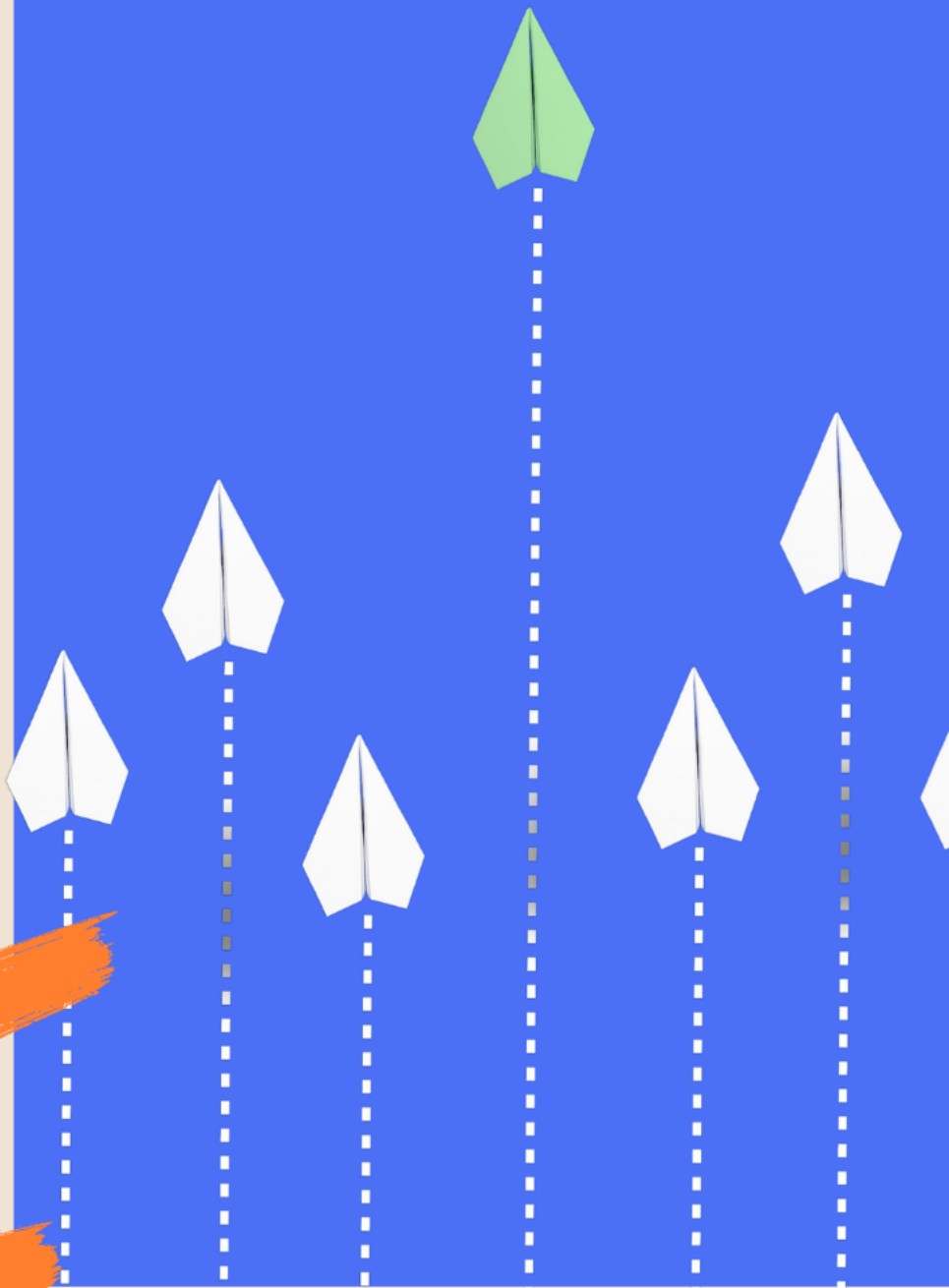
This is the *way*

PARTHA KAR



The story of 2017 in the NHS

No Freestyle Libre

Type 1 Diabetes not a national focus

Dexcom Uptake around 4%

Insulin Pumps - Children 27%; Adults 8%

No lack of evidence

No specific Audits

NICE TA 2008

The story of 2024

- 97% of T1Diabetes have CGM
- 98% of T1Diabetes pregnancy have CGM
- Pediatric HbA1c attainments best since records began
- Adults HbA1c attainments best since records began
- T1Diabetes pregnancy outcomes - improvement on all markers

The problem....

