

# Value-based surgical care

Defining key indicators

September 2022

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## Introduction

This document identifies key indicators to support local implementation of value-based surgical practices.

The information in this document has been developed through:

- a review of existing measures and indicators identified and used by Australian and international health organisations
- identification of issues and directions in relevant literature
- consultation with clinical subject matter experts.

Value can be added at all stages of a patient's healthcare journey. This document focuses on appropriateness of care – is the surgery indicated for this individual patient? This decision point is assessed during a surgical review, which incorporates a clinically complex risk and benefit assessment, based on the individual patient's needs and goals of their care.

The indicators outlined in this document aim to:

- assist in making value-based clinical and operational decisions in surgical services
- provide direction and tools to monitor practice change.

Indicators are designed to allow careful consideration of clinical justifications, individual risks, benefits of surgical procedures, health outcomes and patient experiences.

Ongoing measurement and feedback of agreed indicators supports transparency, equity, consistency, and governance to decision making, from the individual patient level to the system level.

## Scope

The scope of this document is to identify indicators for two general surgical interventions for specific clinical conditions:

- repair of minimally symptomatic and asymptomatic inguinal hernias
- laparoscopic cholecystectomy for asymptomatic gallstones, except where the patient has:
  - a history of cholecystitis
  - a history of cholangitis
  - a history of pancreatitis
  - diabetes
  - family history of gallbladder cancer
  - ethnic heritage with a high incidence of gallbladder cancer
  - limited access to healthcare due to geographic remoteness.

## Method

The approach taken to identify key indicators for value-based surgical care is:

1. Summarising existing indicators and processes from literature and existing guidelines.
2. Mapping surgical review with a focus on creating a brief question set for clinical audit.
3. Feasibility testing to assess if the indicators identified are available through established electronic data and record systems.
4. Prioritising a concise set of indicators based on suggested criteria via clinical consultation, to allow evidence-based guidelines to be operationalised.

The approach taken in developing this indicator set will be refined throughout the development process to inform an appropriate approach for development of additional indicator sets in future, to cover further clinical interventions and surgical specialties.

As outlined in Table 1, quality indicators include clinical care process and outcome measures, patient-reported measures and organisational measures. When applied as a set, these provide rich information to inform clinical and operational decision making and performance monitoring.

The sets included in this review focus on indicators that are actionable by clinicians and managers, and those that directly impact on experience and outcomes for patients.

**Table 1: Key quality indicator types, measurement purpose and timing**

| Quality indicator category                | Measurement purpose  | When to apply                                  |
|---|--|--|
| Clinical care process measures            | To assess performance during delivery of care  | Pre and post procedure                         |
| Clinical care outcome measures            | To assess the results of the care that was provided  | Post procedure                                 |
| Patient-reported measures                 | To assess information via questionnaires that ask patients about their healthcare experiences, care goals and the outcomes of their care | Pre and post procedure                         |
| Organisational and service model measures | To describe the characteristics of the service   | Pre and post implementation of a model of care |

## Overview

### Existing quality indicators

A search of key organisations identified a range of clinical care measures with volume of surgery performed, length of stay, unplanned re-admissions and hospital-acquired complications most frequently used (Table 2).

**Table 2: Existing quality indicators for general surgery**

| Source  | Indicators  | Origin    |
|---|---|-----------|
| Bureau of Health Information, <i>Technical Supplement to Healthcare Quarterly, October to December 2021</i> <sup>1</sup>  | <ul style="list-style-type: none"> <li>• Volumes of surgery performed</li> <li>• Waiting times</li> <li>• Weekly surgeries performed</li> <li>• Patients on waiting list</li> <li>• Urgency category</li> <li>• Elective surgeries contracted to private hospitals</li> </ul>   | Australia |
| Australian Commission on Safety and Quality in Healthcare, <i>Australian Atlas of Healthcare Variation 2017: 4.4 Laparoscopic cholecystectomy 2017</i> <sup>2</sup> | <ul style="list-style-type: none"> <li>• Rate of laparoscopic cholecystectomies in Organisation for Economic Co-operation and Development countries</li> </ul>  | Australia |
| The Royal Australasian College of Surgeons, <i>Surgical audit guide</i> <sup>3</sup><br><br>Provides general measures validated for surgery                         | <ul style="list-style-type: none"> <li>• 30-day mortality</li> <li>• Length of hospital stay</li> <li>• Unplanned readmission</li> <li>• Unplanned return to theatre</li> <li>• Positive and negative outcomes</li> <li>• Operation-specific complications</li> <li>• Process of care, such as preoperative care</li> <li>• Time on waiting list</li> <li>• Numbers waiting for outpatient appointment</li> <li>• Use of investigations</li> <li>• Patient satisfaction shown by patient-reported outcome measures (PROMs)</li> <li>• Timing and use of prophylactic antibiotics</li> </ul> | Australia |

