

Development and implementation of the Day Case Pathway – reducing length of stay for inpatients requiring amputation for diabetes-related foot complications

Sonja A. Rogasch*¹, Sharon Hong¹, Cathy Loughry^{1,2}, Robert A. Fitridge^{1,2}

¹Central Adelaide Local Health Network; ²The University of Adelaide [Adelaide, Australia]



BACKGROUND

In the state of South Australia:

- In 2018 10.8% aged >18 years had been diagnosed with diabetes
- Second highest prevalence of diabetes nationally (1)
- Rate varies between local healthcare networks (LHNs): 8.1% in the Central Adelaide (metropolitan) to 15.5% in the Riverland Mallee Coorong (regional)
- In 2021-22 financial year, 442 of 1746 (25%) recorded vascular procedures were lower limb amputations, 88% with diabetes (2)

Trans-phalangeal or minor digital amputations are an important component to preserving limb and life. Traditionally these procedures have required acute hospitalisation, a finite resource which is becoming increasingly overloaded.

AIM

Develop and implement a novel pathway for surgical intervention for diabetes-related foot complications to reduce the duration of inpatient stay at a tertiary hospital in South Australia.

METHOD

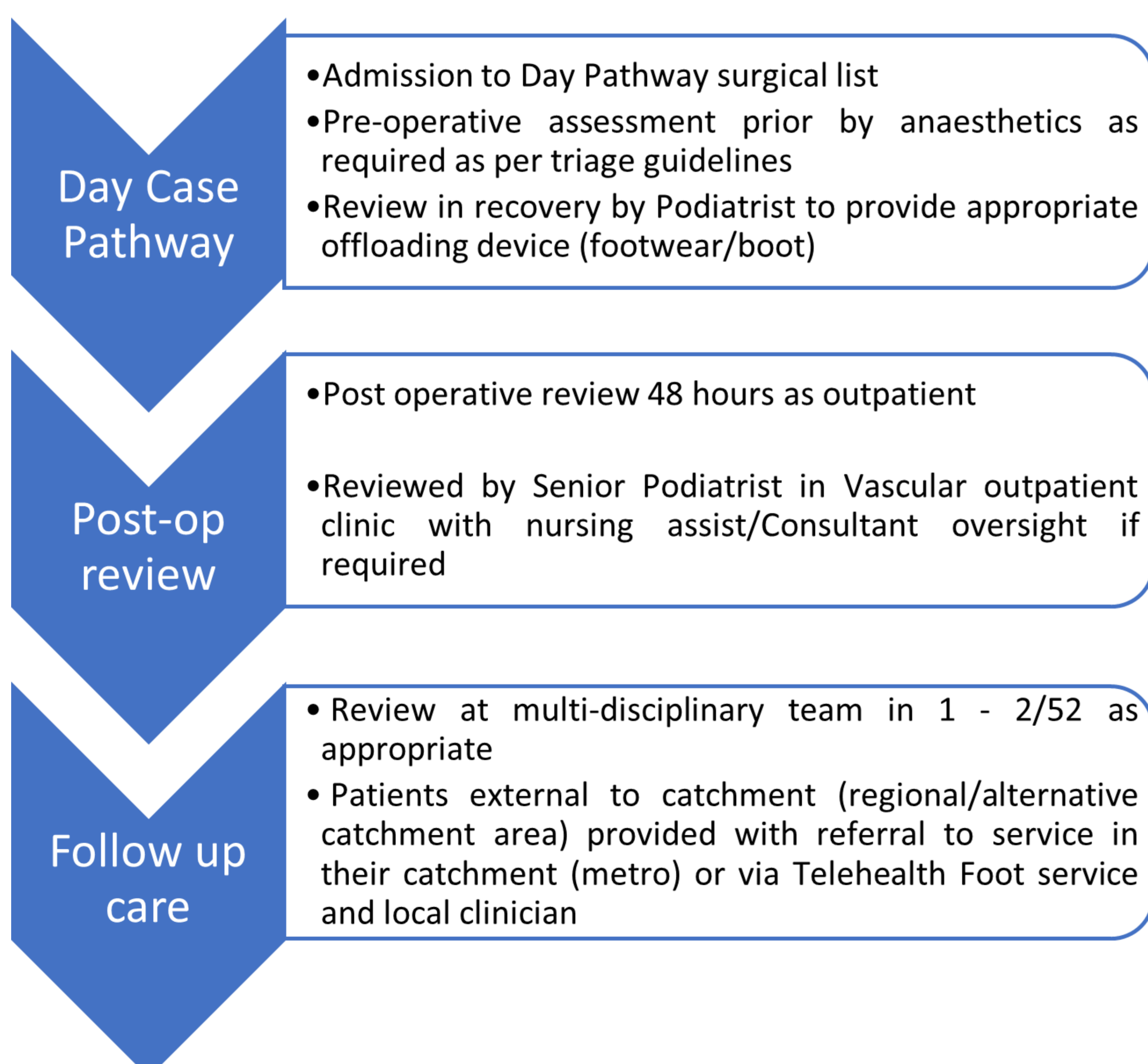
Development of Clinical Program:

