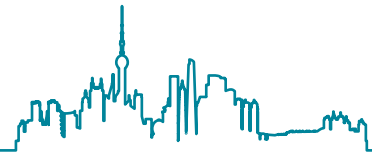


# SHANGHAI



## STRENGTHENING LOCAL CAPACITY FOR DIABETES CARE IN CHINA'S FASTEST-GROWING CITY

Shanghai is a coastal megacity in eastern China, spanning an area of 6,341 km<sup>2</sup> and with a resident population of about 25 million people.<sup>50,56</sup> Since China's economic reform in the late 1970s, Shanghai has experienced rapid expansion and urbanisation, making it into one of the world's largest and fastest-growing urban areas.<sup>57</sup>

In the past decade, rapid development has changed the face of Shanghai as the thriving population has driven the city to expand upwards, with 150 skyscrapers,<sup>58</sup> and more recently underground, with the building of the first and largest super underground city.<sup>59</sup>

Moreover, the population of Shanghai has also undergone a demographic transition. Life expectancy has more than doubled since 1949, with people now living to an average age of 83, a statistic which exceeds that of many Western industrialised countries.<sup>60</sup> This has resulted in Shanghai becoming the first city in China categorised as an ageing society.<sup>60</sup> Consistent with the profile of an ageing population, there has also been a shift

in the pattern of disease away from infectious diseases and infant health problems to NCDs such as diabetes.

### ESTABLISHING A FOUNDATION FOR ACTION

The Diabetes Projection Model shows that 11.3% of the adult population (aged 20–79) in Shanghai has diabetes, and the prevalence is projected to reach 18.2% in 2045 if action is not taken (Figure 7).<sup>61</sup> This would increase the number of people with diabetes from 2.3 million today to 4.3 million in 2045.

Cities Changing Diabetes research from 2015 highlighted several diabetes vulnerabilities in the city. The research revealed how diabetes impacts families, and how family behaviour and perceptions impact an individual's ability to manage their diabetes. Knowledge about social transition and its relationship with urban diabetes was also revealed.<sup>16</sup>



*"We all have more to learn, and do more. Through in-depth learning and connecting our knowledge, Cities Changing Diabetes can help us to improve even further the effectiveness of taking on diabetes in our city."*

**PROF JIA WEIPING, DIRECTOR, SHANGHAI DIABETES INSTITUTE**

### Transforming diabetes care in Shanghai

The Shanghai Municipal Government developed and launched a new three-year action plan on diabetes, the 2015–2017 Diabetes Intervention Programme. The programme provides well-organised specialised diabetes care along with primary care through Community Health Centres (CHCs) in the neighbourhoods in which people with diabetes live.

The working strategy emphasises community-based health promotion for controlling risk factors, early detection of diabetes and health management, and screening for complications and disease/case management.

### Strengthening screening capacity at the primary care level

The City of Shanghai has initiated a project to organise screening for both people at high risk for diabetes and people with diagnosed diabetes at risk for diabetes-related complications. According to the plan, this will cover 300,000 individuals at high risk for diabetes and 250,000 people with diagnosed diabetes. For those with diabetes, the programme will screen for neuropathy, cardiovascular disease, nephropathy and retinopathy. To date, 195 of the 241 participating CHCs have implemented screening to detect people at high risk for diabetes. More than 150,000 individuals have already been screened for diabetes and, of these, almost 17,000 were identified as having diabetes and another 20,000 as having prediabetes. Six CHCs have started screening for complications among people with diabetes and have already screened more than 7,000 people.<sup>62</sup>

### Supporting healthcare professionals with standard diabetes treatment and referral guidelines

Data from the programme's research indicate that about 60.0% of people with diabetes receive treatment.<sup>16</sup> However, despite having a diagnosis and receiving treatment many do not manage to control their diabetes adequately. Supporting people with diabetes to achieve better outcomes requires the necessary healthcare professional capacity and expertise to be in place and accessible.<sup>3</sup> To improve healthcare capacity, standard diabetes treatment and referral guidelines are being promoted, and knowledge transfer among healthcare professionals in CHCs is being facilitated. To date, 1,531 healthcare professionals, including primary care physicians and nurses, have received training at 241 CHCs.

