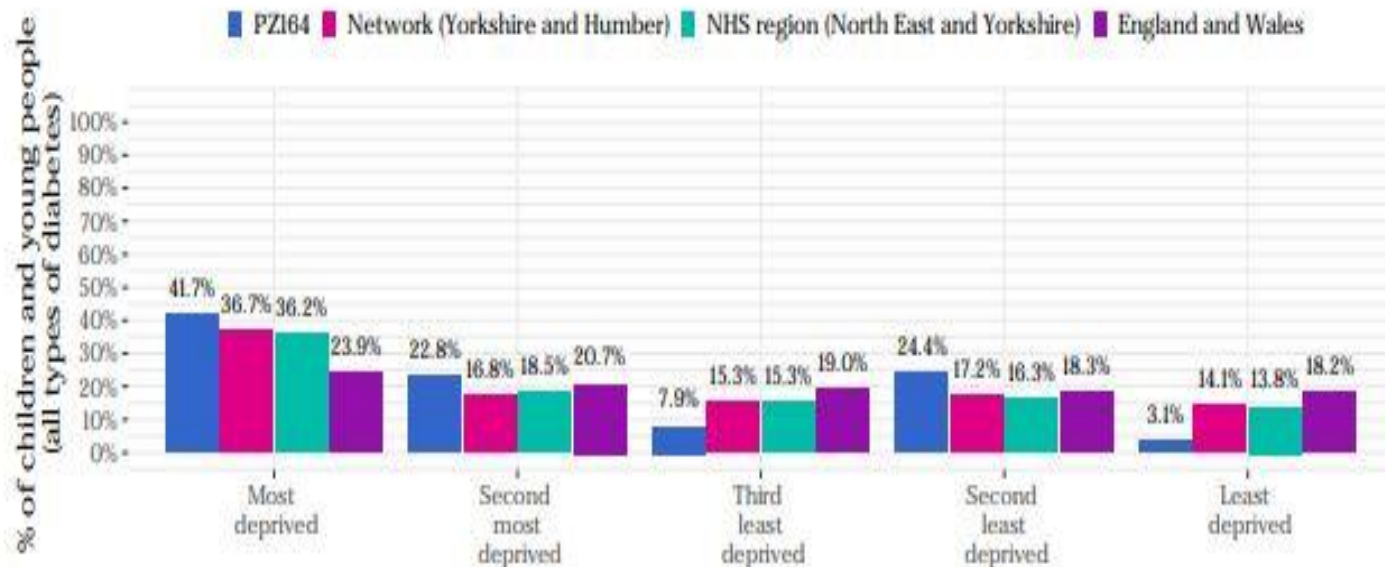
‘On boarding and beyond’ The benefits of skill mix in a Children & Young People’s Diabetes Team

Project Lead: Imran Bashir (Paediatric Diabetes lead)
Lead PDSO: Janet Gomm
Family Support Worker: Rebecca Davis

