Ambulatory High Risk Foot Services

Initiative Type

Model of Care

Status

Deliver

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http://staging.clinicalexcellence.qld.gov.au/improvement-exchange/ambulatory-high-risk-foot-services

Summary

This ambulatory high risk foot service (HRFS) project highlights how investment in quality ambulatory HRFSs improve outcomes for people with diabetes-related foot disease. Three areas in particular have been targeted as part of the initiative:

- Queensland High Risk Foot form data became mandatory for all ambulatory HRFSs using the

Measurement Analysis and Reporting System (MARS).
- Ambulatory HRFSs models of care were redesigned to meet evidence-based quality of care indicators.
- A Statewide Podiatry Telehealth Service was established to provide access to care in the absence of local services.

Investing upstream in ambulatory HRFSs provided timely evidence-based care, which has resulted in service efficiencies through quicker healing times and decreased major amputation and associated costs downstream in an inpatient setting. Approximately 63% of HHSs expended their allocated investments in HRFSs by end 2018-19 and about 94% of HHSs by 2020-21 (The Covid-19 pandemic had some impact on provisions in 2019-2020 and 2020-2021 financial years.)

Key dates

Jul 2018

Jun 2021

Implementation sites

All Queensland Hospital and Health Services, excluding Children's Health Queensland

Partnerships

Patient Safey and Quality Unit and Healthcare Purchasing & System Performance Division

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Aim

To improve timely access for Queenslanders to ambulatory high risk foot services and reduce hospitalisation, disability and amputation burdens of diabetes-related foot disease.

Benefits

Significant improvements in HRFS care found in 2020-21, compared to pre-program in 2017-18, were:

- waiting times for new foot ulcer patients halved
- foot ulcer patients seen doubled
- foot ulcer patients received more evidence-based care
- foot ulcer patients healing time halved
- public foot ulcer hospitalisation rates remained stable
- major lower limb amputation rates decreased by a third.

Background

Diabetes-related foot disease (DFD) is a leading cause of Queensland's hospitalisation, amputation and disability burdens, which have been shown to be significantly reducible with timely access to quality ambulatory care (Reference 1,2). Up to 34% of people with diabetes will develop a diabetes-related foot ulcer (Reference item 3), and without good care approximately 20% of those people will require hospitalisation and about 50% of those an amputation. To improve access for new foot ulcer or acute Charcot foot referrals, the Queensland Department of Health (DoH) invested in 2018 a total of $3.28M of new recurrent funding, increasing to $4.74 million in 2019-20 for the improved provision of ambulatory high risk foot services (HRFS). A set of key performance indicators (KPIs), activity targets and data collection tool were conditions attached to the recurrent funding.

Solutions Implemented

- Recurrent $4.7M investment increased the ambulatory HRFS workforce, which resulted in improved access to the service.
- This allowed for the implementation of specific solutions (as described in Summary Section i.e. redesign models of care, mandatory data gathering, and Podiatry Telehealth Service).

Evaluation and Results

Despite the variation in HHS models of care and challenges to implementation, there have been significant improvements across the state since the investment in ambulatory HRFSs in 2020-21 compared to 2017-18 for:

- Wait Times: 71% increase in new foot ulcer patients seen within best practice wait times
- Patients Seen: 100% increase in the average foot ulcer visits provided each month
- Care Quality: 28% increase in foot ulcer patients receiving best practice care (e.g. offloading treatment)
- Short-term Outcomes: 43% decrease in median time to healing of foot ulcer patients
- Medium-term Outcomes: DFD hospitalisation rates in public hospitals remained stable
- Long-term Outcomes: 29% decrease in major lower limb amputation rates.

Lessons Learnt

- The effective role of an evidence-based quality-of-care performance measure in addition to an activity-based indicator to direct health services in improving patient outcomes.
- The need for a long-term workforce strategy to address the chronic issues impacting a small discipline like Podiatry to recruit and retain staff particularly in regional and rural areas.

References

1. Lazzarini PA, Gurr JM, Rogers JR, Schox A, Bergin SM. Diabetes foot disease: the Cinderella of Australian diabetes management? Journal of Foot and Ankle Research. 2012;5(1):24. 2. Lazzarini PA. The burden of foot disease in inpatient populations [PhD thesis]. Brisbane: Queensland University of Technology, 2016. https://eprints.qut.edu.au/101526/ 3. Armstrong DG, Boulton AJM, Bus SA. Diabetic Foot Ulcers and their Recurrence. N Engl J Med 2017; 376:2367-2375. 4. Boulton,

AJM, Kirsner RS, Vileikyte L. Neuropathic Diabetic Foot Ulcers. N Engl J Med 2004; 351:48-55. 5. Singer AJ, Tassiopoulos A, Kirsner RS. Evaluation and Management of Lower-Extremity Ulcers. N Engl J Med 2017; 377:1559-1567.