



**cities  
changing  
diabetes**



# Mapping the challenge of type 2 diabetes in Greater Manchester



Cities Changing Diabetes (CCD) Manchester is a joint working project that has been jointly funded by Health Innovation Manchester and Novo Nordisk and developed in collaboration between them.

***This report has been written, funded and distributed by Novo Nordisk, in collaboration with Health Innovation Manchester. Colleagues from the National Institute for Health and Care Research (NIHR) Applied Research Collaboration Greater Manchester, the University of Salford, Manchester Metropolitan University and the British Muslim Heritage Centre also collaborated on the report.***



## 1. Foreword

- Dr Tracey Vell MBE, Chair of the CCD Manchester Steering Group; Clinical Director, Health Innovation Manchester; Associate Lead for Primary and Community Care, Greater Manchester Health and Social Care Partnership
- Pinder Sahota, General Manager Novo Nordisk UK
- Dr Naresh Kanumilli, Diabetes Clinical Lead, Greater Manchester and Eastern Cheshire Strategic Clinical Network for Diabetes

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**Dr Tracey Vell MBE, Chair of the CCD Manchester Steering Group**

*Clinical Director, Health Innovation Manchester*

*Associate Lead for Primary and Community Care, Greater Manchester Health and Social Care Partnership*

Tackling Type 2 diabetes is a significant challenge for health systems across the globe. Increasing prevalence of the disease means more people living with significant health complications and more premature deaths.

Currently, diabetes causes more than 1,000 premature deaths in Greater Manchester and around £400 million is spent each year within the city region treating health complications associated with diabetes.<sup>1</sup> We know that more than a quarter of our residents are expected to develop diabetes in their lifetime.<sup>1</sup> We also know that some cases of type 2 diabetes could potentially be prevented or delayed through improved diet, increasing physical activity and weight loss.<sup>2</sup>

Within Greater Manchester we've utilised our unique health and care system and our spirit of collaboration to commit to address this. We were delighted to be named the twenty-first city to join the global Cities Changing Diabetes programme in 2019. Working in partnership with Novo Nordisk, Health Innovation Manchester and the Greater Manchester and Eastern Cheshire Strategic Clinical Network for Diabetes, we were able to bring this global project to our city-region, and to assemble a range of local partners with the collective ambition of working together to help reduce the prevalence of type 2 diabetes.

During the Cities Changing Diabetes programme we have been able to develop a greater understanding of the prevalence and impact of type 2 diabetes within our city region. We understand more about how social factors and cultural determinants can impact diagnosis, treatment and outcomes for different sections of our diverse population and that more needs to be done to support those aged under 40, particularly those living in areas of deprivation and members of ethnic minority communities, given these groups are amongst those more at risk of developing type 2 diabetes.<sup>3,4</sup>

The programme has also served to highlight the innovative work already taking place within health research across our Greater Manchester system. We have discovered the significant research strengths within diabetes in Greater Manchester, including the use of digital technologies to help manage health and the prevention of health complications associated with diabetes. However we also know where we could add value and where there is a current lack of research activity, such as that related to understanding the needs of ethnic minority communities.

The impact of the COVID-19 pandemic has highlighted how vital programmes such as Cities Changing Diabetes are to maintaining and improving the health of our population. During the early stages of the pandemic those living with diabetes and obesity faced a disproportionate risk of poorer outcomes,<sup>5</sup> highlighting the ongoing risk of health complications associated with type 2 diabetes.

We hope that the work undertaken during the Cities Changing Diabetes programme will further support the health and care system in Greater Manchester, as well as our research partners, to collectively tackle type 2 diabetes and reduce its impact within the city region. We at Health Innovation Manchester are enthusiastic about how this work and ongoing collaborations can develop further innovations and research to support type 2 diabetes prevention and care, with a person-centred approach, within Greater Manchester.



**Pinder Sahota, General Manager Novo Nordisk UK**

Novo Nordisk has a near 100 year heritage in diabetes care and we are committed to playing our part to help defeat diabetes and obesity. We recognise it will take more than medicines alone to achieve this and that a holistic approach is essential to ensure people living with diabetes and obesity are able to access the care they need to live well, while also ensuring that society can work together to help prevent the rise of type 2 diabetes.

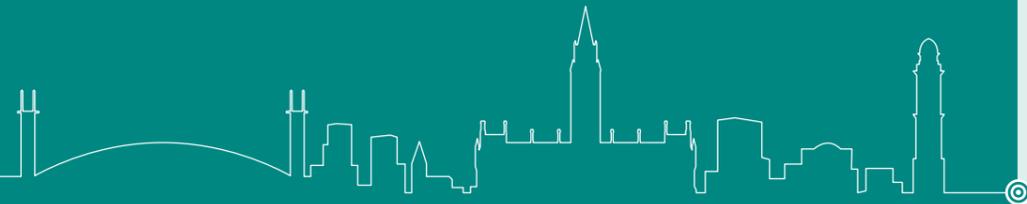
Worldwide, 463 million people are estimated to be living with diabetes, representing an increased prevalence of more than 200% in less than 20 years.<sup>6</sup> The number of people living with diabetes in the UK is expected to reach 5.5 million by 2030.<sup>7</sup> The majority of people with diabetes (around 90%) live with type 2 diabetes, with over 13.6 million people across the country now thought to be at increased risk of developing this chronic condition.<sup>7</sup> Type 2 diabetes is a complex condition. While obesity is responsible for up to 85% of a person's risk of developing type 2 diabetes,<sup>7</sup> we know there are a number of factors that can make some people potentially more at risk of developing the condition, including family history, ethnicity and age, along with the environment we live in - which can also have an impact.<sup>7</sup>

Urbanisation has transformed the way we live and today more than half of the world's population live in cities,<sup>8</sup> which can affect how people live, travel, play, work and eat. Urban areas are complex environments in which a number of nutritional, demographic, social, cultural, and economic factors can affect the health of their populations.

But the increase in type 2 diabetes is not inevitable and we can change its trajectory if we act now.

In 2019 it was announced that Manchester would join Leicester as the second UK city to become part of the Cities Changing Diabetes initiative, a global partnership programme launched by Novo Nordisk, University College London and the Steno Diabetes Centre in Copenhagen to stem the rise in type 2 diabetes within urban environments.

We were delighted to work alongside Health Innovation Manchester and Dr Naresh Kanumilli, Diabetes Clinical Lead for the Greater Manchester and Eastern Cheshire Strategic Clinical Network, to help the city benefit from taking part in this global initiative. Partners across Greater Manchester subsequently came together to tackle the challenge of type 2 diabetes within the city region and to improve the health and wellbeing of their local population.



More than 40 cities across the world are now engaged in the Cities Changing Diabetes programme, which brings together a range of organisations and partners within cities to map the challenge of type 2 diabetes in their communities, to share solutions both locally and globally and to agree tailored actions to improve the health of their populations.

The scale and nature of the challenge requires work across different sectors and disciplines. Partners taking part in the programme across the world range from policymakers and city governments, to academic institutions and researchers, healthcare providers, representatives of the diabetes community, sports clubs and civil society organisations.

This partnership approach is key. Supporting communities to come together, to improve understanding of the underlying factors behind the increase in type 2 diabetes in urban environments and to combine their skills, resources and experience, gives us the opportunity to find new ways to prevent and manage this chronic disease.



**Dr Naresh Kanumilli**

**Diabetes Clinical Lead, Greater Manchester and Eastern Cheshire Strategic Clinical Network**

As a GP working within a large general practice in South Manchester I have seen the impact that type 2 diabetes can have on the lives of those affected by the condition, but I strongly feel that we as health care providers have a lot more to learn and understand about the needs of people living with type 2 diabetes in our region. This is a priority for me.

The Cities Changing Diabetes programme provides us with a unique opportunity to do this. I was delighted to work alongside Health Innovation Manchester to secure Greater Manchester's involvement in the global programme, with the support of Novo Nordisk. Bringing different local partners together around the table, including those directly affected by type 2 diabetes, in a collective endeavour to address the impact of this chronic condition will be key going forward as we work to improve the health of our population.

Greater Manchester's Tackling Diabetes Together Strategy sets out the city region's collective mission:

*To improve the lives of all people across Greater Manchester affected by diabetes or at risk of developing diabetes.<sup>1</sup>*

We have been making progress in our mission to support improvements to care and to achieve better health outcomes and experiences for the thousands of people in Greater Manchester who are affected by diabetes, including the increasing number of people living with type 2 diabetes.

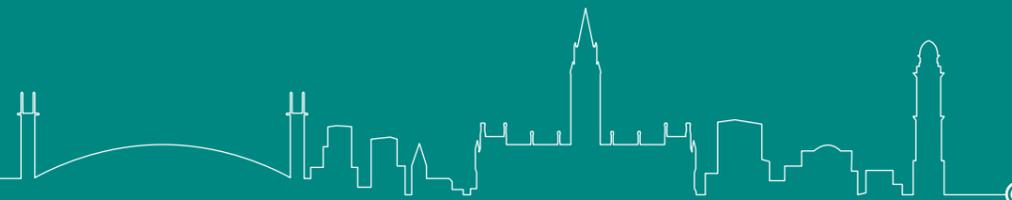
- ⊙ Within Greater Manchester, members of the local community have taken part in the NHS Diabetes Prevention Programme. New research from the University of Manchester has confirmed that this has prevented thousands of people across England from developing type 2 diabetes.<sup>9</sup>
- ⊙ The Greater Manchester Diabetes My Way online support service is funded by the NHS and is a free tool providing information and health advice to help people manage their diabetes, including NHS accredited eLearning courses and content in a range of languages to help meet people's needs.<sup>10</sup>
- ⊙ Addressing health inequalities is a key focus for the NHS, with those from ethnic minority communities and more deprived areas amongst those groups at higher at risk of developing type 2 diabetes.<sup>3,4</sup> Working alongside the British Muslim Heritage Centre (BMHC) and Diabetes UK, the Greater Manchester and Eastern Cheshire Strategic Clinical Network have been able to support the training of Muslim community influencers, including Imams, to help raise awareness of the risks of type 2 diabetes amongst their peers.<sup>11</sup>
- ⊙ People living with diabetes face a 221% increased risk of having major amputation above the ankle and a 337% increased risk of having a minor amputation compared to others within the general population.<sup>1</sup> In some parts of Greater Manchester major amputation rates have been found to be up to 81% higher than the national average.<sup>1</sup> The Manchester Amputation Reduction Strategy (MARS) programme is working to address this and existing resources will be redistributed to create a single community referral care pathway, a coordinated lower limb management care pathway and specialist wound care teams, as well as having a focus on public health prevention to help address risk factors associated with type 2 diabetes.

We know there is more we must do to further improve health outcomes for people affected by diabetes, or at risk of developing type 2 diabetes, and our mission continues. The valuable insights gained through the Manchester Cities Changing Diabetes programme have helped us to understand further the nature of the type 2 diabetes challenge within the city region, particularly how this affects those from ethnic minority communities, those from more deprived areas and the increasing number of younger people being diagnosed with this chronic condition. The need to address variation in the experiences people have of care and to tailor and personalise support for different people living with type 2 diabetes have also been highlighted through this work.

These key findings will be crucial to continuing our work to achieve better outcomes and experiences for people living with diabetes and those at risk of developing type 2 diabetes. They also remind us of the importance of ensuring that those affected have a voice in research to increase our understanding of diabetes and in designing and developing services in Greater Manchester that will help meet their individual needs.

I hope that our insights will also prove helpful to other cities across the world who are working to reduce the impact of type 2 diabetes on their communities.





