

DIABETES

All Party Parliamentary Group

Addressing health inequalities in diabetes

Prof. Wasim Hanif MD FRCP

Professor Diabetes & Endocrinology
Consultant Physician & Head of Service

University Hospital Birmingham, UK

Non Executive Director BMJ

Board of Trustee Diabetes UK

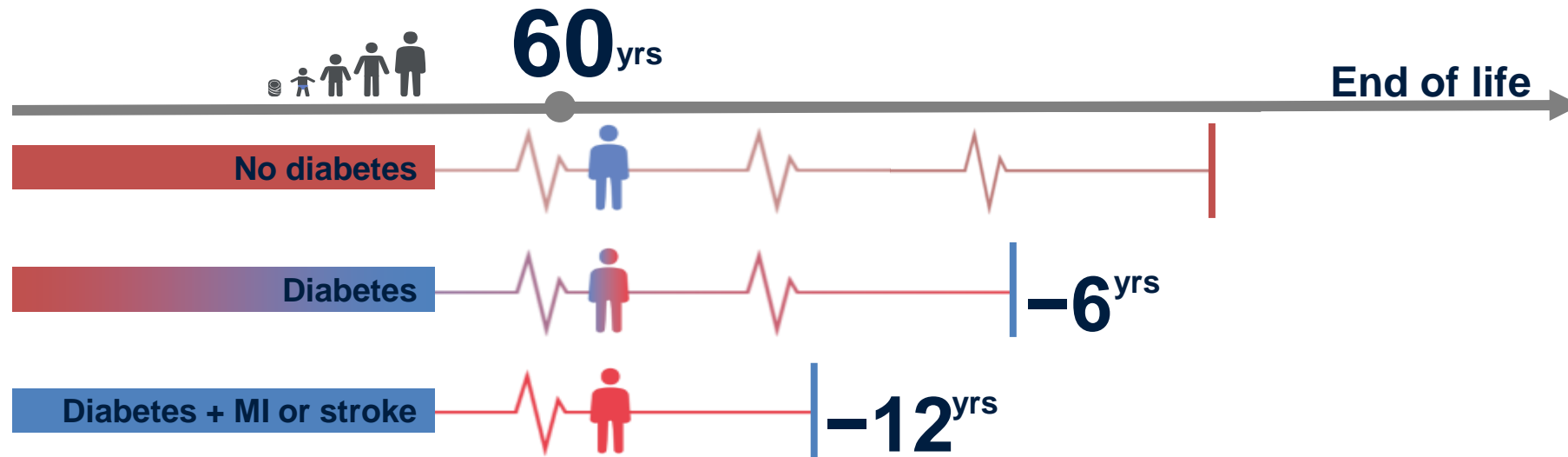
Co-Chair Diabetes SAHF

wasim.hanif@uhb.nhs.uk

Twitter: @docwas



Despite improvement, mortality is still high in patients with T2D and their life expectancy is strongly reduced



In this case, CVD is represented by MI or stroke
*Male, 60 years of age with history of MI or stroke
CVD, cardiovascular disease; MI, myocardial infarction

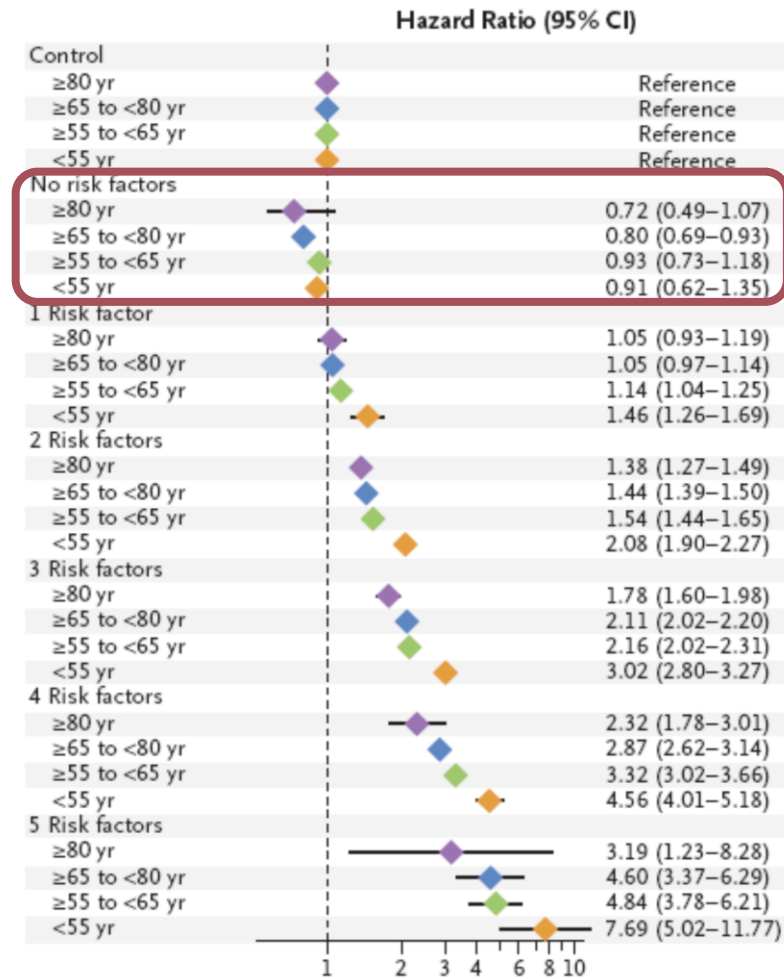
The Emerging Risk Factors Collaboration. JAMA 2015;314:52–60.

Swedish National Diabetes Register: Excess Acute Myocardial Infarction in Relation to Range of Risk-Factor Control

