



# DIABETES

All Party Parliamentary Group

Young people and type 2 diabetes



Young-Onset Type 2 Diabetes:  
insights from the 1<sup>st</sup> national diabetes audit

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AJ



- 22-year-old female
- Diagnosed with type 2 diabetes at 19 years of age
- At University + part time job
- BMI 32 kg/m<sup>2</sup>
- Metformin
- Microalbuminuria
- HbA1c 88 mmol/mol (aiming for 48 mmol/mol)
- Telephoned by GP as has missed her annual review as it clashed with exams

## Rise in type 2 diabetes in young people in England and Wales

© 18 August 2018



## Type 2 diabetes affects 7,000 under-25s in England and Wales

© 22 November 2018 | [Comments](#)



## Rise in type 2 diabetes in children 'deeply worrying'

© 15 June 2016



The rise in type 2 diabetes in children is deeply concerning and also extends to young adults

# Type 2 diabetes presents throughout life

Youth

Early onset in Adults  
Diagnosed <40 years

Later-onset

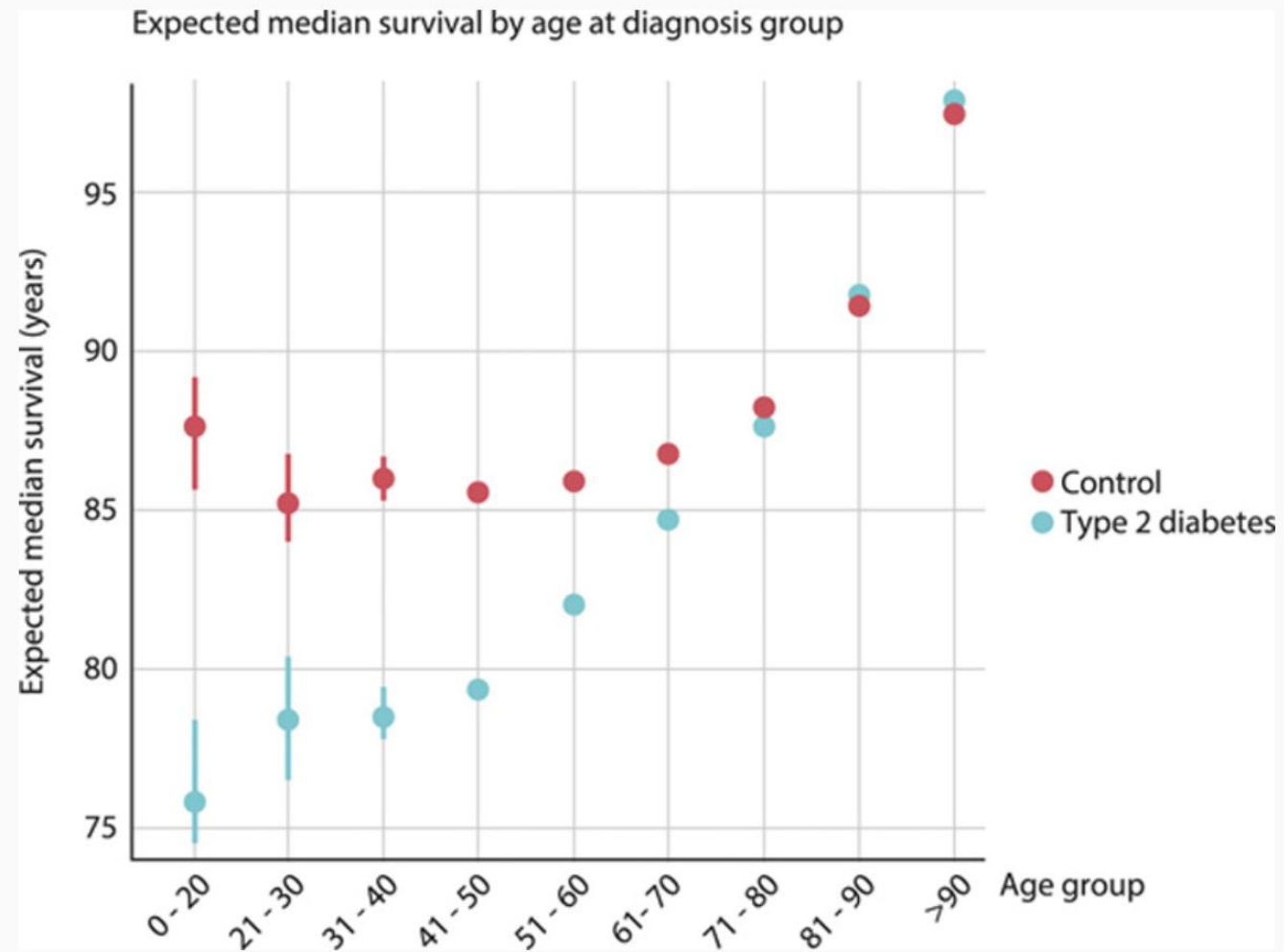


40 years



Why is this group of interest?

# What does 'high risk' mean?



**Early-onset type 2 diabetes is an extremely high risk presentation associated with adverse outcomes**



Earlier death vs later-onset type 2 diabetes



Higher frequency of cardiovascular events vs later-onset type 2 diabetes



Higher frequency of complications vs age-matched type 1 diabetes



Worse outcomes from Covid-19 vs later-onset type 2 diabetes

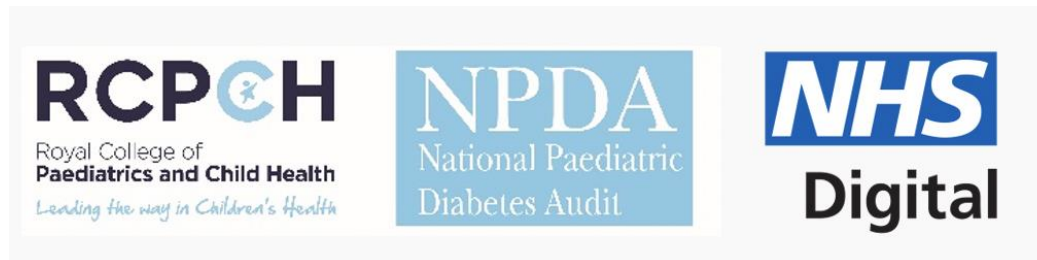
*Sattar et al. Circulation 2019*  
*Steinarsson et al. 2018*

*Sattar et al. 2019*  
*Constantino et al 2013*

*Clift et al. BMJ 2020*  
*McGovern et al 2021*



# 2021: audit report into young people living with type 2 diabetes





# Large number of people living with T2D aged <40 years in England

## 2019-20: cross-sectional prevalence

### Type 2 diabetes

Age group (years)	Number of people	%
<12	105	<0.1
12-15	545	0.4
16-18	910	0.7
19-25	8,245	6.7
26-39	112,980	92
<b>Total</b>	<b>122,780</b>	<b>100</b>

### Type 1 diabetes

Age group (years)	Number
<19	27,642
19 - 24	22,935
25 - 29	21,030
30 - 39	40,630
<b>Total</b>	<b>112,237</b>

121,225 young adults (19-39) living with type 2 diabetes

84,595 young adults (19-39) living with type 1 diabetes

Children <19 years represent 1.3% of all young-onset cases

- Who is affected?

## Key findings

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These individuals are more likely to be in overweight / obese weight categories...

