**The green foot orthoses project (GFOP) – a step towards podiatrists reducing their carbon footprint**

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The health sector, whose mission is protecting health, also contributes to the climate crisis, *the greatest health threat of the 21st century*. The carbon footprint from healthcare exceeds 7% of Australia’s emissions.

Podiatrists use foot orthoses (FOs) to manage foot problems. At end of life, FOs become landfill. Patients increasingly query the ‘recycling’ of used orthoses. An estimate of foot orthoses dispensed by podiatrists in Australia is 500,000 pairs per annum.

GFOP addresses a discrete area of waste, in a defined area of Australian healthcare. As an initiative, GFOP provides an example of waste recycling, applicable to the healthcare sector, and may be a template for other health areas to reduce waste.

All healthcare professionals, can reduce emissions by recycling, conserving product use, and using cleaner energy.

The 2021 Australian Podiatry conference sustainability panel, introduced podiatrists to the concept of recycling used foot orthotics into materials for new uses.

There are several challenges in recycling foot orthoses, including:

1. Difficulty in separating and cleaning the materials used in the orthoses, which can include a variety of plastics, metals, and fabrics.
2. Limited recycling facilities that are able to process orthotic materials.
3. Lack of standardisation in the materials and designs of orthoses, which can make recycling more difficult.
4. Limited consumer awareness and demand for recycled orthotic products.
5. Cost of recycling process.
6. Sterilisation and sanitation of used orthoses before recycling.

The initial prototyping of a solution pathway experimented with using IP developed at SMaRT Centre to use mixed plastic waste from orthoses to upcycle them into flooring materials. The ideation of a solution looked to address many of challenges listed above, however further work is required to develop the solution and test its viability.

Statement of the clinical significance

Climate change poses the greatest health threat of the 21st century, with implications for all.

This presentation will explore the life-cycle of foot orthoses, and the possibilities and challenges of recycling, with implications for podiatrists across Australia.