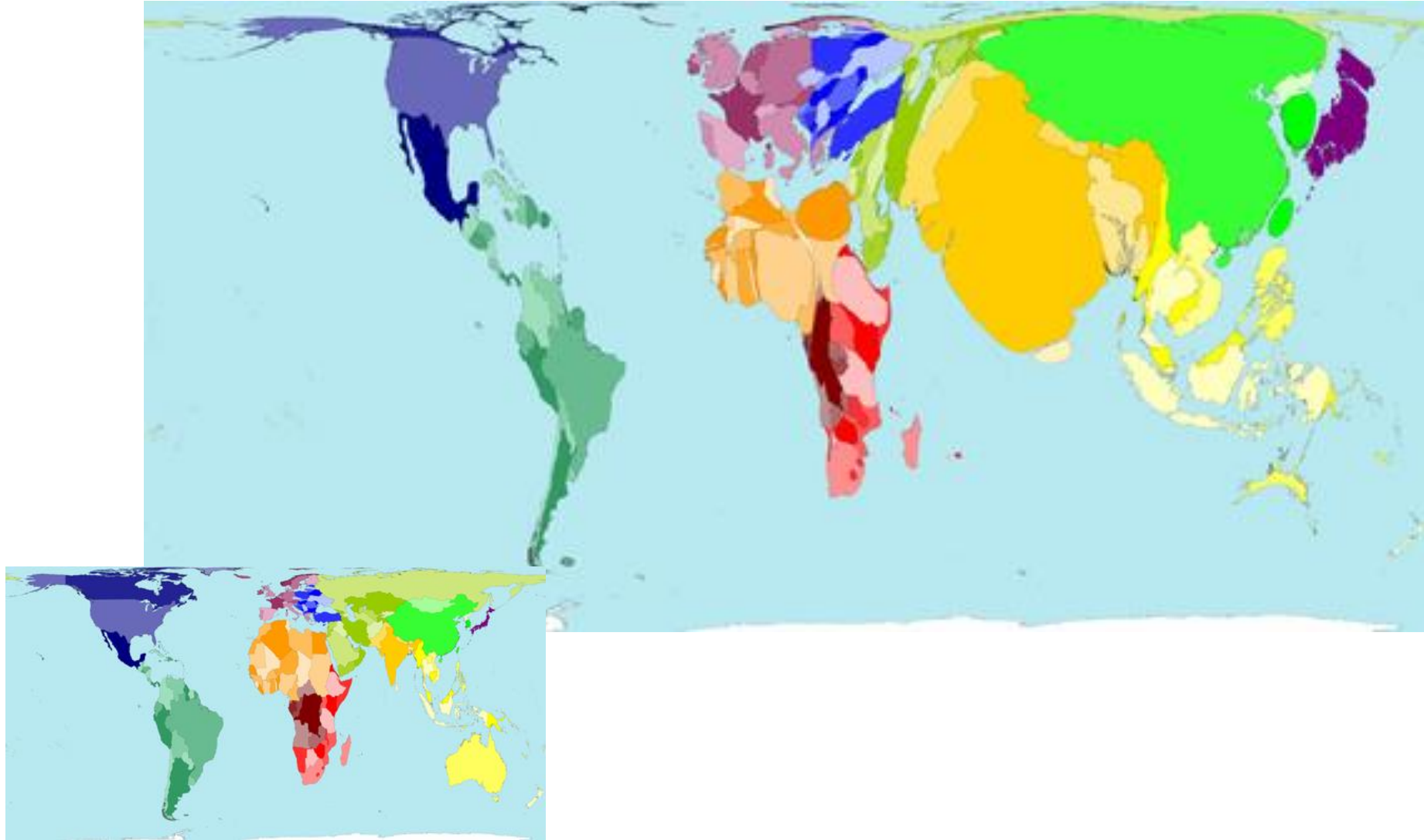
n=271,174
with type 2 diabetes

n=1,355,870
age-, sex-, and country-matched controls

Median follow-up duration = 5.7 years

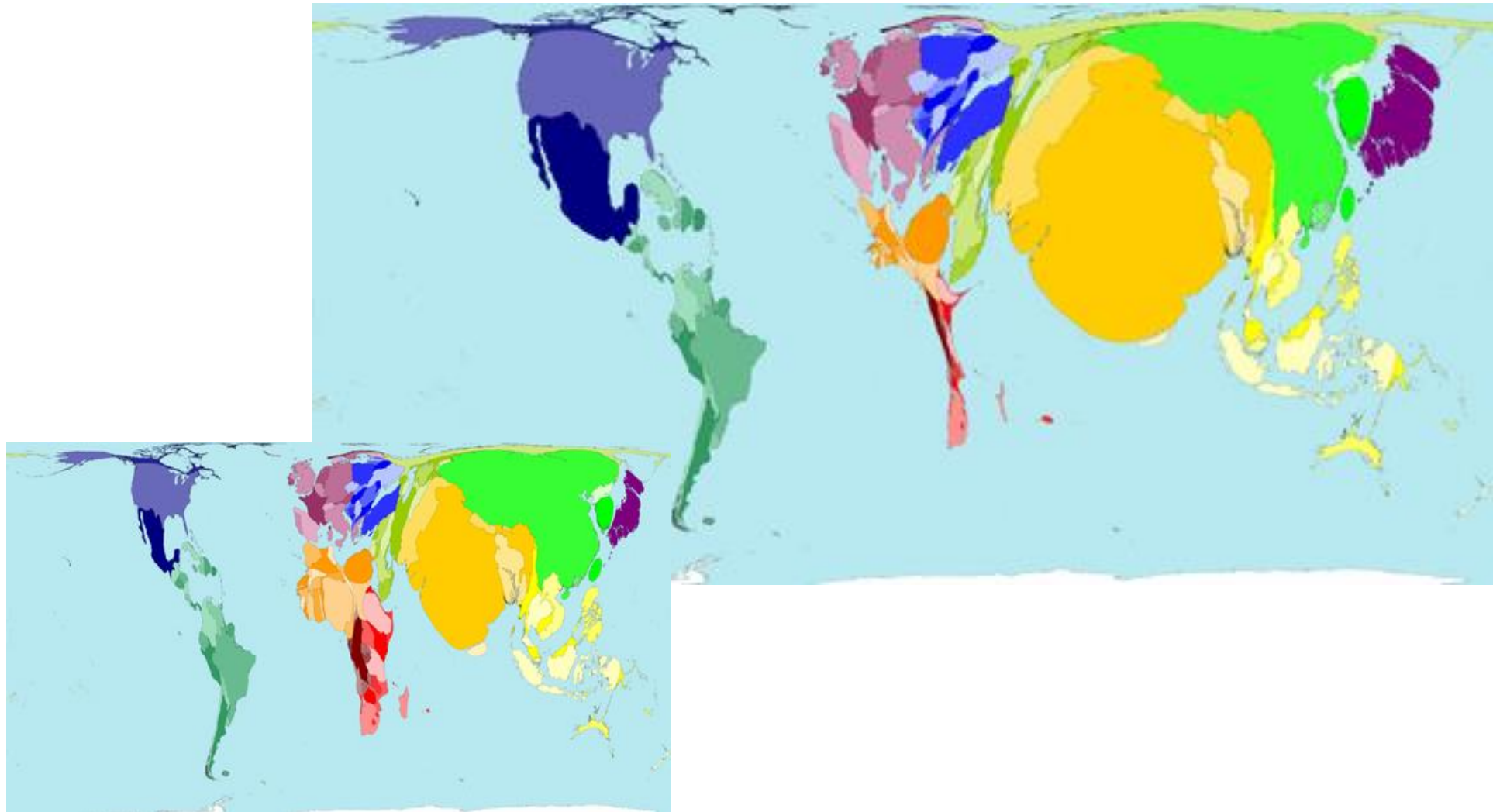


The world, by population



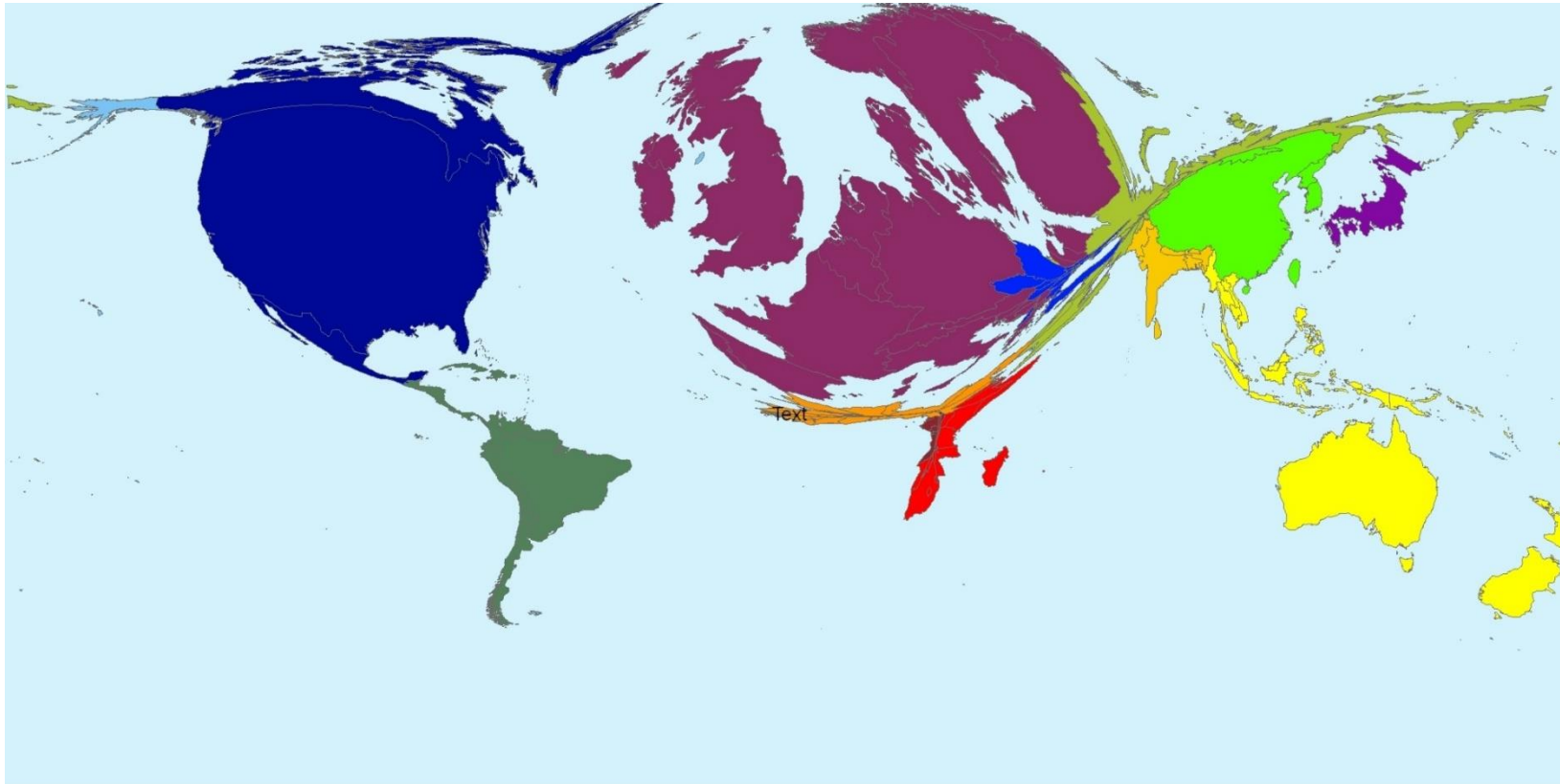
Area

The world, by total number of people with diabetes



Population

The world, by cohort publications (2009)



Estruturação do mapa:
LABGEO/LIS/ICICT/FIOCRUZ

www.gpubmed.com (Sep 2009)

www.worldmapper.org

Representation of people of South Asian origin in cardiovascular outcome trials of glucose-lowering therapies in Type 2 diabetes

- 12 studies
- SA under represented in trials compared to global population
- “Clinicians should exercise caution when generalizing the results of trials to their own practice”

Representation of people of South Asian origin in cardiovascular outcome trials of glucose-lowering therapies in Type 2 diabetes

K. Khunti¹, S. Bellary², M. A. Karamat³, K. Patel³, V. Patel⁴, A. Jones⁵, J. Gray⁵, P. Shepherd⁶ and W. Hanif⁶ on behalf of the South Asian Health Foundation

¹Leicester Diabetes Centre, University of Leicester, Leicester, ²Aston Research Centre for Healthy Ageing, Aston University, ³Heart of England NHS Foundation Trust, Birmingham, ⁴Warwick Medical School, University of Warwick, Coventry, ⁵Sa Communications Group, London and ⁶University Hospital Birmingham, Birmingham, UK

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Abstract

Aims Our aim was to investigate the proportional representation of people of South Asian origin in cardiovascular outcome trials of glucose-lowering drugs or strategies in Type 2 diabetes, noting that these are among the most significant pieces of evidence used to formulate the guidelines on which clinical practice is largely based.

Methods We searched for cardiovascular outcome trials in Type 2 diabetes published before January 2015, and extracted data on the ethnicity of participants. These were compared against expected values for proportional representation of South Asian individuals, based on population data from the USA, from the UK, and globally.

Results Twelve studies met our inclusion criteria and, of these, eight presented a sufficiently detailed breakdown of participant ethnicity to permit numerical analysis. In general, people of South Asian origin were found to be under-represented in trials compared with UK and global expectations and over-represented compared with US expectations. Among the eight trials for which South Asian representation could be reliably estimated, seven under-represented this group relative to the 11.2% of the UK diabetes population estimated to be South Asian, with the representation in these trials ranging from 0.0% to 10.0%.