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From ethnic minority groups

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From more socioeconomically deprived areas

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Less likely to receive care processes and achieve treatment targets

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Summary: the most vulnerable group living with the highest risk subtype of type 2 diabetes

# Guidelines & models of care for type 2 diabetes ....

Are the same whether a  
person is diagnosed  
aged 62 years or 22  
years

Why might different  
guidelines be needed?

# Variable needs of young adults with type 2 diabetes



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People in education

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People of working age

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Different licenced medications  
children vs adults

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Psychological impact / stigma

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Addressing extremely high  
cardiovascular risk

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Glucose-lowering therapy  
selection

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Women of childbearing age

# Priorities

- Raise awareness
- Make sure we are doing our best with current evidence, resource and infrastructure
- Local strategies to support those living with type 1 diabetes and those at high risk for developing
- High quality funded research

# Research priorities

- Prevention strategies in the young
- Which medications are best
- Should we be more aggressive in our treatment targets?
  
- Qualitative studies
  - engagement
  - Implementation research
  - Representation of younger people with type 2 diabetes



# T2 Diabetes in Children and Young People – APPG Call to Action

Dr Dita Aswani

Consultant Paediatrician, Diabetes and Weight Management, Sheffield Children's Hospital

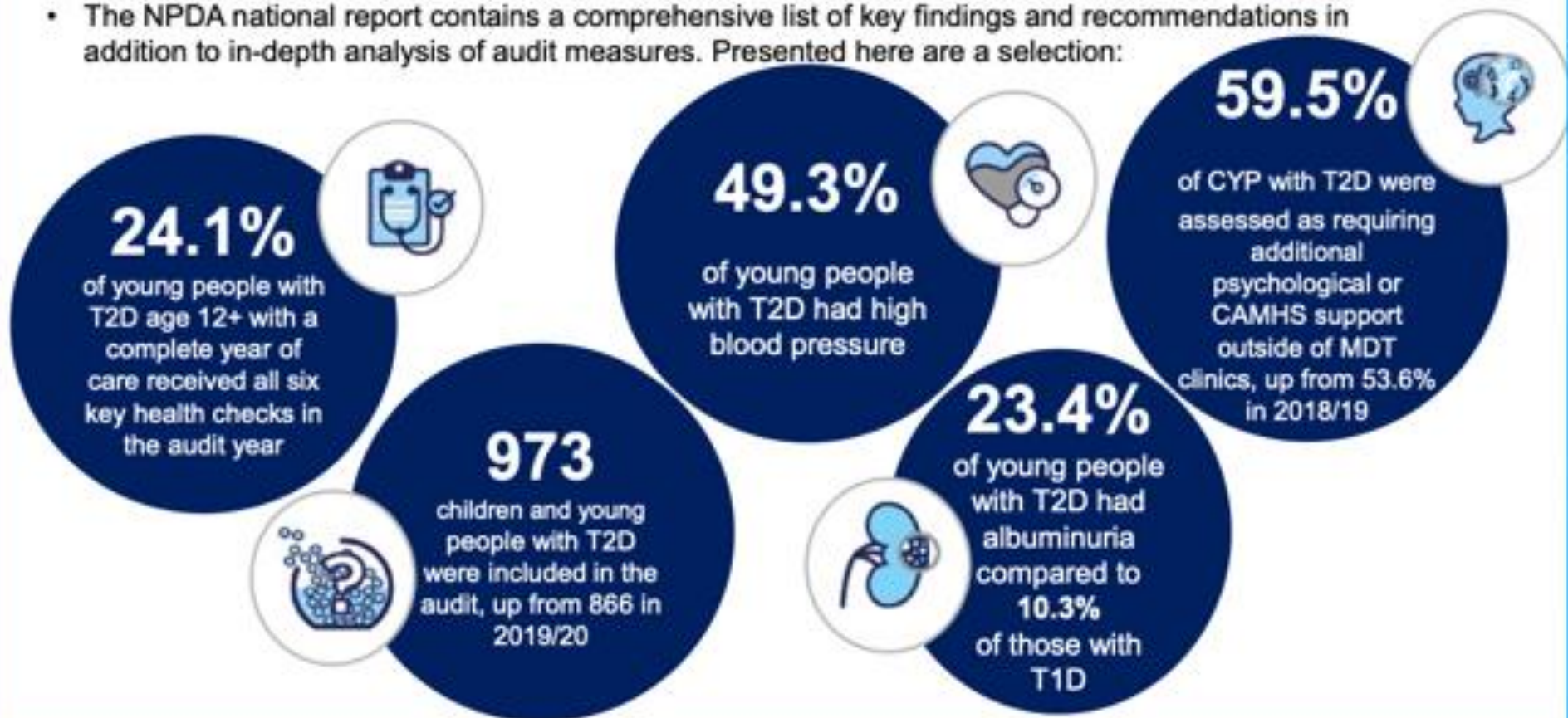
NHSE CYA Clinical Lead for North East and Yorkshire

December 2022



## 2020/21 NPDA Key Findings – Type 2 diabetes

- The NPDA national report contains a comprehensive list of key findings and recommendations in addition to in-depth analysis of audit measures. Presented here are a selection:

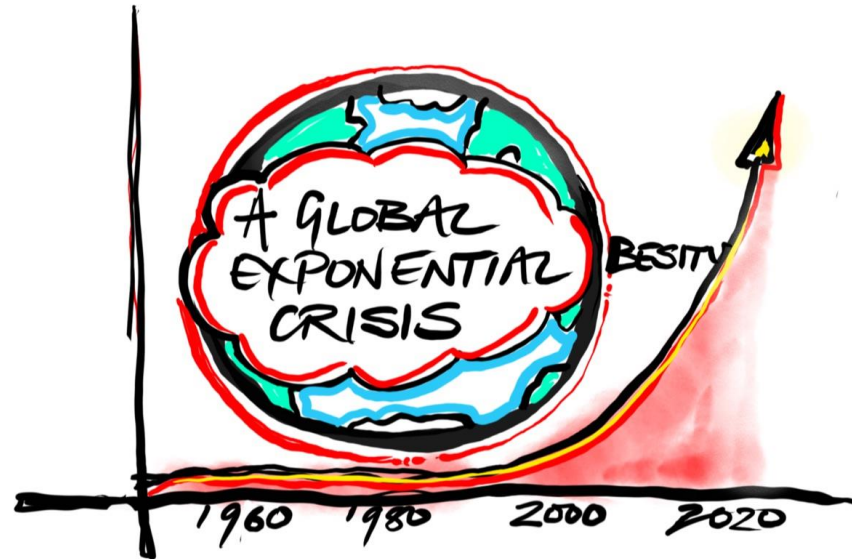


# From 2020 to 2021

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20% increase in overweight and obesity