Background

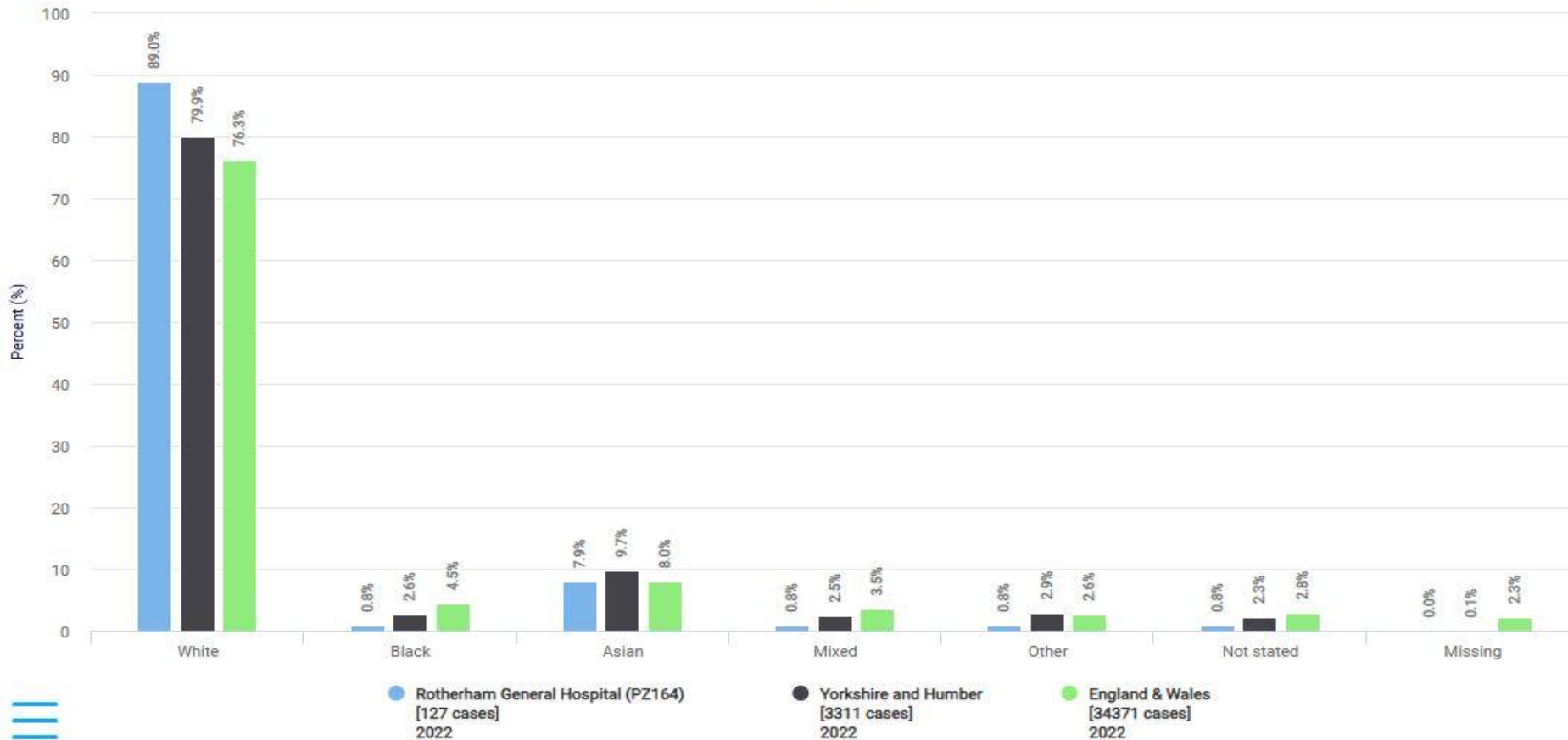
NPDA PZ-164 Unit Data (2022-2023)

64.5% of CYP were in the 2 most deprived quintiles



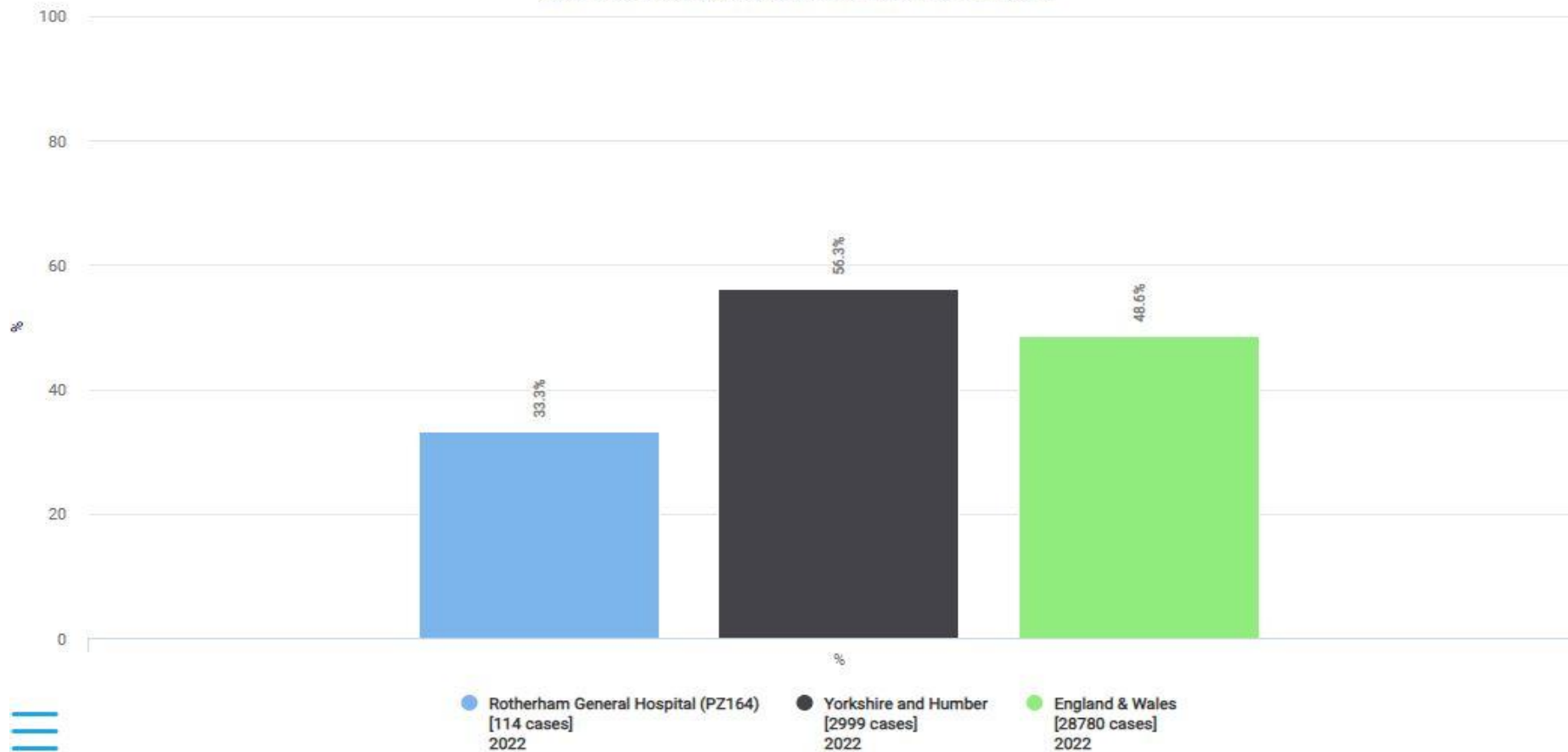
Calculated using Indices of Multiple Deprivation based on patient postcode.