In December 2019, Health Innovation Manchester and Novo Nordisk entered into a joint working agreement to work in collaboration to develop and jointly fund a project to help address the challenge of type 2 diabetes in Greater Manchester. Key intended outputs included:

- ⊙ **Understanding the nature of the type 2 diabetes challenge within Greater Manchester.** This comprised of research to help further identify those most at risk of developing type 2 diabetes, the mapping of existing research and initiatives to address the challenge of type 2 diabetes within the city region and community engagement to help further understand the needs of local communities and how they can be supported to reduce their risk of developing type 2 diabetes and to look after their health.
- ⊙ **Collaborating with partners to learn and share findings and insights.** As part of the Cities Changing Diabetes Network, Greater Manchester has learned and shared experiences with other cities around the world. The city's British Muslim Heritage Centre joined a workshop with faith leaders from Houston, to explore how they could help reduce the impact of type 2 diabetes in communities. New local collaborative partnerships have also developed thanks to the programme.
- ⊙ **Suggesting a roadmap for future initiatives and programmes and building on the insights from the Cities Changing Diabetes Manchester project.** This report outlines recommendations for Greater Manchester partners, based on outcomes from the programme, to help further raise awareness of type 2 diabetes within the community by sharing these findings more widely.

It is hoped that this report will provide helpful insights and recommendations for partners from across Greater Manchester, both health and care organisations, public health colleagues and wider community organisations, about how they can collectively work together to help reduce the impact of type 2 diabetes in Greater Manchester.



### 7 key insights from the Cities Changing Diabetes Manchester programme:

- ⊙ **Those aged under 40, particularly men of white ethnic origin and those living in the most deprived neighbourhoods, are more likely to experience under-diagnosis of type 2 diabetes.**
- ⊙ **GP practices within Greater Manchester whose diabetes populations are younger tend to perform less well than others in terms of delivery of care and the meeting of treatment targets for their diabetes patients.**
- ⊙ **Those aged under 40 with type 2 diabetes feel that existing care and support is not tailored to their needs,** with a sense that education courses to support self-management of their condition do not reflect their lifestyles and seem to be aimed more at older people living with the condition.
- ⊙ **Younger adults with type 2 diabetes should not be treated as a homogeneous group and there is a need to consider tailored support relevant to their different needs.** The research highlighted in this report identified five different types of profile relevant to those aged under 40 living with types of diabetes, reflecting their different feelings, experiences and beliefs about their health.
- ⊙ **Greater Manchester does have significant research strengths in relation to diabetes, including with regards to the use of digital technologies to help manage health and the prevention of health complications associated with diabetes, but there is a lack of research focussed on understanding the needs of ethnic minority communities.**
- ⊙ **Support for those from ethnic minorities to help reduce their risk of developing type 2 diabetes should be tailored to their needs and reflect their cultural and religious beliefs, taking in to account any linguistic needs,** to help address any barriers they may face in managing their health or accessing services.
- ⊙ **Community influencers, including local faith leaders, should be engaged by local health and care services to help raise awareness amongst their peers of the risks of type 2 diabetes and how people can keep healthy.**

This report includes recommendations from researchers from the University of Manchester and the National Institute for Health and Care Research Applied Research Collaboration Greater Manchester (NIHR ARC-GM), as well as the University of Salford, Manchester Metropolitan University and the British Muslim Heritage Centre.

Our thanks goes to colleagues from University College London (UCL) who helped to support the research carried out as part of the programme.

### 3. About the Manchester Cities Changing Diabetes programme



Cities Changing Diabetes Manchester is a joint working project, jointly funded by and developed in collaboration between Health Innovation Manchester and Novo Nordisk. Other partners who were actively engaged in this initial phase of the programme include:

- ⊙ The University of Manchester (via the NIHR ARC-GM)
- ⊙ University of Salford
- ⊙ Manchester Metropolitan University
- ⊙ The British Muslim Heritage Centre

The Cities Changing Diabetes Manchester programme, launched in 2019, is a joint working project. It has been jointly funded by, and developed in collaboration between, Health Innovation Manchester and Novo Nordisk. The initiative aims to help reduce the prevalence of type 2 diabetes in Greater Manchester. The programme has sought to engage a range of local partners in this mission, including the city's universities, the British Muslim Heritage Centre, the local NHS, Diabetes UK and others.

The global Cities Changing Diabetes programme follows a 'map, share, act' model, which supports local partners to come together within cities around the world to map the nature of the challenge of type 2 diabetes in their communities, to share solutions to address this and to drive targeted action to help 'bend the curve' on urban diabetes.

This initial phase of the programme in Greater Manchester has involved 'mapping' the nature of the type 2 diabetes challenge the city-region faces, to help understand more about this and to provide insights about how this can be addressed.



Manchester Metropolitan University

#### The Cities Changing Diabetes Manchester programme has consisted of the following elements:

- ⊙ Research led by the NIHR ARC-GM and researchers from the University of Manchester, to understand more about the prevalence of diabetes within the city region. Researchers analysed data about the number of people living with diabetes in Greater Manchester and their care and treatment outcomes, to help identify any potential gaps that need to be addressed. While the data explored the prevalence of both type 1 diabetes and type 2 diabetes, the analysis concluded that prevalence of type 2 diabetes within the under 40 population in Greater Manchester is an increasing challenge. Further research then sought to identify the nature of social factors and cultural determinants that might make some people within this age group potentially more vulnerable to poorer health outcomes as a result of living with type 2 diabetes.
- ⊙ The mapping of existing research and innovations that relate to the prevention of type 2 diabetes and the treatment of diabetes across Greater Manchester, led by researchers from the University of Salford and Manchester Metropolitan University. This has helped to identify potential priority areas for future focus, in order to make the best collective use of available resources within the city region to address this challenge.
- ⊙ Community engagement led by the British Muslim Heritage Centre to understand the needs of those most at risk of developing type 2 diabetes. The British Muslim Heritage Centre has been working to engage with diverse communities within Greater Manchester to try and better understand the experiences of local minority ethnic groups, so that partners within the city region can work to ensure support and services reflect the needs and preferences of those communities most at risk of developing type 2 diabetes.

It is hoped that bringing together these important research findings, together with the insights from communities across Greater Manchester, will help support local partners in developing further potential solutions to address the challenge of type 2 diabetes within the city region.

# 4. Mapping the type 2 diabetes challenge in Greater Manchester

## 4.1 Research on understanding the nature of the type 2 diabetes challenge in Greater Manchester

### 4.11 The Rule of Halves

Academics from the University of Manchester and the NIHR ARC-GM used one of the research tools that forms part of the Cities Changing Diabetes global programme, known as the Rule of Halves framework, to help understand more about the impact of diabetes in Greater Manchester.

#### The Rule of Halves framework

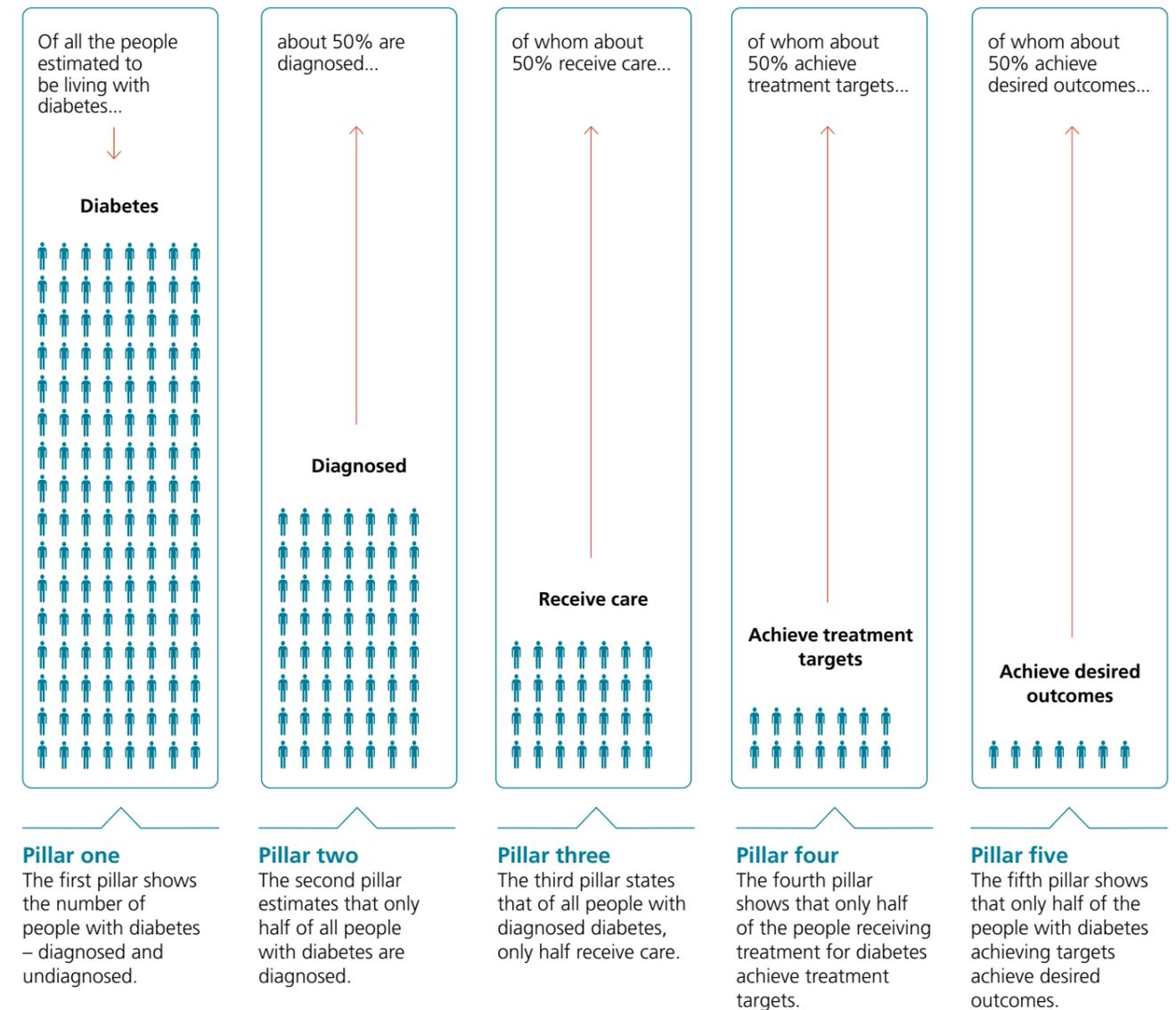
The Rule of Halves is an analytical framework to help identify the gaps within individual cities that need to close to ensure everyone with diabetes is diagnosed, gets treatment and achieves better health outcomes. The framework is based on evidence suggesting that approximately half of the most common chronic disorders are undetected, that half of those detected are not treated, and that half of those treated are not controlled.<sup>12</sup>

Applied to type 2 diabetes, the Rule of Halves analysis can be used as a prioritisation tool for city partners to indicate at which point interventions to improve care and services are likely to have most impact. The Rule of Halves analysis is based around the five pillars described in this section of the report. In an ideal world, the Rule of Halves framework would show only marginal differences between the five pillars, as this would mean that the clinical needs of people with diabetes were being met and that diabetes-related complications were being avoided or delayed.



