



Addressing health inequalities in diabetes care

Type 2 diabetes study day 19th May 2023

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NHS Foundation Trust

Overview

- Type 2 diabetes and deprivation
- Obesity- additional element
- NIHR improving outcomes study - Diabetes self-management support programmes for underserved populations
- Core20Plus 5

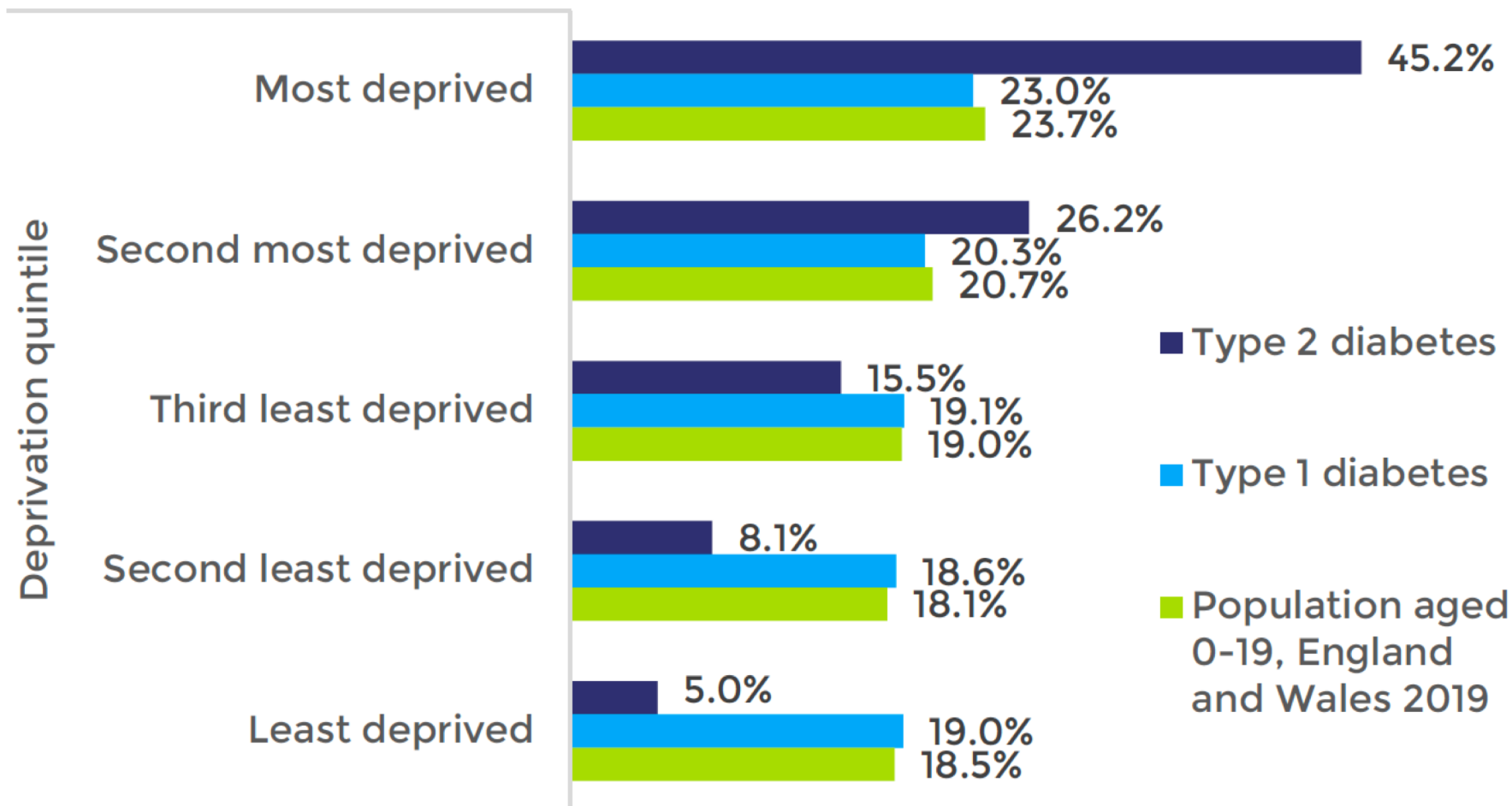
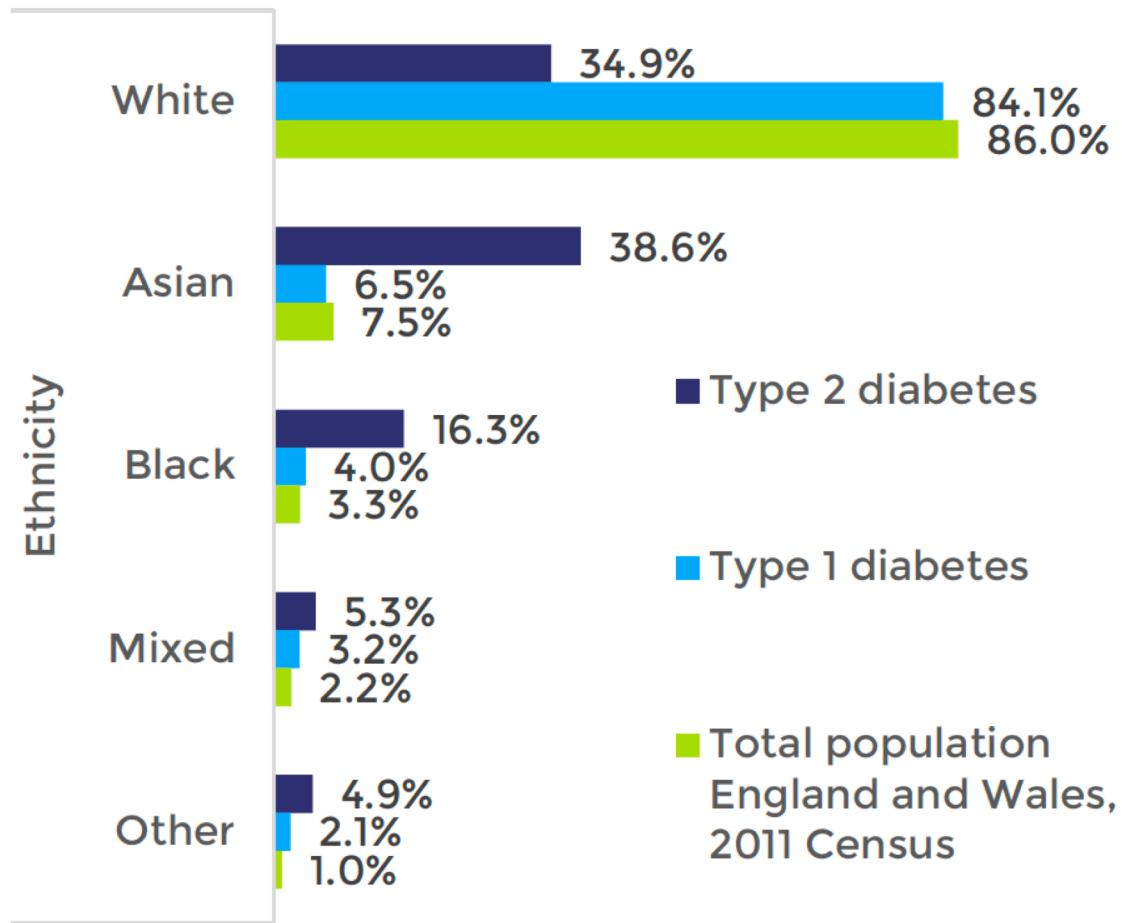


