ACHS

Australasian

# CLINICAL INDICATOR REPORT

24th EDITION 2015-2022

AUSTRALASIAN CLINICAL INDICATOR REPORT: 2015–2022 24TH EDITION.

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The expert commentary provided by the colleges, societies, and associations is contributed in response to a request from ACHS.
Although ACHS appreciates the insights provided, it does not necessarily agree with or endorses the views expressed.



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The ACHS Performance and Outcomes Service (POS) would also like to thank its collaborators in the development and review of the clinical indicator sets, particularly the Working Party Chairs and members.

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# Clinical Indicator Working Parties

ACHS clinical indicators are developed by working parties of practising clinicians (medical officers, nurses and allied health professionals in the relevant specialty field), representatives of the relevant Australian and New Zealand healthcare colleges, associations and societies, consumer representatives, statisticians and ACHS staff.

Selected working parties meet several times throughout the year, both in person and by teleconference, to review the existing clinical indicators and explore areas for new clinical indicators. The revised version of the clinical indicator set and the associated user manual are then endorsed by the relevant colleges, associations or societies prior to implementation.

Clinical indicator sets are regularly reviewed to ensure:

- they are relevant to users
- they continue to reflect the current healthcare environment
- there is consensus on collection and reporting requirements
- they are regarded as useful for quality improvement.

## List of clinical indicator working party chairs and participating organisations

| CI set | Working Party Chair | Participating organisations |
|---|---|---|
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# Clinical Indicator Working Parties

| CI set | Working Party Chair | Participating organisations |
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| Maternity | Prof Michael Permezel (RANZCOG) | • Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG)<br>• Australian College of Midwives |
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# Foreword

On behalf of the Australian Council on Healthcare Standards (ACHS), I am delighted to provide this foreword for the Australasian Clinical Indicator Report 24th Edition 2015-2022. The report examines data sourced from a broad range of clinical specialty areas supporting the use of performance data in safety and quality improvement.

As in previous years, the Australasian Clinical Indicator Report provides key points on significant trends between 2015 and 2022 for a broad range of Clinical Indicators.

The report also includes commentary by professionals within the respective healthcare specialty to provide context to the complex and ever-changing healthcare environment and offers insight for the potential to improve quality and safety within their facility.

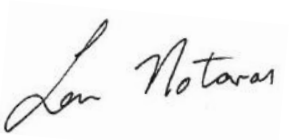
During the 34-year history of the clinical indicators and with this new Australasian Clinical Indicator Report, ACHS has proudly collaborated with clinical colleges, societies, and associations. These key stakeholders have contributed comments within their specialist area for each of the 22 clinical indicator sets, which contains 347 individual clinical indicators, and we sincerely thank them for their time and contributions.

Sydney University digital health intern David Chen has written a feature report, which discusses research on sustaining performance improvement when utilising the clinical indicator program, performed through a partnership between the ACHS, Sydney University and the Digital Health CRC program.

ACHS provides the Australasian Clinical Indicator Report to key health industry bodies, Federal and State Governments, our members and assessors, and other interested parties. The report is available to download on the ACHS website. A full retrospective report for each clinical indicator set is also available on the website.

I commend the Australasian Clinical Indicator Report 24th Edition 2015-2022 to you as a valuable resource for our healthcare industry.

In providing this insight, I would like to extend my appreciation to all collaborating colleges, associations and societies. Their ongoing support of the ACHS Clinical Indicator Program allows us to continue our efforts to improve healthcare standards in Australia and internationally. Thank you also to the ACHS Team for their work on a very comprehensive report.



Professor Len Notaras AO
President, ACHS Board of Directors

# About the Australasian Clinical Indicator Report (ACIR)

This Australasian Clinical Indicator Report 24th Edition 2015-2022 provides an overview of the results for each clinical indicator set for the last eight years, with additional commentary from the collaborating medical colleges, associations, specialist societies and other clinical organisations. Their expertise provides context for the trends or variations observed in the data.

This report summarises the clinical indicator data submitted to the ACHS Clinical Indicator Program for the years from 2015-2022. The report highlights significant trends or variation in the data over time, which can suggest areas where there is scope to improve practice.

### Summary of results

The summary of results section, describes observations drawn from the data of each clinical indicator for the year 2022. This data is an aggregate of results submitted by healthcare organisations participating in the ACHS Clinical Indicator Program. The aggregate rate is the sum of all the numerators of the cleansed data divided by the sum of all the denominators of all the cleansed data. The average of all the cleansed data is also provided. The aggregate and average are both provided as the aggregate is skewed towards the amount of work that has occcured (the total denominator), while the average is skewed by the number of submitting organisations. Both the average and aggregate are useful for comparing performance as the aggregate is representative of what a typical patient might experience it can be skewed by large denominator submissions. While the average can be skewed by the inclusion of small low risk high performing organisations. Hence both are provided. The best stratum and trends are provided where applicable.

### Expert commentary

To capture the context and circumstances that influence the data, ACHS draws upon the expertise of the specialist healthcare colleges, societies, and associations, in addition to the other clinical organisations with which it collaborates. Their comments and expert feedback precede the summary of results.

The expert commentators review the retrospective data and respond to questions from ACHS. The views expressed in the commentaries are those of the authors, and are not necessarily shared by ACHS. Where industry commentators were not available general comments have been made.

### ACIR - Retrospective Data 2015-2022

Every year, ACHS publishes retrospective data of collective performance against each of the clinical indicators. This information is published on the ACHS website: https://www.achs.org.au/our-services/pos/pos-resources and can be accessed by scanning the QR code with a smartphone or device.

An ACIR - Retrospective Data 2015-2022 report is created for each clinical indicator set and provides detailed information about each clinical indicator collected in 2022. Listed within the report are the clinical indicator, its intent, the numerator, and denominator. Tables summarise the data submitted in every year since 2015 that the clinical indicator has been available for reporting.

Trends in the rates over time are reported, and the data are displayed in a graph if four or more years of data are available from five or more healthcare organisations.

There are three measures of variation in rates between healthcare organisations included in this report. These are quantified by the differences between the 20th and 80th centiles. Where observable differences between strata have occurred in 2022, these data are reported in additional tables, and the information is illustrated graphically using box plots.

### Statistical Methods

The statistical methods used to analyse and report these data are also available online at https://www.achs.org.au/our-services/pos/pos-resources/guides-and-forms, along with a description of how to read, understand and use the retrospective data.

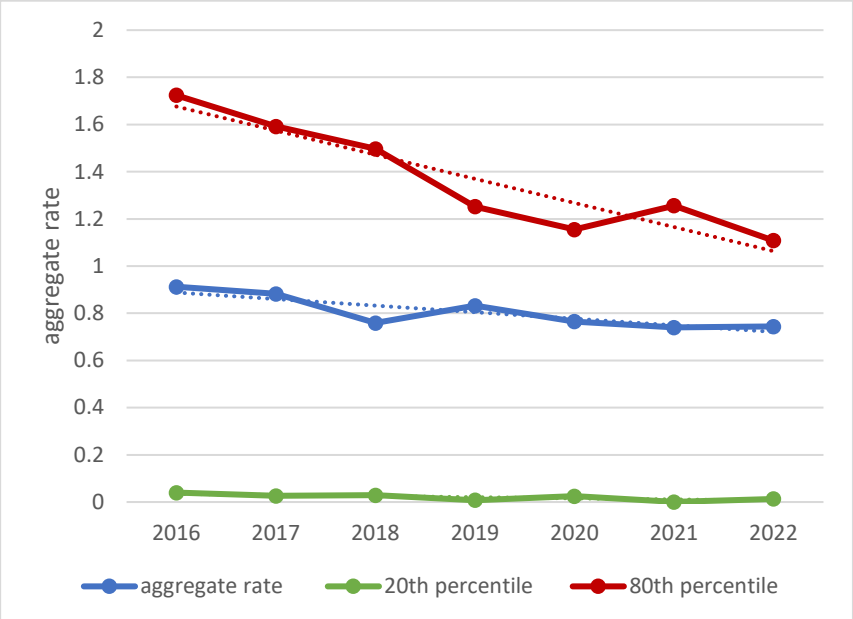
# Key results 2022 - Improvements

In 2022, there were 43 clinical indicators which showed significant trends in the desired direction. There were 7 clinical indicator sets that had an improvement in at least two-thirds of all trended clinical indicators. They were Anaesthesia & Perioperative Care, Day Patient, Hospital Wide, Infection Control, Mental Health, Opthalmology, and Oral Health. For the clinical indicators denoted below, (L) means low desirable rate while (H) means high desirable rate. There were noteworthy improvements in the following sets:

## Anaesthesia and perioperative care

### 3.2 PONV treatment in the recovery room (L)

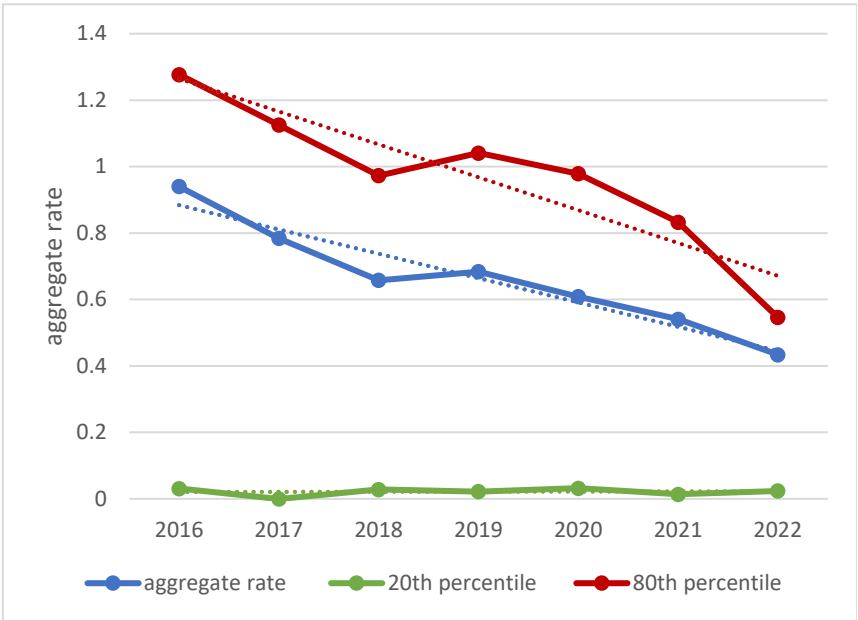
The number of patients requiring treatment in the recovery room for post-operative nausea and vomiting has continued to decline. The aggregate rate was 0.912 in 2016 and has declined to 0.744 in 2022, representing an 18.4% decline over the review period. This is likely due to better management of the patient, surgery, pre-, intra- and post-operative anaesthesia and the implementation of measures for risk assessment and mitigation.




## Day patient

### 6.1 Unplanned transfer or overnight admission related to the procedure (L)

The rate of unplanned transfers to a hospital or overnight admission after a day surgery procedure continues to decline with the rate dropping from 0.94% to 0.43%. This decline represents the increasing safety of the systems within Australia's healthcare system for day related procedures such as gastroscopies, colonoscopies, and joint replacements.

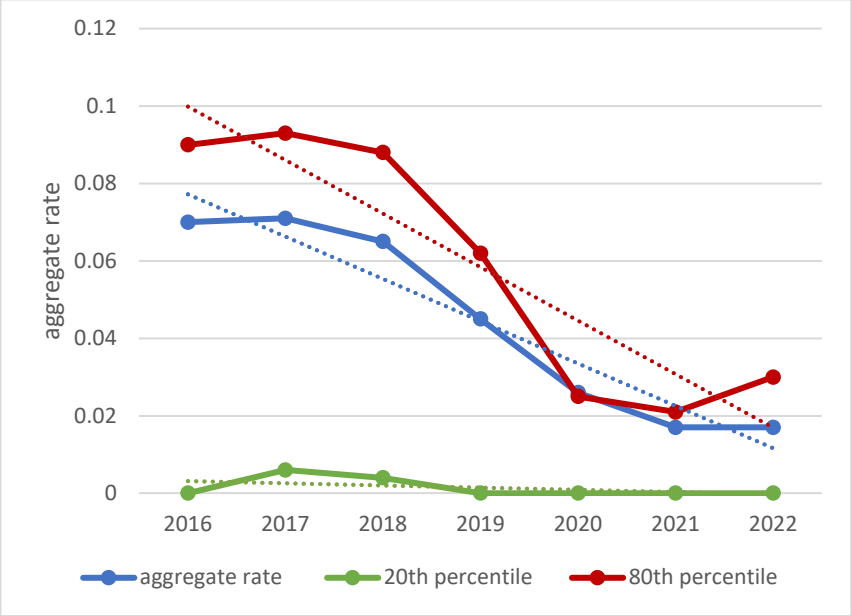


# Key results 2022 - Improvements

## Hospital-wide

3.1 Inpatients who develop >1 pressure injuries (L)

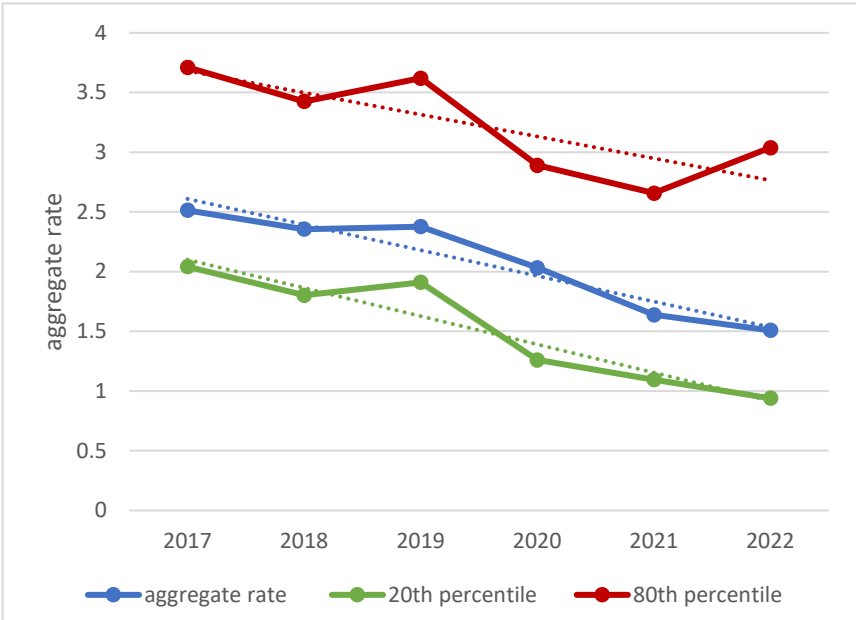
There has been a strong focus on pressure injuries across Australia in recent years as they accounted for a significant portion of hospital related injury to patients. Pressure injuries have declined significantly over time but the rate since 2016 has dropped from 0.070 to 0.017, which represents a 75.7% decrease to 2022. It is looking like we are hitting a floor with the improvement at 0.017% of inpatient bed days but that is an excellent result.




## Oral health

4.2 Fissure sealant treatment (children) - retreatment within 24 months (L)

Determining the rate of the need to retreat children who have had dental treatment within 24 months aims to measure the quality of the original work. This indicator has consistently improved between 2017 to 2022, with the rate declining from 2.51% to 1.51%. This data largely represents the work done by publicly run oral health providers in Australia and it is welcome to see such a high level of care being delivered in the public sector, especially for children.



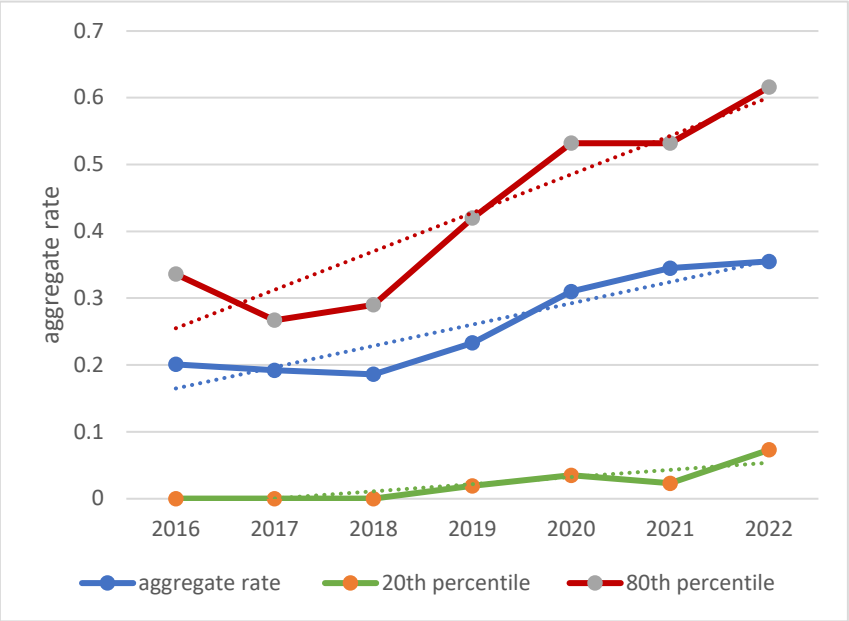
# Key results 2022 - Deteriorations

In 2022, there were 25 clinical indicators which showed significant trends in the undesirable direction. It is recommended that healthcare organisations give consideration to determining and to addressing the reasons for the deterioration. For the clinical indicators denoted below, (L) means low desirable rate while (H) means high desirable rate. There were noteworthy deteriorations in the following sets:

## Day Patient

### 3.1 Cancellation of the procedure after arrival due to pre-existing medical condition (L)

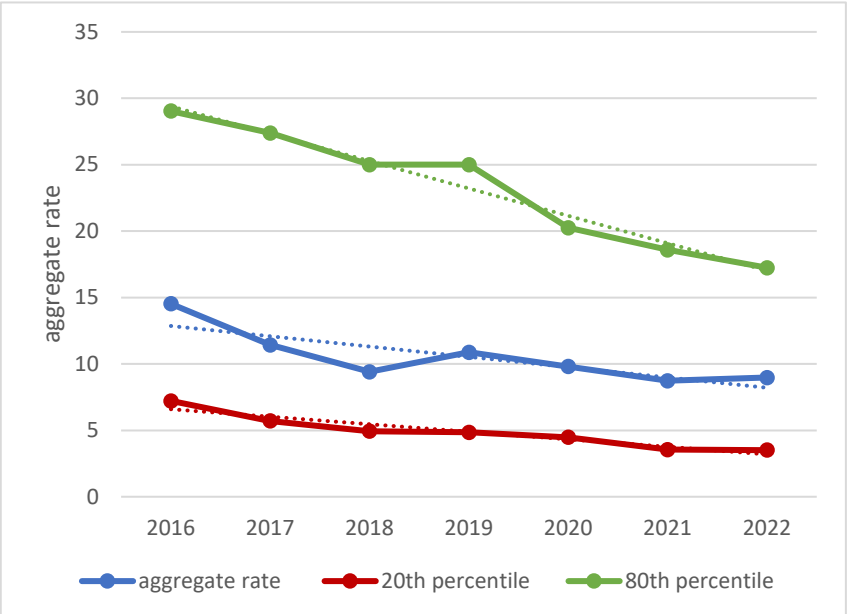
The rate of cancellation of a day procedure after arrival to a day surgery due to a pre-existing medical condition continues to rise. This rate was largely stable until 2020 when it has continued to rise. The increase since 2019 from 0.23% to 0.35% in 2022 has resulted in many procedure cancellations. This is likely to be due to patients with infectious diseases such as COVID-19 arriving being unwell/infectious on the day of the procedure. The trends started in 2020 but the recovery to the pre-COVID-19 pandemic baseline has not yet occurred.




## Maternity

### 3.1 Intact perineum (H)

Mothers with an intact perineum post childbirth continues to decline. The rate has declined from 14.5% in 2016 to a rate of 8.9% in 2022. This 38% decline may be due to the lack of education for mothers' pre-childbirth, an older population of mothers, and increasing obesity within the population.

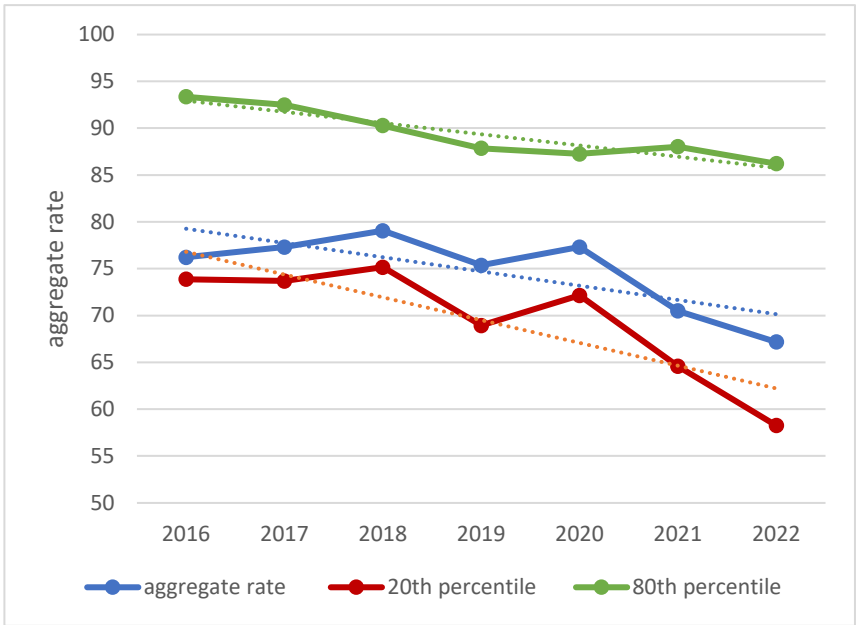


# Key results 2022 - Deteriorations

## Emergency medicine

1.2 ATS Category 2 – medically assessed and treated within 10 minutes (H)

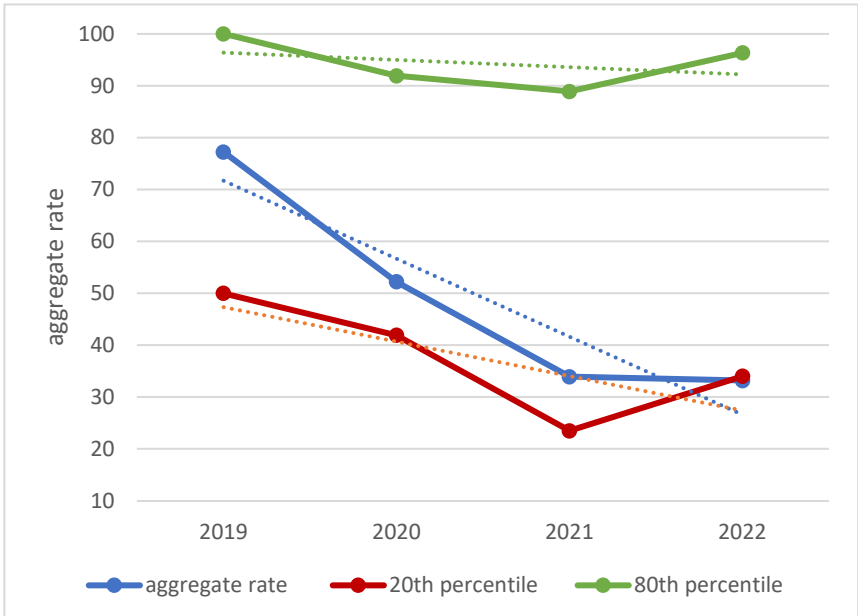
The Australasian Triage Scale Category 2 is the second most urgent level for treatment priority in the emergency department. This indicator measures the number of patients who were medically assessed and treated within 10 minutes of arrival. The data shows a decline from 76% in 2016 to 67% in 2022, with most of the decline since 2020. This reflects the high ongoing emergency department loads and the intensity since the start of the COVID-19 pandemic.