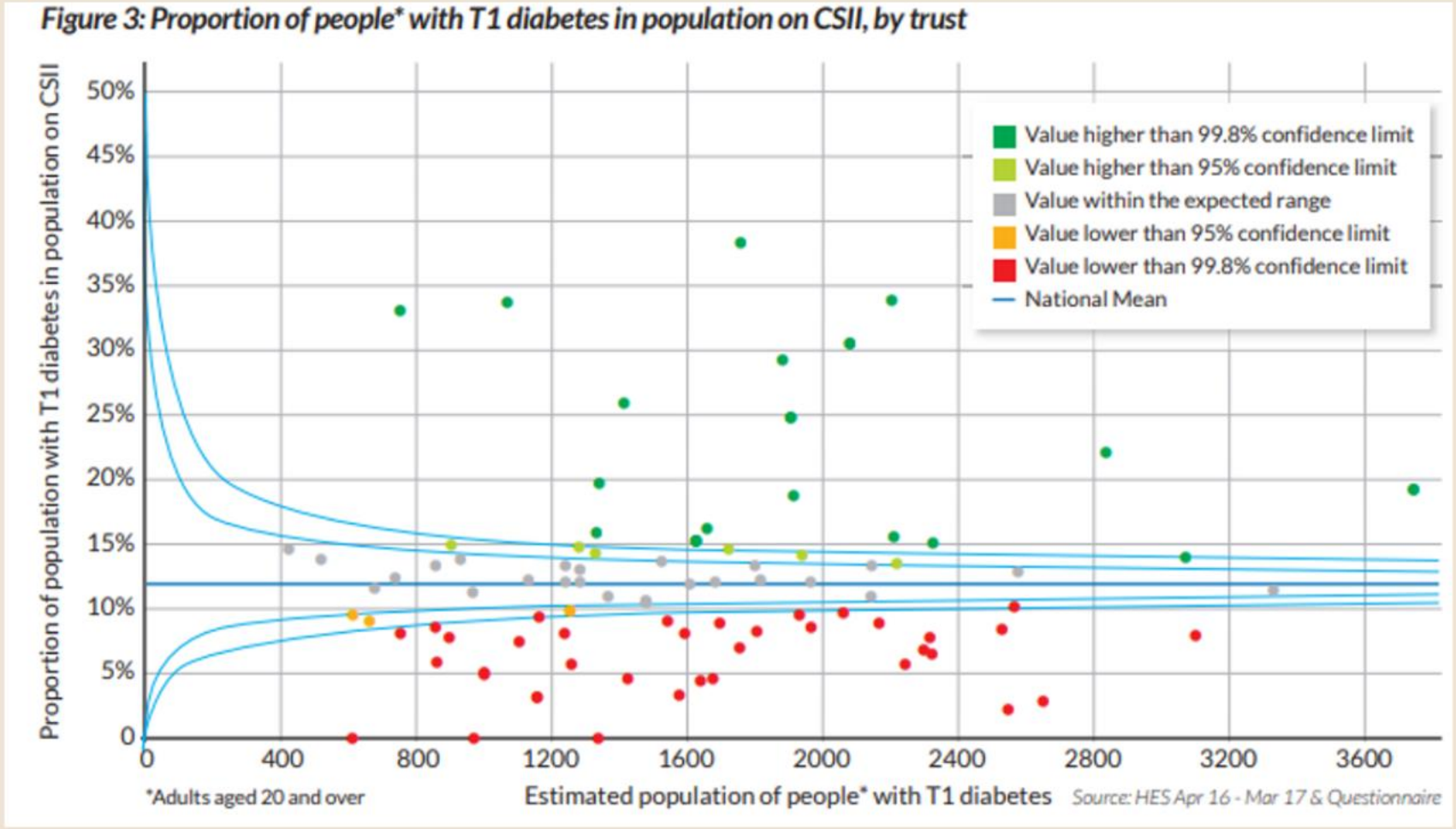


Figure 3: Proportion of people* with T1 diabetes in population on CSII, by trust
Proportion of population with T1 diabetes in population on CSII
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0
0
400
800
1200
1600
2000
2400
2800
3200
3600
Value higher than 99.8% confidence limit
Value higher than 95% confidence limit
Value within the expected range
Value lower than 95% confidence limit
Value lower than 99.8% confidence limit
National Mean
*Adults aged 20 and over
Estimated population of people* with T1 diabetes
Source: HES Apr 16 - Mar 17 & Questionnaire