| Source  | Indicators  | Origin                |
|---|---|-----------------------|
| <p>United Kingdom Royal College of Surgeons, <i>Gallstones-commissioning guide</i><sup>4</sup></p> <p>Sets of five and seven indicators across the arc of surgical care</p> | <ul style="list-style-type: none"> <li>• Age/sex standardised activity (per 100,000 population)</li> <li>• Average length of stay (days)</li> <li>• Seven-day readmission rate (%)</li> <li>• 30-day readmission rate</li> <li>• Day case rate (%)</li> <li>• Cancellation rates</li> <li>• High compliance with PROMs data</li> </ul>  | <p>United Kingdom</p> |
| <p>Abercrombie J, <i>General Surgery GIRFT Programme National specialty report: Executive Summary</i><sup>5</sup></p>   | <ul style="list-style-type: none"> <li>• Quality of care – using indicators such as mortality and readmission rates</li> <li>• Factors linked to outcomes – including adoption of best practice, low volumes of procedures, and time to surgery, access (e.g. standardised activity per 100,000 population)</li> <li>• Efficiency – length of stay and costs</li> <li>• Patient experience</li> </ul> | <p>United Kingdom</p> |

## Key guidelines and criteria

Table 3 outlines available evidence-based guidance for inguinal hernia and laparoscopic cholecystectomy and forms the basis for value-based surgical care. This evidence guides the identification of relevant indicators to measure variance from best practice care standards.

**Table 3: Best practice guidelines and recommendations for hernia and cholecystectomy procedures**

| Recommendation   | Guideline  | Country and year    |
|--|--|---------------------|
| <b>Inguinal hernia</b>   |  |                     |
| Do not perform repair of minimally symptomatic or asymptomatic inguinal hernias without careful consideration, particularly in patients who have significant comorbidities.  | Royal Australasian College of Surgeons (RACS), <i>Choosing Wisely Australia</i> <sup>6</sup>   | Australia, 2016     |
| Do not use ultrasound for the further investigation of clinically apparent groin hernias. Ultrasound should not be used as a justification for repair of hernias that are not clinically apparent.   | RACS, <i>Choosing Wisely Australia</i> <sup>6</sup>  | Australia, 2016     |
| Although most patients will develop symptoms and proceed to surgery, watchful waiting for minimal or asymptomatic inguinal hernias is safe since the risk of hernia complications is low. Management decision is made between the surgeon and patient. | van Veenendaal N, Simons M, Hope W, et al. <i>Consensus on international guidelines for management of groin hernias</i> <sup>7</sup> | International, 2022 |
| <b>Cholecystectomy</b>   |  |                     |
| Avoid routine cholecystectomy for patients with asymptomatic cholelithiasis.   | Society of American Gastrointestinal and Endoscopic Surgeons, <i>Choosing Wisely</i> <sup>8</sup>                                    | USA, 2018           |
| Cholecystectomy confirms no benefit in patients with asymptomatic gallstones and even in patients with one attack of uncomplicated gallstone pain. The risks of the operation outweigh the complications if the stones are left.                       | World Gastroenterology Organisation, <i>Practice Guideline: Asymptomatic Gallstone Disease</i> <sup>9</sup>                          | International, 2006 |
| Patients with gallstones without symptoms should not be treated. They should be advised as to what symptoms to watch for. Cholecystectomy in asymptomatic cases is more hazardous than expectant care, as most patients do not develop symptoms.       | Royal Australian College of General Practitioners, <i>Biliary pain Work-up and management in general practice</i> <sup>10</sup>      | Australia, 2013     |



## Themes from the literature

Outcome-based indicators are generally regarded to be more advanced in development and more commonly used than process, organisational or patient-reported measures.<sup>11</sup>