## Hospital-wide

7.1 VTE Risk assessment (H)

The rate of Venous Thromboembolism (VTE) risk assessment has declined since the introduction of this indicator in 2019. VTE risk assessment is performed to determine if thromboprophylaxis medication should be administered. The rate has declined from 77.2% to 33.2%. There has been an increase in the number of submitting organisations which is reflective of the concern regarding VTE in the healthcare community. However, the current risk assessment rate is low, and it is hoped that despite the low compliance rate, in many cases prophylaxis medication is administered and balanced against the side effects such as anticoagulant based bleeding.



# ACHS Clinical Indicator Program: Key Facts 2022

In this Australasian Clinical Indicator Report 24th Edition 2015-2022, there are a total of 22 clinical indicator sets. In 2022 there were data submitted for 317 of the possible 337 clinical indicators across these sets. Data within this report are submitted from healthcare organisations from every state and territory within Australia and healthcare organisations within New Zealand. These healthcare organisations are from both the public and private sectors, and from metropolitan and non-metropolitan regions.

## Healthcare organisations

Participation in the ACHS Clinical Indicator Program (CIP) is voluntary for healthcare organisations. An eight-year trend in the number of healthcare organisations participating in the program demonstrates a consistent level of participation.

The participation rate of healthcare organisations over the last few years has been heavily impacted by disasters such as the COVID-19 pandemic, and catastrophic floods and bushfires. In 2022, the number of participating healthcare organisations increased to 592, from 574 in 2021. This indicates the start of a recovery for impacted organisations. This increase occurred across all categories - private, public, metropolitan and non-metropolitan. Figure 1 illustrates the proportion of healthcare organisations submitting data based on these characteristics. It is interesting to note that in metropolitan areas the private sector dominates, while in non-metropolitan areas the public sector is the majority.

The state with the largest number of healthcare organisations submitting data is NSW, followed by Vic and Qld (Figure 2). A small number of organisations submitted data from New Zealand.

## Clinical indicators

The ACHS Hospital-Wide Clinical Indicators were the most submitted indicators in 2022, with 356 healthcare organisations submitting these indicators. Other popular indicator sets included infection control (298), day patient (263), medication safety (244) and anaesthesia and perioperative care (214), see Figure 3. Poorly reported indicator sets, with fewer than 20 healthcare organisations submitting data, included hospital in the home, radiology, radiation oncology and cancer care (Figure 3).

Healthcare organisations choose the number of indicators they report on in each set. Popular indicators include important measures of patient safety (inpatient falls, pressure injuries, unplanned transfers or admissions) as well as parentaeral and non-parenteral exposures sustained by staff (Table 1).

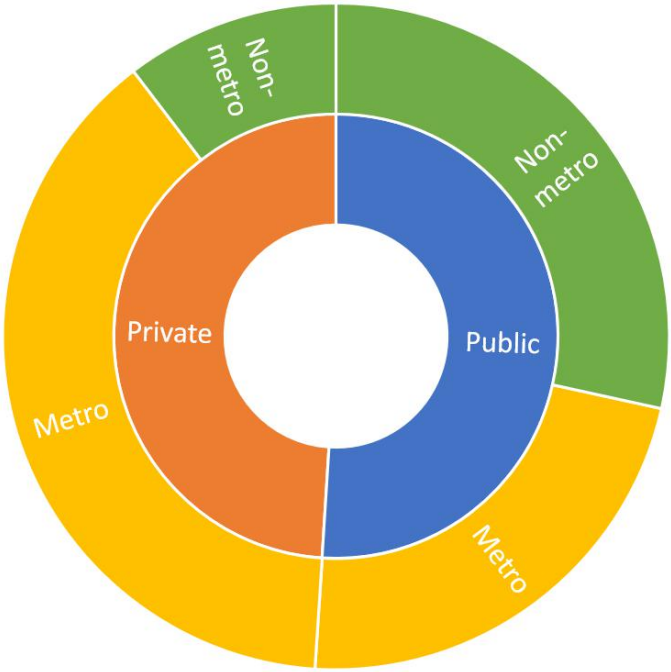



**Figure 1:** Proportion of healthcare organisations submitting data to the ACHS clinical indicator program in the public or private sector and in metropolitan or non-metropolitan locations (2022).

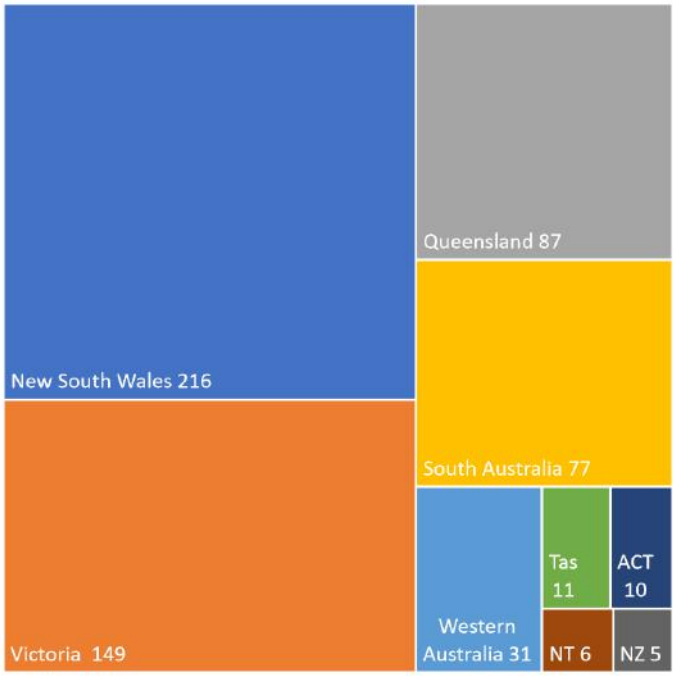



**Figure 2:** Number of healthcare organisations submitting data to the ACHS clinical indicator program by state (2022).

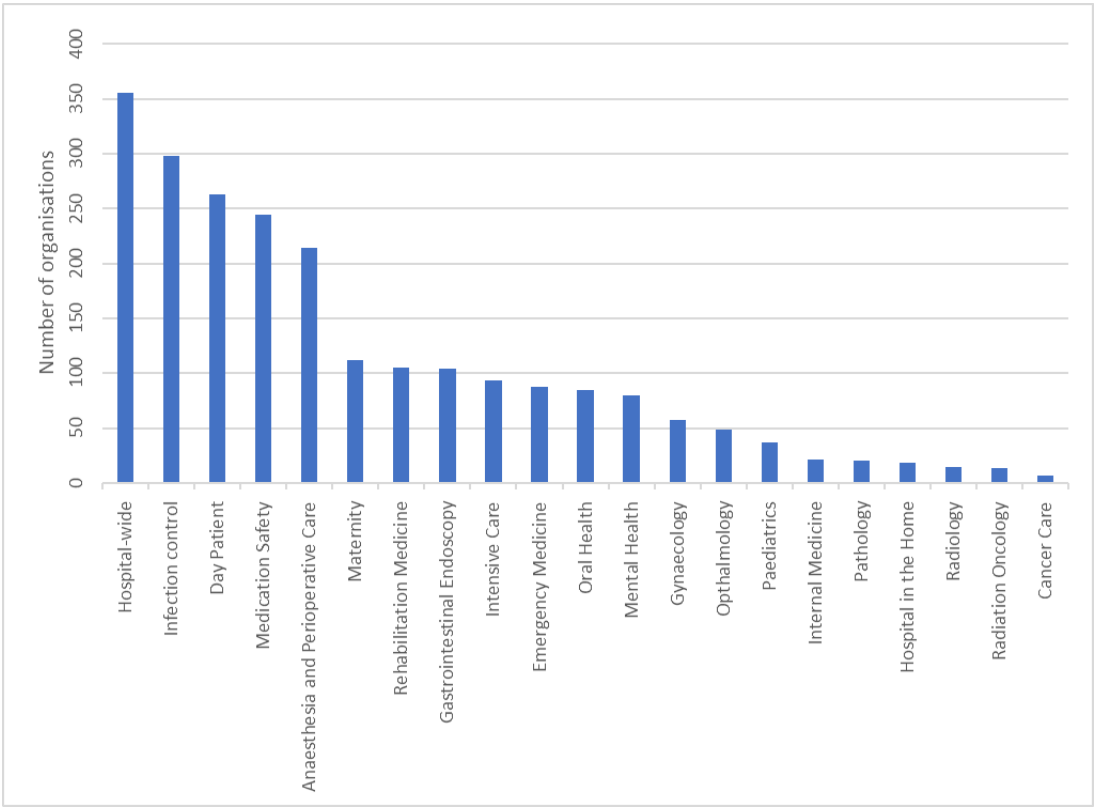



**Figure 3:** Number of healthcare organisations submitting data to the ACHS clinical indicator program by clinical indicator set (2022).

| Rank | Indicator | Desirable Rate | Aggregate rate % | Trend |
|---|---|---|---|---|
| Hospital-wide | | | | |
| 8 | 1.1 Unplanned readmissions within 28 days | Low | 1.18 | |
| 10 | 2.1 Unplanned return to the operating room during the same admission | Low | 0.19 | ✓ |
| 3 | 3.1 Inpatients who develop >=1 pressure injuries | Low | 0.02 | ✓ |
| 1 | 4.1 Inpatient falls | Low | 0.32 | |
| 2 | 4.2 Inpatient falls resulting in fracture or closed head injury | Low | 0.01 | |
| Day Patient | | | | |
| 9 | 3.1 Cancellation of the procedure after arrival due to pre-existing medical condition | Low | 0.36 | ✗ |
| 4 | 6.1 Unplanned transfer or overnight admission related to procedure | Low | 0.43 | ✓ |
| Infection Control | | | | |
| 5 | 6.1 Reported parenteral exposures sustained by staff | Low | 0.03 | |
| 6 | 6.2 Reported non-parenteral exposures sustained by staff | Low | 0.01 | ✓ |
| Medication Safety | | | | |
| 7 | 6.3 Medication errors - adverse event requiring intervention | Low | 0.00 | ✓ |

**Table 1:** Most popular clinical indicators submitted by healthcare organisations to the ACHS clinical indicator program by clinical indicator set (2022).

# Feature report

## Sustaining performance improvement

### An analysis of ACHS clinical indicator data

David Chen, ACHS Intern

#### Introduction

Relatively recent advancements in patient care, through biomedical innovation, multidisciplinary care, and increasing access to healthcare, have allowed the maximisation of health for the greatest number of people. This is supported by the shift towards evidenced-based medicine, guidelines tailored towards the local population, and changes in legislation in order to improve public health and ensure health equity.[1,2] While stakeholders debate the opportunity cost associated with the shift toward patient-centered care, one aspect of medicine undeniably influenced has been the increased ability to measure, and grade, healthcare, allowing improvements in the quality and safety of care.

A consequence of being able to measure quality is the ability to benchmark healthcare organisations according to standardised indicators i.e., quantitative measures that can be used to monitor and evaluate the quality of governance, management, clinical, and support functions affecting patient outcomes.[3] Indicators of quality are generally grouped into three categories:

1. Process indicators reflecting the procedures or interventions provided to patients e.g., percentage of patients receiving preventative screenings for bowel cancer, or follow-up care for diabetic patients.
2. Outcome indicators representing the results of care, and the multifactorial genetic, environmental, and behavioural interactions they have on outcomes.
3. Structural indicators which relate to conditions in the healthcare setting e.g., hospital facilities, staffing levels and morale etc.[4]

The coalescence of these factors allows for a clear indication of whether efforts in quality improvement are achieving the desired direct and indirect outcomes, or if further interventions are required to ameliorate substandard processes, outcomes, or structures.[5] There are still barriers to quality improvement though, with many organisations requiring factors such as patient safety, cost and competitiveness to drive change.

Benchmarking has been associated with positive quality improvements in both processes and outcomes, with interventions that are complementary to the benchmark more likely to sustain improvements.[3] Similarly, public reporting is a significant stimulant for quality improvement activities, especially for healthcare organisations with large, more media-sensitive profiles. Reviews by external stakeholders, such as accreditation organisations, also act as an adjuvant for change.[6,7,8]

Quality improvement processes have shown benefits in various components of healthcare, ranging from decreased rates of septic complications,[9] reduced risk-adjusted mortality, lower rates of seclusion in mental health,[10] significantly reduced time-wastage on administrative tasks, and greater staff wellbeing and retention, all resulting in improved patient-centred care.[9-14] Programs that have been shown to improve quality of care include interventions delivered by the United Kingdom's NHS Improvement Capability Building and Delivery Team, which NSW Health has incorporated into care,[10] the American College of Surgeons National Surgical Quality Improvement Program,[12,13,15] and the ACHS Clinical Indicator Program (CIP).[16]

While it is understood that these programs deliver positive change, there lies a paucity in knowledge regarding time-to-improvement. Within current literature, the time-to-improvement ranges between 165 days, and 15 years, with many of the studies having a scope too broad, or too narrow in nature.[11,17,18] As such, given the holistic range of indicator sets included in the CIP, the number of participating healthcare organisations, and the established nature of the program, use of ACHS CIP data to measure time-to-improvement should mitigate many of these previous limitations. Consequently, this report describes one of the first time-to-improvement quality studies within healthcare, looking at a wide range of indicators from an established large-scale clinical improvement program, rectifying many of the reliability and generalisability issues encountered in existing literature.

The Australian Council on Healthcare Standards (ACHS) measures performance of healthcare organisation's using clinical indicators for a holistic overview of the quality of healthcare services. Clinical indicators are quantitative measures based on a numerator, an issue, divided by the denominator, which counts the total work performed.[19,16,5] At ACHS, data is submitted by healthcare organisations in six-monthly reporting periods. Results are provided in the form of reports which compare an organisations performance for each indicator submitted, against a calculated benchmark of similar organisations, known as the aggregate rate.

The aggregate rate is calculated by summation of all the

submitted numerators divided by the sum of all the submitted denominators. This allows the rate to be more patient-centred, as the rate is reflective of all patient care within a reporting period, rather than an average that is skewed by the number of submitting healthcare organisations. Benchmarking in this way allows healthcare organisations to focus on areas of care for quality improvement, with significantly subpar indicator results being flagged.

This special report describes a project that reviewed clinical indicator data submitted to ACHS within the last decade for its Australian and New Zealand members. The project aimed to identify indicators that had been flagged for improvement and calculate the rates of significant improvement and the time to improvement for the organisations involved. Providing data to healthcare organisations on time to improvement will enable ACHS to be more proactive in supporting this improvement.

### Measuring time-to-improvement

The ACHS CIP is a large, multi-disciplinary and interdisciplinary clinical indicator program, to which healthcare organisations report their data to, in a biannual manner. Clinical indicator sets are formulated in association with specialty healthcare colleges and associations to ensure indicators are relevant and applicable to current healthcare settings. The sets included indicators that are both broad and narrow in scope e.g., number of hospital readmissions versus number of blood transfusions respectively. The 2022 program had 22 clinical indicator sets ranging from specialty-specific to hospital-wide in nature, totalling 347 unique indicators. 574 healthcare organisations participated in the latest submission period, these healthcare organisations are in rural and metropolitan locations and private or public in funding.

Data between the first half of 2016 (H1 2016) and second half of 2022 (H2 2022) was provided from the CIP repository, for all 22 clinical indicator sets. Indicator sets had variable levels of reporting from healthcare organisations, ranging between hundreds and tens of thousands of overall datapoints. To ensure anonymisation, healthcare organisations were assigned a facility number and Australian organisations were subdivided by state. The dataset contained the numerator, denominator, and rate for each indicator submitted by an organisation in a reporting period. Any datapoints labelled sentinel or exclude were removed, before the data was audited manually, removing any obvious errors in data entry. This allowed calculation of an aggregate rate by totaling all the numerators and denominators for a specific indicator in a reporting period. Subsequently, 99% confidence intervals (99% CI) were calculated for the specific cohort, and each healthcare organisation compared to the 99% CI. Healthcare organisations were marked as normal if their rate was within the 99% CI for the aggregate rate, or flagged if their rate was outside the 99% CI for the aggregate rate.

To ensure reliability and generalisability of the data, reports from the Australian Institute of Health and Welfare (AIHW), and the Independent Health and Aged Care Pricing Authority (IHACPA) were consulted to identify the indicator sets that most appropriately captured the use of healthcare in the

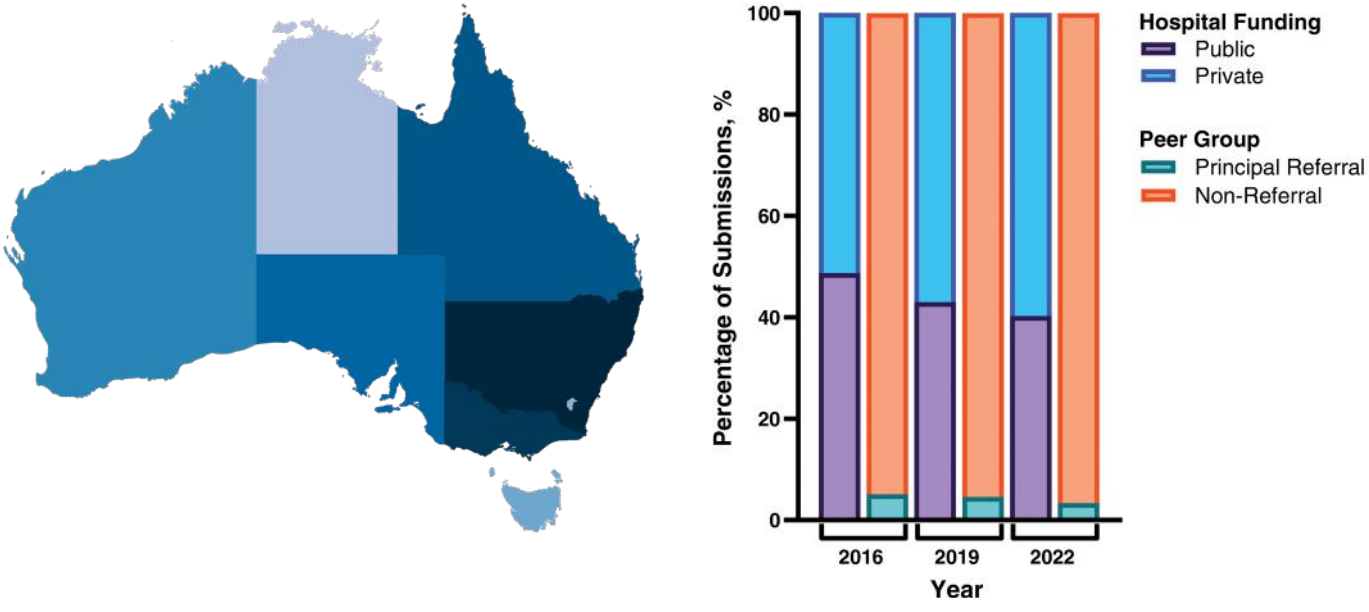



Figure 1 a. Total number of indicator submissions, ranked by state. Lighter colour represents less submissions.
b. Proportion of healthcare organisation subpopulations, by facility funding and peer group.

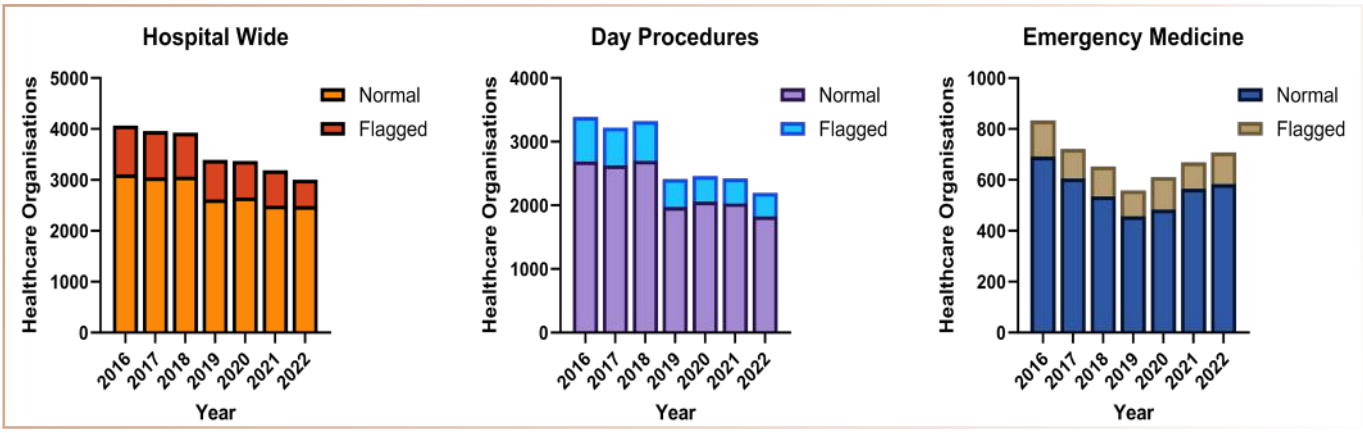



Figure 2. Proportion of submissions flagged per year in Australia and New Zealand. a. Hospital-wide indicators. b. Day procedure indicators. c. Emergency medicine indicators

Australian population, with the assumption that New Zealand uses healthcare in a similar way.[20,21] This revealed that emergency, and non-admitted care represented over 80% of healthcare visits in Australia, hospital day-stays represented two-thirds of all admitted activity, and that two-thirds of procedures are provided in private facilities. Consequently, three indicator sets were chosen for in-depth analysis – hospital-wide, day patient, and emergency medicine, with a particular focus on hospital funding, and peer group.

If a healthcare organisation was flagged for a particular indicator, the period flagged was calculated i.e., number of biannual periods until a return to benchmark. Healthcare organisations that never returned to benchmark were further classified as not reporting the same indicator again, or truly never returning to benchmark. Organisations that never reported again were removed from subsequent analysis to prevent biased zero-inflation of the data. Median time-to-benchmark was calculated for each of the three indicator sets, with subpopulation analysis at a state, funding, and peer group level. Time to deterioration was measured for normal healthcare organisations, with those who remained within the benchmark stratified into never-reporters, and never-flagged organisations.

## Results

New South Wales had the most submissions, followed by Victoria, Queensland, and South Australia. The Northern Territory had the least number of submissions for the selected clinical indicator sets in Australia, while New Zealand had the least overall number of submissions in the region (Figure 1). Most submissions were from private facilities, and from non-principal referral hospitals (less than 35,000 acute weighted separations and less specialised services offered e.g., no major trauma service). Except for emergency medicine, the number of submissions decreased between 2016 and 2022. Day procedure clinical indicators had the largest decrease in submissions in the 2018 and 2019 reporting periods, before stabilising. Remarkably, emergency medicine clinical indicators experienced a rebound in submissions from 2020 onwards (Figure 2). Proportionally, the rate at which healthcare organisations were flagged each year remained similar, with a mean standard (deviation) rate of 21.6% (1.9), 17.9% (1.4), and 17.6% (1.6) for Hospital-wide, Day patients, and Emergency medicine clinical indicator sets respectively.