The problem with a Specialist only approach

2008 NICE TA 151

UPTAKE 12%

HUGE VARIATION

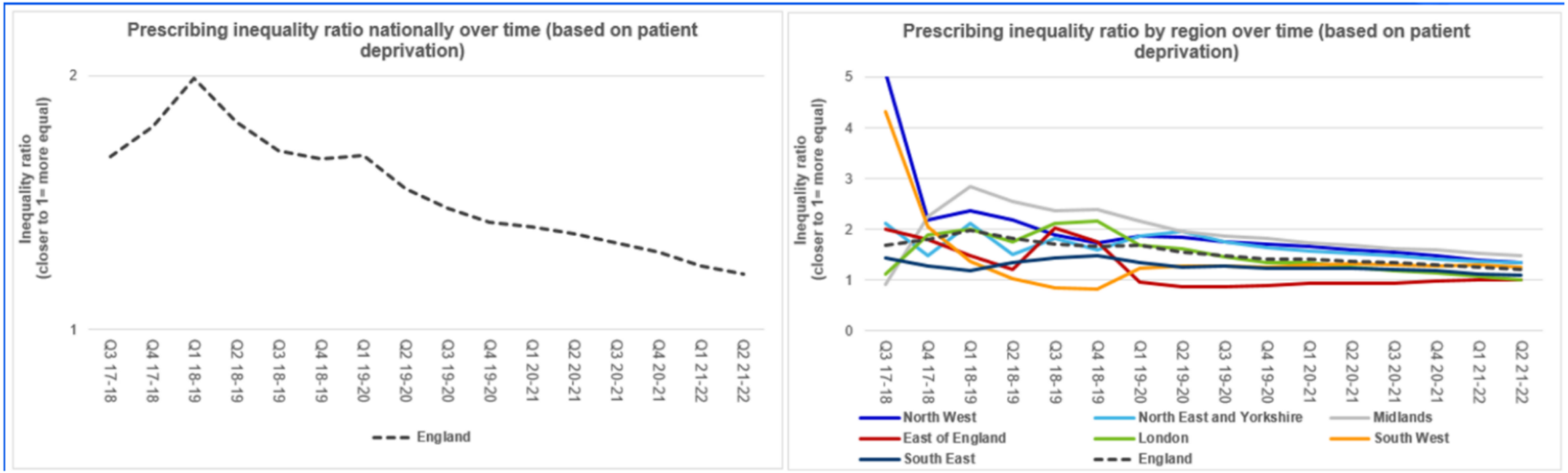
EDUCATION BARRIER

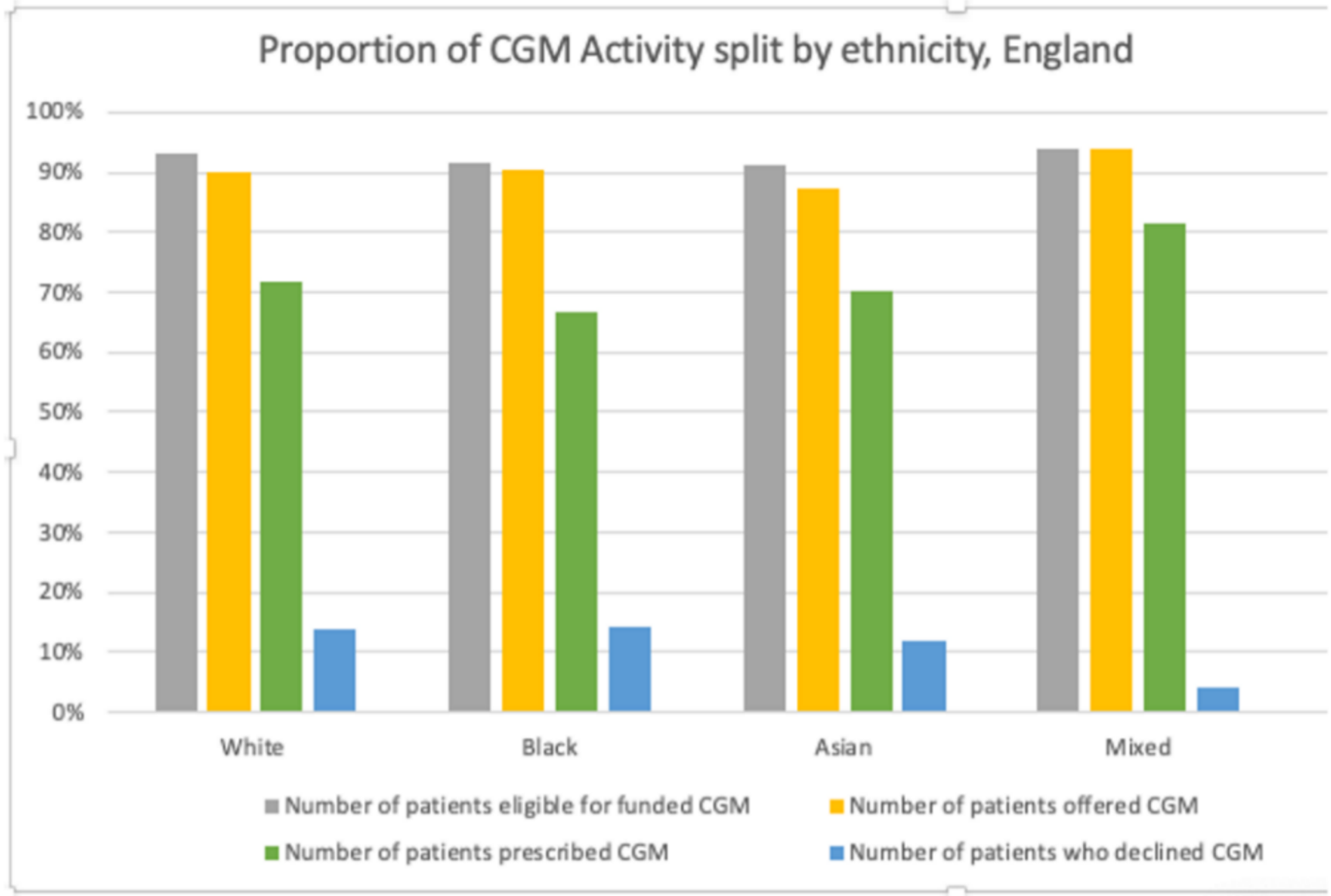
SELF APPOINTED VANGAURDS

“MY WAY”