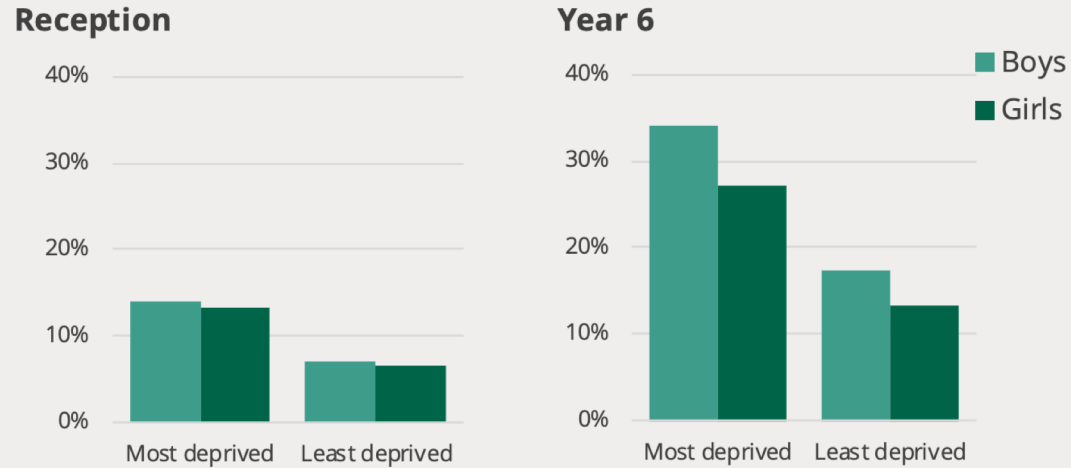
Figure 5: Percentage of children and young people with Type 2 and Type 1 diabetes by deprivation quintile, compared to ONS data



