

CASE STUDY

Modelling the Demand for Endoscopy Services in Queensland

Evaluation model of Endoscopy Services Produced for Queensland Health – with Recommendations for Innovation

THE PROJECT

Queensland has experienced a steadily increasing demand for public endoscopy services, driven by population growth and ageing, as well as by the 2006 introduction of the National Bowel Cancer Screening Program (NBCSP). Endoscopic waiting lists have expanded and many Hospital and Health Services (HHS's) are now unable to see all patients within the clinically recommended time frames.

In 2016, Queensland Health identified an increasing pressure on endoscopy services and recognised a need to predict demand for future services as well as identify solutions to prevent an ongoing increase in wait list times.

AUSHSI'S ROLE

Focusing on its two largest HHS's (Metro North and Metro South), Queensland Health engaged AusHSI to conduct an analysis of its endoscopy system, forecast the impacts of future endoscopic demand and identify efficient ways to reduce waiting list times

In this way, AusHSI created a model of Queensland's endoscopy system that captured the major pathways that patients experience. It was tailored to reproduce general waiting list sizes, times, and other related statistics. AusHSI then used the model to test possible changes to endoscopy services, with the most important focussing on the effect of additional procedures on waiting list sizes and times.

OUTCOME

AusHSI produced a model that was able to identify the number of procedures that would be required per week to rapidly improve waiting times and waiting list sizes within 18 months and remain within target for a significant period of time. The model allowed estimates of the future costs and Quality Adjusted Life Years (QALYs) to be produced under a range of plausible scenarios.

Using results from the modelling, AusHSI was able to recommend a minimum number of procedures per week for Metro North and Metro South HHS's to sufficiently manage wait times in the future, while ensuring the costs associated with increased procedures remained of value in terms of improved patient outcomes. The modelling also showed that by achieving this minimum number of procedures, Queensland Health could expect to see an increase in QALYs, demonstrating that it would be a valuable investment in terms of health outcomes.

AusHSI's findings and recommendations contributed to the planning of Queensland Health's Endoscopy Action Plan which will invest \$160 million over four years to deliver more services and improve access across the Queensland Health system.

AusHSI

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innovation to life*

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