



GETTING IT RIGHT FIRST TIME *Queensland*

State Report - Orthopaedics
October 2020

A JOINT INITIATIVE

Clinical Excellence
Queensland

Healthcare Purchasing
and System Performance
Division



Queensland
Government

Communication objective

The aim of this report is to share findings from the Getting It Right First Time (GIRFT) Queensland Orthopaedic program with Queensland clinicians, Hospital and Health Service Executive, other Queensland Department of Health stakeholders and Professor Tim Briggs CBE, Chair of Getting It Right First Time (GIRFT) in England and the National Director of Clinical Improvement for NHS England and NHS Improvement.

Getting It Right First Time Queensland – Orthopaedic State Report

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FOREWORD

It has been a great pleasure sharing the journey of the first 12 months of the Getting It Right First Time (GIRFT) Queensland Orthopaedic Program with the team. A program designed with a patient focus, to improve patient outcomes by empowering clinicians, in collaboration with hospital administrators, is an ideal fit with our Queensland Health values.

Approximately 134,000 patients are admitted to hospital for musculoskeletal (MSK) causes each year with MSK disorders being the leading cause of disability, accounting for 23% of the total disability burden in Queensland [1]. The quality of the care provided is of a very high standard, but variation in outcomes, access and cost continue to exist. Identifying what provides the best value for all our patients, within an efficient environment, and decreasing unwarranted variation is the key to long term quality, safe and sustainable care.

The Getting It Right First Time program, originating in the United Kingdom (UK) in 2012, has proven that tackling variations in the way services are delivered and sharing best practice drives improved care and patient outcomes, as well as delivers efficiencies for the public health system. Following the success of GIRFT in the UK and, under the mentorship of Professor Tim Briggs CBE and founder of GIRFT, we have been privileged to partner with GIRFT UK to build on the success of the program through the GIRFT Queensland initiative in orthopaedics.

At its heart, the GIRFT program brings clinicians together to share their own data with their peers and to review and question variation in the care, outcomes and costs of services provided. It was clear from the outset that this program is unique, offering our clinicians an opportunity, through peer review and discussion, to identify improvement opportunities and drive changes from the frontline, not only locally but at a statewide level.

Evidence supports peer-to-peer review as a leading and accepted method of promoting practice change and our program has been successfully owned and led by our orthopaedic clinical leads, Dr Catherine McDougall and Dr Lawrie Malisano, and our orthopaedic surgeons. With active participation from orthopaedic departments across 18 hospitals, I have been thoroughly inspired by the leadership demonstrated by our orthopaedic clinical directors throughout this program and by the spirit of collaboration and enthusiasm from, not only, the directors but also their multidisciplinary teams and Hospital and Health Service management teams and executives, reflecting a strong culture of safety, patient-centredness, integrity and teamwork.

Improvements from a program such as this will take time; however, early evidence also indicates that the program is well on track to achieve its objective of improving patient outcomes and also improving service efficiencies. Some early successes include clinician endorsement of the statewide Infection Prevention in Elective Hip and Knee Arthroplasty Guideline aimed at preventing infection, enabling consistency in care and ensuring equitable access to services for hip and knee arthroplasty surgery. In accordance with this guideline, hospitals are continuing to undertake local improvements such as introducing ring-fenced beds. Furthermore, service efficiencies have been realised as a result of the collaboration made possible through GIRFT, whereby a notable reduction in implant costs of up to 33% for hips and 25% for knees in some hospitals has been observed.

I would like to take this opportunity to thank all of those who have contributed to this program, in particular our clinical leads, Catherine and Lawrie, and the Healthcare Improvement Unit team; our dedicated clinicians and executives for their commitment to the program; the various Departments working behind the scenes to prepare the data packs and administrative teams for arranging site visits; the Surgical Advisory Committee; the Australian Orthopaedic Association; the Royal Australasian College of Surgeons for their support; and, to our partners at the Royal National Orthopaedic Hospital, in particular, Professor Briggs for his mentorship and guidance.

I am very pleased to share this report with you to further highlight the findings, outcomes and achievements of the GIRFT program in orthopaedics, which has been made possible by the ongoing commitment and dedication of our hard-working clinicians and teams across Queensland.

Dr John Wakefield
Director-General, Queensland Health



FOREWORD

I have been delighted to partner with Queensland Health for the first pilot of the GIRFT program outside the United Kingdom (UK) and, from my involvement to date, feel truly encouraged by the hard work and enthusiasm of Queensland Health's clinicians and teams to continually improve care and services across the system.

Since starting the GIRFT program in orthopaedics in the UK in 2012, we have seen it expand to now include 35 surgical and medical specialties across the NHS, and it is now recognised as one of the most important cornerstones for improving quality, efficiency and patient outcomes through tackling unwarranted variation. Following the publication of the first GIRFT national report on orthopaedic surgery, we have seen significant change in orthopaedic practice resulting in better outcomes for our patients. We have seen a significant reduction in length of stay in hospitals for elective procedures as well as a reduction in emergency readmission rates. Revision rates for primary hip and knee replacements have reduced and complex primaries and revisions are now being undertaken within networks, with consultants coming together to provide this service with great success, whilst others have stopped taking on these low volume complex cases. We have seen an annual drop in litigation claims in orthopaedics over the last five years resulting in over £65M of savings. Trusts have also been able to 'ring-fence' more orthopaedic beds, reducing infection and enabling patients to go home sooner. With this also comes increased efficiencies. Since the GIRFT program started in 2012 we have helped save £500M for the NHS by Trusts implementing the GIRFT orthopaedic recommendations. Furthermore we have seen a national reduction in the costs of primary hip and knee replacements by Trusts and clinicians rationalising their implant choice based on sound evidence from our National Joint Registry.

We have had support from all the Royal Colleges and Specialist societies to deliver this program and the engagement by clinicians has been fantastic.

The first step towards tackling variation is strong engagement from both clinicians with support from managers. This requires real leadership with clinicians, who we need to empower, and managers working 'shoulder to shoulder.' I echo Dr Wakefield's testament in that the engagement, commitment and leadership demonstrated by Queensland's orthopaedic clinical directors, their multidisciplinary teams and hospital management has been outstanding, which is reflective in the many positive outcomes and achievements that follow.

I trust that through reading this report, you will come to appreciate how the GIRFT methodology provides a structured and robust quality framework for improving the way we provide care, by engaging with clinicians to deliver clinically driven change and improve patient outcomes, while ensuring the best use of public resources. We must not lose this momentum and must continue to act to optimise how we deliver patient care, become more efficient and reinvest the resultant savings back into our frontline so that we can deal with the burgeoning demand for our services.

I would like to extend a special thanks to Catherine and Lawrie for their leadership, dedication and proficiency as the first GIRFT Queensland clinical leads and trust that their experience and expertise will now enable other specialty groups to adopt the methodology with clinicians engaging and leading change to ensure every patient receives the best possible outcomes.



Professor Tim Briggs CBE

Chair of Getting It Right First Time (GIRFT) in England and the National Director of Clinical Improvement for NHS England and NHS Improvement.



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EXECUTIVE SUMMARY

The GIRFT Queensland program has resulted in unprecedented clinician engagement and collaboration. Between June 2019 and June 2020, the team engaged, both in person and virtually, with 17 orthopaedic departments working across 18 hospitals including over 110 clinicians and 60 Hospital and Health Service (HHS) executives.

As one of the core pillars of the GIRFT methodology, peer-to-peer benchmarked data was presented to each department with a focus on variation for over 50 indicators covering metrics on quality, safety, access and efficiency. Data was obtained from multiple sources and enabled the comparison of individual hospitals to other Queensland public hospitals. Through robust discussion and reflection on the data, orthopaedic departments and the GIRFT Queensland team have identified a range of exemplary practices as well as opportunities for further improvement.

While there were several key findings from the program in terms of variation, the following presented significant areas of opportunity:

- Rates for revision for infection ranged from 0.2% to 1.5% in hip arthroplasty and 0.5% to 2.0% in knee arthroplasty.
- Length of stay for primary hip and knee arthroplasty (minor complexity) ranged from 2.9 days to 4.9 days and 3.2 days to 4.8 days respectively.
- Cemented femoral stems in primary hip arthroplasty patients aged >70 years occurred 20% to 100% of the time.
- Access to dedicated orthopaedic trauma lists varied across sites, from zero lists per week up to 16 lists per week, with access not consistently aligned to demand.
- Average prosthesis costs are 1.6 to 1.8 more than theatre costs (second highest direct cost) with costs ranging from \$3,754 to \$8,269 for hips and \$6,028 to \$11,430 for knees.
- Alignment with the National Elective Surgery Urgency Categorisation Guideline (NESUCG) ranged from 51% to 98%.
- Average time to surgery for hip fracture patients ranged from 31 hours to 82 hours and the length of stay ranged from 4.8 days to 12.7 days.
- 38% to 100% of patients were seen in the clinically recommended time for an initial orthopaedic specialist outpatient appointment.
- Hospital-initiated specialist outpatient cancellations occurred 2.5% to 11.8% of the time.

As a result of findings and discussions from the site visits, over 100 recommendations were developed for local implementation across participating sites. These recommendations fell broadly under the following themes:

1. Arthroplasty optimisation
2. Improving clinical coding, clinical documentation and data quality
3. Prioritising trauma services
4. Clinician-led procurement
5. Alignment to best practice standards (in particular, hip fracture care and clinical urgency categorisation)
6. Alternate care pathways
7. Peer support
8. Learning from litigation
9. Reinvesting in frontline services

In addition to specific findings regarding variation throughout the program, common themes also emerged including:

There is **significant variation** across the state in terms of systems, processes, patient management and, consequently, patient outcomes and costs.



There is **opportunity, evidence and willingness** to explore current prosthesis procurement models to ensure **high value care** by delivering the same outcomes at a lower cost or improved outcomes at the same or marginal increase.



There is opportunity, evidence and willingness to support the development of standard guidelines to improve patient outcomes.



There is inconsistency in the collection and reporting of a **range of data** necessary to enable **accurate and reliable** comparison to support decision-making.



Morale and clinical engagement are directly related.



There is low to moderate confidence in the reliability of admitted patient data due to concerns regarding coding accuracy.



There is a **lack of opportunity and support** for clinicians to engage and network with their peers, resulting in varied practice and isolation.



It is acknowledged that implementing quality improvements and sustainable change takes time and, therefore, full outcomes from the program are not anticipated to be seen until at least 12 months post-implementation. Despite this, a number of sites have committed to implementing local quality improvement initiatives, with early measures indicating positive progress.

The following early achievements of the GIRFT Queensland program are recognised as significant milestones for public orthopaedic services in Queensland:

- Development of a statewide Infection Prevention in Elective Hip and Knee Arthroplasty Guideline.
- Support to progress and implement a clinician-led statewide coding improvement plan for orthopaedics.
- Support to progress a clinician-led, statewide procurement model to optimise the value of care provided in orthopaedics.
- 100% of sites have now accessed their Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) facility reports.
- All sites are now approved to contribute to the Australian and New Zealand Hip Fracture Registry.
- Establishment of the first Queensland Directors of Orthopaedic's Group (QDOG).
- Ring-fenced beds have been endorsed at three hospitals.
- A comparison of the cost of the most commonly used hip and knee constructs demonstrates a notable reduction in implant costs since a new statewide standing offer arrangement was implemented in March 2019; up to 33% for hips and 25% for knees in some hospitals.

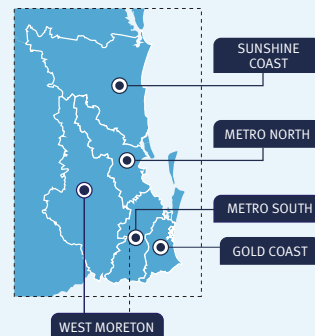
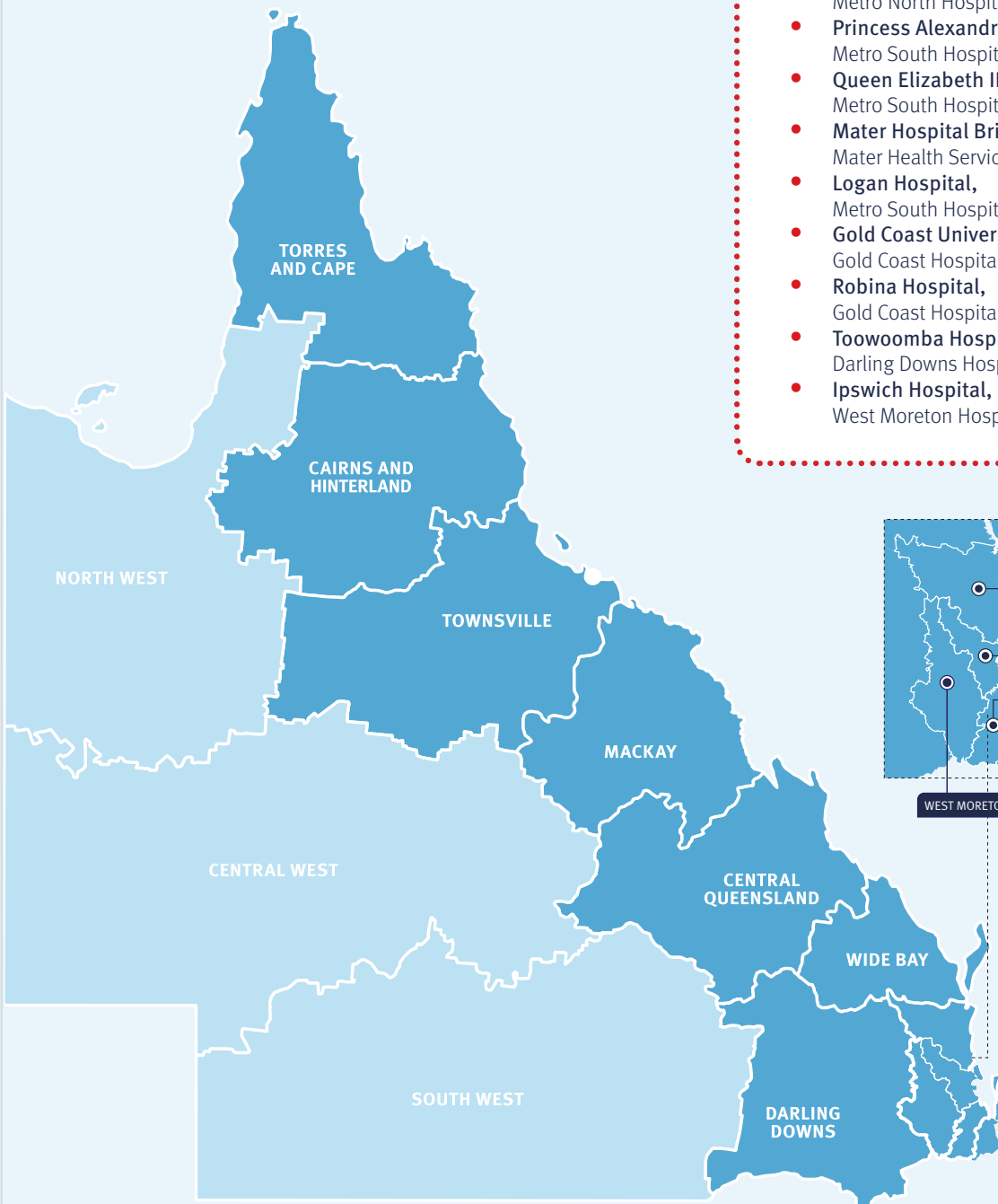
While the above provides a snapshot, the following report provides a detailed overview of the findings, opportunities and achievements of the GIRFT Queensland program in orthopaedics.



GIRFT Queensland Orthopaedic Clinical Leads,
Dr Catherine McDougall and Dr Lawrence Malisano.

