

## Effectiveness of Diabetes Foot Screening in Primary Care in Preventing Lower Extremity Amputations

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### Abstract

**Introduction:** The risk of lower extremity amputations (LEAs) in diabetics is 20 times higher than in non-diabetics. Clinical practice guidelines recommend that all diabetics should receive an annual foot examination to identify high-risk foot conditions. Despite this recommendation, there is little evidence in the literature to show its effectiveness in preventing LEA. This study aims to evaluate the effectiveness of diabetes foot screening in primary care in preventing LEA and to identify LEA risk factors. **Materials and Methods:** This is a retrospective cohort study of diabetic patients who visited the National Healthcare Group Polyclinics for the first time from 1 January 2008 to 31 December 2012. The intervention of interest was foot screening performed at least once during 2 years of follow-up, and the outcome of interest was LEA (major and/or minor) performed during 2 years of follow-up. Patients who did foot screening (n = 8150) were compared to a propensity score matched control group (n = 8150) who did not do foot screening. Logistics regression was done to identify factors associated with LEA. **Results:** Among those who underwent foot screening, there were 2 (0.02%) major amputations and 15 (0.18%) minor amputations compared with 42 (0.52%) and 52 (0.64%) among those who did not ( $P < 0.001$ ). **Conclusion:** Lack of diabetes foot screening, lower socioeconomic status, hip fracture, Malay ethnicity, chronic kidney disease, poorer glycaemic control, longer diabetes duration and male gender have been found to be associated with a higher risk of LEA.

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**Key words:** Diabetes mellitus, real-world, Singapore

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