FIGURE 2 THE RULE OF HALVES FRAMEWORK

The Rule of Halves framework illustrates the global diabetes burden and indicates where the largest unmet clinical needs are<sup>13</sup>





## Local data analysed through the Rule of Halves framework

A range of data sources were used to populate the Rule of Halves across each of the five pillars. The following data was analysed using the Rule of Halves model. While this data on estimated prevalence, diagnosis and treatment relates to all types of diabetes, on average 90% of people living with diabetes have type 2 diabetes. The data therefore provides key insights in to the nature of the type 2 diabetes challenge within Greater Manchester. The data analysed reflects that which was available at the time the research was undertaken and does not therefore take into account the impact of COVID-19 on services and care outcomes. Research has since suggested that thousands of people in the UK were affected by missed or delayed diagnosis of type 2 diabetes and by a fall in HbA1c blood tests to monitor the clinical management of diabetes between March and December 2020, indicating the challenges experienced in the treatment of type 2 diabetes during the pandemic.<sup>14</sup>

### Data analysed:

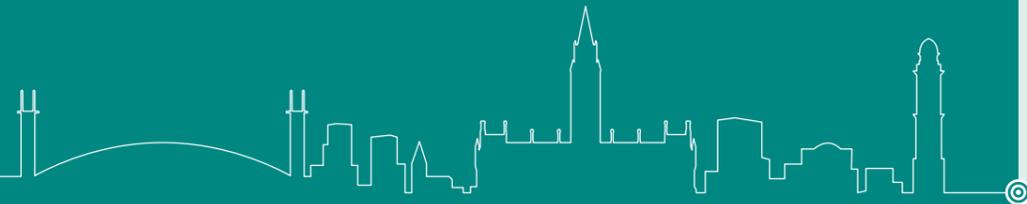
1. **Prevalence of diabetes:** estimated using individual-level survey data on Greater Manchester residents for 2015-17 (wave 7) from the UK Household Longitudinal Study, applied to Office for National Statistics (ONS) population estimates for mid-2016.
2. **Diagnoses:** recorded at GP practice-level in the 2016/17 National Diabetes Audit
3. **Care quality:** recorded at GP practice-level in the 2016/17 National Diabetes Audit (*in relation to the NICE-recommended eight care and treatment processes for people with diabetes*)
4. **Treatment targets:** recorded at GP practice-level in the 2016/17 National Diabetes Audit (*in relation to the three NICE-recommended combined treatment targets for diabetes for blood glucose levels (HbA1c levels), cholesterol and blood pressure*)

The data for each of the five domains for Greater Manchester was compared to that for comparable cities in England (Hull, Liverpool, Sheffield). A range of additional analyses was also undertaken, including examining:

- ⊙ The representation of particular population sub-groups in regards to the prevalence and diagnosis of diabetes, as noted within care records
- ⊙ How the percentage of patients provided with appropriate quality of care varied according to the composition of patients with diabetes within local general practices
- ⊙ How the percentage of patients achieving their treatment targets varied according to the composition of patients with diabetes within local general practices.

5. **Outcomes:** recorded at clinical commissioning group (CCG) level in the 2017/18 CCG Outcomes Indicator Set (*related to hospital admissions linked to diabetes. This pillar looked at the number of people in Greater Manchester with a diagnosis of diabetes in 2016/17, as captured by the National Diabetes Audit, and then identified what proportion of them were admitted to hospital for a diabetes-related complication in the following year – as recorded in Hospital Episode Statistics data for 2017/18*).





## Rule of Halves findings from Greater Manchester

### Prevalence

1. Almost 250,000 people were estimated to be living with diabetes (all types of diabetes) in Greater Manchester in 2016.<sup>13</sup>

### Diagnosis

2. 63% of those estimated to be living with diabetes (just over 156,000) had an official diagnosis of any type of diabetes reflected in their health records in 2016/17.<sup>13</sup>

### Delivery of care

3. 51% of those diagnosed with diabetes in Greater Manchester (just over 80,700) people received appropriate care in 2016/17, as measured by the proportion of people who received the eight care processes recommended by the National Institute of Care Excellence (NICE).<sup>13</sup>

### Achievement of recommended treatment targets

4. 37% of those diagnosed with diabetes (58,646) achieved the three NICE recommended combined treatment targets in 2016/17. This figure is, equivalent to 73% of the 80,700 people diagnosed with diabetes who received the eight recommended care checks.<sup>13</sup> Diabetes UK has highlighted research showing that people with diabetes who receive all their annual care process checks have better health outcomes.<sup>15</sup>

### Experience of health complications

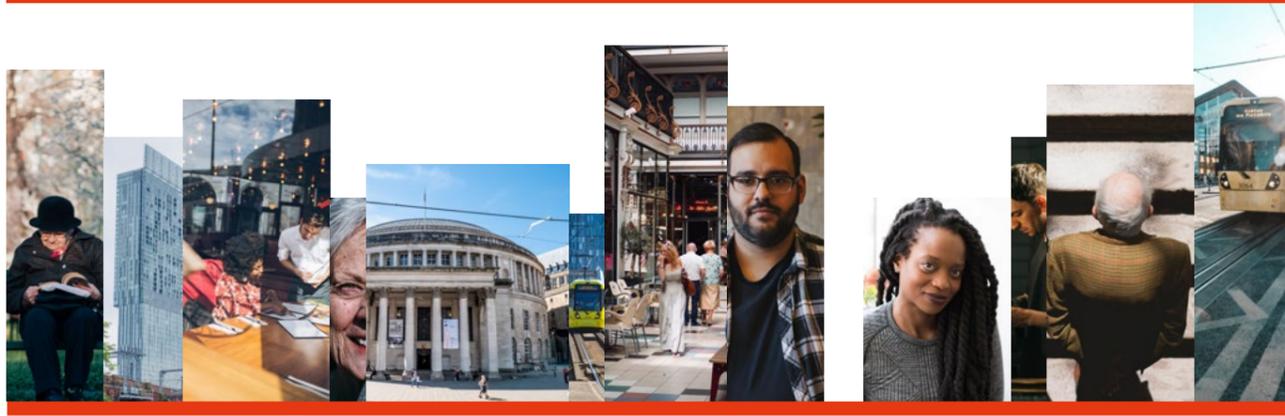
5. The number of people in Greater Manchester who had a recorded diagnosis of diabetes in 2016/17 and who were admitted to hospital in the following year (2017/18) for a diabetes-related health complication was 13,090. This represents around 8% of those who were recorded as living with a diagnosis of diabetes in the previous year.<sup>13</sup>

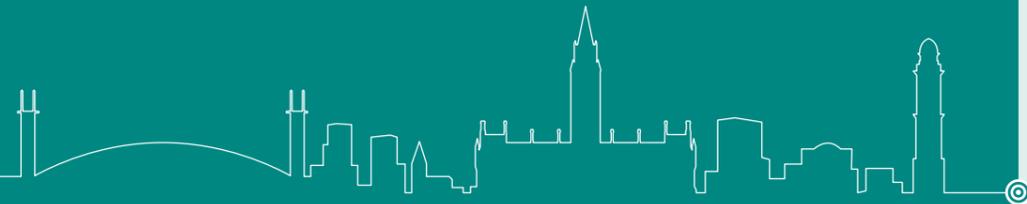
The results from the analysis show that while the Rule of Halves theory does not generally apply within Greater Manchester, the available data does provide some key insights:

- ⊙ **Greater Manchester is estimated to have higher prevalence of diabetes than comparator cities:** There were just under 250,000 people in Greater Manchester estimated to be living with diabetes as of 2016, with prevalence estimated to equate to almost 9% of the population, compared to just over 7% in the comparison cities explored.<sup>13</sup>
- ⊙ **Comparison cities (Sheffield, Hull, Liverpool) were estimated to have higher rates of diagnosis of diabetes than Greater Manchester (66% vs. 63%), and a higher proportion of diagnosed diabetes patients who had received the eight recommended care process checks (59% vs 51%).**<sup>13</sup>
- ⊙ **However, Greater Manchester had a higher rate of patients achieving all three NICE-recommended treatment targets for diabetes than comparator cities, when this data was considered in relation to the number of patients who received the eight care process checks (73% vs 62%).**<sup>13</sup>

### Of particular note:

- ⊙ The data suggests that **adults aged under 40, individuals of white ethnic origin, men and individuals living in the most deprived neighbourhoods are the groups most likely to be under-diagnosed when considering the impact of type 2 diabetes within Greater Manchester.** *This finding comes from comparing data on estimated diabetes prevalence with the levels of diagnosis noted in health records.*<sup>13</sup>
- ⊙ **GP practices within Greater Manchester whose diabetes populations are younger tend to perform less well than others in terms of delivery of care and the meeting of treatment targets for their diabetes patients.**<sup>13</sup> *This is of concern as younger people living with type 2 diabetes will need to manage the condition and any associated health complications over a longer period of their lives than those who are diagnosed later in life.*



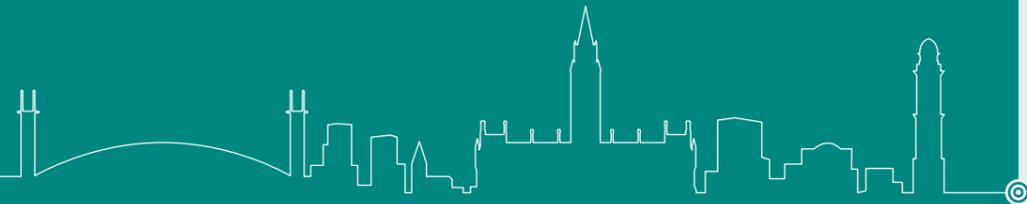


The work on the Rule of Halves, as part of the Cities Changing Diabetes Manchester programme, led to a further subsequent study by researchers from the University of Manchester and NIHR ARC-GM. This compared the application of the Rule of Halves in urban and rural settings within England. This concluded that while the Rule of Halves was not an accurate reflection of the pattern of diagnosis and treatment across the diabetes care pathway in England, the delivery of the eight care process checks for people living with diabetes was generally associated with a greater proportion of patients with diabetes achieving the recommended treatment targets.<sup>16</sup>



*“Through the Rule of Halves research we have found significant gaps in terms of diagnosing diabetes and providing the appropriate care and achievement of treatment targets amongst diagnosed patients in Greater Manchester – with particular sub-groups worse affected than others. While quality of care has improved in recent years, further improvements can be achieved by targeting some groups of patients.”* Dr Thomas Mason, Research Fellow in Health Economics, University of Manchester and part of the NIHR ARC-GM





## 4.12 The Urban Diabetes Priority Assessment

Having identified potentially poorer service provision and health outcomes for those aged under 40 in Greater Manchester with diabetes, additional research by University of Manchester and NIHR Applied Research Collaboration Greater Manchester academics sought to further understand the perspectives of people living with type 2 diabetes within this age group.

Previous research conducted through the Cities Changing Diabetes global programme has identified that some factors can impact upon a person's vulnerability to developing type 2 diabetes and are relevant to different cities and urban environments around the world, even if they manifest themselves in unique ways locally. Research conducted in the first five cities to join the global programme (Mexico City, Copenhagen, Houston, Tianjin and Shanghai) identified eight social factors and cultural determinants that can potentially affect a person's risk of developing and living with type 2 diabetes.<sup>17</sup> Social factors are the conditions under which we are born, grow, live and work that shape our daily life. Cultural determinants are the shared conventions, understandings and practices that impact our health and wellbeing.

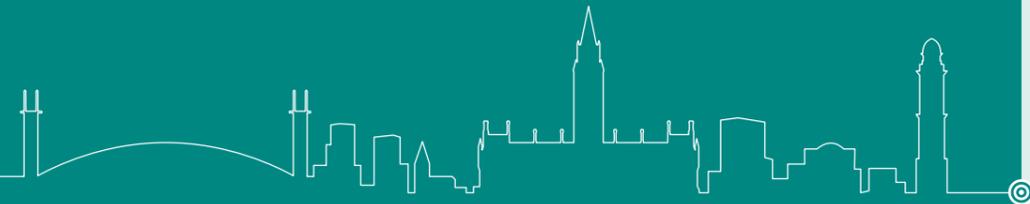
Understanding the local mixture of social factors and cultural determinants that can make certain local populations more vulnerable to developing type 2 diabetes can help in shaping tailored interventions to support the prevention of type 2 diabetes. The eight social factors and cultural determinants identified through the previous Cities Changing Diabetes global research are summarised below.