PARTICIPATING HOSPITALS

- **Cairns Hospital,**
Cairns and Hinterland Hospital and Health Service
- **Townsville Hospital,**
Townsville Hospital and Health Service
- **Mackay Hospital,**
Mackay Hospital and Health Service
- **Rockhampton Hospital,**
Central Queensland Hospital and Health Service
- **Hervey Bay Hospital,**
Wide Bay Hospital and Health Service
- **Bundaberg Hospital,**
Wide Bay Hospital and Health Service
- **Sunshine Coast University Hospital,**
Sunshine Coast Hospital and Health Service
- **Redcliffe Hospital,**
Metro North Hospital and Health Service
- **The Prince Charles Hospital,**
Metro North Hospital and Health Service
- **Royal Brisbane and Women's Hospital,**
Metro North Hospital and Health Service
- **Princess Alexandra Hospital,**
Metro South Hospital and Health Service
- **Queen Elizabeth II Hospital,**
Metro South Hospital and Health Service
- **Mater Hospital Brisbane,**
Mater Health Services
- **Logan Hospital,**
Metro South Hospital and Health Service
- **Gold Coast University Hospital,**
Gold Coast Hospital and Health Service
- **Robina Hospital,**
Gold Coast Hospital and Health Service
- **Toowoomba Hospital,**
Darling Downs Hospital and Health Service
- **Ipswich Hospital,**
West Moreton Hospital and Health Service



“

The GIRFT initiative by Queensland Health has allowed the orthopaedic departments around the state to collaborate effectively with an exchange of ideas and practices to help improve the overall standard of care for orthopaedic patients in Queensland. Where necessary, the GIRFT team has also facilitated the essential communication necessary between hospital executives and unit directors to establish a fertile ground for positive change where deficiencies have been identified.



INTRODUCTION

Background

The Delivering What Matters in Orthopaedic Care project is an initiative under the 2019 Ministerial priorities program. The project aims to identify and address system-level barriers to optimise value in orthopaedic care for patients, clinicians, and the Queensland public healthcare system.

It was envisaged that opportunities to improve the patient experience and clinical outcomes would be identified through the articulation of a quality framework that supports clinicians to continually deliver high quality services, by understanding variations in care.

A highly successful clinician-led, quality initiative commenced in the United Kingdom (UK) in 2012, reflecting similar purpose, was identified and researched. The Getting It Right First Time (GIRFT) initiative undertaken by the National Health Service (NHS) in the UK, led by Professor Tim Briggs CBE, Chair, GIRFT UK and National Director of Clinical Improvement NHS England and NHS Improvement, demonstrated significant and measurable benefits for patients and the broader public health system.

Following a successful visit to Queensland by Professor Briggs in March 2019, it became apparent that there was relevance for the GIRFT initiative within the Queensland context. To that end, Clinical Excellence Queensland (CEQ) and the Healthcare Purchasing and System Performance (HPSP) Division partnered with the Royal National Orthopaedic Hospital NHS Trust (RNOH) and Professor Briggs to deliver the Getting It Right First Time Queensland program.

Dr Catherine McDougall and Dr Lawrence Malisano were appointed as the orthopaedic clinical leads for the GIRFT Queensland program by the Director-General on 30 May 2019. This report is the summation of the GIRFT Queensland program.

Orthopaedics in Queensland

The most recent population-level data indicates musculoskeletal (MSK) conditions contribute substantially to the disease burden in Australia, accounting for 25% of non-fatal burden of disease [2]. They are the second highest cause of the morbidity related disease burden, with 30% of Australians reporting at least one MSK condition in 2014–15. The prevalence generally increases with age, from 1.0% among people aged 0–14 to 72% among people aged 75–84 and, in 2016–17, there were 536,804 hospitalisations in Australia with a MSK condition as the principal diagnosis [3].

In Queensland, MSK disorders are the leading cause of disability, accounting for 23% of the total burden. High population growth [1], ageing population, high prevalence and obesity and physical inactivity will continue to drive the musculoskeletal burden in the future [6] in Queensland.

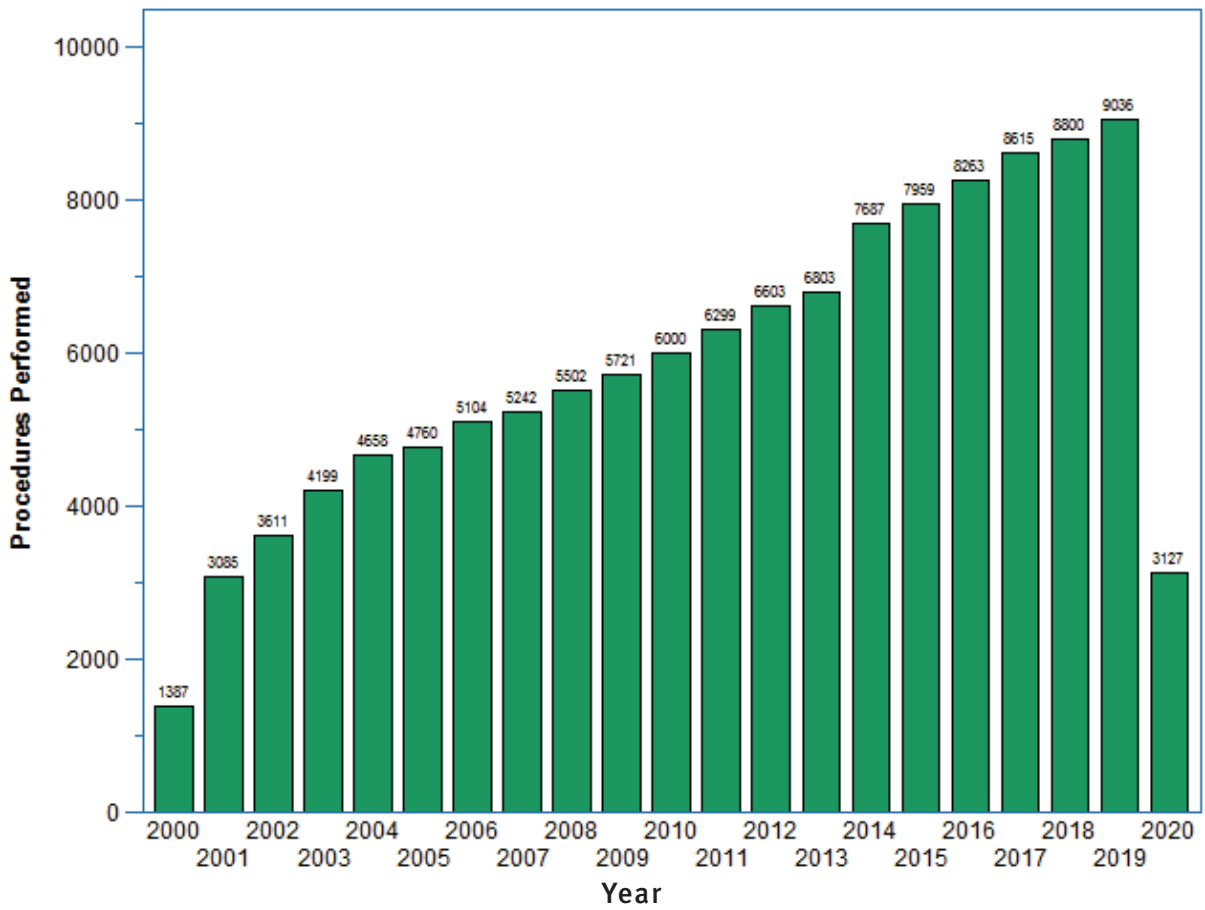
Musculoskeletal conditions have a profound impact on quality of life and wellbeing, due to acute and chronic pain, physical limitations, management of comorbidities and mental health problems [3]. In 2011, back pain and back problems was the largest specific cause of musculoskeletal burden at 29%, followed by rheumatoid arthritis (17%) and osteoarthritis (14%) in Queensland [6].

Arthroplasty surgery for arthritis is acknowledged as a safe and reliable treatment. Queensland undertakes about 20% of all hip and knee arthroplasty surgeries in Australia. The total number of procedures is increasing year on year, with the projected burden of primary total knee and hip replacements for osteoarthritis in Australia estimated to rise by 276% and 208%, respectively, by 2030 [7].

Currently, Queensland public hospitals undertake on average, 105,624 orthopaedic outpatient appointments each year (the highest of all specialist outpatient services) and treat approximately 24,848 orthopaedic elective surgery patients (the second highest of all surgical specialties in Queensland).

Increasing population and life expectancy coupled with an increasing burden of disease and disability is resulting in increased demand for specialist orthopaedic services. Demand is expected to outweigh capacity and, in an ever increasing fiscally challenged environment, health services and clinicians need to ensure optimal use of resources to meet the needs of all Queenslanders. More than ever, clinicians are considering innovative models of care, reducing unwarranted variation and improving outcomes to ensure we can continue to provide sustainable, patient focused and quality outcome driven services.

Number of hip replacement procedures performed in Queensland by year, 2000-2020



Number of knees procedures performed in Queensland by year, 2000-2020

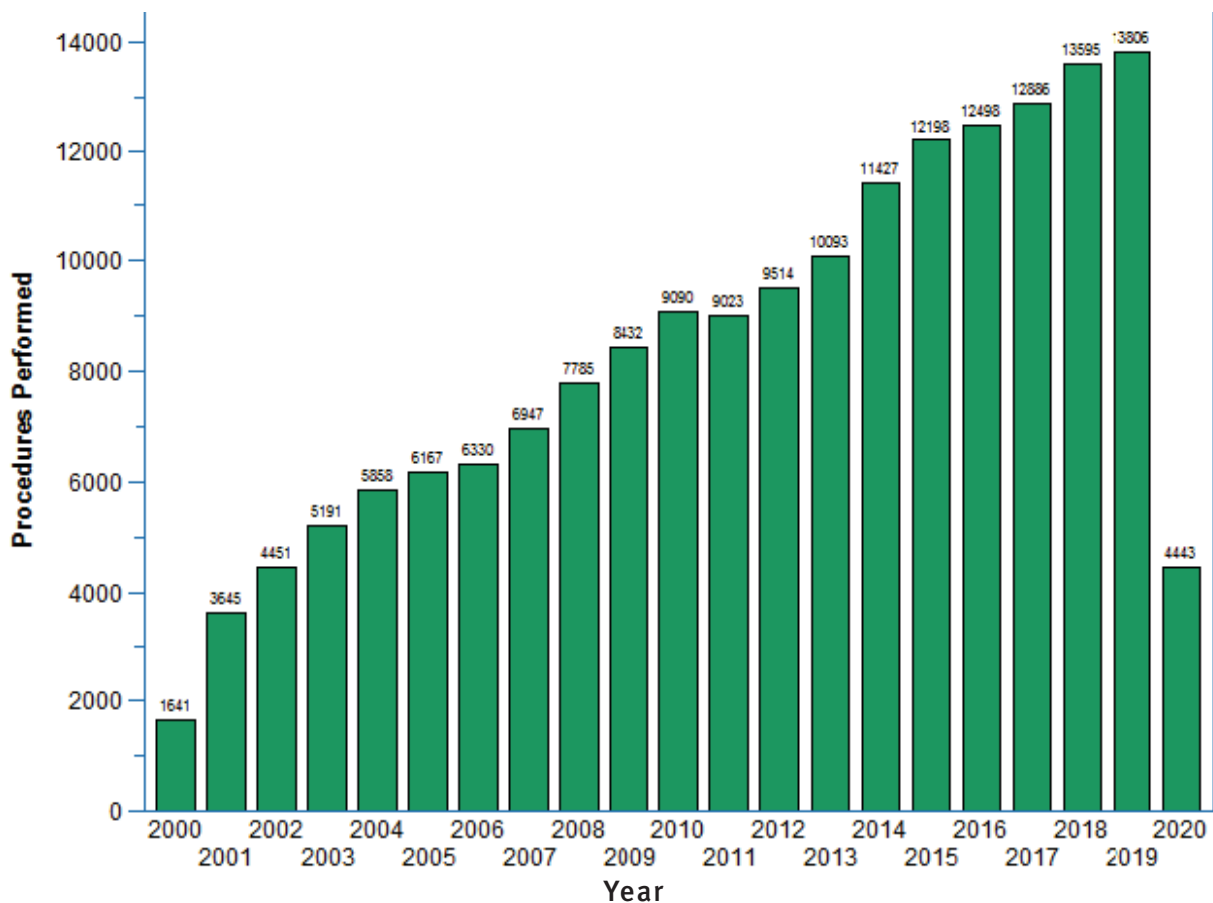


Figure 1: AOANJRR Downloaded 24/04/2020 - Number of hip and knee



*Well organised review process
with positive feedback and
outcomes post discussion.*

GIRFT Queensland methodology

The GIRFT Queensland methodology is modelled on the GIRFT methodology created and led by consultant orthopaedic surgeon Professor Tim Briggs CBE for the National Health Service in England. The method is clinically-led, utilising data through a cycle of review and quality improvement. Following feedback obtained during the pilot site visits, the GIRFT Queensland team included an additional phase to the methodology; clinician engagement. This phase was identified as a critical step to ensure clinical directors had an opportunity to meet with the clinical leads prior to the program's commencement, building confidence and trust in the program and providing insight into local context and issues.

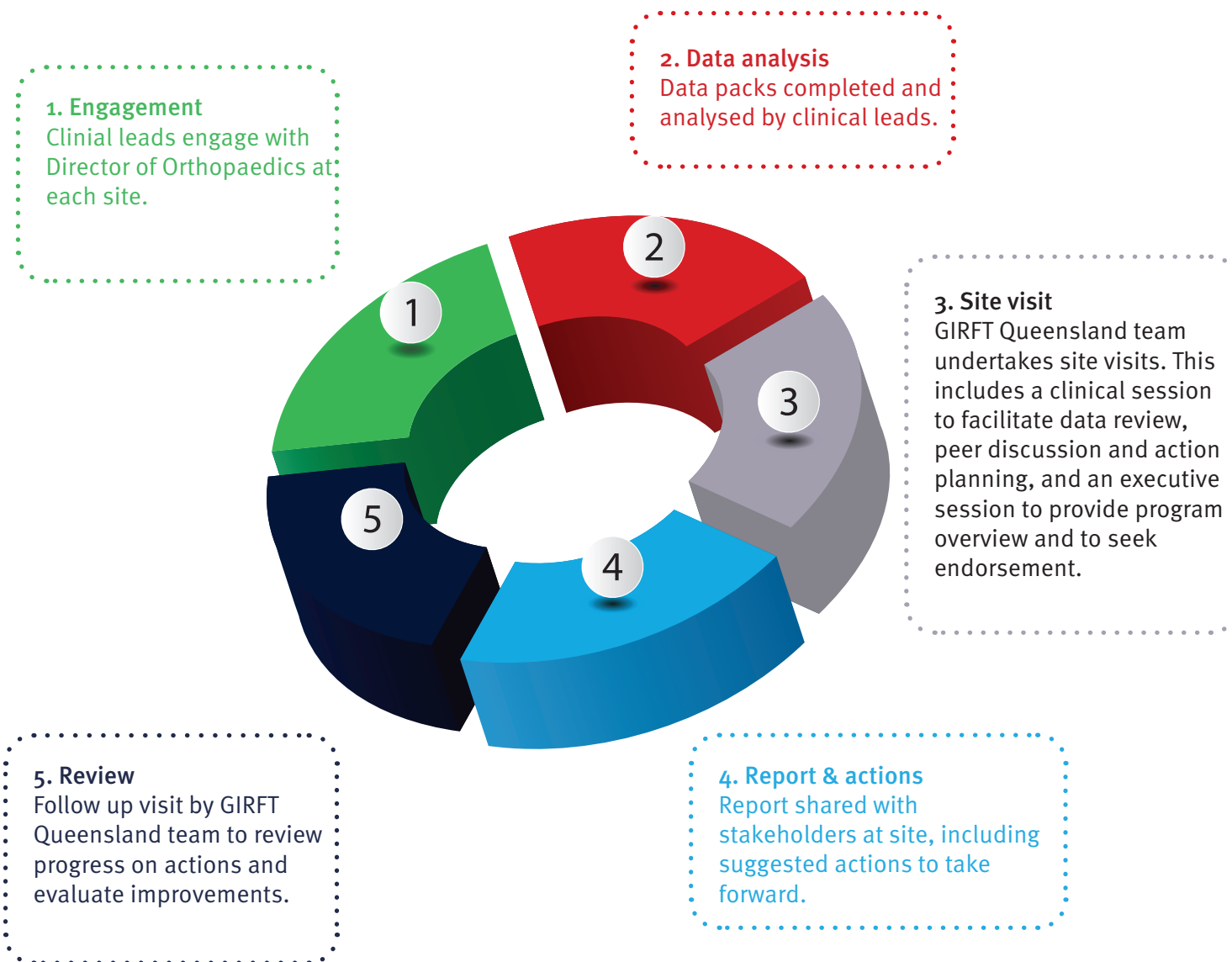


Figure 2: GIRFT Queensland methodology

Pilot

The GIRFT Queensland methodology was piloted in two orthopaedic units within Queensland Health public hospitals during the week commencing 10 June 2019. The site visits comprised a deep-dive data session with clinicians and an executive session.