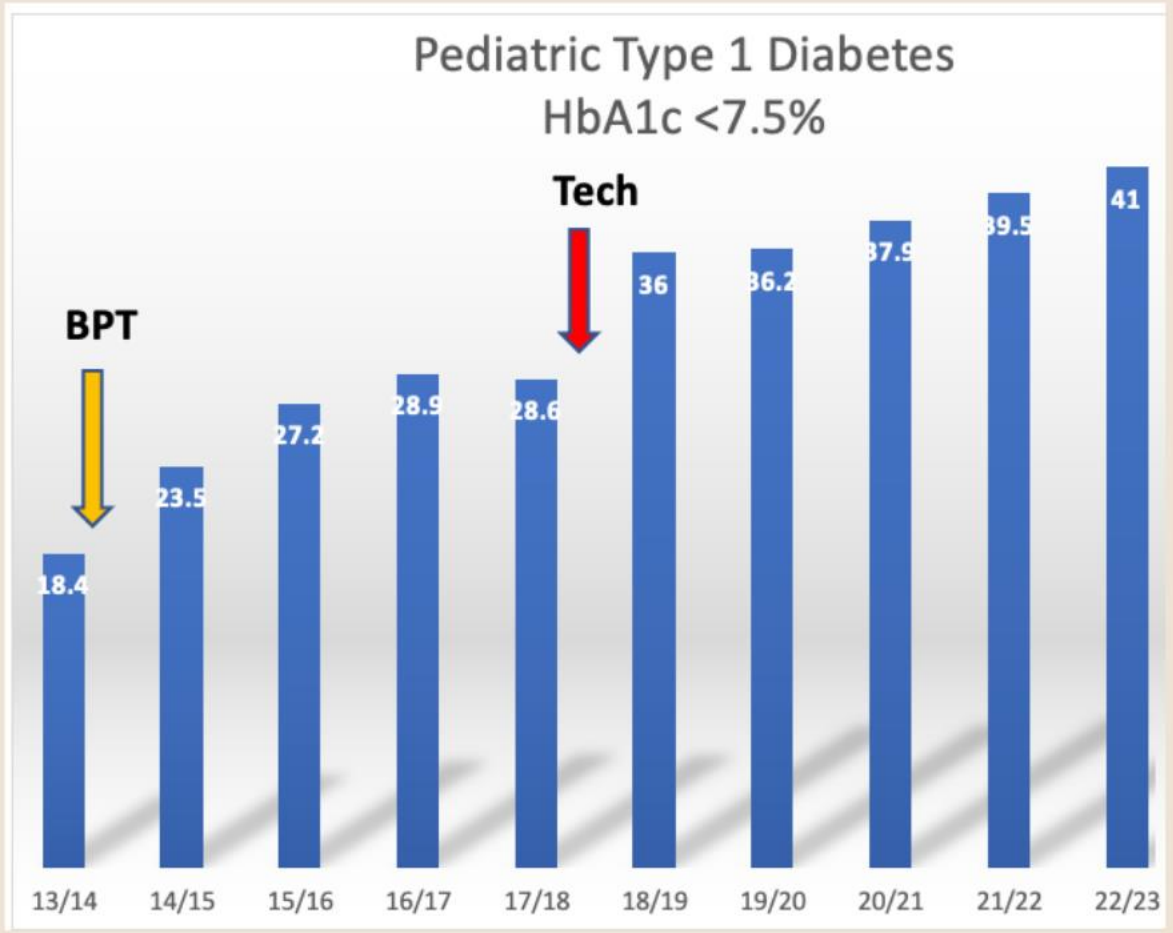
LOOK AT TYPE 1 DIABETES OUTCOMES