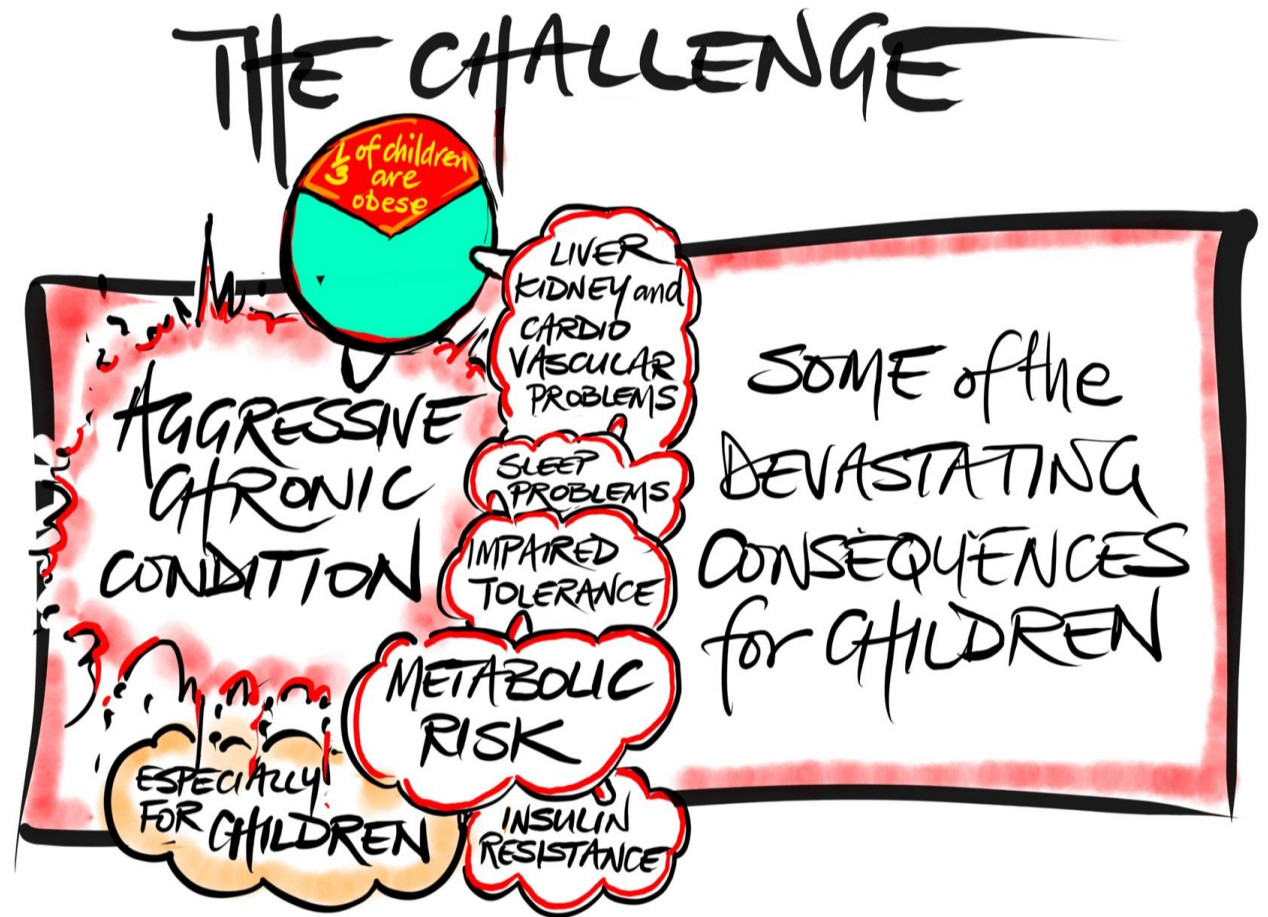
12.8% rise in CYP



The scene

Local window on  
National crisis

Joint actions to  
start reversal



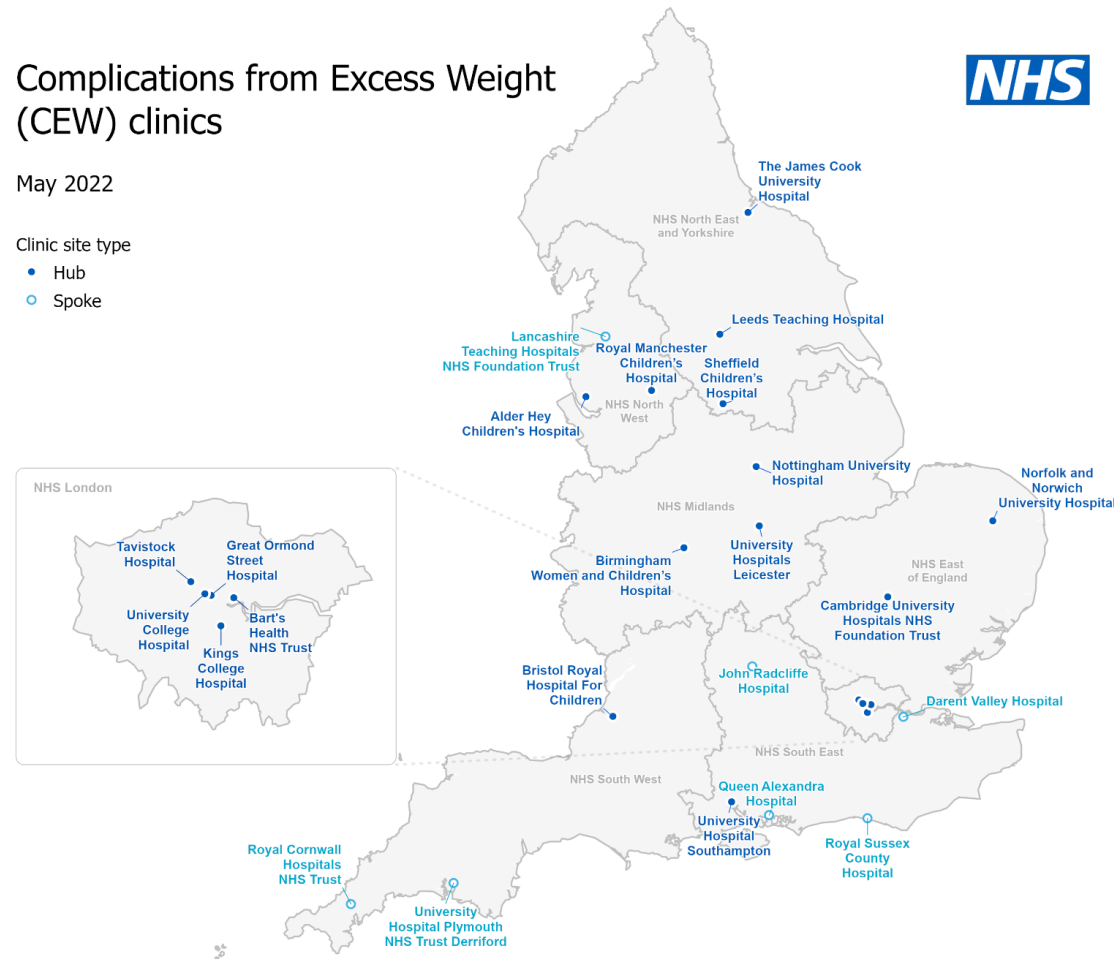
Addressing medical and psychosocial Complications from Excessive Weight (CEW)

