# Appendix B: International case study – Alfred Health[1]

## Summary

- New model of delivery of elective surgical services designed specifically to provide consistent quality of care and good operational performance
- Model is based on a high degree of standardisation:
  - clarity on complexity/casemix which the centre can accommodate – with higher complexity patients treated at the tertiary hospital (separate managerial structure but single financial entity)
  - 168 protocols for all major pathways
  - defined expected length of stay for all major pathways (usually 3 days maximum)
  - perioperative co-ordinators responsible for theatre scheduling (rather than individual surgeons) with suite of theatre scheduling tools and analytics
  - streamlined preadmission assessment process
  - completely ring-fenced resources (theatres, beds, teams) which cannot be requisitioned by emergency patients
  - defined cultural norms including a 'no hospital-initiated cancellations' policy

## Delivery model

- A public sector multi-specialty elective-only centre with fully dedicated management and resources, co-located with a large teaching hospital providing emergency and specialist elective care
- Surgeons work across both organisations (the elective centre and the teaching hospital)

## Background and history

- Opened in 2007 to address issues at the tertiary centre (The Alfred) including:
  - long waiting times for elective surgery
  - frequent cancellation or postponement of elective surgery due to prioritization of time-critical emergency surgery

## Health system context

- Australian national public health insurance scheme, Medicare, provides universal health coverage but private insurance is encouraged through taxation and subsidies
- Mix of public and private hospitals serving all insurance groups
- State governments have relatively high degree of autonomy in administration of health services

[1] This case review was externally commissioned. Sources included site visits, interviews and review of company reports/information systems. Specific additional sources are given where appropriate.
MJA (2011) Streamlining elective surgery care in a public hospital: the Alfred experience www.mja.com.au/journal/2011/194/9/streamlining-elective-surgery-care-public-hospital-alfred-experience

AlfredHealth

# Streamlining elective surgery care: Alfred Centre

## 1 Background

### Setting

- Melbourne, Australia
- The Alfred, a major tertiary hospital: Australasia's largest designated trauma service and elective surgery provider for state of Victoria

### Case for change

- Long waiting times for patients requiring elective surgery
- Frequent cancellations of elective procedures due to prioritisation of time-critical emergency surgery
- Hospital initiated postponement (HIP) of almost 30%

## 2 Initiative details

### Approach

- Clinical process redesign to streamline perioperative services initiated in 2006
- Construction of Alfred Centre, a separate dedicated elective surgery and procedural facility co-located on hospital site
- Primary aims of redesign to:
  - improve timeliness of patient care, specifically by reducing HIP rates and decreasing number of patients waiting for elective surgery beyond nationally recommended waiting periods
  - increase hospital's surgical treatment capacity

### Process

- Surgical care separated into streams to increase service efficiencies:
  - specific areas of Alfred Centre and main Alfred Hospital set aside for emergency, elective short stay (<3 days) and elective long stay (>5 days) streams
- Surgical care model standardised and protocol led:
  - model revised to incorporate patient screening and allocation to appropriate wards by team of perioperative co-ordinators; one-day attendance at preadmission clinic for presurgical evaluation; and co-ordination of individually tailored discharge support before admission
- Structure of clinical leadership and dedicated management modified to co-ordinate all components of new service:
  - perioperative services manager and co-ordinators appointed for each surgical unit

## 3 Impact

### Timeliness of care

- 45% decrease in numbers of Category 2 patients (semi-urgent) waiting longer for surgery than the recommended time of <90 days[1]
- Decrease in combined HIP rate for planned elective admissions from 28% to 6%[2]
- Reduction in median time to time-critical non-elective surgery at main Alfred Hospital as a result of dedicated stand-alone facility for elective surgery

### Length of stay

- Reduction in combined LOS for top surgical DRGs from mean of 4.8 days to 2.3 days[1]
- Increase in proportion of successful same-day discharges from 83% to 95%[1]

### Capacity to manage demand

- Increase of 70% in number of patients admitted to Alfred Hospital per month for elective surgery[3]

### Morale and satisfaction

- Improvement in morale among medical, surgical and nursing staff[4]
- 100% satisfaction with new preadmission process among short-stay elective surgery patients[5]

[1] Between February 2005 and 2010

[2] Between February 2005 and 2010; by February 2011, HIP rates at Alfred Centre and main Alfred Hospital were <1% and <7%, respectively

[3] Between quarter ending 30 September 2005 and the same quarter in 2009; establishment of the Alfred Centre and segregation of the surgical teams have enabled protection of the hospital's elective surgery capacity, resulting in fewer cancellations of elective surgery when emergency surgery peaks occur

[4] Based on informal surveys of Alfred Centre staff following implementation of new care model

[5] Based on telephone follow-up from September 2008

MJA (2011) Streamlining elective surgery care in a public hospital: the Alfred experience. www.mja.com.au/journal/2011/194/9/streamlining-elective-surgery-care-public-hospital-alfred-experience

# Alfred Health has three centres carrying out surgery, each serving different patient acuities and morbidities

## Alfred Centre

- 5,747 theatre cases in 2013
- 4,734 procedural cases in 2013[1]

