

ACHS 2021 Clinical Indicator Program Information



ACHS
**PERFORMANCE &
OUTCOMES SERVICE**

The Australian Council on Healthcare Standards

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ACHS 2021 Clinical Indicator Program Information

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CONTENTS

INTRODUCTION.....	3
ABOUT THE PERFORMANCE AND OUTCOMES SERVICE	4
WHAT ARE CLINICAL INDICATORS?	5
THE PROCESS OF CLINICAL INDICATOR	7
DEVELOPMENT AND REVIEW	7
BENEFITS OF COLLECTING ACHS CLINICAL INDICATORS.....	7
USING ACHS CLINICAL INDICATOR DATA.....	8
HOW IS A CLINICAL INDICATOR STRUCTURED?	9
CLINICAL INDICATOR DATA GOVERNANCE DIAGRAM	12
ACHS CLINICAL INDICATOR REPORTS.....	13
WHAT AREAS DO THE CURRENT CLINICAL INDICATOR SETS COVER?	16
APPENDIX 1: SAMPLE COMPARATIVE REPORT	19
Sample Report.....	23

INTRODUCTION

This document provides information about the Performance and Outcomes Service and the function of the ACHS Clinical Indicator Program.

For further copies of this document or for additional information relating to Clinical Indicators please contact:

ACHS Performance and Outcomes Service
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ULTIMO NSW 2007
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Other publications:

- The *ACHS Clinical Indicator User Manuals* are published annually with updated Clinical Indicators available for collection in the coming year.
- The *ACHS Clinical Indicator Summary Guide* is published annually with updated Clinical Indicators available for collection in the coming year.
- The *Australasian Clinical Indicator Report* is published annually and reports aggregate results for all published Clinical Indicators.

ABOUT THE PERFORMANCE AND OUTCOMES SERVICE

The role of the Performance and Outcomes Service (POS) is to coordinate the development, collection, collation, analysis, and reporting of the Clinical Indicators (CIs). The ACHS, through the Performance and Outcomes Service has considerable information on over 330 CIs with more than 620 healthcare organisations (HCOs) participating in the ACHS Clinical Indicator Program. Information from the CIs is the largest source of data gathered on the quality of healthcare in Australia and New Zealand.

What is the ACHS Clinical Indicator Program?

The ACHS Clinical Indicator Program is a data repository, analysis and reporting service provided to member HCOs. It provides a national clinical benchmarking service and is comprised of comparative information on the processes and outcomes of health care. Participating HCOs are able to submit CI data for inclusion in an extensive database. Data are aggregated and analysed six-monthly and results are provided in the form of comparative reports. These reports compare results across all contributing HCOs as well as providing a comparison with 'peer' HCOs based on a number of variables.

The POS team also provides individual support to HCOs, via telephone and e-mail. Consultancies can be arranged through the ACHS Improvement Academy and Lead Programs are provided on a range of topics related to performance improvement. The Clinical Indicator Program provides all the necessary products, tools and services required for members to participate. These resources are available via a secure website where members can also submit and download the CI data.

Who can subscribe?

Subscription to the ACHS Clinical Indicator Program is free for ACHS accreditation members. All ACHS members are encouraged to submit indicator data to demonstrate continuous quality improvement.

Non-ACHS accredited organisations may subscribe and a membership fee applies. Fees are based on a calendar year subscription.

WHAT ARE CLINICAL INDICATORS?

A Clinical Indicator (CI) is simply a measure of the clinical management and/or outcome of care.¹ A well-designed indicator should 'screen', 'flag' or 'draw attention' to a specific clinical issue. Usually rate-based, indicators identify the rate of occurrence of an event. CIs do not provide definitive answers; rather they are designed to indicate potential problems that might need addressing, by identifying variations within data results.² They are used to assess, compare and determine the potential to improve care.³ CIs are therefore, tools to assist in assessing whether or not a standard in patient care is being met.