3 year NHSE pilot funding 21 clinics

## Complications from Excess Weight (CEW) clinics

May 2022

- Clinic site type
- Hub
  - Spoke

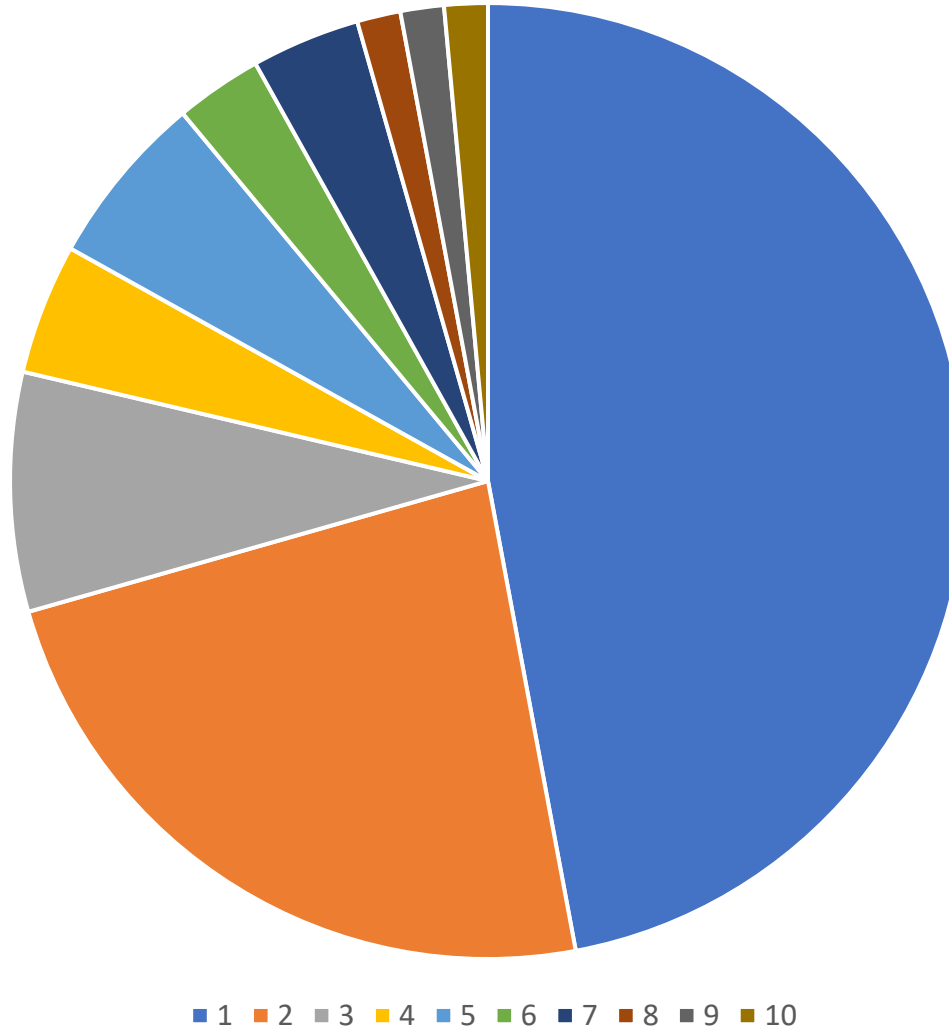


One third of CYP are living with overweight and obesity in UK by 11 years of age (NCMP)





### Index of Multiple Deprivation scores

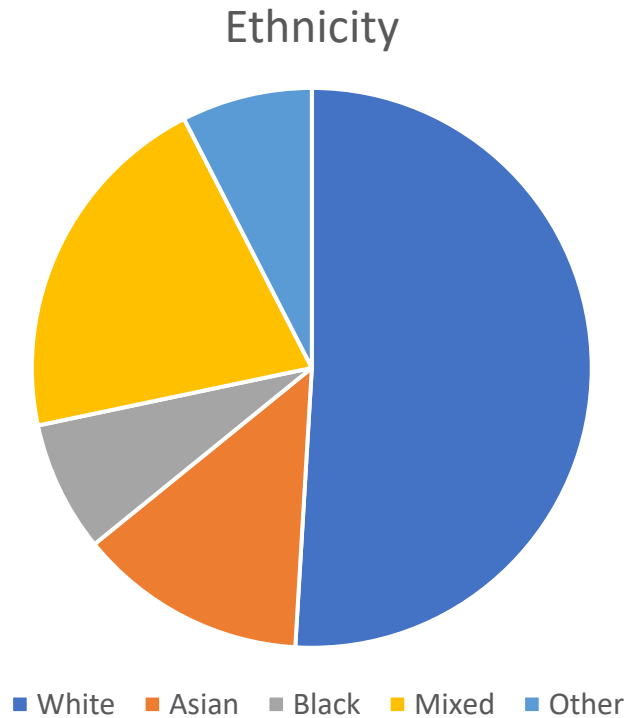


70% of CEW clinic patients live in the lowest two IMD decile postcodes

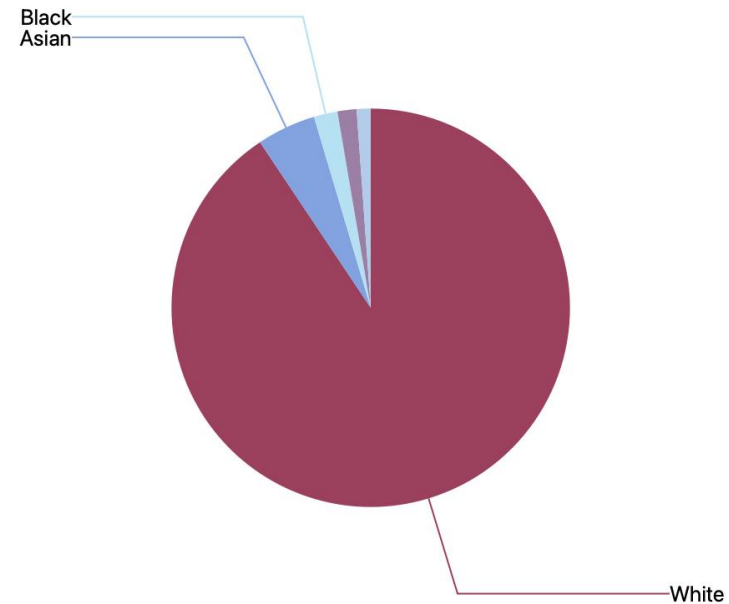


# South Yorkshire Ethnicity Breakdown

**CEW clinic (53 new patients 2021-22, age range 2y 11m to 16y 9m)**



**South Yorkshire Population Census 2011**



# Acanthosis Nigricans

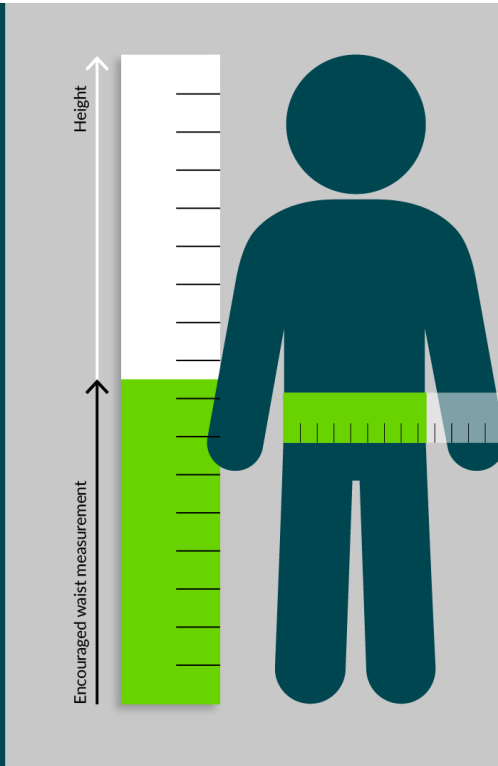
- Present in 70%
- Present for > 1 year
- Familial Skin type
- No understanding of metabolic significance



# Waist to height ratio is a measure of central adiposity and correlates with metabolic risk

Updated draft NICE guideline encourages everyone to **keep their waist measurement to less than half their height** to reduce the risk of potential health problems.