Conclusions Clinicians should exercise caution when generalizing the results of trials to their own practice, with regard to the ethnicity of individuals. Efforts should be made to improve reporting of ethnicity and improve diversity in trial recruitment, although we acknowledge that there are challenges that must be overcome to make this a reality.

Diabet. Med. 00, 000–000 (2016)

Introduction

People of South Asian origin are an important target for the prevention and treatment of diabetes. In the UK, for instance, Type 2 diabetes is about two times more prevalent in this group than in white European people [1]. Furthermore, in the USA, ~17.4% of people of South Asian origin have diabetes [2]. The risks of diabetic retinopathy and end-stage renal disease are known to be higher in South Asian people than in the white European population, and individuals of South Asian origin are also known to have a higher mortality rate from coronary heart disease and stroke [1].

There is also some evidence suggesting that there are ethnic differences in response to diabetes therapies. For instance,

glucagon-like peptide-1 receptor agonists have been found to lower HbA_{1c} levels to a greater extent in Asian-dominant studies than in non-Asian-dominant studies, perhaps reflecting a different pathophysiology of Type 2 diabetes in different ethnic groups [3].

As in other conditions, clinical practice in Type 2 diabetes is influenced heavily by various guidelines; these, in turn, are informed by clinical trials, with much weight being placed on cardiovascular outcome trials. The applicability of the results from trials to clinical practice is dependent on the representativeness of study participants' demographic characteristics. Studies in both acute and chronic conditions, however, have suggested that non-white ethnic groups are often under-represented in clinical trials [4–7]. Here, we report on the proportion of participants of South Asian origin recruited to cardiovascular outcome trials of glucose lowering in Type 2

Correspondence to: Kamlesh Khunti. E-mail: k522@leicester.ac.uk

Health Inequalities:

Avoidable inequalities that are unfair or unjust

BMJ 2001;322:591-594

What are we talking about?

Deprivation vs Ethnicity?



Remission of type 2 diabetes: is it possible?

Primary care-led weight management for remission of type 2 diabetes (DiRECT): an open-label, cluster-randomised trial

Lean M. The Lancet, 2018

Definition of remission:

HbA1c < 48 mmol/mol (6.5%) after cessation of all antidiabetic medication, for 1 year