Frameworks to capture information relating to appropriateness of surgery should take into account shared decision-making and clinical consensus techniques such as peer review, multidisciplinary review, external utilisation review and indications review.<sup>12</sup>

The RAND Corporation appropriateness method is a widely used and validated consensus building technique to designate where surgical procedures would be appropriate, equivocal, or inappropriate.<sup>13</sup> However, metrics used to assess the impact of these interventions remain limited.<sup>14</sup>

Measuring the value of care for surgical patients is not limited to measuring just the surgical intervention. Ideally, indicators would be identified and applied to assess care value across the patient journey, from primary care settings, hospital-based episodes of care and through to long-term patient outcomes.

Consideration should be given to the opportunity cost of care decisions, including exploration of alternative care pathways, and consideration of timing for a surgical intervention. While these elements feature in literature on value-based surgical care, this information is difficult to access and collect across sites of care.<sup>15</sup>

Current measures are constrained by the lack of systematic collection of clinical data at the level of individual patient, to capture the indications for the intervention (why was it given?) and the views and preferences of patients (in cases of marginal benefit, was there a strong patient preference to receive it?).<sup>5</sup> Understanding unmet need and use of alternative therapeutic interventions is a recurring theme across the health system. Innovative ways to capture this information are needed.<sup>16</sup>

The Getting it Right the First Time (GIRFT) General Surgery program has demonstrated how existing data can be used in an innovative way to gain a comprehensive picture of value-based surgical care, including productivity and cost.<sup>5</sup>

## Comparators and targets

It is recommended that a baseline assessment of the current state is completed at the hospital level using the indicators identified below. Following this, targets may be agreed to monitor trends in performance in the context of local improvement goals and organisational priorities. In defining targets, consider:

- **performance over time:** point prevalence will demonstrate changes over time
- **what is achievable:** actual data can be compared against the agreed standard, to determine if this standard is reasonable and achievable
- **assessment against peer facilities:** benchmarking is productive when there is a like for like comparison, however, needs to be interpreted with caution because of many confounding factors that may not be accounted for in the data.

## Eligible indicators for prioritisation

**Table 4: Proposed process indicators for value-based laparoscopic cholecystectomy**

| Indicator   | Measure   |
|---|---|
| Volume of laparoscopic cholecystectomy                | <p>Total number of laparoscopic cholecystectomies performed for an appropriate indication (i.e. clinical indications where laparoscopic cholecystectomy is generally considered appropriate), including:</p> <ul style="list-style-type: none"> <li>• Cholecystitis</li> <li>• Symptomatic cholelithiasis</li> <li>• Biliary dyskinesia</li> <li>• Acalculous cholecystitis</li> <li>• Gallstone pancreatitis</li> <li>• Gallbladder mass or polyp</li> <li>• Gallbladder cancer</li> </ul> |
| Identification of potentially inappropriate referrals | <p>Frequency performing a laparoscopic cholecystectomy for asymptomatic gallstones</p> <p>Total number of laparoscopic cholecystectomies performed where patient-reported pain score is low or mild (&lt;4 on a 10-point pain scale)</p> <p>Frequency of requests for admission for laparoscopic cholecystectomy for asymptomatic gallstones which do not proceed to surgical intervention</p>  |
| Team-based surgical care                              | <p>Number of potentially inappropriate referrals for which exemption to perform the procedure has been sought</p> <p>Number of referrals for laparoscopic cholecystectomy which do not proceed to surgical intervention</p> <p>Total number of procedures performed in the facility</p>   |
| Appropriate approach for cholecystectomy procedure    | <p>Proportions of:</p> <ul style="list-style-type: none"> <li>• open surgical approach; or</li> <li>• unplanned conversion of laparoscopic approach to open procedure.</li> </ul>   |
| Timely access to surgical care                        | <p>Proportion of laparoscopic cholecystectomies performed within appropriate clinical urgency category</p> <p>Number of overdue patients on elective surgery waiting list waiting for laparoscopic cholecystectomy</p> <p>Median wait time for elective laparoscopic cholecystectomy</p>  |

| Indicator                          | Measure   |
|------------------------------------|---|
| Established communication pathways | Proportion of potentially inappropriate referrals with documented communication back to referring physician |