**NICE**



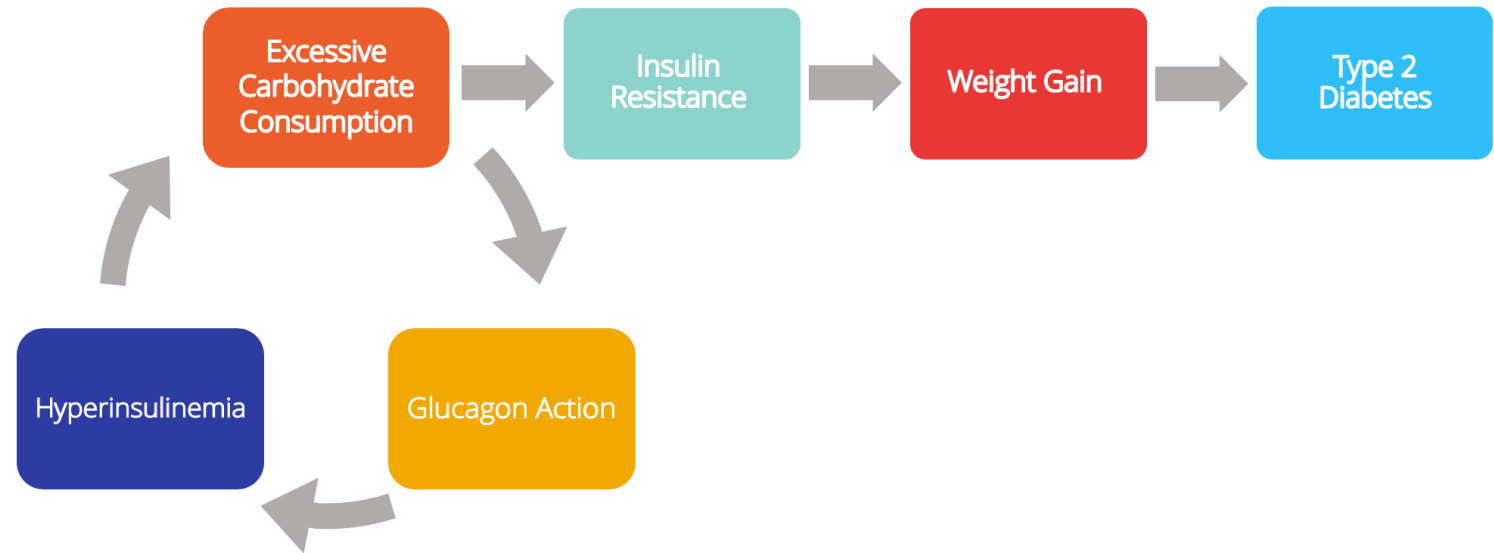
All patients had waist to height ratio  $>0.5$

42% WTHR  $>0.7$

**HIGH METABOLIC RISK**

Central adiposity is more prevalent in certain ethnicities at a lower BMI

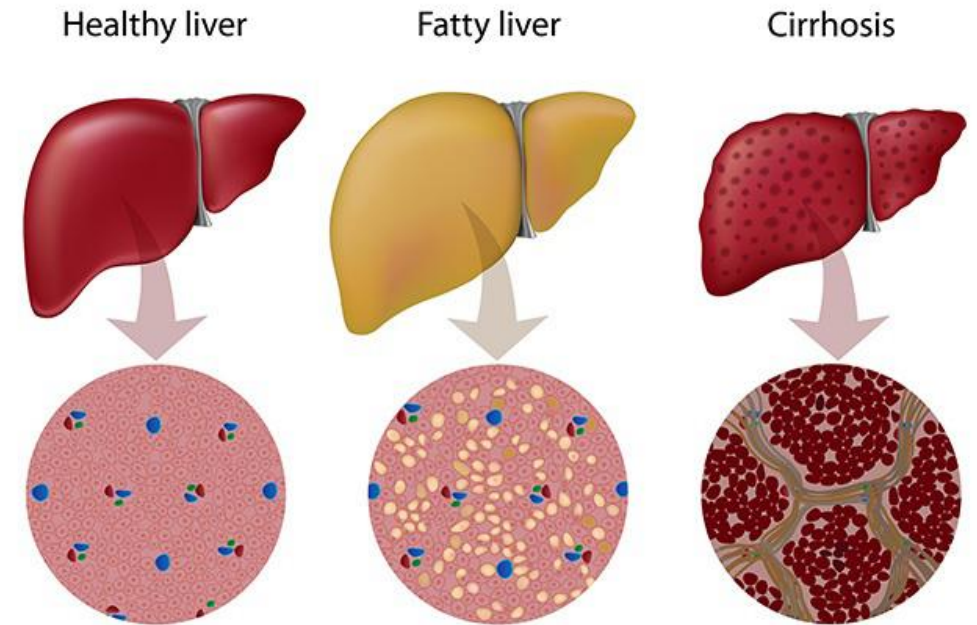
# Insulin Resistance

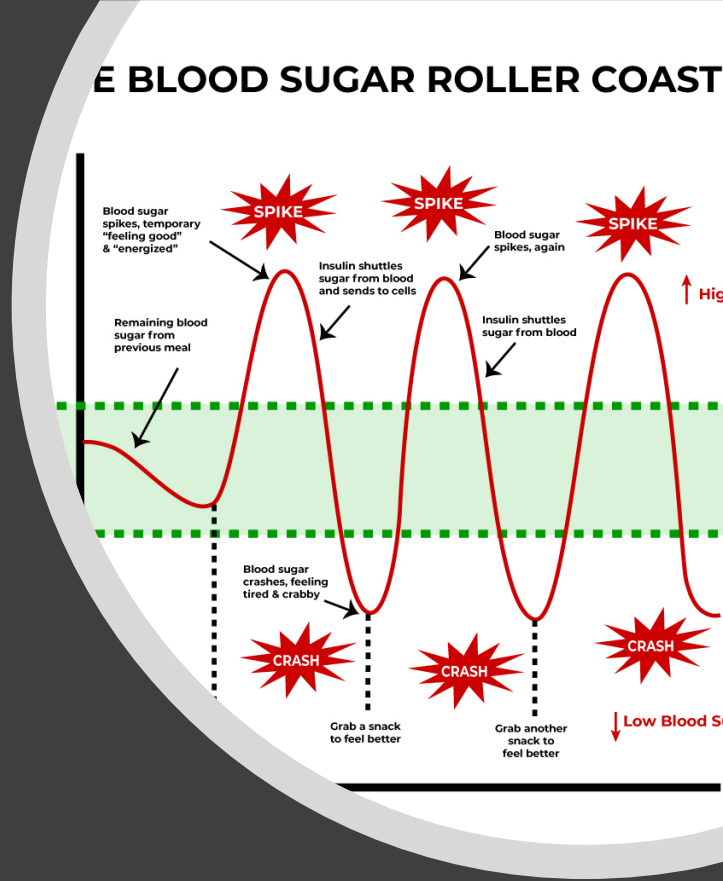


- Raised Fasting Insulin Level in 61%
- HOMA-IR score raised in 73%
- **NO SYMPTOMS**