Within hospital-wide indicators, 21.8% of healthcare organisations were flagged for at least one indicator within the study period (Figure 3a). Excluding H2 2022, 21.0% of submissions were flagged, of which 67.2% were able to return to benchmark. Of the healthcare organisation unable to return to benchmark, 67.8% had multiple submissions for a single indicator, but never remediated, representing the minor mode. The major mode for time-to-benchmark was one cycle, with a median of 3 (1 to 13) cycles when flagged healthcare organisations with only one submission for an indicator were further excluded in analysis (Figure 4a).

Subpopulation analysis indicated that 58.6% of the flagged healthcare organisations were from public facilities, with 59.0% returning to benchmark; 78.9% of flagged submissions from private healthcare organisations returned to benchmark. Principal referral facilities accounted for 24.1% of flagged submissions (25.2% of all principal referral submissions), with 66.3% returning to benchmark. Only 45 healthcare organisations were flagged for a single indicator, with only one healthcare organisation never returning to benchmark.

Day patient clinical indicators represented the second largest indicator set analysed, with 18.1% of submissions

flagged, 17.1% after H2 2022 was excluded; 60.2% returned to benchmark i.e., 10.3% of the overall submissions (Figure 3b). Healthcare organisations with more than one flagged submission for an indicator again represented the minor mode, with the major mode being one reporting cycle, with a median of 3 (1 to never-recovered) cycles (Figure 4b). Public healthcare organisations accounted for 55.1% of flagged submissions, of which 46.5% recovered, whereas 71.8% of flagged private healthcare organisation submissions returned to benchmark. Day patient facilities were not classified by peer group, but rather as standalone facilities, or integrated within a hospital. Of the standalone facilities, mostly comprised of private organisations (96.4%), 66.9% recovered, while facilities integrated within hospitals had a lower recovery rate, at 54.0%.

Emergency medicine had the lowest proportion flagged at 17.4%, 16.4% excluding H2 2022; and the only indicator set where the proportion of healthcare organisations that recovered lower than those that did not return to benchmark (Figure 3c). The major mode was comprised of never-recovered healthcare organisations, while the median time-to-benchmark was 10 (2 to never-recovered) cycles i.e., 5 years (Figure 4c). Of the 708 public healthcare organisations submissions, only 34.3% recovered, whereas 51.7% of private emergency medicine submissions recovered. Similarly, non-principal referral hospitals out-recovered principal referral hospitals (40.4% vs 28.5% respectively). Of the healthcare organisations that first reported a rate within the 99% CI for a benchmark, 65.2% of healthcare organisations consequently always reported rates within the 99% CI thereafter for hospital-wide indicators, 65.1% for day case submissions, and 62.1% for emergency medicine.

## Project Outcomes

In a rapidly changing medical landscape with an ageing population and new public health crises, the ability to adapt and improve the standard of healthcare is paramount to providing safe, patient-centred care. While the ability to measure healthcare and the theory behind quality improvement is well-established, there lies a paucity of knowledge relating to the time it takes to improve healthcare, particularly for healthcare organisations that have subpar performance compared to their peers. The ACHS CIP was used to ameliorate many of the limitations in existing literature on time-to-improvement, given the scope, industry participation, and established nature of the program.

Here, we were able to illustrate the propensity for healthcare organisations to not meet regional benchmarks, and the time it takes to return to industry standards in the three areas of healthcare that Australians and New Zealanders use the most - emergency medicine, day procedures in both an

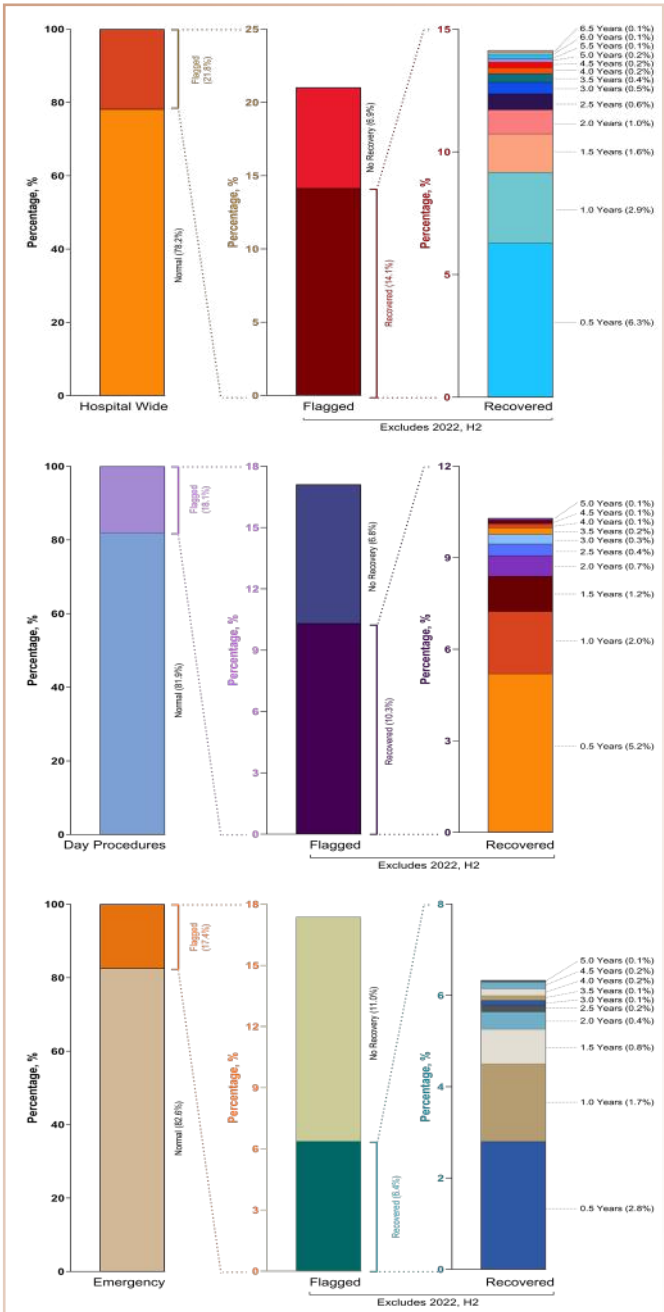



Figure 3. Proportion of submissions flagged, recovered, and time-to-benchmark for recovered organisations in Australia and New Zealand Between H1, 2016 and H1, 2022. a. Hospital-wide indicators. b. Day procedure indicators. c. Emergency medicine indicators. H2, 2022 was excluded to prevent artificial inflation of non-recovered organisations. Percentages presented as proportion of overall number of submissions during study period for each indicator set.

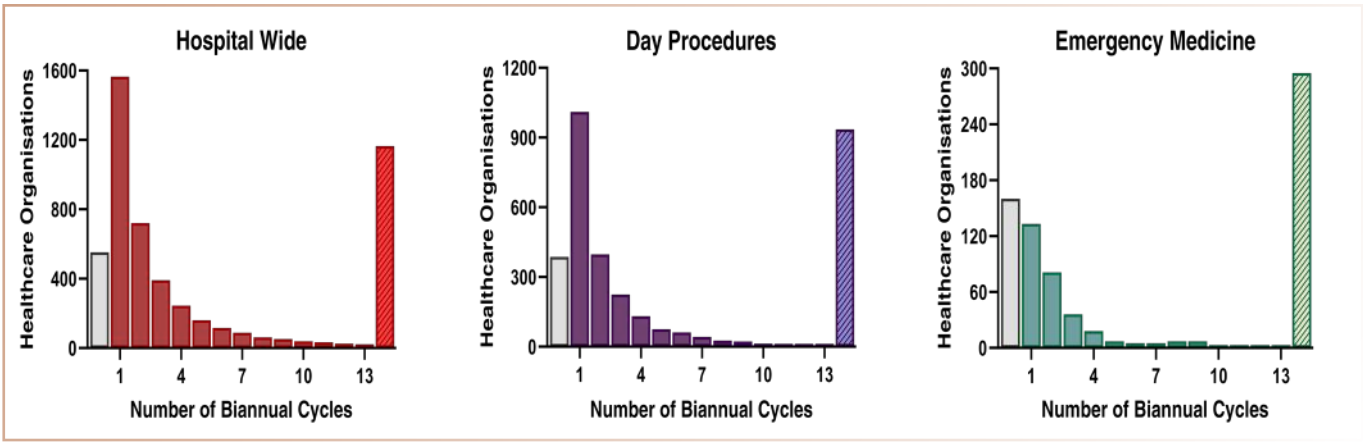



Figure 4. Distribution of time-to-benchmark for recovered organisations in Australia and New Zealand between H1, 2016 and H1, 2022. a. Hospitalwide indicators. b. Day procedure indicators. c. Emergency medicine indicators. Grey box indicates organisations which were flagged but only submitted data once. Cross-hatched coloured box indicates organisation never returned to benchmark by H2, 2022.

inpatient and outpatient setting, and general hospital-wide performance metrics (Figure 4). Subpopulation analyses at a funding (i.e., private, or public), peer-group (i.e., facilities available) and state level were also conducted. Similarly, the rate at which organisations declined was also investigated.

The analysis in this report illustrates that being flagged for an indicator is commonplace, rates are temporally similar across indicators, with the proportion that returns to benchmark influenced by public health trends such as the COVID-19 pandemic. Except for emergency medicine, return-to-benchmark occurred within several reporting periods (greater than 1 year). Private healthcare organisations are flagged as poor performers less often than public healthcare organisations, despite having more healthcare organisations, and providing the bulk of procedural care. It should be noted that random variation with low frequency events, such as adverse outcomes, can flag an organisation as an outlier where it is a random event and does not necessarily require system-wide improvement. This is why is it important flagged events are reviewed by the organisation with their clinical quality team.

Constant, routine, systematic reporting allows for early recognition of deviations in care. This analysis will inform further study of the mechanisms that organisations apply to remediate substandard processes, the efficiency of various mechanisms employed, and the cost to remediate, while also enabling identification of the reasons underlying deterioration of healthcare quality in the context of funding, peer-group, and location. Consequently, this enables us to provide tailored advice to organisations to improve substandard processes efficiently, and advice to administrators and legislators regarding strategies to prevent deterioration of healthcare quality and advance the overall quality of healthcare provided to their corresponding populations.

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# Summary of results

# ANAESTHESIA AND PERIOPERATIVE CARE

# Expert commentary

**Dr L. Nayana Vootakuru**
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Australian and New Zealand College of Anaesthetists

Fellow of the Australian and New Zealand College of Anaesthetists

The year 2022 witnessed noteworthy developments in anaesthesia care, marked by consistent improvements in quality indicators. However, data skewing by major players in different states added complexity to the interpretation of these trends.

Pre-operative care, assessed by completion of the anaesthetic record (CI 1.1), shows good compliance despite several high-volume providers in the private sector in NSW and public sector in Victoria skewing the available data.

In the intra-operative period, presence of a trained assistant (CI 2.1), shows excellent performance with improvement since 2018 by the lowest performers. A new addition to the intra-operative indicator set, the measurement of temperature less than 36 degrees in the holding bay (CI 2.2), remains controversial with regards to site, mode and equipment used for temperature measurement. There is also discussion as to whether temperature is measured immediately upon arrival to the anaesthetic bay or at a later point. Further, most of published data examines the effect of hypothermia in the context of major surgery and its relevance in day surgery and sedation cases is unclear.

The first patient recovery period indicator, the relief of respiratory distress in the recovery period (CI 3.1), showed good improvement over the last five years, apart from one significant outlier in the private sector in NSW. PONV treatment (CI 3.2), showed improvement, especially by the lowest performers, and severe pain not responding to a pain protocol in the recovery period (CI 3.4) is performing well with little room for improvement.

Temperature less than 36 degrees Celsius in the recovery period (CI 3.3) worsened in 2022. This may be due to reporting variation with some providers recording temperature only after major surgery while others are reporting after cardiac catheter lab and endoscopy procedures. It was intended that temperature only be recorded for general anaesthesia and major regional blockade cases.

Unplanned stay in the recovery room longer than 2 hours (CI 3.5) is largely performing well and unchanged from previous years. Systolic BP <100 in the recovery room (CI 3.6) is a new indicator with only 3 years of data but a slowly increasing number of contributors. The rate has increased, with most of the higher numbers reported from the public sector in Queensland, which may be worth monitoring over the coming years. Presence of a trained recovery room nurse (CI 3.7) is performing very well despite significant staffing issues in the current environment, with data skew due to one organisation in Queensland.

The post-operative clinical indicator of unplanned ICU admission within 24 hours after procedure (CI 4.1), demonstrated an increase in 2020 but stabilised in the subsequent years, with 2020 peak likely secondary to the COVID-19 pandemic. Documented patient handover from operating suite to recovery area (CI 4.2) shows excellent compliance with little room for overall improvement, probably reflecting the beneficial effects of electronic medical records (EMR).

The only obstetric anaesthesia indicator is the number of patients who experience post-dural puncture headaches (CI 5.1), which demonstrated an increase during the COVID-19 pandemic but is now performing well with little room for improvement.

The strength of clinical indicators and the insights they offer depend on the quality of data collected and contributed to ACHS by participating organisations. EMR and data extraction tools are pivotal to streamlining data management and reducing time and labour requirements. Implementing EMR, along with data extraction software, serves as the initial step toward automation.

In Australia, the adoption of EMR varies significantly. In a recent article in Anaesthesia and Intensive Care, Reilly et al. (1) surveyed 131 hospitals affiliated with the ANZCA clinical trials network, with a 32% response rate. Notably, all 42 responding institutions were public hospitals. Their findings reveal substantial disparities between hospitals in electronic data recording (ranging from 19% to 85%), data export for analysis (27% to 100%), and data utilization for quality assurance and research (13% to 58%). These variations highlight the diversity in data measurement, extraction, and utilisation in perioperative settings, often overshadowed by clinicians' primary focus on patient care.

Ultimately, the automation and standardisation of data processes are critical to enhancing our ability to assess perioperative outcomes, identify areas for improvement, and implement policies and procedures that enhance safety and quality. The presence and utilisation of such standardised data handling infrastructure could potentially serve as a marker of quality assurance, warranting consideration for a future indicator set.

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# ANAESTHESIA AND PERIOPERATIVE CARE

## Summary of results

In 2022 there were 1,535 submissions from 214 healthcare organisations for 13 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, 4 improved and the remainder showed no evidence of trend.

### Table of indicator results

| Indicator | Desirable Rate | Number of organisations | Aggregate rate % | Average rate | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Pre-anaesthesia period | | | | | | |
| 1.1 Preanaesthesia consultation completed by anaesthetist | High | 35 | 94.6 | 96.4 | | |
| Intraoperative period | | | | | | |
| 2.1 Presence of a trained assistant | High | 25 | 97.0 | 96.3 | | ✓ |
| 2.2 Temperature of <36° C in holding bay | Low | 10 | 2.27 | 9.61 | | |
| Patient recovery period | | | | | | |
| 3.1 Relief of respiratory distress in the recovery period | Low | 149 | 0.03 | 0.03 | | ✓ |
| 3.2 PONV treatment in the recovery period | Low | 92 | 0.74 | 0.83 | Private | ✓ |
| 3.3 Temperature of <36° C in the recovery period | Low | 100 | 2.68 | 2.13 | Private | |
| 3.4 Severe pain not responding to pain protocol in the recovery period | Not specified | 153 | 0.23 | 0.28 | | |
| 3.5 Unplanned stay in recovery room >2 hours | Low | 113 | 1.22 | 1.03 | Private | |
| 3.6 Adult patients with documented systolic blood pressure of <100mm Hg in the postanaesthesia recovery room | Low | 15 | 9.81 | 7.64 | | |
| 3.7 Presence of a trained recovery room nurse | High | 15 | 91.3 | 94.6 | | |

## Table of indicator results continued

| Indicator | Desirable Rate | Number of organisations | Aggregate rate % | Average rate | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Postoperative period | | | | | | |
| 4.1 Unplanned ICU admission within 24 hours after procedure | Low | 106 | 0.14 | 0.13 | | |
| 4.2 Documented patient handover - operating suite to recovery area | High | 27 | 99.4 | 99.5 | | ✓ |
| Obstetric anaesthesia care | | | | | | |
| 5.1 Obstetric patients experiencing postdural puncture headache (L) | Low | 13 | 0.69 | 0.67 | | |

# ANAESTHESIA AND PERIOPERATIVE CARE

# DAY PATIENT

# Expert commentary

**Fiona Gerrard**
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During 2021-22 63% (7.3 million) of hospitalisations were same day compared with 37% (4.3 million), which included an overnight stay.[1] These figures reinforce the importance day procedures play in the healthcare system and the continued need to benchmark clinical indicators to maintain clinical and service oversight to drive improvements. While same day services vary in size and are increasing the specialities on offer, one factor has continued to influence every healthcare provider: the COVID-19 pandemic.

The pandemic had significant impacts particularly since restrictions on elective surgery were introduced in early 2020. In 2021-22 there was an increase in COVID-19 case numbers and hospitalisations, and all jurisdictions except Tasmania experienced a reduction in elective surgery admissions. Compared with 2020-21, admissions from elective surgery waiting lists declined by 17% nationally with a considerable decline in Category 3 procedures.[2] Conversely, during 2022 private health insurance hospital treatment membership increased by 2.2%. This growth was broad-based with membership in the 50+ age group increasing by 2.4% and the 20 to 49 group increasing by 2.2%.[3]

The challenges patients face to gain access to healthcare are being met by the trend of increased specialty procedures performed in the day hospital clinical setting. This is true throughout the sector, in stand-alone day hospitals and larger facilities offering day procedures. This trend will only increase as techniques, equipment, medication, and training drive same-day treatment in this cost-effective environment.

To ensure continued high-quality episodes of care within this ever-increasing case mix, it is vital that services have clear clinical governance processes and systems, including admission inclusion and exclusion criteria. The pre-assessment admission process is key to identifying patients who may not be suited to a same-day treatment option. Those that proceed as a day patient need to be tracked by clinical indicators to ensure that the evolution of services maintains the high standards we all expect including our patients. Patient feedback has consistently informed the sector that the majority prefer not being admitted overnight and that their same-day experience be tailor-made to their individual care needs. Continuing to benchmark will ensure we all keep our eyes on the how best to evolve our services for all stakeholders, most importantly, our patients.

The ACHS Day Patient Clinical Indicator set encompasses both public and private healthcare providers throughout the country in metropolitan and non-metropolitan areas. Preadmission assessment is monitored by the number of booked patients who receive a preadmission assessment (CI 1.1). Despite a small decrease in healthcare organisations reporting in 2022, the aggregate rate of patients receiving preadmission assessment has improved from 86.1% to 92.3% over the review period. There is a correlation between the number of patients assessed prior to admission increasing with the number of patients booked. In metropolitan areas the private sector performs better despite several poor performing outliers. The public sector has a considerable variation in non-metropolitan areas.

Cancellation of procedure due to pre-existing medical condition (CI 3.1) also indicates the level of assessment before the patient arrives at hospital. Despite a small decrease in healthcare organisations reporting in 2022, the trend of cancellations has increased to the highest aggregate rate of 0.35 in 2022, from the lowest rate of 0.19 in 2018. This decrease in effectiveness of identifying pre-existing conditions is an issue across public and private sectors and all locations. Some smaller organisations are reporting the same number of cancellations as larger organisations.

The number of healthcare organisations reporting cancellation of procedure after arrival due to administrative or organisational reasons (CI 3.2) is comparable to those

reporting CI 3.1. The trend for this indicator remains stable over the seven years with the aggregate rate ranging from the lowest rate of 0.45 in 2020 to the highest rate of 0.58 in 2021. During 2022 smaller organisations were more likely to experience higher numbers of cancellations. Private facilities had less cancellations in each jurisdiction, irrespective of location.

The number of healthcare organisations reporting adverse events (CI 4.1) has fluctuated over the last seven years with an increase in submitting organisations with poor performance over 2020 and 2021. The aggregate rate peaked during 2020 at 0.13 then slightly decreased to 0.09 in 2022. The aggregate rate for the indicator showed substantial variation between states and organisational size but not between metropolitan and rural organisations in 2022.

The number of reporting healthcare organisations reporting an unplanned return to the operating room (CI 5.1) has steadily decreased each year from 2016 with the aggregate rate of returning to theatre on the same day also decreasing from the peak of 0.06 in 2020 and 2021 to 0.04 in 2022. The public sector performs worse than the private sector which is most likely due to the higher risk procedures undertaken in public facilities.

The number of healthcare organisations reporting unplanned transfer or overnight admission (CI 6.1) has remained relatively stable over several years. The aggregate rate continues to decrease from a peak of 0.78 in 2017 to 0.43 in 2022. This is due to substantial improvements by the most poorly performing 20% of organisations whose rate has decreased from 1.28 in 2016 to 0.55 in 2022. The private sector performs better than the public sector, regardless of location.

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# DAY PATIENT

## Summary of results

In 2022 there were 2,784 submissions from 263 healthcare organisations for 12 clinical indicators. Of the indicators which had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, six improved and three deteriorated.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Preadmission preparation | | | | | | |
| 1.1 Booked patients assessed before admission | High | 79 | 92.3 | 95.2 | Private | ✓ |
| Procedure non-attendance | | | | | | |
| 2.1 Booked patients who fail to arrive | Low | 171 | 1.34 | 0.83 | | ✗ |
| Procedure cancellation | | | | | | |
| 3.1 Cancellation of the procedure after arrival due to pre-existing medical condition | Low | 189 | 0.36 | 0.50 | | ✗ |
| 3.2 Cancellation of procedure after arrival due to administrative/ organisational reasons | Low | 181 | 0.52 | 0.83 | Private | ✓ |
| Episode of care adverse events | | | | | | |
| 4.1 Patients who experience an adverse event during care delivery | Low | 168 | 0.09 | 0.12 | | |
| Unplanned return to the operating room | | | | | | |
| 5.1 Unplanned return to operating room on same day as initial procedure | Low | 166 | 0.04 | 0.05 | Private | ✗ |
| Unplanned transfer / admission | | | | | | |
| 6.1 Unplanned transfer or overnight admission related to procedure | Low | 231 | 0.43 | 0.51 | Private | ✓ |
| Discharge | | | | | | |
| 7.1 Unplanned delayed discharge for clinical reasons >1 hour beyond expected | Low | 111 | 0.30 | 0.35 | Private | ✓ |

Table of indicator results continued

| | | | | | | |
|---|---|---|---|---|---|---|
| Departure | | | | | | |
| 8.1 Departure without an escort | Low | 64 | 0.55 | 0.61 | Public | ✓ |
| 8.2 Departure without an overnight carer | Low | 39 | 0.09 | 0.17 | | |
| Post-discharge follow-up | | | | | | |
| 9.1 Follow-up contact within 48 hours | High | 55 | 92.2 | 92.8 | | ✓ |
| 9.2 Completeness of follow-up instructions form for patients | High | 49 | 99.4 | 99.7 | | |

# DAY PATIENT

# EMERGENCY MEDICINE

# Expert commentary

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Department of Critical Care, University of Melbourne

Emergency Department (ED) performance is highly sensitive to flow pressures. During the COVID-19 pandemic (and continuing beyond) there has been a reduction in access to primary care and an increased number and acuity of ambulant and ambulance presentations to emergency departments [Mughal 2021, Andrew 2022].[1,2] The combination of service demand pressure and challenging hospital discharge flow to residential and rehabilitation facilities or services provided by the National Disability Insurance Scheme (NDIS) impact on the ability of the Emergency Department to achieve time based targets.[3]

The Australasian Triage Scale (ATS), introduced in 1993, was developed to prioritise patient care in the face of limited time, space, material and staff resources, and provide a consistent approach to triage practice at the national level.[4] ATS Category 1 is assigned to life threatening emergencies where treatment must begin immediately (CI 1.1). It is of comfort but of no surprise that compliance for this indicator is high and the rate stable over the last 6 years. Any deviation should be assumed to be incomplete data submission or a coding issue.

