Estimated healthcare expenditures due to diabetes in the North America and Caribbean Region

Joao Diogo da Rocha Fernandes1, Katherine Ogurtsova2, Leonor Guariguata1, Ute Linnenkamp1, Till Seuring1, Ping Zhang2, Lydia Makaroff1

Aims and objectives:
Diabetes imposes a large economic burden on healthcare systems. The International Diabetes Federation (IDF) Diabetes Atlas tracks healthcare expenditures related to diabetes globally and regionally1-6. Here, the 2014 estimates for the IDF North American and Caribbean region are presented (NAC).

Methods:
Healthcare expenditures due to diabetes for the region were calculated as a sum of the expenditures from 17 countries and territories, which was estimated using an attributional fraction model, taking into consideration the differences between gender and age groups7. Data needed for the model were obtained from 2014 estimates of population by age and sex from the United Nations World Population Prospects (2012), 2014 diabetes prevalence estimates from the IDF Diabetes Atlas Update (2014), 2012 health expenditure estimates (2012) from the World Health Organization, and expenditure ratios between people with and without diabetes from US Kaiser health insurance claims data (2002). Expenditures were expressed in 2012 US dollars (USD) (Figure1).

Results:
The estimated total healthcare expenditure on diabetes in the region was $310 billion (2012 USD), representing more than 50% of the World's health expenditure on diabetes (Figure 2). This fact is in large part explained due to the US's health expenditure on diabetes, which was $281 billion USD (Table1).

Within the North American and Caribbean region, diabetes was responsible for 1 dollar in 8 of the regional total health spending in 2014. Regarding the health expenditure per capita, the North American and Caribbean region spent on average $8,011 USD per person with diabetes, against a world average of $1,583 USD. There were great disparities in health spending between countries within the region. Haiti had the lowest per capita spending of $148 USD, compared to the US with the highest per capita spending at $10,902 USD (Figure 3).

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References:

Table 1 – Total health expenditure on diabetes per country in the IDF North America and Caribbean region in 2014

<table>
<thead>
<tr>
<th>Country</th>
<th>Total health expenditure on diabetes (2012 USD)</th>
<th>Country</th>
<th>Total health expenditure on diabetes (2012 USD)</th>
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<tbody>
<tr>
<td>United States of America</td>
<td>$291 billion</td>
<td>Sweden</td>
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<td>St Vincent and the Grenadines</td>
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<td>Suriname</td>
<td>$2 million</td>
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</table>

Figure 1 – Study design and data flow

Figure 2 – Total health expenditures on diabetes in 2014 (USD)

Figure 3 – Mean health expenditure per person with diabetes in the IDF North America and Caribbean region in 2014

Discussion:
The 2014 estimates on the total health expenditures on diabetes confirm the large economic impact caused by diabetes on health systems. This is observed across low-, middle- and high-income countries of the North America and Caribbean region (Figure 4). In upper-middle-income countries, a larger share of resources (15.7%) was allocated to diabetes, over 3% more than the regional average (12.9%).

When analyzed the distribution of the health expenditure on diabetes across sex and age groups a large diversity was observed (Figure 5). The age-group with the highest spending was the 5.2 million females aged 60-69 ($47 billion USD). The age-group with the lowest level of spending was the 0.7 million males aged 25-29 ($5.7 billion USD).

Figure 4 – Percentage of money spent on diabetes from total expenditure on health in NAC in 2014

Figure 5 – Health expenditure on diabetes by sex and age group in the IDF North America and Caribbean region in 2014

Conclusion:
The prevalence of diabetes and the overall expenditure associated with it have been on the rise for the past decade14.

In 2014, the estimated total healthcare expenditure on diabetes in the IDF North America and Caribbean region was USD $310 billion, representing more than 50% of the global health expenditure on diabetes of $612 billion USD. The North American and Caribbean region spent on average $8,011 USD per person with diabetes, substantially higher than the world average of $1,583 USD.

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