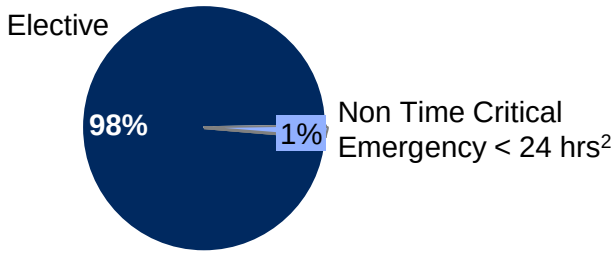
## Alfred Main

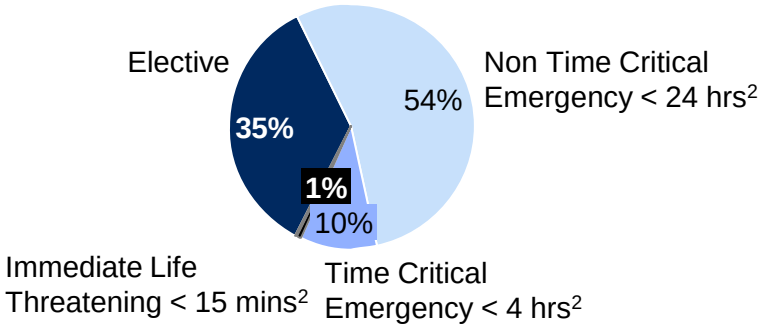
- 9,774 theatre cases in 2013

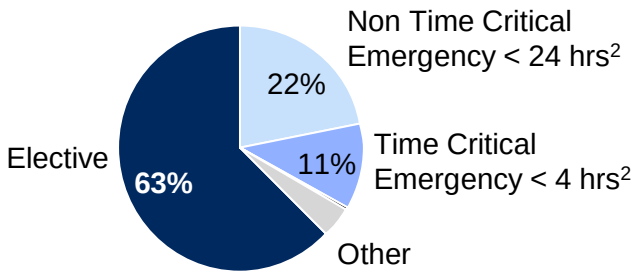
## Sandringham

- 3,243 theatre cases in 2013

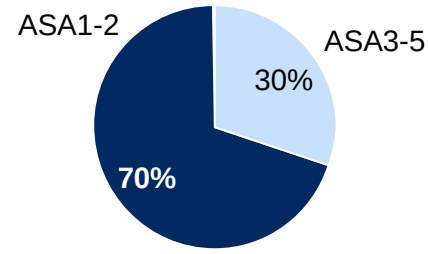
### Acuity of cases in 2013

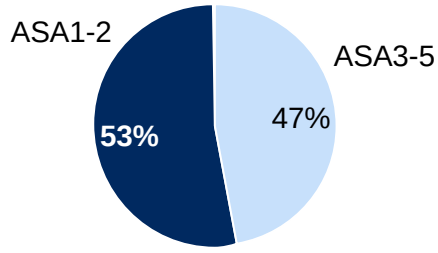


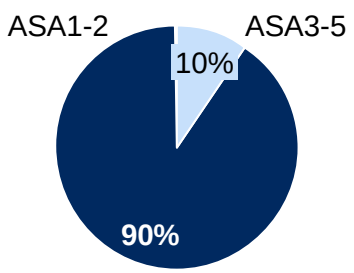




### Morbidity of cases in 2013




ASA, American Society of Anesthesiologists scoring system to rate the medical fitness/complexity of patients requiring surgery. 1 is least complex; 5 is most complex..

[1] Procedural cases not shown in comparison of acuity and morbidity

[2] Indicates timeframe in which emergency treatment/surgery required

# Vision for the Alfred Centre was solidly based on the an enhanced model of care

| Principles | Expected outcomes |
|---|---|
| • Focus on patient's journey | • Patient-centred care<br>• Optimised patient safety<br>• Reduced waiting times |
| • Standardise clinical care | • Protocol-based care<br>• Effective work processes/clinical pathways<br>• Multi-disciplinary team approach |
| • Efficient, 'one-stop' preparation for elective surgery | • Focus on short-stay elective surgery patients (within the maximum stay of 3 days)<br>• No cancellations initiated by the organisation<br>• Scheduled individual appointments |
| • Support new skills and multi-skilling | • Training in work change management<br>• 'Skills where skills are required' – expanded scope of practice<br>• Promotes a true multi-disciplinary team |
| • Commitment to IT innovation | • Embrace IT innovations and adapt work practices to maximise e-resources<br>• Strive towards a paperless environment<br>• Electronic automated processes optimised |

MJA (2011) Streamlining elective surgery care in a public hospital: the Alfred experience www.mja.com.au/journal/2011/194/9/streamlining-elective-surgery-care-public-hospital-alfred-experience

