

## **Entry Title**

### **Toowoomba Hospital Specialist Outpatients Demand-Capacity Model**

Team being nominated: Dr Sheila Cook (Physician, Head of Department of Medicine), Dr Ross Sellars (Physician), Dr Pradeep Narayanan (Cardiologist), Dr Jason Denman (Senior Medical Officer), Tracey Simmons (NUM MU1), Brett Mendezona (A/Nursing Director), Caroline Rae (CNC Cardiac-Respiratory), Kristy McLean (Administration Officer), Clinical Measurements and Medical SOPD staff.

## **Award Divisions**

### **Divisions:**

Project Award

### **Category for Project Awards**

Queensland Health Award for Excellence in safety and sustainability

## **Abstract**

Historically the Specialist Outpatient system has been designed to expect and manage lengthy delays for patients to access an appointment with a specialist.

At Toowoomba Hospital, a committed team with a strong vision for patient-focused services, and a desire to reduce waste in their clinician's day, adopted lean thinking principles and undertook a diagnostic body of work to design and develop a new system and a new model of care for Specialist Outpatient services.

Working closely with the support and assistance of the local division of GPs – GP Connect – the Toowoomba Hospital Demand-Capacity Model was launched, which sets up a system to ensure 100% of last month's referrals are seen this month; and therefore ensuring no patient waits longer than 4 weeks for their appointment.

To date, achievements have exceeded initial targets set, and have demonstrated sustainability over time. The initial phase has focused on medical clinics, seeing cardiology waiting list numbers reduce from 556 to 86 patients, and respiratory waiting list numbers reduce from 239 to 0 in 6 months. Patients who were once waiting up to 18months for an appointment are being seen routinely within 4 weeks.

## **Aim**

To challenge the status quo of the system, and design and implement a new specialist outpatient model which resolves the imbalance between referral demand and organisational capacity to meet that demand; ensuring the system routinely provides access to patients within 4 weeks: every patient, every time.

## **Nature of the problem**

The Specialist Outpatient Service at Toowoomba Hospital was experiencing similar service strain to many public hospital outpatient settings, with long patient waits and inefficiencies in processes across the service.

In July 2008, as part of a whole-of-service review of access and efficiency, it was identified that 945 patients were waiting to access general medicine, cardiology and respiratory clinics.

New incoming referrals were consistently exceeding the capacity of appointments, and the backlog of waiting patients was continuing to grow over time. The risk to these patients who were unable to access services in a timely manner was identified as a key priority for the service as part of a suite of improvement initiatives.

## **Extent of the problem**

Data indicated the cardiology and respiratory outpatient waiting lists were 556 and 239 respectively in the July quarter 2008.

Referrals were not being categorised in a timely fashion, with up to 50 unclassified referrals awaiting classification. The cardiologist was spending large amounts of his own time categorising referrals, which meant his time was not being utilised assessing and seeing patients.

Category 2 & 3 cardiology patients were waiting up to 18 months for an appointment, and Category 2 respiratory patient were experiencing delays of up to 6 to 12 months for an appointment, with Category 3 Respiratory patients being unlikely to be seen at all.

## **Strategic importance**

Queensland Specialist Outpatient services are critically important to consumers, the community, and to our partner General Practitioners, providing over 9 million occasions of service per annum. Demand for this service has grown significantly in recent years, with more than 143, 940 patients waiting for an appointment with a specialist in Queensland Health in March 2007.

In 2005 Queensland Health commenced a wide range of reforms to the public health system, with the reform of outpatient services and improving access for patients being an identified key priority area.

The Toowoomba Hospital Specialist Outpatient Demand-Capacity Model forms an important strategy within the Toowoomba Hospital Operational Plan, and the principles of the model are currently being transferred across the service to other areas where patients are experiencing waits, such as endoscopy.

## **Planning and implementing solutions**

The clinical team worked closely together, having early morning weekly stand-up accountability sessions to ensure the body of work was progressed with early traction through dedicated focus and effort.

A diagnostic phase was undertaken to assess waiting list numbers, regular data and reporting requirements, work flow and work processes. Techniques utilised included lean thinking principles, clinic mapping exercise, time-in-motion studies, international benchmarking, data analysis, and setting specific stretch targets.

The Demand-Capacity Model was quickly developed following the diagnostic phase. The model focuses on ensuring the mean weekly demand for each clinic is established, and the system capacity is made to routinely match that demand. The system dictates a go-live date for the new system, with a simultaneous targeted strategy for the back-log. This technique avoids the compound effect of further back-log or waiting list growth whilst waiting lists are being addressed. It also ensures the important cultural mind-shift of an outpatient system that does not accept delays is quickly influencing the day-to-day work practices and expectations of clinicians.

Strategies utilised to reduce demand and increase capacity to ensure demand routinely equalled capacity were:

- Streamlining clinic processes;
- Implementation of referral guidelines for each clinic;
- Nurse categorisation of cardiology/respiratory referrals utilising a cardiology categorisation algorithm;
- Assessment of workflow of the cardiologist and all members within the outpatient team, with subsequent re-engineering of tasks;
- Nurse initiated clinics for category 2 and 3 patients;
- Development of management protocols for specific conditions;
- Intensive once-off block scheduling of exercise stress tests to reduce backlog.

Working closely with the local Division of GPs – GP Connect – ensured that early communication and consultation with the core referral source was established and effective. This relationship enhanced the final product and enabled early wins to be demonstrated and shared.

## **Outcomes and Evaluation**

The incoming referrals now equal patients seen month to month for both cardiology and respiratory clinics.

The cardiology waiting list has now reduced from 556 to 91 in March 2009. It is forecast to be zeroed by June 30, 2009. The Respiratory waiting list was zeroed from 239 on the 23/12/09 and is now in monthly maintenance mode. This total means of the 799 initial waiting for an appointment for the 2 focus clinics, now only 91 remain on the waiting list.

The General Practitioner community has communicated increased satisfaction due to the real change occurring in the waiting lists, and subsequent increase in access to specialist outpatient consultation for their patients. The GP-Hospital partnership and

working relationships have been enhanced and continue to strengthen through this and other similar processes.

Staff working within the area have expressed significant increase in satisfaction with their work day, and readily report the sense of reward with the improvement for patients with access to services.

### **Sustaining change**

Sustaining change is best evidenced by the trends on the embedded xls document for medical outpatients. The core project team ceased as of December 2009. The processes put in place continue as part of routine day-to-day practice and are continuing to demonstrate positive outcomes.

Transformational leadership strategies have been embedded within the team, including techniques such as bringing key clinicians together weekly to ensure a responsive approach to real-time decision making on demand is met and exceeded, thus never allowing a backlog to develop again.

Policy, procedures and workplace instructions have been developed to ensure formalised processes were in place for sustainability.

### **Future Scope**

The Toowoomba Hospital Specialist Outpatient Demand-Capacity Model and backlog management strategy has applicability and transferability to be spread state-wide as a best-practice model to other Queensland Health Outpatient services. The model also has potential to be applied to any service that has a demand for service that outweighs the capacity to meet that demand.

The model is currently being shared with other outpatient facilities across the state, with other hospitals undertaking site visits at Toowoomba to learn from the model implemented.

The development of a toolkit and implementation guide would assist in outlining the steps to undertake the processes, and facilitate broad application across the state.