TILL 2018

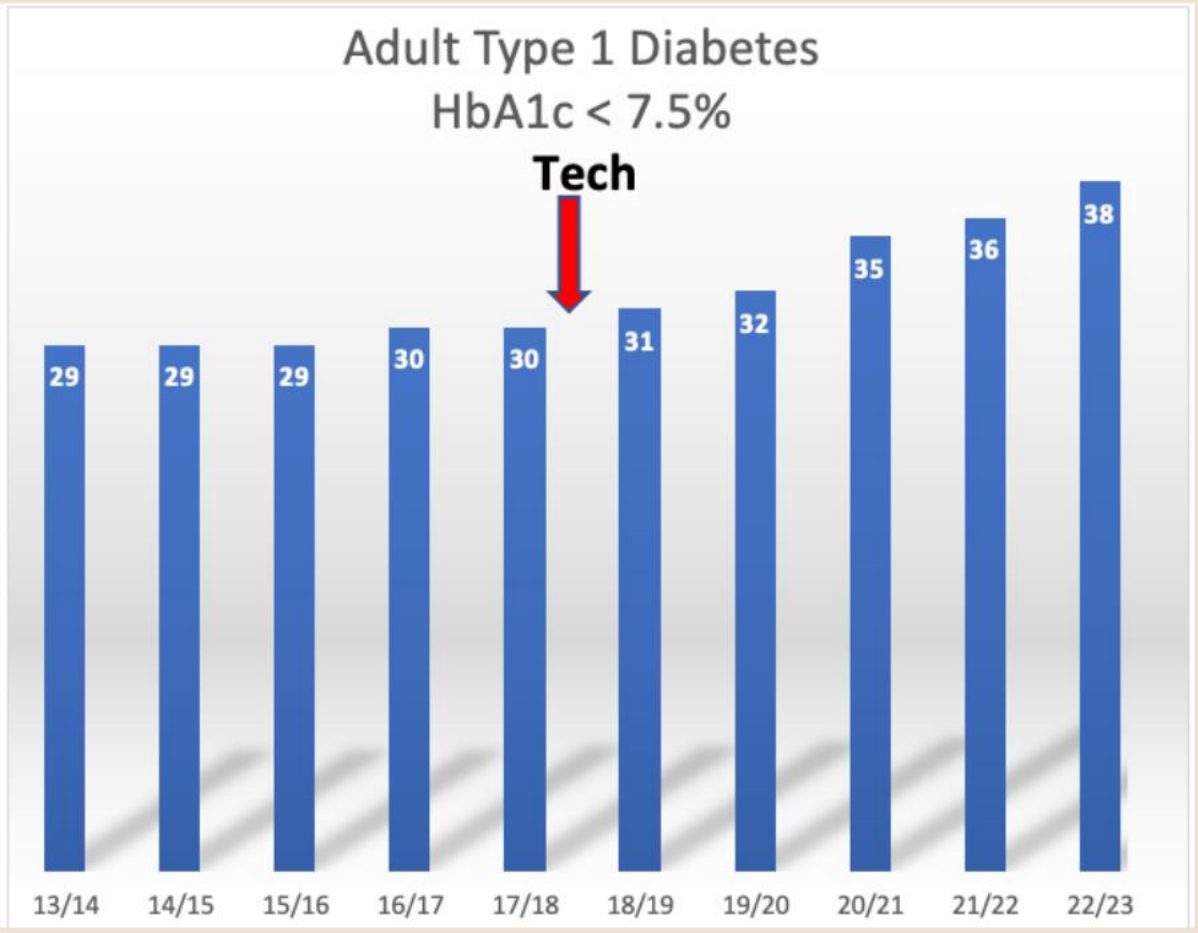
Is it possible?