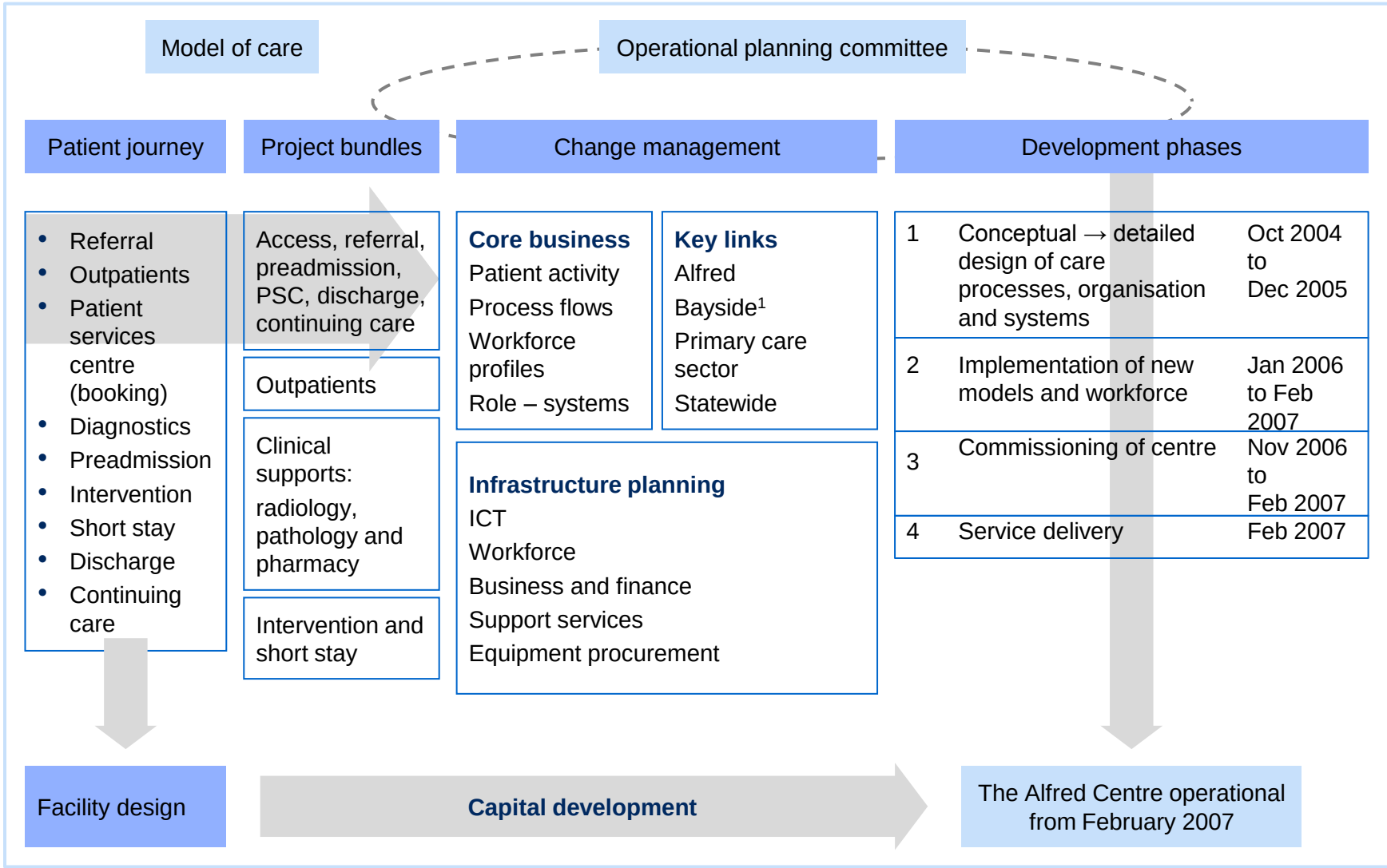
AlfredHealth

# A phased planning approach was adopted in setting up the centre

| Planning | Key elements | Comments |
|---|---|---|
| **Service plan** | • Future growth, changes<br>• Technologies and new ways of working<br>• Service elements and activity forecasts<br>• Base document to guide planning parameters | • Must precede other elements of planning and can be integrated with model of care considerations |
| **Model of care** | • Articulation of service vision<br>• Research and case/evidence for change<br>• Best practice and innovation of best practice<br>• Clear-cut model of care enunciated<br>• Principles which drive and guide decisions | • Must stretch the imagination beyond today's ways. There are numerous examples of best practice. The care model should be the driver of what is planned |
| **Master plan** | • Site options<br>• Evaluation methodology for objective decision-making<br>• Forward looking and strategic | • What does the model require, what are the options and which is the best when all facets are taken into account |
| **Service models and options** | • Set of options to deliver the new care model as envisaged<br>• Capital and recurrent costs<br>• Options prioritised on quality and feasibility | • Model needs to be configured and there may be options, cost restraints, etc. What are the options and how to select? |
| **Design** | • Based on the planned model of care, business plan, strategic visions and identified options<br>• ICT built into the design | • How does the facility/service serve the patients as priority and support the staff to provide best possible care? |

MJA (2011) Streamlining elective surgery care in a public hospital: the Alfred experience www.mja.com.au/journal/2011/194/9/streamlining-elective-surgery-care-public-hospital-alfred-experience