Ethnic minority groups disproportionately affected

Figure 4: Percentage of children and young people with Type 2 and Type 1 diabetes by ethnic group in 2019/20, compared to the 2011 census

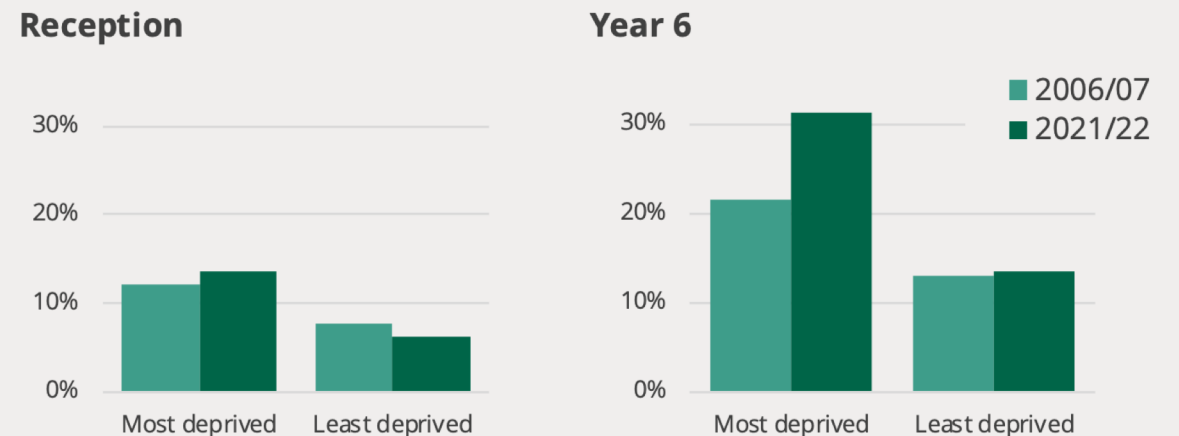
Children living in deprived areas are more likely to be obese than those in less deprived areas (2021/22)



Source: NHS Digital, [National Child Measurement Programme 2021/22](#), Tables 6a_R and 6a_6

Obesity – additional dimension

Obesity rates among children in England aged 10-11 have risen in the most deprived areas (comparing 2006/07 and 2021/22)



Source: NHS Digital, [National Child Measurement Programme 2021/22](#), Table 6c



Almost all children and young people with Type 2 diabetes were either overweight (6.5%) or obese (92.0%) in 2019/20. Of those with obesity at diagnosis in years prior to 2019/20, only 8% reduced their BMI to a lower category by this audit year.

