

# JOHANNESBURG

## TAKING THE FIRST STEP TOWARDS ACTION IN A FAST-GROWING CITY

Since the discovery of gold in Johannesburg more than a hundred years ago, it has been a city of immigrants. Mine dumps and gleaming skyscrapers, contrasted with Indian bazaars, African medicine shops and streets thronging with fruit sellers and street vendors, tell the story of Johannesburg's rich and diverse past. Jo'burg, as it is referred to locally, is a single metropolitan municipality of more than 1,645 km<sup>2</sup> connected by vast highways, and is the largest city in South Africa.<sup>64</sup>

Over the past 20 years, Johannesburg has increasingly become an immigrant gateway for people from all over the world, and from other parts of Africa in particular.<sup>65</sup> With approximately 4.9 million people,<sup>66</sup> Johannesburg is one of the most populous cities in Africa.<sup>67</sup>

### A NEW HEALTH FOCUS FOR JOHANNESBURG

This fast-paced urbanisation has been a magnet for several challenges, including

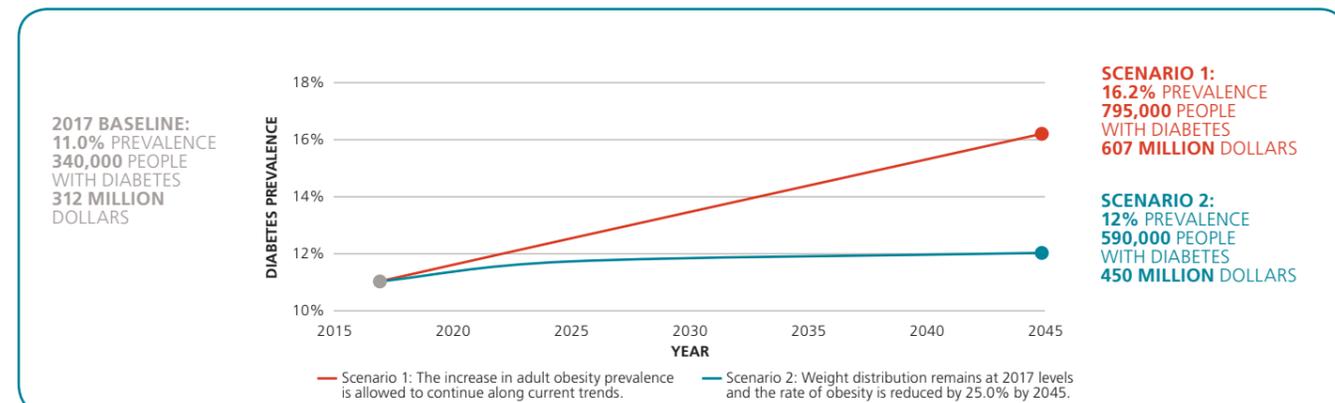
lack of housing, inner city decay, high unemployment, crime and inadequate healthcare provision, which, in turn, has created an environment conducive to NCDs such as type 2 diabetes. In 2015, NCDs were the leading cause of mortality in the city, with diabetes as the sixth leading cause.<sup>68</sup>

The growing burden of NCDs in Johannesburg is adding to an already high burden of communicable diseases and perinatal, maternal and injury-related disorders.<sup>69</sup> Addressing diabetes provides an opportunity to manage the increasing prevalence of NCDs, and is a paramount step for Johannesburg as it works towards reducing its quadruple burden of disease.

The Diabetes Projection Model shows that 11.0% of the adult population (aged 20–79) in Johannesburg has diabetes. If action is not taken, the prevalence of diabetes could increase to 16.2% by 2045, more than doubling the current number of people with diabetes from 340,000 to approximately 795,000 (Figure 8).<sup>70</sup>

**FIGURE 8: PROJECTED DIABETES PREVALENCE IN JOHANNESBURG, 2017–2045 (ADULTS AGED 20–79)<sup>70</sup>**

If we reduce obesity by 25.0% by 2045, 205,000 cases of type 2 diabetes can be avoided and 157 million dollars in healthcare expenditure saved



**NOTE:** The baseline prevalence of 11.0% among adults (aged 20–79) in 2017 uses Rule of Halves research conducted in Johannesburg in 2016.<sup>71</sup> The model assumes that the age distribution in Johannesburg follows the same pattern as the rest of South Africa.



Johannesburg, South Africa

### Mapping the burden of diabetes in primary health centres

In 2016, Cities Changing Diabetes initiated quantitative research in Johannesburg to map the burden of diabetes and its comorbid conditions, such as dyslipidaemia, hypertension and obesity, among patients attending public sector primary healthcare facilities in the city. Performed in partnership with the University of the Witwatersrand, Novo Nordisk and the Johannesburg Junior Council, the research is the first step towards action for the programme in Johannesburg and on the African continent.

The research was conducted in 14 primary health centres, which are public sector facilities located in areas with a high population density. The services of retired nurses from the local area were called upon due to their extensive experience of working in these settings.

The research revealed high levels of type 2 diabetes and its comorbidities. Of the sample population, 6.0% had pre-existing diagnosed

*“Cities Changing Diabetes in Johannesburg provides us with a platform to bring together different players to challenge this epidemic. This is an opportunity to take a multi-faceted integrated approach to tackling diabetes in Johannesburg which has been lacking so far.”*

**PROF DEBASHIS BASU,  
PUBLIC HEALTH MEDICINE SPECIALIST,  
UNIVERSITY OF THE WITWATERSRAND**

type 2 diabetes and another 46.0% was not aware they had the condition.<sup>71</sup> High levels of comorbidities such as hypertension and dyslipidaemia were detected.<sup>71</sup> Furthermore, high prevalence of risk factors for type 2 diabetes, such as overweight and obesity, was also observed, with 29.0% of the sample population being overweight and a further 37.0% having obesity.<sup>71</sup>

### Moving from research to action

The next step for Cities Changing Diabetes in Johannesburg is to use the Urban Diabetes Risk Assessment to unveil the drivers underlying diabetes in the city. The research will facilitate a deeper understanding of how the sociocultural drivers of diabetes play out in a diverse and rapidly growing city.

In the meantime, several recommendations and actions based on the quantitative research are already on the table. These include policy recommendations, such as the implementation of risk-based screening for diabetes, hypertension and dyslipidaemia in all health facilities and the development of a cost-effectiveness study to evaluate the sustainability of such an approach.

The local programme partners are planning various stakeholder meetings to present results from the study and discuss primary and secondary prevention of diabetes. In addition, they are planning a school awareness campaign to raise awareness about diabetes and its comorbidities among young people.

LOCAL PROGRAMME PARTNERS

City of Johannesburg  
University of the Witwatersrand  
The Johannesburg Junior Council

IN SOUTH AFRICA, MORE THAN 47.1% OF THE ADULT POPULATION IS PHYSICALLY INACTIVE.<sup>72</sup>