# An operational planning framework spanned the two and a half-year development journey

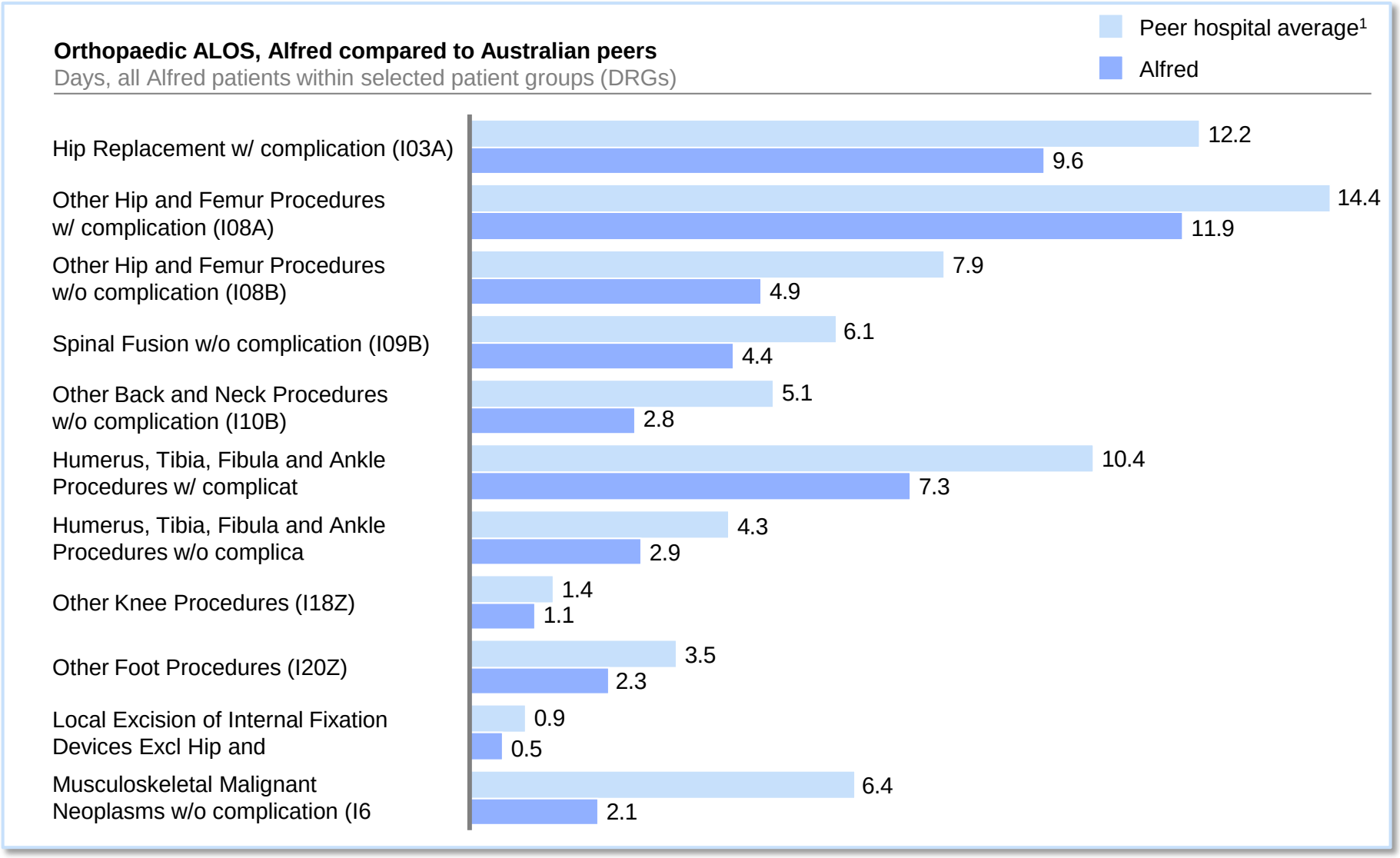



[1]Local public sector commissioner

MJA (2011) Streamlining elective surgery care in a public hospital: the Alfred experience www.mja.com.au/journal/2011/194/9/streamlining-elective-surgery-care-public-hospital-alfred-experience

AlfredHealth

# The Alfred Centre has a shorter average length of stay (ALOS) than Australian peer hospitals across a range of orthopaedic procedures