**Table 5: Proposed outcome indicators for value-based laparoscopic cholecystectomy**

| Indicator                                      | Measure  |
|--|--|
| Adverse events and complications <sup>17</sup> | <p>Proportion of patients undergoing laparoscopic cholecystectomy for asymptomatic gallstones who experience a hospital-acquired complication:</p> <ul style="list-style-type: none"> <li>• Pressure injury</li> <li>• Healthcare associated infection including surgical site infection (SSI), urinary tract infection (UTI), central line-associated bloodstream infections (CLABSI), methicillin-resistant staphylococcus aureus (MRSA), vancomycin-resistant enterococci (VRE) and clostridium difficile infection (CDI)</li> <li>• Respiratory complication</li> <li>• Venous thromboembolism</li> <li>• Gastrointestinal bleeding</li> <li>• Delirium</li> <li>• Other [freetext]</li> </ul> |
| Average length of stay                         | <p>Mean length of stay for acute episode of care in patients undergoing laparoscopic cholecystectomy</p> <p>Mean length of stay for acute episode of care in patients undergoing laparoscopic cholecystectomy for asymptomatic gallstones</p> <p>Proportion of laparoscopic cholecystectomy completed as day stay cases</p>  |
| 30-day mortality                               | <p>Rate of mortality at 30 days post operation in patients undergoing:</p> <ul style="list-style-type: none"> <li>• laparoscopic cholecystectomy</li> <li>• laparoscopic cholecystectomy for asymptomatic gallstones.</li> </ul>   |
| Unplanned readmission                          | <p>Rate of unplanned admission to hospital post discharge in patients undergoing laparoscopic cholecystectomy (e.g. presentation to emergency department within 30 days of discharge)</p> <p>Rate of unplanned admission to hospital post discharge in patients undergoing laparoscopic cholecystectomy for asymptomatic gallstones</p>  |

| Indicator   | Measure   |
|---|---|
| Unplanned return to theatre   | <p>Rate of unplanned return to theatres post-operatively in patients undergoing laparoscopic cholecystectomy (e.g. post-operative hemorrhage, surgical wound dehiscence)</p> <p>Rate of unplanned return to theatres post-operatively in patients undergoing laparoscopic cholecystectomy for asymptomatic gallstones</p>   |
| Unplanned admission to intensive care   | <p>Rate of unplanned admission to intensive care unit (ICU) post-operatively in patients undergoing laparoscopic cholecystectomy</p> <p>Rate of unplanned admission to ICU post-operatively in patients undergoing laparoscopic cholecystectomy for asymptomatic gallstones</p>   |
| Day of surgery admission  | Proportion of patients undergoing laparoscopic cholecystectomy who are admitted to hospital on the day of surgery   |
| Day only and extended day only cases  | Proportion of patients undergoing laparoscopic cholecystectomy with a total length of stay <24 hours  |
| Australian Hospital Patient Experience Question Set (AHPEQS) Patient reported experience measures (PREMs) <sup>18</sup> | <p>AHPEQS enables hospitals and healthcare services to ask recent patients about their experiences of treatment and care.</p> <p>The questions have been found to be reliable and valid both for patients who are admitted to hospital for a night or more and for patients who have a day-only admission to hospital or day-stay clinic</p>  |
| EQ-5D-5L PROMs <sup>19</sup>  | EQ-5D-5L is an instrument which evaluates generic quality of life measures. It was developed in Europe and is widely used. The EQ-5D-5L descriptive system is a preference-based health-related quality of life (HRQoL) measure with one question for each of the five dimensions that include mobility, self-care, usual activities, pain and discomfort and anxiety and depression. |

**Table 6: Proposed process indicators for value-based minimal or asymptomatic inguinal hernia repair**

| Indicator   | Measure  |
|---|--|
| Appropriate indication for inguinal hernia repair | Frequency performing a minimally invasive hernia repair for an appropriate indication (i.e. symptomatic inguinal hernia) |

