

# cities changing diabetes



VANCOUVER  
Canada



## URBAN DIABETES PRIORITY ASSESSMENT

### INTRODUCTION MANUAL

Worldwide 425 million people are living with diabetes.<sup>1</sup> Without concerted action this is estimated to rise to 736 million by 2045.<sup>2</sup> Today, more than half of the world's population live in urban areas,<sup>3</sup> including two-thirds of people with diabetes.<sup>1</sup> This makes cities an important focal point for studying and tackling diabetes. However, taking action requires a better understanding of what drives diabetes in urban areas.

#### URBAN DIABETES PRIORITY ASSESSMENT

The Urban Diabetes Priority Assessment is a comprehensive data collection and analysis instrument developed for the Cities Changing Diabetes programme to explore shared priorities, attitudes, and points of view among people with type 2 diabetes.

The Urban Diabetes Priority Assessment draws on the principles of Q-methodology, which since its inception in 1935,<sup>4</sup> is increasingly being used by researchers exploring health-related decision making and behaviours because its results are practice-oriented and can be communicated effectively.<sup>5</sup>

The Urban Diabetes Priority Assessment combines qualitative and quantitative research techniques to explore the impact and relevance of eight social factors and

cultural determinants of type 2 diabetes.<sup>6</sup> These eight factors and determinants (Info box 1) were identified through a Diabetes Vulnerability Assessment, which was conducted in the first five cities\* participating in the Cities Changing Diabetes programme.

The Urban Diabetes Priority Assessment is guided by three overall research questions:

- What characterises the participants in terms of their needs and capabilities regarding diabetes, health and wellbeing?
- What are the social factors and cultural determinants that matter most to the participants?
- How do components of those factors and determinants create specific barriers to and opportunities for successful diabetes prevention, better diabetes care and management, as well as improved wellbeing?



Steno Diabetes Center  
Copenhagen



# CITIES ARE A FOCAL POINT FOR TACKLING DIABETES

425 MILLION PEOPLE HAVE DIABETES WORLDWIDE<sup>1</sup>

**2/3** OF PEOPLE WITH DIABETES LIVE IN CITIES<sup>1</sup>

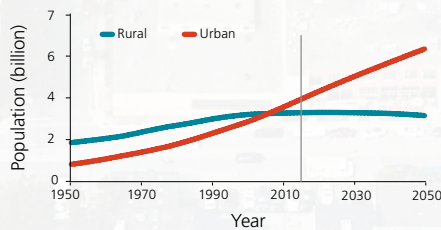


BY 2045, 736 MILLION PEOPLE WILL HAVE DIABETES<sup>2</sup>



**3/4** OF THEM WILL LIVE IN CITIES<sup>1</sup>

**URBANISATION** IS ONE OF THE MOST SIGNIFICANT DEMOGRAPHIC SHIFTS OF THE PAST CENTURY<sup>3</sup>



## INFOBOX 1 EIGHT FACTORS AND DETERMINANTS IDENTIFIED THROUGH THE DIABETES VULNERABILITY ASSESSMENT<sup>7</sup>

### SOCIAL FACTORS

**FINANCIAL CONSTRAINTS**  
 Limited financial resources may become a barrier to access health-promoting resources such as paying for healthy food, healthcare, health insurance, and exercise as well as feeling stressed and hopeless.

**TIME CONSTRAINTS**  
 Time-consuming family and work obligations and a long commute may become barriers to health-promoting lifestyle choices such as seeking healthcare, exercising, sourcing healthy food as well as feeling stressed and socially isolated.

**RESOURCE CONSTRAINTS**  
 Low education level, lacking knowledge of existing health resources, and scarcity of healthcare provisions (eg, medicines and healthy foods), and limited possibilities to exercise may be barriers to health-enhancing decision-making and individual actions to improve personal health.

**GEOGRAPHIC CONSTRAINTS**  
 Unfavourable climate, high pollution and crime levels and lack of infrastructure (eg, basic roads, access to water) may become barriers to health-promoting activities such as walking, outdoor exercises and drivers of isolation and loneliness.