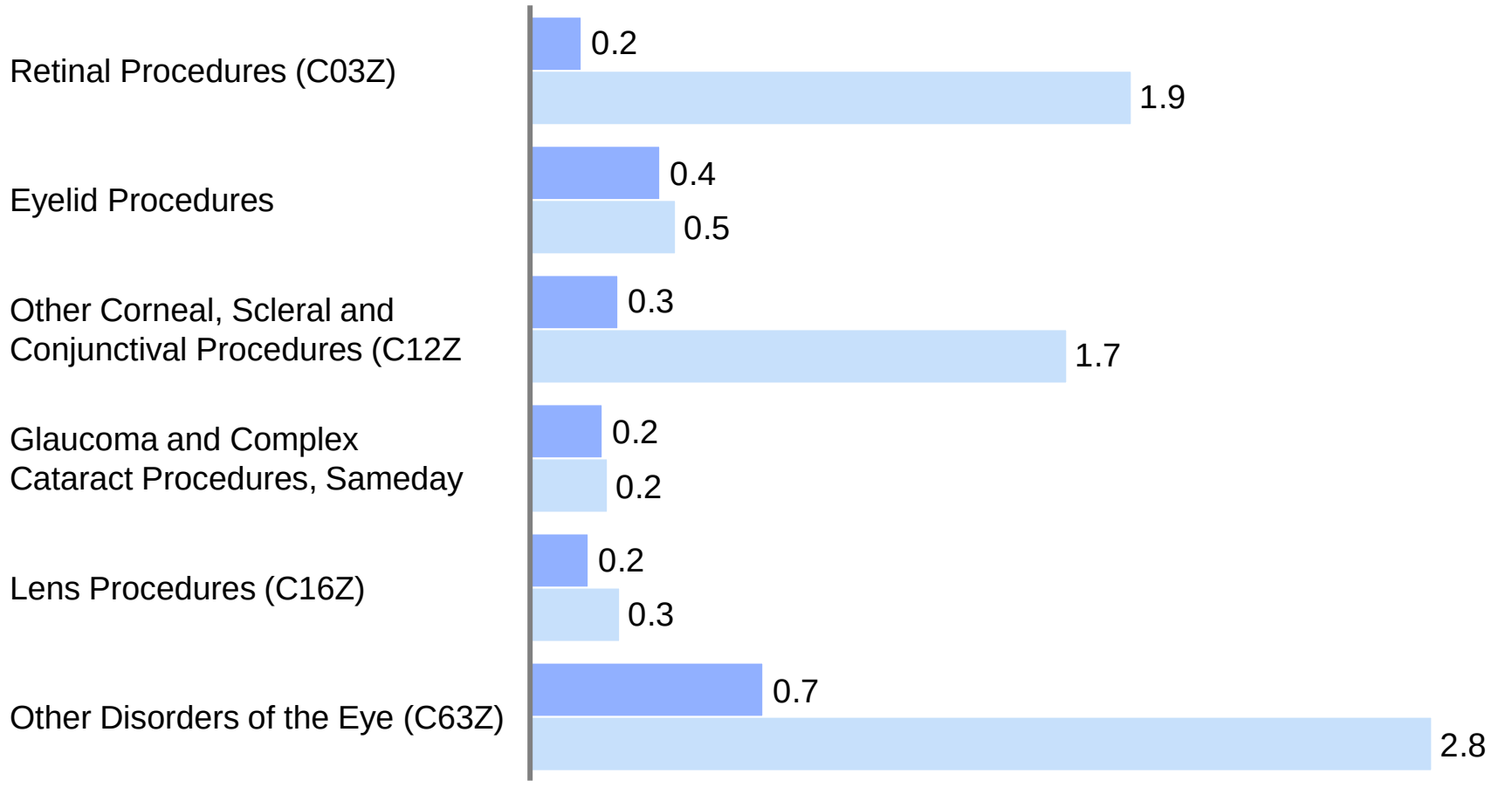



[1] Interstate benchmarking data of risk-weighted ALOS, 2013/14

# Similar performance is seen in ophthalmology

## Ophthalmology ALOS, Alfred compared to Australian peers

Days, all Alfred patients within selected patient groups (DRGs)




[1] Interstate benchmarking data of risk-weighted ALOS, 2013/14

# Newly-created perioperative co-ordinator role helps to streamline preadmission processes

## Perioperative co-ordinator role responsibilities

- Participation in the patient preadmission process including attending unit-specific outpatient clinics and preadmission clinics, ensuring relevant preadmission documentation is completed
- Ensuring the 'Health Questionnaire' is completed and reviewed to determine the need for anaesthetic consultation or other interdisciplinary referral, and co-ordinate relevant appointments
- Ensuring relevant preadmission investigations and referrals are executed as per agreed protocols with the anaesthetic department (as required) and surgical unit, and triaged to the appropriate person, ensuring the results of investigations and referrals are available to the surgical unit and broader multidisciplinary team as per agreed protocols and readily accessible on the morning of admission
- Ensuring the summary screening tool is complete and available on the day of admission
- Determining patient's community service requirements post discharge and pre-empt this through flagging or booking the required services

### Key performance measures

- 100% satisfaction with preadmission process among short-stay elective surgery patients
- Increase of 70% in number of patients admitted to Alfred Health per month for elective surgery through establishment of a dedicated centre