# Non-Alcoholic Fatty Liver Disease

- Blood tests may show raised liver enzymes
- An ultrasound scan will show fatty deposits
- Liver elastography will indicate if there is any fibrosis
- In early stages can be reversible
  
- **One fifth had evidence of fatty liver**
- **Another quarter had abnormalities**
- **All asymptomatic**



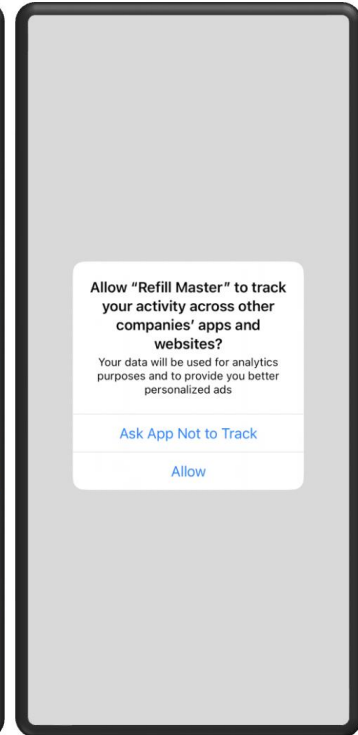
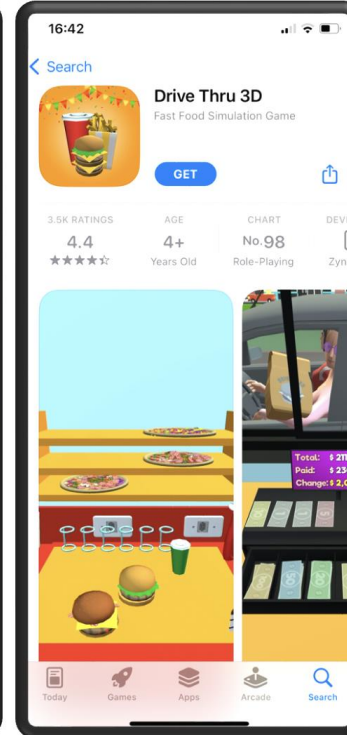
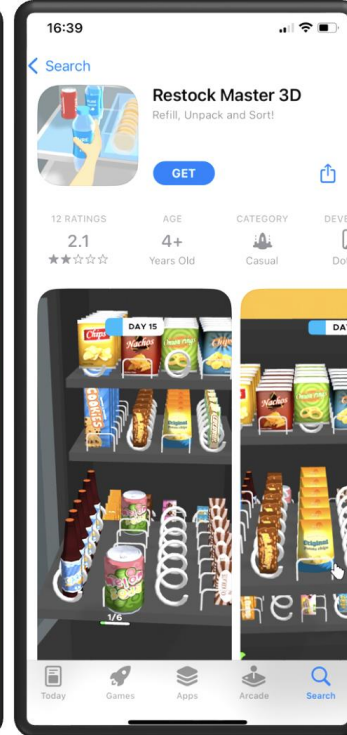
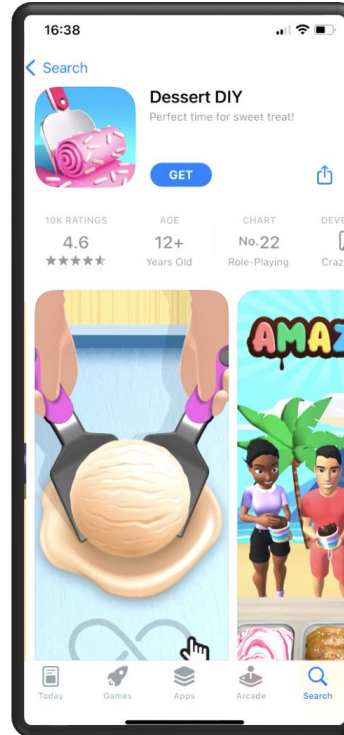


Breakfast is the best two meals of the day?

Buy one, get another free!