Proportion of CGM Activity split by ethnicity, England
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
White
Black
Asian
Mixed
Number of patients eligible for funded CGM
Number of patients offered CGM
Number of patients prescribed CGM
Number of patients who declined CGM

The impact of Technology in Type 1 Diabetes Care


Pediatric Type 1 Diabetes
HbA1c <7.5%
BPT
Tech
18.4
23.5
27.2
28.9
28.6
36
36.2
37.9
39.5
41
13/14
14/15
15/16
16/17
17/18
18/19
19/20
20/21
21/22
22/23


Adult Type 1 Diabetes
HbA1c < 7.5%
Tech
29
29
29
30
30
31
32
35
36
38
13/14
14/15
15/16
16/17
17/18
18/19
19/20
20/21
21/22
22/23

NICE RECOMMENDS LIFE CHANGING TECHNOLOGY IS ROLLED OUT TO PEOPLE WITH TYPE 1 DIABETES

PRESS RELEASE
NICE recommends life changing technology is rolled out to people with type 1 diabetes
An announcement of the recommendations was made today (Tuesday 7 November) at NICE's annual conference in Manchester by NICE chief executive Dr Sam Roberts

Thousands of people with type 1 diabetes could be offered wearable technology to help them manage their condition following the publication of final draft guidance by NICE.

An independent NICE committee has recommended people whose diabetes is not controlled with their current device despite best possible management with an insulin pump, or real-time or intermittently scanned continuous glucose monitoring, are offered a hybrid closed loop system.

ABOUT THE RECOMMENDATIONS

1. Hybrid closed loop systems are recommended as an option for managing blood glucose levels in type 1 diabetes for adults who have an HbA1c of 58 mmol/mol (7.5%) or more, or have disabling hypoglycaemia, despite best possible management with at least 1 of the following:
- continuous subcutaneous insulin infusion (CSII)
  - real-time continuous glucose monitoring
  - intermittently scanned continuous glucose monitoring.

2. Hybrid closed loop systems are recommended as an option for managing blood glucose levels in type 1 diabetes for children and young people.

3. Hybrid closed loop systems are recommended as an option for managing blood glucose levels in type 1 diabetes for people who are pregnant or planning a pregnancy.