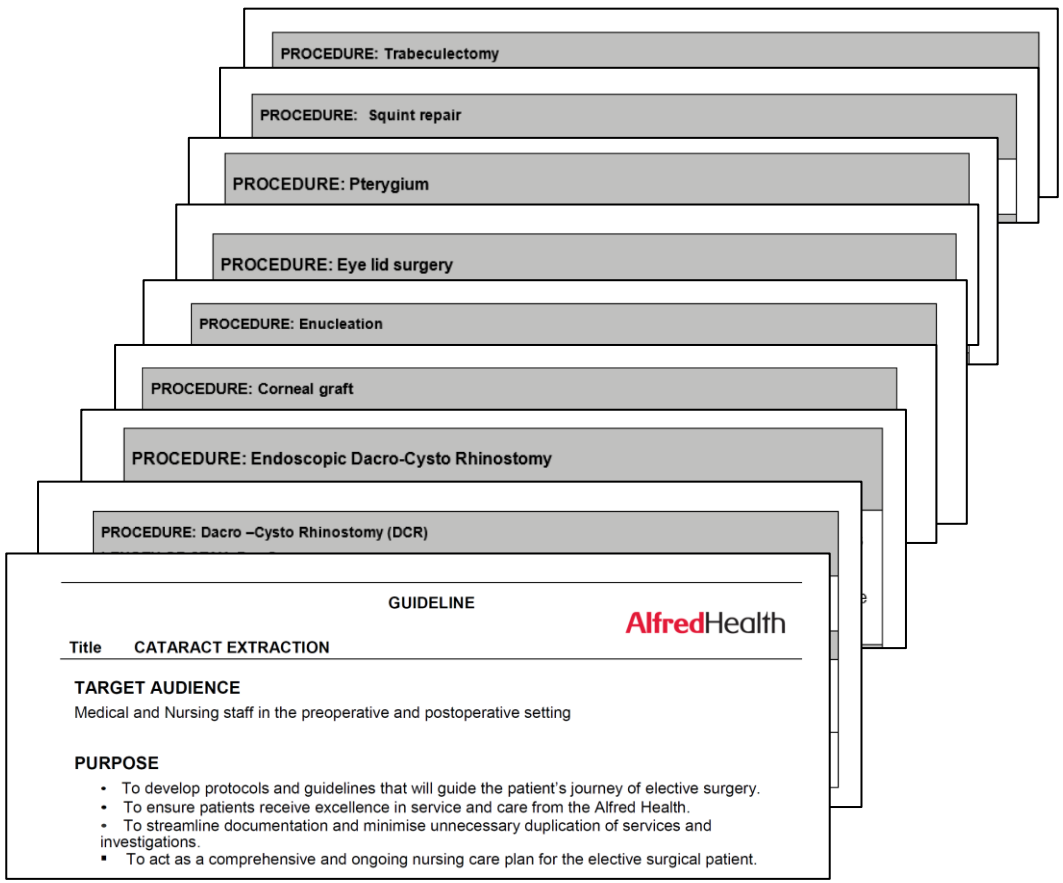
### Enablers

- Tight co-ordination between perioperative co-ordinators and patient services centre clerks
- Dedicated resources for each clinical unit working across all sites
- Co-location in centralised area
- Regular trouble shooting with the clinical service director for surgery, perioperative and outpatient services

MJA (2011) Streamlining elective surgery care in a public hospital: the Alfred experience www.mja.com.au/journal/2011/194/9/streamlining-elective-surgery-care-public-hospital-alfred-experience
ershireglaucomasupport.co.uk/

# The Alfred has developed and fully embedded more than 160 best practice pathways

## Alfred Centre best practice pathways in ophthalmology




### Benefits

- Defines best practice care across the patient journey
- Clearly defines roles and responsibilities
- Helps to highlight continuous improvement opportunities
- Facilitates performance discussions if unwarranted variation arises

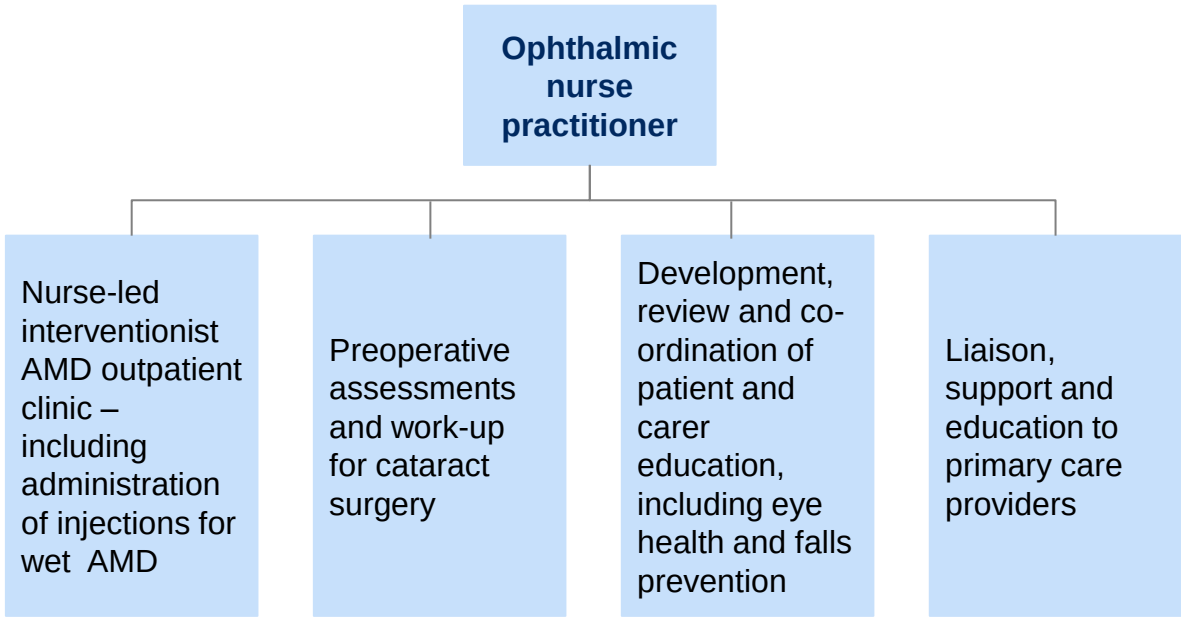
### Enablers

- Clinician engagement to define pathways
- Support to embed pathways, eg perioperative co-ordinators
- Effective leadership and willingness to challenge unwarranted variation in practice

MJA (2011) Streamlining elective surgery care in a public hospital: the Alfred experience www.mja.com.au/journal/2011/194/9/streamlining-elective-surgery-care-public-hospital-alfred-experience
ershireglaucomasupport.co.uk/

# The Alfred has secured approval to create the first extended nurse practitioner role for AMD and cataracts in Australia

## Extended nurse practitioner role in ophthalmology




*Core responsibilities of role*

### Context

- Rapid growth in demand:
  - 150 people accessing AMD treatment service
  - 521 AMD injections delivered in outpatient setting in 2014
  - 87% increase in number of patients being referred for cataract surgery

### Solution

- Funding secured to create first nurse practitioner role for AMD in Australia
- Model of care aligned with the Australian government National Framework for Action to Promote Eye Health and Prevent Avoidable Blindness and Vision Loss

AMD, age-related macular degeneration

# The Alfred has worked with the Australian College of Optometry (ACO) to streamline the cataract pathway

## Community partnership improves access to cataract surgery

**Cataract referral received and triaged**

↓

**Patient is assessed by specialist and placed on list**

↓

**Within first postop week the patient is assessed and a decision on contralateral eye surgery is made and patient is given date**

↓

**Patient has their 3-week postoperative review and any ongoing management by the community provider**

"Patients are discharged from our service but not from our care. Patients requiring a review at the Alfred do not need a new referral to access the system."