- Administrative / clinical care pathway for same-day admission and surgery care at Royal Adelaide Hospital
- Stakeholder engagement including administration, pre-operative assessments (anaesthetics), perioperative nursing, Vascular Surgery and Podiatry departments

Eligibility Criteria:

- Medically Stable – no systemic features of infection
- Systolic Toe Pressures > 50 mmHg
- Surgical procedure consisting of either: digital amputation, local surgical debridement, biodegradable temporizing matrix (BTM)

Model of Care:



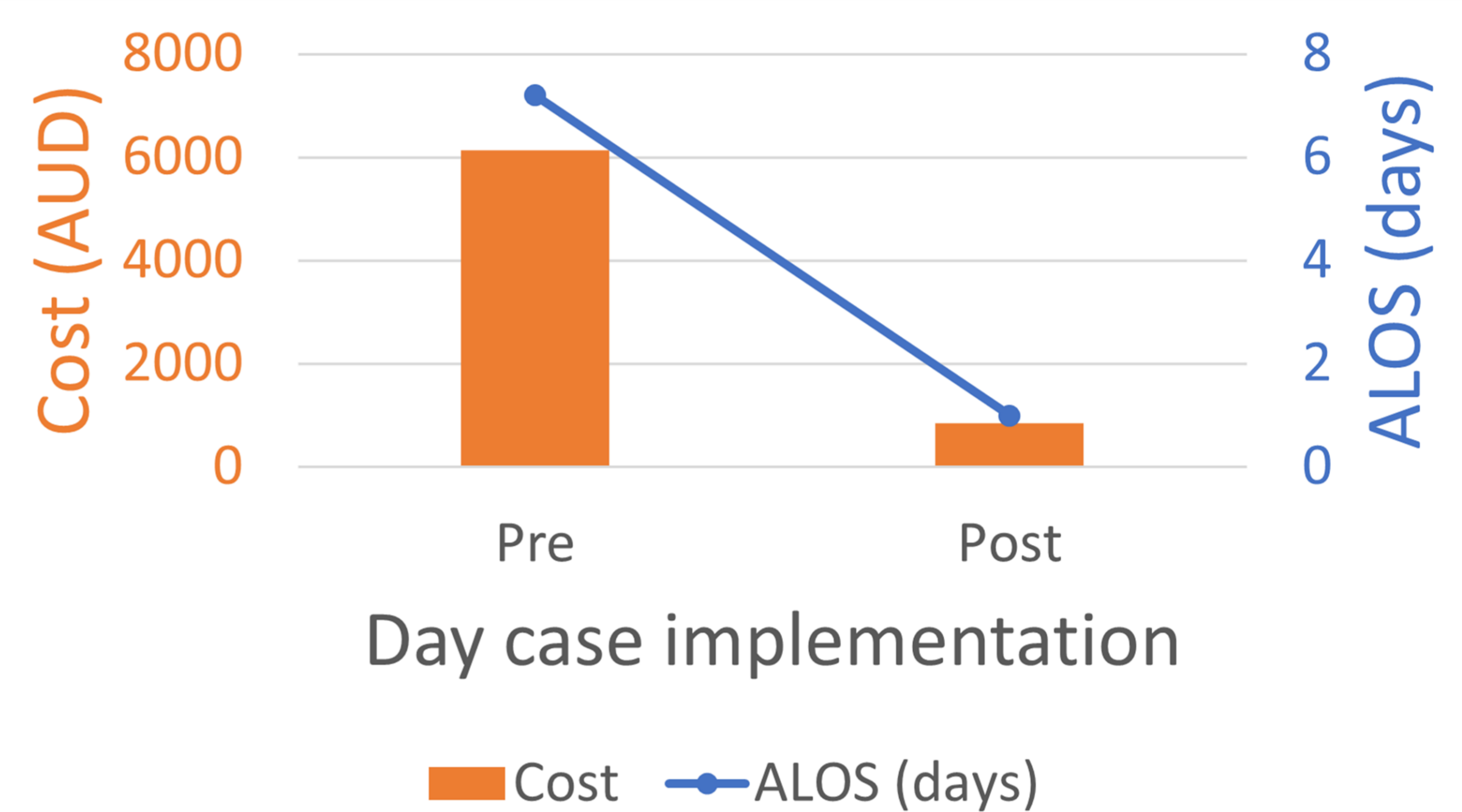
RESULTS

Clinical Outcomes:

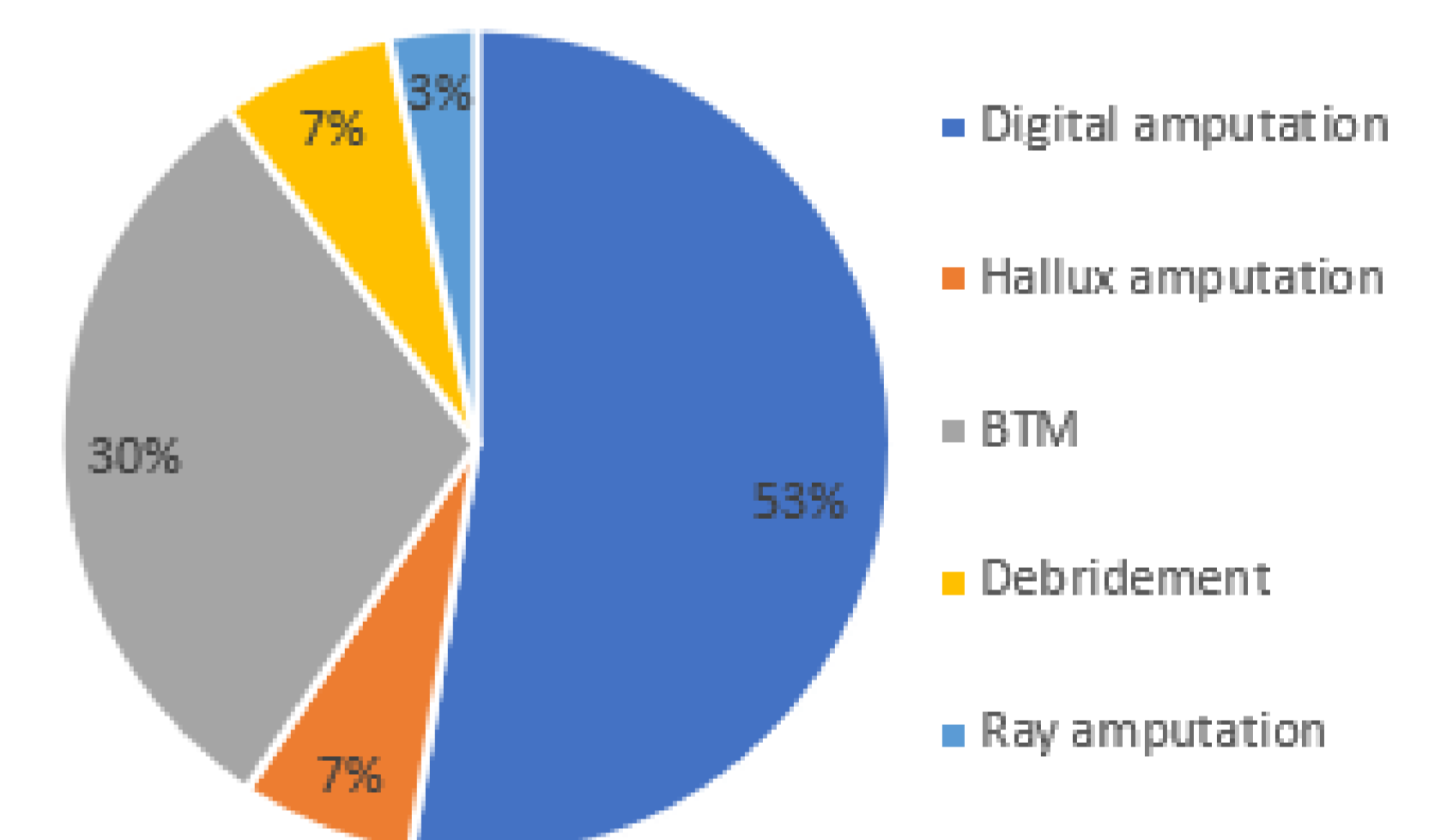
For 59 patients who utilised the Day Case Pathway from 2021 - 25:

- Average length of stay was reduced by 87%
- Equates to 340 acute bed days and \$311,284 AUD