### Lessons for a healthier China

The local partners behind the programme hope that the knowledge and experience gained through Cities Changing Diabetes in Shanghai can contribute to making China healthier. The programme has already improved communication between local policymakers, medical institutions and CHCs.

### LOCAL PROGRAMME PARTNERS

- Shanghai Diabetes Institute
- Shanghai Municipal Centre for Disease Control and Prevention
- Shanghai Municipal Commission of Health and Family Planning

IN SHANGHAI, 32.0% OF PEOPLE WITH DIABETES REMAIN UNDIAGNOSED AND ARE AT RISK OF DEVELOPING SERIOUS COMPLICATIONS BEFORE THEY SEEK TREATMENT.<sup>16</sup>



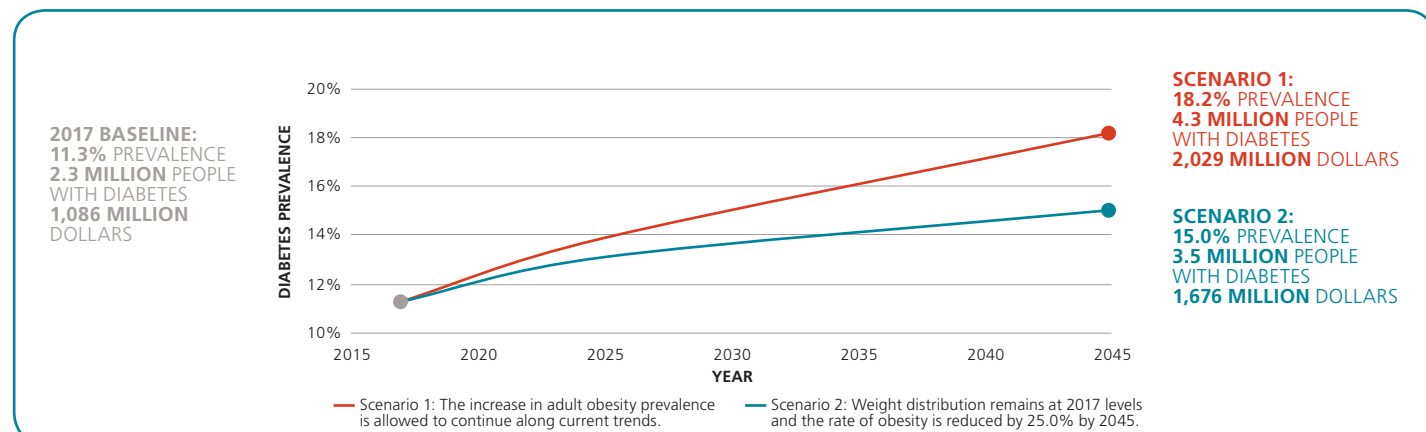
### MEET CAOYANG<sup>16</sup>

- 48-year-old man
- Married and has a demanding job
- Overweight with type 2 diabetes and high blood pressure
- Family history of diabetes.

Caoyang lives together with his family. He was diagnosed with diabetes by coincidence at a general physical check-up. The stressors of work and the demands of everyday life, mean that he may not focus enough on his own health and does not prioritise monitoring his blood glucose. When he was first diagnosed he did not adhere to dietary restrictions on sweet, salty and fatty foods, often justifying that "it makes no difference to eat occasionally". This changed when he was hospitalised, and since then, he has taken control of his diet and exercises to manage his diabetes. Caoyang usually goes to the hospital to have his blood glucose tested once every six months. Having diabetes does not concern Caoyang as he believes that "diabetes isn't a serious illness...". Ensuring he can provide for his family is a priority; therefore his focus is on work.

**FIGURE 7: PROJECTED DIABETES PREVALENCE IN SHANGHAI, 2017–2045 (ADULTS AGED 20–79)<sup>61</sup>**

If we reduce obesity by 25.0% by 2045, 800,000 cases of type 2 diabetes can be avoided, and 353 million dollars in healthcare expenditure saved



**NOTE:** The baseline prevalence of 11.3% among adults (aged 20–79) in 2017 uses published data from 2010.<sup>63</sup> For China, the model uses different BMI cut-off points for overweight and obesity because, in Asian populations, there is a risk of developing type 2 diabetes at a BMI lower than the existing WHO cut-off point for overweight.<sup>55</sup>