Ethnicity breakdown

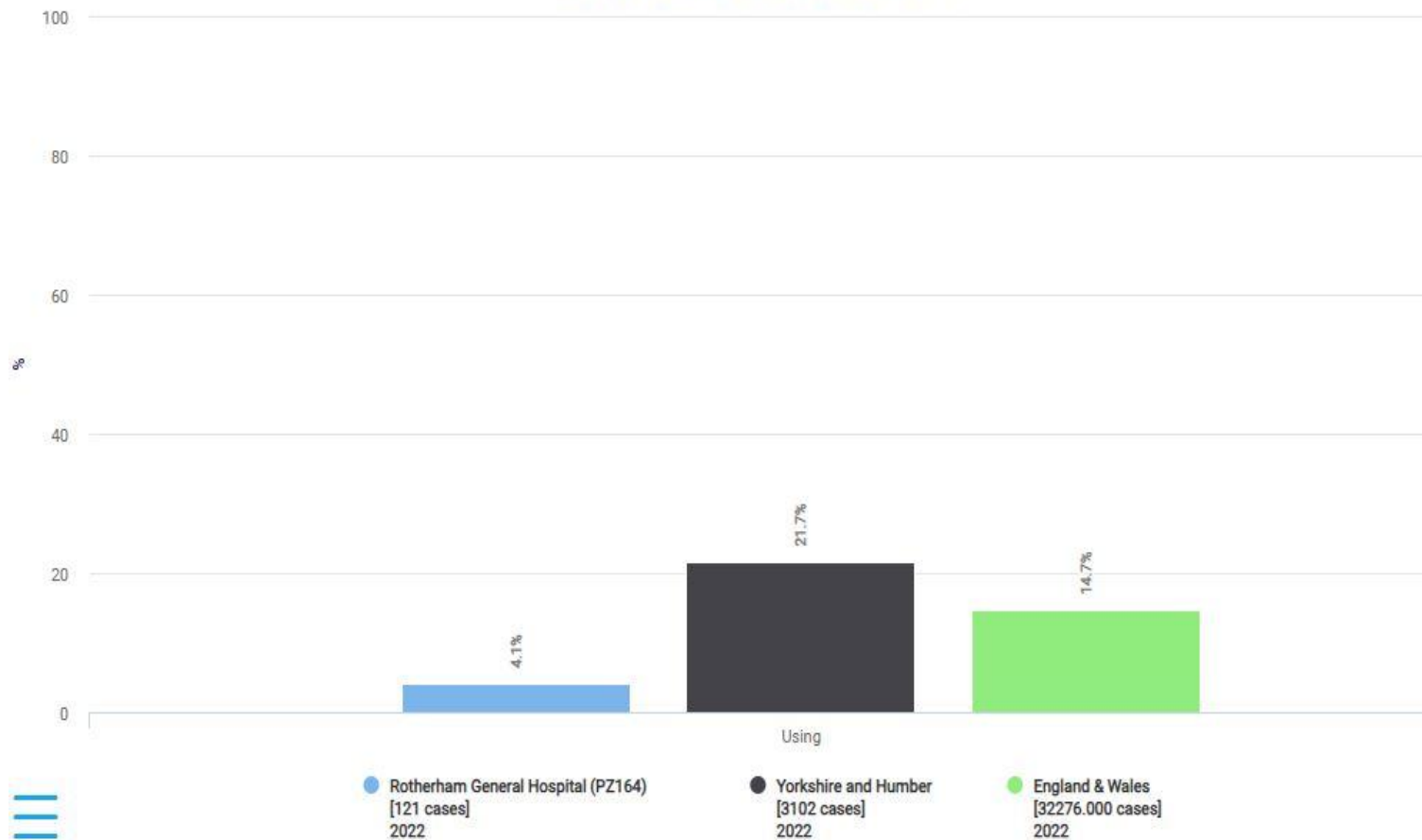


Percentage of children and young people with Type 1 diabetes

using a real-time continuous glucose monitor (CGM) with alarms

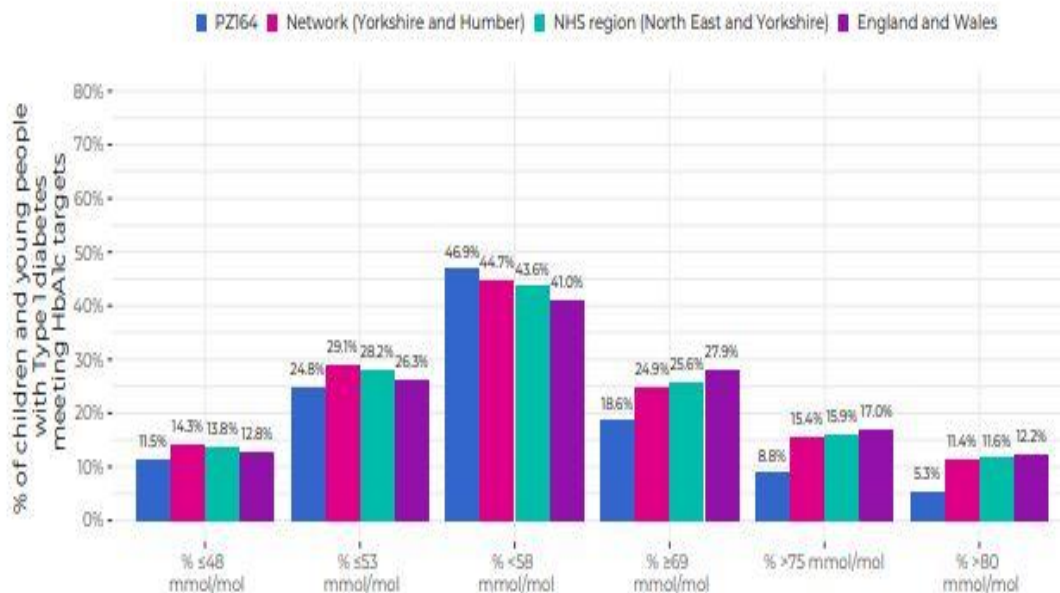


Percentage of children and young people with Type 1 diabetes using hybrid closed loop system



NPDA Data 2022-2023. PZ164 Rotherham Hospital

The % of CYP meeting the overall HbA1c targets of ≤ 48 mmol/L and ≤ 53 mmol/mol was lower in Rotherham compared to Yorkshire and Humber and England and Wales



Advanced Technology use in Rotherham March 2023

- Lower Continuous Glucose Monitoring use in Rotherham compared to the Network, Region and England and Wales.
- Low Hybrid Closed Loop use compared to the Network, Region and England and Wales.

Rotherham National Paediatric Diabetes Audit 2022-2023

Adjusted mean HbA1c was **58.8mmol/L**, making Rotherham a positive outlier, **however** the % of CYP meeting the overall HbA1c targets of $\leq 48\text{mmol/mol}$ and $\leq 53\text{mmol/mol}$ was lower in Rotherham compared to Yorkshire and Humber and England and Wales.

The Project

March 2023

NHS England CYP Equitable Provision of Diabetes Treatment Technology funding



- 1 WTE Family Support Worker
- Additional 0.2 WTE Specialist Diabetes Dietitian
- Fixed Term April 2023 - March 2024



The funding has initially been extended by the Trust to January 2025

Project Focus:

To increase the use of advanced diabetes technology, for Children and Young People living with diabetes, in Rotherham.

Aims:

- To ensure all children and young people have equitable access to appropriate advanced diabetes technology.
- To provide support to use technologies to achieve and **maintain** improvements in care and best outcomes beyond on boarding.

Summary of Funded Support Worker and Dietitian roles

FSW:

- Signposts and demonstrates technology resources and equipment and supports their use/troubleshooting
- Manages the planning and initiation of the technology start pathways
- Supports families and CYP to connect technologies to data platforms
- Reviews 'Time in Range' (TIR) data to highlight those CYP requiring earlier intervention
- Prepares data and information for clinic reviews
- Provides individual support to struggling CYP and their families and those not engaging with the service

The FSW continues to allow capacity for the PDSNs to focus on new technology starts, clinical support and reviews.