The data sessions were attended by orthopaedic surgeons, allied health and nursing representatives from the pilot site and the GIRFT Queensland team (clinical lead, project staff and analysts) and Professor Tim Briggs CBE.

The executive sessions were attended by relevant executive stakeholders from the sites as well as Professor Briggs, Dr John Wakefield, Deputy Director-General CEQ, Mr Nick Steele, Deputy Director-General, HPSP and members of the GIRFT Queensland project team.

The data packs were shared with the clinical directors prior to the site visits and the specific content of these packs was discussed during the clinical sessions.

The executive session focused on providing an overview of the GIRFT Queensland program and seeking executive endorsement and commitment to support the orthopaedic teams to implement the local recommendations. While the Hospital and Health Service (HHS) staff at the executive session were not privy to the data pack, key themes and findings were discussed with the HHS executives.

Both sites were engaged in the process, giving support in principle to the methodology and participating in robust discussion. It was evident throughout the sessions that local service delivery and resource context was critical and should be considered prior to any future site visits. It was also identified that some site-specific data was available from the sites and there may be future opportunities to consider sharing data directly between the sites and the GIRFT Queensland team.

Feedback from clinicians and executives was sought following the pilot site visit which resulted in several changes to the program, specifically;

- The inclusion of a clinician engagement process as described in the methodology section.
- Changes to the data pack to reflect what clinicians and executives felt added most value.
- Amendments to the follow up structure and schedule to ensure adequate post-site visit support.

Measures of effectiveness

At the start of the program, it was widely accepted that quantifiable patient, system and financial outcomes would be difficult to measure in the short term. To give departments and facilities the time required to undertake improvement activities and measure outcomes through the existing Queensland Health data systems, the effectiveness of the GIRFT Queensland program will be measured in the short, medium and long term, specifically:

Short	Medium	Long
<ul style="list-style-type: none"> • Agreement on GIRFT methodology • Acceptance of data • Clinician leadership at each site • Identification of areas of clinical variation • Identification of opportunities for improvement • Executive support of recommended local quality improvement (QI) actions • Willingness of staff to act on recommended actions 	<ul style="list-style-type: none"> • Improved understanding of clinical variation • Evidence based QI projects targeted at areas identified through the GIRFT project • Interest from other specialties / craft groups to implement GIRFT • Improved access to reliable data 	<ul style="list-style-type: none"> • Improved patient outcomes. E.g. increased joint longevity, reduction in infection, complication, readmission and mortality rates, reduced length of stay • Improved service efficiencies. E.g. reduced costs including prosthetics, increased capacity • GIRFT is business as usual for QI at sites • Improved QI culture, communication of variation and patient outcomes • GIRFT spread to other specialties • Sustainable clinical engagement

“
Was a great atmosphere and not threatening as I had previously worried about.
 ”

Data collection and reporting

Data was sourced from ten different providers and data custodians with the process for extraction variable across sources.

Summary of measures included in the final site data packs:

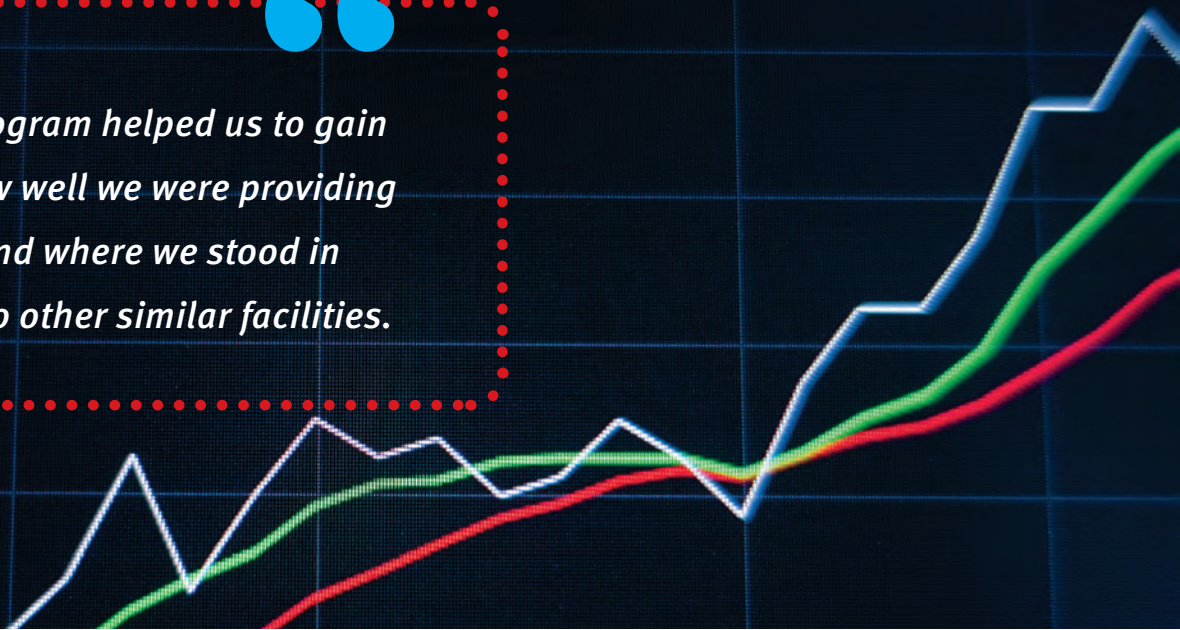
Focus area	Specific indicators	Rationale
Patient profile and demographics	<ul style="list-style-type: none"> • Average age on admission • Percentage of admissions where patient age ≥ 75 years • Average Charlson Comorbidity Index • Average American Society of Anaesthesiologists (ASA) Rating • Average Quintile of Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) • Percentage of patients in the top (most disadvantaged) IRSAD deprivation quintile 	<p>Provided as a general measure of population context, patient characteristics and socioeconomic status, to inform complexity of patients, and for consideration during quality outcomes analysis.</p>
Patient experience	<ul style="list-style-type: none"> • Outpatient Clinic Patient Experience Survey response rate • Outpatient clinic average patient rating of care • Patient recommendation of orthopaedic clinic to family and friends 	<p>Patient-reported measures of experience are a valuable indication of how patients view services and care.</p>
Outpatient services	<ul style="list-style-type: none"> • Average number of patients waiting at census at end of month • Net change to the outpatient waiting list • Percentage of patients seen in time for Initial Service Event • Average wait time to Initial Service Event • Percentage of hospital-initiated new or review cancellations within 14 days of appointment • Percentage of patients who fail to attend • Percentage of patients converting to surgery from an Initial Service Event 	<p>As the largest of all specialist outpatient services, understanding demand, capacity and efficiency is vital for ensuring timely access to care.</p>

Focus area	Specific indicators	Rationale
Elective surgery services	<ul style="list-style-type: none"> • Average number of patients waiting at census at end of month • Net change to the elective surgery waiting list • Percentage of patients treated in time • Average wait time to surgery • Percentage of hospital-initiated cancellations within 48 hours of booked operation date • Percentage of preventable day of surgery cancellations • Percentage alignment with national categorisation guideline • Number of patients outsourced to a private facility for elective surgery 	As the second largest elective surgery specialty, understanding demand, capacity and efficiency is vital for ensuring timely access to care.
Trauma	<ul style="list-style-type: none"> • Admissions for selected injury codes • Number of trauma sessions per week 	Trauma surgery is a critical component of orthopaedic services, although there is currently limited transparency over quality and access to care.
Hip fracture care	<ul style="list-style-type: none"> • Admissions for fractured neck of femur • Hip arthroplasty or open reduction of femur following admission for fractured neck of femur • Average length of stay for fractured neck of femur • Patient assessed by geriatric medicine • Average time to surgery, excluding transferred patients 	Hip fracture is a serious and costly fall-related injury suffered by older people and represents another significant component of orthopaedic services.

Focus area	Specific indicators	Rationale
Quality outcomes	<ul style="list-style-type: none"> • Standardised mortality rate (90 days) • Number of arthroscopy procedures where patient age \geq 55 years • Elective joint replacement - percentage of patients who had arthroscopy less than two years previously • Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) Discussion • Change to Oxford Hip Score pre to post-operatively • Patients with a surgical site infection in the episode • Patients with a surgical site infection within 30 days of the procedure • Readmission for total knee replacement within 60 days • Number of in-scope hospital-acquired complications (HACs) • Joint replacement fixation method 	Providing safe, high-quality care is the core business of healthcare.
Service efficiencies	<ul style="list-style-type: none"> • Number of separations – select procedures • Average separation costs by Diagnosis Related Group (DRG) • Average length of stay by DRG • Average prosthesis cost per procedure • Number of orthopaedic medical indemnity claims for period • Total cost of orthopaedic medical indemnity claims for period 	Providing high-value, efficient care can improve access for all.
Medical workforce	<ul style="list-style-type: none"> • Full-time equivalent (FTE) medical staff - Minimum Obligatory Human Resource Information (MOHRI FTE) • Full-time equivalent medical staff - Queensland Health (QH) FTE 	Ensuring workforce reflects service demand is vital for providing safe and efficient care

Table 1: Summary of GIRFT Queensland data pack indicators

The GIRFT program helped us to gain an idea of how well we were providing services and where we stood in comparison to other similar facilities.



Data during the site visits were presented in numerical and graphical form. Example below:

Box and whisker plot

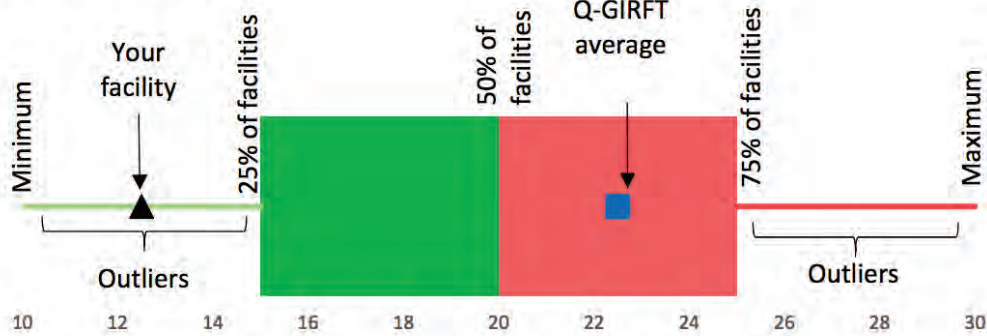


Figure 2: Box and whisker plot

The data presented in the pack identified the facility (triangle), Queensland average (square) and the range. Facilities that fell within the box were considered inliers, while those that fell outside the box were considered outliers. For indicators where there was a desirable outcome, for example, infection rate or hospital-acquired complication, the data was represented in colour (ie; green = positive). For all other indicators, for example, volume or population-based indicators, the data was represented in a grey scale.

GIRFT QUEENSLAND FINDINGS

Demographics

Age, physiological complexity and socio-economic status of patients are important variables to consider when analysing and comparing variation across individual sites.

The average age of adult orthopaedic patients on admission in Queensland is 58.8 years (ranging from 53 to 63 years), and the percentage of admissions where patients are aged ≥ 75 years is 21% (ranging from 14% to 34.5%).

The Charlson Comorbidity Index, a method to predict mortality in patients who have a range of comorbid conditions, was analysed to identify complexity of patients. A higher score indicates a greater risk of mortality and higher health resource use. The average Charlson Comorbidity Index was 0.26 (ranging from 0.14 to 0.54), indicating low rates of recorded Charlson comorbidities.

The American Society of Anaesthesia (ASA) physical status classification system was reviewed to identify likely physiological complexity of surgical patients. The average ASA was 2.0 (ranging from 1.25 to 2.4) reflecting a relatively well population with only mild systemic disease.

Socio-economic status, as measured by the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD), averaged 2.6 (ranging from 1.2 to 3.6) with, on average, 28% (ranging from 3% to 89%) of patients falling into the most disadvantaged quintile. This shows there is significant variation in terms of the socio-economic status of patients across Queensland hospitals. Socioeconomic status and patient demographic factors have been shown to impact patient-reported outcomes, morbidity and

Specialist outpatients

In the 2018/19 financial year, there were, on average, 1,596 patients waiting for an initial orthopaedic outpatient appointment per facility.

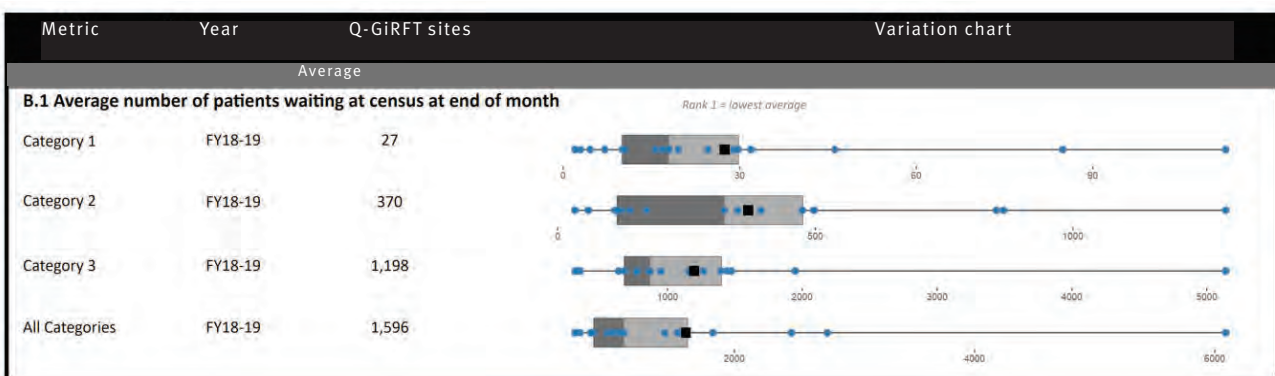


Figure 3: Average number of patients waiting for an initial orthopaedic outpatient appointment at census at end of month FY 18/19

The average net change to the outpatient waiting list per month, as a measure of alignment of demand and supply, was 0.3 patients; however, across Queensland this ranged from -19 to 32 patients, indicating variation in some facilities' ability to meet the demands of incoming outpatient referrals, increasing outpatient wait times and the volume of patients waiting longer than clinically recommended.

Across Queensland, the percentage of specialist outpatients seen in time for Initial Service Event (ISE) varied, with the Queensland average meeting the 2019/20 average state target of $\geq 83\%$ for Category 1 but falling below the average state targets for Category 2 ($\geq 69\%$) and Category 3 ($\geq 84\%$).



Figure 4: Percentage of patients seen in time for Initial Service Event FY 18/19

Percentage of hospital-initiated cancellations within 14 days of appointment and the percentage of patients who fail to attend may be considered measures of service efficiency.

Across Queensland, there was significant variation in both measures as seen below.

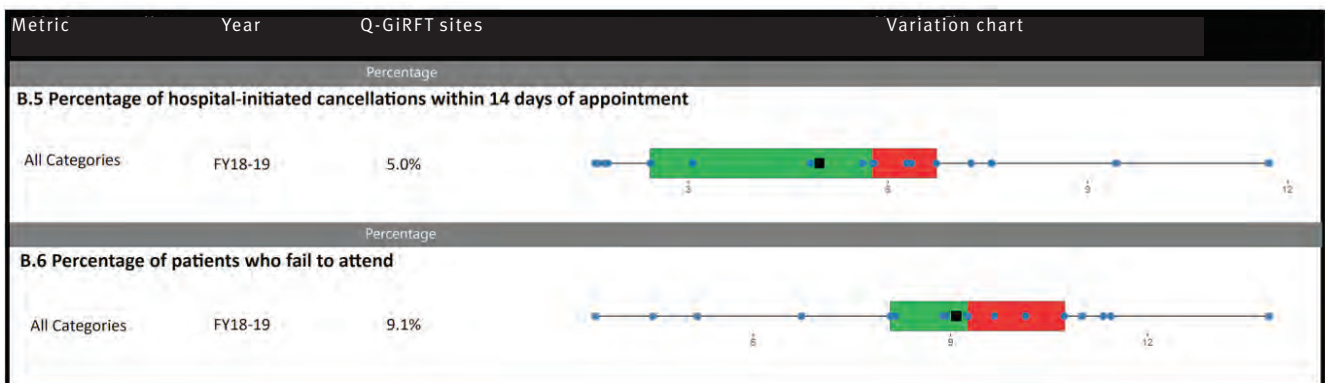


Figure 5: Percentage of hospital-initiated cancellations within 14 days and, percentage of patients who fail to attend FY 18/19

There has been an enormous amount of work undertaken in Queensland in the preceding years to improve the equitable and timely access to specialist outpatient services. Initiatives such as the Queensland Health Clinical Prioritisation Criteria (CPC), HealthPathways, General Practitioners with Special Interest (GPwSI), Orthopaedic Physiotherapy Screening Clinics and Virtual and Primary Care Clinics are all aimed at ensuring patients see the right practitioner, in the right place, at the right time and with the right information. Despite this, there remains variation in the percentage of patients who convert to surgery from an ISE, suggesting further outpatient optimisation opportunities exist. It is generally expected that units with a high conversion rate to surgery are following appropriate referral acceptance guidelines by only seeing patients who require specialist care. Where sites have a low conversion to surgery rate, it presents an opportunity to review the type of patients and conditions being referred and whether their care may be more appropriately provided by another healthcare professional.

