The Burden Caused by Type 2 Diabetes

## Introduction

South Africa is a country which is undergoing rapid changes:

* Burden of disease data from 2000 shows that chronic conditions were responsible for 30% of the total disease burden.
* Ongoing fast urbanisation is leading to increasing lifestyle risks, such as unhealthy diet and lack of physical activity, which in turn add to growing chronic disease rates.

Understanding the main contributors to disease burden is vital in the planning of health care facilities addressing this growing problem.

## Survey Data

Refer to Table 1: Rate of Diabetes in South Africa and related Diseases on page

## Burden of disease results

The rate of type 2 diabetes in those over age 30 was approximate at 9.0% (7.4% in men and 10.4% in women), a major increase over the 5.5% occurrence reported for 2000 (14). This gives a total of 1.97 million cases of type 2 diabetes in South Africa. A secondary finding from the search was that 55% of cases are undiagnosed for South Africa. This means that about 1 million people with type 2 diabetes do not know they have it. Age-specific diabetes rate is shown in Fig. 1 as well as 1.97 million people with type 2 diabetes. The model also shows that 115,000 new cases develop each year, along with 7,800 cases of vision impairment and 2,100 toe or foot amputations due to diabetes (Table 1).

*Figure 1: Comparison of diabetes in males and females per age group*

|  |  |  |
| --- | --- | --- |
|  | **Diabetes** | |
| *Age Group* | *Male* | *Female* |
| 25-34 | 7106 | 11853 |
| 35-44 | 12644 | 17594 |
| 45-54 | 15419 | 16768 |
| 55-64 | 10373 | 9238 |
| 65-74 | 4722 | 4518 |
| 75+ | 2191 | 3009 |

The number of people categorised as urban or rural was last analysed for 2001, when it was estimated that 57.5% of people lived in urban areas and 42.5% lived in rural areas. According to our analysis, 35% of people with diabetes live in rural areas and 65% in urban areas, indicating an unequal distribution. In urban areas, among the aged, rate is higher in females, whereas in rural areas, rate is higher in females than males at all ages:

Diabetes (Type 2) 42919

Retinopathy 13458

Amputations 4527

Strokes 7233

IHD 5577

A sensitivity analysis was done to look at the impact of the highest and the lowest rate measures on the outcomes. By excluding the highest rate study overall diabetes rate drops to 5.2% in line with the previous decade. Excluding the lowest rate study for both urban and rural areas had the opposite impact, causing rate to increase to 12.1% overall.

## Discussion

Our estimates show that the burden of disease due to diabetes may have grown considerably since the previous South African burden of disease study in 2000. Rate of diabetes in people over age 30 has increased from 5.5 to 9.0% since the previous estimates. This may partly be a reflection of the data used in 2000, which was largely from the early 1990s, so the increase seen may have occurred over almost two decades.

## Table 1 : Rate of Diabetes in South Africa and related Diseases

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Diabetes** | | **Retinopathy** | | **Amputation (foot or toe)** | |
| *Age Group* | *Male* | *Female* | *Male* | *Female* | *Male* | *Female* |
| 25-34 | 7106 | 11853 | 18 | 38 | 0 | 0 |
| 35-44 | 12644 | 17594 | 143 | 213 | 166 | 246 |
| 45-54 | 15419 | 16768 | 493 | 551 | 316 | 386 |
| 55-64 | 10373 | 9238 | 956 | 838 | 246 | 214 |
| 65-74 | 4722 | 4518 | 1260 | 985 | 158 | 140 |
| 75+ | 2191 | 3009 | 1182 | 1134 | 94 | 114 |
| Subtotal all ages | **52455** | **62980** | **4052** | **3759** | **980** | **1100** |
| Total both sex | **115435** | | **7811** | | **2080** | |