| Indicator   | Measure   |
|---|---|
| Identification of potentially inappropriate referrals | Frequency of surgical repair for asymptomatic inguinal hernia (e.g. where patient reported pre-operative pain score is low or mild (<4 on a 10-point pain scale))   |
| Team-based surgical care                              | Number of referrals for which advice from Director of Surgery (or equivalent) has been sought for suitability to perform the procedure<br><br>Number of referrals for repair of minimally symptomatic or asymptomatic inguinal hernia which do not proceed to surgical intervention<br><br>Total number of procedures performed in the facility |
| Surgical approach for cholecystectomy procedure       | Frequency of: <ul style="list-style-type: none"> <li>• open surgical approach; or</li> <li>• unplanned conversion of laparoscopic approach to open procedure.</li> </ul>  |
| Timely access to surgical care                        | Proportion of inguinal hernia repair performed within appropriate clinical urgency category<br><br>Number of overdue patients on elective surgery waiting list waiting for inguinal hernia<br><br>Median wait time for elective inguinal hernia surgery   |
| Established communication pathways                    | Proportion of potentially inappropriate referrals with documented communication back to referring physician   |

**Table 7: Proposed outcome indicators for value-based minimal or asymptomatic inguinal hernia repair**

| Indicator                                      | Measure  |
|--|--|
| Adverse events and complications <sup>17</sup> | Proportion of patients undergoing repair of minimally symptomatic or asymptomatic inguinal hernia who experience a hospital-acquired complication: <ul style="list-style-type: none"> <li>• Pressure injury</li> <li>• Healthcare associated infection including SSI, UTI, CLABSI, MRSA, VRE and CDI</li> <li>• Respiratory complication</li> <li>• Venous thromboembolism</li> <li>• Gastrointestinal bleeding</li> <li>• Delirium</li> </ul> |

| Indicator                             | Measure  |
|---------------------------------------|--|
| Average length of stay                | <p>Mean length of stay for acute episode of care in patients undergoing inguinal hernia repair</p> <p>Mean length of stay for acute episode of care in patients undergoing repair of minimally symptomatic or asymptomatic inguinal hernia</p> <p>Proportion of inguinal hernia repair completed as day stay cases</p>                   |
| 30-day mortality                      | <p>Rate of mortality at 30 days post-operation in patients undergoing:</p> <ul style="list-style-type: none"> <li>• inguinal hernia repair</li> <li>• repair of minimally symptomatic or asymptomatic inguinal hernia.</li> </ul>  |
| Unplanned readmission                 | <p>Rate of unplanned admission to hospital post-discharge in patients undergoing inguinal hernia repair (e.g. presentation to emergency department within 30 days of discharge)</p> <p>Rate of unplanned admission to hospital post-discharge in patients undergoing repair of minimally symptomatic or asymptomatic inguinal hernia</p> |
| Unplanned return to theatre           | <p>Rate of unplanned return to theatres post-operatively in patients undergoing inguinal hernia repair (e.g. post-operative hemorrhage, surgical wound dehiscence)</p> <p>Rate of unplanned return to theatres post-operatively in patients undergoing repair of minimally symptomatic or asymptomatic inguinal hernia</p>               |
| Unplanned admission to intensive care | <p>Rate of unplanned admission to ICU post-operatively in patients undergoing inguinal hernia repair</p> <p>Rate of unplanned admission to ICU post-operatively in patients undergoing repair of minimally symptomatic or asymptomatic inguinal hernia</p>   |
| Day of surgery admission              | Proportion of patients undergoing inguinal hernia repair who are admitted to hospital on the day of surgery  |
| Day only and extended day only cases  | Proportion of patients undergoing inguinal hernia repair with a total length of stay <24 hours   |
| AHPEQS PREMs <sup>18</sup>            | AHPEQS enables hospitals and healthcare services to ask recent patients about their experiences of treatment and care. The questions have been found to be reliable and valid both for patients who are admitted to hospital for a night or more and for patients who have a day-only admission to hospital or day-stay clinic           |

| Indicator                    | Measure  |
|------------------------------|--|
| EQ-5D-5L PROMs <sup>19</sup> | EQ-5D-5L is an instrument which evaluates generic quality of life measures. It was developed in Europe and is widely used. The EQ-5D-5L descriptive system is a preference-based HRQoL measure, with one question for each of the five dimensions that include mobility, self-care, usual activities, pain and discomfort, and anxiety and depression. |

## Developing clinical audit tools

### Mapping surgical review processes and devising a clinical audit tool

The literature recommends construction of clinically complex performance measures to assist in assessing value-based surgical indications.<sup>15, 16</sup>

Developing a concise clinical audit tool will enable the capture of clinical decision-making processes, using the referral for admission (RFA) document. It is intended that the audit information will be combined with other types of indicators, to determine appropriateness of surgery.