Improving outcomes for children with diabetes from socio-economically deprived and/or ethnic minority groups

NIHR PGfAR 202358

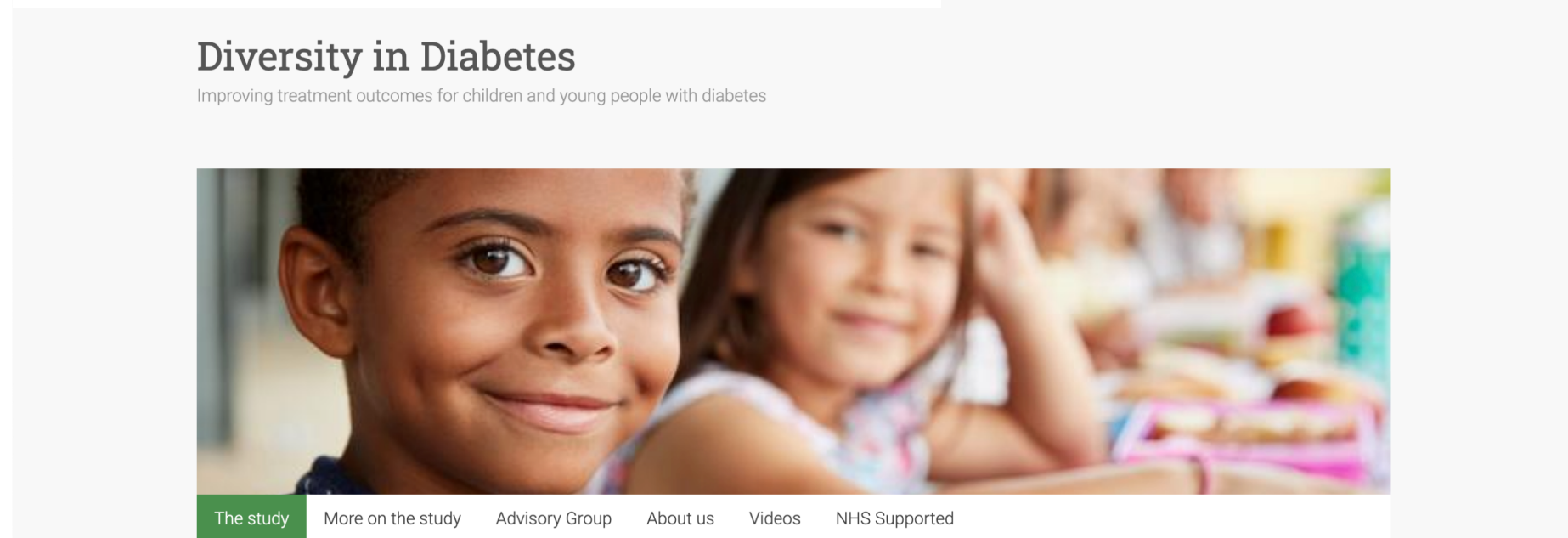
Lead Investigators: Professors Timothy Barrett and Julian Hamilton-Shield



Research Question

Can we deliver an intervention package, targeting deprived and ethnic minority groups living with childhood diabetes, that improves glycaemic control and reduces risk of long-term complications?

<https://www.diversityindiabetes.org.uk/>



The screenshot shows the homepage of the Diversity in Diabetes website. At the top, the URL <https://www.diversityindiabetes.org.uk/> is visible in the browser's address bar. Below the address bar, the website header features the title "Diversity in Diabetes" in a bold, dark font, followed by the tagline "Improving treatment outcomes for children and young people with diabetes" in a smaller, lighter font. A large, warm-toned photograph of two young children, a boy and a girl, smiling and looking towards the camera, occupies the center of the page. Below the photograph is a horizontal navigation menu with several items: "The study" (highlighted with a green background), "More on the study", "Advisory Group", "About us", "Videos", and "NHS Supported".