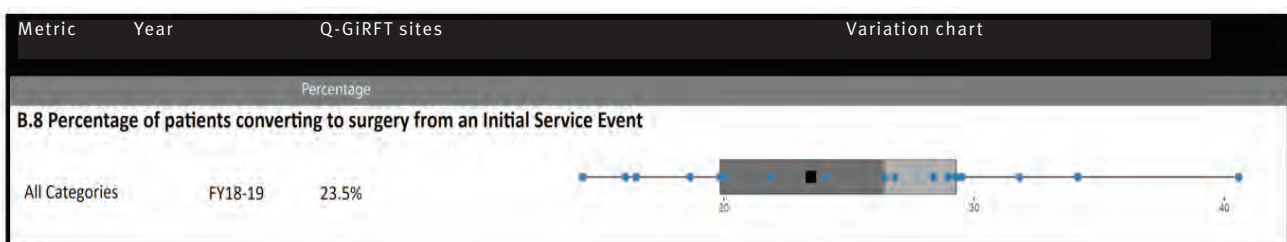


Figure 6: Percentage of patients converting to surgery from an Initial Service Event FY 18/19

Elective surgery

The percentage of patients on the Elective Surgery Wait List (ESWL) treated in time across Queensland varies across all categories. During the GIRFT Queensland site visits, a number of factors were identified that potentially contribute to this variation including:

- departmental administrative processes such as surgeon leave management
- elective surgery booking processes
- alignment with clinical urgency categorisation
- access to adequate elective and trauma theatre sessions

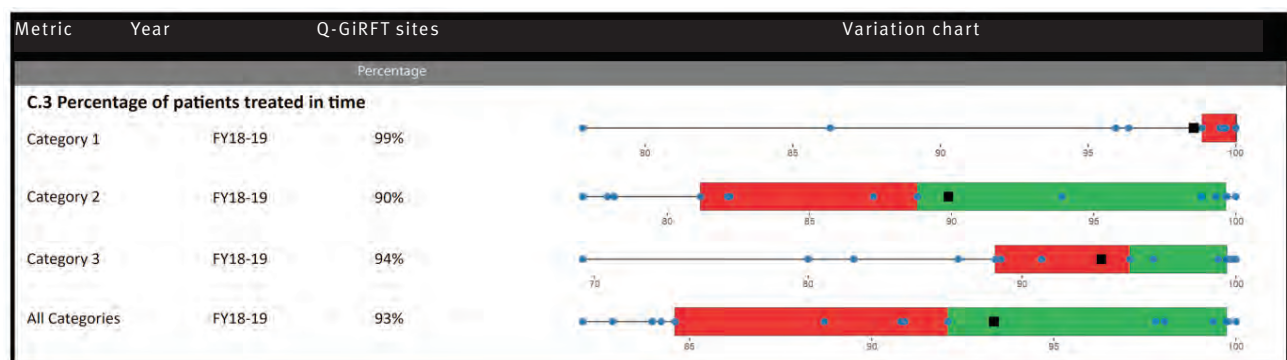


Figure 7: Percentage of of elective surgery patients treated in time FY 18/19

The percentage of hospital-initiated cancellations within 48 hours of booked operation date, and the percentage of preventable day of surgery cancellations, may be considered elective surgery process efficiency measures. Similar to the outpatient setting, there is variation across these efficiency measures within the elective surgery setting.

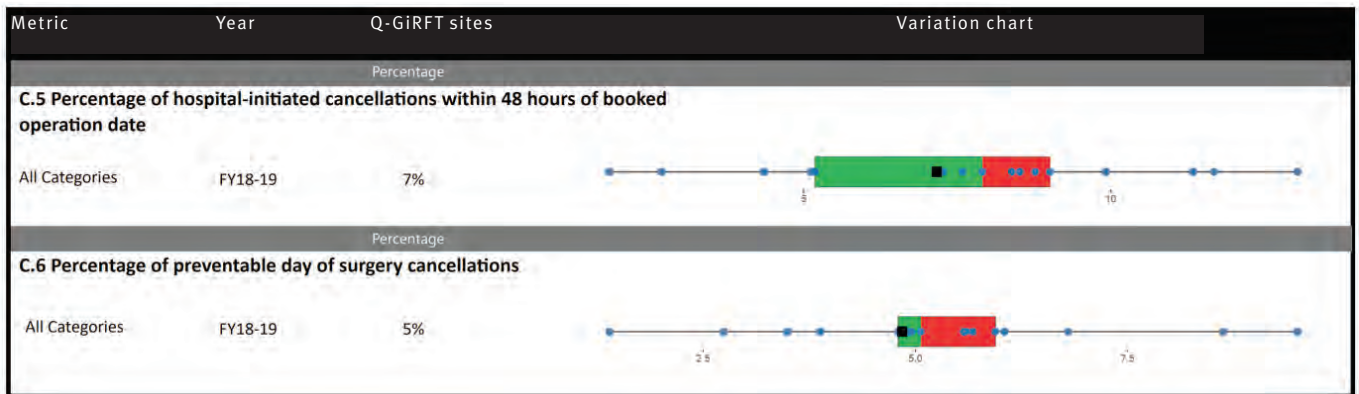


Figure 8: Percentage of hospital-initiated cancellations within 48 hours of booked operation date and, percentage of preventable day of surgery cancellations FY 18/19

The National Elective Surgery Urgency Categorisation Guideline April 2015 [9], endorsed by the Royal Australasian College of Surgeons (RACS), aims to promote national consistency and comparability in urgency categorisation and improve equity of access for patients undergoing elective surgery. Alignment with this guideline was measured and discussed during the GiRFT Queensland site visits. As shown in figure 9 there was variation in alignment across all procedures measured despite clear guidance.

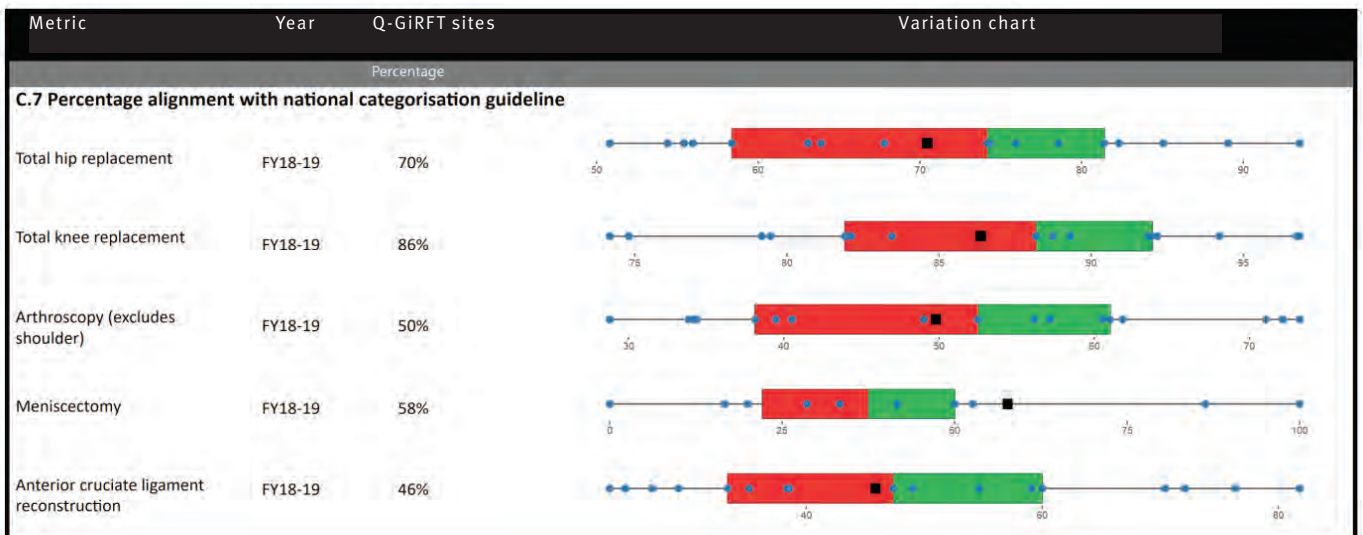


Figure 9: Percentage alignment with national categorisation guideline FY 18/19

Trauma

Orthopaedic trauma can be classified as life and limb threatening, urgent and semi urgent. Orthopaedic trauma demand across Queensland is significant with some sites admitting in excess of 2000 orthopaedic trauma patients per year.



Figure 10: Admissions for selected trauma-related injury codes

Historically, trauma surgeries are reported as taking place in generic emergency theatres, often being delayed due to emergency surgeries from other specialties taking priority. Not only does delay to orthopaedic trauma surgery result in poorer patient outcomes, including increased risk of infection in open injuries and increased morbidity and mortality in geriatric hip fracture patients, it also results in increased length of stay and subsequent blocks to patient flow and access [10, 11].

Access to dedicated, supervised trauma theatre sessions enables improved surgical planning, patient preparation and reduced fasting, increased surgical supervision for junior medical staff through appropriate senior rostering and reduced length of stay, all of which improve patient outcomes. Sites were asked to self-report the number of dedicated orthopaedic trauma theatre sessions available to them. Four sites were identified as having access to all-day trauma theatres seven days a week; however, many sites reported either no or limited access to dedicated orthopaedic trauma sessions. When this was considered in relation to trauma admission volumes, it was evident that a number of sites required additional resources to meet their orthopaedic trauma demands and ensure optimal patient outcomes.

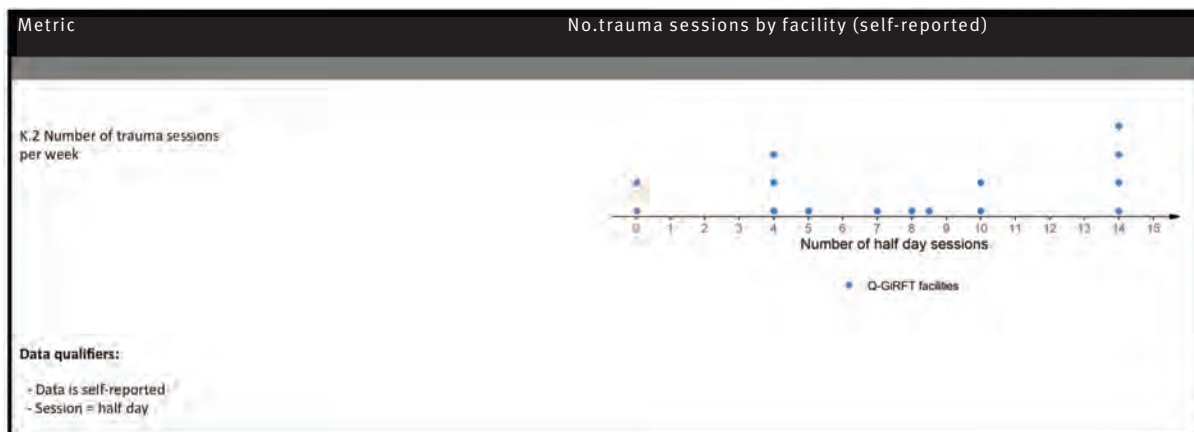


Figure 11: Number of trauma sessions per week

Hip fracture care

The Australian and New Zealand Hip Fracture Registry (ANZHFR) and the Australian Commission on Safety and Quality in Health Care (ACSQHC) Hip Fracture Clinical Care Standard both indicate surgical intervention within 48 hours (in the absence of clinical contraindication) and a formal, acute orthogeriatric service (medical physician in the absence of geriatrician) as the best practice model to improve patient outcomes for hip fracture patients.

GIRFT Queensland utilised the ANZHFR Annual Report (patient level) to assess variation across these indicators. The average time to surgery ranged from 31 hours to 73 hours, with all but one facility performing better (i.e. a shorter time to surgery) than the Australian average of 54 hours.

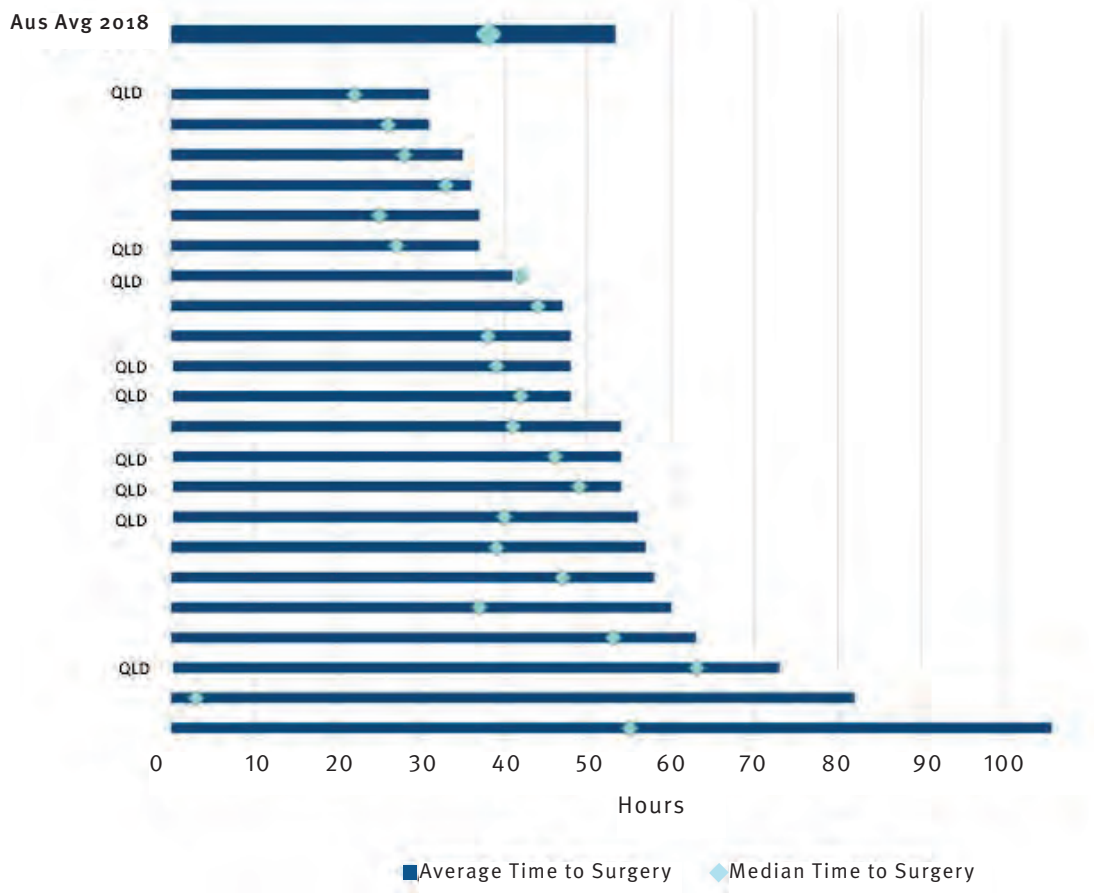


Figure 12: Average time to surgery for hip fracture patients (excluding those transferred) ANZHFR 2019 Annual Report

Geriatric support in regional areas was identified as a challenge, with some facilities reporting limited access. In the absence of geriatrician support, medical physician support was available in most facilities; however, the service provision varied with some facilities adopting a shared-care model between orthopaedics and geriatrics while others continue to provide a geriatric/physician consultation only service.