Design: 49 GP practices; Age 20-65y; BMI 27-45 kg/m²

Control: n=149. Best practice care by guidelines

Intervention: n=149

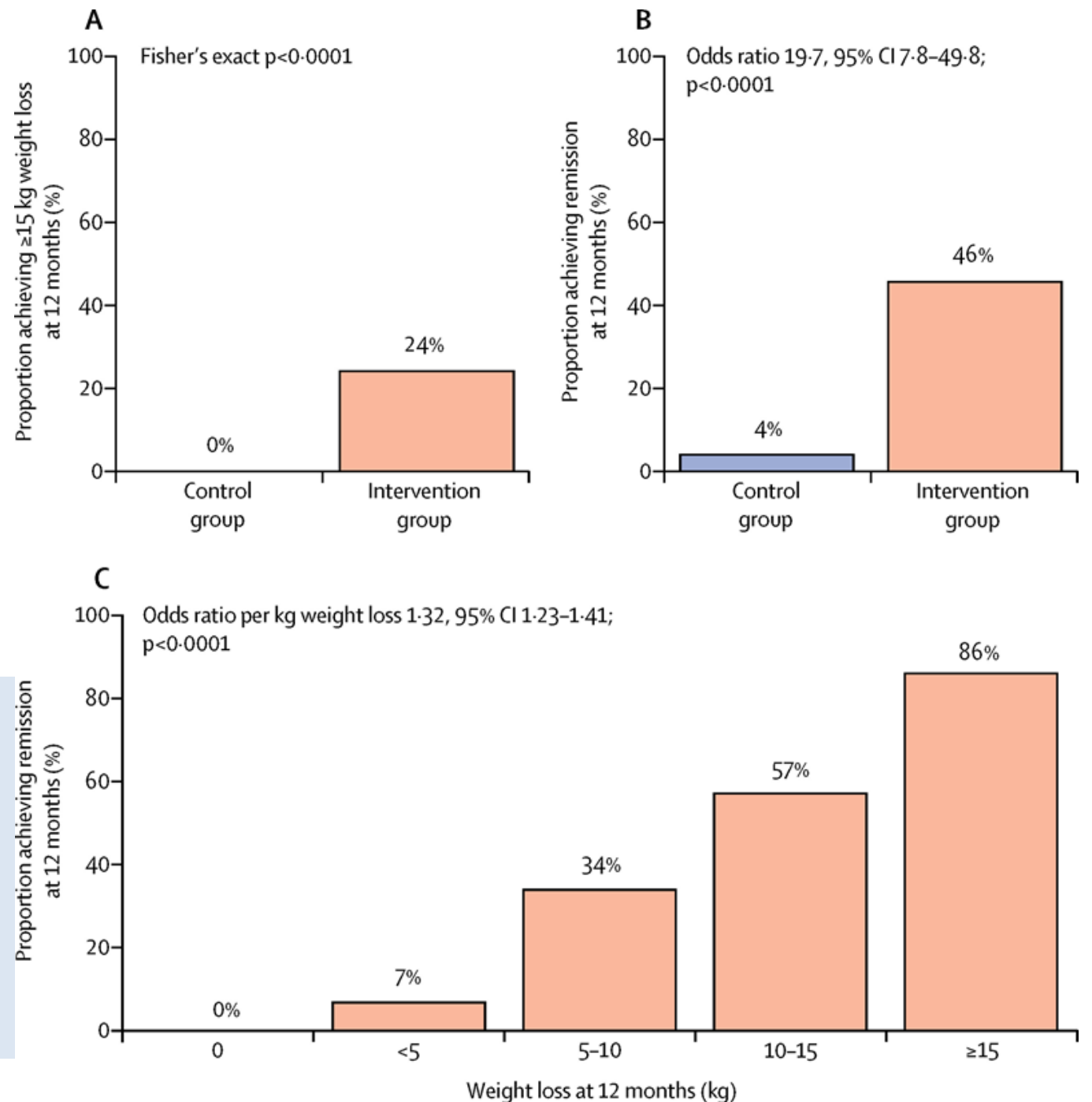
Stop antidiabetic & antihypertension medication

1-2-3 approach:

1. **Total diet replacement** (liquid formula) ~825-853 kcal/day formula diet for 12-20 weeks;

2. **Stepped food reintroduction** (2-8 weeks)

3. **Structured support** for long-term weight loss maintenance





Incidence and Characteristics of Remission of Type 2 Diabetes in England: A Cohort Study Using the National Diabetes Audit

Diabetes Care 2022;45:1151–1161 | <https://doi.org/10.2337/dc21-2136>



Naomi Holman,¹ Sarah H. Wild,²
 Kamlesh Khunti,³ Peter Knighton,⁴
 Jackie O’Keefe,⁴ Chirag Bakhai,⁵
 Bob Young,⁶ Naveed Sattar,¹
 Jonathan Valabhji,^{5,7,8} and
 Edward W. Gregg⁹

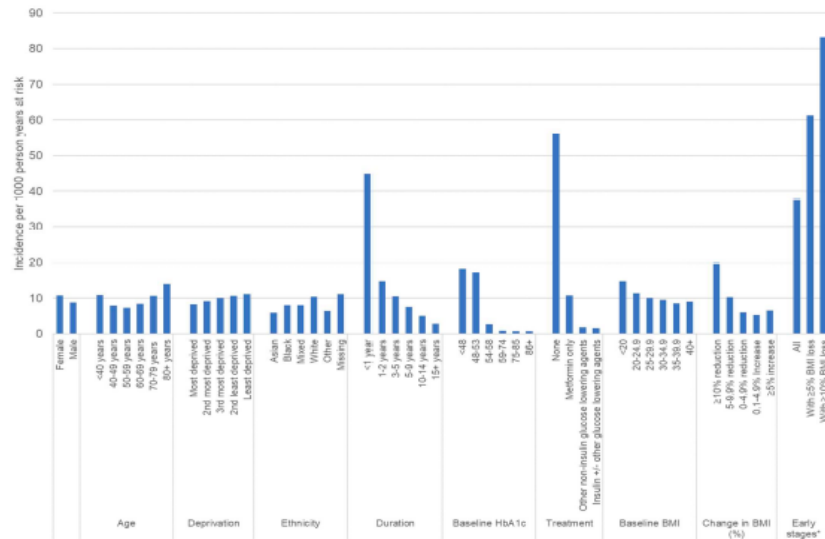


Figure 1—Incidence of remission of type 2 diabetes per 1,000 person-years. *Early stages of type 2 diabetes defined as diagnosed <2 years previous, baseline HbA_{1c} ≤53 mmol/mol (7.0%), prescribed metformin only or no glucose-lowering drugs, and no history of heart failure, cancer, COPD, or dementia.

In 2,297,700 people with type 2 diabetes, the overall incidence of remission per 1,000 person-years was 9.7 (95% CI 9.6–9.8) and 44.9 (95% CI 44.0–45.7) in 75,610 (3.3%) people who were diagnosed <1 year. In addition to shorter duration of diagnosis, baseline factors associated with higher odds of remission were no prescription for glucose-lowering medication, lower HbA_{1c} and BMI, BMI reduction, White ethnicity, female sex, and lower socioeconomic deprivation. Among 8,940 (0.4%) with characteristics associated with remission (diagnosed <2 years, HbA_{1c} <53 mmol/mol [7.0%], prescribed metformin alone or no glucose-lowering medications, BMI reduction of ≥10%), incidence of remission per 1,000 person-years was 83.2 (95% CI 78.7–87.9).

Downloaded from <https://diabetes.diabetesjournals.org/> on 05/11/2022 at 10:08:40:02:12:13

Who am I?



- BME
- BAME
- Ethnic Minority
- Minority Ethnic
- Person of Color
- BIPCO

Challenges



FUNDING



STUDY DESIGN



REVIEWERS



RECRUITMENT



PERCEIVED
BARRIERS



LANGUAGE

Opportunities

- Funding
- Adaptive studies
- Global need
- Not inclusion but proportional representation
- Good quality academic interest

Recommendations

Ethnic Coding

Legal frame work for representative population in clinical trial and MHRA/NICE approvals

Impact assessment of research on the “whole” population a mandatory requisite for funding

Cultural competent language training for researchers

NHS funding, QOF and other incentive schemes to be based on equitable outcomes in all population

EQUALITY VERSUS EQUITY



In the first image, it is assumed that everyone will benefit from the same supports. They are being treated equally.



In the second image, individuals are given different supports to make it possible for them to have equal access to the game. They are being treated equitably.



In the third image, all three can see the game without any supports or accommodations because the cause of the inequity was addressed. The systemic barrier has been removed.

Health inequalities in African, African-Caribbean People living with Diabetes in the UK

Dr Joan St John GPwsi Diabetes

Diabetes UK Clinical Champion

'Activating Change in Diabetes' steering group member

Co-Author Carbs & Cals World Foods

African and African-Caribbean People and Diabetes

- Increased prevalence of Type 2 Diabetes 3-4x increased risk compared to White population
- Develop Type 2 Diabetes at a younger age
- Increased risk of complications