Bernadette Comitti, Clinical Service Director - Surgery, Perioperative & Outpatient Services

### Key performance measures

- **50%** of patients operated on at The Alfred are referred to the ACO for postoperative follow-up
- Shift from two to five postop visits to one visit – **reducing waiting time for cataract surgery from 14 to 5 months**
- **0% readmission for infection** from this pathway

### Enablers

- Strong collaboration between Alfred Health and the ACO
- Tailoring model to shift postoperative review to within first week rather postop day 1 to improve outpatient discharge tolerance

# The Alfred's approach to optimizing all aspects of the patient pathway

| GP referral | Outpatient clinic | Patient service centre | Preadmission clinic | Surgery | Bed management | Discharge and continuing care |
|---|---|---|---|---|---|---|
| Development of GP internet site containing referral guidelines including:<br>• when to refer/conditions treated<br>• what investigations are required for referral acceptance<br>• triage priority for each condition | • Attendance in clinic by the surgical unit perioperative co-ordinator<br>• Once decision is made for surgery, patient is assessed, the patient health questionnaire completed and surgical planning commenced | • Co-location of perioperative co-ordinators, waiting list clerks, surgical waiting list patient/GP call centre | • Scheduled 4 to 6 weeks prior to surgery based on perioperative co-ordinator risk screen and clinical protocols<br>• All patients are risked screened prior to booking by perioperative co-ordinator, either via phone or PAC (40% of elective surgical patients attend PAC) | Planned 8 weeks ahead, booked 10 days in advance:<br>• all surgical procedures booked according to average case time (in-built into scheduling system) to ensure session maximisation<br>• no cancellations once scheduled<br>• beds booked at the time of surgery based on protocol length of stay – no bed available, no procedure booked<br>• 96% of elective short stay cases are admitted on day of surgery<br>• surgeons, anaesthetists, junior doctors working across three sites have clear understanding of the model | • Booked at the time of surgery<br>• Patients managed according to protocol length of stay; any deviation discussed with the head of unit and reported quarterly to the theatre reference group:<br>○ 1.3% failed day case rate<br>○ 13% of patients deviate from protocol due to clinical requirements<br>○ 25% are discharged early based on event-driven discharge criteria | • Nursing-led event driven discharge, automated GP discharge summaries<br>• Follow-up phone calls post surgery |

## Enablers

- Development of electronic surgical waiting list tools to assist the perioperative co-ordinator in managing surgical lists and treating in turn
- Daily KPI reports on individual unit performance
- Operating schedule based on an 8-week cycle according to waiting list and emergency demand and session utilisation across three sites
- Perioperative co-ordinator attends surgical unit weekly meetings to discuss list planning and patient management
- Monthly meetings with all heads of unit to discuss unit performance against KPI measures

AlfredHealth

# Operationalising the Alfred Centre's model of care focused on necessary behaviours to implement the transformation (1/4)

| Principle | Descriptor/outcomes | Physical resources to support this | Behaviours required by team members |
|---|---|---|---|
| **Focus on patient's journey** | • Facilities and services provided directly to the patient in a manner that is convenient to the patient rather than convenient to the service<br>• Patient-centred care seen in every interaction between patient and staff<br>• Continuum of care is the focus. As an example, a care plan is developed for each patient admitted<br>• Reduced waiting times and meet KPIs | • Location of facilities is based on patient flows and condition pathways, removing the challenges of disparate services and poor functional relations<br>• IT supports communications with primary care practitioners<br>• As a stand-alone facility with strong links to The Alfred for acute services, The Alfred Centre maintains close working relationships with all services, enhancing the patients' journey<br>• Adequate car parking and ease of access to the building<br>• Online patient information by procedure<br>• Decreased duplication – scheduling clerking requirements, investigations and preparations<br>• Primary nursing enhanced and supported by all staff | • Every patient greeted within a short period of time<br>• Patient remains in one consulting suite with clinicians rotating around the patient, eg in PAC<br>• Staff orientation highlights the type of interactions expected between all staff and patients and their carers<br>• Managers champion processes specific to each area of The Alfred Centre to enhance the patient journey and experience<br>• Staff share a common set of values and a vision that drives the patient's journey<br>• Staff involve the GP, family and carers in the continuum of care |
| **Take a standardised approach to care; plans and schedules care** | • Protocol-based care supporting a standardised approach using multi-disciplinary teams to provide the most suitable treatment to patients<br>• Services focus on effective work processes and clinical pathways for patient and provider convenience<br>• Outcomes determined within the patients' clinical condition in consultation with the multi-disciplinary team | • Patient tracking, electronic documentation (e-discharge summary) and communications with the primary care sector enhance the standardised approach<br>• Promotes efficiencies:<br>  ○ protocol-based care allows consistencies within the systems, predictability and certainty<br>  ○ separation of elective and emergency care<br>• For day surgery, an electronic documentation process will be available for The Alfred Centre patients<br>• Introduces a paperless theatre environment<br>• Outpatient scheduled appointments based on protocols with variations to be audited and actioned | • Managers empower multi-disciplinary teams to implement event-driven discharge based on protocols<br>• For preadmission procedures and postsurgical procedures supported by IT, pharmacy and perioperative co-ordinators access IT applications to begin discharge planning on the morning of surgery, while medical staff, nursing and allied health supplement (as needed) and support predetermined discharge processes<br>• Complete operation notes without documenting postop orders, ie surgeons only need to document variations in the case where a standardised approach (as per the protocol) is not applicable |