Social factors	
1)  <b>Financial constraints</b>	Limited financial resources may become a barrier to accessing health-promoting resources, such as paying for healthy food and exercise.
2)  <b>Time constraints</b>	Time-consuming family and work obligations and a long commute may become barriers to health-promoting lifestyle choices, such as seeking healthcare, exercising and sourcing healthy food.
3)  <b>Resource constraints</b>	Lack of knowledge of existing health resources, or scarcity of resources (such as access to healthy foods), along with limited possibilities to exercise, may be barriers to an individual making decisions that can enhance their health.
4)  <b>Geographic constraints</b>	An unfavourable climate, high pollution and crime levels, or a lack of infrastructure, may become barriers to health-promoting activities such as walking and outdoor exercises.

## Cultural determinants

5) <b>Traditions and conventions</b>	Traditions and conventions can have consequences for health and wellbeing. For example, unhealthy food traditions may become barriers to healthy eating, or a tendency to only use health services in urgent situations may undermine a person's ability to receive optimal healthcare.
6) <b>Health and illness</b>	The way health and illness are understood shape our perception of health and wellbeing. For example, perceptions amongst some people that type 2 diabetes is less severe than other health issues, misconceptions about our own health, mistrust in healthcare providers and the feeling of stigma may be barriers to achieving optimal health and making lifestyle changes.
7) <b>Self and others</b>	A person's understanding of self, in relation to others, contributes to health and wellbeing. In Houston, the Cities Changing Diabetes programme has found that people comparing their own health to others in a favourable way can create a scenario where they feel changes to improve their own health are unnecessary, while in Copenhagen some people were found not to attend gyms or fitness clubs because they perceived their body shape as 'bigger than average' and felt uncomfortable.
8) <b>Change and others</b>	Living in rapidly growing cities or neighbourhoods that undergo constant changes, and migrating from rural to urban settings, can be stressful and may become barriers to achieving optimal health outcomes.

Between June and December 2021, researchers in Greater Manchester recruited 43 people living with type 2 diabetes and aged under 40 to take part in an Urban Diabetes Priority Assessment.<sup>17</sup> This research tool seeks to determine which social factors and cultural determinants matter most to people with type 2 diabetes and how these can create potential barriers or opportunities in relation to the prevention of type 2 diabetes and the management and care of those already living with the condition.



## A focus on how to support the increasing number of younger people living with type 2 diabetes

Greater Manchester is the only city within the global Cities Changing Diabetes programme to date that has undertaken specific research to understand more about younger adults living with type 2 diabetes. This work has provided some unique insights about the experiences of this population as a result.

This is important, because although type 2 diabetes usually occurs in people aged over 40, prevalence amongst younger people is becoming an increasing challenge. NHS data has revealed that there are now almost 123,000 children and young adults under the age of 40 years in England and Wales living with the condition, over 1,500 of whom are under the age of 19.<sup>18</sup>

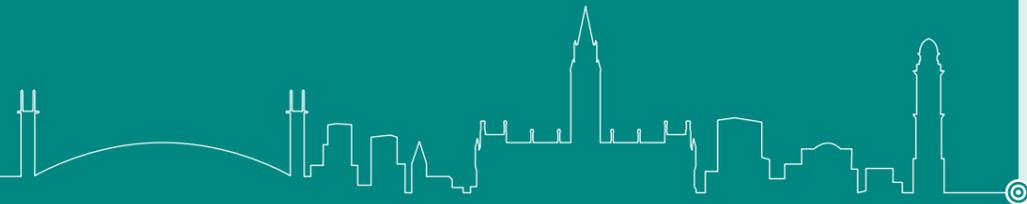
### How the Urban Diabetes Priority Assessment was conducted in Greater Manchester

- ④ 43 people aged under 40 living with type 2 diabetes were asked to complete an online demographic survey to report information on their socioeconomic status, housing, employment, health, any long-term conditions, diabetes complications and height and weight.
- ④ Participants were invited to take part in the study via local general practices, community pharmacy services, through local community engagement and social media. Social media was by far the most successful recruitment channel, with 38 research participants secured via Facebook advertising.
- ④ The research participants then undertook a statement-sorting exercise ('Q-sort') to assess their perspectives on various aspects of living with diabetes. The 64 statements used in the study represented a broad range of social and cultural factors relevant to health, wellbeing and diabetes, based on the previous global Cities Changing Diabetes research. Participants were asked to rank these statements, based on their level of agreement or disagreement with each statement. Statistical analysis was applied to detect any similarities in sorting patterns between participants, in order to identify any with shared viewpoints and experiences and to yield statistically meaningful results.
- ④ 17 research participants then took part in remote focus group sessions or individual interviews, to help understand more about their experiences of living with type 2 diabetes.

Insight: Social media channels were by far the most successful in recruiting those aged under 40 with type 2 diabetes to take part in the research. This suggests the importance of academics increasingly considering such methods for recruitment going forward.

### Outcome of the Urban Diabetes Priority Assessment<sup>19</sup>

- ④ **Researchers identified five different perspectives related to the experiences and views of younger people living with type 2 diabetes in Greater Manchester**
- ④ **Some common experiences were shared across the different groups**, such as their belief that time restraints and busy lifestyles acted as consistent barriers to improving their health.
- ④ **Reliance on takeaways were noted in multiple groups.** Eating healthily was considered expensive by some and hard to fit into existing lifestyle patterns.
- ④ **Across all groups, a lack of access or support from health services was perceived.**
- ④ **The research highlighted the importance of not treating younger adults with type 2 diabetes as a homogeneous group and the need to consider tailored support relevant to their different needs.** There were different journeys reported with regards to the experience of being diagnosed with type 2 diabetes and the participants shared different responses to their diagnosis (with family situations, having a history of pre-diabetes and wider demands – including caring responsibilities- all impacting upon this). Some people felt positive for the future but recognised they needed support. Other noted feelings of shock, fear or lack of acceptance and reported feeling adrift following their diagnosis.
- ④ **Some participants had undertaken courses to support self-management of their type 2 diabetes, but did not feel this support was sufficiently tailored to their age and lifestyles to be helpful.**

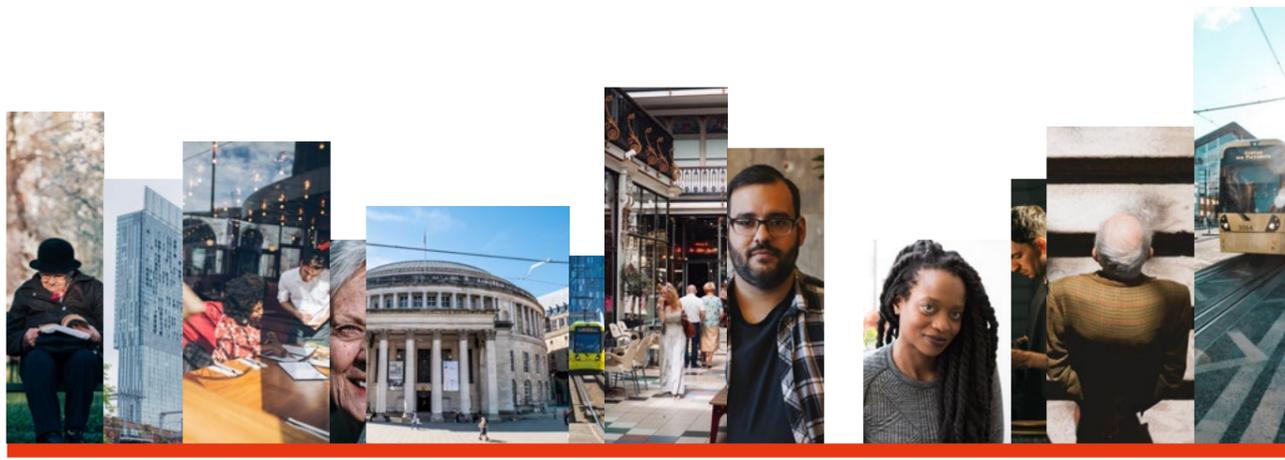


***“Our research identified some particular challenges for younger adults living with type 2 diabetes in Greater Manchester, especially for those with work, children and family commitments. We also found significant differences in the preference for support, access to information and ability to follow self-management advice. We strongly advocate for better support and increased attention for the overall group of under 40’s to help them avoid, delay onset or live well with type 2 diabetes.”***



*Dr Sarah Croke, Research Associate, University of Manchester and NIHR ARC-GM*

The five different ‘perspectives’ on living as a younger person with type 2 diabetes in Greater Manchester are outlined in this section. They illustrate the everyday challenges people face in living with type 2 diabetes and the different abilities and/or capacity they may have to moderate these.



### **Perspective 1: ‘Stressed and calamity coping’**

Report having the awareness and some ability to manage their diabetes.



#### **Diabetes diagnosis**

People in this sub-group had some of the highest BMIs across our study but often had not noticed, or had ignored, the onset of diabetes. They experienced challenges engaging with their diagnosis in the early stages. This group highlighted other life demands, including stress, work and childcare, as impacting on their ability to manage their health and noted they often put others’ needs before their own.



***“I don’t know how long I was diabetic for, I wouldn’t be surprised if I’ve been diabetic for at least a couple of years before my diagnosis. Now it’s one of those cases where you realise signs were there but they weren’t as prominent”*** (30-year old Male)



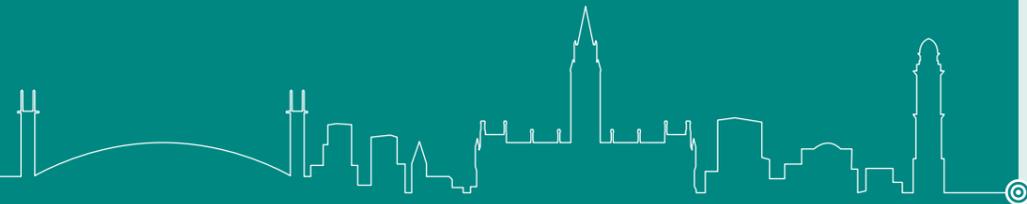
***“We were in the middle of organising my sister’s wedding and...I kept going to the toilet and I thought, why do I keep needing a wee and I was tired going up the stairs. I was tired, and I kept needing a wee and I thought it was all the nerves from my sister’s wedding”.*** (39-year old Female)

#### **Service support**

Despite challenges they faced at the point of diagnosis, people suggested that they had good awareness and ability to manage their diabetes and a desire to ‘turn things around’, but felt they had insufficient support to do so. Advice they received was felt to be contradictory and ‘prescribed’ diabetes management courses were felt not to be useful, as it was felt they were tailored to older people. This meant most people did not attend further after one or two sessions.



***“I went on a course when I was first diagnosed, but they don’t take into consideration people’s age, because I was on this course with, like, people my nana and grandad’s age. So, like, even though it was nice and, you know, we’re all in the same boat, they’re not really in the same boat because they’re slowing down whereas I’m just starting my life really and I’ve got a long way to go.”***  
(28-year old Female)



### Lifestyle/self-management issues

Self-described 'food addiction' was common in this group. People felt poorly educated about the benefits of being healthy before becoming overweight or developing diabetes. Demanding lives were noted as leading to an increased reliance on takeaway food: there was a theme that the demands of family/dependants can make it harder to do better in relation to 'good health'. Respondents also noted a lack of employer support (e.g. breaks at work) particularly in the healthcare sector.