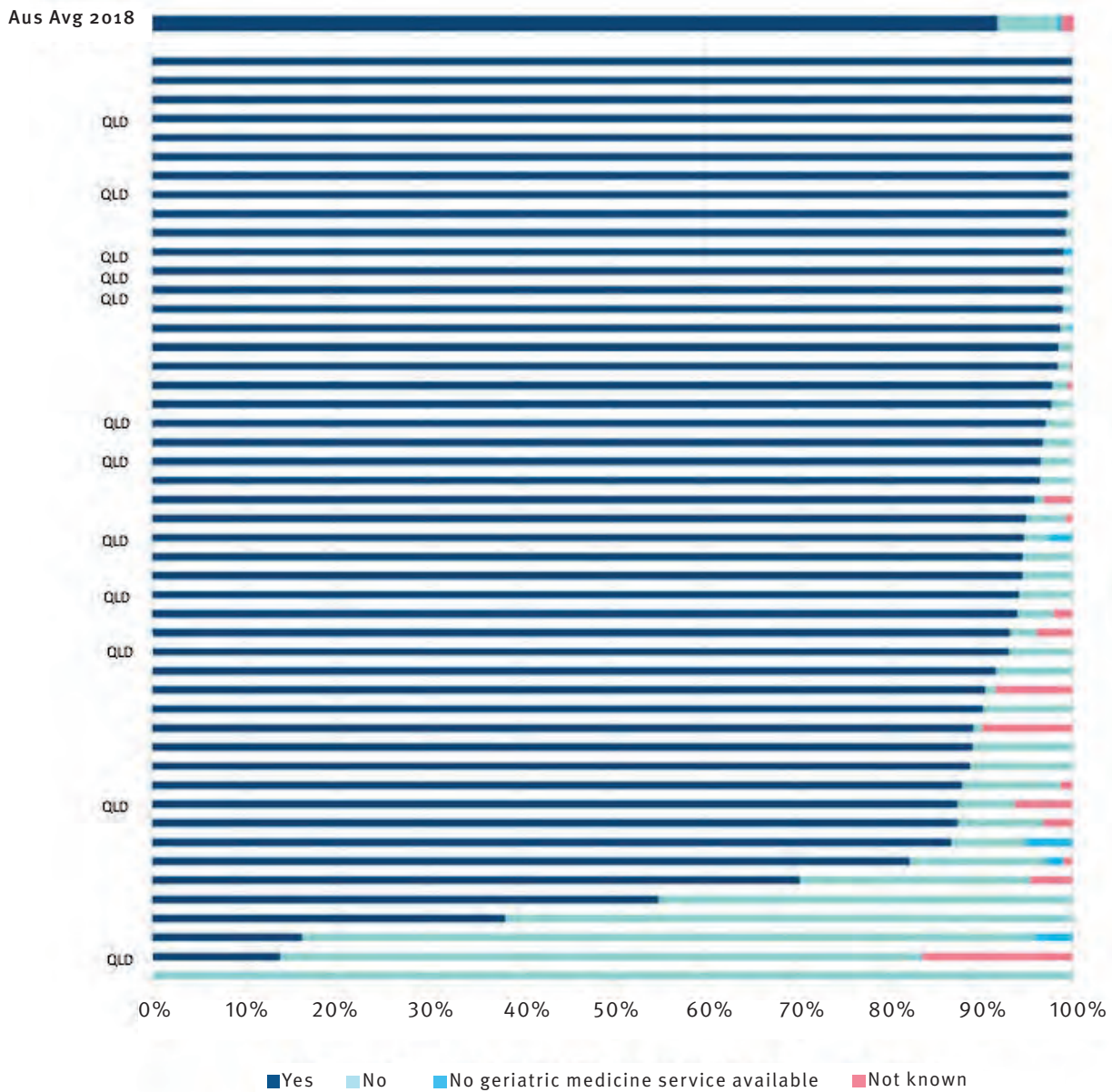


Figure 13: Percentage of hip fracture patients assessed by geriatric medicine ANZHFR 2019 Annual Report

Time to surgery, adequate medical optimisation and support for geriatric hip fracture patients may be a contributing factor to length of stay. Across Queensland the average length of stay for hip fracture patients aged 16 and over ranges from 4.8 days to 12.7 days, with an average of 9.2 days.



Figure 14: Average length of stay for fractured neck of femur 18/19 FY

Joint replacement (arthroplasty)

Knee replacement within two years of knee arthroscopy

Knee arthroscopy for osteoarthritis (OA) has been shown to provide little to no benefit [12-14]. It is, however, acknowledged that knee arthroscopy in patients over the age of 55 years may be justified in select cases (excluding OA). The GIRFT Queensland team chose to analyse the percentage of patients who received an elective total knee replacement within two years of a knee arthroscopy, as a pseudo measure to identify possible low benefit knee arthroscopy procedures in Queensland public hospitals. While the volume of these surgeries across Queensland was relatively low (n = 46), the percentage in hospitals ranged from 0% to 4.8%, with the Queensland average 1.76%.

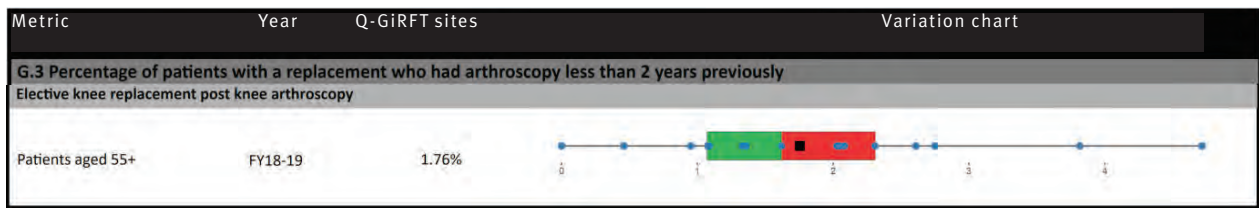


Figure 15: Elective knee replacement within two years of knee arthroscopy 18/19 FY

Surgical site infection

Surgical site infection (SSI) in arthroplasty, particularly those classified as prosthesis or deep tissue infection is a potentially catastrophic complication resulting in significant morbidity and mortality, reduction in quality of life and increased healthcare costs [15, 16].

Across Queensland the rate of SSI both during the episode and within 30 days of the procedure varied. During the site visits, clinicians reported a number of possible contributing factors, including the effects of implementing arthroplasty optimisation and enhanced recovery principles, access to “closed” theatres whereby traffic in and out of the theatre is limited to critical personnel, and access to ring-fenced beds.

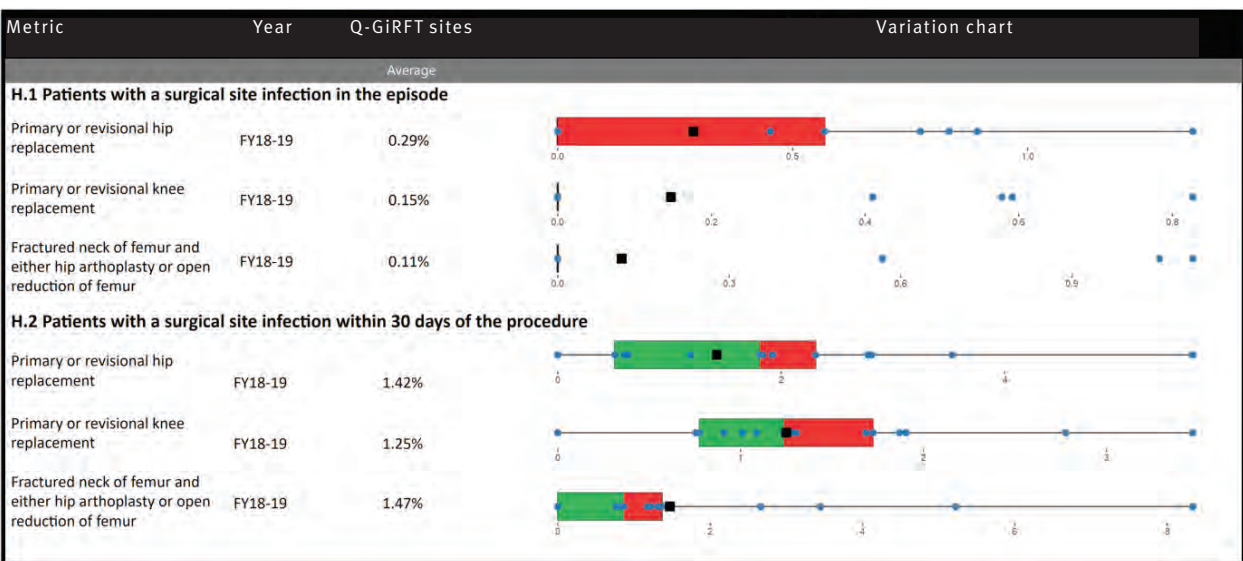


Figure 16: SSI within episode and within 30 days of the procedure 18/19FY

Readmission rates

Readmission within 60 days following total knee replacement (TKR) is an important metric closely related to post-operative complications. TKR readmission rates in Queensland range from 8% to 15% indicating opportunity for improvement. Modifiable factors related to the patient's pre-morbid state should be considered in preoperative decision-making to ensure an appropriate and optimised treatment plan is developed.

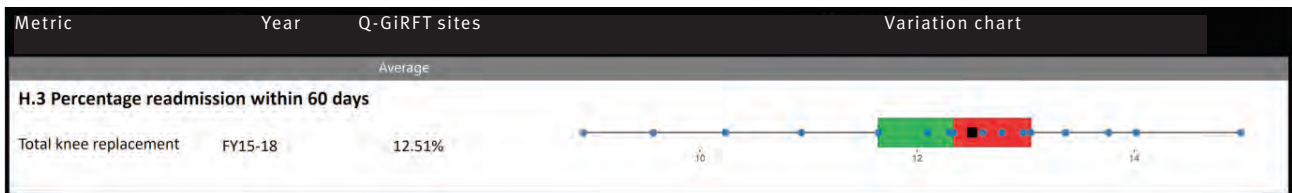


Figure 17: TKR percentage readmission within 60 days FY 18/19

Arthroplasty cost and average length of stay

Arthroplasty costs may be influenced by a number of factors including choice of prosthesis, length of stay and complications. As with cost, length of stay may also be associated with adequacy of patient preparation and expectation, post-op management practices, complications and access to appropriate post-discharge support.

The average cost of a total knee replacement (minor complexity) was \$17,851; however, ranged from approximately \$15,000 to \$21,500. The average length of stay was 3.9 days with a range across Queensland of 2.8 to 4.7 days.

Similarly, for total hip replacement (minor complexity), the average separation cost was \$19,024 ranging from \$15,800 to \$22,500 across Queensland. The average length of stay was 3.6 days and ranged from 2.8 to 4.9 days.

Cost per joint

While the cost of prosthesis in Australia is higher than other countries benchmarked against, this may be attributable to manufacturing and shipping costs outside of Australia. It is also acknowledged that complexity of procedure, particularly in relation to complex revision and tumour surgery may inflate the average cost per procedure.

Regardless of this, the average prosthesis cost per procedure in Queensland varied significantly as per Figure 18.

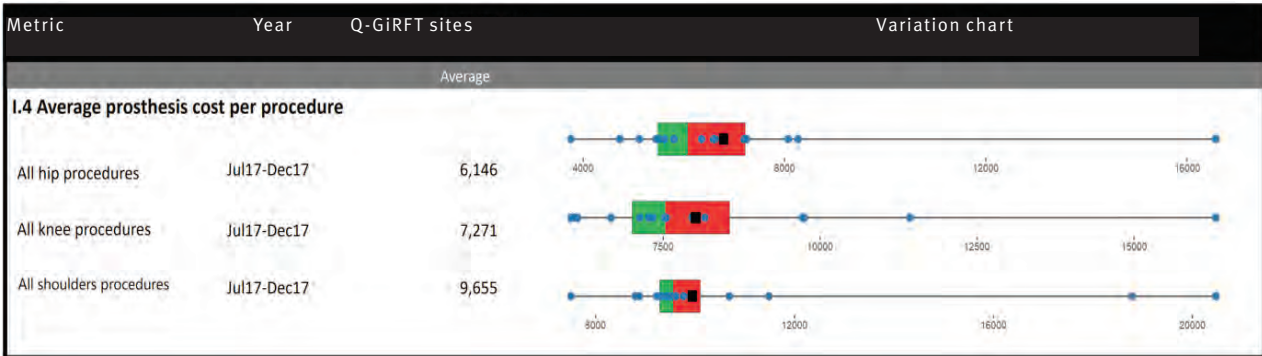


Figure 18: Average prosthesis cost per procedure

Leveraging off the momentum of GIRFT Queensland, in collaboration with Health Support Queensland (HSQ), an orthopaedic procurement forum was held with the orthopaedic directors. Key findings presented during the forum included:

- Orthopaedic surgeons make procurement decisions on \$80M+ of public funds each year.
- 'Revision rate or other published data on performance' is the number one influence on prosthesis choice for Queensland orthopaedic directors.
- There is significant variation across hospitals in terms of choice of supplier, product, and cost of prosthesis, with at least 12 different suppliers for hip and knee prosthesis.
- A review of prosthesis costs versus revision rates for various hip and knee prosthesis demonstrated no evidence that more expensive prostheses result in better outcomes. In fact, for total hip replacements, revision rates were relatively consistent regardless of the prosthesis cost (ranging from approx. \$2,000 to \$9,000) yet for total knee replacements, the revision rate generally increased with increasing cost of prosthesis (ranging from approx. \$5,000 to \$10,000).
- Local inefficiencies are contributing to increased costs. For example:
 - » 48% of loan set trays are not used
 - » 30% of loan sets are ordered less than 24 hours before surgery commences
 - » 50% - 60% of loan sets are not returned on time.

Cement use in femoral stem >70 years

The Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) findings indicate that cemented stems have lower revision rates in hip replacement in those over 75 years. Cemented arthroplasty is also considered a more cost-effective option than uncemented. Despite this, variation remains in the percentage of patients aged over 70 years that have the femoral stem in primary hip arthroplasty cemented. On average, 76% of patients aged > 70 years received a cemented stem; however, the rate across Queensland varied from 20% to 100%.



Figure 19: Joint replacement fixation method, femoral stem cement 2019

Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR)

The Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) is an initiative of the Australian Orthopaedic Association (AOA). The AOANJRR was established in 1999 becoming fully national in mid-2002. The purpose of the AOANJRR is to improve and maintain the quality of care for individuals receiving joint replacement surgery. Information on hip, knee, shoulder, elbow, wrist, ankle and spinal disc replacement is collected from all hospitals in Australia undertaking joint replacement surgery. The registry is the most validated, robust data source for arthroplasty prosthesis outcomes and revision surgeries in Australia, providing large volume longitudinal data on performance and outcomes at the prosthesis level.

323 hospitals (public and private facilities nationwide) contribute to the registry, including every public hospital in Queensland that undertakes arthroplasty surgery. The AOANJRR provides yearly reports at the hospital, department and surgeon level. Prior to the GIRFT Queensland program, only 33% of public orthopaedic departments in Queensland requested their departmental report. Following the clinician engagement sessions, 100% of orthopaedic departments have since requested their departmental report. Yearly review of these reports enables orthopaedic departments to review their local outcomes and identify trends and opportunities for improvement.

Hospital acquired complications (all orthopaedic)

Hospital acquired complications (HACs) are complications whereby clinical risk mitigation strategies may reduce (but not necessarily eliminate) the risk of that complication occurring. Variation in rates of SSI, infection associated with prosthesis / implantable device and surgical wound dehiscence were noted across Queensland facilities. Similarly, venous thromboembolic complications such as pulmonary embolism and deep vein thrombosis varied across facilities. It is noted that each dot in the below graph may represent more than one facility if the total number of complications was the same.