07 November 2023

Time Line

TA 943 published 19 Dec 2023

2.5 Million £ Preparation Fund released 24 Dec 2023

Data collection exercise for rough estimates

All centers keen to be part of work

Time Line

NICE sets a cost-effective price

Discussion with NHS England finance to stretch it (Added Value)

7 possible HCL combinations

5 outside price to be paid for: Jan 24

Negotiations continue till July 24

Hybrid Closed Loop (HCL) Systems Comparison Chart

Diabetes Specialist Nurse Forum UK

Diabetes Specialist Nurse Forum UK	Medtronic	Tandem	Advanced Therapeutics	Ypsomed	Insulet
HCL algorithm	SmartGuard	Control IQ	CamAPS FX	mylife Loop (mylife CamAPS FX)	SmartAdjust
Location of algorithm	Pump-integrated	Pump-integrated	App based (Android)	App based (Android)	Pod-integrated
Pump	Medtronic 780g	T-slim X2	DANA-i	mylife YpsoPump	Omnipod 5
Pump type	Tethered (tubed)	Tethered (tubed)	Tethered (tubed)	Tethered (tubed)	Patch (tubeless)
Continuous glucose monitor (CGM)	Guardian 4 (no calibration)	Dexcom G6, Dexcom G7	Dexcom G6	Dexcom G6, FreeSyle Libre 3	Dexcom G6, FreeStyle Libre 2 Plus
Control & bolus delivery operation	Pump	Pump	Android smartphone	Android smartphone	Omnipod 5 Controller (PDM)
Pump charging mechanism	AA battery	Rechargeable	AAA battery	AAA battery	Battery within each pod Controller is rechargeable
Target glucose	5.5, 6.1 or 6.7 mmol/L (default 5.5)	6.25-8.9 mmol/L	Customisable from 4.4 to 11.1 (default 5.8)	Customisable from 4.4 to 11.1 (default 5.8)	6.1, 6.7, 7.2, 7.8, or 8.3 mmol/L
Exercise mode target glucose	8.3 mmols/L	7.8-8.9 mmol/L	No specific target. Ease off mode can be used for exercise	No specific target. Ease off mode can be used for exercise	8.3 mmol/L & less insulin delivery
Sleep mode target glucose	No	6.25-6.7 mmols/L	Customisable glucose target can be adjusted overnight	Customisable glucose target can be adjusted overnight	Customisable glucose target or exercise feature (see above)
Bolus calculator based on	CGM value, glucose trend data and bolus calculator settings	CGM value only with bolus calculator settings	CGM value only with bolus calculator settings	CGM value only with bolus calculator settings	CGM value, glucose trend data and bolus calculator settings
Automated correction bolus settings	If predictive glucose > 6.7 mmols/L and if max basal rate is reached	If predicted glucose in 30 mins >10 mmols/L & increasing/max delivery is reached	Incorporated into continuous insulin delivery. Adjusts insulin delivery every 8-12 minutes	Incorporated into continuous insulin delivery. Adjusts insulin delivery every 8-12 minutes	Automated micro-boluses every 5 mins. Plus user initiated correction bolus
Active insulin time	Adjustable	Not adjustable (set at 5 hrs)	Adjustable	Adjustable	Adjustable
Set up requirements	Basal rates, ICR, ISF & AIT	TDD, body weight, basal rates, ICR & ISF	TDD & body weight	TDD & body weight	Basal rates, ICR, ISF & AIT
Learning mechanisms	Uses TDD over past 2-6 days. Requires 48 hours of manual mode to learn user profile	Uses body weight & TDD. Predicts glucose 30 mins ahead	Overall insulin needs, diurnal, post meal	Overall insulin needs, diurnal, post meal	Adapts with each pod using previous TDDs. Predicts glucose 60 mins ahead
Remote monitoring for parents/ carers	Glucose and insulin data via CareLink Connect app	Glucose via Dexcom follow app	Glucose via Dexcom follow app	Glucose and insulin data via 'companion' in mylife CamAPS FX app	Glucose via Dexcom follow app if using G6
Data share with HCPs	CareLink (via app in real-time)	Glooko (download needed)	Glooko (real-time)	Glooko (real-time)	Glooko (real-time)
Minimum and maximum daily dose	8-250 units per day	10-100 units per day	5-350 units	5-350 units	Min 5 units per day Min 85 units to activate pod
Pump capacity	300 units	300 units	300 units	160 units	200 units
Insulin compatibility	NovoRapid & Humalog	NovoRapid & Humalog	Any rapid and ultra-rapid acting	NovoRapid, Humalog, Fiasp, Apidra & Lyumjev	NovoRapid, Humalog & Admelog
Licensed in pregnancy	No	No	Yes	Yes	No
Age Range	7-80 years	6 years & over	1 years & over	1 years & over	2 years & over
Demo pump app/simulator	Yes	Yes	?	Yes	Yes