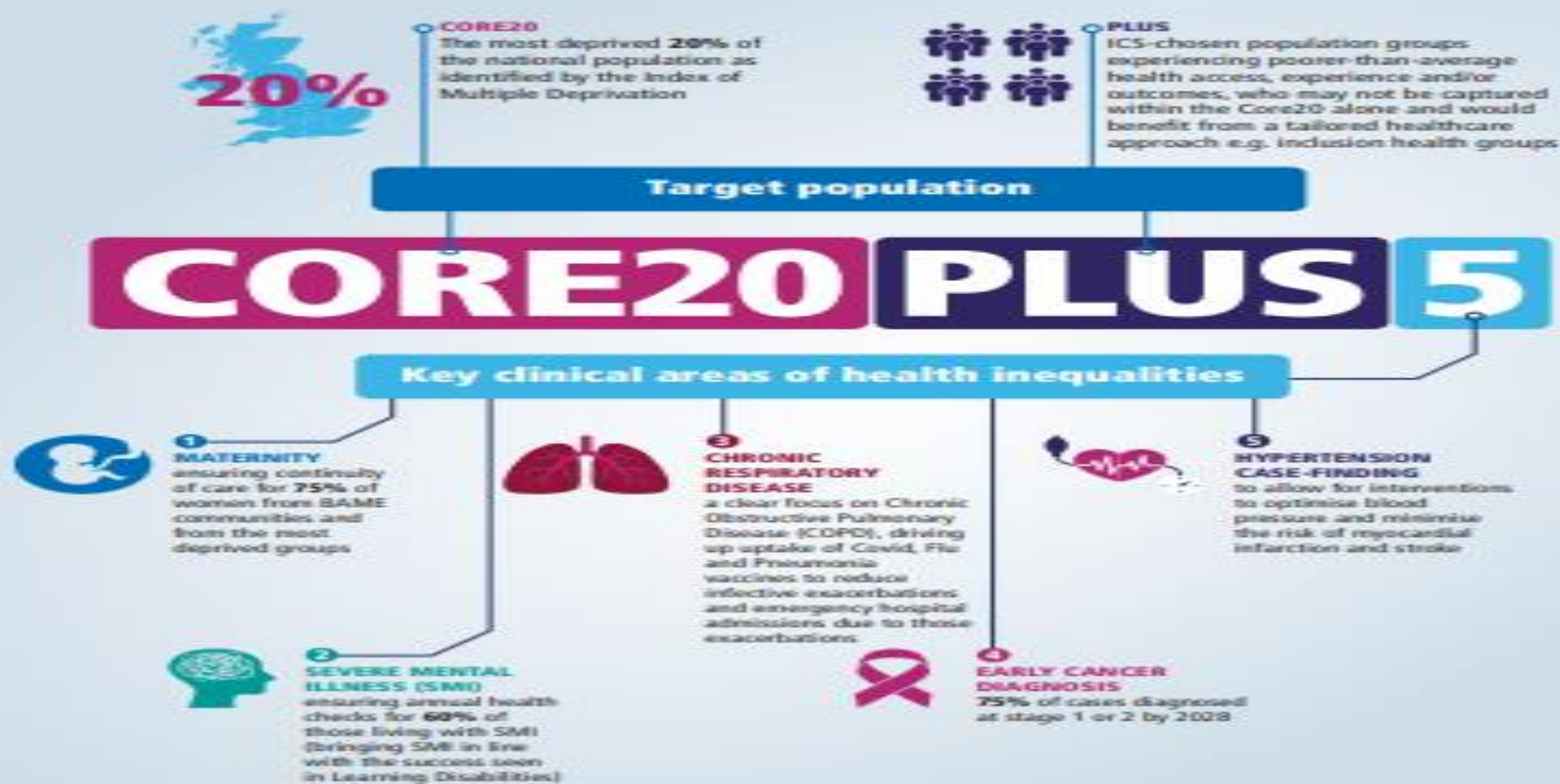
- People from black ethnic groups are more likely to have undiagnosed diabetes than people from white British backgrounds

- Some evidence of disparities in glycaemia, care processes and treatment

<https://www.diabetes.org.uk/professionals/position-statements-reports/statistics>

REDUCING HEALTHCARE INEQUALITIES

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



National Pregnancy in Diabetes (NPID) Audit Report 2018

Preparation for pregnancy 2014 to 2020

- Overall seven out of eight women were not well prepared for pregnancy and this proportion has remained unchanged over the past seven years
- Current approaches to pregnancy preparation are not working for most women with diabetes, particularly Black women and women living in more deprived communities

Figure 5: Percentage of women who were well prepared for pregnancy by audit year

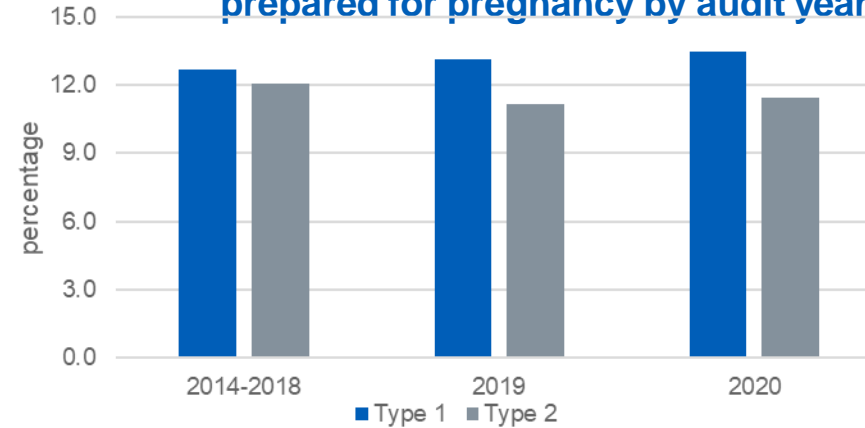


Figure 6: Percentage of women who were well prepared for pregnancy by deprivation quintile

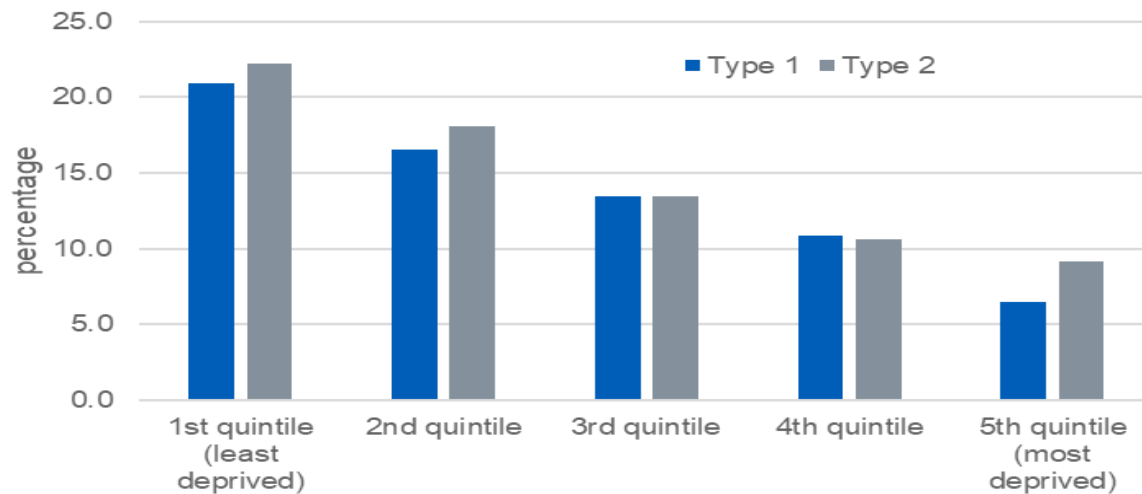
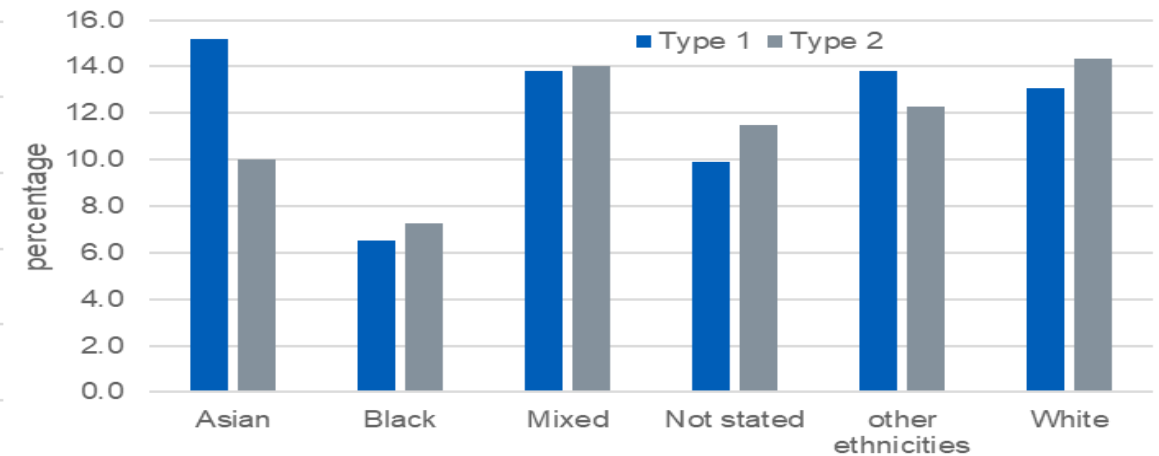