# Operationalising the Alfred Centre's model of care focused on necessary behaviours to implement the transformation (2/4)

| Principle | Descriptor/outcomes | Physical resources to support this | Behaviours required by team members |
|---|---|---|---|
| **Separate elective from emergency** | • No cancellations initiated by the organisation<br>• Elective financial targets enhance the separation of elective and emergency surgical cases<br>• Patients admitted to The Alfred Centre are expected to have scheduled admission and discharge within the maximum stay of 3 days<br>• A focus for elective surgery patients<br>• Saturday/Sunday capacity enhanced (where possible) by admitting 3-day LOS patients in the latter half of the working week | • Work has been completed and is now being implemented to run an efficient and effective scheduling centre (PSC) including the PAC (post acute care) redesign, and separation of elective and emergency surgical lists<br>• For endoscopy the procedures can be either elective or emergency and with the relocation of this unit to the Alfred Centre it is planned that after-hours procedures be performed at the Alfred in the usual priority order. The Alfred Centre will support non-elective endoscopy procedures within operating hours | • If a patient on an Alfred Centre list cancels (patient initiated), their space is filled by an elective patient from the 'ready-for-care' pool. In the unlikely event that no 'ready-for-care' patients can be scheduled for the elective list, a patient from the Alfred Main may be scheduled, the procedure completed and the patient then returned to an Alfred Main inpatient bed<br>• If a patient becomes ill and their length of stay (LOS) varies from the predicted LOS, they can only remain at the Alfred Centre if a bed is available and not required. If the bed is required for another booking, the patient is transferred to Alfred Main for their ongoing care. LOS KPIs are provided to unit heads and managers on unit performance in relation to LOS<br>• If beds do become available over a weekend, there is no access to them from the emergency department. In some cases, a Sunday evening stay may be granted to those elective patients commuting from the country as part of their scheduled admission<br>• A key component in managing MADU admissions is the introduction of a MADU co-ordinator to screen referrals and ensure that the maximum LOS is not compromised. The co-ordinator ensures that admitted patients whose medical stay is expected to last >3 days attend at Alfred Main |

# Operationalising the Alfred Centre's model of care focused on necessary behaviours to implement the transformation (3/4)

| Principle | Descriptor/outcomes | Physical resources to support this | Behaviours required by team members |
|---|---|---|---|
| **Provide a 'one-stop' approach to care** | • Promotes a true multi-disciplinary team with co-ordination of medical, nursing and allied health appointments<br>• Scheduled individual appointments across the day and therefore no wait enhanced by the functionality of the centre | • IT scheduling supports the delivery of care, co-ordinating as many aspects of care into each hospital visit and thereby reducing the number of visits required for patients<br>• Direct radiology and pathology referrals for GPs and other clinicians – no patient co-payments<br>• Patient tracking will allow for electronic documentation using the Cerner application due to improved links and interface<br>• Electronic scheduling for outpatients, PAC, theatre, beds, MADU, radiology, pathology and gastro/endoscopy<br>• Ongoing and follow-up outpatient appointments to be scheduled as part of the onsite patient journey. A three-hour turnaround time will be a target KPI | • Perioperative co-ordinators are the key contacts for patients in planning their journey. They support each individual unit and ancillary care in planning a patient's care |
| **Support new skills and multi-skilling** | • Innovative work change management<br>• Managers will place 'skills where skills are required', translating to expanded scope of practice and development of new roles | • Allied health staff (including allied health assistants) provide a multi-disciplinary D/C planning process<br>• IT innovations and 'state of the art technology' (refer to principle "Commitment to IT innovation and 'state of the art' technology") | • Ongoing and structured training including professional development supports staff<br>• Staff work collaboratively with peers using a team-based approach while committing to a set of shared values<br>• HMO training consolidates the understanding that care is standardised, with documentation only being required in the case of a variation |

# Operationalising the Alfred Centre's model of care focused on necessary behaviours to implement the transformation (4/4)

| Principle | Descriptor/outcomes | Physical resources to support this | Behaviours required by team members |
|---|---|---|---|
| **Commitment to IT innovation and 'state of the art' technology** | • Staff embrace IT innovations and adapt work practices to maximise the use of e-resources<br>• Each staff member strives towards a paperless environment<br>• Electronic automated processes are optimised within the centre | • The Alfred Centre has a full wireless network enabling wireless computing and improved clinician mobility<br>• Clinicians take advantage of the latest theatre and radiology equipment, electronic D/Cs and e-pharmacy<br>• State of the art equipment promotes clinical confidence allowing for achievement of predicted LOS<br>• The IT system improvements and software upgrades have supported the redesign of the perioperative processes alongside the establishment of the PSC, and enabled significant workflow efficiencies<br>• An IT staff member is a permanent member of the Alfred Centre team, promoting IT learning, training and development of applications suited to clinical need<br>• RFID innovations for equipment tracking | • Team members use a bigger IT interface for all their work processes<br>• Staff minimise printing of paper-based communications, documents and records<br>• Staff use the intranet and desktop applications as their first port of call within their usual clinical and non-clinical activities |