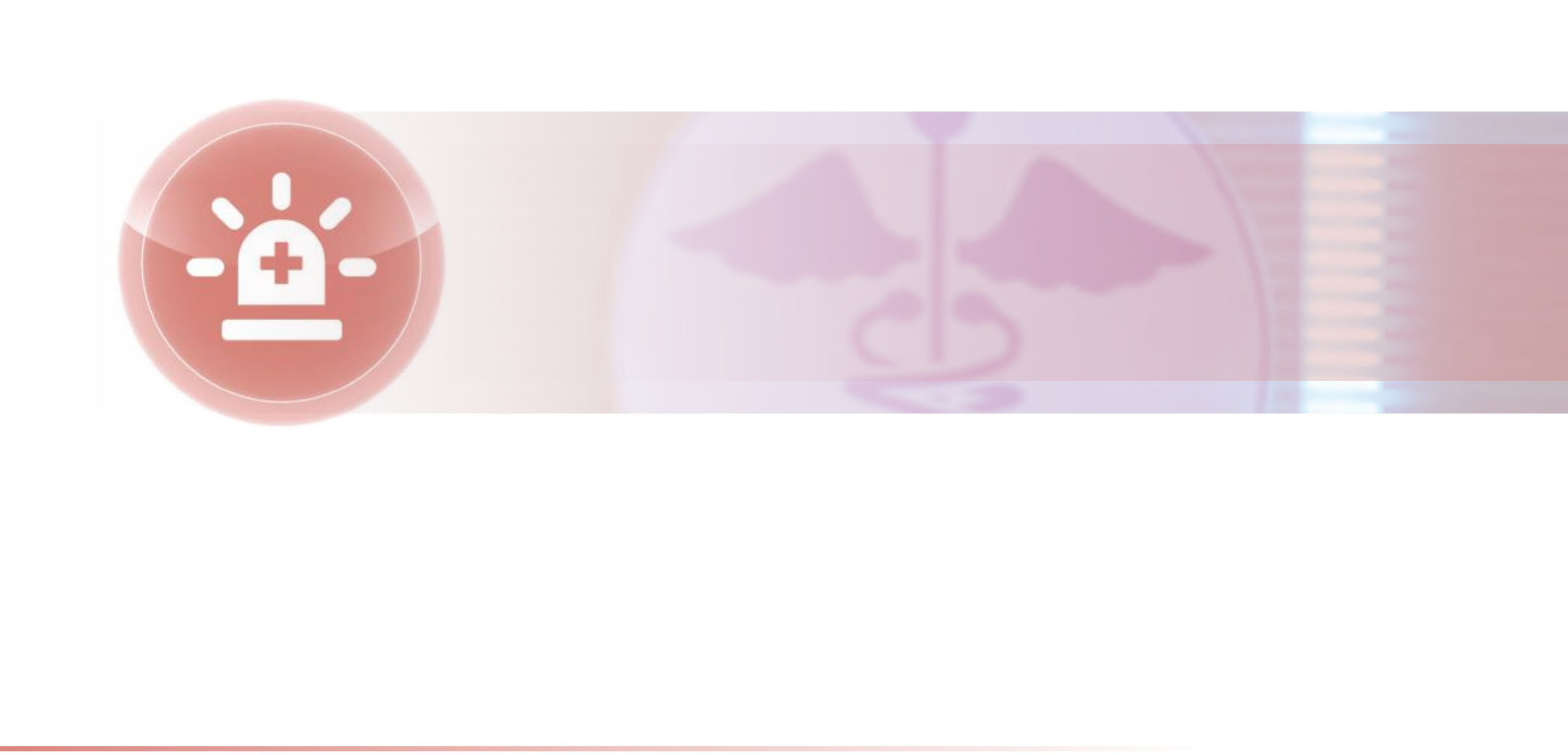
ATS categories 2 and 3 (CI 1.2 and CI 1.3) represent patients who present with imminently life threatening or urgent conditions where the management should be instituted within 10 and 30 minutes respectively. It is alarming that there has been a fall in the rate of compliance in each of these indicators, particularly ATS 2 over the last 2 years. The impact of the COVID-19 pandemic may have contributed to some of this decline as EDs pivoted and rapidly introduced new models of care to manage COVID-19 patients, often in different locations. Ability to admit patients to short stay units and inpatient wards was limited as patients required isolation. The time required to don and doff personal protection equipment would also impact on staff availability, however the decline in performance preceded the pandemic. In previous years this has been attributed to ED overcrowding, which continues to remain an issue with increased service demand and lack of available inpatient beds.

There is no consistent pattern of deterioration across the states or across public and private providers, though WA appears to be an outlier for ATS 3 performance. The general decline in ATS 4 (CI 1.4) performance is most likely due to increased demand due to lack of primary care availability, with WA again being the poorest performer. The deterioration of performance of ATS 5 is less evident (CI 1.5)

CI 1.6 reports the number of patients who leave the ED before being seen. Consistent with the observations above, this indicator has deteriorated, reaching its highest percentage in 2022, a trend that started in 2020. While studies have shown that patients who leave the ED after triage are not at higher risk of morbidity or mortality, they do present to hospital at a higher rate and this increase is concerning.[5] Private hospitals do better; patients may be more motivated to stay having paid a facility fee.

CI 2.1 (number of patients with STEMI who receive thrombolytic therapy as their primary treatment within 30 minutes of presentation to the ED) is an true clinical indicator rather than a performance measure. Extensive knowledge links time to thrombolysis or stent insertion to patient outcomes. The COVID-19 pandemic seems to have impacted this indicator adversely, with the fewer patients receiving thrombolysis within 30 minutes in 2022 than at any time in the last 6 years. I note that the indicator is poorly reported and may be biased. There is insufficient data to comment on stenting (CI 2.2), but it does not appear to have changed in this time period.

Alarmingly there has been a significant deterioration in the number of mental health patients admitted within 4 hours of presentation to the ED (CI 3.1). The performance of this



indicator in 2022 was only 60% of 2016. This is of greater concern when one considers that there was a continuous decline in the prior 6 year reporting period. These data indicate a crisis in mental health bed capacity, a conclusion reached in the Royal Commission into Victoria's Mental Health System with a recommendation that at least 100 additional beds were needed.[6]

This trend is replicated in CI 3.2 (mental health patients discharged from the ED within 4 hours) and may reflect increased demands for mental health services and/or a workforce that has been adversely impacted by the COVID-19 pandemic. It may also represent a lack of any alternative services for patients in crisis, particularly after hours. Dual diagnosis and complex patients who may require more than four hours to address issues may be over-represented in this cohort. CI 3.3 (mental health patients who left before the service was completed) shows a similar trend. The inability to provide a timely service to mental health patients is not only distressing to patients, families and carers but also the clinicians who work in our EDs.

While only a small number of patients leave the ED to intensive care unit (ICU), each ICU patient utilises a large amount of ED resources. The decline in access observed in CI 4.1 (ED time within 4 hours for ICU admissions) places further demand on ED resources. It is however, pleasing to note that the rate of rapid response system calls within 4 hours of patient admission from the ED (CI 4.2) continues to decline despite the increased demand.

While there are a small number of organisations providing data on the administration of antibiotics in the ED within 60 minutes (CI 5.1), it is pleasing to see a better than doubling of the rate in 2 years. This may represent the introduction of electronic medical records with clinical decision support. It is a concern that there is limited reporting in this area and healthcare organisations are encouraged to submit data for this new indicator.

There remains an improvement in the general trend of discharge communication (CI 6.1), despite a reduction in the aggregate rate in 2022. Whether this is a concern will need to be observed in the next reporting period.

The assessment of an ED's ability to provide analgesia for patients in severe pain within 30 minutes (CI 7.1) is hampered by the lack of healthcare organisations that submit data and accounts for the variation in performance. It is pleasing to see that re-presentation within 48 hours of ED discharge (CI 8.1) continues to decline in this reporting period.

The discrepancy between the 4-hour performance of patient flow for admitted patients versus discharged patients (CI 9.1 aggregate rate of 22.3% versus CI 9.4 aggregate rate of 57.2%) in 2022, reflects the critical state of access block across Australian ED departments. CI 9.2 and CI 9.3 which measure longer times to be admitted from the ED and CI 9.5 and CI 9.6 which measure longer times prior to ED discharge do not add anything further to the narrative. Patients do not want to spend prolonged periods of time in the ED and emergency clinicians want to use their time to managing new patients who need their care. The capacity to admit a patient within 4 hours to a multiday bed reflects the ability of a healthcare organisation to create flow; put simply, if there is no available ward bed, there is no available ED cubicle and there is a queue for people waiting to receive care in the ED. Bed block impacts most of the clinical indicators reported upon.

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# Summary of results

In 2022 there were 1,311 submissions from 88 healthcare organisations for 26 clinical indicators. Of the 16 indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend:

- 2 improved
- 8 deteriorated
- the remainder showed no evidence of trend.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Waiting time | | | | | | |
| 1.1 ATS Category 1 - medically assessed and treated immediately | High | 80 | 99.6 | 97.9 | | |
| 1.2 ATS Category 2 - medically assessed and treated within 10 minutes | High | 83 | 67.1 | 71.8 | | ✗ |
| 1.3 ATS Category 3 - medically assessed and treated within 30 minutes | High | 84 | 59.6 | 65.8 | | ✗ |
| 1.4 ATS Category 4 - medically assessed and treated within 60 minutes | High | 84 | 68.3 | 73.3 | | ✗ |
| 1.5 ATS Category 5 - medically assessed and treated within 120 minutes | High | 82 | 87.8 | 87.4 | | ✗ |
| 1.6 Patients who left the ED after triage without being seen | Low | 58 | 4.94 | 4.25 | Private | ✗ |
| ST-segment elevated myocardial infarction (STEMI) management | | | | | | |
| 2.1 STEMI patients who receive thrombolytic therapy within 30 minutes | High | 6 | 39.4 | 43.8 | | |
| 2.2 Time to balloon opening within 90 minutes | High | 3 | 83.1 | 69.2 | | |
| Emergency department mental health presentations | | | | | | |
| 3.1 Mental health patients admitted from the ED within 4 hours | High | 19 | 19.5 | 27.8 | | |
| 3.2 Mental health patients discharged from the ED within 4 hours | High | 18 | 33.9 | 54.2 | | |
| 3.3 Mental health patients who left before the service was completed | Low | 16 | 6.43 | 4.39 | | |

# EMERGENCY MEDICINE

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Critical care | | | | | | |
| 4.1 ED time within 4 hours for ICU admissions | High | 10 | 30.8 | 29.3 | | |
| 4.2 Rapid response system call within 4 hours of admission to the ward from the ED | Low | 7 | 0.26 | 0.33 | | |
| Sepsis management | | | | | | |
| 5.1 Time of antibiotic administration for patients within 60 minutes | High | 10 | 30.1 | 36.4 | | |
| Discharge Communication | | | | | | |
| 6.1 Documented evidence of clinical management plan provided to an ongoing care provider | High | 11 | 87.9 | 92.1 | | ✓ |
| Pain management | | | | | | |
| 7.1 Analgesic therapy within 30 minutes for all patients with moderate or severe pain | High | 1 | 75 | 71.6 | | |
| Unplanned re-attendance | | | | | | |
| 8.1 Patients who have an unplanned re-attendance to the ED within 48 hours of initial presentation and who require hospital admission | Low | 24 | 1.09 | 2.40 | | ✓ |
| Patient flow | | | | | | |
| 9.1 Patients admitted to the ward within 4 hours | High | 14 | 22.3 | 29.9 | | |
| 9.2 Patients admitted to the ward within 8 hours | High | 13 | 53.4 | 64.5 | | |
| 9.3 Patients admitted to the ward within 12 hours | High | 13 | 83.9 | 79.4 | | |
| 9.4 Patients discharged from the ED within 4 hours | High | 14 | 65.6 | 62.0 | | |
| 9.5 Patients discharged from the ED within 8 hours | High | 13 | 93.2 | 88.7 | | |
| 9.6 Patients discharged from the ED within 12 hours | High | 13 | 97.8 | 95.1 | | |

## Table of indicator results continued

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Patient flow (continued) | | | | | | |
| 9.7 Patients admitted to an ED Short Stay Unit (SSU) within 4 hours | High | 10 | 49.6 | 53.5 | | |
| 9.8 Patients admitted to an ED Short Stay Unit (SSU) within 8 hours | High | 10 | 87.6 | 86.2 | | |
| 9.9 Patients admitted to an ED Short Stay Unit (SSU) within 12 hours | High | 10 | 95.6 | 94.7 | | |

# EMERGENCY MEDICINE

# GASTROINTESTINAL ENDOSCOPY

# Expert commentary

**Associate Professor Gregor Brown**
Head of Endoscopy, Alfred Hospital, Melbourne
Member, Recertification in Colonoscopy Conjoint Committee
Member, National Bowel Cancer Surveillance Program Clinical Advisory Group

A striking observation when looking at the ACHS Gastrointestinal Endoscopy Clinical Indicator Report over the years 2016 – 2022 is the sustained uplift in participation from 2019 to 2020. In terms of the number of healthcare organisations submitting each year, there is a universal uplift from 2019 to 2020, with over twice as many healthcare organisations submitting for some indicators. This is particularly remarkable given the impact of the COVID-19 pandemic on healthcare across that time, and probably reflects the impact of the implementation of the Colonoscopy Clinical Care Standard (CCCS)[1] by the Australian Commission on Safety and Quality in Health Care in 2020.

The CCCS is used for health service accreditation and stipulates several benchmarks for auditing as key performance indicators, including adenoma detection rate, which is measured by one of the indicators (CI 3.1) collected for this report. Correspondingly, that particular indicator exhibited the strongest uplift in number of healthcare organisations submitting data from 2019 to 2020, from 36 to 98 (an increase of 272%). Adenoma detection rate is the only indicator in this report which directly corresponds to the CCCS indicators, although CI 1.1 (Failure to reach caecum/neo-terminal ileum due to inadequate bowel preparation) is similar to the bowel prep quality indicators in the CCCS. This indicator also had a strong uplift in submission rates from 2019 to 2020 (66 to 138, or 209%).

It is pleasing, therefore, to note the increase in adenoma detection rate from 2021 to 2022, particularly amongst the poorer performers. The rate in that group has increased dramatically from 21.9 to 34.0, which is above the recommended minimum (25%) of the Recertification in Colonoscopy Conjoint Committee (RCCC). The RCCC has offered voluntary recertification in colonoscopy 3 yearly since 2015, whereby colonoscopists complete online logbooks of the outcomes of 150 colonoscopies including completion rates, adenoma detection rate, serrated polyp detection rate, etc. However, recertification was effectively mandated in 2020 by inclusion as a requirement of the CCCS for health service accreditation, which may partly explain this impressive improvement. High adenoma detection rates are an important marker of colonoscopy quality and are known to reduce the risk of interval colorectal cancer and subsequent death.[2]

With that in mind it is disappointing to see that completion rates as indicated by CI 1.1 and 1.2 (failure to reach caecum/neo-terminal ileum due to inadequate bowel preparation and pathology encountered respectively) are stagnant or even deteriorating, particularly amongst the poorer performers. Completion rates are a fundamental marker of colonoscopy quality[3] and, like adenoma detection rates, should be improving year on year.

While post-polypectomy haemorrhage (CI 2.3) has been stable since 2021, it has improved since 2016, probably reflecting an evolution in practice away from diathermy-based techniques towards cold-snare polypectomy for removal of the increasing majority of polyps. This technique is known to come with a lower risk of delayed bleeding.[4]

All of the other indicators, which mainly relate to adverse outcomes, are stable, with very low rates of complications including perforation after polypectomy (CI 2.1), colonoscopy (CI 2.2) and oesophageal dilatation (CI 4.1). Aspiration following gastro-intestinal endoscopy is also broadly stable (CI 5.1), with gradual improvement over several years in the poor performers which is encouraging.


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# GASTROINTESTINAL ENDOSCOPY

## Summary of results

In 2022 there were 1,328 submissions from 104 healthcare organisations for 9 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend:

- one improved
- the remainder showed no evidence of trend.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Failure to reach caecum / neo-terminal ileum | | | | | | |
| 1.1 Failure to reach caecum due to inadequate bowel preparation | Low | 94 | 0.52 | 0.71 | | |
| 1.2 Failure to reach caecum due to pathology encountered | Low | 87 | 0.34 | 0.46 | Private | |
| Colonoscopy adverse outcomes | | | | | | |
| 2.1 Treatment for possible perforation post-polypectomy | Low | 90 | 0.01 | 0.01 | | |
| 2.2 Treatment for possible perforation post-colonoscopy | Low | 89 | 0.02 | 0.05 | Public | |
| 2.3 Post-polypectomy haemorrhage | Low | 84 | 0.04 | 0.08 | Metro | |
| Adenoma detection | | | | | | |
| 3.1 Adenoma detection rate | High | 62 | 43.1 | 44.5 | | ✓ |
| Oesophageal perforation after dilatation | | | | | | |
| 4.1 Oesophageal dilatation - possible perforation | Low | 69 | 0.18 | 0.32 | | |
| Aspiration following GI endoscopy | | | | | | |
| 5.1 Aspiration following GI endoscopy | Low | 81 | 0.02 | 0.02 | Public | |
| Sedation in GI endoscopy | | | | | | |
| 6.1 Sedation in GI endoscopy | Low | 49 | 0.03 | 0.06 | | |

# GYNAECOLOGY

# General comments

The gynaecology clinical indicators were updated in 2021 with some minor changes to the set in July 2022 for clarity. This year's report contains multiple points of data for the new indicators, allowing trend analysis and additional commentary. The first modification was in Area 2 - injury to a major viscus, which split the old indicator into two new ones, with the aim of measuring the rate of injury to a major viscus for both endoscopic and non-endoscopic surgery. The second new indicator is Area 4 - hysterectomy, where measurement of the rates of the surgical abdominal approach are recorded with the aim to encourage vaginal and laparoscopic procedures.

The blood transfusion section (Area 1) is broken into two indicators measuring unplanned interoperative or post-operative blood transfusions, one for benign disease (CI 1.1) and the second for metastatic disease (CI 1.2). Both indicators show signs of improvement. The rate of transfusion for benign disease had been improving until 2018, after which it started to deteriorate again. This deterioration has been corrected in 2022 by an improvement, although the poorest performers are now performing at a 2.0% rate, which is the poorest 80th centile in the indicators history. The best performers are performing at the same rate high rate. For metastatic disease the rate continues to improve with a the rate of 4.4% the best performance since 2015.

The new injury to a major viscus indicators are well reported, with an injury to a major viscus during endoscopic surgery (CI 2.1) having an aggregate rate of 0.28% in 2022. There are some outlier organisations which are contributing to variability but generally performance is quite good. The lower non-endoscopic surgery rate of injury (CI 2.2) of 0.21% in 2022, demonstrates that there is room to improve for surgeons using endoscopic methods.

Thromboprophylaxis for major gynaecological surgery (CI 3.1) has recovered from variability in the data in 2021 to an aggregate rate of 93.0% in 2022. This variability in the data is largely due to the performance of a few organisations in NSW which had poorer rates of thromboprophylaxis compliance. There has been an increase in the number of organisations submitting data for re-admission for venous thromboembolism within 28 days (CI 3.2) increasing to almost double the number of submitting organisations since 2016. This is encouraging, as the aggregate rate has increased to 0.37% which is more reflective of general rates.

The surgical approach for hysterectomy is a new indicator aiming to measure the abdominal approach. The aim of this indicator is to guide hospitals towards newer laparoscopic and trans-vaginal approaches for the bulk of hysterectomy procedures, as the literature shows it leads to faster return to normal activities[1] and better outcomes compared to open abdominal procedures.[2,3] During the two years recording this indicator, the aggregate rate has dropped from 52.5% to 46.3%, which is encouraging progress.


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# Summary of results

In 2022 there were 311 submissions from 57 healthcare organisations for 7 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, there was no evidence of trend.

## Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Blood transfusion | | | | | | |
| 1.1 Major gynaecological surgery for benign disease - unplanned intraoperative or postoperative blood transfusion | Low | 38 | 0.64 | 0.89 | Private | |
| 1.2 Major gynaecological surgery for malignant disease - unplanned intraoperative or postoperative blood transfusion | Low | 13 | 4.50 | 2.57 | | |
| Injury to a major viscus | | | | | | |
| 2.1 Injury to a major viscus during endoscopic surgery | Low | 42 | 0.28 | 0.30 | | |
| 2.2 Injury to a major viscus during non-endoscopic surgery | | 42 | 0.21 | 0.36 | | |
| Thromboprophylaxis for major gynaecological surgery | | | | | | |
| 3.1 Thromboprophylaxis for major gynaecological surgery | High | 13 | 93.0 | 89.1 | | |
| 3.2 Re-admission for venous thromboembolism within 28 days | Low | 19 | 0.37 | 0.16 | | |
| Hysterectomy | | | | | | |
| 4.1 Surgical approach for hysterectomy | Low | 18 | 46.3 | 48.3 | | |

# GYNAECOLOGY

# HOSPITAL IN THE HOME

# Expert commentary

**Dr James Pollard**
President, Hospital in the Home Society of Australasia

It was a great pleasure to review the 24th Edition of the ACHS Hospital in the Home (HITH) Clinical Indicator Report 2015-2022. This year is the second year of the updated indicators, and it is pleasing to see ongoing high performance from reporting services. This was a notable year for HITH services, as the impact of the COVID-19 pandemic continued to settle, and overall activity remained strong. Notably, in May 2023, the HITH Society of Australasia released a position paper on a definition of hospital in the home,[1] and as part of the paper, recommended outcome measures which align with those collected here by ACHS.

Once again, healthcare organisations continue to demonstrate very low rates of unexpected deaths (CI 3.1) for patients while under the care of a HITH service. This is reassuring and demonstrates the ongoing safety of HITH care.

Unplanned returns, measured under area two - service interruption, also continue to be very low, suggesting patient selection remains very good, with a slightly reduced overall aggregate rate (CI 2.1), and a stable within 24 hour return rate. There also has been a reduction in the rate of unscheduled telephone calls (CI 1.1) and unscheduled clinical assessments (CI 1.2), also reflecting successful patient selection for HITH care by reporting services.

The majority of services are collecting details reflecting patient experience, as reflected by the forth set of indicators - reviewing patient experiences. Hopefully the remaining few services not yet collecting this data will be able to do so in forthcoming years.

Finally, new scatterplots of reporting rates and volumes by state are noteworthy. In particular, Victoria has reported the largest number of denominator episodes, and will therefore proportionally influence the overall results. Over time, with increased denominator data from other states, we can further broaden the geographical volume and spread of data.

References

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# Summary of results

In 2022 there were 100 submissions from 18 healthcare organisations for 8 clinical indicators. None of the indicators had sufficient data to observe trends.