The study

Study overview

Work package 1:
survey of existing
evidence – 18 mo

Work package 2:
intervention
development – 6 mo

Work package 3:
feasibility assessment
– 17 mo

Work package 4:
cluster randomized
controlled trial with
internal pilot – 35 mo

Survey of existing evidence (qualitative and ethnographic)

Investigation of burden of treatment on 'at risk' groups: Birmingham and Bristol

Identify preferences for behaviour change: Birmingham, Bristol

Intervention co-designed with PPI panel

Write protocols and submit to ethics

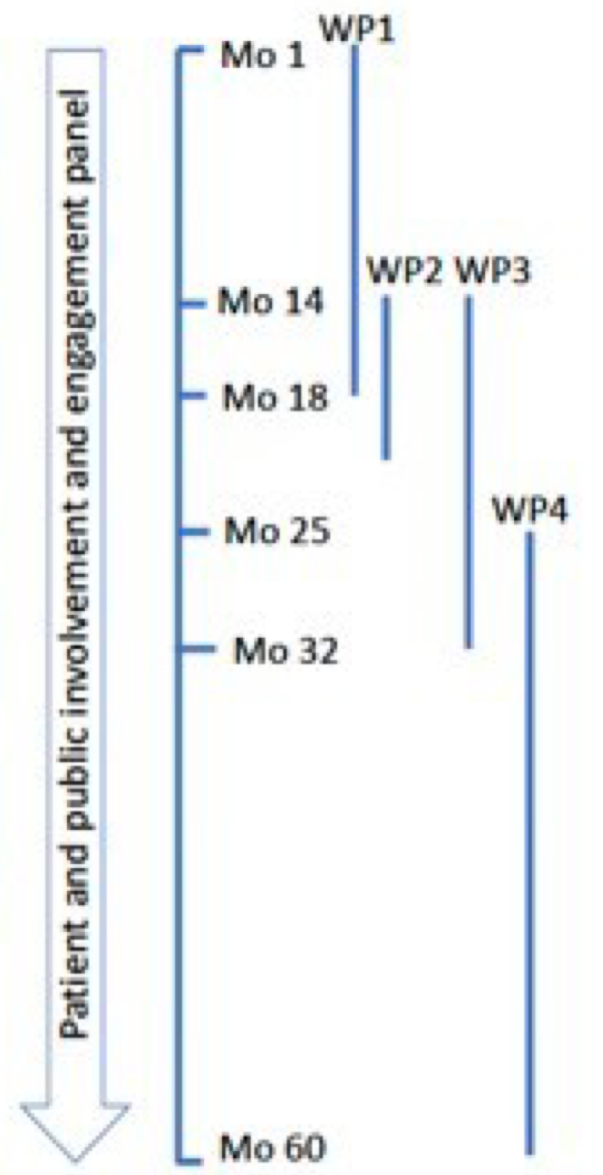
Feasibility assessment: Leicester and Nottingham

Substantial amendment

Internal pilot: 10 centres recruit then randomized to intervention/SOC

Remaining 20 centres recruit; centres randomized to intervention/SOC

Final analysis



Patient Population



- Patient Group
 - Children and young people 5-19 years with type 1 or type 2 diabetes, and their carers.
 - Inclusion criteria: Children from ethnic minorities; children from families with postcodes from economically deprived districts.
- Recruitment Source
 - Secondary care paediatric diabetes clinics:
 - Bristol, Birmingham (intervention design)
 - Leicester, Nottingham (feasibility study)
 - 30 paediatric diabetes centres in England (cluster randomised trial)

What are the aims?

- Develop an intervention package that reduces inequalities in outcomes between socio-economic and ethnic minority groups
- Develop an intervention that is acceptable to these groups
- Develop intervention core principles that are generalizable across diabetes centres, regardless of type of diabetes
- Formulate evidence base to persuade NHSE&I to commission as standard of care for all centres.