There is growing recognition that a capacity to evaluate and report on quality is a critical building block for system-wide improvement of healthcare delivery and patient outcomes.⁴ HCOs are frequently being requested to provide data on many aspects of their facility to a variety of stakeholders. CI results provide valuable information in assessing the performance of health services. This focus on performance management has emerged through increased competition, a more recent focus on quality improvement and safety and an increased demand for evidence of performance.

The use of CIs is an effective tool for measuring and managing the quality of clinical care providing the relevant clinicians are involved and supported with adequate resources to undertake such clinical audit. The reporting of CIs to the ACHS is not a mandatory component of the accreditation process. However, HCOs are required to demonstrate their achievements through the use of data. To do this, HCOs may either use ACHS CIs or other indicators. HCOs also need to demonstrate at the time of survey, evidence of improving performance through evaluation, supported by data.

The ACHS has been involved in the development of CIs in conjunction with Australian and New Zealand medical colleges, associations and societies since 1989. In this time, the program has seen the development of Hospital-Wide and specific sets of CIs.

Types of Indicators

CIs can be classified according to the aspects of care they address. A comprehensive view of healthcare performance can be built up by investigating information from a variety of sources about different aspects of care.

Indicators will measure either:

- Structure (what is needed)
- Process (what is done)
- Outcome (what is achieved or expected).

¹ Collopy BT. Clinical indicators in accreditation: an effective stimulus to improve patient care. *Int J Qual Health Care* 2000; 12(3): 211-216.

² Campbell S, Braspenning J, Hutchinson A and Marshall M. Research methods used in developing and applying quality indicators in primary care. *Qual Saf Health Care* 2002; 12(3): 358-364.

³ Howley P and Gibberd R. Using hierarchical models to analyse clinical indicators: a comparison of the gamma-Poisson and beta-binomial models *Int J Qual Health Care* 2003; 15(4): 319-329.

⁴ Miller T and Leatherman S. The National Quality Forum: A 'Me-Too' Or A Breakthrough In Quality Measurement And Reporting? *Health Aff (Millwood)* 1999; 18(6): 233-237.

Structure Indicators

Structure indicators provide important information about the organisation's environment (infrastructure, physical layout and resources, human resources and organisational framework) required for the provision of quality health care.

An example of a structure indicator is:

- Number of patients who undergo a procedure with an anaesthetist in attendance where there is a trained assistant to the anaesthetist⁵ (Numerator ANAE CI 2.1)

Process Indicators

Process indicators actually measure what is being done in providing the care. Process indicators provide quantitative data regarding the impact or effectiveness of systems, policies and procedures and can monitor changes over time when measured repeatedly.

An example of a process indicator is:

- Number of patients who have documentation of risks and benefits of the anaesthetic procedure(s) completed by an anaesthetist prior to transfer to the operating suite or procedure room (Numerator ANAE CI 1.1)

Outcome Indicators

Outcome refers to the result of care and outcome indicators provide quantitative data related to the outcomes of health system performance.

An example of an outcome indicator is:

- Number of patients undergoing treatment for postoperative nausea and vomiting in the post-anaesthesia recovery room (Numerator ANAE CI 3.2)

It is often difficult to develop definitive outcome indicators and therefore 'surrogate' outcome indicators may be used.

According to Donabedian⁶, these three areas of care are interlinked, in that sound structures facilitate good processes, which in turn facilitate positive outcomes, the endpoint of care. Donabedian postulated that quality improvement is enabled by receiving feedback about these three aspects of care and responding to that feedback. He called these measures, *indicators of quality*. Indicators of quality are not direct or definitive measures of quality in themselves. Rather as their name suggests they **indicate** areas of care requiring greater scrutiny.

⁵ ACHS Performance and Outcomes Service. *Anaesthesia and Perioperative Care version 6: Clinical Indicator User Manual*. Sydney NSW; Australian Council on Healthcare Standards; 2015.

⁶ Donabedian A. The quality of care. How can it be assessed? *JAMA* 1988; 260(12): 1743-1748.

