

# Key issues surrounding the management of patients with NCDs including diabetes mellitus among LMICs focusing on Bangladesh

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# **1. Introduction**

2. Managing diabetes in Bangladesh including the public system

3. Ways forward to improve care

# Issues and challenges to improve care for patients with NCDs including diabetes in LMICs

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- There is increasing prevalence of NCDs across countries especially among LMICs
- Even in sub-Saharan Africa, there is now greater mortality from NCDs than infectious diseases, with this trend continuing exacerbated by COVID-19 and associated lockdown and other measures impacting on clinic closures/ patients attending clinics
- It has been estimated by 2025 nearly 30% of all adults globally will have hypertension, greatest among LMICs (20%+ in Bangladesh) – with an appreciable number undiagnosed and most uncontrolled
- In Bangladesh, deaths due to NCDs increased from 43.4% of total deaths in 2000 to 66.9% in 2015, with this trend likely to continue
- Diabetes, particularly T2DM, is a particular concern as its complications appreciably increase morbidity, mortality and costs – including patients in Bangladesh

# There are a number of key factors increasing the prevalence of NCDs – with some now being addressed

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- There are a number of factors increasing the morbidity and mortality from NCDs among LMICs including Bangladesh. Key factors include:
  - ❑ Increased urbanisation/ reduced Physical activity/ dietary changes
  - ❑ Limited access to diagnosis and treatment facilities
  - ❑ High patient co-payment levels including medicines
  - ❑ Ageing populations – especially with advances in the management of infectious diseases
  - ❑ Continued high tobacco consumption – including Bangladesh where up to 44.7% of men smoke – highest in the slum areas. However new tobacco laws, introduction of smoke-free places/ monitoring of the implementation of the Tobacco Control Act can improve the situation
- Overall, it is estimated that 13.1 million adults in Bangladesh now have diabetes, with this figure potentially rising to 22.3 million by 2045 or more including those undiagnosed

# Some of these issues were discussed in our recent Editorial (available Open Access)

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## Editorial

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**Key issues surrounding the management of non-communicable diseases including the management of diabetes post COVID-19 among developing countries with a specific focus on Bangladesh**

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1. Introduction

**2. Managing diabetes in Bangladesh including the public system**

3. Ways forward to improve care

# Concerns with the management of patients with NCDs in Bangladesh including diabetes

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- Whilst the Government in Bangladesh has launched many NCD-related programmes and policies in recent years to improve the management of the patients including those with diabetes and hypertension, there are key issues to address:
  - ❑ Shortage of trained personnel and laboratory facilities, lack of adequate medicine supplies and lack of guidelines for managing patients with CVD and diabetes especially in the public sector
  - ❑ Costs are a key issue especially with high co-payments with potential costs (total annual per capita expenditure on medical care) 6.1 times greater for those with diabetes in Bangladesh versus those without diabetes - with the costs of medicines the greatest contribution to overall costs (60.7%) followed by hospitalisations (27.7%)
  - ❑ Concerns with patient follow up – especially with paper-based systems and records carried by patients rather than stored centrally in patient-level systems as we see in e.g. Sweden

# The comprehensive system in Sweden with good patient level data enables key stakeholders to proactively plan for the introduction of new medicines as well as assess the effectiveness and safety of medicines in routine care



**FIGURE 1** | The Swedish national process for managed introduction and follow-up of new medicines. Source: The Swedish Association of Local Authorities and Regions (2017a). Reproduced with permission from Sofia Åkerlind.

# There were concerns with the lack of monitoring of patients with diabetes in the public system in Bangladesh

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- A number of concerns were identified in our recent pilot study in the public healthcare system in Bangladesh
- Key concerns included:
  - ❑ Poor control of blood glucose levels - resulted in increased prescribing of insulin. However, better control of blood pressure, lipids and albumin levels
  - ❑ Overall, greater availability and prescribing of medicines to help control blood glucose levels as well as prevent cardiovascular complications compared with the situation in many other LMICs – although we did see both micro- and macro-vascular complications in our pilot study
  - ❑ Appreciable missing knowledge gaps with large gaps in patient follow-up especially during the COVID-19 pandemic, which needs to be addressed going forward
- Encouragingly in recent studies, we have seen growth in the use of long-acting insulin analogues in Bangladesh including biosimilars to help in patients requiring insulin – certainly when compared with a number of African and South American countries

# Our recent study in Bangladesh showed increasing use of long-acting insulin analogues helped by biosimilars

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## Ongoing efforts to improve the management of patients with diabetes in Bangladesh and the implications

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# We have seen similar increased use of long-acting insulin analogues among other Asian countries helped by biosimilars

CURRENT MEDICAL RESEARCH AND OPINION

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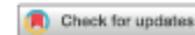
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ORIGINAL ARTICLE



## Current utilization patterns for long-acting insulin analogues including biosimilars among selected Asian countries and the implications for the future

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# Utilisation of long-acting insulin analogues was greater in Bangladesh than among African and South American countries



## The Current Situation Regarding Long-Acting Insulin Analogues Including Biosimilars Among African, Asian, European, and South American Countries; Findings and Implications for the Future

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# Activities that can be introduced in the public system to improve care of patients with NCDs

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- Key areas to consider going forward to improve the care of patients with NCDs in Bangladesh with a special emphasis on CVD/ diabetes include:
  - ❑ Improved record keeping and away from paper based systems – with the introduction of electronic record systems as seen in e.g. Sweden (and also European countries such as the UK)
  - ❑ Improving early diagnosis – with the potential help of community pharmacists and others
  - ❑ Initiatives to reduce patient co-payments through increasing competition (medicine prices) and subsidies – especially given the financial impact of complications
  - ❑ Expansion of educational programmes as well as programmes to enhance patient adherence to suggested lifestyle changes/ prescribed medicines
  - ❑ Increased availability and dissemination of pragmatic guidelines alongside increased monitoring of adherence to these (key quality indicator – helped by electronic systems)

**Thank You**

**Any Questions!**

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