REVIEW ARTICLE

Developments in the design and delivery of self-management support for children and young people with diabetes: A narrative synthesis of systematic reviews

Ian Litchfield¹  | Timothy Barrett^{2,3} | Julian P. Hamilton-Shield^{4,5,6} |
T. H. M. Moore⁴ | Parth Narendran^{7,8}  | Sabi Redwood⁶ | Aidan Searle⁹ |
Suma Uday^{3,10} | Jess Wheeler⁶ | Sheila Greenfield¹



Narrative review of systematic reviews

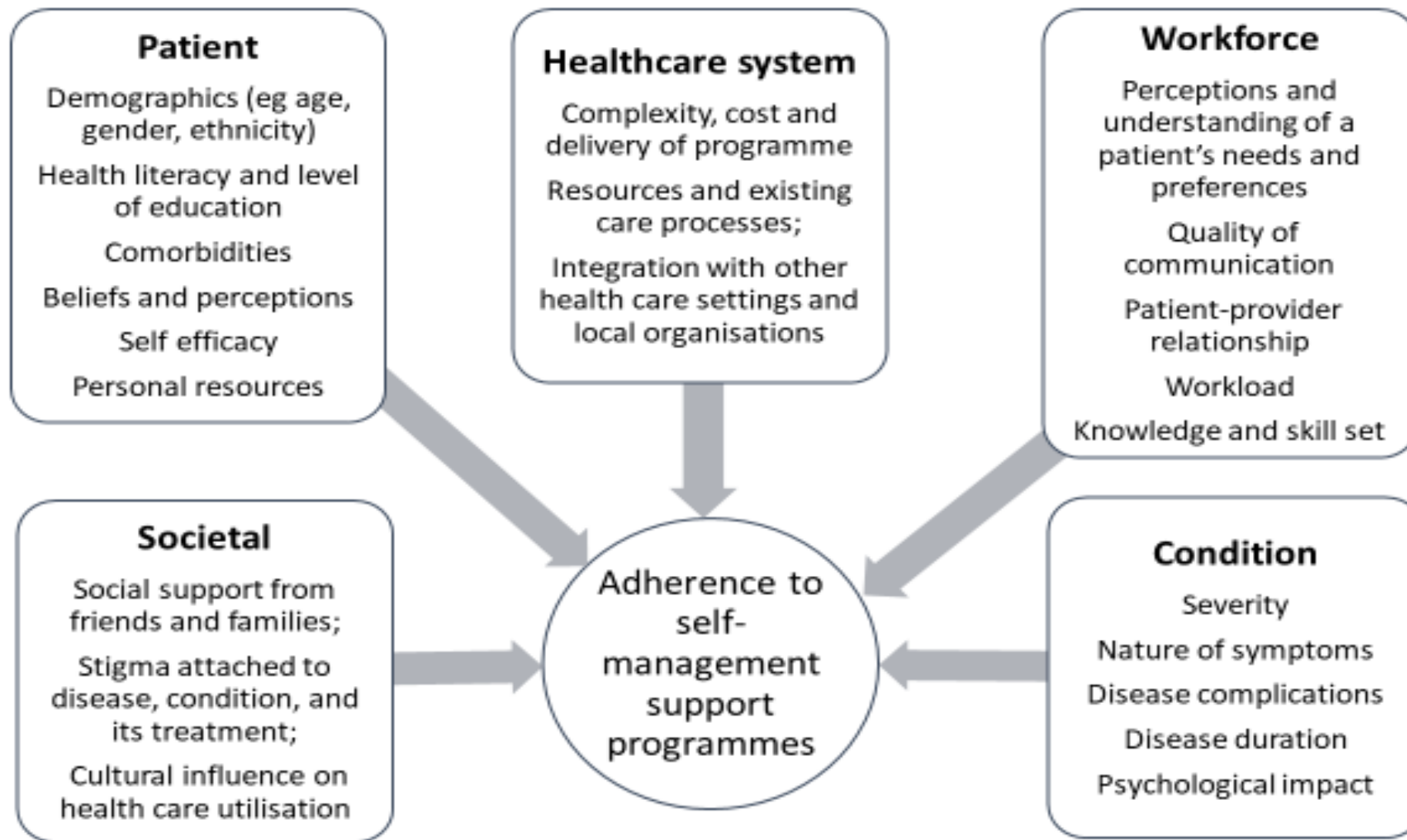
Focus on four key elements of self-management support programmes (SSP)