*"I mean, we both are very busy. He is a [job title] and we [are] just swapping in between the meetings, so one is taking care of the baby while my husband is in the meeting, if I am in the meeting he's taking care of the baby, and sometimes we both end up around seven, eight o'clock pm to finish our everyday work, and then we both are so much tired and we decide, let's order from outside [...] But honestly, we are so much tired at the end of the day that we don't think about it." (32-year old Female )*



*"When we're stuck at hospitals for hours, queuing outside, they have what they call welfare vehicles and it's where the staff can quickly go over and get a brew and get something to eat. So if you want something to eat it's either a Mars bar, a Snickers or a bag of crisps." (36-year old Male)*

People also noted that medication side effects could be difficult to tolerate given their lifestyles and commitments.



### Perspective 2: 'Financially disadvantaged and poorly supported' Lack the skills, finances or support to better manage their diabetes



#### Diabetes diagnosis

People in this sub-group recognised they had been living with pre-diabetes ('borderline diabetes') for some time before being diagnosed with diabetes. Following diagnosis, they felt they were then left with limited early support and lack of monitoring. Individuals suggested they seldom shared their diagnosis with friends and family due to fear of being judged and that this could lead to isolation around their health, with potentially serious consequences. For example, one person had not confided in their long-term partner that they had been given a diabetes diagnosis more than 9 months ago.



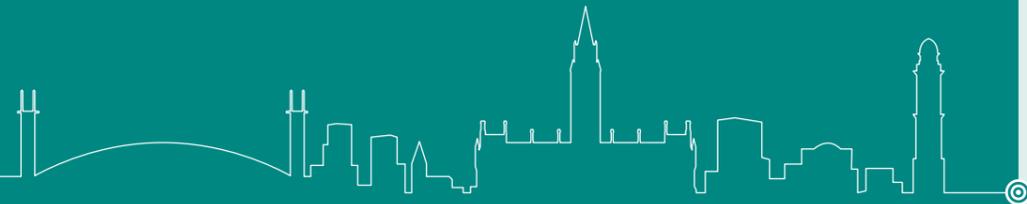
*"I haven't told my partner; he doesn't know. I've told my mum but I think it's the same, it's that you feel like people are going to judge you for having it and it's your fault because of the way that you eat." (Person living with type 2 diabetes)*



*"So it's just me and my instincts and intuition that's guiding me more than anything". (38-year old Female)*

#### Service support

Following diagnosis, many in this group felt unsure about the symptoms of their diabetes, and said they lacked clarity and guidance from healthcare providers. They perceived a clinical focus on medication, whilst they would prefer support with diabetes-specific dietary advice. Some said they knew what to do but not how to do it – their desire to manage their symptoms through lifestyle change ran into the hurdles of every-day life, and support was unavailable or refused by medical providers who wanted to implement a different regime. Diabetes management courses were perceived as not useful, as they were not tailored to people's needs and age. A lack of options did not prevent people discontinuing key medications in the event of difficult side effects.



***“But there was nothing, it was just like right, well, no potatoes, come off the coke, do more exercise, see you later.”***

*(38-year old Female)*



***“In terms of medication....I probably only put up with for about a month or so because it was just the side effects were too much for me to handle..... I spent more time in the bathroom than anywhere else, without going into too much detail. So, I just stopped taking it.”*** *(37-year old Female)*

### Lifestyle/self-management issues

A key point raised here was that it was difficult to eat healthy food at work, and takeaways were a convenient option at home. Healthy eating was deemed resource intensive, in terms of time and money, both being in short supply. People were embarrassed to exercise and felt self-conscious and judged by others. A lack of role models in the media (including television characters) was also noted.



***“There’s not even one story in there of oh well, I have to live with this. This is what I have to do every day. This is what I have to deal with. And there’s no truth in what they’re saying on telly or in leaflets. All it is, is a factsheet. And to me it needs to be more real-based.”*** *(38-year old Female).*



### Perspective 3: ‘Well-intentioned but not succeeding’

Talk about diabetes management, but struggle to make this work in every-day life



### Diabetes diagnosis

People in this sub-group had often been diagnosed as having pre-diabetes prior to full onset. They often noted that a family history of diabetes meant they had expected a diagnosis sooner or later, and they felt their family history meant the diagnosis was not necessarily all their own fault. However, they did express surprise at being diagnosed at such a young age. A sense of the unavailability of diabetes made this group hard to target for prevention-efforts.



***“I’m not going to completely change my life and suddenly start doing things I don’t want to do and change who I am .... We will still have a takeaway once a week cause that’s our treat”***

*(35-year old Male)*



***“It’s my turn sooner or later, it would be anyway.”*** *(41-year old Male)*

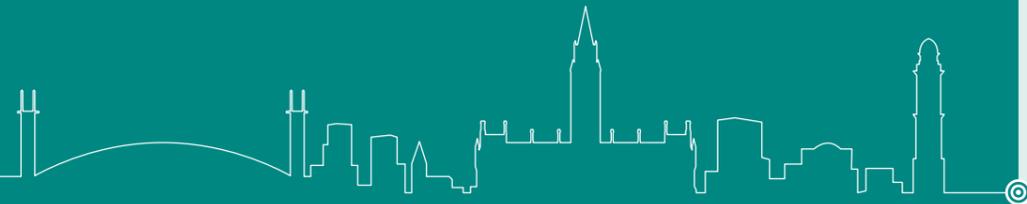
### Service support

Unequal access to GP services, with provision perceived to be worse in inner city areas, was highlighted as a significant problem. Although participants noted they were proactive in monitoring their own blood sugar and diet and tried to access advice and information, they felt they had a lot of questions, but no one to ask. Peer support was pointed out as a form of desirable support.



***“I think that – like I explained about diets – that there’s not enough information on how to try and control your blood sugars from what I’ve been given. And I’ve seen other diabetics, they’ve not been really told. A lot of them have had to do their own research. And I think, with how we are technology-wise now, that I’m surprised there’s no sort of app or something like that, that can tell you what kind of foods are good, what kind of foods are bad.”***

*(36-year old Male)*



***“There must be something separate, or there should be for diabetic people.”*** (38-year old Male)

### **Lifestyle/self-management issues**

Crucially, participants noted a lack of time as a barrier to doing ‘the right things’, and having to balance multiple priorities. People felt that being overweight was more socially acceptable than it has been previously. There was a view across this subgroup that diet is more important than exercise in controlling diabetes. The role of family was seen as being positive in providing motivation to ‘do better’. People in this group were, on the whole, quite optimistic about the future.



***“I think a big thing is, because it’s quite socially acceptable, I never felt particularly scared. I just wanted to feel better,”***  
(35-year old Male)



***“So, I think it’s in moderation, and to be quite sensible with things, and what works for you. If it works, going to the gym and things like that for you, then brilliant, go for it. But, just because, if you’re not one that’s going to go and try and run a triathlon or a marathon or something, then that doesn’t mean you can’t do some of the right stuff for yourself.”*** (35-year old Male)



### **Perspective 4: ‘Withdrawn and worried’**

Isolated, with concerns about future health.



*The researchers were unable to recruit anyone from this subgroup to take part in a focus group session or interview. The insights below are based on the outcomes of the statement sorting exercise to assess their perspectives on various aspects of living with diabetes.*

### **Diabetes diagnosis**

People in this group found diabetes ‘scary’ and would have tried to avoid it if they had known more about it before.

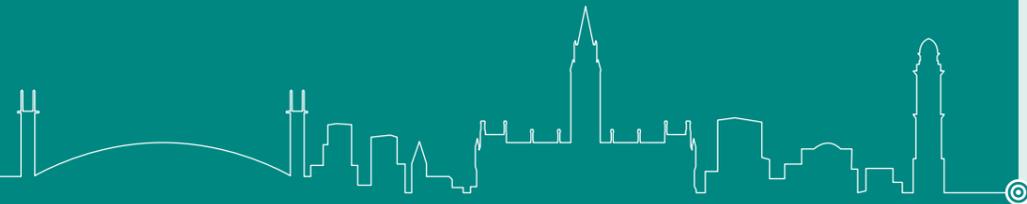
### **Service support**

People were unsure who to trust with their health. They found it hard to learn about their diabetes and did not feel well equipped to take care of themselves. This group felt choices for them were limited and they were very worried about their health.

### **Lifestyle/self-management issues**

People felt that integration into the community was important, but that it was hard to socialise (because of diabetes) and this increased feelings of loneliness. Support groups were a popular option in theory, but people felt that they did not have the time to attend. The group noted financial limitations to accessing gyms and fitness activities or to buying good quality food.





### **Perspective 5: 'Young and stigmatised'**

Feel too young to have diabetes and deny their diabetes complications



#### **Diabetes diagnosis**

People in this group suggest they found it hard to accept their diabetes diagnosis and so postponed addressing the management of their condition until they were older and/or there was the onset of complications. There was a sense that their health was not going to be good in the future, yet participants felt they would choose to address their diabetes when they were ready.

**“I always put myself off from going to appointments. I don't know why I find it so daunting. Maybe it's because I don't want to hear what I'm going to be told.”** (30-year old Female)

**“One of the doctors were like, you can go blind and you can...and I'm like yeah, I'm not going to go blind, I'm not 60 yet.”** (30-year old Female)

#### **Service support**

There was a significant issue around limited trust in health services. A lack of follow-up or monitoring was noted, and the sense of being left alone with a scary, yet not immediately threatening diagnosis. It was pointed out that being a younger person with diabetes should mean increased attention by GPs and health care professionals, though feelings of being judged for having diabetes and/ or being overweight were more common. This group also felt medication side effects were difficult to tolerate given their age and lifestyles, and again would discontinue medications. There was a feeling that younger people did not get as much support as older people.

**“I remember I was in Nando's once, they were like...that was how bad the smell was. It was like something out of...it was disgusting. And then that put me off, I was like I can't even socialise, I can't go even go out. And especially when I was younger I was like I'm not doing this. So, I stopped taking the injections.”** (30-year old Female)



**“I always think of diabetes as someone in their 50s or 60s becoming diabetic, so if a young person has got diabetes would you not want to work with them more? Would there not be more things in place for them? Would they not have more check-ups?”** (30-year old Female)

#### **Lifestyle/self-management issues**

People were embarrassed to have diabetes at such a young age, but being busy and having a fast pace of life with long working hours meant it was hard to engage in activities that prioritise health. People said they did not have enough time to exercise or cook healthy meals. Takeaways were used for convenience, despite recognising these were often unhealthy options. People believed that type 2 diabetes could be put in to remission, with diet and exercise, but they needed support with this.



**“Life was just at such a fast pace for me I just had to take a step back. I've not worked for the last few months but I feel better with in myself... I feel I can concentrate on myself. I'm cooking three meals a day at home.”** (30-year old Female)

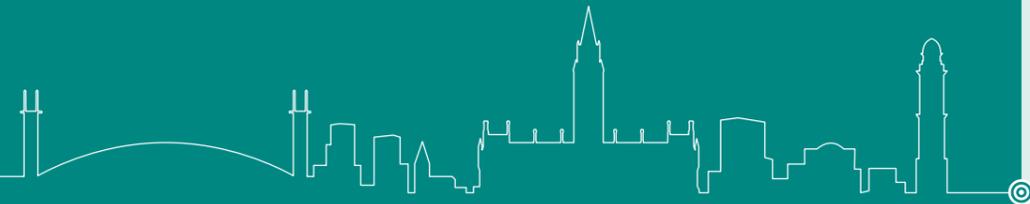


**“I live in [place] now and it's just fried chicken shops and pizza shops... I do like salads and grilled food, and if I could have that I would.”** (30-year old Female)

The Urban Diabetes Priority Assessment have highlighted a number of insights, which warrant further exploration and action to address the growing problem of type 2 diabetes in younger adults and to help improve the future outlook for this population. Despite their younger age, the researchers found that many of the people who took part in the study are living with obesity, which adds urgency to the need to support improvements to their health.