Figure 7: Percentage of women who were well prepared for pregnancy by ethnicity



National Paediatric Diabetes Audit results 2019/20

Percentage of children and young people with Type 1 Diabetes using insulin pump therapy by ethnic group and deprivation

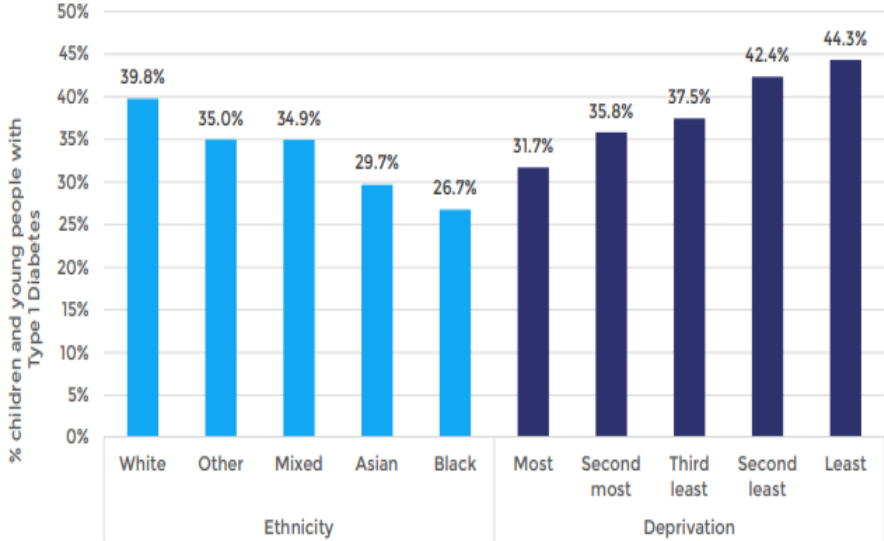


Figure 68: Percentage of children and young people with Type 1 Diabetes using Insulin Pump Therapy by ethnic group and deprivation, 2019/20

Percentage of children and young people with Type 1 Diabetes using continuous glucose monitoring by ethnic group and deprivation

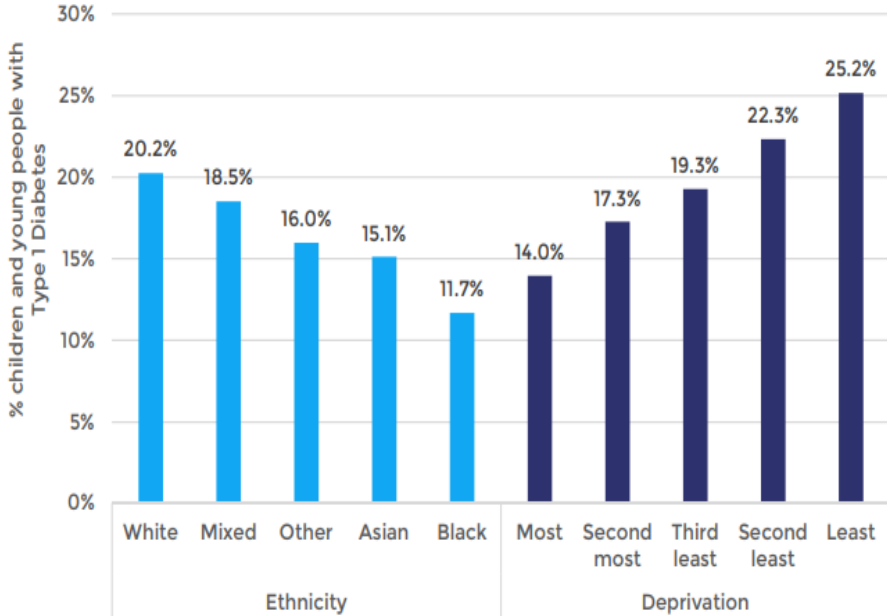
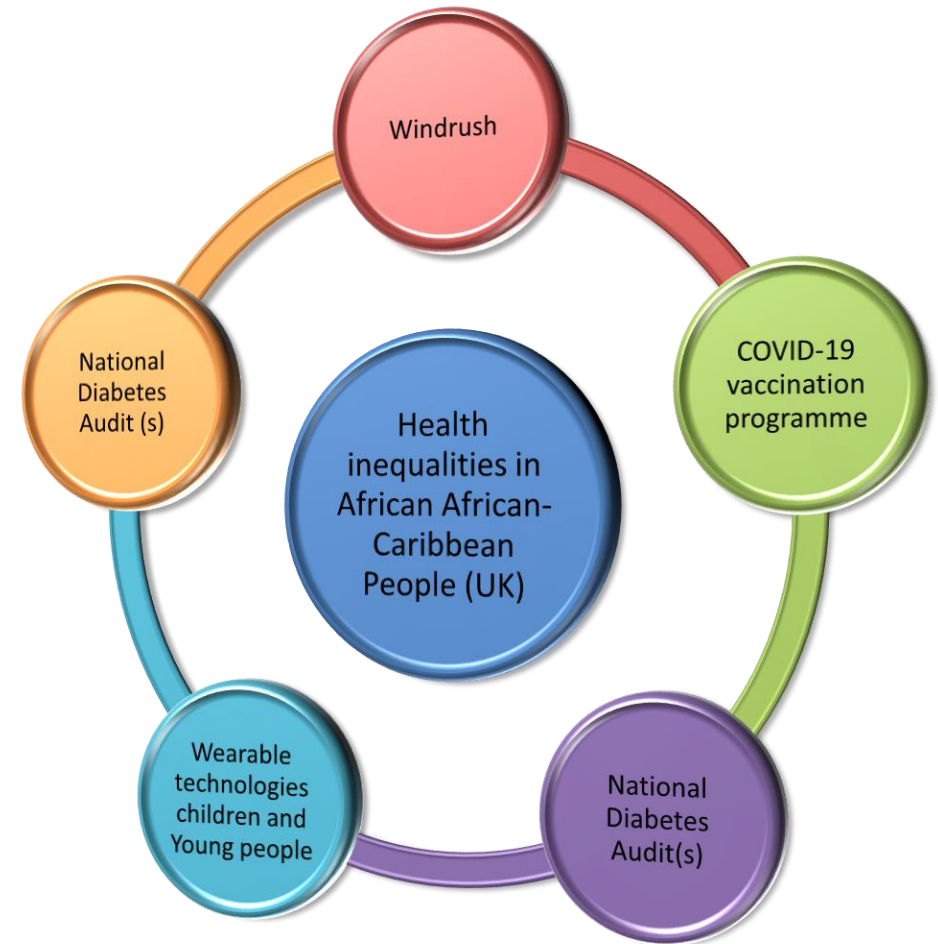
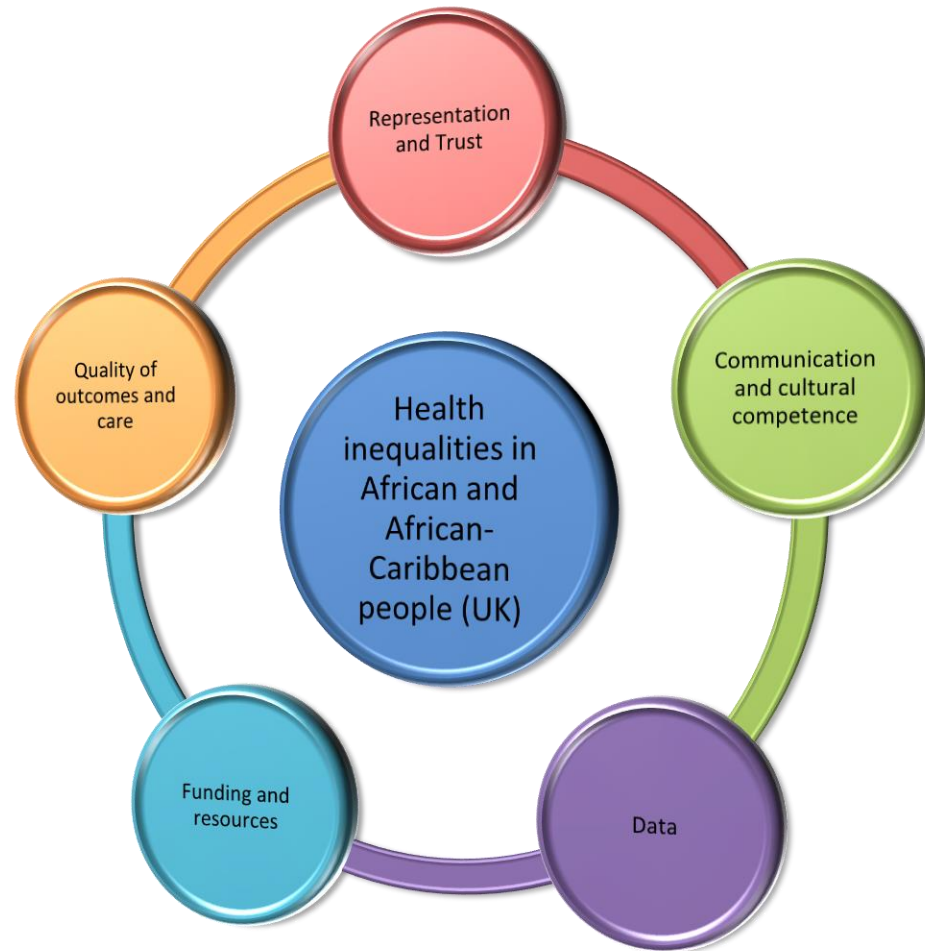