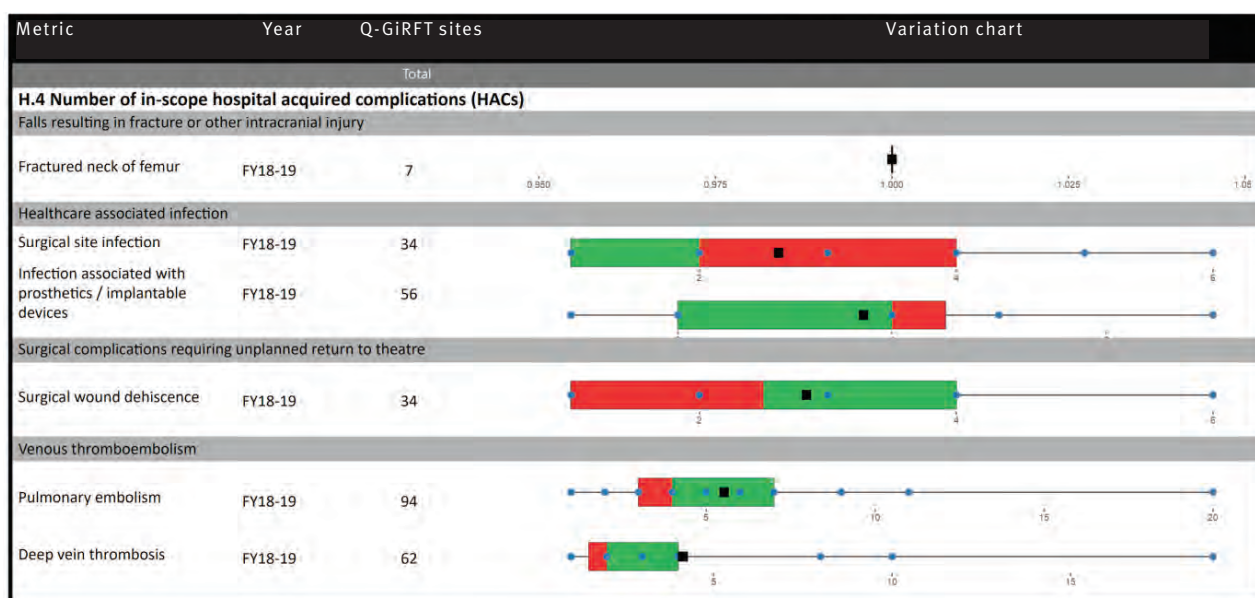


Figure 20: Number of in-scope hospital acquired complications (HACs) 18/19 FY

Mortality

Standardised mortality rate (all-cause mortality) within 90 days of primary total hip replacement, primary total knee replacement, and hip fracture repair was reviewed. The local teams were committed to further reviewing the data provided and undertaking patient-level audits to analyse mortalities and identify potential opportunities for improvement.

Patient-reported outcome and experience measures

Patient-reported outcome measures (PROMs), as a self-reported measure of a patient's health status, are very valuable measures to gather information directly from patients about their symptoms, condition and overall quality of life. Historically, healthcare has focused on quantifiable clinical outcomes that are considered important to the treating clinicians; however, there is now acceptance that gaining an understanding of the patient's assessment of their own health and health outcomes is critical information to understand whether healthcare interventions actually make a difference to people's lives.

At this stage, there is no consistent collection and reporting of PROMs in orthopaedic patients across Queensland; however, the AOANJRR has undertaken a pilot project to test the feasibility of collecting PROMs in patients undergoing arthroplasty surgery. The initial outcomes of this pilot have been positive, and the recommendation is that the program be spread to all Queensland facilities that undertake arthroplasty surgery.

Patient-reported experience measures (PREMs) are used to collect information from patients on their experience while receiving care. These measures allow patients to provide direct and timely feedback on their care, enabling health services to identify what is working well and what requires improvement. The last PREM data available for Queensland resulted from the 2015 Orthopaedic Outpatient Experience Survey. It is anticipated that a statewide solution for regular and consistent PREMs data collection will be forthcoming through the Ministerial Priority work.

Litigation

Data from the Queensland Government Insurance Fund (QGIF) were analysed to identify the current number and cost of orthopaedic medical indemnity claims. From 2014 to 2018, there were a total of 125 orthopaedic medical indemnity claims resulting in a total cost of \$21,934,211.

It must be acknowledged that the methodology for reporting indemnity claims did not take into consideration factors such as size and service provision at each facility – for example: a larger facility offering more complex services may experience a higher volume and cost of claims.

During the GIRFT Queensland site visits it became apparent that very few orthopaedic departments were aware of their local litigation and claims data. There was overwhelming agreement from clinicians that timely access to this information would be of value, including the ability to analyse cases (within the confines of necessary confidentiality and privacy requirements) and identify potential common themes that could inform practice and service improvements.

Workforce

Review of local Minimum Obligatory Human Resource Information (MOHRI) full-time equivalent (FTE) and QH FTE data identified discrepancies in local payroll data, enabling clinical directors to reconcile established FTE with costs, and address FTE allocated which was not within their establishment.

Discussions during the GIRFT Queensland site visits also identified the need to analyse payroll data in the context of demand and activity. The clinicians felt it would be valuable to review variation in workforce against activity levels, to determine if the workforce size and composition is appropriate to support demand and activity.



...In view of the current world health pandemic it is even more vital that we, as senior clinicians, collaborate and communicate to maximise efficiencies, while minimising risks, complications and costs. We aim to continue to deliver world class healthcare to the people of Queensland with new and exciting tools to enable appropriate improvements and quality assurance.

Collaboration and peer support

During the site visits, it was evident that there was limited opportunity and support for clinicians to engage and network with their peers. This can result in variation in practice, duplication of improvement efforts and professional isolation. There is clear opportunity, willingness and evidence to support clinician collaboration, peer support and the development of standardised practices and guidelines to improve patient outcomes.

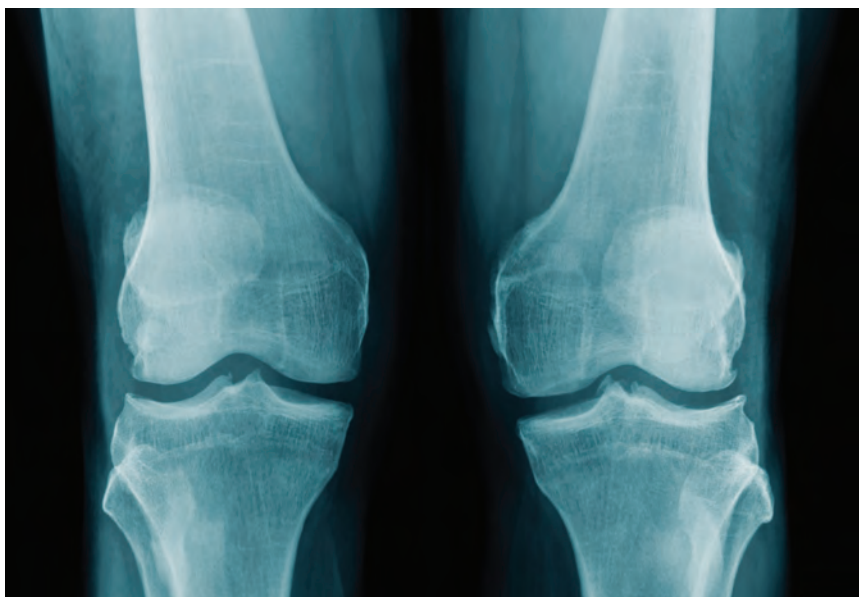


Data quality

It was raised during the site visits that there is inconsistency in the collection and reporting of a range of data necessary for enabling accurate and reliable comparison to support decision-making. Several variations in practice were identified that contributed to the inconsistencies including:

- Outpatient data – inconsistent mapping of local clinics to corporate clinic codes, particularly in relation to services that have allied health orthopaedic outpatient clinics and those that manage separate wait lists for sub-specialties such as spine and upper limb.
- Inpatient data – Inconsistencies in the application of service category changes through the sub and non-acute patient (SNAP) process, resulting in variation across facilities in the comparison of acute and total length of stay.
- Costing data – inconsistent methodology for attributing costs to cost buckets and variation in reconciliation of prosthesis costs and associated financial journaling (real time versus retrospective). Furthermore, access to costing data is significantly delayed due to variable reporting timeframes across HHSs. All these factors severely limit the ability to identify and respond to issues in a timely manner, as well as make informed decisions on recent data.
- Patient-reported outcome (PROM) and patient-reported experience (PREM) – while there are standard tools for collecting this important information, there is currently no consistent methodology for the collection and reporting of data across all hospitals.
- Data availability and approval processes – there is no agreement or consistency across sites in regard to:
 - what clinical data is required to support improved patient outcomes
 - how clinical data is collected
 - where clinical data is stored
 - how clinical data is supplied to clinicians
 - the frequency with which clinical data is supplied to clinicians.This results in multiple data repositories, variation in data reliability and reduces the ability to benchmark.
- Operating theatre data – there is variation in the definition and recording of both orthopaedic trauma and elective surgery data resulting in data inconsistencies, inability to benchmark, review performance and an overall lack of reliability. Transparency, standardised data definitions and compliance with standard business rules are critical to ensure performance and outcomes, particularly in relation to orthopaedic trauma surgery, are measurable and comparable.

There was also low to moderate confidence in the reliability of admitted patient data, with clinicians reporting concerns regarding the coding accuracy. It is acknowledged that the process of clinical coding is directly reliant on the quality, completeness and appropriateness of the clinical documentation.



The GIRFT program clearly highlighted and assisted us with understanding improvement opportunities within our service. The team then assisted us in presenting these to the hospital executive group and, as a result, we have gained support in making the necessary changes to improve the care of our patients.



GIRFT QUEENSLAND OPPORTUNITIES

The GIRFT Queensland program has provided a strong platform for identifying and addressing both local and system-level barriers to optimising value in orthopaedic care for patients, clinicians and the Queensland public healthcare system. In addition to HHSs implementing local recommendations, realising the program's full potential will require an ongoing commitment from orthopaedic directors, clinicians, Hospital and Health Service executives and the Department of Health to work together for sustainable change.

Table 3 provides a summary of the opportunities and supporting evidence identified throughout the GIRFT Queensland program and provides a comprehensive road map for improving key aspects of service delivery across the care continuum.



DEPARTMENT OF HEALTH












HOSPITAL AND HEALTH SERVICES







CLINICIANS

Responsibility	Opportunity	Supporting Evidence in Queensland	Anticipated Outcomes & Benefits
 	<p>Optimisation of arthroplasty management Development of a best practice guideline for the management of elective hip and knee arthroplasty patients with a focus on:</p> <ul style="list-style-type: none"> • Ring-fenced beds • Enhanced Recovery After Surgery (ERAS) protocols • Preoperative optimisation. 	<ul style="list-style-type: none"> • Rates for revision for infection in hip arthroplasty ranged from 0.2% to 1.5% and 0.5% to 2.0% for knee arthroplasty. • Total knee replacement readmission rates within 60 days range from 8% to 15%. • The percentage of patients aged > 70 years who received a cemented stem varied from 20% to 100%. • Length of stay for primary hip and knee arthroplasty (minor complexity) ranged from 2.9 days to 4.9 days and 3.2 days to 4.8 days respectively. 	<ul style="list-style-type: none"> • Adequate pre-operative patient optimisation. • Reduction in modifiable risk factors. • Control of environmental risks. • Consistency in care. • Equitable access to services. • Reduction in infection, complication and readmission rates. • Reduction in length of stay.
	<p>Clinical coding Development and implementation of a clinician-led coding improvement strategy, with a focus on improving collaboration between coders and clinicians.</p>	<ul style="list-style-type: none"> • 17 of 18 participating sites requested underlying patient-level data to conduct local auditing and analysis of findings. • ‘Coding error’ consistently reported as a potential explanation for variation in data, or where unexpected findings were presented. 	<ul style="list-style-type: none"> • Robust coding validation processes. • Improved quality, completeness and accuracy of clinical documentation. • Improved coding accuracy. • Reliable data to support informed decision-making.

Responsibility	Opportunity	Supporting Evidence in Queensland	Anticipated Outcomes & Benefits
 	<p>Prioritising trauma services Review and alignment of demand, supply and capacity for orthopaedic trauma.</p> <p>Development of key performance indicators to increase the profile and priority of emergency and trauma surgery.</p>	<ul style="list-style-type: none"> • Access to dedicated, consultant-led orthopaedic trauma lists varied across sites from zero lists per week up to 16 lists per week, with access not consistently aligned to demand. • There is no ability to consistently measure or benchmark the time to treatment for emergency or trauma surgery patients across Queensland. • Generally, access to elective surgery was quite good with 93% of all patients receiving treatment in time. 	<ul style="list-style-type: none"> • Reduced waiting times for trauma surgery. • Improved patient outcomes and experience through reduced delays. • Reduced length of stay for trauma surgery patients. • Increased trauma supervision. • Reduced readmission rates and/or returns to theatre.
  	<p>Clinician-led procurement model Implementation of a clinician-led statewide orthopaedic procurement model, to improve value for money and maintain or improve outcomes</p>	<ul style="list-style-type: none"> • Average prosthesis costs were 1.6 to 1.8 x more than theatre costs (2nd highest direct cost.) • Average prosthesis costs per procedure ranged from \$3,754 to \$8,269 for hips and \$6,028 to \$11,430 for knees. 	<ul style="list-style-type: none"> • Reduced implant / prosthesis costs. • Maintain / improve patient outcomes - e.g. reduction in revision rates, infection rates relating to prosthesis. • Improved transparency over procurement costs and outcomes.
 	<p>Clinical urgency standardisation Implementation of processes for monitoring and ensuring clinical urgency categorisation aligns to current guidelines unless there is a documented and valid clinical reason not to do so.</p>	<ul style="list-style-type: none"> • Alignment with the National Elective Surgery Urgency Categorisation Guideline (NESUCG) ranged from 51% to 98%. • Currently no standard approach for monitoring alignment to Clinical Prioritisation Criteria for specialist outpatient referrals. 	<ul style="list-style-type: none"> • Increased alignment to Clinical Prioritisation Criteria and National Elective Surgery Urgency Categorisation Guidelines. • Improved equity of access. • Reduced waiting times. • Improved conversion to surgery rates.

Responsibility	Opportunity	Supporting Evidence in Queensland	Anticipated Outcomes & Benefits
	<p>Hip fracture care Implementation of systems and processes to ensure adherence to the Australian Commission on Safety and Quality in Health Care's (ACSQHC) Hip Fracture Clinical Care Standard (HFCCS) inclusive of:</p> <ul style="list-style-type: none"> • A geriatric (physician in the absence of geriatrician) shared-care model. • Surgery for hip fracture within 48 hours. • Participation in the Australian and New Zealand (ANZ) Hip Fracture Registry. 	<p>Despite ACSQHC HFCCS recommendations:</p> <ul style="list-style-type: none"> • Average time to surgery for hip fracture patients ranged from 31 hours to 82 hours. • The average length of stay for hip fracture patients ranged from 4.8 days to 12.7 days. • Access to assessment by geriatric medicine varied considerably with some sites reporting limited access. 	<ul style="list-style-type: none"> • Reduction in morbidity and mortality for hip fracture patients. • Hip fracture surgery within 48 hours. • 100% participation in the ANZ Hip Fracture Registry.
	<p>Alternate care pathways for specialist outpatients Investigation and implementation of alternative care pathways for specialist outpatients to ensure patients receive the right care at the right time with the right practitioners.</p>	<ul style="list-style-type: none"> • Conversion to surgery from specialist outpatient rates ranged from 14% to 41% indicating opportunities to improve referral management processes. • 38% to 100% of patients were seen in the clinically recommended time for an initial orthopaedic specialist outpatient appointment. • Hospital-initiated specialist outpatient cancellations occurred 2.5% to 11.8% of the time. 	<ul style="list-style-type: none"> • Reduced specialist outpatient waiting times. • Improved conversion to surgery rates.

Responsibility	Opportunity	Supporting Evidence in Queensland	Anticipated Outcomes & Benefits
 	<p>Networking and peer support Formalising the establishment of the Queensland Directors of Orthopaedics Group.</p> <p>Participation in the development of formalised peer support models (such as the Supporting Our Specialist Services, SOSS, partnership program) to ensure all clinicians are supported and, consequently, improve service delivery.</p>	<ul style="list-style-type: none"> Limited opportunity and support for clinicians to engage and network with their peers. No access to opportunities to routinely share and discuss benchmarked data at a statewide level. 	<ul style="list-style-type: none"> Improved clinician satisfaction. Regular opportunities for peer collaboration. Improved relationships across hospitals. Improved consistency of care and equity of access.
	<p>Learnings from litigation Development and implementation of a standardised process for the sharing and review of local litigation claims to identify systems, process and clinical improvement opportunities.</p>	<ul style="list-style-type: none"> Several orthopaedic directors reported not being aware of litigation cases that involved their unit. The majority of hospitals lack robust processes to review and learn from litigation claims 	<ul style="list-style-type: none"> Increased transparency over litigation claims relevant to the unit. Opportunity to learn from litigation experiences and improve future practice.
	<p>Reinvestment strategy Establishment and implementation of a process for identifying and reinvesting savings back into the unit.</p> <p>Agreement on an appropriate portion of savings for reinvestment.</p>	<ul style="list-style-type: none"> Consensus from orthopaedic directors that financial savings realised through the program or unit-led initiatives should be reinvested into the orthopaedic department to demonstrate support, boost morale and incentivise ongoing improvement efforts. 	<ul style="list-style-type: none"> Increased transparency and financial accountability. Improved clinician satisfaction. Improved executive and clinician relationships. Increased clinician involvement in decision making.