*High rate skewed due to a single outlier organisation

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Patient safety, selection, communication and care co-ordination | | | | | | |
| 1.1 Unexpected clinical and administrative telephone calls | Low | 5 | 1.14 | 8.57* | | |
| 1.2 Unscheduled clinical assessment | Low | 6 | 0.39 | 0.16 | | |
| Service interruption | | | | | | |
| 2.1 Unplanned return to hospital | Low | 16 | 2.23 | 5.79 | | |
| 2.2 Unplanned return to hospital within 24 hours | Low | 11 | 0.70 | 1.50 | | |
| Unexpected deaths | | | | | | |
| 3.1 Unexpected deaths during HITH admission | Low | 9 | 0.02 | 0.03 | | |
| Reviewing patient experiences | | | | | | |
| 4.1 Receiving survey reports | High | 7 | 85.7% | n/a | | |
| 4.2 Causes of unexpected phone calls and returns to hospital | High | 5 | 80% | n/a | | |
| 4.3 Hospital associated complications | High | 5 | 100% | n/a | | |

# HOSPITAL IN THE HOME

# HOSPITAL-WIDE

# Expert commentary

**Dr David Rankin**
Chair, ACHS Hospital-Wide Working Party
Royal Australasian College of Medical Administrators

It is encouraging to see these benchmark reports from hospitals across Australia and New Zealand. Benchmarking provides an invaluable service to healthcare organisations and highlights areas where individual hospitals can usefully focus their clinical governance efforts to improve the quality and safety of the care they provide. Unfortunately, there appears to be a slight reduction in the number of participating healthcare organisations in this year's report.

Unplanned readmissions within 28 days (CI 1.1) appears to be rising, after three years of a declining rate. This indicator appears to be a particular challenge for several hospitals in NSW, Qld and Vic – both metropolitan and non-metropolitan. It would be interesting to know the number of unplanned readmissions that are the result of surgical complications. The distribution of the readmissions over the 28 days may also help better understand the data. A high readmission rate in the first week after discharge is likely to be of more concern that a readmission at 14 – 28 days.

The remarkable reduction in pressure injury rates (CI 3.1) over the past seven years is very encouraging. Non-metropolitan public hospitals in NSW with comparatively small numbers of occupied bed days appear to be outliers.

The extraordinarily stable annual aggregate rate of inpatient falls (CI 4.1) raises a range of questions about the preventability of falls in hospital. While there are several non-metropolitan public hospitals in Victoria that appear to be outliers, the median rate for private hospitals across the States is remarkably consistent. Falls with harm (CI 4.2) unfortunately continue to rise. One non-metropolitan hospital appears to have a rate that is 30 times higher than the aggregate rate. It is difficult to know if this is because of a very low denominator or a high number of falls with harm.

The strong positive correlation between the number of rapid response system calls and the number of calls attended to within five minutes (CI 8.4) implies that response time does not deteriorate with hospital size.

Once again, the ACHS Hospital-Wide Clinical Indicator report provides a very useful service to public and private hospitals in Australia and New Zealand. The challenge is for managers and clinicians to use this report to identify opportunities for improvement in data quality, reporting and clinical service delivery.

# Expert commentary

**Professor Virginia Plummer**
Professor of Nursing Research
Federation University

Australian College of Nursing

Thirty-day unplanned readmissions are common in patients over age 45 years, leading to significant morbidity.[1] Effective strategies for reducing unplanned readmission may help to improve quality of care, outcomes and higher value care.[1] Some insights have become available on all-cause unplanned re-admissions in the United States of America, where up to recent years, predictors remained obscure.[1] Over 15% of United States federal government spending per annum and 3% of the gross domestic product was on healthcare.[2]

Despite this expenditure, patient clinical outcomes have not improved significantly in the United States of America,[3] in the last 14 years, after the Centers for Medicare & Medicaid Services started publicly reporting 30-day hospital readmission rates.[4] Predictors of 30-day readmission were patients in the lowest income quartile, with highest diagnosis related group and severity scores, in metropolitan teaching hospitals, those who left against medical advice, aged 18-64 with depression, cancer and renal disorders and 65-74 with heart failure, chronic obstructive pulmonary disease and cancer.[1]

High readmission rates are under analysis in Australia, although a national cohort of patients similar to that described by Amritphale et al, is not available in the Australian context, however, studies have been performed in a range of specialties and services. One example is 30-day readmission rates following percutaneous coronary intervention (PCI) and other procedures. A study in Australian and New Zealand hospitals found one in ten patients had an unplanned readmission, most commonly for acute myocardial infarction, or after percutaneous coronary intervention.[5] This was the first population-based study to evaluate 30-day readmission after PCI, undertaken outside of the United States of America.

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# HOSPITAL-WIDE

## Summary of results

In 2022 there were 4,753 submissions from 356 healthcare organisations for 19 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, 4 improved and one deteriorated.

Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Hospital readmissions | | | | | | |
| 1.1 Unplanned readmissions within 28 days | Low | 217 | 1.18 | 0.92 | Private | |
| Return to the operating room | | | | | | |
| 2.1 Unplanned return to the operating room during the same admission | Low | 185 | 0.19 | 0.16 | | ✓ |
| Pressure injuries | | | | | | |
| 3.1 Inpatients who develop ≥1 pressure injuries | Low | 304 | 0.02 | 0.02 | | ✓ |
| Inpatient falls | | | | | | |
| 4.1 Inpatient falls | Low | 328 | 0.32 | 0.40 | Private | |
| 4.2 Inpatient falls resulting in fracture or closed head injury | Low | 314 | 0.01 | 0.01 | | |
| Patient deaths | | | | | | |
| 5.1 Patient deaths addressed within a clinical audit process | High | 180 | 87.5 | 94.8 | Public | |
| 5.2 Deaths in adult patients who do not have a resuscitation plan | Low | 64 | 0.09 | 0.13 | Private | |
| Blood transfusion | | | | | | |
| 6.1 Significant adverse blood transfusion events | Low | 175 | 0.08 | 0.24 | | |
| 6.2 Transfusion episodes where informed patient consent was not documented | Low | 109 | 0.98 | 2.39 | | ✓ |
| 6.3 RBC transfusion where Hb reading is ≥100 g/L | Low | 75 | 1.26 | 1.82 | | |

Table of indicator results continued

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Thromboprophylaxis | | | | | | |
| 7.1 VTE risk assessment | High | 40 | 33.2 | 71.03 | | ✗ |
| Minimum standards for rapid response system (RRS) calls | | | | | | |
| 8.1 Rapid response system calls to adult patients | Not specified | 118 | 4.71 | 4.06 | | ↑ |
| 8.2 Rapid response system calls to adult patients within 24 hours of admission | Not specified | 78 | 0.86 | 0.91 | | ↑ |
| 8.3 Adult patients experiencing cardiopulmonary arrest | Low | 170 | 0.07 | 0.05 | | |
| 8.4 Rapid response system attendances within 5 minutes | High | 60 | 93.5 | 95.52 | | |
| Surgery | | | | | | |
| 9.1 Pre-operative acute appendicitis - normal histology | Low | 31 | 8.14 | 9.64 | | |
| 9.2 Laparoscopic cholecystectomy - bile duct injury requiring operative intervention | Low | 52 | 0.65 | 1.77 | | |
| 9.3 Tonsillectomy - significant reactionary haemorrhage | Low | 47 | 0.32 | 0.25 | | ✓ |
| 9.4 Hip fracture care | High | 8 | 79.3 | 85.79 | | |
| Risk assessment | | | | | | |
| 10.1 Frailty assessment | High | 1 | 6.86 | | | |

# HOSPITAL-WIDE

# INFECTION CONTROL

# Expert commentary

**Mrs Nicola Isles**
Board Director, Australasian College for Infection Prevention and Control

There are approximately 180,000 healthcare associated infections (HCAI), in Australia annually. These include pneumonia, surgical site infections (SSI), urinary tract infections (UTI) and blood stream infections (BSI) which account for approximately two million hospital bed days and over 7,000 deaths, of which BSI have the highest mortality rate.[1,2,3,4] The large majority of these infections are preventable and severely impact a patients' morbidity (including increased length of hospital stay, delayed recovery, one or more further serious hospital acquired complications, rehospitalisation), and have a significant impact on both patient and carer experience (2,3).

Each Australian state and territory mandates HCAI reporting and their reporting requirements differ, particularly around different multi resistant organisms (MRO). Surveillance of HCAI is time consuming and the accuracy of rates vary across healthcare organisations with healthcare worker experience in data collection roles contributing to this variation. Investment in digital technology should be encouraged to ensure accurate rates across all jurisdictions and support healthcare workers to provide accurate data in real time. This data can then be used to implement and drive best-practice change management processes to improve patient outcomes.

The number of organisations contributing to the ACHS Infection Control Clinical Indicator set has increased since 2016; however, there is a noted decline in healthcare organisations submitting data for some indicators from 2020 to 2022, especially for hip (CI 1.1) and knee prosthesis (CI 1.2). This decline is most likely due to the COVID-19 Pandemic when elective surgery was delayed or cancelled. The aggregate rate of SSI for both hips (0.58 to 0.32) and knees (0.34 to 0.23) have both improved from 2016-2022; however, the rate of SSI for chest incisions (CI 1.3) worsened over the same period, with the poorest performing organisations deteriorating from 1.06 to 2.06. There was no difference noted between the metropolitan and non-metropolitan sites or public and private organisations.

There has also been a decrease in the number of healthcare organisations submitting data for Lower Segment Caesarian Section (LSCS) SSI since 2016 (CI 1.4). SSI rates for LSCS have increased from 0.15 to 0.31 over the review period (2016 to 2022). The poorest performers continue to deteriorate from 0.26 to 0.56 over the review period. This could also be related to the COVID-19 pandemic, when accessing post-operative care in the community may have been challenging for women experiencing enforced government lock downs, and timely access to care was challenging.

SSI is one of the most preventable HCAI. Globally rates vary between 2-11% and BSI contribute to over 3000 of these deaths.[3] There have been improvements in centrally inserted cuff line associated BSI (CI 3.2) across both the aggregate rate and the poorest performing organisations from 2016-2022.

Antimicrobial resistance (AMR) is global threat to health. Inappropriate prescribing of antibiotics is known to contribute to AMR, and results in an increase in multi-resistant organisms, patients experiencing unnecessary side effects and additional costs associated with prescribed antibiotics. The number of healthcare organisations contributing to the surgical antibiotic prophylaxis (SAP) clinical indicators (area two) has significantly improved since 2016 but varies for each clinical indicator in this data set. In the sub-set for hips and knees (CI 2.1-2.6), variation could be due to inconsistencies in prescriber documentation in the timing of SAP, both at the time of induction and post-operative dosing. Interestingly the rate of SAP timing for LSCS (CI 2.7) has improved from 89.5% to 93.4%, accompanied by an improvement in correct SAP and dose (CI 2.8).

The Australian Immunisation Handbook recommends all healthcare workers are appropriately immunised to vaccine preventable diseases to prevent transmission of preventable infections to patients and other healthcare workers.[5] NSW requires all Category A healthcare workers to be vaccinated for influenza annually. In 2022, the state of Victoria endorsed mandatory influenza vaccination for all healthcare workers. Ensuring staff immunisation clinical indicators are collected at healthcare organisations encourages and documents accountability.

There has been a steep increase in the number of healthcare organisations submitting data for staff immunisation particularly for influenza (CI 5.1) compared to other vaccine preventable diseases (CI 5.2 - 5.5). Influenza vaccine reporting from 2017 to 2018 went from 43 to 63 healthcare organisations. In 2022, a total of 83 healthcare organisations submitted data. This indicator saw the largest improvement in the aggregate rate from 54.2% in 2016 to 77.6% in 2020. The rate decreased in 2021 and recovered to 60.9% in 2022. This decrease could be due to the COVID-19 pandemic and vaccine hesitancy amongst healthcare workers after the COVID-19 vaccine mandates in Australia. The number of healthcare organisations submitting data has substantially increased across the reporting time from 17 to 53 organisations for other vaccine preventable diseases.

There remains a lack of transparent and accurate reporting of occupational exposures in healthcare organisations. A positive culture of reporting should be encouraged to ensure the safety of all patients and healthcare workers. There has been a decrease in the number of healthcare organisations reporting parenteral and non-parenteral exposures since 2020 onwards, which may reflect decreased elective surgical procedures during the COVID-19 Pandemic.

The ACHS Infection Control Clinical Indicator sets encourage healthcare organisations to submit data for benchmarking and this further promotes and supports evidence-based practice in many specific fields.

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# INFECTION CONTROL

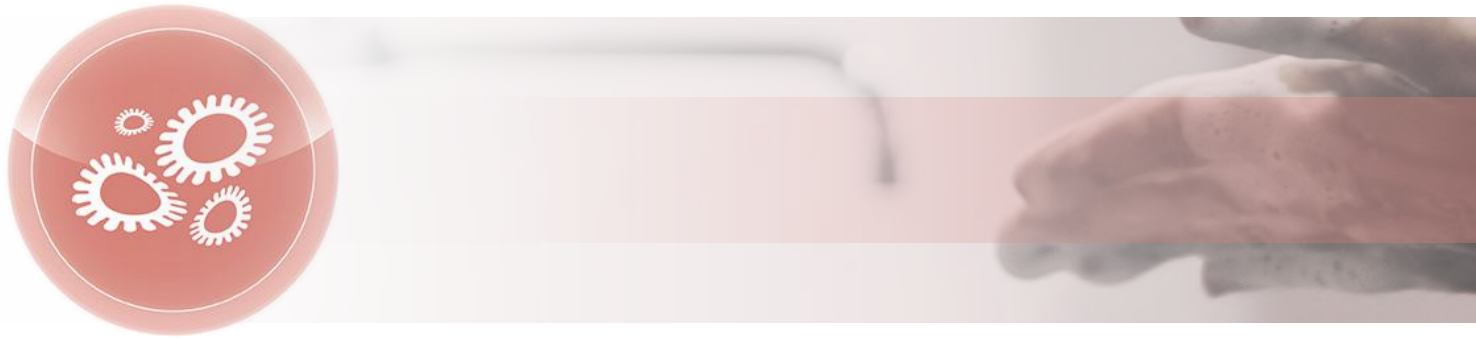
## Summary of results

In 2022 there were 2,919 submissions from 298 healthcare organisations for 26 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend:

- 8 improved
- 4 deteriorated
- the remainder showed no evidence of trend.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Surgical Site Infections (SSIs) | | | | | | |
| 1.1 Deep or organ / space SSI - hip prosthesis procedure | Low | 144 | 0.33 | 0.49 | | ✓ |
| 1.2 Deep or organ / space SSI - knee prosthesis procedure | Low | 143 | 0.23 | 0.32 | | |
| 1.3 Deep or organ / space SSI to chest incision site - CABG | Low | 29 | 1.03 | 1.18 | | ✗ |
| 1.4 Deep or organ / space SSI - LSCS | Low | 50 | 0.31 | 0.44 | | ✗ |
| 1.5 Deep or organ/space SSI - open colon surgery | Low | 8 | 0 | 0 | | |
| 1.6 Deep or organ/space SSI - open rectal surgery | Low | 4 | 1.39 | 4.17 | | |
| 1.7 Deep or organ/space SSI - laparoscopic-assisted large bowel resection | Low | 12 | 1.43 | 1.05 | | |
| Surgical Antibiotic Prophylaxis (SAP) | | | | | | |
| 2.1 Timing of SAP for the hip prosthesis procedure | High | 49 | 93.4 | 93.1 | | ✗ |
| 2.2 Correct SAP and dose for the hip prosthesis procedure | High | 52 | 92.1 | 92.5 | | ✓ |
| 2.3 Discontinuation of SAP within 24 hours of the hip prosthesis procedure | High | 51 | 86.2 | 85.0 | | |
| 2.4 Timing of SAP for the knee prosthesis procedure | High | 49 | 90.5 | 93.0 | | ✗ |



## Table of indicator results continued

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Surgical Antibiotic Prophylaxis (SAP) (continued) | | | | | | |
| 2.5 Correct SAP and dose for the knee prosthesis procedure | High | 50 | 89.9 | 92.8 | | |
| 2.6 Discontinuation of SAP within 24 hours of the knee prosthesis procedure | High | 49 | 84.8 | 86.4 | | |
| 2.7 Timing of SAP for the LSCS procedure | High | 23 | 93.4 | 92.0 | | ✓ |
| 2.8 Correct SAP and dose for the LSCS procedure | High | 25 | 94.9 | 93.9 | | ✓ |
| 2.9 Discontinuation of SAP within 24 hours of the LSCS procedure | High | 24 | 97.8 | 97.1 | | ✓ |
| Haemodialysis access-associated bloodstream infection surveillance | | | | | | |
| 3.1 Haemodialysis - AV-fistula access-associated BSI | Low | 17 | 0.07 | 0.04 | | |
| 3.2 Haemodialysis - Centrally Inserted cuffed line access-associated BSI | Low | 17 | 1.17 | 4.16 | | |
| Vancomycin Resistant Enterococci (VRE) | | | | | | |
| 4.1 VRE infection within the ICU | Low | 54 | 1.02 | 0.02 | | |
| Staff immunisation | | | | | | |
| 5.1 Influenza / Flu vaccination for permanent staff | High | 83 | 60.9 | 69.0 | | ✓ |
| 5.2 Hepatitis B vaccination for permanent staff | High | 59 | 82.7 | 80.6 | | ✓ |
| 5.3 MMR vaccination for permanent staff | High | 53 | 81.4 | 81.6 | | |
| 5.4 Pertussis vaccination for permanent staff | High | 53 | 75.8 | 77.2 | | |
| 5.5 Varicella vaccination for permanent staff | High | 53 | 79.9 | 80.7 | | |

# INFECTION CONTROL

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Occupational exposures to blood and/or body fluids | | | | | | |
| 6.1 Reported parenteral exposures sustained by staff (L) | Low | 227 | 0.03 | 0.02 | | |
| 6.2 Reported non-parenteral exposures sustained by staff (L) | Low | 224 | 0.01 | 0 | | ✓ |

# INTENSIVE CARE

# Expert commentary

**Professor Frances Lin**
Chair, Quality Advisory Panel, Australian College of Critical Care Nurses
College of Nursing and Health Sciences, Caring Futures Institute, Flinders University, SA

**Professor Deepak Bhonagiri**
ANZICS Representative
Clinical Director, Critical Care South Western Sydney Local Health District.
Director, Campbelltown ICU

The Australian College of Critical Care Nurses (ACCCN), and the Australian and New Zealand Intensive Care Society (ANZICS) appreciate the opportunity to provide this collaborative commentary.

Currently, 185 hospitals report adult and paediatric intensive care data to ANZICS, and 118 of them are accredited for training by the College of Intensive Care Medicine. Intensive Care Units (ICU) from 52 adult and 10 paediatric healthcare organisations contributed data to ACHS in 2022. This unfortunately limits generalisability of this report. However, it provides valuable insight into the care metrics of contributing units.

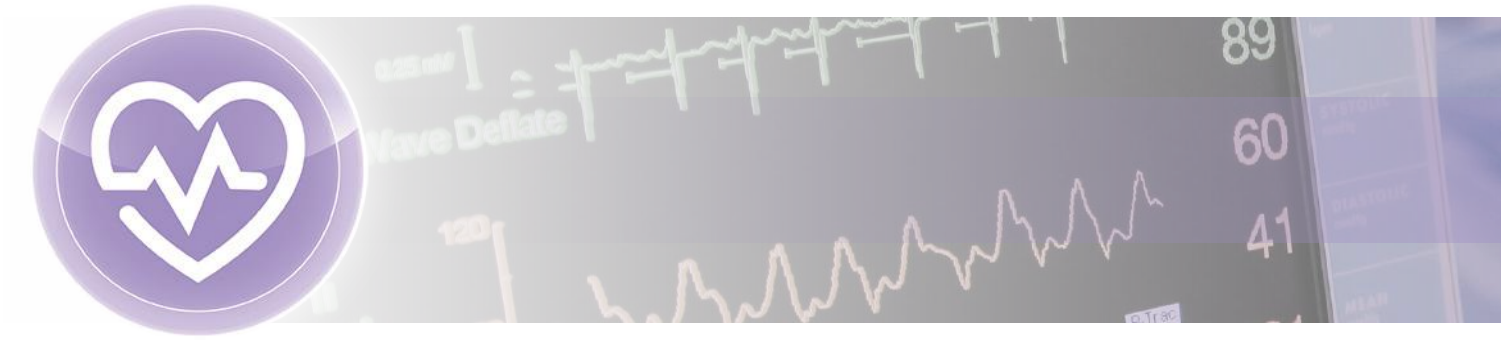
The clinical indicators under the area of access and exit block are designed to detect ICU and to a lesser extent hospital stress. In particular, adult discharge delay more than 12 hours (CI 1.4) has increased from 15.6% in 2019 to 17.3% in 2022 since the last report. These increases are evident across the board, with larger ICUs in NSW, Victoria and SA having 200 to 800 patients delayed. The delay is much higher in the public sector than the private sector, which is consistent with reports from recent years.

While current evidence shows that discharge delay does not increase mortality of patients who experienced ICU discharge delays, not much is known currently about the impact of ICU discharge delay on patients awaiting ICU admission specially from emergency departments. Research evidence from Australia also shows that ICU discharge delay increased patient ICU length of stay and hospital length of stay,[1] which adds significant costs to the healthcare system. ICU discharge delay may also contribute to ICU strain,[2] and a recent study shows that ICU strain is associated with increased risk of mortality in patients admitted from ward.[3] The increase in this indicator also reflects the relatively low in-patient bed capacity and increased length of stay of patients in hospitals.

The rate of adult discharge between 6pm and 6am (CI 1.5) has also increased in the reporting period and is worse than any of the previous 6 years. CI 1.4 and CI 1.5 together reflect a on-the-ground reality in ICUs that discharged patients leave ICU after-hours to allow for patient admission. Regional challenges to ICU access and transfers due to the lack of ICU capacity are seen in some jurisdiction and are similar to those noted in 2021.

The large increase in paediatric after-hours ICU discharges seen in 2021 and 2022 (CI 1.6) are restricted to one jurisdiction alone and local measures to review and remediate are suggested. Access to ICU beds is particularly challenging in Queensland for both adult and paediatric ICU patients. A recent systematic review with meta-analysis (which includes data from Australia),[4] shows that after-hours discharge was strongly associated with increased ICU readmission and hospital mortality. More needs to be done to reduce after-hours discharge in Australian ICUs.

The rate of rapid response system calls to adult ICU patients within 48 hours of ICU discharge (CI 2.1) has been relatively stable and low over the past few years, reflecting adequate discharge practice within ICUs. The equivalent indicator for paediatric ICU patients (CI 2.2) is difficult to interpret due to the small number of paediatric ICUs contributing data. The recorded rate is associated with small absolute numbers restricted to one jurisdiction.



The rates of adult ICU-associated central line-associated bloodstream infection (CI 4.1) rose from 0.34 per 1000 central line-days in 2017/2018 to 0.39 in 2022, but the rise is slow and potentially not clinically significant as reported in 2021. The rates reported here are among the lowest in the world and reflective of excellent clinical practice across the board in Australian ICUs. Variation was noted in some organisations and during one reporting period.

The rate of empathetic practice toward families of ICU patients (CI 6.1) is reported by only 16 units. This indicator has low uptake and needs review and encouragement of participating units to contribute to this important indicator of care. In contrast, CI 3.1 and CI Area 5 reflect excellent engagement of contributing units with the treatment indicator of DVT prophylaxis and engagement with ANZICS adult and paediatric database.