Figure 74: Percentage of children and young people with Type 1 Diabetes using a rCGM by ethnic group and deprivation, 2019/20

Health inequalities in Black African, Black African-Caribbean people



Activating Change

Patrick Vernon OBE **Public health campaigner** (Chair)

- Dr Joan St John GP with special interest in Diabetes and Clinical Champion, Diabetes UK
- Dr Bernadette Adeyileka-Tracz Founder, **Diabetes Africa**
- Michael Connellan Head of External Affairs, JDRF (**Juvenile Diabetes Research Foundation**)
- Dr Natalie Darko, Associate Professor **Stephen Lawrence Research Centre**
- Farhana Darwich Senior Engaging Communities Officer, **Diabetes UK**
 - Tony Kelly Diabetes **Strategic Patient Partner, NHS** Birmingham and Solihull Clinical Commissioning Group
- Vanessa Laber Engaging Communities Officer for the North of England, **Diabetes UK**
- Shannon Rush Diabetes Business Unit Leader, **Lilly UK & Northern Europe**
 - Dr Samuel Seidu Head of Research, **Primary Care Diabetes Europe**
 - Grace Vanterpool MBE Nurse Consultant, Diabetes & Service Manager, **West London Mental Health Trust**

With additional document review by

- Professor Wasim Hanif Consultant Physician & Head of Service in Diabetes, **University Hospital Birmingham**

ACTIVATING CHANGE IN DIABETES

A Charter for Change – Delivering equitable care for Black African, Black Caribbean and South Asian people living with diabetes



Lilly

Examples of Recommendations from 'Activating Change in Diabetes'

- Communication & Cultural Competency
 - E.g. Co-production to produce training for HCPs and those studying for healthcare qualifications on improving cultural competency.
- Representation & Trust
 - E.g. NHS England should set targets for increasing recruitment of people from Black African, Black Caribbean and South Asian groups into decision-making roles
- Data
 - E.g. NHS organisations should standardise the way minority ethnic populations are captured in datasets, and review outcomes to ensure service improvements can be designed accordingly
- Quality of Outcomes and Care
- Funding and Resources

The Ask

What are we asking of ourselves

- Communication & Cultural Competency
 - Contact and discussion with stakeholders
- Representation & Trust
- Data
 - Contact and discussion with stakeholders
- Quality of Outcomes and Care
 - Contact and discussion with stakeholders
- Funding and Resources

What are we asking of APPG

- To table a written question on recommendations raised in the Charter
- Sharing the 'Activating Change in Diabetes' document
- Asking for an update on what the Government is doing to improve diabetes care for minority ethnic groups
- Raise issues and recommendations covered by the Charter during any relevant parliamentary debates on health / inequalities
- Charter for Change Quality and Outcomes of Care Recommendation
 - NHSE to work with ICS& PWD enhance funding and care for people from minority ethnic groups living with Diabetes

Conclusions

- Health inequality daily reality for Black African, Black African-Caribbean people living with Diabetes (Type 1 & Type 2)
- Health inequality costs the individual, their family, community and wider society and needs action
- ‘Activating Change in Diabetes’ provides Roadmap of possible solutions, resources and best practice examples that could be taken forwards

Thank you

DIABETES & INEQUALITY – THE ROLE OF POVERTY

**HELEN KIRrane, HEAD OF POLICY,
CAMPAIGNS & MOBILISATION, DIABETES UK**

INEQUALITIES IN ACCESS TO CARE

- People living in more deprived areas and from ethnic minority groups face inequalities in access to many different aspects of vital diabetes care.
- If you are from a more deprived area, or from an ethnic minority community, you are:
 - Less likely benefit from access to diabetes technology at the same rates those from more affluent groups
 - Less likely to access structured education if you are living with type 1
 - Less likely to receive all of your vital care processes

INEQUALITIES IN CARE OUTCOMES

- Complication rates are higher in more deprived areas with steep gradients
 - for heart failure, angina and vision loss- in people with type 1 diabetes
 - For angina, major amputation, and vision loss - in type 2 and other
 - diabetic ketoacidosis (DKA) and hyperglycaemic hyperosmolar state (HHS) both life-threatening complication of diabetes that require urgent hospital treatment - for all type of diabetes
- People in the most deprived quintile are less likely to achieve all three treatment targets than those in the least deprived quintile. For people with type 1 diabetes this difference is 16% (most deprived) to 24% (least deprived). For people with type 2 it is 40% (most deprived) to 43% (least deprived).
- People in the most deprived groups showed poorer HbA1c than the least deprived groups, and people of Black ethnicity had worse HbA1c than those of White ethnicity. This pattern was more recently mirrored in the NPDA for children and young people with type 1.

