

## Prevalence and control status of T2DM in Bangladesh: finding from a nationally representative survey

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### Background:

With around 10 million diagnosed patients, Bangladesh remains at the forefront of the global type 2 diabetes mellitus (T2DM) epidemic. A comprehensive understanding of the current T2DM scenario is required to curb the disease burden. In this study, we aimed to identify the prevalence, associated factors, and control status of T2DM in Bangladesh.

### Methods:

This cross-sectional survey was conducted in 15 randomly selected community-based clusters in Bangladesh. Around 1,000 adults aged  $\geq 18$  years from each cluster were selected. Face-to-face interviews, anthropometric measurement, biospecimen collection, and point of care blood test were performed. Individuals with Fasting Blood Sugar (FBS)  $\geq 126$  mg/dl or previously diagnosed with T2DM by a qualified health provider were considered T2DM cases. Multivariate logistic regression analysis was performed to identify factors associated with T2DM.

### Results:

Data of 13,674 individuals were analysed for this study. The overall prevalence of T2DM was 10.0%, among whom 29.2% were undiagnosed. Among previously diagnosed patients, 64.9% had uncontrolled diabetes (FBS  $\geq 126$  mg/dl). The prevalence of uncontrolled diabetes was higher among elderly, female, and urban participants. Patients with hypertension, high waist-hip ratio and high serum cholesterol had 2.20 times (95% CI: 2.17-2.23,  $p < 0.001$ ), 3.53 times (95% CI: 3.47-3.59,  $p < 0.001$ ) and 2.53 times (95% CI: 2.48-2.59,  $p < 0.001$ ) higher odds of having T2DM, respectively.

### Conclusions:

One out of every ten adults in Bangladesh had T2DM, and a substantial proportion of them had undiagnosed and uncontrolled diabetes. This finding indicates the lack of preparedness of the country's health system to address the problem. Pertinent stakeholders should adopt a multi-sectoral approach to develop comprehensive policies and implement target-

specific interventions, e.g., population-based screening program, primary care based T2DM service, and community mobilisation to combat the T2DM epidemic.

**Key messages:**

- As the T2DM burden is high in Bangladesh, policy makers should adopt a collaborative approach to develop and implement effective public health programs for prevention and control of T2DM.
- As the burden of uncontrolled T2DM is high in Bangladesh, the country's health system should ensure early diagnosis and provision of quality care at affordable cost for T2DM patients.