Overall, this report from reflects a growing concern of ICU exit block across Australia, which, when considerd together with emergency department overcrowding, makes a case to review reasons for increased length of stay in hospital and reduced inpatient bed capacity. In addition, though research evidence on discharge delay and after-hours discharge occurrence and their consequences continue to grow, there is still a lack of evidence on effective interventions and strategies to improve ICU discharge practices and outcomes, demonstrating the importance of further research on development, implementation and evaluation of relevant interventions and strategies.

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# INTENSIVE CARE

## Summary of results

In 2022 there were 1,067 submissions from 93 healthcare organisations for 16 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, 4 deteriorated and the remainder showed no evidence of trend.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Access and exit block | | | | | | |
| 1.1 ICU - adult non-admission due to inadequate resources | Low | 52 | 2.10 | 2.45 | Private | |
| 1.2 ICU - elective adult surgical cases deferred or cancelled due to unavailability of bed | Low | 50 | 1.95 | 2.44 | | ✗ |
| 1.3 ICU - adult transfer to another facility / ICU due to unavailability of bed | Low | 50 | 1.20 | 1.55 | | ✗ |
| 1.4 ICU - adult discharge delay >12 hours | Low | 56 | 17.4 | 17.0 | Private | ✗ |
| 1.5 ICU - adult discharge between 6pm and 6am | Low | 62 | 17.5 | 16.9 | Private | |
| 1.6 ICU - paediatric discharge between 6pm and 6am | Low | 10 | 11.3 | 24.4 | | |
| 1.7 ICU - elective paediatric surgical cases deferred or cancelled | Low | 3 | 0 | 0 | | |
| Intensive care patient management | | | | | | |
| 2.1 Rapid response system calls to adult ICU patients within 48 hours of ICU discharge | Low | 45 | 6.0 | 4.31 | Private | ✗ |
| 2.2 Rapid response system calls to paediatric ICU patients within 48 hours of ICU discharge | Low | 7 | 0.74 | 0.24 | | |
| Intensive care patient treatment | | | | | | |
| 3.1 VTE prophylaxis in adult patients within 24 hours of ICU admission | High | 60 | 95.7 | 96.2 | | |

## Table of indicator results continued

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Central line-associated bloodstream infection | | | | | | |
| 4.1 Adult ICU-associated CI-CLABSI | Low | 74 | 0.40 | 0.20 | | |
| 4.2 Paediatric ICU-associated PI-CLABSI | Low | 1 | 0 | 0 | | |
| Utilisation of patient assessment systems | | | | | | |
| 5.1 Participation in the ANZICS CORE Adult Patient Database (APD) | High | 60 | 99.2 | 98.8 | | |
| 5.2 Participation in the ANZICS CORE Paediatric Intensive Care (ANZPIC) registry | High | 6 | 99.9 | 90.9 | | |
| Empathetic practice | | | | | | |
| 6.1 Empathetic practice toward families of ICU patients | High | 16 | 78.2 | 63.0 | | |

# INTENSIVE CARE

# INTERNAL MEDICINE

# General comments

The ACHS Internal Medicine Clinical Indicator set consists of seven areas: cardiovascular disease, endocrine disease, acute stroke management, care of the elderly, respiratory disease, gastrointestinal disease, and oncology. The areas of oncology and care of the elderly have largely been replaced by the emerging sets of Cancer Care and Geriatric Care with the number of organisations moving from reporting internal medicine indicators to these new indicator sets.

The cardiovascular disease area has four indicators for the management of congestive heart failure. These indicators measure the management of congestive heart failure through the use of medications such as warfarin, beta blockers or angiotensin-converting enzyme inhibitors. These indicators are reported by a single organisation in Australia but are often reported by international organisations where healthcare is at a different stage in its quality improvement journey.

Percutaneous transluminal coronary angioplasty (PTCA) where primary success is achieved (CI 1.5) is the best reported indicator in this area with six organisations reporting data. The current aggregate rate is 97.1% with a tight grouping among all submitting organisations. There has been a general improvement since 2016 in this indicator across all submitting organisations with an approximate 1% improvement.

The endocrine disease indicator of hospitalised patients with severe hypoglycaemia < 2.8 mmol/L (CI 2.1), measures the rate of insulin treated diabetic inpatients with a recorded blood glucose level less than 2.8 mmol/L. This indicator reports an aggregate rate in 2022 of 17.7% with a flat trend since 2017.

The three acute stroke management indicators all show improvement over time. Documentation of swallowing screening conducted within 24 hours prior to food or fluid intake in patients with a primary diagnosis of stroke (CI 3.1) has increased from 68.2% in 2016 to 84% in 2022. The aggregate rate of this indicator continues to improve as there is increased compliance with swallowing screening post stroke diagnosis. This improvement is greater in metropolitan sites compared with non-metropolitan sites and there has been improvement in both the best and poorest performing (80th and 20th centiles) organisations.

Documented physiotherapy assessment within 48 hours of presentation in acute stroke patients (CI 3.2) has improved across the review period with an improvement of the aggregate rate from 68.2% to 86.1%. This improved rate has largely been led by improvement in the poorer performers (20th centile) while the best performers (80th centile) have remained relatively flat at around 90% compliance for all inpatients with acute stroke.

Having a documented plan for ongoing care in the community is critical for transition from the inpatient setting to the community setting. Acute stroke clinical indicator 3.3 measures the rate of patients discharged with a plan provided to the patient/family prior to discharge. The rate of this indicator has improved throughout the review period with an increase from 84.8% in 2016 to 93.8% in 2022. This improvement is across both the poorer performers and best performers (20th and 80th centiles).

The use of specialist stroke units for the treatment of patients with acute stroke remains high. This is measured by clinical indicator 3.4 - documented treatment in a stroke unit during hospital stay. The rate of this indicator remains flat with an aggregate rate between 79 to 81% across the review period. There is variability year to year which likely reflects the resourcing requirements in sites measuring this indicator. It should be noted that high performers (80th centile) have achieved a 96.8% rate for utilisation in 2022, which is a record high point in the data.

Respiratory disease indicators cover chronic obstructive pulmonary disease (COPD) service referral and acute asthma management. COPD service referral (CI 5.1) has been between 60% to 70% for most reporting organisations throughout the review period. This rate has room for more improvement. The assessment of asthma severity on admission (CI 5.2) and the admission of patients with an acute asthma who have an appropriate discharge plan (CI 5.3) are not well reported but have an aggregate rate in 2022 of 50.6% and 69.8% respectively.

Gastrointestinal disease indicators are largely covered by the Gastrointestinal Endoscopy Clinical Indicator set, but there are two indicators here that measure haematemesis/melaena with blood transfusion. The first indicator (CI 6.1) measures patients who have had haematemesis/melaena with blood transfusion and subsequently had a gastroscopy within 24 hours and the second indicator (CI 6.2) measures haematemesis/melaena with blood transfusion and subsequent death. Indicator 6.1 has an aggregate rate of 45.7% in 2022. This indicator needs a large amount of improvement to occur, while CI 6.2 has a low rate of approximately 2%, which is encouraging.

Internal medicine indicators will continue to be a set that aggregates smaller specialities within it, and it is encouraging to see some areas such as acute stroke management with such good improvements. The automation of data collection in the future would also bring more data to this space which will provide improved comparisons.

# INTERNAL MEDICINE

## Summary of results

In 2022 there were 94 submissions from 21 healthcare organisations for 18 clinical indicators. There were no observed trends.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Cardiovascular disease | | | | | | |
| 1.1 CHF - prescribed ACEI / A2RA | High | 1 | 88.1 | 88.2 | | |
| 1.2 CHF - prescribed beta blocker | High | 1 | 84.5 | 84.5 | | |
| 1.3 CHF and AF - prescribed warfarin | Low | 0 | | | | |
| 1.4 CHF - chronic disease management referral including physical rehabilitation | High | 1 | 60.8 | 60.7 | | |
| 1.5 PTCA - vessels where primary success achieved | High | 6 | 97.1 | 96.7 | | |
| Endocrine disease | | | | | | |
| 2.1 Hospitalised patients with severe hypoglycaemia <2.8 mmol/L | Low | 2 | 17.7 | 19.6 | | |
| Acute stroke management | | | | | | |
| 3.1 Acute stroke - documentation of swallowing screen conducted within 24 hours prior to food or fluid intake | High | 7 | 84.9 | 83.2 | | |
| 3.2 Acute stroke - documented physiotherapy assessment within 48 hours of presentation | High | 7 | 86.1 | 85.6 | | |
| 3.3 Acute stroke - plan for ongoing community care provided to patient/family | High | 6 | 93.9 | 89.0 | | |
| 3.4 Acute stroke - documented treatment in a stroke unit during hospital stay | High | 6 | 81.5 | 82.0 | | |

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Care of the elderly | | | | | | |
| 4.1 Medical patients ≥65 years - cognition assessment using validated tool | High | 1 | 84.4 | 84.1 | | |
| 4.2 Geriatric patients - documented assessment of physical function | High | 1 | 73.9 | 73.9 | | |
| 4.3 Documentation of delirium plan | High | 0 | No data has been submitted for this indicator. | | | |
| 4.4 Documentation of follow-up plan after discharge | High | 1 | 87.5, 87.5 | | | |
| Respiratory disease | | | | | | |
| 5.1 COPD - chronic disease management service referral | High | 3 | 60.0 | 45.3 | | |
| 5.2 Acute asthma - assessment of severity documented on admission | High | 2 | 50.6 | 55.6 | | |
| 5.3 Acute asthma - appropriate discharge plan documented | High | 2 | 69.9 | 68.8 | | |
| Gastrointestinal disease | | | | | | |
| 6.1 Haematemesis / melaena with blood transfusion - gastroscopy within 24 hours | High | 4 | 45.7 | 27.8 | | |
| 6.2 Haematemesis / melaena with blood transfusion & subsequent death | Low | 2 | 2.70 | 2.17 | | |
| Oncology | | | | | | |
| 7.1 Time to administration of antibiotics for patients admitted with febrile neutropenia | High | 1 | 16.7 | 16.7 | | |

# INTERNAL MEDICINE

# MATERNITY

# Expert commentary

**Associate Professor Alexis Shub**
Fellow, Royal Australian and New Zealand College of Obstetricians and Gynaecologists

The comprehensive data in this report provides a useful way to track the care we provide for women and babies. The strengths of the data lie in the large number of healthcare organisations represented, as high as 104 organisations for some indicators. This broad representation across large and small units, metropolitan and regional, and private and public, enables clinicians and consumers to have a better understanding of process measures and outcomes. Overall the picture is of a system that provides very safe care for women having babies in Australia, but important information missing from this report is women's experience of that care.

The data must be interpreted with the understanding that services have different population demographics and different levels of service provision. The differences that are seen between units may reflect quality of care, but may also reflect these different patient populations. These differences are mitigated to some extent by the data regarding Area 1 - outcome of selected primipara. These are women who are relatively low risk by virtue of having a term cephalic singleton pregnancy and being between 20 and 34 years of age and in their first pregnancy. This comparator however, does not consider other important risk factors such as body mass index, smoking, and socioeconomic status. The indicators also differ in terminology used in some state based reporting, which excludes a larger number of women with comorbidities and obstetric diagnoses.

Overall in selected primiparas (Area 1), the trend of a decrease in spontaneous vaginal birth and instrumental vaginal delivery and an increase in induction and the caesarean section rate has continued. Spontaneous vaginal delivery remains a high priority for many women and there is a large variation across the sector, with rates varying from 26.4% to 50.9% for the 20th and 80th percentile, and outliers ranging from 10% to 100%. This data also reflects a changing landscape of maternal choice, of increased intervention to prevent risk of foetal growth restriction and still birth, and the knowledge that induction of labour does not increase caesarean section rate and may have benefits for babies.[1,2]

Other factors contributing to overall increased rates of caesarean section include the decline in the rate of vaginal birth after caesarean section (Area 2). This may reflect maternal choice, but may also represent barriers to accessing this option for women at some sites.

There has been an ongoing trend in decreasing rates of 3rd and 4th degree tears (CI 3.5 and CI 3.6). The national clinical care standard for third and fourth degree perineal tears may have contributed to this decline by providing useful clinical resources to women, clinicians and healthcare organisations to focus on prevention as well as ongoing care.[3] The wide variation between organisations suggests that there may be more gains to be made in this important area. This decrease also may reflect the increasing rate of episiotomy. Episiotomy is used selectively in Australia, and its use can prevent more severe perineal trauma, and is recommended in instrumental deliveries in primiparous women.

The use of appropriate prophylactic antibiotics for caesarean section is monitored by CI 5.1. There has been a slight decrease in this indicator, despite very good performance for the best performing organisations. In comparison to many process measures in maternity care, where change is complex and multifactorial, this is a simple intervention. It represents relatively easy changes for an organisation to make to improve both the process measure, and reduce infectious morbidity for women.

Finally, we must remember that this granular data is only possible due to the commitment of clinicians who enter data as another part of their busy working day so that consumers, clinicians and health policy teams can see a

# Expert commentary

broader picture of our system, and how we can provide better care to women and babies.


References

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2. Australian Commission on Safety and Quality on Healthcare, Quality statements - Stillbirth Clinical Care Standard, Australian Commission on Safety and Quality on Healthcare, 2023, accessed 19 October 2023.
3. Australian Commission on Safety and Quality on Healthcare, Third and Fourth Degree Perineal Tears Clinical Care Standard, Australian Commission on Safety and Quality on Healthcare, 2023, accessed 19 October 2023.

# MATERNITY

## Summary of results

In 2022 there were 3,161 submissions from 112 healthcare organisations for 20 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, 2 improved and 5 deteriorated.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Outcome of selected primipara | | | | | | |
| 1.1 Spontaneous vaginal birth | High | 92 | 40.8 | 40.6 | Public | ✗ |
| 1.2 Induction of labour | Low | 95 | 45.1 | 41.6 | | ✗ |
| 1.3 Instrumental vaginal birth | Not specified | 93 | 23.0 | 22.7 | | |
| 1.4 Caesarean section | Low | 95 | 35.6 | 35.6 | Public | ✗ |
| Vaginal birth after caesarean section (VBAC) | | | | | | |
| 2.1 Vaginal delivery following previous birth by caesarean section | Not specified | 81 | 11.2 | 12.7 | | |
| Major perineal tears and surgical repair of the perineum | | | | | | |
| 3.1 Intact perineum | High | 83 | 9.98 | 12.0 | | ✗ |
| 3.2 Episiotomy and no perineal tear | Low | 71 | 36.7 | 33.7 | | ✗ |
| 3.3 Perineal tear and no episiotomy | Low | 71 | 43.3 | 45.0 | | |
| 3.4 Episiotomy and perineal tear | Low | 69 | 7.31 | 6.73 | | |
| 3.5 Surgical repair of perineum for third-degree tear | Low | 86 | 3.92 | 3.04 | | ✓ |
| 3.6 Surgical repair of perineum for fourth-degree tear | Low | 104 | 0.17 | 0.13 | | ✓ |

## Table of indicator results continuted

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| General anaesthetic for caesarean section | | | | | | |
| 4.1 General anaesthetic for caesarean section | Low | 86 | 5.15 | 4.82 | Private | |
| Antibiotic prophylaxis and caesarean section | | | | | | |
| 5.1 Appropriate prophylactic antibiotic at time of caesarean section | High | 68 | 92.4 | 91.9 | | |
| Exclusive breastfeeding | | | | | | |
| 6.1 Selected primipara - exclusive breastfeeding | High | 48 | 68.4 | 72.1 | | |
| Postpartum haemorrhage and blood transfusions | | | | | | |
| 7.1 Vaginal birth - blood transfusion | Low | 96 | 1.06 | 1.09 | | |
| 7.2 Caesarean section - blood transfusion | Low | 94 | 1.14 | 1.09 | | |
| Fetal growth restriction (FGR) | | | | | | |
| 8.1 Birth weight less than 2,750g at 40 weeks gestation or beyond | Low | 84 | 1.12 | 1.03 | | |
| Apgar score | | | | | | |
| 9.1 Term neonates - Apgar score less than 7 at 5 minutes post-delivery | Low | 102 | 1.44 | 1.33 | | |
| All admissions of a term neonate to a neonatal intensive care nursery or special care nursery | | | | | | |
| 10.1 Term neonates - transferred or admitted to a NICN or SCN | Low | 100 | 10.3 | 9.53 | | |
| Specific maternal peripartum adverse events | | | | | | |
| 11.1 Specific maternal peripartum adverse events addressed within peer review process | High | 18 | 78.8 | 85.9 | | |

# MATERNITY

# MEDICATION SAFETY

# Expert commentary

**Dr Sasha Bennett**
NSW Therapeutics Advisory Group
Chair, ACHS Medication Safety Working Party

Despite recent challenging years for Australian healthcare, 222 healthcare organisations undertook at least one clinical audit using the ACHS Medication Safety Clinical Indicators during 2022. Uptake of indicators was similar to previous years with indicators for medication-related continuity of care at admission and at discharge being most frequently used. There is low uptake of clinical indicators that measure processes involving specific high-risk medicines. Some of this is due to changing medicines use (e.g., increasing use of Factor Xa inhibitors compared to warfarin use) or medicines management (e.g., increasing use of electronic medicines management systems) and underscores the importance of updating the medication safety indicators in a timely manner. Most of the clinical indicators are derived from NSW Therapeutic Advisory Group (TAG)-led Quality Use of Medicines Indicator projects.

The most popular non-automated indicators during 2022 were CI 3.1, 3.2, and 5.6 (similar to 2020 and 2021), demonstrating a focus on processes that target medication reconciliation at admission, inpatient medication charting and communication of medication information for ongoing care after discharge. Given an increasing focus on patient-centred care, it is disappointing to see the low percentage of patients (51%) receiving a current, accurate and comprehensive medication list at the time of hospital discharge (CI 5.6). This contrasts with the more impressive result of 91% for percentage of patients whose discharge summaries contain a current, accurate and comprehensive medication list at the time of hospital discharge (CI 5.5). The provision of current, accurate and comprehensive medication lists to patients indicates an area for the attention of healthcare organisations.

While the documentation of adverse drug reactions on medication charts (CI 3.2) is commendable, other areas also requiring significant improvement to enhance medication safety include medication reconciliation at admission (CI 3.1, 67%) and clinical pharmacist review within 24 hours of admission (CI 6.1, 59.5%)

It is difficult to assess if improvement across the healthcare system is occurring. Participant healthcare organisations are encouraged to monitor their performances from year to year to assess whether they have succeeded with their implemented quality improvement strategies or if there is a need to consider the implementation of new or different quality improvement strategies, especially in the rapidly changing healthcare environment. It is recommended for future clinical indicator audits that all healthcare organisations consider whether their sample size is sufficient, and whether their sample population is sufficiently representative of their healthcare organisation, to ensure that the clinical indicator result is a true representation of their healthcare organisation's performance. Sampling information can be found in the National Indicators for Quality Use of Medicines (QUM) in Australian Hospitals.[1]

References

1. Australian Commission on Safety and Quality in Health Care and NSW Therapeutic Advisory Group Inc. (2014), National Quality Use of Medicine Indicators for Australian Hospitals. ACSQHC, Sydney.Accessed 24 October 2023.

# Summary of results

In 2022, there were 999 submissions from 244 healthcare organisations for 19 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend:

- one improved
- eight deteriorated
- the remainder showed no evidence of trend.

## Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Antithrombotic therapy | | | | | | |
| 1.1 Percentage of patients prescribed enoxaparin whose dosing schedule is appropriate | High | 3 | 96.0 | 95.0 | | |
| 1.2 Percentage of patients prescribed hospital initiated warfarin whose loading doses are consistent with a Drug and Therapeutics Committee approved protocol | High | 3 | 65.4 | 34.7 | | |
| 1.3 Percentage of patients with an INR above 4 whose dosage has been adjusted or reviewed prior to the next warfarin dose | High | 4 | 94.5 | 95.8 | | |
| Antibiotic therapy | | | | | | |
| 2.1 Percentage of prescriptions for restricted antibiotics that are concordant with drug and therapeutics committee approved criteria | High | 6 | 81.0 | 72.7 | | |
| 2.2 Percentage of patients in whom doses of empirical aminoglycoside therapy are continued beyond 48 hours | Low | 2 | 0.79 | 3.17 | | |
| 2.3 Percentage of patients presenting with community acquired pneumonia that are prescribed guideline concordant antibiotic therapy | High | 7 | 69.1 | 71.3 | | |
| Medication ordering | | | | | | |
| 3.1 Percentage of patients whose current medications are documented and reconciled at admission | High | 67 | 52.4 | 77.9 | | |

# MEDICATION SAFETY

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Medication ordering cont'd | | | | | | |
| 3.2 Percentage of patients whose known adverse drug reactions are documented on the current medication chart | High | 93 | 93.6 | 90.1 | | |
| 3.3 Percentage of medication orders that include error-prone abbreviations | Low | 19 | 7.47 | 8.20 | | |
| 3.4 Percentage of patients receiving cytotoxic chemotherapy whose treatment is guided by a hospital approved chemotherapy treatment protocol | High | 1 | 100 | 100 | | |
| Pain Management | | | | | | |
| 4.1 Percentage of postoperative patients that are given a written pain management plan at discharge AND a copy is communicated to the primary care clinician | High | 0 | | | | |
| Continuity of care | | | | | | |
| 5.1 Percentage of discharge summaries that include medication therapy changes and explanations for changes | High | 10 | 81.8 | 79.8 | | |
| 5.2 Percentage of patients discharged on warfarin that receive written information regarding warfarin management prior to discharge | High | 2 | 91.1 | 90.2 | | |
| 5.3 Percentage of patients with a new adverse drug reaction (ADR) that are given written ADR information at discharge AND a copy is communicated to the primary care clinician | High | 2 | 93.8 | 96.5 | | |
| 5.4 Percentage of patients receiving sedatives at discharge that were not taking them at admission | Low | 1 | 1.70 | 1.69 | | |
| 5.5 Percentage of patients whose discharge summaries contain a current, accurate and comprehensive list of medicines | High | 14 | 90.8 | 87.4 | | |
| 5.6 Percentage of patients who receive a current, accurate and comprehensive medication list at the time of hospital discharge | High | 24 | 51.3 | 78.0 | | |

## Table of indicator results continued

| Indicator | Desirable rate | Number of organisaitons | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Hospital-wide policies | | | | | | |
| 6.1 Percentage of patients that are reviewed by a clinical pharmacist within one day of admission | High | 11 | 59.5 | 60.3 | | |
| 6.2 Adverse drug reactions reported to TGA | Not specified | 55 | 0.05 | 0.02 | | |
| 6.3 Medication errors - adverse event requiring intervention | Low | 222 | 0 | 0 | | ✓ |

# MEDICATION SAFETY

# MENTAL HEALTH

# Expert commentary

**Dr William Kingswell**
Deputy Chair, Education Committee, Royal Australian and New Zealand College of Psychiatrists
Chair, ACHS Mental Health Clinical Indicator Working Party

The 2015-2022 Australasian Clinical Indicator Report continues with a set of mental health clinical indicators that have been collected and reported on since 2019. The indicators remain in nine groups clustered into four broad areas:

- Consumer/carer engagement (diagnosis and care planning, continuity of care, community care)
- Treatment interventions (physical examination, prescribing patterns and electroconvulsive therapy)
- Restrictive practice (seclusion and restraint, mental health act status) and
- Critical incidents.

