



Estimated costs of treating two standardised diabetes-related foot ulcers of different severity – A comparison of 7 global regions

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ABSTRACT

Aims: To determine estimated costs to treat two hypothetical diabetes related foot ulcers of differing severity in different World Health Organization regions.

Methods: Descriptions of two standardised diabetes related foot ulcers of differing severity were sent to foot teams. Each centre was sent a picture and description of the ulcers, and a series of potential interventions. Respondents were asked to estimate how much each intervention would cost in their centre, and how many times each would be required before the ulcer would heal. These estimated costs were converted to US dollars.

Results: Responses were received from 51 centres. Estimated costs for treating each wound were highest in the North America and Caribbean region. The average estimated cost of treating the milder wound was \$2,942, (range \$79–\$17,758). Relative costs compared to those of North America and the Caribbean ranged from 0.36 to 0.75. The average time needed to cover the estimated costs of treating the wound was 8.6 (0.3–62.3) months' salary. The average estimated cost of treating the more severe wound was \$17,403, (\$546–\$67,178). Relative costs ranged from 0.06 to 0.69. The average time needed to cover the estimated costs of treating the wound was 22.7 (0.2–98.3) months' salary.

Conclusions: The estimated costs of treating ulcers vary widely across the world.

1. Introduction

Diabetes related foot ulcers (DFU) remain a significant cause of morbidity and mortality around the world, with an estimated prevalence of over 20 million people [1–3]. Just under half of those with DFU require hospitalisation for treatment of infection or the effects of peripheral arterial disease, with an estimated 2 million people per year requiring an amputation [2–4]. The annual incidence of DFU globally is estimated to be between 2.5% and 5%, with a lifetime risk of developing a DFU ranging between 15% and 34% in those with diabetes. This translates to hundreds of millions of individuals affected when considering the people with diabetes and their families [1–8]. Beyond the

immediate effect of the individuals' increased risk of complications and subsequent diminished quality of life, there is often also a significant financial burden accompanying DFU.

In 2015 diabetes mellitus (DM) is estimated to have cost the global economy about US\$1.3 trillion [9]. If past trends persist, the same authors estimated the global burden to increase to US\$2.5 trillion by 2030 [9]. In the USA, direct expenditure on DM was estimated at US\$237 billion 2017, with 30% of this being attributed to DFU management [10]. Similarly, it has been calculated that 0.9% of the entire UK National Health Service budget was attributed to DFU management [11]. In developing countries, data on the financial burden of DFU is scarce, despite the reported high prevalence [2,8,12,13]. It is reported that

Abbreviations: DM, Diabetes mellitus; DFU, Diabetes related foot ulcer; MENA, Middle East and North Africa; NAC, North America and the Caribbean; SACA, South and Central America; SEA, South-East Asia; WP, Western Pacific.

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