While there were a number of common themes found to be relevant to the different groups identified within this younger population living with type 2 diabetes in Greater Manchester, the research reveals a variety of perspectives and highlights that individuals need to be supported in different ways.

Young adults with type 2 diabetes in Greater Manchester want to be healthier, fitter, and more engaged in their own care. Young families and work pressures can make it difficult to focus on their own health. Across the different subgroups, people are frequently scared about the future and worry about health problems, which they do see coming down the line, and are often frustrated that support related to the prevention and management of type 2 diabetes seems to be geared towards an older population and is not relevant to them. Recognising the insights, often not communicated between research participants and their healthcare providers, could create an opportunity for change and improvement.



## Recommended next steps to build on the Manchester Cities Changing Diabetes research findings

- Support the development of a local network of young people with type 2 diabetes that can work in partnership with health and care services and other community partners to determine the priorities to improve care and support for those under 40 living with the condition. This would help to further improve understanding of their experiences, to ensure support is developed based around their needs.
- Explore the current provision of support for people living with type 2 diabetes in Greater Manchester, and those at risk of developing the condition, to identify any potential gaps in provision with respect to addressing the social and cultural issues identified during the research.
- Providers of health and care services and other partner organisations should recognise that young adults often share their households with children and partners or have commitments that make any interventions or 'lifestyle modification' harder to achieve and work with people with type 2 diabetes to design and implement more tailored programmes to better support those living with the condition.
- Undertake to reduce the stigma felt by adults aged under 40 at risk of, or already living with, type 2 diabetes and develop actions to address the social and cultural issues identified during the research, to help support them in managing their health.
- Work to raise awareness within local communities about the benefits of 'being healthy' amongst younger adults, to encourage those at risk of developing type 2 diabetes to engage with relevant services, to help reduce their risk.

The findings and insights from the Manchester Cities Changing Diabetes research provide an opportunity for local partners to consider the impact of social and cultural factors on the development of services and initiatives to address the challenge of type 2 diabetes within Greater Manchester. Ensuring that support and resources can be targeted at addressing these issues that have been identified and which are relevant to the future health of the population will have the best chance of reducing the incidence and burden of diabetes.





## 4.2 Mapping of existing research and initiatives to address the challenge of diabetes in Greater Manchester

Bringing together local partners from across the city to map what initiatives are already being delivered can help cities review existing activity against their key priorities for health improvement, taking into account the broad range of health offerings which may be delivered by health organisations, city administrations, academic institutions, community groups, sporting facilities and the third sector. This can help determine where it may be helpful to augment existing activity and where future initiatives could provide added-value. It can also help identify where there might be any gaps in existing local activities to support health improvements, or where there may be unnecessary duplication, where pooling resources and activity could help achieve greater impact.

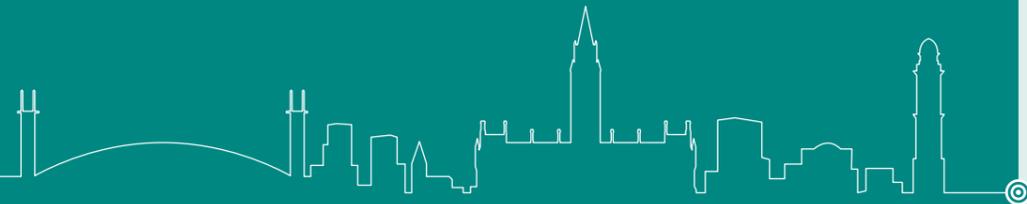
### How the mapping of existing research and initiatives to address the impact of diabetes in Greater Manchester was completed

- Colleagues from the University of Salford and Manchester Metropolitan University collated details of different research instead innovation service activities aimed at addressing the impact of diabetes with in Greater Manchester.
- Data was gathered by reviewing existing research literature, various databases detailing existing clinical trial and research work and by engaging with local partners and organisations with knowledge of relevant activities taking place within the city region. This included engagement with local NHS providers of care, Diabetes UK and the Research for the Future programme, that helps people find out about, and take part in, health and care research.



### Outcome of the mapping of existing research and initiatives to address the impact of diabetes in Greater Manchester

- Key health research strengths were identified within Greater Manchester, in relation to diabetes.** This included with respect to the use of digital technologies to help manage health, research with regards to the prevention of health complications and interventional clinical trials of medication and medical equipment.
- A total of 47 current studies and projects were identified,** with most research studies (61%) looking at the impact of both type 1 and type 2 diabetes. Three projects were identified that focussed on helping to prevent type 2 diabetes – the Greater Manchester Active initiative, the local implementation of the national NHS Diabetes Prevention Programme and the DIPLOMA research programme to evaluate the national NHS Diabetes Prevention Programme (although the Manchester Amputation Reduction Strategy project encompasses some initiatives to engage with a younger population to raise awareness about the importance of a healthy lifestyle to help prevent type 2 diabetes and its complications). The majority of research studies and initiatives (more than 70%) are focussed on preventing diabetes-associated health complications including ulceration, amputations and cardiovascular events.
- Under-served groups have typically been under-represented in Greater Manchester diabetes research studies.** This presents an important opportunity to address this under-representation, in line with the ambition of the national Life Sciences Strategy to reflect the diversity of the UK's population in future clinical research. This will be important to help inform the development of care and services that will meet the needs of those most at risk of developing type 2 diabetes. No Greater Manchester-based studies investigating the impact of diabetes in ethnic minority groups were identified, but one study focussing on this was found to be recruiting patients in Manchester. No studies were identified that were focused on the impact of diabetes in deprived communities.
- A key strategic strength within Greater Manchester, which could help to support the development and implementation of further diabetes research and care initiatives, is having a strong local infrastructure in regards to the allied health professions,** via the Greater Manchester Allied Health Professionals (AHP) Council. Allied health professionals include dieticians, chiropodists and podiatrists and paramedics.



Ⓢ **A new “Applied Health Domain,” led by Health Innovation Manchester, is helping to connect Greater Manchester’s assets that can be deployed to help address the impact of diabetes.**

*Two key initiatives that illustrate how the connection of assets within the city-region is helping with this challenge are 1) The Manchester Amputation Reduction Strategy (MARS) - a Greater Manchester-wide programme exploring service redesign and connecting local public health, community and acute care services to help reduce major amputations and prevent, manage and heal chronic foot and leg ulcers faster and 2) the Help Beat Diabetes unique patient recruitment resource for Greater Manchester, which helps people living with diabetes find out about and take part in health and care research.*

Ⓢ **The current links between Greater Manchester’s multiple assets related to diabetes care and research are embryonic, but the collective impact of these assets holds considerable promise if deployed in a more connected way.** *Greater Manchester has examples of excellent diabetes research, but would benefit from coordination of assets across the city region to bring together expertise and create a strong global offer for attracting large research programmes. Given the link between diabetes and other comorbidities, more coordinated research focused on addressing the impact of diabetes within Greater Manchester could potentially help to address wider health and social care issues.*



### Benefits resulting from the Cities Changing Diabetes Manchester ‘mapping’ work

- Ⓢ **A digital dashboard has been created to help map Greater Manchester research studies and capabilities related to diabetes.** This has been created by University of Salford and Manchester Metropolitan University researchers, working alongside Health Innovation Manchester.
- Ⓢ **Partnership working through the Cities Changing Diabetes Manchester programme has brought different local organisations together and encouraged greater collaboration in the pooling of resources and expertise to help address the impact of diabetes.** *This has included Manchester Metropolitan University, the University of Salford and Manchester University NHS Foundation Trust collaborating together on research grant applications on behalf of the city region, working alongside wider community organisations like the British Muslim Heritage Centre and Diabetes UK. Collaborative working between colleagues within Manchester University NHS Foundation Trust and at the University of Salford and Manchester Metropolitan University, supported by relationships developed through the Cities Changing Diabetes Manchester programme, has helped to secure further funding and research resource to support the Manchester Amputation Reduction Strategy.*

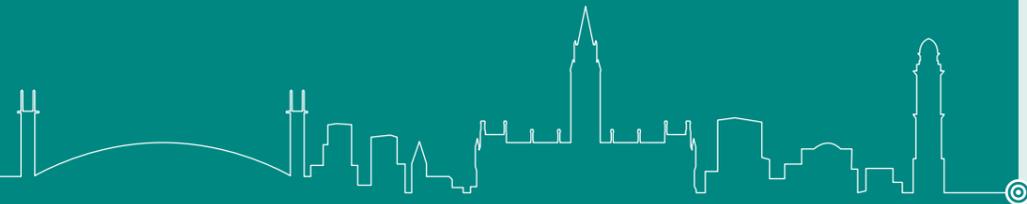


**“Greater Manchester has examples of excellent diabetes research within the city-region’s unique infrastructure and research strengths including digital technologies, prevention of lower limb complications and interventional clinical trials. A coordinated approach, bringing together expertise across Greater Manchester could create a strong global offer for attracting large diabetes research programmes and impact key outcomes such as amputation rates.”**  
*Professor Chris Nester, University of Salford and Professor Neil Reeves, Manchester Metropolitan University*