### CULTURAL DETERMINANTS

**TRADITIONS AND CONVENTIONS**  
 Traditions and conventions have direct consequences on health and wellbeing. Traditional gender roles, unhealthy food traditions, and use of healthcare only in emergency situations may become barriers to effective self-care, healthy eating, and optimal healthcare.

**HEALTH AND ILLNESS**  
 The way health and illness are understood shape the perception of health and wellbeing. The perception of diabetes as less severe than other social and health issues, the misconception of own health and disease, the mistrust in healthcare providers, and the feeling of stigma may be barriers to optimal care seeking behaviour and lifestyle modification.

**SELF AND OTHERS**  
 A person's understanding of self, in relation to others, contributes to health and wellbeing. Environments, where large body size is accepted as normal, may create a scenario where slimming is perceived as unnecessary. In contrast, when normal body size is favourable, obesity may become a barrier to activities such as going to the gym.

**CHANGE AND TRANSITION**  
 Experiencing change and transition may have physical and psychological consequences. Living in rapid growing cities or neighbourhoods that undergo constant changes, and migrating from rural to urban settings are often worrying and stressful and may become barriers to an optimal health outcome. Especially, memories of hunger and resource shortages can create an environment that is obesogenic.

## WHY CONDUCT AN URBAN DIABETES PRIORITY ASSESSMENT?

The Urban Diabetes Priority Assessment enables cities to establish a local research platform that can inform future interventions and policies, while at the same time contribute to further strengthen the global Cities Changing Diabetes research platform for understanding the social-cultural drivers of diabetes. Through a deeper understanding of how the social factors and cultural determinants of diabetes are played out in cities, diabetes care and prevention measures can be improved upon and tailored to specific target groups.

# ROADMAP

## TO PERFORMING AN URBAN DIABETES PRIORITY ASSESSMENT



# 1

### PHASE ONE Plan the study



#### DEFINE THE FOCUS OF THE LOCAL STUDY

Consider if there are any sub-populations that research should centre around



#### DOWNLOAD AND TEST THE REQUIRED SOFTWARE

Three software packages are required for the Urban Diabetes Priority Assessment



#### DETERMINE THE DETAILS FOR THE DATA COLLECTION

Consider how and where data will be collected



#### ANALYSIS I: ANALYSE THE Q-SORT DATA

Conduct a factor analysis to show similarities between the participants' sorting of the statements

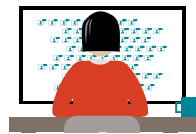
#### DATA COLLECTION I: Q-SORT

There are two main components to the computer-based Q-sort data collection



#### 2<sup>ND</sup> SORTING

Participants are instructed to sort these statements, per their personal preference, into the forced distribution sorting matrix



#### 1<sup>ST</sup> SORTING

Participants are presented with a set of 64 pre-determined statements, which they rank along a continuum of preference



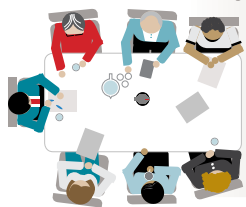
#### RECRUIT PARTICIPANTS FOR THE Q-SORT

### PHASE TWO Q-sort data collection and analysis

# 2

# 3

### PHASE THREE Focus group data collection and analysis



#### DATA COLLECTION II: FOCUS GROUP

Planning for the focus group involves a number of elements

Determine the number of participants, finalise an interview protocol and schedule people to lead the focus group

Recruit six to ten participants from the Q-sort phase of the study

The focus group session should be audio- or video-recorded



#### ANALYSIS II: ANALYSE THE FOCUS GROUP DATA

Process the focus group transcripts using Computer-assisted qualitative data analysis software (CAQDAS)

#### ANALYSIS II: ANALYSE THE DATA FROM THE FOCUS GROUP



Interpret the study findings



Analyse the data from the focus group



Analyse the data from the focus group



### PHASE FOUR Final analysis

# 4

In the final analysis, the results from both the Q-sort and the focus group analyses are synthesised into a set of study findings, which are subsequently interpreted