THE PROCESS OF CLINICAL INDICATOR

DEVELOPMENT AND REVIEW

The Performance and Outcomes Service (POS) has a collaborative framework for developing Clinical Indicators (CIs) which is based on:

- Established working relationships with medical colleges, associations, societies and other relevant clinical organisations
- An established working relationship with a department of clinical epidemiology and biostatistics to ensure the rigour, reliability, validity and relevance of the CIs
- A multidisciplinary approach to indicator development
- Development of a broad range of CIs for use in acute and non-acute settings
- Provision of regular analyses/reports to individual HCOs
- Publication of an annual report of indicator results and trends

New CI sets are developed when there is interest from specialty colleges and organisational demand. A CI set is regularly reviewed to ensure:

- it is relevant for clinicians;
- it remains reflective of today's health care environment;
- there is consensus of collection and reporting requirements and;
- the set remains useful for quality improvement.

For more information about the development process please contact the Performance and Outcomes Service on +61 2 9281 9955.

BENEFITS OF COLLECTING ACHS CLINICAL INDICATORS

The benefits of collecting ACHS Clinical Indicators (CIs) are outlined below:

- Formal clinical audit processes inherent in the Clinical Indicator Program encourage evaluation of care by the relevant clinicians. Clinician involvement is imperative if quality improvements are to be achieved.
- Strategic benchmarking program which provides comparison of results with national and peer group HCOs and is the largest clinical data set of its kind in Australasia.
- The six-monthly comparative reports enable early recognition of areas of potential improvement.
- The evidence addressing the utilisation of CI data and the associated involvement of relevant clinician groups supports HCO participation in the ACHS program and the achievement of appropriate levels in mandatory criteria.

USING ACHS CLINICAL INDICATOR DATA

There are 21 Clinical Indicator (CI) sets and over 330 CIs to choose from in the ACHS Clinical Indicator Program. There is no requirement that an organisation monitor a specific number of CIs. HCOs are required to consider CIs that relate to the health services they provide and are appropriate to their size and type of organisation.

The ability to effect improvements in patient care will depend on the relevance of the CIs being monitored. To identify those CIs which are potentially relevant and appropriate, the following points should be considered:

- Will the information be useful and meaningful to clinicians in demonstrating how the service is performing and ways that it may be improved?
- Will the data be accessible to clinicians to allow for monitoring of the CI?
- Are existing resources sufficient to allow for ongoing monitoring of the CI?

The ability of the ACHS CI data to influence and improve the standards of clinical care is dependent on the relevance of the CIs to current clinical practice (largely determined by the relevant medical college, society or association), and the resources available to support clinicians in assessing the data and considering alterations to either individual or clinical unit practice. Utilisation of CI data occurs at local HCO and national levels.

Local HCO level

Six-monthly comparative reports and the HCO trend reports (currently supplied annually) provide quantitative data identifying variation from total aggregate and peer group rates. The reports highlight results which are statistically significantly 'different' to all other HCOs submitting data for that particular CI and where the results are undesirably lower or higher than the expected rate.

Over 90% of Australian HCOs are accredited, and the majority provide CIs to the ACHS. Utilisation of ACHS CIs is not mandatory within the ACHS accreditation process. However, all HCOs are required to show evidence of monitoring, evaluation and improvement using clinical data. Monitoring relevant CIs within a benchmarking program is one method by which this can be achieved.

Additionally, ACHS surveyors are provided with the latest CI reports prior to survey. Surveyors discuss CI results with HCOs and results are frequently used as a valid source of clinical audit criteria for accreditation purposes.

National Level: The Australasian Clinical Indicator Report

In the Australasian Clinical Indicator Report, the data is assessed from a national perspective providing a statistical analysis of aggregated results for each of the published CIs. The results provide health policy planners with relevant information, particularly results addressing access issues, and professional organisations, such as medical colleges and societies, with information highlighting variation in practice which may assist in improving standards of care.

HOW IS A CLINICAL INDICATOR STRUCTURED?