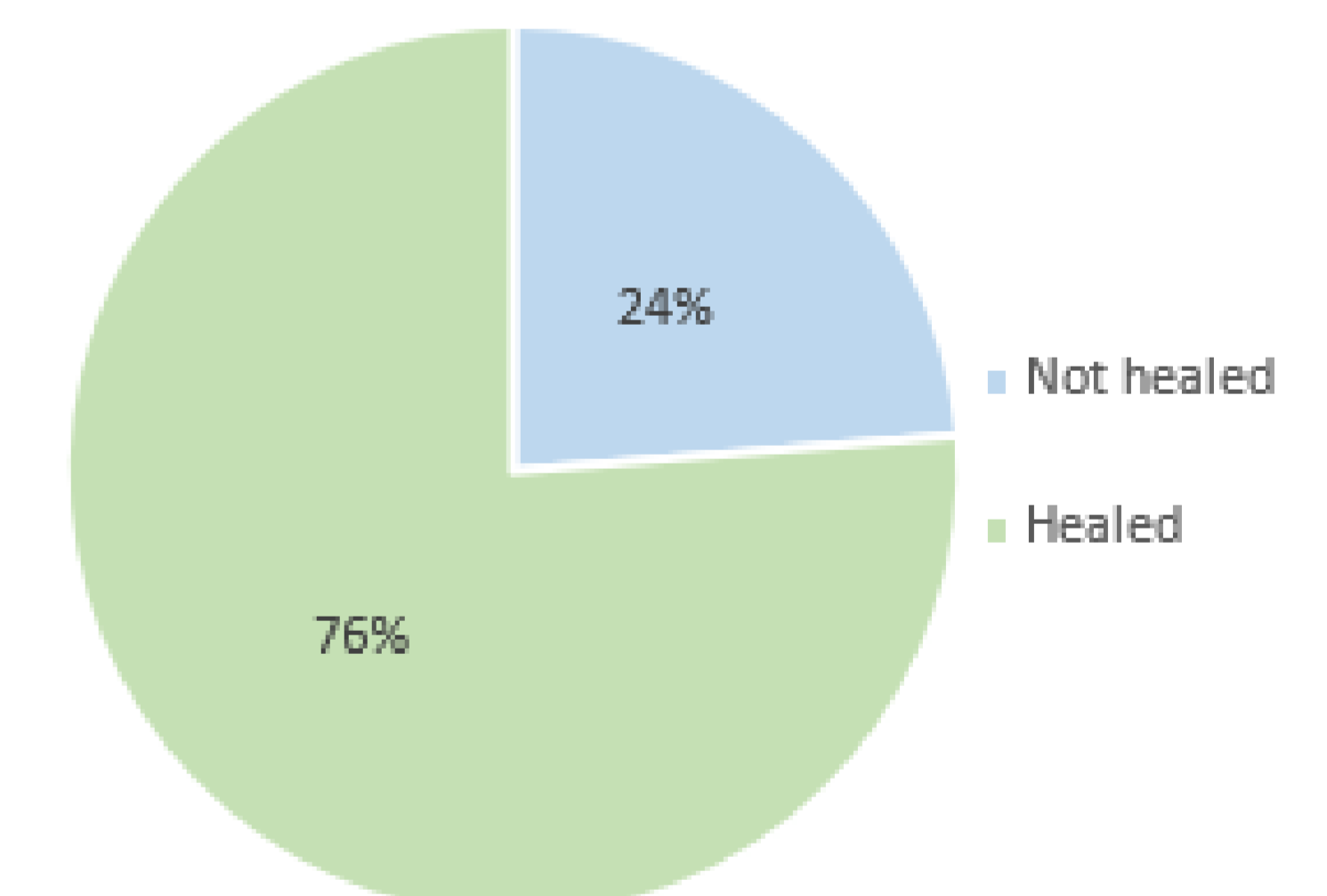
Figure 1: Implementation of new day case pathway reduces cost and day in hospital per patient



The majority of eligible procedures were digital amputations (53%)



45 patients (76%) were healed within six months



DISCUSSION

- Reduced number of bed days with associated system cost savings for same-day surgical procedures in diabetes related foot complications
- Increased access to preventive surgical procedures may reduce the risk of for further deterioration or delays in receiving care
- The application of a day pathway for amputation, may increase availability of acute hospital admissions by improving the utilisation of surgical services

CONCLUSION

The day case pathway reduces the length of stay and cost of surgical procedures. This model is of great benefit to the organisation and community by providing more access to acute beds, as well as personal benefits to patients by avoiding the need for overnight hospitalisation.

References:

1. Based on South Australian Population Health Survey customised extract 2020, Prevention and Population Health, SA Health, Adelaide, 3 February 2020.
2. Wellbeing SA, Lower Limb Amputations in South Australia

Acknowledgments: Thank you to the Vascular Surgery department, perioperative nursing unit and Podiatry Department at the Royal Adelaide Hospital in supporting this new initiative.