## Recommended next steps to build on the 'mapping' of existing diabetes research and initiatives in Greater Manchester

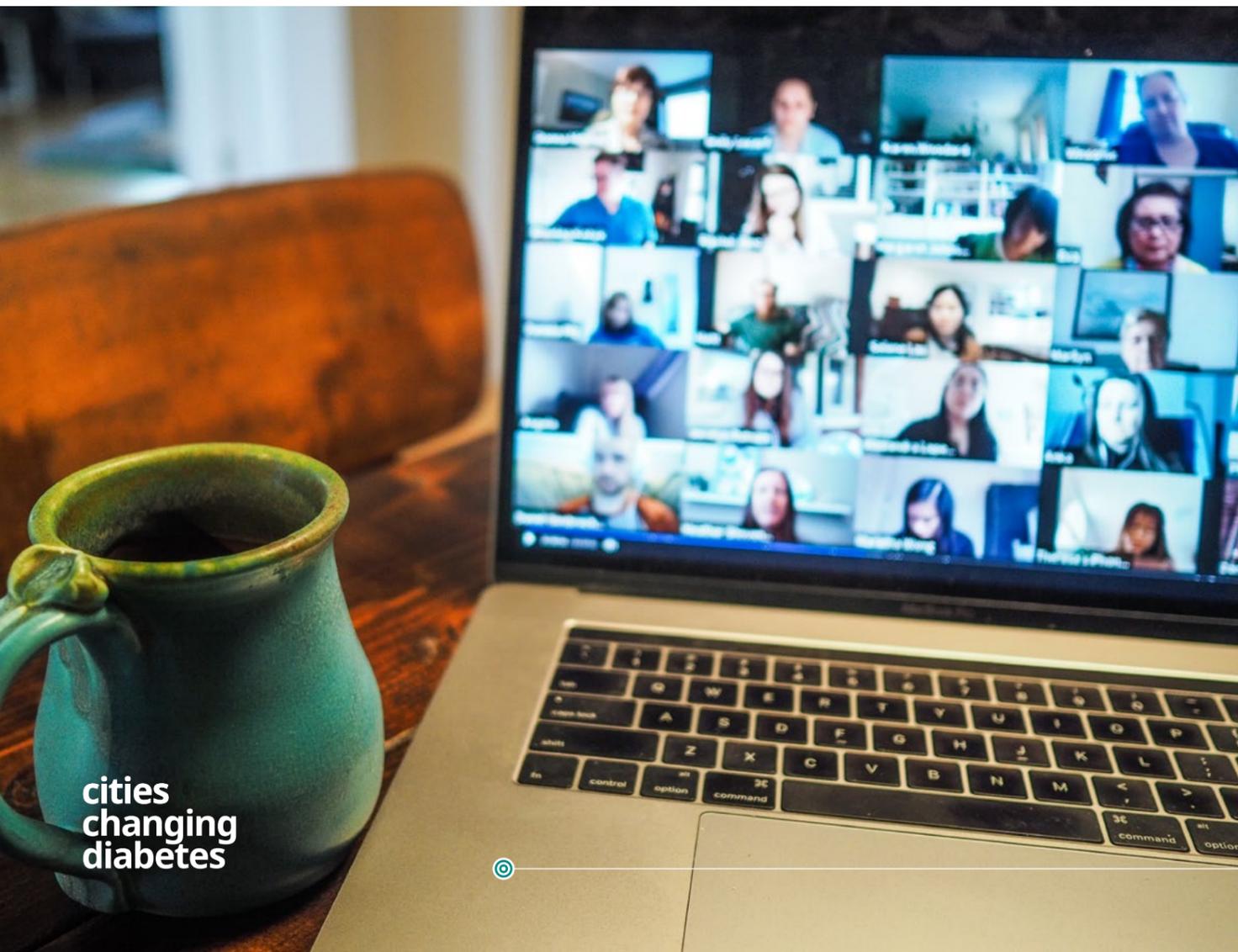
- ③ **Appoint a Diabetes Research Tsar to coordinate diabetes-related research opportunities across Greater Manchester.** *This could help to ensure that research priorities across the city region reflect the health needs of the local population and help to provide an interface between the city's universities and clinical researchers and the Greater Manchester health and care system, to help facilitate the translation of research findings in to clinical practice and to inform public health initiatives to help prevent type 2 diabetes. Helping to connect Greater Manchester's research assets could also help attract investment in research within the city region related to addressing diabetes and cardiovascular disease.*
- ③ **Address areas of apparent unmet need in regards to diabetes research, including with respect to the impact of diabetes on ethnic minority and economically disadvantaged groups.** *With an increasing NHS focus on addressing the impact of health inequalities, it will be vital to understand how to address the impact of any health disparities related to the management of diabetes, particularly given those from ethnic minorities and disadvantaged communities are at increased risk of developing type 2 diabetes.*
- ③ **Identify resource to host and maintain a 'live' database of diabetes research.** *This would help to identify potential opportunities for local partners to pool resources to help address any gaps in provision, as well as helping to avoid any duplication of effort. A similar approach could potentially be taken to mapping local support initiatives to help address the impact of type 2 diabetes.*
- ③ **Connect emerging Nursing, Midwifery and Allied Health Professionals research capacity and capability to addressing the challenge of diabetes in Greater Manchester, to help understand how these professionals could help with this.**



### 4.3 Engaging the community to help develop action to address the impact of diabetes in Greater Manchester

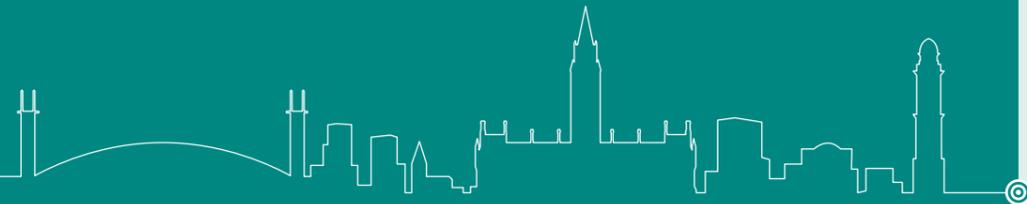
Through the initial phase of the Cities Changing Diabetes Manchester programme, the British Muslim Heritage Centre led some community engagement activities, to help raise awareness of the risks associated with the development of type 2 diabetes and to secure feedback from local communities within Greater Manchester about how this challenge can be addressed in a way that will meet their needs.

This includes ensuring that the needs of people from ethnic minority communities, who are up to six times more likely to develop type 2 diabetes, <sup>4</sup> frequently at a younger age and lower body mass index (BMI) than White Europeans are met. <sup>20,21</sup> This includes ensuring that appropriate support can be offered to Greater Manchester's significant South Asian community.



#### Community engagement in Greater Manchester

- ⦿ The British Muslim Heritage Centre organised six webinars to help engage with communities across Greater Manchester about the challenge of type 2 diabetes, which included attendance by local health care professionals. This included webinars targeted at local areas with a significant South Asian population, given the increased risk members of this community face in regards to developing type 2 diabetes. The following webinars were held:
  - ⦿ Managing diabetes during Ramadan
  - ⦿ Managing diabetes and supporting communities during the COVID-19 pandemic
  - ⦿ Challenges faced by people with diabetes, including how peer support can help
  - ⦿ Session bringing together local healthcare professionals and people living with diabetes in Bury, to discuss the prevention of type 2 diabetes
  - ⦿ Session bringing together local healthcare professionals and people in Oldham and Rochdale to discuss living with diabetes
  - ⦿ Greater Manchester wide webinar with discussions about diabetes, including the establishment of localised peer groups and the positive effects of sports, physical activities and walking on health.
- ⦿ The British Muslim Heritage Centre held some additional focus group sessions to discuss how access to support for local communities, to help tackle the impact of diabetes could be increased. This took in to account views from NHS staff and commissioners and service users.
- ⦿ The British Muslim Centre also completed some mapping of local Muslim organisations within Greater Manchester, to help understand which voluntary sector partners within individual boroughs might be able to help support engagement with members of the Muslim community around raising awareness of the risks of type 2 diabetes and how to improve their health.



## Insights from community engagement

Issues that were raised by members of the community during the webinars and through wider community engagement by the British Muslim Heritage Centre include the following:

- ⊙ **Preventing type 2 diabetes and supporting those already living with diabetes has to be seen as part of wider efforts to tackle health inequalities** within Greater Manchester, particularly within South Asian communities and other groups that are more vulnerable to developing type 2 diabetes.
- ⊙ **People's faith and cultural beliefs should be seen as providing a positive potential opportunity to contribute to helping people to manage their diabetes.** *Delivering high-quality care to British Muslim patients and members of other minority ethnic groups requires knowledge of the differences in cultural and spiritual values of different communities. Important differences may include with respect to diet, views of modesty, privacy, touch restriction, and alcohol intake restriction; factors which may have a bearing on how an individual approaches the management of their health. For example, the religion of Islam provides spiritual guidance as well as an emphasis on maintaining health and Islamic beliefs affect Muslim patients' views and behaviours in respect of their health. It is therefore important for healthcare professionals to have an understanding of these issues, in order to provide culturally and religiously appropriate care.*
- ⊙ **NHS and health providers need to have meaningful engagement with local community groups and organisations,** including faith institutions, to help ensure long-term and sustainable support for people at risk of developing type 2 diabetes and those already living with diabetes, which reflects their needs.
- ⊙ **Promoting support services that are endorsed by various local communities is vital at a grassroots level to help encourage people to engage with services** that could support their health. *It was noted that diabetes risk assessment sessions, provided with support from local clinicians and Diabetes UK and held at the British Muslim Heritage Centre after Jummah prayers on a Friday, had worked well. It was highlighted that the provision of similar diabetes risk assessments could be considered by NHS partners in synagogues, Gurdwaras and temples to help reach other communities. Training programmes, to help raise awareness of the risks of type 2 diabetes and how people can improve their health, could also be offered by the health service to local faith leaders. Faith leaders could then help to raise awareness of type 2 diabetes amongst the communities they regularly engage with and who look to them as a trusted source of guidance.*
- ⊙ **Having a Diabetes Inclusion Network in place across Greater Manchester could help support people with diabetes, carers and families** and act as a bridge in sharing valuable information between NHS providers, decision-makers, and service users. *Including local peer to peer support groups as part of such a network, both to support those at risk of developing type 2 diabetes and those already living with diabetes, was also suggested, as was using the network to help promote access to locally available diabetes education programmes.*

- ⊙ **Healthcare providers need to become more inclusive with respect to overcoming any language barriers or cultural factors that might affect the ability of different communities to engage with services to support their health.** *The British Muslim Heritage Centre noted that some members of the South Asian community sometimes underutilise health services, due to linguistic and cultural barriers. This was also reflected in the findings of the research conducted by the University of Manchester and the NIHR Applied Research Collaboration Greater Manchester. It was observed that research participants sometimes found it difficult to reconcile aspects of their Islamic beliefs with the day-to-day management of their type 2 diabetes, leading to personal tensions and challenges.*
- ⊙ **Healthcare professionals should consider what is personally important to individuals when supporting them to control their type 2 diabetes, rather than engaging with them from a clinical perspective alone, in order to help them manage the progression of their condition in the long-term.** *One webinar participant noted that if healthcare professionals took in to account what was important to him as an individual when engaging with him about how to manage his diabetes, for instance the desire to avoid the risk of needing to have a limb amputated in order to be able to dance at his daughter's wedding in 20 years' time, this would have a lasting effect.*
- ⊙ **There should be more work between health services and local people to inform the development of support for communities** in relation to prevention of type 2 diabetes and the management of diabetes, in order to help ensure that services meet their needs. This includes working with communities to help address issues around stigma, including with regards to how healthcare professionals engage with people living with type 2 diabetes, with some people feeling that they are 'blamed' for developing the condition as a result of lifestyle choices.



**“Community engagement is an important way to support the improvement of diabetes care by addressing the social determinants of health and reducing health inequalities. Diabetes is highly prevalent in some population groups, including the British Muslim community and the South Asian community, and evidence-based treatment which is culturally and religiously sensitive is needed to encourage uptake of this support.”**

**Maqsood Ahmad OBE, Chief Executive Officer  
British Muslim Heritage Centre**



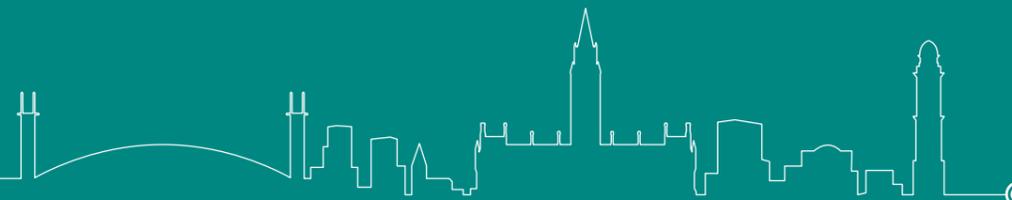
## Benefits from community engagement

- ◎ **The development of a Greater Manchester Diabetes Network** - Following the feedback from communities that a Greater Manchester-wide Diabetes Network would be helpful to support engagement with ethnic minority communities and to better understand how to address any barriers related to improving their health, the British Muslim Heritage Centre is now working to establish such a network, with the support of some initial grant funding from Novo Nordisk. This will build upon an initial Diabetes Inclusion Network established by the British Muslim Heritage Centre and Diabetes UK, with support from the Greater Manchester and Eastern Cheshire Strategic Clinical Network.
- ◎ It is envisaged that the network will bring together people from across the local community who want to improve diabetes services for people in Greater Manchester, including people with diabetes and health professionals.
- ◎ The aim of the Diabetes Network will include supporting different representatives from across the community to come together to help co-design local services in partnership, making sure local people and diabetes patients, carers, healthcare professionals, local faith leaders and others will all have a voice in helping to inform the development of services and to help address any barriers members of local ethnic minority groups may face in accessing care and support.
- ◎ It is planned that the Network will also help to support the delivery of education for people living with diabetes in a culturally and religiously sensitive manner, to help people to manage their condition better.
- ◎ The Network provides an opportunity for academic and clinical researchers to engage more closely with Greater Manchester's ethnic minority communities, in order to help ensure the diversity of research related to better understanding the impact of diabetes within the city region and how this can be addressed.