The following audit tool will be able to ascertain the presenting problem, if and why a person was referred for surgery and how goals of care were discussed.

**Table 8: Sample audit tool to capture surgical indication for cholecystectomy**

| Cholecystectomy  | Source                         |
|--|--------------------------------|
| <ol style="list-style-type: none"> <li>1. Patient age</li> <li>2. Patient sex</li> <li>3. Significant comorbidities</li> </ol>   | RFA                            |
| <ol style="list-style-type: none"> <li>4. What is the presenting problem or diagnosis?<br/>[Free text]</li> </ol>  | Primary referrer letter or RFA |
| <ol style="list-style-type: none"> <li>5. Planned procedure treatment? <ul style="list-style-type: none"> <li>• Surgery</li> <li>• Watchful waiting</li> <li>• Other [provide comment]</li> </ul> </li> </ol>  | RFA                            |
| <ol style="list-style-type: none"> <li>6. If surgery was decided, why was this patient referred for surgery? <ul style="list-style-type: none"> <li>• History of cholecystitis</li> <li>• History of cholangitis</li> <li>• History of pancreatitis</li> </ul> </li> </ol> | Surgeon practice notes         |

| Cholecystectomy  | Source                 |
|--|------------------------|
| <ul style="list-style-type: none"> <li>• Patient has diabetes</li> <li>• Family history of gallbladder cancer</li> <li>• Ethnic heritage with a high incidence of gallbladder cancer</li> <li>• Limited access to healthcare due to geographic remoteness</li> <li>• Other [provide comment]</li> </ul>  |                        |
| <p>7. How was the goal of care decided with patient? (More than one can be selected)</p> <ul style="list-style-type: none"> <li>• Shared decision-making tool</li> <li>• PROMs screening tool</li> <li>• Patient information sheet provided</li> <li>• Verbal information provided</li> <li>• Goals of care were not discussed</li> <li>• Other [provide comment]</li> </ul> | Surgeon practice notes |

**Table 9: Sample audit tool to capture surgical indication for cholecystectomy**

| Hernia repair for asymptomatic hernia  | Source                         |
|--|--------------------------------|
| <ol style="list-style-type: none"> <li>1. Patient age</li> <li>2. Patient sex</li> <li>3. Significant comorbidities</li> </ol>   | RFA                            |
| <ol style="list-style-type: none"> <li>4. What is the presenting problem or diagnosis?<br/>[Free text]</li> </ol>  | Primary referrer letter or RFA |
| <ol style="list-style-type: none"> <li>5. Planned procedure or treatment? <ul style="list-style-type: none"> <li>• Surgery</li> <li>• Watchful waiting</li> <li>• Other [provide comment]</li> </ul> </li> </ol> | RFA                            |



| Hernia repair for asymptomatic hernia   | Source                 |
|---|------------------------|
| <p>6. If surgery selected, why was this patient referred for surgery:</p> <ul style="list-style-type: none"> <li>• Patient is symptomatic</li> <li>• Other [provide comment]</li> </ul>   | RFA                    |
| <p>7. How was the goal of care decided with patient? (More than one can be selected)</p> <ul style="list-style-type: none"> <li>• Shared decision-making tool</li> <li>• PROMs screening tool</li> <li>• Patient information sheet provided</li> <li>• Verbal information provided</li> <li>• Goals of care were not discussed</li> <li>• Other [describe in comments]</li> </ul> | Surgeon practice notes |

## Proposed next steps

### 1. Feasibility study to test availability of identified measures and indicators

Partnering with 1-2 hospitals to test whether the specified measures are routinely recorded in clinical and administrative data sets. An important next step is where are they recorded and potential extraction methods.