ICR – insulin carbohydrate ratio
ISF – insulin sensitivity factor
TDD – total daily dose of insulin
AIT – active insulin time

For availability of systems approved by NHS England: www.supplychain.nhs.uk/product-information/contract-launch-brief/insulin-pumps-and-associated-products

Version 4.0 May 2024: Adapted for health care professionals from Tim Street's Hybrid closed loop systems

Indicative funding Till end March 25

NHS England

To: Regional Diabetes Leads 19 July 2024

Dear colleagues

ICB funding allocations to support rollout of Hybrid Closed Loops in 2024/25

As part of NHS England's Hybrid Closed Loop (HCL) implementation strategy in response to NICE TA 943, ICBs are being offered the opportunity to receive a contribution towards the **incremental** costs of implementing HCL.

Please find below a breakdown of the maximum revenue funding available for all ICBs in the East of England region, in the first year of HCL implementation, and covering the 2024/25 financial year. The national diabetes team would appreciate the regional team's support in communicating with each ICB details of their allocation envelope as soon as possible.

It is important to emphasise that these allocations are indicative, and reimbursement funding will be calculated based on activity reported through the quarterly National Diabetes Audit (NDA) and/or the National Paediatric Diabetes (NPDA) collections, and paid to the ICBs retrospectively.

Qualifying payment process

- HCL systems have been purchased though the national procurement framework hosted by NHS Supply Chain and only from suppliers who have successfully met the cost-effective criteria.
- HCL systems have been provided to eligible populations by trusts commissioned by the ICB to provide diabetes services.
- Individual patient-level information has been reported to either the NDA HCL quarterly collection (for adults) or the NPDA quarterly audit (for children and young people).
- The information reported will be used to calculate the eligible cohort and associated contribution on a quarterly basis and this contribution will be paid to the ICB.
- It is the responsibility of the ICB to ensure the funds are allocated to the respective NHS organisation that has incurred the costs of prescribing HCL.

An overview of the reimbursement funding and payment criteria is available in section 3.2 of NHS England's implementation strategy published in January 2024.

Further information on the ICB allocations and payment process will follow in due course. This will include additional information on the *HCL Pregnancy Pump Switching Allocation.*

For further information or assistance contact Mark Brodigan on markbrodigan@nhs.net

Yours faithfully

Shaun Crowe
Diabetes Programme Director
NHS England

Professor Partha Kar
GIRFT Type 1 Diabetes Technology Clinical Lead
NHS England

ICB code	ICB name	Region
England	ENGLAND	ENGLAND
QM7	NHS Hertfordshire and West Essex ICB	East of England
QMM	NHS Norfolk and Waveney ICB	East of England
QH8	NHS Mid and South Essex ICB	East of England
QJG	NHS Suffolk and North East Essex ICB	East of England
QUE	NHS Cambridgeshire and Peterborough ICB	East of England
QHG	NHS Bedfordshire, Luton and Milton Keynes ICB	East of England

1. Ensure your system signed up to NHS Supply Chain
2. Pregnancy pot separate
3. Total investment from NHS England- Year 1? 14.1 Million £
4. 25% from systems - Total NHS investment approx. 19 Million £
5. Priority Area: CYP & Pregnancy

Basic Principles

Basic Principles

Payment backdated from April 2024

Work with industry

Understand what ‘incremental’ means in this context

Upgrades and savings

Top Tips

- Ask for money allocated values / Pricing as needed
- Only confirmed source - NHS England
- Big jump in funding in subsequent years- so plan ahead
- Staffing plans
- Clinical Person? Me- ask me / involve me

Mission Statement

Type 1 Diabetes and Hybrid Closed Loops..

The final frontier

These are the voyages of the Starship NHS Enterprise…

Its 5-year mission- to explore strange new centres

To seek out new leaders….and new initiatives

To boldly go where no one has gone before…

Thank You