Summary of Funded Support Worker and Dietitian roles

Specialist Diabetes Dietitian:

- Full review with all CYP and families prior to HCL starts.
- Simple leaflet to support getting the most out of the new technology.
- Targeted support and additional dietitian contacts for CYP with deteriorating TIR.
- Provides additional dietetic appointments for those who require it - carbohydrate counting/bolus insulin ratios/activity planning/hypo treatment/timing of insulin etc.



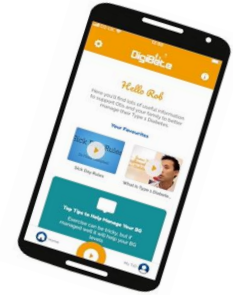
Wholegrain roll (56g)		
Nutritional information		
Typical values		
Energy (kJ/kJ)	230/559	
Protein (g)	6.3	112/559
Carbohydrate (g)	46.3	82.5
of which sugars (g)	2.2	25.9
of which saturated (g)	2.2	1.1
Fibre (g)	0.5	1.5
Fat (g)	4.3	0.88
of which saturated (g)	0.9	2.4
Sodium (g)	0.09	0.32



Beyond On Boarding

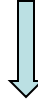
Maintaining improved glucose management

- FSW 2 weekly Time in Range Review → targeted PDSN/PDSD intervention
- FSW ongoing technology problem solving and support contacts
- FSW data and information gathering in preparation for MDT clinic reviews
- FSW signposting to physical and mental health resources

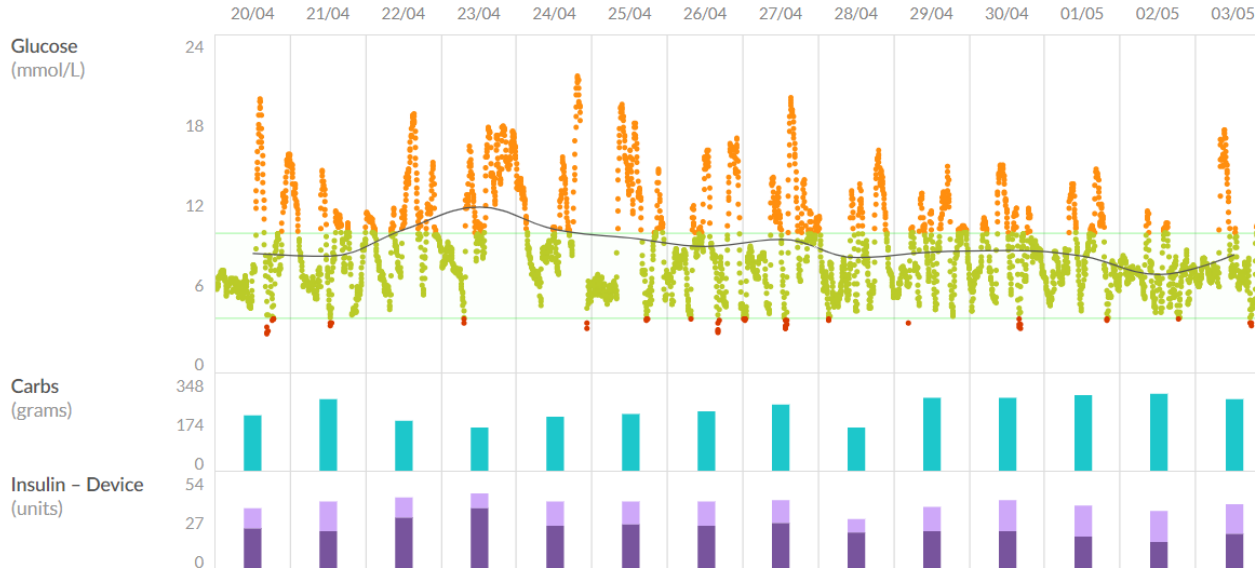


FSW Time In Range review

TIR reduced to 62%, average 9.7mmol/L. Missing some snack boluses. PDSO tel. contact.



TIR for the following week improved to 76%, average 8.3mmol/L.