# 5

### PHASE FIVE Report the research findings



#### PRODUCE A RESEARCH REPORT

On completion of the Urban Diabetes Priority Assessment data collection and analysis, an internal research report is produced



#### PUBLISH

Consider publishing the results in a scientific peer-reviewed journal and presenting the findings at conferences and meetings

REFER TO THE **URBAN DIABETES PRIORITY ASSESSMENT HOW-TO GUIDE** FOR DETAILED GUIDANCE ON PERFORMING THE ASSESSMENT

## CITIES CHANGING DIABETES

Cities Changing Diabetes is a partnership programme to address the urban diabetes challenge. Initiated by Novo Nordisk in 2014, the programme is a response to the dramatic rise of urban diabetes. The programme has been developed in partnership with University College London and Steno Diabetes Center Copenhagen, as well as a range of local partners including the diabetes and public health community, city governments, academic institutions, city experts from a variety of fields and civil society organisations.

The Cities Changing Diabetes programme is a commitment to push for urgent action against diabetes on a global scale. The programme is mapping the extent of the diabetes challenge in cities and working to generate an understanding of the drivers behind this pandemic.

The aim of the programme is to map the challenge, share solutions and drive concrete actions to fight the diabetes challenge in cities around the world.

## JOIN THE GLOBAL FIGHT AGAINST URBAN DIABETES

CitiesChangingDiabetes.com  
#UrbanDiabetes  
@CitiesDiabetes 

## THREE RESEARCH METHODS

The Cities Changing Diabetes programme consists of three global research methods to map the challenge of diabetes in cities and understand its drivers. Introduction and How-To Guides have been developed for all three methods.



**RULE OF HALVES**  
QUANTITATIVE METHOD

### Mapping the extent of the challenge

The Rule of Halves analysis is a quantitative estimation of the diabetes burden in a specific population or community.



**DIABETES VULNERABILITY ASSESSMENT**  
QUALITATIVE METHOD

### Unveiling the social factors and cultural determinants

The Diabetes Vulnerability Assessment identifies the social factors and cultural determinants of diabetes among people living with type 2 diabetes.



**URBAN DIABETES PRIORITY ASSESSMENT**  
MIXED METHOD

### Prioritising social factors and cultural determinants for intervention

The Urban Diabetes Priority Assessment is a comprehensive data collection and analysis instrument developed to explore priorities, attitudes, and shared points of view about diabetes, health and wellbeing among people living with diabetes.

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ALL THREE RESEARCH MANUALS ARE AVAILABLE FOR DOWNLOAD AT  
[CitiesChangingDiabetes.com](https://www.citieschangingdiabetes.com)

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## REFERENCES

1. International Diabetes Federation. *IDF Diabetes Atlas*. 8th edn. Brussels, Belgium: International Diabetes Federation; 2017. 2. Cities Changing Diabetes. Diabetes Projection Model, Global. Data on file. Novo Nordisk. In: Incentive, ed. Holte, Denmark 2017 3. UNDESA. United Nations Department of Economic and Social Affairs. *World Urbanization Prospects, the 2014 Revision, Highlights*. 2014. 978-92-1-151517-6. 4. Stephenson W. *The study of behavior; Q-technique and its methodology*. 1953. 5. Cross RM. Exploring attitudes: the case for Q methodology. *Health education research*. 2005;20(2):206-213. 6. Cities Changing Diabetes. *Urban diabetes. Understanding the challenges and opportunities*. [https://issuu.com/novonordisk/docs/ccd\\_bb\\_full\\_book\\_09112015\\_final/1](https://issuu.com/novonordisk/docs/ccd_bb_full_book_09112015_final/1). Novo Nordisk;2015. 7. Napier D. *Diabetes Vulnerability Assessment Tool: Modifiable risk factors in urban areas*. London: UCL;2014.

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