Responsibility	Opportunity	Supporting Evidence in Queensland	Anticipated Outcomes & Benefits
	<p>Data quality and access Investigation of opportunities to improve the consistency, timeliness and reliability of statewide data to support accurate benchmarking and analysis across all key metrics.</p>	<ul style="list-style-type: none"> • Mapping of clinics to Corporate Clinic Codes is variable across facilities. • Inconsistencies in the application of service category changes through the sub and non-acute patient (SNAP) process • Inconsistent methodologies for allocating costs and lengthy delays in reporting. • No consistent, statewide approach for the collection and reporting of PROMs and PREMs. • No consistent, statewide approach for the collection and reporting of emergency and trauma surgery data. • Varying processes for storing, accessing and reporting data dependent on local custodians limiting access to timely and reliable benchmarking data. 	<ul style="list-style-type: none"> • Improved reliability and consistency of data. • Streamlined and standardised processes .

Table 3: Summary of findings and opportunities of GIRFT Queensland

“
It was a pleasure to see corporate office supporting clinical champions in implementing change.
”

The following section highlights, in more detail, the key opportunities for improvement as a result of findings from the GIRFT Queensland program.

Opportunity 1: Optimisation of arthroplasty management

There is evidence of significant unwarranted variation across a range of indicators relating to arthroplasty surgery. Following consultation with orthopaedic directors, there is strong agreement on the need for a statewide best practice guideline for the management of elective hip and knee arthroplasty patients.

The guideline should aim to support, not replace, clinical decision making and service delivery requirements requirements across the pre and perioperative journey, in order to ensure:

- adequate patient optimisation
- reduction in modifiable risk factors
- control of environmental risks
- consistency in care
- equitable access to services.

To address the above, it is recommended that Queensland Health, in consultation with orthopaedic clinicians, develop a statewide guideline for the management of elective hip and knee arthroplasty patients that includes, at minimum, the following elements.

Ring-fenced beds for arthroplasty services

Arthroplasty infection is catastrophic for patients and health systems. The resulting loss of quality and function for the patient and the economic cost to health services as a result of infection is immense. Ring-fenced beds, as a targeted measure to reduce the risk of deep tissue and prosthesis related infections in arthroplasty surgery, is well supported in the scientific literature [17-19]. Additional benefits also include improved rates of day of surgery admissions, reduced length of stay, reduced surgical cancellations due to bed availability and improved patient experience [17, 20, 21].

While the benefits of ring-fenced beds are well-evidenced, the demand on public health resources has, over time, led to a limited ability for clinicians to maintain dedicated ring-fenced bed spaces for arthroplasty elective surgery. This has meant that emergency and non-arthroplasty elective surgery patients, such as medical admissions, are regularly admitted to ring-fenced bed areas, reducing the benefits of a dedicated area for such patients.

Prior to the GIRFT Queensland visits, some sites had been working towards dedicated orthopaedic elective surgery beds. It was clear, during the site visits, that there was overwhelming support from clinicians for ring-fenced beds. However, there had been limited success in achieving rigorous ring-fencing of beds across Queensland.

Based on the evidence, it is recommended that all elective arthroplasty services should transition to a service delivery model whereby arthroplasty surgery is only undertaken in facilities that have access to ring-fenced beds.

Enhanced recovery after surgery (ERAS)

Enhanced recovery after surgery (ERAS) programs aim to improve patient and functional outcomes and aid rapid recovery by reducing variation across the patient journey by using standard multimodal interventions integrated into clinical pathways [22]. The ERAS® Society has published a consensus statement [23] for perioperative care in total hip and total knee replacement surgery which articulates evidence-based, best practice across 17 areas including patient education, optimisation, risk mitigation and clinical care.

Implementation of ERAS principles and programs have realised numerous benefits including:

- improved patient education
- reduced fasting times
- reduced blood loss
- reduced length of stay
- improved outcomes. [24,25]

Across Queensland facilities, a number of orthopaedic departments endorse ERAS, and there is evidence of implementation of components of the ERAS program in some facilities. One of the barriers to implementing a robust and complete ERAS program in Queensland facilities has been the ability to secure the resources required to ensure centrally coordinated and consistent application of the principles particularly in the preoperative period. Roles such as care co-ordinators / navigators are integral for partnering with consumers to support their end-to-end journey from the outpatient setting, through the surgical period until post-rehabilitation and discharge.

The use of a standard ERAS program will reduce variation across the patient journey and improve patient outcomes. HHS's should consider re-deploying existing resources or seek funding for additional resources to implement ERAS principles for arthroplasty patients

Arthroplasty optimisation program

Queensland has a growing and ageing population, with a rising burden of disease and disability due to chronic musculoskeletal disorders [1]. Arthroplasty surgery is widely accepted as a cost-effective solution, improving the quality and function for a growing number of people. Despite improvements in surgical techniques, arthroplasty is not without risk, though there is a growing body of evidence to suggest that some of these risks can be mitigated through preoperative optimisation.

Comorbidities such as cardiac disease, respiratory disease, peripheral vascular disease, diabetes, smoking and obesity have all been shown to increase complication risk [26-30]. Identifying and addressing known risk-factors will reduce readmission risk [31]. In addition, potentially preventable complications not only contribute to poor experience [32, 33] and outcome but have also been shown to be associated with increased costs [15].

Despite this, comorbidities are no longer seen as a barrier to arthroplasty surgery, though without a clear optimisation process and understanding of roles and responsibilities around preoperative patient optimisation, there is a risk that patients will progress to surgery without adequate preparation [34], subsequently resulting in suboptimal and, in some cases, catastrophic outcomes.

Models such as the perioperative orthopaedic surgical home [35], whereby modifiable comorbidities and risks are optimised by a multidisciplinary team, have been shown to improve perioperative outcomes and patient engagement while reducing costs. Furthermore, standardisation of patient selection according to evidence-based criteria, criteria led discharge and early discharge planning may also assist in reducing infection, complication and readmission rates, the need for additional surgical procedures and length of stay for elective arthroplasty patients.

It is recommended that Queensland Health support the development and implementation of a clinician endorsed arthroplasty optimisation guideline to standardise requirements for surgical optimisation, reduce preventable complications and improve patient outcomes.

Opportunity 2: Clinical coding

Clinical coding utilising clinical documentation is the process of classifying or ‘coding’ inpatient clinical diagnoses and interventions and is the foundation for hospital inpatient funding under an Activity Based Funding (ABF) model. In addition to funding, coded clinical data is used in a variety of other areas - e.g. epidemiology and population health, health service planning, hospital performance measurement and health sciences research.

Clinical coders are non-clinical staff bound by guidelines and conventions. They are not permitted to interpret, assume or apply a code to anything that is not explicitly recorded in the clinical record. Throughout Queensland, there are standard processes in place to ensure clinical coders liaise with clinicians if the clinical documentation is not of suitable quality or quantity to assign a Diagnostic Related Group (DRG); however, these processes are variable in terms of reliability.

Coding errors have the potential for far-reaching consequences - most notably, inappropriate assignment of activity for the care and services provided to patients and an inability to accurately monitor the incidence and nature of complications to inform clinical risk programs.

Poor quality, incomplete or inaccurate clinical documentation leads to incorrect DRG assignment. The inability to assign codes related to complexity, comorbidity or complication due to incomplete clinical documentation is the most common cause of coding error [36-38], with accuracy rates reported as low as 50% [39] resulting in significant financial implications [37, 40].

Strategies designed to improve the accuracy of clinical coding include:

- improved coder access to clinical input
 - clinician and coder education
 - collaboration and communication
 - increased awareness of the importance and implications of accurate clinical documentation.
- [37,38,41]

It is recommended that health services consider implementing a clinical coding improvement strategy in order to ensure the validity and robustness of coded data. This strategy should improve the collaboration between clinical coders and clinicians.



Opportunity 3: Prioritising trauma services

Alignment of demand and supply

Delays to surgery for orthopaedic trauma patients can result in a number of negative consequences, including but not limited to increased morbidity and mortality, prolonged periods of fasting and an increased length of stay [10, 11]. In particular, increased length of stay due to preoperative delays coupled with the need to undertake trauma surgeries after hours and on weekends creates significant financial burden for health services [42]. In addition, a lack of dedicated trauma theatre sessions results in an inability to consistently roster a consultant surgeon to supervise trauma surgeries, risking increased reoperation rates and poorer training experiences for registrars and junior medical staff.

The vast majority of delays in orthopaedic trauma surgery are preventable and predominantly relate to operational delays such as competing priorities or theatre overruns [43]. The Queensland Emergency Surgery Access Guideline indicates that, “A dedicated orthopaedic emergency theatre should be considered in facilities where workload indicates sufficient demand:

- Orthopaedics comprises >50% of the emergency surgery workload.
- Emergency surgery lists consistently run over time.
- Elective surgery lists are cancelled for emergency cases >30% of the time.” [44]

In view of this, it is recommended that each HHS review the alignment of current dedicated, supervised trauma theatre sessions against demand and consider additional resource allocation, where required, to ensure trauma demand can be managed in a timely and appropriate manner.



Trauma key performance indicators

As noted, access to trauma theatre resources is regularly challenging due to competing priorities of elective surgery targets and Service Agreement performance measures. Given the criticality and nature of trauma surgery, Queensland Health should also consider establishing trauma-related key performance indicators to increase the profile and priority of access to theatre for trauma patients, again, improving patient outcomes and service efficiencies.

To support this, the Statewide Trauma Clinical Network in collaboration with the Healthcare Improvement Unit is leading the development of a statewide trauma data collection and has endorsed an agreed data definition for 'trauma' to enable comparable reporting of trauma.

Opportunity 4: Clinician-led procurement model

Health Support Queensland (HSQ) provide procurement, contract management, and supply services to the Queensland public health system. While there are standing offer arrangements, local facilities negotiate individual prices based on prosthesis use and market share principles. Facilities in rural and remote settings may have less bargaining power, as a result of lower activity volumes and greater transportation distances.

As a result of the findings and discussions from the orthopaedic procurement forum, clinical directors are in agreement that procurement and pricing processes should be driven by the following principles;

- striving for the best outcomes for patients
- transparency
- clinician involvement in decision making
- any savings made should be reinvested in frontline services.

Consequently, it is imperative that Hospital and Health Service executives enable clinical participation in a clinician-led procurement strategy. HSQ will continue to work in collaboration with orthopaedic directors and Hospital and Health Services to further investigate opportunities for implementing a statewide procurement model to ensure best value care and outcomes.

Opportunity 5: Clinical urgency standardisation

Standardised clinical urgency categorisation in both outpatients and elective surgery promotes equitable and timely access for all patients. In Queensland, defined criteria are available to inform decision making and allocation of urgency category for both outpatient and elective surgery referrals.

Clinical Prioritisation Criteria (CPC) are decision support tools that have been developed and endorsed by clinicians. These can be used to ensure referrals to specialist services in Queensland are triaged according to their clinical urgency and in a safe, consistent and equitable manner.

The National Elective Surgery Urgency Categorisation Guideline (NESUCG) [9] was developed and implemented to promote national consistency and comparability in categorising the urgency of elective surgery and to improve equity of access for patients requiring elective surgery.

While these guidelines have been implemented across Queensland, it is acknowledged that there will always be exceptions, and decision-making based on the individual assessment of each patient is paramount. In view of this, the recommended urgency category should be assigned unless there is a clinical reason not to do so.

The elective surgery electronic booking form is one strategy that may support improved categorisation by automatically assigning the NESUCG category based on the selected procedure code. Sites may also opt to enable additional validation functions that require approval to override a category change where it deviates from the guideline.

It is recommended that HHSs, in partnership with clinicians, ensure they have compliance monitoring processes and processes to manage unwarranted variation from these guidelines in place to ensure there is consistent application of categorisation guidelines.

Opportunity 6: Hip fracture care

Hip fracture is the most serious and costly fall-related injury suffered by older people. More than 22,000 people across Australia break their hip each year, with the cost to the economy of approximately \$579 million annually [46]. It is recognised that geriatric hip fracture is associated with significant morbidity and mortality risk across the continuum of care. To reduce this risk, a number of initiatives have been developed:

- The Australian Commission on Safety and Quality in Health Care (ACSQHC) Hip Fracture Clinical Care Standard (HFCCS), which details evidence-based best practice standards to ensure all patients receive quality care.
- The Australian and New Zealand Hip Fracture registry (ANZHFR), which is a clinical registry that collects data on care provided and the outcomes of care.

Despite these widely implemented initiatives, variation in the care and outcomes for geriatric hip fracture patients remains evident. GIRFT Queensland focused on geriatric assessment and support, and time to surgery as two indicators of quality hip fracture care.

Geriatric assessment and shared-care models in older hip fracture patients have been shown to improve patient outcomes, including reducing morbidity and mortality [47-49]. The ACSQHC HFCCS states, “A patient with a hip fracture is offered treatment based on an orthogeriatric model of care as defined in the Australian and New Zealand Guideline for Hip Fracture Care [50]”. This includes regular orthogeriatric assessment, medication review, management of patient comorbidities, surgical optimisation and early identification of goals and care coordination.

The model of hip fracture care across Queensland varies from effective shared care between orthopaedic and orthogeriatric specialists through to no service provided other than the ability to request a consult for a specific issue from a medical physician.

Acknowledging the challenges faced, particularly by rural and regional facilities in regard to the recruitment of specialist orthogeriatric staff, all facilities that provide acute care for hip fracture patients should have in place a standard arrangement with either geriatric or medical teams to ensure all hip fracture patients are offered care that is based on an orthogeriatric model.

The ACSQHC HFCCS also requires that a patient presenting to hospital with a hip fracture, or sustaining a hip fracture while in hospital, is to receive surgery within 48 hours if no clinical contraindication exists and the patient prefers surgery [50]. Despite this, the average time to surgery for hip fracture patients in Queensland public hospitals varies from 31 hours to 73 hours.

To ensure quality, timely, person-centred care, all facilities should ensure they have adequate systems and processes in place to offer evidence-based hip fracture care consistent with the ACSQHC FCCS, including but not limited to; geriatric (physician in the absence of geriatrician) shared-care models, adequate and timely access to theatre resources, and resource to support ongoing data contribution to the ANZHFR.

Opportunity 7: Alternate care pathways for specialist outpatients

Ensuring patients are seen in the right place, at the right time, with the right information and by the most appropriate health practitioner is vital for ensuring timely, safe and efficient specialist outpatient care. Throughout GIRFT Queensland, a number of hospitals shared exemplar practices of successful alternate care pathways for specialist outpatients including, for example, various orthopaedic physiotherapy and musculoskeletal clinics.

Implementation of such models can result in a range of benefits to both patients and the health system including:

- Improved access to timely care by reducing unnecessary delays for assessment by a specialist when care can be provided safely by other appropriately qualified healthcare practitioners.
- Reduction in overall waiting times for specialist outpatients by releasing the capacity of specialists to attend to patients who genuinely require specialist surgical care and management.
- Improved operative and non-operative outcomes through appropriate pre-operative screening and management.
- Improved clinic efficiency.
- Enables practitioners to work to the top of their scope.

Underpinning these models is the need for robust systems and processes inclusive of:

- Clearly defined roles and responsibilities.
- Clear communication and escalation pathways between care providers.
- Documented criteria and pathways for the assessment, triage and streaming of referrals to appropriate care providers developed in consultation with specialists.
- Mechanisms to review and monitor outcomes and service efficiencies, particularly in the early stages of implementation.
- Efficient business as usual processes for reducing failure to attend rates and hospital-initiated cancellations.

Finally, complementing alternate care pathways is the need for alignment to Clinical Prioritisation Criteria (CPC). This is not only necessary for ensuring referrals to public specialist outpatient services are triaged according to clinical urgency in a safe, consistent and equitable manner but also for ensuring:

- Referrals have all the information required for appropriate triage.
- Patients are ready for care at their first specialist outpatient appointment.
- Improved referral and communication processes between referrers and specialist outpatient services.