A number of indicators have as few as eight participating healthcare organisations and for others, such as suicide (CI 6.1 and 6.2) and physical restraint (CI 5.4 and 5.5), the base rate is so low that the indicator is highly variable when an incident occurs.

There are now four years of data collection and the participation in a number of indicators by healthcare organisations is in some areas is low. The voluntary nature of this program has meant that organisations are unlikely to submit indicators, which are hard to improve or reflect poorly on their organisation such as rates in the areas for the use of seclusion and restraint.

The Australasian Clinical Indicator Report is a significant undertaking and ACHS is to be applauded for it. Benchmarking and identifying strengths and weaknesses is critical to the improvement of mental health care delivery and the outcomes for patients and their carers. However, it is time to review the indicator set in partnership with the end users, the contributing healthcare organisations. We look forward to reviewing the set in 2024.

# Summary of results

In 2022, there were 1,652 submissions from 80 healthcare organisations for 31 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend:

- 7 improved
- 1 deteriorated
- the remainder showed no evidence of trend.

## Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Diagnosis and care planning | | | | | | |
| 1.1 Individual care plan | High | 51 | 91.1 | 94.4 | | ✓ |
| 1.2 Individual care plan signed by consumer | High | 46 | 84.0 | 85.1 | | ✓ |
| 1.3 Individual care plan signed by carer | High | 32 | 27.2 | 46.1 | | ✗ |
| Physical examination of patients | | | | | | |
| 2.1 Physical examination documented within 24 hours of admission | High | 48 | 83.0 | 88.5 | | |
| Prescribing patterns | | | | | | |
| 3.1 Discharged on ≥2 psychotropic medications from sub-group I (Antidepressants) | Low | 22 | 23.2 | 25.9 | | ✓ |
| 3.2 Discharged on ≥2 psychotropic medications from sub-group II (Mood Stabilisers) | Low | 21 | 4.41 | 5.05 | | ✓ |
| 3.3 Discharged on ≥2 psychotropic medications from sub-group III (Sedatives, Hypnotics or Anxiolytics) | Low | 20 | 11.3 | 12.3 | | ✓ |
| 3.4 Percentage of patients who receive written and verbal information on regular psychotropic medicines initiated during their admission (including antipsychotics) | High | 14 | 64.6 | 80.6 | | |
| 3.5 Discharged on ≥2 antipsychotic medications | Low | 19 | 20.9 | 21.08 | | |

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Prescribing patterns (continued) | | | | | | |
| 3.6 Monitoring for metabolic side effects for consumers commencing antipsychotic medications | High | 16 | 87.5 | 86.2 | | ✓ |
| 3.7 Monitoring for metabolic side effects for consumers taking regular antipsychotic medications | High | 16 | 91.0 | 87.7 | | |
| Electroconvulsive therapy | | | | | | |
| 4.1 ECT treatments | Low | 32 | 2.19 | 7.25 | | |
| Use of seclusion and restraint | | | | | | |
| 5.1 Average duration of seclusion episodes (Hours per episode) | Low | 8 | 1.56 | | | |
| 5.2 Rate of seclusion (per 1,000 bed days) | Low | 16 | 3.52 | 4.39 | | |
| 5.3 Percent of consumers secluded | Low | 12 | 2.15 | 2.66 | | |
| 5.4 Physical restraint | Low | 17 | 3.02 | 3.11 | | |
| 5.5 Rate of physical restraint (per 1,000 bed days) | Low | 13 | 3.35 | 4.73 | | |
| 5.6 Mechanical restraint | Low | 11 | 0.08 | 0.06 | | |
| 5.7 Rate of mechanical restraint (per 1,000 bed days) | Low | 8 | 0.02 | 0.04 | | |
| Major critical incidents | | | | | | |
| 6.1 Percent of consumers who die by suicide | Low | 46 | 0.01 | 0.01 | | |
| 6.2 Rate of suicide (per 1,000 bed days) | Low | 63 | 0.01 | 0.01 | | |
| 6.3 Consumers who assault (per 1,000 bed days) | Low | 50 | 0.39 | 0.46 | Private | |

## Table of indicator results continued

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Major critical incidents (continued) | | | | | | |
| 6.4 Consumers assaulted (per 1,000 bed days) | Low | 49 | 0.23 | 0.25 | | |
| 6.5 Sexual assault (per 1,000 bed days) | Low | 44 | 0.03 | 0.02 | | |
| 6.6 Significant self-harm (per 1,000 bed days) | Low | 71 | 0.18 | 0.19 | | |
| Mental Health Act status | | | | | | |
| 7.1 Involuntary admission status | Not defined | 9 | 13.5 | 18.8 | | |
| 7.2 Consumers detained as involuntary patients (per 1,000 bed days) | Low | 6 | 101 | 170.6 | | |
| Continuity of Care | | | | | | |
| 8.1 Discharge summary / letter provided to consumer or nominated carer | High | 65 | 86.7 | 87.3 | | ✓ |
| 8.2 Discharge summary / letter provided to service providing ongoing care | High | 41 | 77.3 | 78.8 | | |
| 8.3 Three-monthly multidisciplinary review | High | 6 | 100 | 100 | | |
| Community Care | | | | | | |
| 9.1 Consumers seen face-to-face by community service | Not defined | 9 | 85.4 | 90.8 | | |

# MENTAL HEALTH

# OPHTHALMOLOGY

# Expert commentary

**Dr Sharon Morris**
Staff Specialist Ophthalmology
Royal Australian and New Zealand College of Ophthalmologists

RANZCO The Royal Australian and New Zealand College of Ophthalmologists
THE LEADERS IN COLLABORATIVE EYE CARE

The ACHS Clinical Indicator Program endeavours to collect representative data of certain measurable ophthalmic indices in order to assess current standards of healthcare. As with all data collection programs, the quality of data assessed is reliant on the accurate coding of procedures and the correct reporting of events. Determination of the accuracy and relevance of this data should be established prior to national analysis of trends. Therefore, conclusions drawn are limited by this assumed data accuracy. Despite this limitation, the 2015-2022 report does offer an important insight into overall performance of ophthalmic surgery and aftercare as evidenced by the lack of any extremely poorly performing indicators.

Area 1 of this indicator set covers cataract surgery. Endophthalmitis rates continue to be extremely low across the board (CI 1.2) and there has been a significant steady increase in per-operative antibiotic prophylactic use (CI 1.5). Interestingly, and of relevance, is the absence of any worsening of endophthalmitis rates given the increasing shift away from prescribing routine post-operative antibiotic drops following surgery, to the preferred intracameral on-table antibiotic use as sole treatment across the nation. This shift has occurred secondary to increasing evidence of the benefit of intracameral antibiotic alone and the importance of antimicrobial stewardship.

The data for the unplanned readmissions post cataract surgery (CI 1.1) shows such a broad scatter of rates across the states, that it is difficult to make an assessment of improvement but does suggest ongoing low levels of unexpected complications across the nation. Unplanned overnight stays (CI 1.3) have reportedly become less frequent. This may be a true reflection of improved pre-admission health planning and perioperative standards of healthcare, or may reflect a better practical admission procedure for patients, simply ensuring that they have carers to take them home before they attend for surgery. Certainly, being involved in reviewing the raw data collected for indicators at a personal level, frequent pitfalls occur around patients not having a carer to collect them, rather than any intraoperative unexpected event necessitating their admission for health reasons. The outliers seen in the data may simply represent tidiness of data collection.

Complicated cataract surgery with anterior vitrectomy (CI 1.4) occurs, as expected, more often in public hospitals and reflects the increased co-morbidities of the public patient and the need to train ophthalmic trainees in this setting. The peak outlier in the Northern Territory likely also represents the complexity of patient case and the decreased availability of ophthalmic care in remote settings. However, further investigation into the data for this indicator would be helpful to establish relevance and reliability and to assess if increased support and provision of care would be beneficial.

The delay to second eye cataract surgery (CI 1.7) has risen presumably due to the COVID-19 pandemic causing global cancellations of surgery. The spike in delays and the reduction in reporting centres during 2020 suggest this, as there were restrictions to routine intraocular surgery at this time in Australia. The delays steadily improve again in 2021 and 2022 as the pandemic restrictions become lifted.

Area 2 of this indicator set covers glaucoma surgery. Unplanned readmissions (CI 2.1) have dropped from 3% to 1%, which has been attributed to improved performance at one centre, however improved technology and the steady increase in the uptake of minimally invasive glaucoma surgery may also be responsible. This likely also explains the absent/low endopthalmitis rates for glaucoma surgery. The complexity of patient cases is most likely responsible for the slight increase in patient stay.

Retinal surgery is covered in Area 3 of this indicator set. Endophthalmitis cases following retinal surgery (CI 3.2)

remain low but unplanned readmissions within 28 days (CI 3.1) have slightly increased over the last 3 years, peaking in 2020. This likely reflects the complexity of cases and delays due to the COVID-19 pandemic during which retinal detachment surgery, deemed urgent surgery, occurred despite other restrictions of healthcare but patients were not easily discharged out of hospital, often due to non-ophthalmic reasons. This may not be reflected fully in the data but would explain the peak in patients staying longer than an overnight stay (CI 3.3. Given that the unplanned readmission within 28 days (CI 3.1) reduced from 2020 to 2022, supports this explanation – the complexity of patient case reduced as the restrictions around COVID-19 reduced.

Overall the documentation around introcular lens planning records remains excellent (Area 4). The variability in toric introcular lens planning records being present at the time of surgery is not easily explained and likely represents data collection aberrations.

The usefulness of the clinical indicators is critically linked to the collection of the data and the appreciation of the surrounding events that influence the relevance of this data. Reliability of this data allows for enhanced patient care and reflection on the true meaning of the results. The indices allow outliers to be flagged and pursuing an explanation of these outliers will ultimately improve standards of performance and outcome. Overall, except for variance around the COVID-19 pandemic, the ophthalmic indicators appear to be excellent, sustaining expected levels of high performance without any obvious true dips in outcome.

# OPHTHALMOLOGY

## Summary of results

In 2022, there were 619 submissions from 49 healthcare organisations for 17 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, 4 improved and the remainder showed no evidence of trend.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Cataract surgery | | | | | | |
| 1.1 Cataract surgery - unplanned readmissions within 28 days | Low | 36 | 0.23 | 0.13 | | |
| 1.2 Cataract surgery - treatment within 28 days due to endophthalmitis | Low | 38 | 0.01 | 0.01 | | |
| 1.3 Cataract surgery - unplanned overnight admission | Low | 38 | 0.16 | 0.42 | | ✓ |
| 1.4 Cataract surgery - anterior vitrectomy | Low | 42 | 0.51 | 0.50 | Private | |
| 1.5 Cataract surgery - antibiotic prophylaxis | High | 24 | 98.8 | 99.1 | | ✓ |
| 1.6 Cataract surgery - toxic anterior segment syndrome (TASS) | Low | 24 | 0.00 | 0.00 | | |
| 1.7 Cataract surgery - planned second eye cataract surgery | Low | 9 | 0.56 | 9.88 | | |
| Intraocular glaucoma surgery | | | | | | |
| 2.1 Intraocular glaucoma surgery - unplanned readmissions within 28 days | Low | 16 | 1.06 | 0.58 | | ✓ |
| 2.2 Intraocular glaucoma surgery - micro-invasive glaucoma surgery (MIGS) | High | 15 | 85.2 | 86.0 | | ✓ |
| 2.3 Intraocular glaucoma surgery - treatment within 28 days due to endophthalmitis | Low | 12 | 0.00 | 0.00 | | |
| 2.4 Intraocular glaucoma surgery - >1 overnight stay | Low | 8 | 2.96 | 0.67 | | |

## Table of indicator results continued

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Retinal detachment surgery | | | | | | |
| 3.1 Retinal detachment surgery - unplanned readmission within 28 days | Low | 6 | 3.14 | 2.77 | | |
| 3.2 Retinal detachment surgery - treatment within 28 days due to endophthalmitis | Low | 8 | 0.05 | 0.02 | | |
| 3.3 Retinal detachment surgery - >1 overnight stay | Low | 8 | 6.23 | 5.83 | | |
| 3.4 Retinal detachment surgery - unplanned reoperation within 28 days | Low | 9 | 2.31 | 2.08 | | |
| Planning records for intraocular lens implantation | | | | | | |
| 4.1 Intraocular lens implantation with planning record present at time of surgery | High | 22 | 99.9 | 99.9 | | |
| 4.2 Toric intraocular lens implantation with planning record present at time of surgery | High | 22 | 97.1 | 98.1 | | |

# OPHTHALMOLOGY

# ORAL HEALTH

# Expert commentary

**Dr Martin Webb**
Federal Councillor, Australian Dental Association
Chair, ACHS Oral Health Clinical Indicator Working Party

This is the first year where oral health clinical indicator data has been reported to ACHS under new definitions following extensive revision of the 11 clinical indicators by the Oral Health Clinical Indicator Working Party in 2021-22. This means that some of the data and trends cannot be compared with previous data, as data for 5 of the revised oral health clinical indicators was first collected in the second half of 2022.

In general, there appears to be no significant differences between the States overall, and no difference between metropolitan and non-metropolitan healthcare organisations. The indicator for teeth retreated within 6-months after restorative treatment (CI 1.1) has shown no significant change over the period, but the best performers have improved from 4.2 in 2017 to 3.0 in 2022. The rate of dentures being remade within 12 months (CI 1.4) has been on a downward trend for the best performing healthcare organisations, but overall data for all states shows no significant change in trends.

The definitions for the endodontic indicator for root canal re-treatment (CI 2.1) was updated in 2022, so data and trends cannot be compared with previous years. Interestingly only 5 healthcare organisations from 3 States reported data for CI 2.1, compared to 59 healthcare organisations for CI 2.2. The rate of permanent teeth extracted within 12 months of commencement of endodontic treatment (CI 2.2) has deteriorated. This may be a result of the way the data is collected as some teeth may have root canal treatment started for pain relief but then subsequently extracted for various reasons. The report indicated that there has been a recent trend by some states to aggregate the data from multiple sites into a single state based source.

The rate for restorative treatment in children where teeth are retreated within 6 months (CI 3.1), has shown a flat trend in the fitted rate. There was a large spike in 2019, which if removed from the dataset, shows a deterioration from 1.4 to 2.5 teeth retreated per 100 restorations. Only public healthcare organisations submitted data for this clinical indicator, so there is no way to give a realistic comparison between public and private dental services delivery.

The new clinical indicator to track if preventative treatment offered (CI 4.1), was poorly reported with only 5 healthcare organisations submitting data to ACHS from only 2 states. A valid comparison of metropolitan versus non-metropolitan data is quite difficult when some states are only submitting aggregated data. The rate for retreatment of fissure sealant in children (CI 4.2) has shown an improvement from 2017 to 2022, with the comparison rate for performance showing a downward trend from 2.5 to 1.5 retreats per 100 treatments, which is a positive sign. The best performers have improved in this period with a change from 2.0 to 0.9 re-treatments per 100 fissure sealant treatments.

I note that there has been a few of the clinical indicators where the data has not been submitted by many healthcare organisations and some states. The purpose of collecting this information is to enable organisations who are providing dental services to focus on improvements to the quality of those dental treatments.

In conclusion, I would like to thank all members of the Oral Health Clinical Indicator Working Party for their expertise and significant contributions over the last few years.

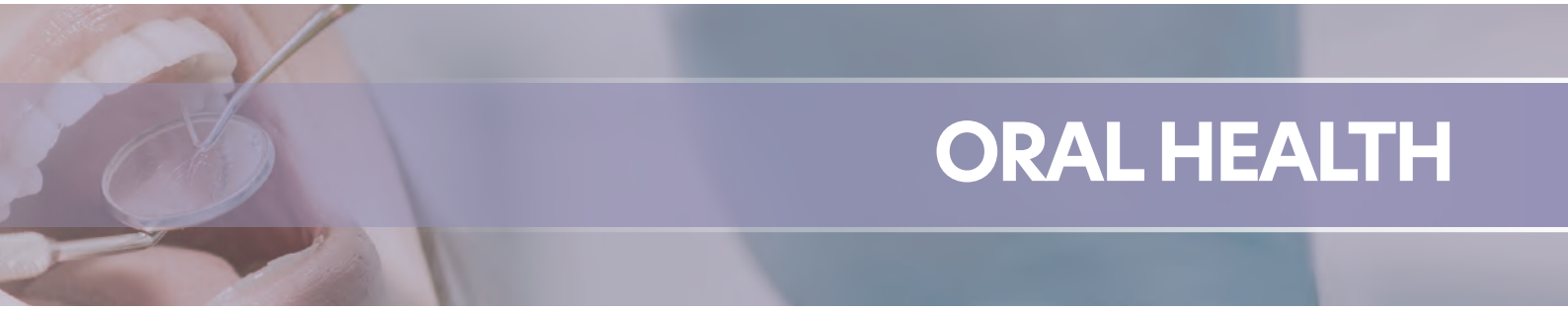
# Summary of results

In 2022, there were 750 submissions from 85 healthcare organisations for 14 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend:

- 3 improved
- the remainder showed no evidence of trend.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Returns to the dental centre | | | | | | |
| 1.1 Restorative treatment - teeth retreated within 6 months | Low | 65 | 6.07 | 5.35 | | |
| 1.2 Routine extraction - complications within 14 days | Low | 7 | 2.57 | 1.91 | | |
| 1.3 Surgical extraction - complications within 14 days | Low | 7 | 1.73 | 2.03 | | |
| 1.4 Denture remade within 12 months | Low | 46 | 1.61 | 3.96 | | ✓ |
| Endodontic treatment | | | | | | |
| 2.1 Endodontic treatment - root canal re-treatment within 12 months | High | 5 | 17.2 | 6.89 | | |
| 2.2 Endodontic treatment - teeth extracted within 12 months | Low | 59 | 3.36 | 3.27 | | |
| Children's oral health care | | | | | | |
| 3.1 Restorative treatment (children) - teeth retreated within 6 months | Low | 74 | 2.02 | 2.41 | | |
| 3.2 Pulpotomy (children) - deciduous teeth extracted within 6 months | Low | 63 | 1.80 | 3.45 | | ✓ |
| 3.3 Children who have potentially unnecessary General Anaesthetic (GA) within the last 12 months | Low | 4 | 0 | 0 | | |



# ORAL HEALTH

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Preventative services | | | | | | |
| 4.1 Is preventive treatment offered at each appointment? | High | 4 | 91.4 | 70.4 | | |
| 4.2 Fissure sealant treatment (children) - re-treatment within 24 months | Low | 76 | 1.51 | 2.20 | | ✓ |

# PAEDIATRICS

# Expert commentary

**Mrs Alicia Bell**
Nurse Practitioner
Board member, Australian College of Children and Young People's Nurses

In order to provide safe, quality patient/person-centred care, it is imperative that staff are trained to appropriately care for children and adolescents in emergency situations. Whilst it is fantastic to see an increase in the number of HCOs participating in this survey since 2016, it is concerning to see the decline in performance of registered nurses with paediatric basic life support (PBLS) qualifications, however, it is worth noting the decline in HCO participation since 2020 and 2021. Participation rates in PBLS may have declined due to staffing pressures, burnout and high rates of staff turnover, reducing participation in professional development activities (Marufu et al, 2021). It would be interesting to investigate whether there is a correlation between the participating HCOs who have reported medication errors and adverse events and those with lower rates of PBLS training (Area 1 and Area 2).

Whilst it is important to collect this data, it is noted that the literature supporting the need for PLS training to support quality care is quite dated. It may be beneficial to consider whether PBLS training remains current best practice to support staff working in the paediatric setting. To promote engagement and buy in from HCOs, it may be more valuable to educate staff to identify the deteriorating paediatric patient, rather than, or in addition to basic life support skills (Gill et al, 2022). It is disappointing that there are no submissions regarding medical practitioners with PBLS training and it would be interesting to understand whether there is a relationship between rates of medical practitioners with PBLS training and adverse outcomes.

It is pleasing to see that there are very low rates of medication errors and adverse events generally, however, it would be interesting to investigate the events surrounding the adverse event and whether there were contributing factors such as poor staffing ratios or levels of experience of RN in those areas reporting.

It is also pleasing to see reports of paediatric adverse events are declining in both the paediatric ward and non-paediatric ward setting and to see that adverse events improving generally. It is assumed this is a direct impact of safety measures successfully implemented historically.

It is disappointing to see the poor response for documentation management, given the risks associated with poor documentation. Clearly documented Asthma Action Plans in particular are incredibly important to ensure safe and effective care delivery and management for children with asthma (Castagnoli et al, 2023).

CI 3.3 and CI 3.4, physical assessment completed by a medical practitioner and registered nurse respectively and documented within 4 hours of admission is an important aspect of the communication between various members of the healthcare team to ensure collaborative care delivery and therefore important data to continue to collect. With an increase in HCOs implementing electronic medical records throughout Australia, these clinical indicators should be straightforward to both implement and report on.

There is no report for this clinical indicator (4.2) due to no or low numbers of HCOs providing data for this clinical indicator. It is important to continue capturing this data due to the adverse events that can impact the paediatric population with the use of general anaesthesia and with increased fasting times. Length of stay in the hospital setting may be increased due to adverse outcomes from paediatric anaesthesia, which is important to capture. With options for conscious sedation for paediatric conditions, it would be valuable to continue to collect data for this clinical indicator.


References

1. Marufu TC, Collins A, Vargas L, Gillespie L, Almghairbi D. Factors influencing retention among hospital nurses: systematic review. Br J Nurs. 2021 Mar 11;30(5):302-308. doi: 10.12968/bjon.2021.30.5.302.
2. Gill, F., Cooper, A., Falconer, P., Stokes, S., & Leslie, G. (2022). Implementation of an evidenced-based escalation© system for recognising and responding to paediatric clinical deterioration. Australian Critical Care, 35, S15–. doi: https://doi.org/10.1016/j.aucc.2022.08.055
3. Castagnoli R, Brambilla I, Giudice MMD, Marseglia GL, Licari A. Applying the new guidelines to asthma management in children. Curr Opin Allergy Clin Immunol. 2023 Apr 1;23(2):132-136. doi: 10.1097/ACI.0000000000000892.

# PAEDIATRICS

## Summary of results

In 2022, there were 170 submissions from 37 healthcare organisations for 11 clinical indicators. There were no observed trends.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Appropriateness | | | | | | |
| 1.1 Registered nurses with paediatric basic life support qualifications | High | 25 | 71.0 | 75.2 | | |
| 1.2 Medical practitioners with paediatric basic life support qualifications | High | 2 | 97.7 | 65.2 | | |
| 1.3 Paediatric patients admitted to a paediatric ward/area | High | 6 | 76.6 | 70.5 | | |
| Adverse events | | | | | | |
| 2.1 Medication errors | Low | 29 | 0.09 | 0.07 | | |
| 2.2 Adverse events when not in a paediatric ward/area | Low | 3 | 0 | 0 | | |
| 2.3 Adverse events in a paediatric ward/area | Low | 22 | 0.57 | 0.65 | | |
| Documentation | | | | | | |
| 3.1 Completed asthma action plan - paediatrics | High | 2 | 100 | 66.7 | | |
| 3.2 Paediatric surgery post-procedural report | High | 0 | | | | |
| 3.3 Physical assessment completed by medical practitioner and documented | High | 0 | | | | |
| 3.4 Physical assessment completed by registered nurse and documented | High | 0 | | | | |
| 3.5 Medical discharge summary completed - paediatrics | High | 3 | 98.9 | 98.5 | | |

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Paediatric anaesthesia | | | | | | |
| 4.1 Paediatric patients who fast 6 hours prior to anaesthesia | High | 2 | 100 | 100 | | |
| 4.2 Adverse event due to non-adherence to paediatric fasting guidelines | Low | 0 | | | | |
| 4.3 Parent/guardian present at induction of anaesthesia | Not specified | 0 | | | | |

# PAEDIATRICS

# PATHOLOGY

# Expert commentary

**Dr Angela Wong**
Chair, Anatomical Pathology Advisory Committee of the Royal College of Pathologists of Australasia
Department of Anatomical Pathology, Royal North Shore Hospital, NSW Health Pathology

The complexity level 4 Medicare Benefits Schedule (MBS) items (CI 3.1) represent a diverse range of specimens including endoscopic biopsies, cervical biopsies, transurethral prostate resections, uterine curettings and orientated skin excisions. A few larger low complexity specimens such as benign uterus and benign breast excisions also fall into this category.

