The big picture: lower extremity complications of diabetes



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ver the past decade, for the first time in human history, more people died from non-communicable diseases (NCDs) than from all the plagues in the world combined. The 'big three' of those NCDs include cancer, heart disease and diabetes. While inexorably linked to one another in terms of morbidity and mortality, diabetes is singular in its silent and sinister characteristics — because of neuropathy, peripheral artery disease and other comorbidities, people with diabetes suffer from silent heart attacks and silent 'foot attacks'.

While diabetes may be the frequently ignored sibling within NCDs, the diabetic foot is, without question, the equivalent within diabetes. *Figure 1* displays the relative size of populations of diabetes and its lower extremity complications in the USA using best available prevalence data (Barshes et al, 2013; Amputee Coalition, 2015). We believe, however, that these data are directly transferable to the NHS and beyond. Up to a third of direct costs of care for diabetes are spent on the lower extremities. While this is true, less than a factor of 0.0017 is spent on federally funded research and development in the USA (Armstrong et al, 2013).

This astonishing gap between this public health problem and clinically meaningful clinical resource

shifts and research has led toward efforts to improve awareness often by comparing diabetic feet to other NCDs. Efforts from Diabetes UK to 'Put Feet First' have developed pathways to avoid a 'foot attack' (Hitman, 2015). We have frequently compared diabetic foot morbidity and mortality with cancer (Armstrong and Mills, 2013; Miller et al, 2014).

But there is hope. We are beginning to see the fruits of worldwide efforts pay off in reduction of amputation in parts of Europe (Kennon et al, 2012; Lombardo et al, 2014), as well as in the USA (Li et al, 2012). We need to remain ever vigilant, however. Indeed, it is entirely plausible that these data may ultimately be linked to efforts made in early screening and interdisciplinary teams, and we may one day congratulate ourselves with the epidemiologic equivalent of a day at the beach. However, it is equally possible that these data may, with the rise of diagnosis of diabetes and people living longer with complications, be a moment of calm before the next big wave.

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in Figure 1. Prevalence of diabetes and associated conditions in the USA.