

## The South African Economy on those Living with Type Two Diabetes and Asthma

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The saying, "Times are Tough" is proving to be true for many South Africans. To be diagnosed with Type Two diabetes is devastating as it involves lifestyle modification, a change in diet and increased physical activity. Little is known is socio-economic status of those living with type two diabetic and Asthma cope with the daily burden to manage diabetes and asthma, if the quality of life does not improve the two are highly associated with an increase in economy costs. The world health organization in a study on global burden of Asthma and Diabetes diseases, estimated 13.8 million disability-adjusted life years (DALYs) per year because of asthma that encompasses 1.8% of total burden of all diseases. Asthma disability level is resembled diabetes and it can affect the social, physical and emotional aspects of patients' lives especially in those with poor control of the situation [11].

In South Africa, there is limited data on health care users with type two diabetes and asthma. However, a study that was conducted by Ehrlich, *et al.* [2], showed that there is a risk of pulmonary disease in patients with diabetes. Individuals with diabetes are at increased risk of several pulmonary conditions (asthma, COPD, fibrosis, and pneumonia) and we cannot turn a blind eye on this issue as the incident of type two diabetes is increasing at an alarming rate in South Africa [7]. So how can we as South Africans combat the diabetes epidemic more now with the added risk of pulmonary conditions.

The South African health care system is separated into the private sector and the state sector. The following stats were taken from the private sector on individuals using medical aid schemes, and it shows that, chronic respiratory diseases (CRDs) are among the leading causes of deaths worldwide. The prevalence of respiratory diseases is expected to rise in low- and middle-income countries because of increasing urbanisation amongst other factors [1]. The most common chronic respiratory diseases in South Africa are asthma and chronic obstructive pulmonary disease [2].

Asthma is the major non-communicable disease globally. About 235 million people are affected by Asthma globally [3]. Studies suggest that an additional 100 million people may be living with asthma by 2025 [1]. Asthma is one of the most common childhood diseases [3,4]. Most asthma-related deaths occur in low- and lower-middle income countries [3]. In South Africa, Asthma prevalence is estimated to be on the region of "5.1 - 7.1%" of the population [6]. Asthma is one of the commonest childhood diseases in South Africa as well [4]. As we can realise that the pandemic of Asthma is not decreasing, how aware are the South African health care users and the health care professionals (Nurses and Doctors) about the association between Asthma and Type Two Diabetes. About 25 million people in Africa region were affected by diabetes (as by 2014 data) [9]. The International Diabetes Federation show that the prevalence of 13 adults with type 2 diabetes mellitus (DM) is highest in low and middle-income countries, with Sub-Saharan Africa and the Indian subcontinent being highlighted as two of the regions where this rise is expected to be the greatest [10].

Asthma and Diabetes has been researched and guidelines on the management of each condition are known by many, however regardless of the number of available treatments available its prevalence has been increasing. With asthma currently affecting over 300 million

people worldwide. Similarly, the prevalence of obesity has doubled since the 1980s, and according to the World Health Organization, obesity now affect over 600 million people around the world (with an additional 1.3 billion being overweight) [8]. Obesity is a major risk factor for type two diabetes, and it is also associated with higher risk of asthma [8]. The prevalence of Asthma and type two diabetes in Africa has not been an interest for many researchers, it has limited data. This is the one thing that future researchers can investigate to help improve health outcomes.

Improving health outcomes on individuals living with Asthma and Type two diabetes will have a positive impact on those living with Type Two diabetes and Asthma and on the economy of the country. As this will mean more people at work and less sick leave, less morbidity rates amongst the working class. However, there is more yet to be done by the South African health system in order to support individuals living with diabetes and Asthma by providing ongoing health education and wellness programs in hospitals and the work place. These programs are to raise an awareness on Asthma and Diabetes, the long term and short term impact

Improving health outcomes on individuals living with Asthma and Type two diabetes will have a positive impact on those living with Type Two diabetes (T2DM) and Asthma and on the economy of the country. Economic aspect of asthma and diabetes is important for both asthmatic/diabetic patients and health administrators of South Africa for precise allocating the health budget. In research studies on asthma and diabetes economic burden, attention should be paid on both direct (i.e. medication, doctor visit, emergency services, hospitalization) and indirect costs (i.e. loss of productivity and premature death) [11]. The costs of T2DM are partly direct, such as hospital and medication costs and disability grants incurred by individuals, families or governments, and partly indirect, via work absenteeism, time spent caring for sick relatives, and reduced productivity. About 76% of diabetes deaths in SSA occur in people younger than 60 years old, the most economically active demographic segment of the population [12]. Total health expenditure for diabetes for adults in SA is projected to increase by approximately 50% between 2010 and 2030 [12]. In SA, these costs are projected to be between 1.1 to 2 billion USD in 2030 However, there is more yet to be done by the South African health system in order to support individuals living with diabetes and Asthma.

A study by Nazar, *et al.* (2016) in the UK, showed that by providing ongoing health education and wellness programs in hospitals and the workplace on diabetes\Asthma will help raise the awareness thus help minimize or prevent the number of unnecessary hospital admissions due to lack of knowledge from the patient. These programs are to raise an awareness on Asthma and Diabetes, highlighting the long term and short-term effects of living with the disease. The wellness programs will also ensure that the patient is in control of their lives as they will be more involved into their care if they understand the basics on how to manage Asthma and Diabetes at home. The wellness programs should offer continuous support and counselling to both the patient and their family members [13]. This is the one thing that will prove to be most beneficial to many living with Asthma and Diabetes in South Africa.

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