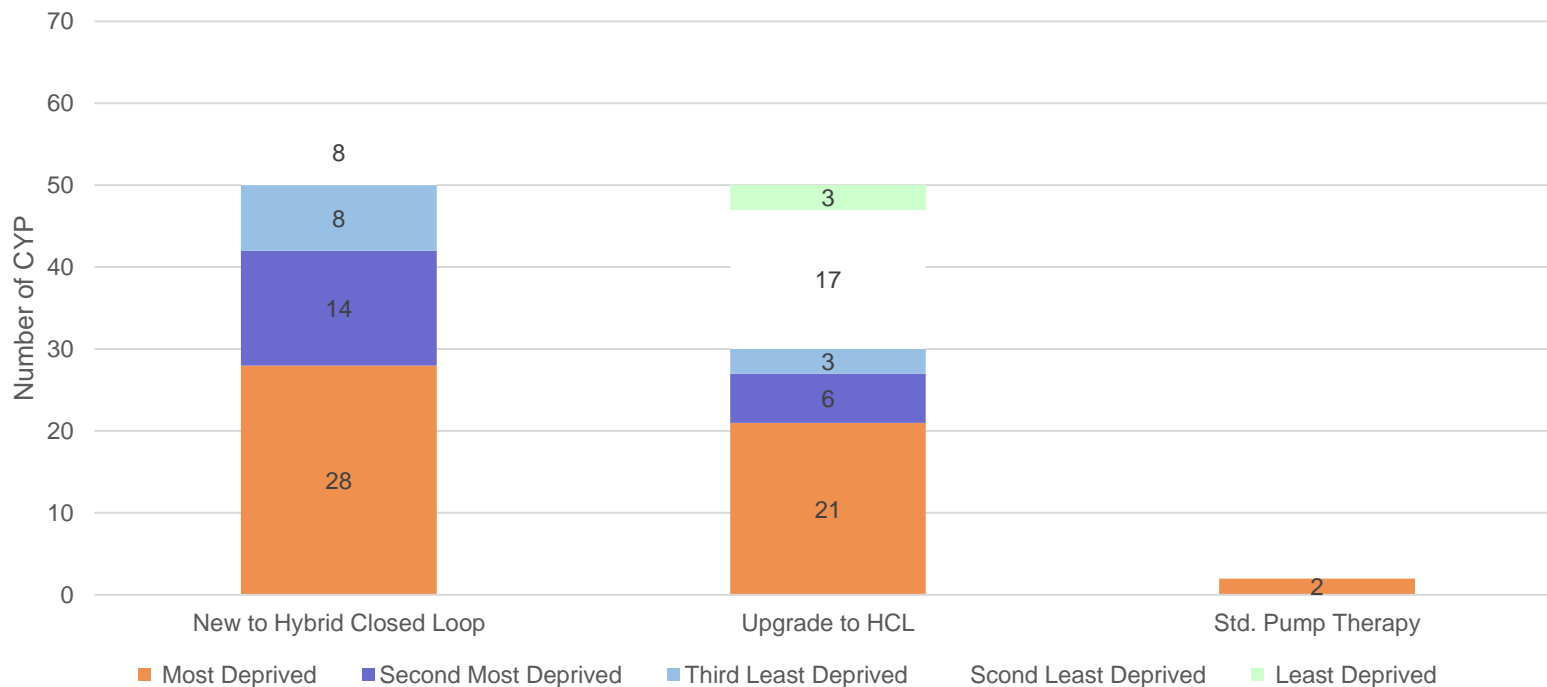
Data submission and Monitoring

- Two monthly data submission to NHS England for complete summary of New Technologies started, outcomes and progress.
- Monthly MDT discussions in Paediatric Diabetes “Patient in difficulty” meetings to discuss patients who will benefit with this extra support/education and training

Outcomes & Improvements in Care

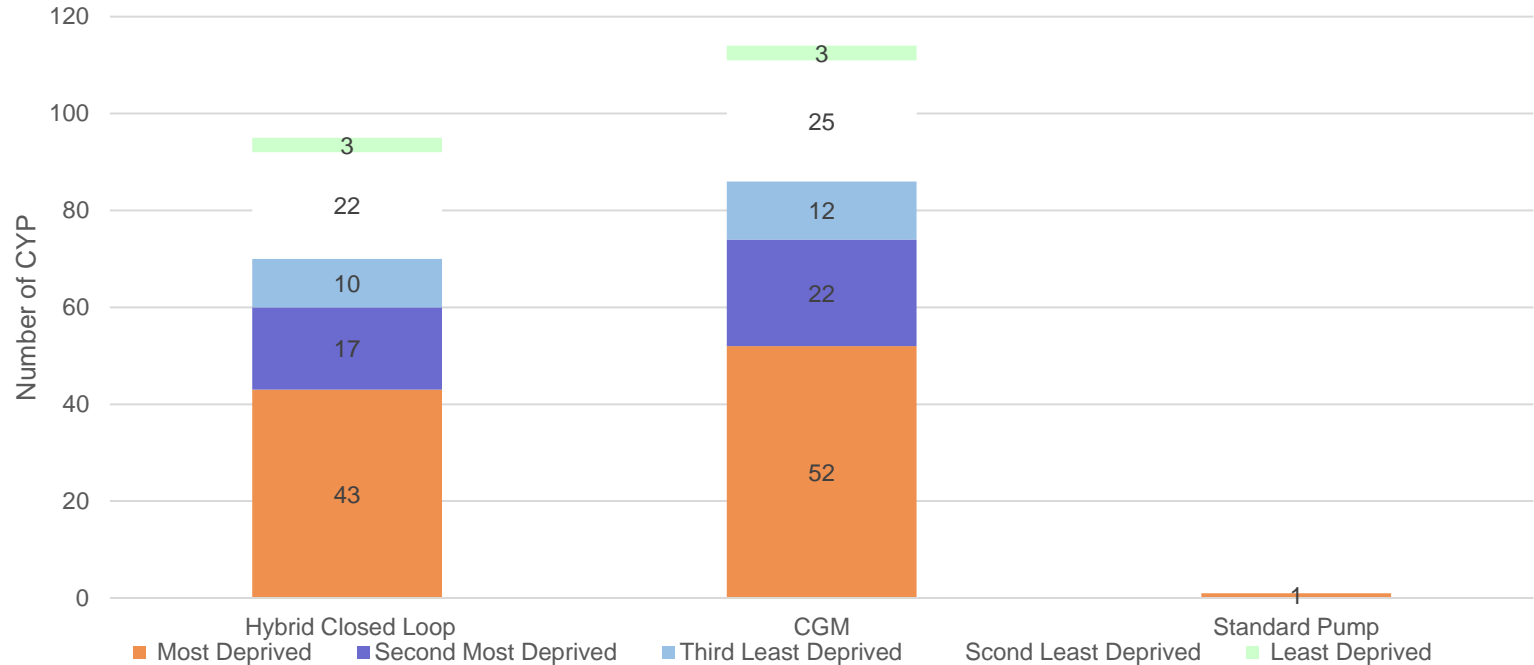
Technology Starts by Deprivation: April 2023 - Dec 2024