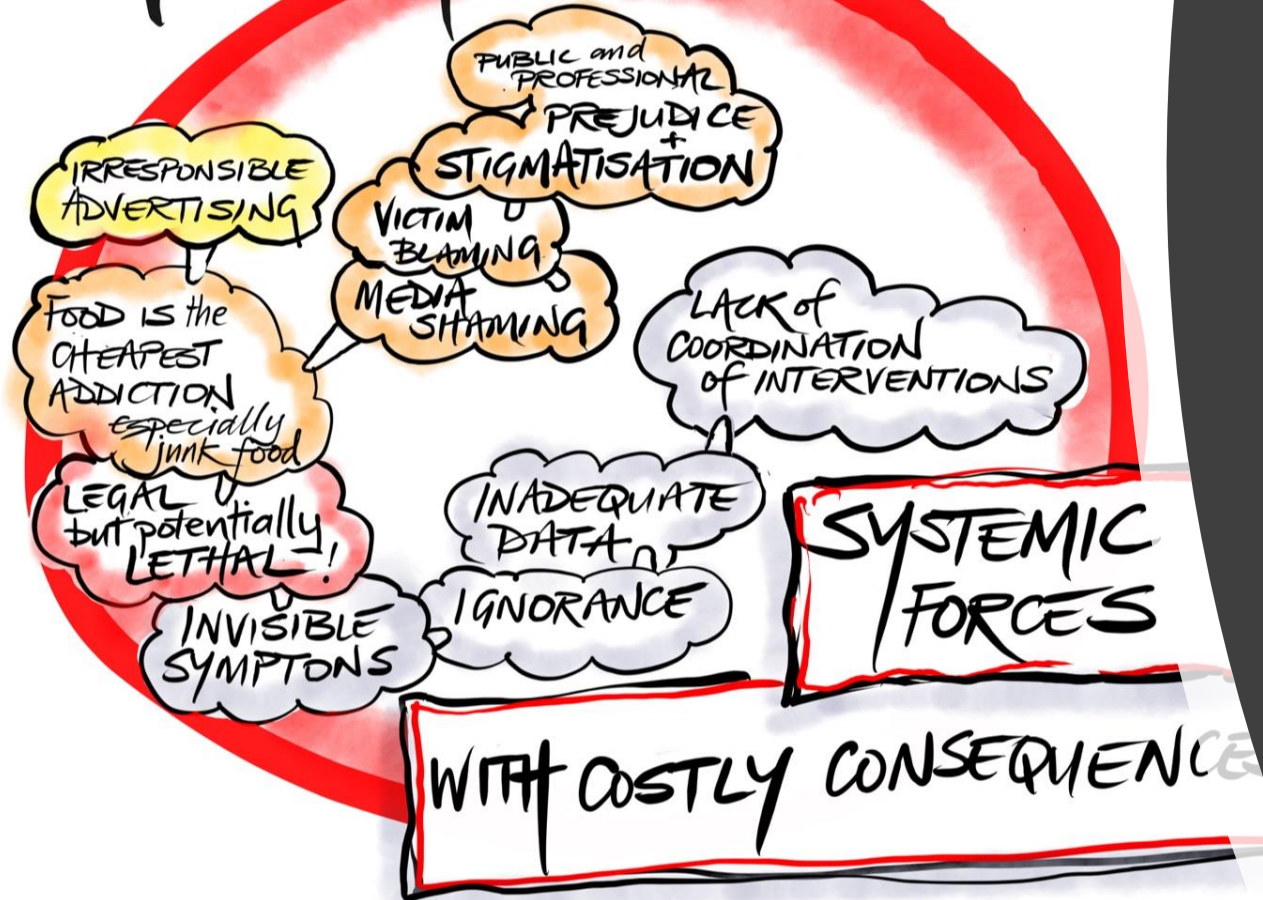


# Innocent Fun





# THE CHALLENGE



Mindset shift

&

Radical Intervention

# 3 quick wins



**SCREENING**



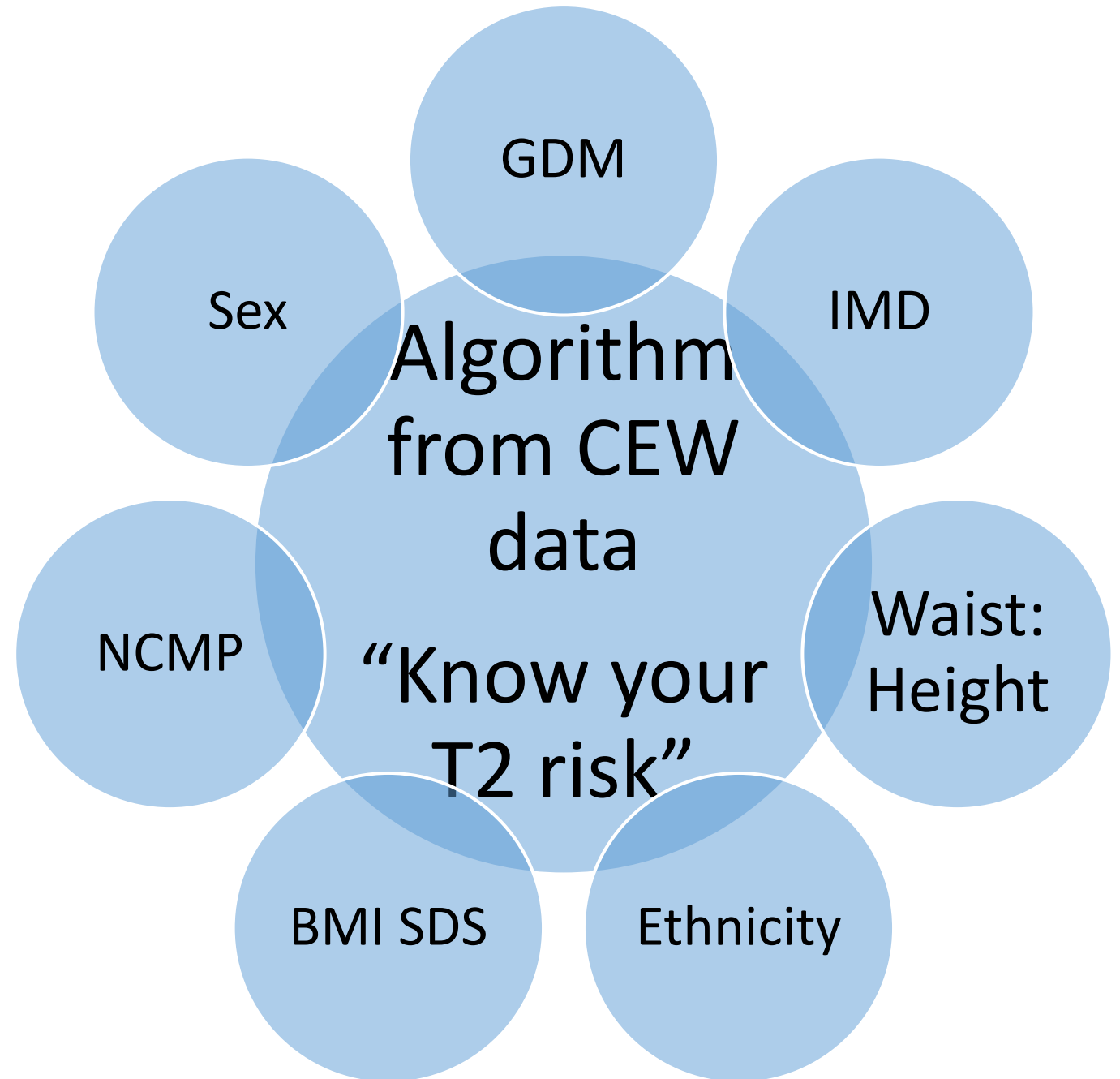
**AWARENESS**



**JOINING UP**

Targeted Screening  
of Asymptomatic  
Insulin Resistance in  
High Risk Groups –  
CYP NDPP

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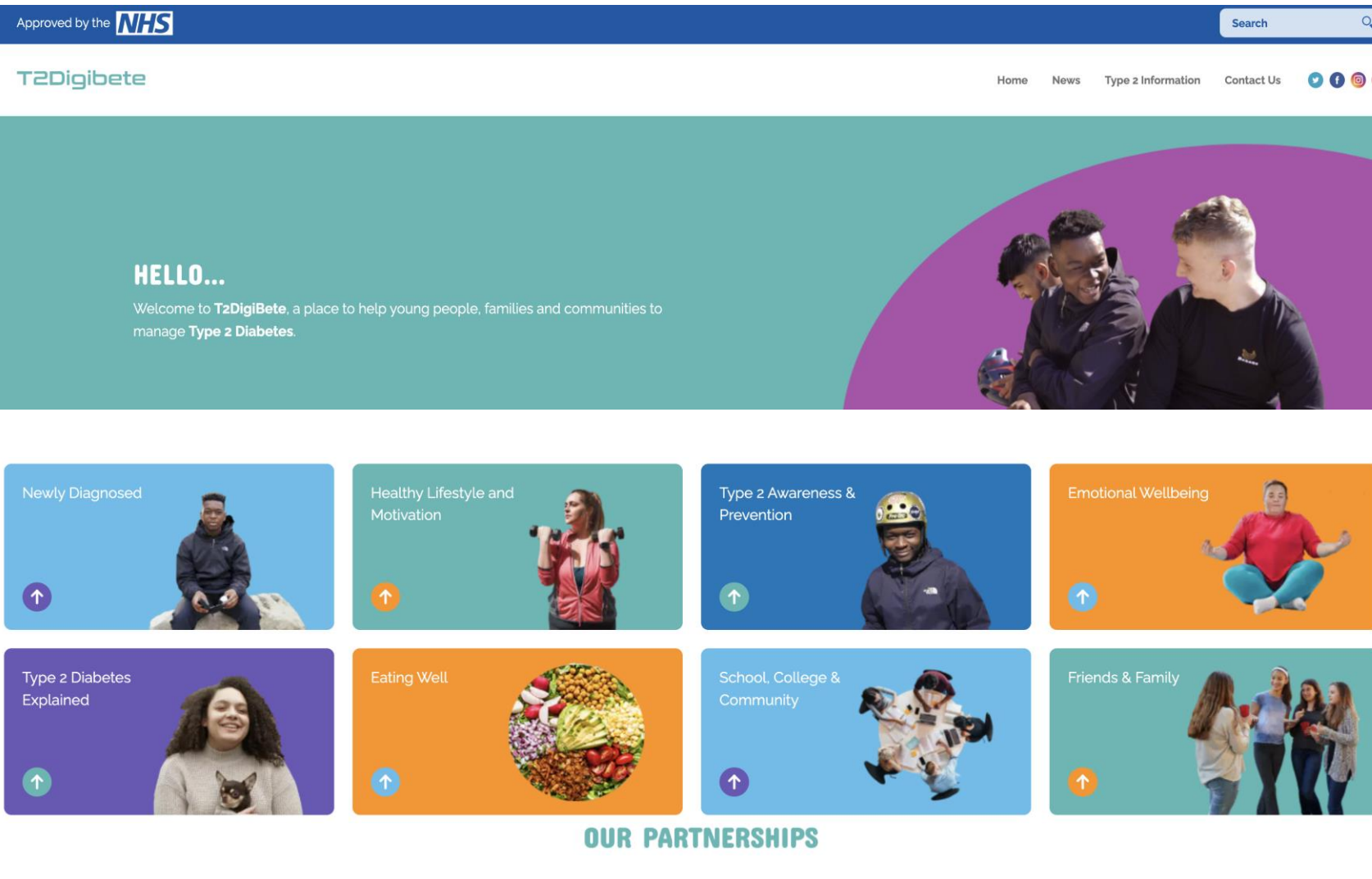
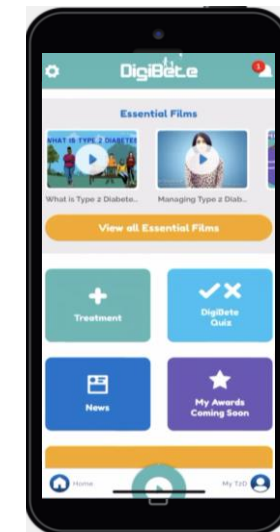
# New Young Type 2 Web platform & App – Going Live Feb 2023