In this second year of data collection, the number of healthcare organisations submitting has increased from 8 to 12. The three largest data contributors were from Victoria. There is a notable absence of data from South Australia, Western Australia and the Australian Capital Territory. The aggregate rate of compliance increased from 69% to 78%, however, this improvement is mostly due to the high compliance rate from Tasmania and Victoria averaging close to 90%. New South Wales, Northern Territory and Queensland are reporting average compliance rates of about 50-60%. Notably, in Queensland, the three reporting healthcare organisations have variable compliance rates of <30% to the highest rate of 80%.

Delays in these diagnostic turnaround times impact on timely patient reviews that underpin clinical management of a range of surgical and non-surgical conditions. Compliance with this metric allows clinicians to plan follow-up appointments and to manage patient expectations. Additional data is encouraged especially from Western Australia, the Australian Capital Territory and South Australia. There is no observable difference between metropolitan and non-metropolitan sites.

The complexity level 6 and 7 MBS items (CI 3.2) represent the majority of cancer surgical resections. The number of contributing healthcare organisations increased from 7 in 2021 to 11 in 2022. The aggregate rate of compliance increased from 64% to 81% in that time. A compliance rate of >80% is seen in the Victorian and Tasmanian submissions, followed by New South Wales, Queensland and Northern Territory reporting a wide scatter from 20% to over 80%. There is no observable difference in the average rate between metropolitan and non-metropolitan sites.

These statistics are notable in the wide range of compliance percentages reported by the healthcare organisations. A compliance rate of at least 50% is desirable. It is possible that the delay in some reports may be due to the need for clinicopathological correlation at multidisciplinary meetings. Laboratory workforce factors should also be monitored as these specimens are labour and resource intensive.

Over the seven years of data collection (2016-2022) of structured reporting for anatomical pathology (CI 3.3), the number of healthcare organisations submitting data has decreased from 10 to 3. The three healthcare organisations submitting data in 2022 all report 100% compliance with structured reporting for colorectal cancer, melanoma, lung, prostate, breast and endometrial cancer. The fall in submission rates for this category is likely to be due to the cumbersome process for healthcare organisations to assess reports for compliance. Difficulties arise when multiple resections have been performed for the same tumour. For example, the excision of a breast cancer is typically reported in a synoptic format, however the re-excision with residual cancer may not always warrant a new synoptic report, depending on the extent and nature of the residual lesion. Since NPAAC regulations have been updated to mandate structured reporting in 2020,[1] this clinical indicator may no longer be necessary for healthcare organisations to monitor. It will instead fall under the domain of the laboratory accreditation process.

References

1. National Pathology Accreditation Advisory Council, Requirements for information communications and reporting (Forth edition 2020), Australian Government Department of Health, 2020, accessed 23 October 2023

# Summary of results

In 2022 there were 438 submissions from 20 healthcare organisations for 25 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to test for trend:

- one improved
- 2 deteriorated
- the remainder showed no evidence of trend.

## Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Chemical Pathology | | | | | | |
| 1.1 Serum / plasma potassium for ED - in lab to validated time <40 minutes (H) | High | 17 | 53 | 55.9 | | ✗ |
| 1.2 Serum / plasma potassium from ED - collected to in lab time <50 minutes (H) | High | 16 | 90.2 | 89.7 | Metro | |
| 1.3 Serum / plasma troponin for ED - in lab to validated time <50 minutes (H) | High | 17 | 63.3 | 61.3 | | ✗ |
| 1.4 Serum / plasma troponin from ED - collected to in lab time <50 minutes (H) | High | 16 | 89.0 | 89.8 | | |
| Haematology | | | | | | |
| 2.1 Haemoglobin for ED - in lab to validated time <35 minutes (H) | High | 16 | 85.6 | 83.9 | | |
| 2.2 Haemoglobin from ED - collected to in lab time <50 minutes (H) | High | 16 | 90.0 | 89.8 | Metro | |
| 2.3 Blood group for ED - in lab to validated time <60 minutes (H) | High | 12 | 45.0 | 47.1 | | |
| 2.4 Blood group from ED - collected to in lab time <50 minutes (H) | High | 11 | 87.3 | 83.8 | | |
| Anatomical pathology | | | | | | |
| 3.1 AP complexity level 4 MBS item - received to validated time <4 working days | High | 12 | 78.0 | 72.2 | | |
| 3.2 AP complexity level 6 & 7 MBS item - received to validated time <7 working days within a calendar month | High | 11 | 81.6 | 75.1 | | |
| 3.3 Structured reporting for Anatomical Pathology | High | 3 | 100 | 100 | | |

# PATHOLOGY

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Microbiology | | | | | | |
| 4.1 Time from blood culture "flagging" positive to reporting of Gram stain result entered in laboratory information system | High | 3 | 61.4 | 46.9 | | |
| 4.2 Cerebrospinal fluid testing - Time from receipt in the testing laboratory to reporting <60 minutes | Not specified | 4 | 61.6 | 48.0 | | |
| 4.3 COVID-19 testing - PCR result in hospitalised patients from receipt in testing laboratory to reporting <24 hours | High | 10 | 98.5 | 95.7 | | |
| 4.4 HIV testing - Ag/Ab negative in recipients of blood borne virus exposures occurring in hospitals | High | 8 | 74.6 | 85.8 | | |
| 4.5 Hepatitis B surface antibody testing in recipients of blood borne virus exposures occurring in hospitals | High | 8 | 70.4 | 78.8 | | |
| Point of care testing | | | | | | |
| 5.1 Point of care testing (PoCT) register | Not specified | 5 | 60.0 | | | |
| 5.2 PoCT devices that are not under a quality framework | Not specified | 5 | 100 | | | |
| Whole of service | | | | | | |
| 6.1 Misidentified episodes | Low | 11 | 0.28 | 0.28 | | |
| 6.2 Errors prior to receipt (Specimen handling, Patient identification) | Low | 6 | 2.00 | 1.39 | | |
| 6.3 Errors post receipt (Specimen handling, Patient identification) | Low | 6 | 0.11 | 0.06 | | |
| 6.4 Number of specimens collected for potassium testing with haemolysis | Low | 10 | 3.2 | 4.24 | | |
| 6.5 Blood group from ED - recollections | Low | 10 | 6.94 | 6.97 | | |
| 6.6 Alert of urgent results | High | 7 | 100 | | | |

Table of indicator results continured

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Immunopathology | | | | | | |
| 7.1 Immunopathology - Anti-Neutrophil Cytoplasmic Antigen (ANCA) | High | 3 | 13.1 | 10.7 | | |

# PATHOLOGY

# RADIATION ONCOLOGY

# Expert commentary

**Dr Rachel Effeney**
Quality Improvement Committee, Faculty of Radiation Oncology
Royal Australian and New Zealand College of Radiologists

The Royal Australian and New Zealand College of Radiologists
The Faculty of Radiation Oncology

In 2022 submissions were received from 13 healthcare organisations on 9 radiation oncology clinical indicators. Many of the clinical indicators are showing some improvement over time, although analysis is limited by the small number of healthcare organisations submitting data.

A clinical indicator of interest is CI 3.2 which reports on the proportion of patients receiving radical radiation therapy for lung cancer who have motion management in treatment planning. Motion management describes techniques that account for the effect of respiratory motion on the position of a lung tumour and the surrounding normal tissues. Such techniques can ensure better targeting of the lung cancer, and therefore can improve the safety and accuracy of radiation therapy. The annual aggregate rate for this indicator has increased from 67.4 in 2018 to 95.8 in 2022, indicating a widespread adoption of these techniques. By collecting this clinical indicator, healthcare organisations can ensure this technology is being used for all relevant patients and that they are keeping up to date with similar organisations.

Motion management is an example of how technological advancements lead to higher quality radiation treatments. However technological advancements alone are not sufficient to ensure quality treatment. Therefore, it is pleasing to see a pattern of improvement in the proportion of patients discussed at a multidisciplinary meeting (CI 1.3) and the proportion of treatment plans undergoing peer review (CI 2.3), although analysis is limited by small sample sizes.

The Radiation Oncology clinical indicators have recently undergone a revision and from 2023 the sixth version of the clinical indicator set will be used. Although the changes are only minor, the revision process ensures that the indicators being used remain relevant to current clinical practice.

# Summary of results

In 2022 there were 112 submissions from 13 healthcare organisations for 9 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend:

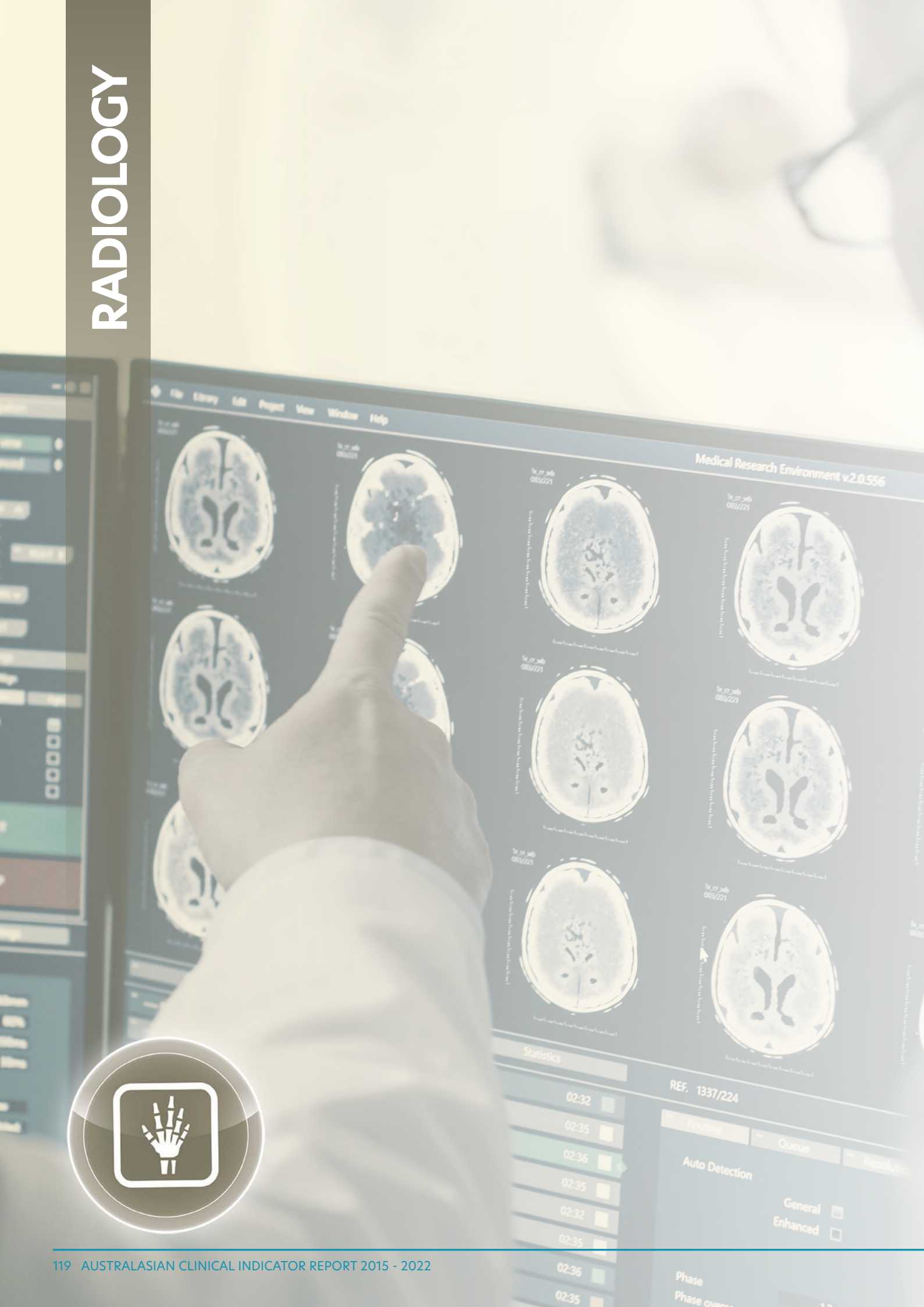
- one improved
- the remainder showed no evidence of trend.

## Table of indicator results

| Indicator | Desirable rate % | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Consultation process | | | | | | |
| 1.1 Patients for radical treatment - waiting time from the 'ready for care' date more than the faculty guidelines | Low | 13 | 5.87 | 9.00 | | ✓ |
| 1.2 Patients for palliative treatment - waiting time from the 'ready for care' date more than the faculty guidelines | Low | 13 | 8.07 | 18.4 | | |
| 1.3 Multidisciplinary meeting involvement | High | 6 | 61.4 | 63.3 | | |
| Treatment planning | | | | | | |
| 2.1 Staging annotation for current radiotherapy course | High | 7 | 69.4 | 85.9 | | |
| 2.2 Treatment prolongation | Low | 5 | 4.48 | 6.46 | | |
| 2.3 Treatment plan peer review | High | 4 | 32.6 | 42.5 | | |
| Treatment delivery | | | | | | |
| 3.1 Single fractionation for bone metastases | High | 4 | 36.6 | 48.1 | | |
| 3.2 Motion management | High | 6 | 92.6 | 96.3 | | |
| 3.3 Androgen deprivation therapy | High | 4 | 80.5 | 87.2 | | |

# RADIATION ONCOLOGY

# RADIOLOGY


Medical Research Environment v2.0.556
Statistics
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Auto Detection
General
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# General Comments

***Dr Paul Beech***
*Victorian Branch Education Officer, RANZCR*
*The Royal Australian and New Zealand College of Radiologists*

The Royal Australian and New Zealand College of Radiologists®

On behalf of the Royal Australian and New Zealand College of Radiologists (RANZCR) I am pleased to provide commentary on the Australasian Clinical Indicator Report 24th Edition (2015-2022) which provides feedback on Key Performance Indicators associated with adverse patient events, CT dosimetry, patient identification and consent and critical test result notification.

In this edition it is again reassuring to see that the incidence of severe adverse events in both diagnostic and interventional radiology remains low. The consistent occurrence of contrast extravasations across different healthcare organisations demonstrates the ongoing issue and the further stratification of these events into high volume and low volume in the future will help to guide the significance of the extravasation and help with comparison of events across different healthcare organisations.

Minimising radiation exposure following the principles of "as low as reasonably achievable" (ALARA) remains an important component of radiology practice and the Australian diagnostic reference levels (DRLs) are an effective way for healthcare organisations to monitor and benchmark their radiation doses with other practices. There is also increasing interest in monitoring cumulative radiation doses for patients across their healthcare journey and the inclusion of documentation of cumulative patient doses with further aid healthcare organisations in ensuring that processes are in place to minimise patient radiation exposure across their lifetime.

Finally, the ongoing work with critical result notification remains an essential component of providing high quality care in the Australian healthcare system. Closing the loop between health care providers is essential for best patient outcomes and the expansion of the critical result notification section of the Clinical Indicators to include auditing of results notification will help in reducing adverse patient outcomes.

# Summary of results

In 2022 there were 269 submissions from 14 healthcare organisations for 15 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend there was no evidence of a trend.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Adverse patient events | | | | | | |
| 1.1 Number of Severity Assessment Code (SAC) 1 or Incident Severity Rating (ISR) 1 incidents - interventional radiology examinations | Low | 12 | 0.01 | 0.00 | | |
| 1.2 Number of Severity Assessment Code (SAC) 1 or Incident Severity Rating (ISR) 1 incidents - diagnostic radiology examinations | Low | 14 | 0.00 | 0.00 | | |
| 1.3 Number of Severity Assessment Code (SAC) 2 or Incident Severity Rating (ISR) 2 incidents - interventional radiology examinations | Low | 12 | 0.04 | 0.02 | | |
| 1.4 Number of Severity Assessment Code (SAC) 2 or Incident Severity Rating (ISR) 2 incidents - diagnostic radiology examinations | Low | 14 | 0.00 | 0.00 | | |
| 1.5 Contrast extravasation during an IV contrast enhanced CT procedure | Low | 11 | 0.25 | 0.27 | | |
| 1.6 Percutaneous trans pleural biopsy of lung or mediastinum requiring unexpected overnight admission | Low | 8 | 2.33 | 2.77 | | |
| 1.7 Image-guided percutaneous core biopsy of liver requiring unexpected overnight admission | Low | 8 | 0.38 | 7.14 | | |

# RADIOLOGY

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| CT Dosimetry | | | | | | |
| 2.1 $CTDI_{vol}$ for non-contrast CT head examinations | Low | 11 | 10.6 | 9.00 | | |
| 2.2 $CTDI_{vol}$ for portal venous phase of abdominal pelvic CT examinations | Low | 10 | 14.3 | 11.8 | | |

# REHABILITATION MEDICINE

# Expert commentary

**Dr Jennifer Mann**
President, Australasian Faculty of Rehabilitation Medicine

The rehabilitation medicine section of the Australasian Clinical Indicator Report 2015–2022 continues to provide a wealth of information and data for the rehabilitation sector. A number of the indicators are still in the early years of their introduction and so there is only limited annual data available for comparison. Within these limitations, it is good to note that for the 2 years of data collection of timely assessment of function on admission (CI 1.1) and timely establishment of an initial multidisciplinary rehabilitation plan (CI 2.1) that there has a significant number of healthcare organisations contributing data and the limited available data shows a high rate of completion in these areas.

It is interesting to note that the other 2 newer clinical indicators rate of fallers (CI 5.1) and rehabilitation intensity (CI 6.1) both continue to have small numbers of healthcare organisations contributing data. Of particular note is the very small number of healthcare organisations contributing data on rehabilitation intensity. This is consistent across the first 2 years of data collection. These 2 indicators are important aspects of rehabilitation. It is difficult to interpret 2 years of very limited data, but it is hoped that the data contribution will increase over time as services become more used to the data collection for the indicators. If the participation in data collection for these new indicators remains low in future years, it may be worth examining the barriers to participation including if the methodology requires review. It will be interesting to follow the longitudinal trends of these particular indicators.

There continues to be overall high rates of functional gains for people completing formal rehabilitation programmes (CI 3.1). It is noted however that even though rates remain high, there has been a slight downward trend in the aggregate rate from 2020-2022, mainly contributed to by a downward trend in 20th percentile rates for 2022. One observation may be that this slight downward trend corresponds to the COVID-19 pandemic. During that time many rehabilitation units across Australia had services significantly reduced or ceased and many have still not returned to their pre-pandemic service levels. These indicators may be reflecting some of those changes. Functional gain is one of the main aims of formal rehabilitation programmes. So it is hoped that as services return to 'normal' that this downward trend in performance will be reversed.

Overall, it is useful to see this data and we can look forward to the newer indicators providing useful information as more units provide data and more years of data collection allow more meaningful interpretation of trends.

# Summary of results

In 2022 there were 797 submissions from 105 healthcare organisations for 6 clinical indicators. Of the indicators that had a desirable level specified as high or low and sufficient data (minimum of four years) to observe a trend, no trends were observed.

### Table of indicator results

| Indicator | Desirable rate | Number of organisations | Aggregate rate % | Average rate % | Best Stratum | Trend |
|---|---|---|---|---|---|---|
| Timely assessment of function on admission | | | | | | |
| 1.1 Functional assessment within 48 hours of admission | High | 96 | 94.0 | 96.1 | | |
| Timely establishment of an initial multidisciplinary rehabilitation plan | | | | | | |
| 2.1 Multidisciplinary team plan within 7 days | High | 97 | 97.5 | 98.4 | | |
| Functional gain achieved by rehabilitation program | | | | | | |
| 3.1 Functional gain following completed rehabilitation program | High | 100 | 95.4 | 94.4 | | |
| Discharge destination | | | | | | |
| 4.1 Destination after discharge from a rehabilitation program | High | 73 | 92.0 | 89.1 | Private | |
| Rate of fallers | | | | | | |
| 5.1 Rate of fallers of less than 15% of admissions | Low | 44 | 7.92 | 11.3 | Private | |
| Rehabilitation intensity | | | | | | |
| 6.1 Rehabilitation intensity | High | 8 | 65.0 | 59.1 | | |

# REHABILITATION MEDICINE

# Emerging Clinical Indicator Sets

Over the past year or so the Performance and Outcomes Service at ACHS has worked on some new clinical indicator sets. These emerging sets are often developed at the request of partner organisations, with the view to develop the set over the long-term into something which can be implemented across a wider variety of organisations. These sets are considered emerging due to the lower levels of data available in these clinical areas or that the set has not been released yet for wider usage.

### Cancer Care

Cancer Care launched in mid-2020 with the 2022 year being the second year of collection. Currently 4 organisations are contributing to this set, but unfortunately that is not enough data to provide an overall commentary on. We recently reviewed and clarified several of the indicators which were difficult to collect, to ensure that collection would be easier on organisations choosing to report this data. We hope that in 2023 more organisations will start reporting on this important indicator set, particularly the easier to report indicators. We have had interest in this set by some of the larger private providers of care so we are hopeful that its growth will continue.

### Geriatric Care

Geriatric Care has now had over 12 months of data collection so far and currently there is not enough data to report on. The uptake of data collection among several organisations is promising and we hope that this set will yield improvements in the quality of care for the elderly. This set focuses on functional assessments and planning, medications, discharge, and unplanned readmissions. It is an emerging area of care in regard to clinical indicators which complement the National Aged Care Mandatory Quality Indicator Program indicators.

### Ambulance Health Services

This set will be a new addition to the ACHS portfolio and we are thrilled to have received significant interest from several organisations within the field of paramedical and ambulance health service provided care. The working party for this set has met and the development of the set continued throughout 2023, and we are excited to have the Council of Ambulance Authorities endorsing this set for release in 2024. The set covers the areas of patient assessment, clinical interventions, medication errors, behaviours of concern, transition of care, and patient experience. It is expected to complement the draft standards recently released by the Australian Commission on Safety and Quality in Healthcare.

### Clinical Care Standards

Since 2021, ACHS has progressively added the Clinical Care Standards developed and released by the Australian Commission on Safety and Quality in Healthcare for benchmarking. The reporting of these benchmarks is the same as other products developed by ACHS. All seventeen of the current areas released by the Australian Commission on Safety and Quality in Healthcare are available and data has been submitted in a number of areas, with particular focus on colonoscopy. If your organisation would like to submit these indicators, please contact us and we will activate this benchmarking product for you. ACHS endeavours to support the collection and benchmarking of these indicators to provide our users context for the indicators for local monitoring within the clinical care standards.

ACHS

THE AUSTRALIAN COUNCIL
ON HEALTHCARE STANDARDS
Inspiring Excellence in Healthcare

Inquiries regarding

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