It is, therefore, recommended that:

- Opportunities to continue to share and investigate the feasibility of spreading successful alternate care pathways for specialist outpatients to other hospitals across Queensland be considered to ensure the same and/or similar benefits can be realised.
- HHSs ensure appropriate compliance monitoring processes are in place to ensure there is consistent application of CPC.

Opportunity 8: Networking and peer support

Queensland is a large state, highly populated in the south east corner with the remaining population dispersed over large distances throughout the state. Geographical isolation and the inability to provide sub-specialty services in every location can lead to clinician isolation and a perceived lack of support. In addition, patients are often expected to travel to metropolitan centres for consultations and procedures due to the lack of available services locally or if their physiological needs fall beyond the service capability of their local health service.

The concept of networking is not new, and the benefits have been widely established including:

- increasing local provision of care
- reducing the burden of travel
- reducing unnecessary or premature tertiary referrals
- reduction in professional isolation
- increased peer support [51, 52].

Telehealth and telemedicine services between rural, regional and tertiary services also provide opportunities to support training and education [53].

It is pleasing to see that in recognition of the need for increased peer support across Queensland and to provide a collegiate and collaborative forum for discussion, the orthopaedic directors have convened the Queensland Directors of Orthopaedics Group (QDOG), which now meets regularly.

To build on the momentum of QDOG, Queensland Health should also consider formalising this group by establishing clear governance, terms of reference and support for travel. In addition to this, formalised peer support models, such as the Supporting our Specialist Services (SOSS) Partnership Program, should

Opportunity 9: Learnings from litigation

Litigation claims relating to Queensland Health are centrally managed by the Queensland Government Insurance Fund (QGIF). Data from litigation claims is not something that has historically been readily available to clinicians. During the GIRFT Queensland site visits, clinicians reported having very little knowledge or oversight of local claims data both in relation to costs and reason for claim.

It is acknowledged that broad dissemination of this sensitive data may pose confidentiality and privacy risks; however, with appropriate anonymisation, there is great potential value to be found in learning from litigation.

Analysis of common causes of claims, clinical themes, patient characteristics and adverse events identified within litigation data could afford the potential to inform improvement opportunities in clinical practice, communication, patient safety, health service research and strategic planning [54-59].

Queensland Health should consider developing a process to enable aggregate review of litigation claims to identify systems, process and clinical improvement opportunities.

Opportunity 10: Reinvestment strategy

It is inevitable that reduced variation and improved patient outcomes will result in financial benefits. Despite this, there is no clear process to enable financial and resource reinvestment into frontline services when improvements occur. Reinvestment requires the ability to firstly quantify potential benefits, and secondly have a clear, consistent process to ensure the benefits are directed to frontline services.

Appreciating the need for sustainable health services and generation of efficiency dividends, HHSs should consider developing and endorsing an improvement reinvestment strategy whereby a proportion of financial and benefits realised through improvement activities is reinvested into clinical units. This is also another way of demonstrating support to clinicians and increasing engagement and morale.

Opportunity 11: Data quality and access

Data reliability, confidence and access is key to ensuring clinical engagement in not only identifying opportunities for improvement but also measuring clinical and performance outcomes following improvements. It is also critical to ensure reported outcomes, costs, activity and efficiencies are accurately reflected at a systems level. As discussed in the findings section, there are a number of areas whereby the collection, validation, reporting and sharing of data can be improved.

It is recommended that Queensland Health investigate the streamlining and standardisation of the following:

- Outpatient data – standardise the mapping of clinics to corporate clinic codes for all hospitals.
- Inpatient data – investigate and standardise the application of the Sub and Non-Acute Patient (SNAP) process to ensure comparability of length of stay data across facilities.
- Costing data – improve standardisation of the assignment of costs to cost buckets and implement reporting deadlines for HHSs.
- Patient-reported outcome measures (PROM) and patient-reported experience measures (PREM) – Queensland Health to adopt a statewide approach to PREMs and PROMS.
- Data availability and approval processes – streamline the process for accessing data from various systems, and where possible, aim towards a central repository.
- Operating theatre data – implement the Statewide Trauma Clinical Network’s definition for ‘trauma,’ expedite the Operating Theatre Data Collection to enable access to emergency surgery data and implement standard business rules for data entry for elective and emergency surgery patients in ORMIS and SurgiNet.



Clinician leadership and engagement

Achievement of the above will only be possible through strong clinical leadership and engagement. Today's pressures to ensure financial sustainability and increase productivity and performance mean that the role of clinicians now goes beyond delivering services on the frontline.

In addition to ensuring quality outcomes, clinicians are responsible for: monitoring and maintaining waitlists; ensuring safe and high-quality care through clinical audit, monitoring outcomes and undertaking professional development; and, participating in training and research. As such, balancing these many portfolios can be challenging if clinicians are not adequately supported or engaged.

During the GIRFT Queensland program, some clinicians and clinical directors have expressed concern with the increasing burden of clinical, academic and administrative workloads and, at times, frustration with having little opportunity afforded to participate in service delivery and development decisions.

Evidence also shows that clinician satisfaction, support, motivation and involvement within the organisation is crucial to ensuring optimal patient outcomes. [60]

It is, therefore, imperative that health service executives and leaders partner with clinicians to ensure there is shared decision making, clear communication and support to ensure clinicians have the time, support, knowledge and skills to succeed in all areas.



ACHIEVEMENTS

It is acknowledged that sustainable change and implementing quality improvements takes time and, therefore, full outcomes from the program are not anticipated to be seen until at least 12 months post-implementation. It should also be acknowledged that due to the impacts of COVID-19, future comparative analysis will be challenging. Despite this, a number of sites have committed to implementing local quality improvement initiatives, with early measures indicating successful improvement.

Early wins

In the absence of mid to long-term outcome data, the following early achievements are seen as significant milestones for orthopaedics in Queensland – some of which begin to address the opportunities outlined in the previous section:

- **Peer support and networking:** GIRFT Queensland assisted in the establishment of the first Queensland Directors of Orthopaedics Group (QDOG). The aim of this group is to enable orthopaedic directors to network, collaborate and provide peer-to-peer support to pursue system-wide quality improvement and ensure there are opportunities to standardise practice, systems and processes where required. The first meeting was held in October 2019 and QDOG has met another three times, with very high attendance and input from participating HHSs.
- **Clinician-led, statewide orthopaedic procurement model:** Resulting from the Statewide Orthopaedic Director's Procurement Forum, HSQ gained endorsement to progress a clinician-led, statewide procurement model to optimise the value of care provided in orthopaedics. Furthermore, following a review of the cost of the most commonly used hip and knee constructs from March to December 2019, it is evident that several hospitals which participated in the GIRFT Queensland program have begun implementing local changes to procurement, with savings up to 33% and 25% for hip and knee implant costs respectively. This has been achieved, in part, by hospitals making a commitment to suppliers in exchange for discounted pricing.
- **Outcomes monitoring:** Prior to GIRFT Queensland, only 1/3 of orthopaedic departments across Queensland Health had previously requested their Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) facility level report. Participation in such registries enables access to comparative performance data and the best available evidence from Australian hospitals to improve and maintain the quality of care and outcomes for patients. Following the GIRFT Queensland clinical engagement sessions, this increased to 100% of orthopaedic departments accessing their AOANJRR report. Similarly, all sites are now approved to contribute to the Australian and New Zealand Hip Fracture Registry with similar benefits to the AOANJRR for hip fracture care.
- **Ring-fenced beds:** Ring-fenced beds have been endorsed at three hospitals which aligns with best practice care for preventing infection.
- **Clinician support:** Commencement of clinician/executive meetings has occurred at a number of sites demonstrating commitment to continually improve services.
- **Local audit:** 17 of the 18 sites have requested local patient-level data for local audit, demonstrating good engagement with the GIRFT process.

Outcomes

As previously outlined, the short and medium-term outcome measures of effectiveness of the program are predominantly related to engagement, understanding and acceptance of the methodology and program, with the long-term measures designed to assess quantifiable improvements over time.

Initial feedback from clinicians and executives following the site visits has been overwhelmingly positive in respect to these early outcome measures as evidenced by the following clinician and executive feedback:



91% of clinicians and executive were extremely, very or somewhat confident that the GIRFT Queensland program would result in improved patient outcomes within their facility.



60% reported the data pack content and relevance was excellent and **33%** reported it to be good



83% reported excellent understanding of the program



50% of sites have commenced GIRFT Queensland relationship meetings between local clinicians and executives



75% reported the data presented during the site visit was normally hard to access



91% of sites have commenced quality improvement initiatives as a result of the GIRFT Queensland site visit



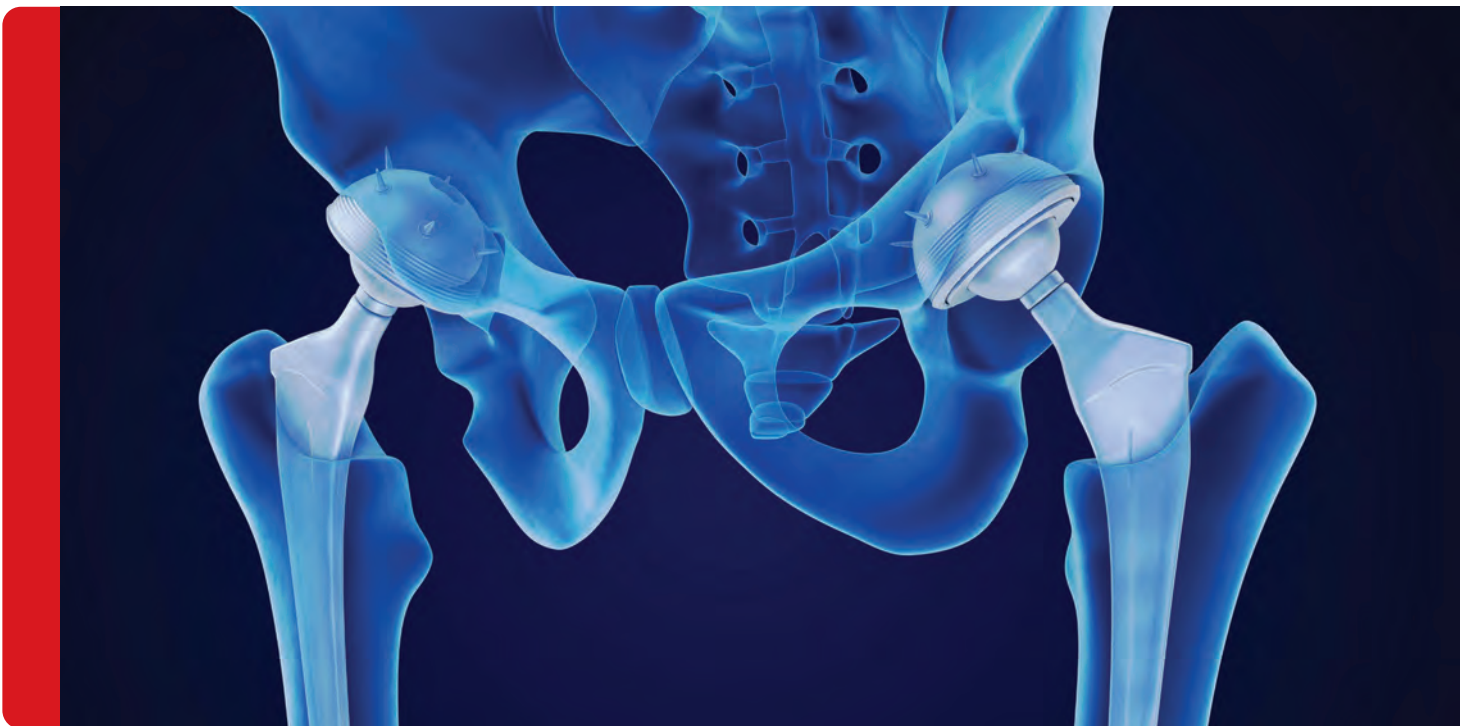
50% reported the GIRFT Queensland program identified issues they were not previously aware of

GIRFT Queensland (Virtual) Director's Forum

The GIRFT Queensland team facilitated an online Directors of Orthopaedics Forum on the 19 June 2020. The aim of the forum was to provide an overview of GIRFT Queensland findings to date, share successes from local sites and consider future opportunities.

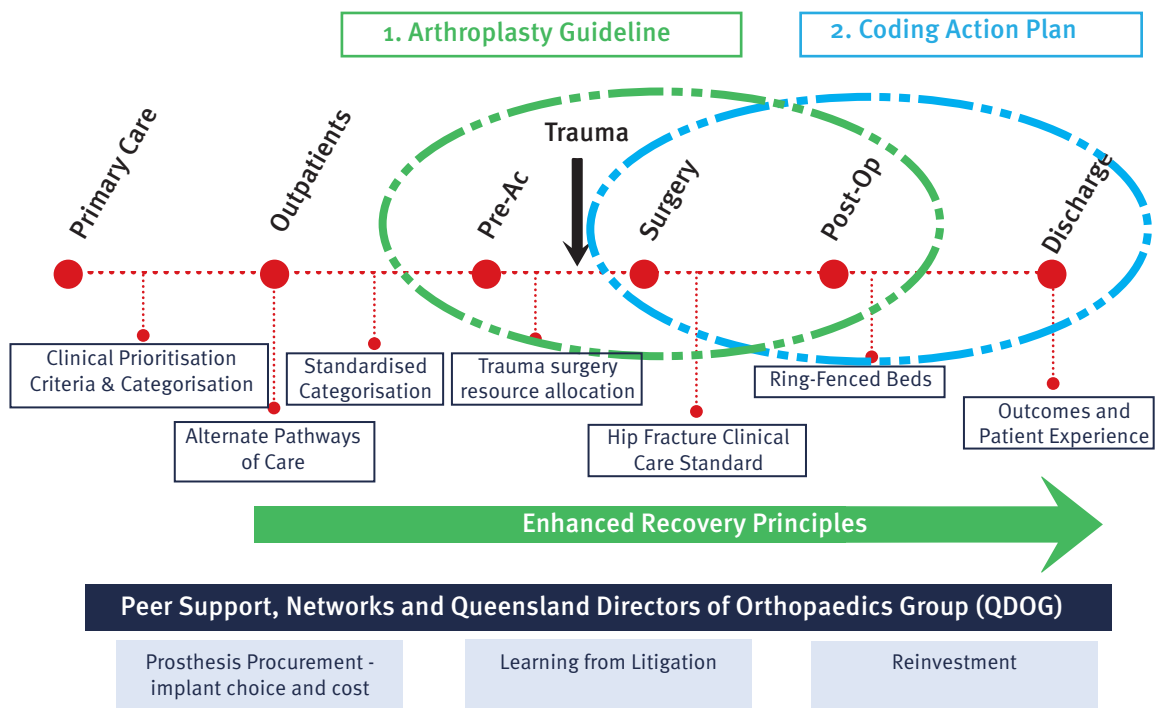
The forum, opened by Dr John Wakefield PSM, Director-General, Queensland Health, and attended by Professor Tim Briggs, saw representation from every public orthopaedic department across the state.

Outcomes from the forum included endorsement of the draft Infection Prevention in Arthroplasty guideline and statewide orthopaedic coding improvement plan, as well as commitment from the Queensland Directors of Orthopaedics Group (QDOG) to partner with the GIRFT Queensland team to prioritise the remaining opportunities for implementation through a phased approach across the state.



NEXT STEPS

The Queensland Directors of Orthopaedics Group (QDOG) has committed to continuing to partner with the GIRFT Queensland team in prioritising and implementing the identified opportunities and priorities as outlined in the following GIRFT Queensland roadmap.



CONCLUSION

The GIRFT Queensland program has been met with overwhelming support from clinical and health service executives across the state. Integral to gaining this support has been face-to-face clinical engagement, clear communication around the methodology and objectives, and providing an opportunity for constructive peer discussion on variation, local challenges and opportunities.

Collaborating with all orthopaedic departments using the GIRFT Queensland methodology, has provided great value in understanding local context, challenges and exemplar practices for improving patient outcomes and health service efficiencies. As evident through the site visits, many of the challenges faced by individual orthopaedic teams are not unique to their facility, and there is clear evidence of the need to address variation in a consistent, co-ordinated and ongoing manner across the state.

The GIRFT Queensland program in orthopaedics has demonstrated the significant value of clinician-led, peer-to-peer benchmarking and strengthens the need to ensure the momentum and outcomes achieved to date can be continued and sustained by embedding this methodology as Queensland's preferred surgical quality framework.

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