Co-created with HCPs & CYP living with Type 2 Diabetes

## Currently in last 6 weeks of Testing

So far... 19 New CYP have now taken part in testing & and completed a review survey and reported:

- 89% - new platform and app as 'Helpful' and 'Very Helpful'
- 100% - having access to DigiBete would or possibly could help them manage their Diabetes.
- 84% would recommend the platform and app to a friend.



# Raising Awareness

Equivalent needed for  
Type 2 Diabetes  
(including Acanthosis)

KNOW THE **4Ts** OF TYPE 1 DIABETES

**T** OILET

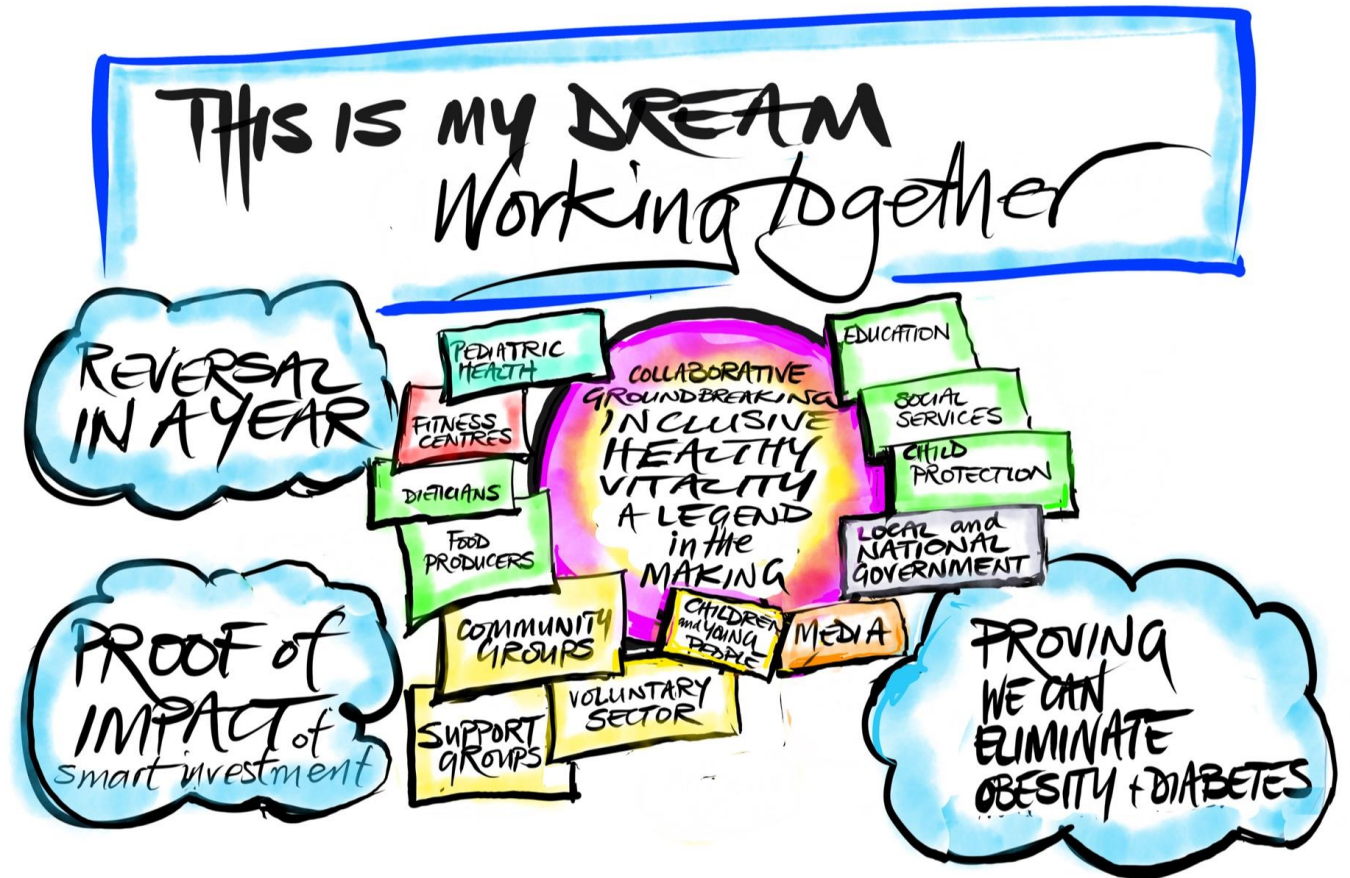
**T** HIRSTY

**T** IRED

**T** HINNER

# Cross Party and Policy Child Poverty Group

- Stakeholders not working in silo
- Mindful of unintended consequences
- Accountable Minister across all parties





# UNDER 25?



**IF YOU ARE LUCKY  
ENOUGH TO LOOK UNDER  
25 YOU WILL BE ASKED  
TO PROVE THAT YOU ARE  
AGED 18 OR OVER WHEN  
YOU BUY ALCOHOL**

**IF YOU ARE UNDER 18  
YOU ARE COMMITTING  
AN OFFENCE IF YOU  
ATTEMPT TO BUY  
ALCOHOL**



SCOTTISH  
**BEER & PUB**  
ASSOCIATION

[drinkaware.co.uk](http://drinkaware.co.uk)  
for the facts about alcohol

[WWW.CHALLENGE25.ORG](http://WWW.CHALLENGE25.ORG)



## “Preventable”

does not mean stepping back and holding individuals responsible for prevention when they live in an environment they cannot control



Predicted and  
Predetermined  
Casualties of  
T2



THE CHILDREN  
ARE THE  
CANARY in the  
MINE

