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# Disruptive Innovation at Mount Isa Hospital

Initiative Type

Redesign

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Deliver

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## Summary

The podiatry service was connected with a team from QUT Design Lab who identified an opportunity to improve the consumer experience through the supply chain which would make a significant difference to the accessibility and timeliness for consumers across the North West region. Led by Assoc. Prof Chamorro-Koc, a partnership with industry was formed between Mount Isa Hospital,

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QUT, University Queensland Mechanical Engineering School, iOrthotics (a Queensland-based provider of custom orthoses who utilise advanced 3D manufacturing techniques) and My Foot Dr (a private podiatry provider). Together, the team conceptualised an innovative model to approach the issue. This involved end-to-end reconceptualisation of the supply chain for the provision of orthoses and footwear. A digital workflow solution has been proposed which will see industry development of remote volumetric scanning; this could be undertaken by their local health worker and uploaded to a cloud service. The 3D manufacturing will occur in Brisbane utilising the digital scan and incorporating wearable sensors and smart technologies embedded into the devices. The orthoses will be sent for fitting locally cutting out considerable cost, time and inconvenience while improving clinical outcomes and transforming consumers' current experience.

### Key dates

Jul 2020

Dec 2021

### Implementation sites

North West HHS

### Partnerships

Bridge Labs- HEAL; QUT School of Design; UQ School of Mechanical Engineering; Iorthotics; My Foot Dr

## Key Contacts

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Clinical Lead

## **Aim**

Improve consumers experiences in accessing footwear and orthoses in a rural and remote location particularly for people with Diabetic Foot Disease.

## **Benefits**

Through partnership across industry, education and health opportunities to change timely access for footwear and orthoses can occur with the introduction of digital technology to workflow.

## **Background**

Mount Isa Hospital covers a vast geographical region. Access to orthoses and footwear for people with diabetic foot disease is challenging, particularly those consumers in remote communities.

## **Solutions Implemented**

Through industry partnership, the current workflow process for access was mapped across region and proposed digital workflow redesign conceptualised. Industry partnership has lead to the successful application of a federally funded grant to allow this work to continue.

## **Evaluation and Results**

Ongoing implementation and evaluation are occurring across the next three years including:

- development of a service pathway for digital workflow through clinical auditing, field

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observations and end-user interviews

- advanced manufacturing and testing of volumetric scanning and wearables in orthoses.

Results so far indicate a considerable cut in cost, time and inconvenience while improving clinical outcomes and transforming consumer experience.

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