## Recommendations to build on the insights from Manchester CCD community engagement

- ◎ **Extend the mapping of local faith-based and community voluntary organisations that could help support health service engagement with ethnic minority communities, to help raise awareness of the risks of type 2 diabetes and how these can be addressed.** This would build upon work the British Muslim Heritage Centre has already undertaken to map faith organisations within the Muslim community, working alongside Diabetes UK and with support from the Greater Manchester and Eastern Cheshire Strategic Clinical Network.
- ◎ **Work with the Greater Manchester Diabetes Network that is being developed to establish local peer to peer support services across the city region's ten boroughs.** This would include those already living with diabetes and those at risk of developing type 2 diabetes.
- ◎ **Develop culturally-sensitive care for people living with type 2 diabetes,** where patients could feel that their ethnic, cultural and spiritual beliefs were to make sure by health care professionals. This includes training healthcare professionals to understand they are equipped with an understanding of any barriers individuals may face in managing their health and engaging with local services.
- ◎ **Work with partners to explore the potential to repeat type 2 diabetes risk assessment events,** piloted at the British Muslim Heritage Centre alongside Diabetes UK, to other parts of Greater Manchester and working alongside other faith groups to help identify those at risk of type 2 diabetes.
- ◎ **Local health and care services should improve data collection to help better understand differences between the health of members of Greater Manchester's ethnic communities and the wider population,** to address any health disparities and to improve equity in access to services.
- ◎ **Train faith leaders and other local community influencers so that they can share information with their peers about how to reduce their risk of developing type 2 diabetes.** They can play an important role in helping to get messages out to communities who may feel less able to engage with health and care professionals about how they can maintain a healthy lifestyle. *The British Muslim Heritage Centre (BMHC), working with Diabetes UK and other partners and supported by the local Diabetes Strategic Clinical Network, have supported the training of community influencers within the Muslim community, including Imams, to help raise awareness of the risks of type 2 diabetes amongst their peers and to 'train the trainers' so that they can then cascade the training further to other respected figures within the community. The BMHC was able to develop a training pack for local Imams, based on the teachings on the Quran and practical actions of the Prophet Muhammed, to help them engage with members of the Muslim community about how to manage their health.*
- ◎ **Use communication channels that different local communities engage with to help raise awareness of the risks of type 2 diabetes and how these can be addressed.** This includes through mediums such as Heritage Radio, Manchester's 24-hour Islamic radio station.

## 5. Next Steps

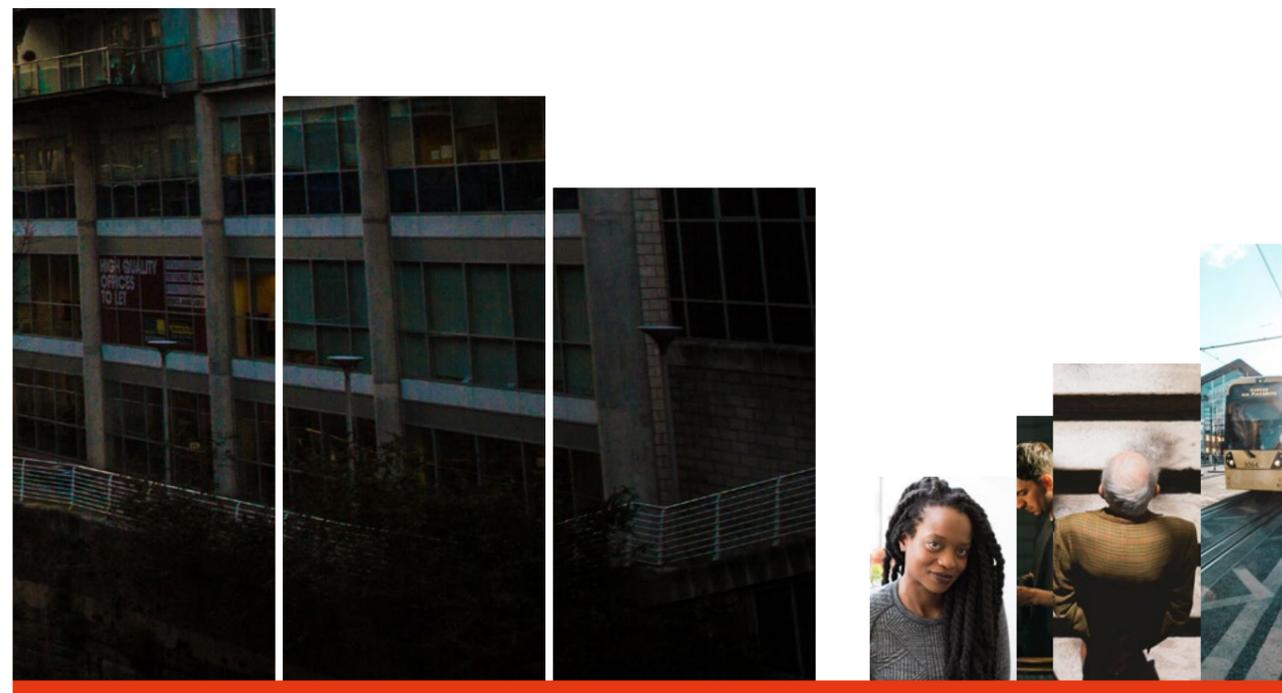


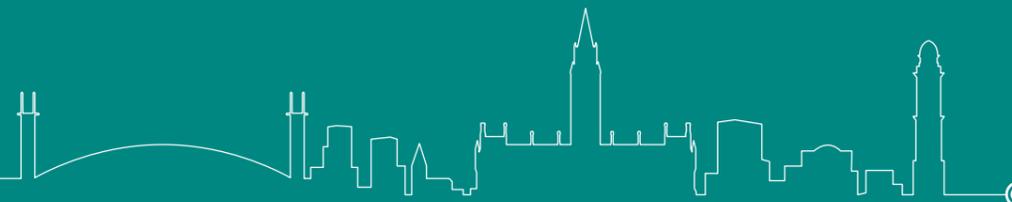
We hope that the insights from the Cities Changing Diabetes Manchester programme will prove helpful to city leaders and organisations as Greater Manchester works to support improvements to the health of its population in an inclusive way and to address the challenge of type 2 diabetes.

We have summarised below the recommended next steps to help translate these insights in to action. It is hoped that this will inform a second phase of the Cities Changing Diabetes programme in Greater Manchester in due course, bringing together a broad group of partner organisations and people affected by type 2 diabetes from across the city region, to collaborate on tailored initiatives to address this challenge.

It is hoped that the findings will also provide useful insights to help inform the further development of the Greater Manchester diabetes strategy, including how those communities most affected by type 2 diabetes could be supported to manage their health by considering targeted interventions that will address their needs.

We hope that other cities will also find these insights of interest as they work to support improvements to the health of their own populations.





## Summary of recommendations

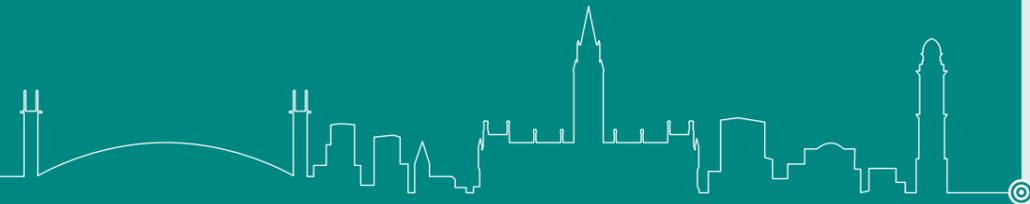
### Support for people at risk of type 2 diabetes or already living with diabetes, including young adults and those from ethnic minority communities

- 1) Explore the current provision of support for people living with type 2 diabetes in Greater Manchester, and those at risk of developing the condition, to identify any potential gaps in provision with respect to addressing the social and cultural issues identified during the research.
- 2) Providers of health and care services and other partner organisations should work with people with, type 2 diabetes to design and implement programmes to better support those living with the condition.
- 3) Explore the development of tailored interventions for adults aged under 40 and at risk of, or already living with, type 2 diabetes. Consider how to address the social and cultural issues identified during the Cities Changing Diabetes Manchester research, to help support this group in managing their health.
- 4) Work to raise awareness within local communities about the experience of living with of type 2 diabetes amongst younger adults, to encourage those at risk of developing the condition to engage with support services and to help reduce their risk.
- 5) Extend the mapping of local faith-based and community voluntary organisations that could support health service engagement with ethnic minority communities, to help raise awareness of the risks of type 2 diabetes and how these can be addressed. This would build upon work the British Muslim Heritage Centre has already undertaken to map faith organisations within the Muslim community.
- 6) Work with the Greater Manchester Diabetes Network that is being developed to establish local peer to peer support services across the city region's ten boroughs. This would include those already living with diabetes and those at risk of developing type 2 diabetes.
- 7) Develop culturally-sensitive care for people living with type 2 diabetes, where patients could feel that their ethnic, cultural and spiritual beliefs were understood by health care professionals. This includes training healthcare professionals to make sure they are equipped with an understanding of any barriers individuals may face in managing their health and engaging with local services.
- 8) Roll out the type 2 diabetes risk assessment sessions piloted at the British Muslim Heritage Centre with the support of wider faith groups across Greater Manchester's ten boroughs, to help identify those at risk of type 2 diabetes.

- 9) Local health and care services should improve data collection to better understand differences between the health of members of Greater Manchester's ethnic communities and the wider population, to help address any health disparities and to improve equity in access to services.
- 10) Train faith leaders and other local community influencers so that they can share information with their peers about how to reduce their risk of developing type 2 diabetes. They can play an important role in helping to get messages out to communities, who may feel less able to engage with health and care professionals about how they can maintain a healthy lifestyle.
- 11) Use communication channels that different local communities engage with to help raise awareness of the risks of type 2 diabetes and how these can be addressed. This includes through mediums such as Heritage Radio, Manchester's 24-hour Islamic radio station.

### Recommendations to enhance understanding of diabetes and to inform improvements to care through research, including ensuring research meets the needs of Greater Manchester's diverse communities

- 12) Appoint a Cardiometabolic Research Tsar to coordinate diabetes-related research opportunities across Greater Manchester. This could help to ensure that research priorities across the city region reflect the health needs of the local population and help to provide an interface between the city's universities, clinical researchers and the Greater Manchester health and care system. This could help facilitate the translation of research findings in to clinical practice and to inform public health initiatives to help prevent type 2 diabetes. Helping to connect Greater Manchester's research assets could also help attract investment in research within the city region, related to addressing diabetes and cardiovascular disease.
- 13) Address areas of apparent unmet need in regards to diabetes research, including with respect to the impact of diabetes on ethnic minority and economically disadvantaged groups. With an increasing NHS focus on addressing the impact of health inequalities, it will be vital to understand how to address the impact of any health disparities related to the management of diabetes, particularly given those from ethnic minorities and disadvantaged communities are at increased risk of developing type 2 diabetes.
- 14) Identify resource to host and maintain a 'live' database of diabetes research and local support initiatives to address the impact of type 2 diabetes. This would help to identify potential opportunities for local partners to pool resources to help address any gaps in provision, as well as helping to avoid any duplication of effort.
- 15) Connect emerging Nursing, Midwifery and Allied Health Professionals research capacity and capability to addressing the challenge of diabetes in Greater Manchester, to help understand how these professionals could help with this.



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