INEQUALITIES IN ACCESS TO ROUTINE CARE

- Pre-pandemic, people with diabetes living in more deprived areas were less likely to receive all their care processes. In 2018-19, 37% of people with type 1 diabetes in the most deprived quintile received 8 care processes compared to 44% in the least deprived quintile. For people with type 2, 52% in the most deprived areas received all 8 checks compared to 57% in the least deprived areas. (NHS Digital, 2019)
- Care process completions dropped markedly during the Covid-19 pandemic – with a greater decline evident for those living in the more deprived areas between 2020/21 and 2019/20. (NHS Digital, 2021)
- Our survey of 10,000 people in January 2022 echoed this markedly unequal picture of access to routine care - people living in the most deprived postcodes were nearly twice as likely to have had no contact with their diabetes healthcare team since the beginning of the pandemic than those in the least deprived – 23% compared with 12%. (Diabetes UK, 2022)

ACCESS TO ROUTINE CARE

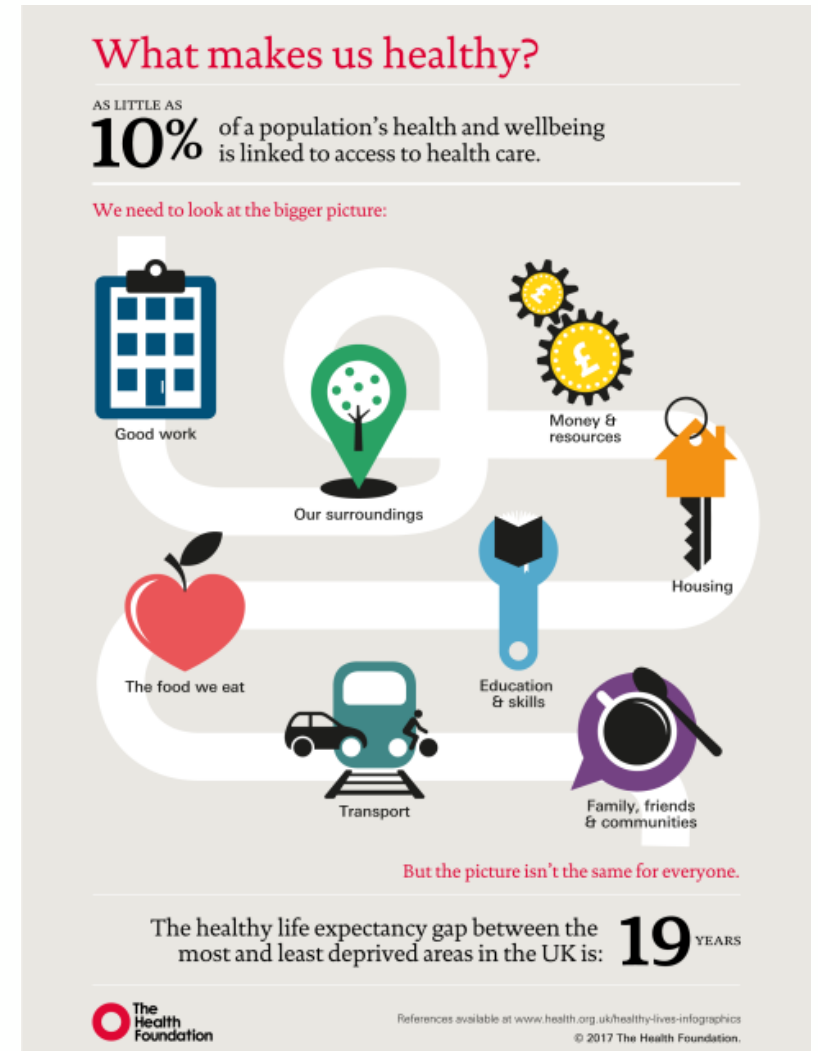
- With the current backlog of care, it's vitally important that services urgently and proactively follow up with those people not seen by services since before the pandemic, taking action to ensure equitable recovery.
- GP shortages, significantly worse in more deprived areas, must be addressed. Recent evidence showed GPs in the poorest parts of the country can be responsible for twice as many patients as GPs in more affluent areas nearby. (Social Market Foundation, 2021)
- The pandemic has also driven a move towards digital healthcare. This works well for many people and can improve access for some. But people in poverty are at risk of digital exclusion. It is vital that people have a choice in how they access their health care.

OUR SOCIAL & ECONOMIC CIRCUMSTANCES

The conditions in which we are born, grow, live, work and age are the **strongest influences on our health** – much more so than our access to health care.

For people with all types of diabetes, our environment, and our social and economic circumstances impact on an individual's ability to **live well with their condition**.

They also have a very significant effect on **our risk of developing type 2 diabetes**.



DEPRIVATION & DIABETES RISK

People in the poorest households are 2.3 times more likely to have type 2 diabetes than those in the highest income households. (NHS Digital, 2020)

Rates of gestational diabetes in deprived communities are twice as high as in the most affluent areas. (Collier, 2017)

Obesity rates – the most significant modifiable risk factor for type 2 – are highest in the most deprived areas. Obesity prevalence is twice as high in the most deprived children and children in deprived communities are five times as likely to be living with severe obesity compared to children in the most affluent communities. (NHS Digital 2020, 2021)

THE FOOD WE EAT, OUR MONEY & RESOURCES



One in five people in the UK live in food insecurity and experience the psychological and physiological impact of food insecurity. (Resolution Foundation, 2019; ENUF)

For households in the lowest income decile, 75% of disposable income would need to be spent on food to meet the UK government's Eatwell Guide costs. (Food Foundation, 2018)

Healthier foods are nearly 3 times as expensive as less healthy foods, calorie for calorie. (Food Foundation, 2021)

Evidence shows that poverty and inequality induce a need to seek high calorie foods and that stress, and an uncertain future increases attraction to calorie dense foods. (Bratanova B et al, 2016; Laran, J. et I, 2013)

As well as being less able to afford healthy food, people in more deprived areas have less access to healthy food, are more likely to live in inadequate accommodation without the means or resource to prepare and cook healthy food, be more vulnerable to the impact of high energy costs on their ability to cook, be targeted by a greater number of unhealthy food advertisements, and have significantly less access to green outdoor space.

GOOD WORK



Compared with day workers, night shift workers are at a higher risk for type 2 diabetes. (C. Vetter et al 2018)

Working longer hours has been shown to increase a person's risk of type 2 diabetes amongst lower earners. (M. Kivimäki et al 2015)

COMMUNITY ASSETS & INFRASTRUCTURE



Higher rates of diabetes are found in deprived areas that have fewer community assets such as green spaces, active travel initiatives, healthy high streets and good education facilities. (Marmot, M, 2020)

Living in a community with accessible green space reduces the prevalence of obesity and diabetes. (Maas J, 2009)

HOUSING



Rates of type 2 diabetes have also been shown to be significantly higher and concentrated in areas characterised by lower incomes and crowded housing. (Kolak M, 2019)

Evidence also points to poor quality housing as an independent diabetes risk - where after controlling for other factors such as BMI, health behaviours and social support. (Shelter, 2017)

WHAT WE ARE CALLING FOR

- The NHS must deliver on its renewed commitments to address health inequalities, and be supported by resources from Government to be able to do this.
- New Integrated Care Systems and Integrated Care Board must urgently draw up plans to catch up on the **diabetes backlog, ensuring equitable recovery**. ICSs should also prioritise tackling the inequalities in diabetes outcomes experienced by those from deprived communities and those from ethnic minority groups
- We want to see bold new commitments from Governments forthcoming **Health Disparities White Paper** which they follow up with swift action and resources which **acknowledge and address the conditions in which we live, grow and work** .
- The Government must urgently produce a **cross-government strategy that addresses these underlying causes** of ill health and will help create a more healthy society. This is essential if we are to turn the tide of rising numbers of people living with type 2 diabetes.
- It is also vital the Government recommits and goes further than it has before to bold population measures to address obesity.

WHAT WE ARE DOING AT DIABETES UK

- Working with others to influence Government and champion the need for bold action address health inequalities, and address the underlying causes of poor health and create a more healthy society.
- Build trusted relationships at a local level with community organisations to develop collaborative partnerships to address inequalities experienced by those with and at risk of diabetes
- Bringing more people, including those from local communities and health professionals, to create a diverse community of people tackling inequality in diabetes through our Tackling Inequalities Lab - providing skills and support to Lab members to prototype innovative solutions for tackling inequalities in their own services and areas.
- Develop an action plan to improve research design & resources to address inequalities in diabetes care.
- Work more closely with experts, including people with lived experience, to identify recommendations for targeted action to address inequalities.