Education, instruction and advice: including peer support	Games and gamification appear to offer a promising means of engaging and educating CYPD
Psychological counselling: via a range of therapies	Psychological interventions when delivered by trained practitioners, appear to improve HbA1c and quality of life although effect sizes were small
Self-monitoring: including diaries and telemetric devices	Technology-enabled interactive diaries can increase the frequency of self-monitoring and reduce levels of HbA1c
Telecare: the technology-enabled follow-up and support by healthcare providers	Telecare provided synchronously via telephone produced significant improvements in HbA1c

Narrative review of systematic reviews

Conclusions:

- The cost-effective flexibility of increasing the reliance on technology is an attractive proposition; however, there are resource implications for digital connectivity in underserved populations.
- The need remains to improve the understanding of which elements of each component are most effective in a particular context, and how to optimise the influence and input of families, caregivers and peers.



Factors affecting access and engagement with (diabetes) self-management programmes

Designing self-management support for underserved populations: An integrative review of existing evidence and implications for future programmes

Reviews the latest evidence and best practice in designing and embedding culturally and socially sensitive, self-management support programmes (SSP)

Presented DUK-2023
Manuscript under review



Four key considerations of SSP design

Composition	The principles employed in designing written materials and digital interfaces to maximise navigation, comprehension and assimilation
Structure	The combination of individual and group sessions, their duration and frequency, and the combination of taught elements
Facilitators	The combination of individuals used to deliver the programme
Context	The impact of a range of individual and environmental factors on the successful delivery of SSP and sustained improvement in self-management practices

Composition	Use co-design with target populations and existing design tools that improve readability, navigation, and accessibility of written materials and digital interfaces
Structure	Use community-based venues, shorter courses, and offer group and one-2-one sessions. Associated digital technologies should be capable of being used offline
Facilitators	Peer supporters and community-health workers are best placed to understand personal circumstance, community resources and challenges
Context	Tailor support to reflect socio-cultural sensitivities and preferences at individual and population level. Clinicians should be engaged so they understand the importance of self-management, ensure programmes are embedded in local health services and strengthening links between senior staff and local community leaders



Diversity in Diabetes Improving treatment outcomes for children and young people with diabetes from diverse backgrounds

Summary patient information sheet*

www.diversityindiabetes.org.uk



REDUCING HEALTHCARE INEQUALITIES FOR CHILDREN AND YOUNG PEOPLE

CORE20

The most deprived 20% of the national population as identified by the Index of Multiple Deprivation



The **Core20PLUS5** approach is designed to support Integrated Care Systems to drive targeted action in healthcare inequalities improvement

PLUS

ICS-chosen population groups experiencing poorer-than-average health access, experience and/or outcomes, who may not be captured within the Core20 alone and would benefit from a tailored healthcare approach e.g. inclusion health groups



Target population

CORE20 PLUS 5

Key clinical areas of health inequalities

1



ASTHMA

Address over reliance on reliever medications and decrease the number of asthma attacks

2



DIABETES

Increase access to Real-time Continuous Glucose Monitors and Insulin pumps in the most deprived quintiles and from ethnic minority backgrounds & increase proportion of children and young people with Type 2 diabetes receiving annual health checks

3



EPILEPSY

Increase access to epilepsy specialist nurses and ensure access in the first year of care for those with a learning disability or autism

4



ORAL HEALTH

Address the backlog for tooth extractions in hospital for under 10s

5



MENTAL HEALTH

Improve access rates to children and young people's mental health services for 0-17 year olds, for certain ethnic groups, age, gender and deprivation

Core20PLUS5 – An approach to reducing health inequalities for children and young people

- Increase access to real-time continuous glucose monitors and insulin pumps across the most deprived quintiles and from ethnic minority backgrounds
- Increase proportion of those with Type 2 diabetes receiving recommended NICE care processes

Thank you



<https://www.diversityindiabetes.org.uk/>

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