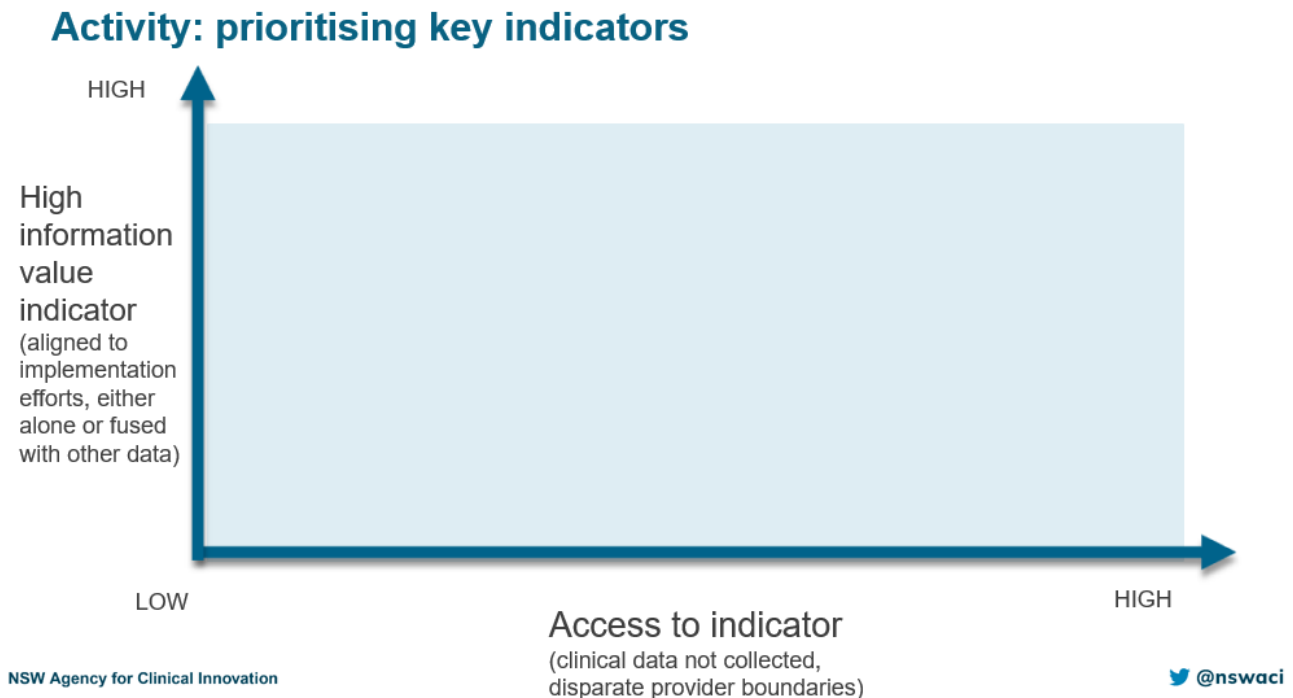
It may be necessary to undertake the feasibility assessment with sites spanning metropolitan, regional and rural facilities to account for regional and rural context and differences in workflow processes and IT systems.

### 2. Prioritising and combining indicators

Following the feasibility study, the next step is to build a consensus position on using 5-10 indicators to best reflect the value-based surgical approach. Working towards a short and consolidated data set to measure changes and improvements in value-based surgical care, requires a consensus building process to gain input from surgical specialties.

There are several strategies, tools, and methods to achieve the agreement on the indicator set. Figure 1 outlines a simple activity with a decision matrix based on criteria of high information value indicator and access to indicator.

**Figure 1: Example of a decision matrix that can be used to build consensus with surgical specialties**



# Glossary

## Acronyms

|        |  |
|--------|--|
| CDI    | Clostridium difficile infection                |
| CLABSI | Central line-associated bloodstream infections |
| GIRFT  | Getting it Right the First Time                |
| HRQoL  | Health-related quality of life                 |
| ICU    | Intensive care unit                            |
| MRSA   | Methicillin-resistant staphylococcus aureus    |
| PREMs  | Patient-reported experience measures           |
| PROMs  | Patient-reported outcomes measures             |
| RFA    | Referral for admission                         |
| RACS   | Royal Australasian College of Surgeons         |
| SSI    | Surgical site infection                        |
| UTI    | Urinary tract infection                        |
| VRE    | Vancomycin-resistant enterococci               |

## Definitions

|                 |  |
|-----------------|--|
| Cholangitis     | Inflammation of the bile duct system   |
| Cholecystitis   | Inflammation of the gallbladder  |
| Cholecystectomy | Surgery to remove the gallbladder  |
| Inguinal hernia | Protrusion of organ or tissue through a weakened section of the abdominal wall |

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