108 children and young people with Type 1 Diabetes have started Hybrid Closed Loop Systems (HCL) to the end of December 2024. 64% of these were in the two most deprived quintiles.

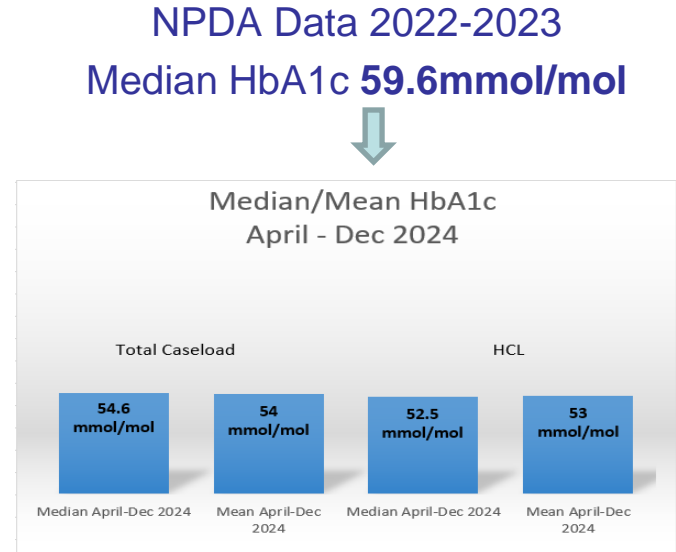
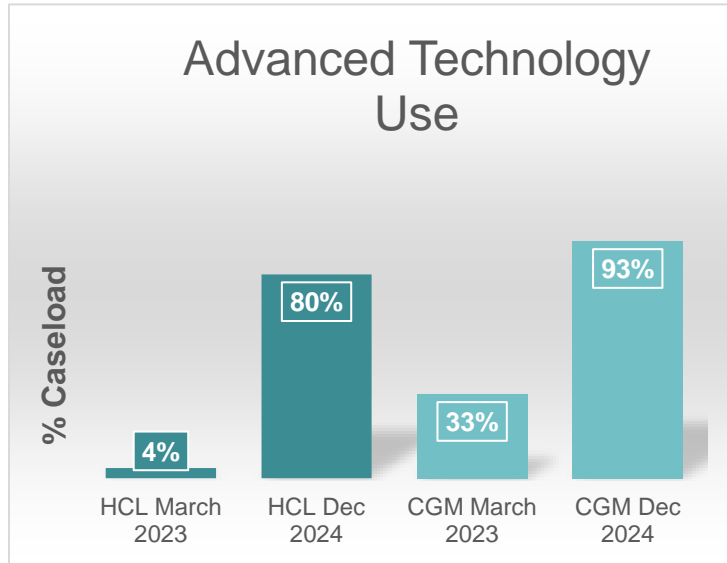


Technology Use by Deprivation – Current Caseload

95 CYP with Type 1 Diabetes are using HCL (80% of the Type 1 caseload) and 114 of the total caseload are using CGM (90% of the caseload).



Improvements in Outcomes/HbA1c



Closure of gap related to Deprivation/Ethnicity

- 66% of current caseload is from the 2 most deprived quintiles.
- 63% of the caseload using HCL are from the 2 most deprived quintiles.
- Demonstrates equitable access and the inequalities gap, related to deprivation, has been closed
- 12 out of 13 CYP with Type 1 Diabetes from ethnic groups are using HCL. (The 1 not is due to sensory issues relating to neurodiversity).

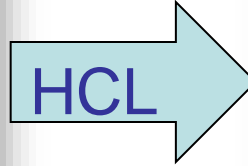
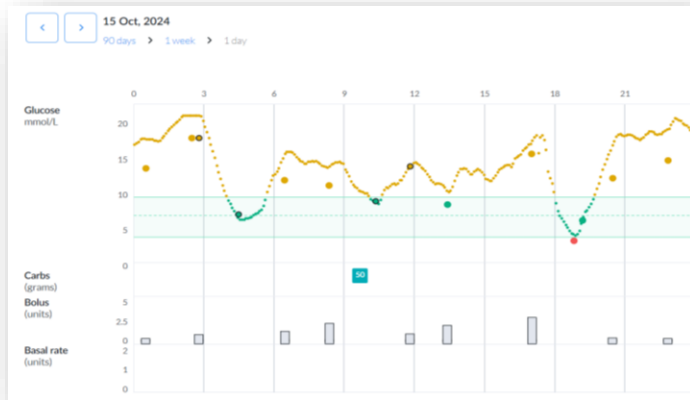
Case Examples

AU: 16 years old. Most deprived quintile. High HbA1c

- January 2024: 2nd Diabetic Ketoacidosis (DKA) admission in 5 months.
- Weekly home visit support by FSW.
- March 2024: Improvements in glucose to 56% TIR with an average glucose of 9.5mmol/L and 5.4 blood glucose values per day.
- Reduction in HbA1c from 85 to 69mmol/mol.
- **Reluctant to use a glucose sensor or insulin pump however, with intensive support from the FSW, a significant improvement was seen.**
- End July TIR had fallen to 16% and 5kg weight loss. AU had been on holiday and had reduced his contacts.
- August 2024: 2 episodes of high ketones and 2 x near attendance at UECC.
- AU agreed to trial advanced technologies.
- **Started glucose sensor and 2 weeks later started HCL pump.**
- **1 week later TIR 71%**

**Mum: ‘Our lives have changed completely’
‘His attitude has changed – he’s been nice!’**

Newly diagnosed Type 1 Diabetes: 2 year old



AB: 10 years old. High HbA1c. Most deprived quintile. British Pakistani ethnicity

- High HbA1c Jan 2024. 71mol/mol.
- Diabetes managed by mum - comprehension and understanding of English was good however Mum was unable to read or write.
- HCL preparation: additional Specialist nurse and Dietitian appointments including home visits with Dad and other family members.
- More accurate carbohydrate counting.
- Glucose sensor and HCL pump started as individual contacts.
- FSW support to link to data platform and sharing.
- Improvement in HbA1c. 56mmol/mol.
- FSW review of TIR and appropriate MDT intervention is arranged as required.

Mum: 'It's easy, easy. You just have to get the Carb counting right'

Feedback: Quality of Life/Reduction in Diabetes Burden

'It's amazing –
it really is. Just
to have my little
girl back'

'It's great – I
love it. It's just
easier'

'I feel a new
normal'

'It's a bit scary as
you're not as in
control - but the
difference/change
in her is lovely'

'I feel lighter – I used to
be sluggish and
droopy'

'The difference in
her is amazing'

'A game changer
– it's made life
easier for us all'



Double thumbs up
from one of the
children with
neurodiversity

Video

<https://youtu.be/Olr26VbZgfg>

Forward View

- **Maintain** improvements in care and outcomes.
- At least 90% of CYP, with Type 1 Diabetes, using HCL.
- Focus on the challenges of engaging and supporting those who have not yet chosen advanced technology use.
- Ensure technology discussions are a routine part of clinic appointments.
- Involvement of the FSW in the Seamless Transition Programme to support those on technologies moving to young adult services.
- Support for the increasing numbers of CYP with Type 2 Diabetes and consideration of technology use from diagnosis.

Summary

- The increased and more diverse MDT allows capacity to offer individualised and focussed support, to achieve and maintain improvements in diabetes care and best outcomes, for CYP from ethnic groups and in a population with high levels of deprivation.
- The National Diabetes Network workforce standards for Children and Young People's Diabetes services, published in February 2024, supports the additional, more diverse staffing in the team.

NHSE acknowledgment that our data is powerful and positive outcomes have been achieved by this funding resource.

Challenges

- Commitment and Team effort
- Mentoring by experienced Diabetes team member

Ongoing funding...It won't be an easy task but Don't give up!

- Support from your managers, Finance team/Trust Executives
- Negotiate with ICB, uplift of BPT Tariff for deprivation/inequalities
- Back it up with your Data

Thank you