All Clinical Indicators (CIs) follow a similar structure with an example given below:

INFC AREA 4: Vancomycin resistant enterococci (VRE)

Rationale

According to the Australian Group on Antimicrobial Resistance (AGAR), the prevalence of VRE infection is rising in Australia. These healthcare-associated infections (HAIs) are commonly seen in high-risk areas such as intensive care units, haematology and oncology units and dialysis centres.

(See Background for more information)

Reporting period

1 January – 30 June

1 July – 31 December

Inclusions

- Only vancomycin resistant enterococci (VRE) laboratory confirmed bloodstream infections are to be **INCLUDED**.

Exclusions

- VRE colonisations are to be **EXCLUDED**.

Data cleaning rules

- Nil

Definition of terms

A **healthcare-associated infection (HAI)** is an infection that occurs as a result of a healthcare intervention. Infections identified > 48 hours after the admission and not incubating on admission or ≤ 48 hours after discharge should be reported as HAIs. Infections identified ≤ 48 hours after the admission need further evidence to be confirmed as HAIs. Please refer to the Australian Commission on Safety and Quality in Health Care (ACSQHC)¹ and National Health and Medical Research Council (NHMRC) Australian Guidelines for the Prevention and Control of Infection in Healthcare² for further clarification.

1. Implementation Guide for Surveillance of *Staphylococcus aureus* Bacteraemia. Australian Commission on Safety and Quality in Health Care; 2013.

https://www.safetyandquality.gov.au/wpcontent/uploads/2012/02/SAQ019_Implementation_guide_SAB_v10.pdf

2. Australian Guidelines for the Prevention and Control of Infection in Healthcare, National Health and Medical Research Council; 2010. <https://www.nhmrc.gov.au/printpdf/book/export/html/51607>

For the purpose of CI 4.1:

AIHW's definition at <http://meteor.aihw.gov.au/content/index.phtml/itemId/181162> is used_ for 'bed days' or 'patient days' calculated by counting the total patient days of those patients separated during the specified period, including those admitted before the specified period. Patient days of those patients admitted during the specified period who did not separate until the following reference period are not counted.

For the purpose of CI 4.1:

ICU bed days are defined as the total number of occupied bed days in the intensive care unit (ICU).

Indicator(s) within this Area

CI 4.1: VRE infection within the ICU (L)

Numerator	Number of ICU associated new vancomycin resistant enterococci (VRE) healthcare-associated infections, during the 6-month reporting period.		
Denominator	Number of ICU bed days , during the 6-month reporting period.		
Desirable rate:	High <input type="checkbox"/>	Low <input type="checkbox"/>	Not specified <input type="checkbox"/>
Indicator type:	Structure <input type="checkbox"/>	Process <input type="checkbox"/>	Outcome <input type="checkbox"/>

Background

In 1986, the first noted cases of Vancomycin Resistant Enterococci (VRE) were reported in the United Kingdom and France.¹⁻³ Since then, the incidence of HAIs as a result of VRE has increased sharply and been prevalent in the United States, Australia and other areas of Europe.^{1,2} Considering that vancomycin had been in use for more than 30 years prior to the first reported case of resistance, this came as a shock to the medical and scientific community.² Their belief that resistance to glycopeptides was unlikely to occur dissipated with the wide-spread transmission of VRE in the United States and European hospitals over the subsequent decades.²

According to the Australian Group on Antimicrobial Resistance (AGAR), the prevalence of VRE infection is rising in Australia, but not at the same rate as seen internationally.¹ It is believed that this could be partly due to the effective management of colonised patients prior to the transmission of this infection.¹ The most common forms of VRE isolates causing HAIs that result in hospital-associated morbidity and mortality are *Enterococcus faecium* and *Enterococcus faecalis*.³ These HAIs are commonly seen in high-risk areas such as:

- Intensive Care Units
- Haematology and Oncology Units
- Dialysis Centres.^{1,4,5}

“The emergence of resistance to various antimicrobial agents, specifically to vancomycin, has become a major clinical and epidemiological threat”.⁶ This resistance usually occurs with the heavy use of glycopeptides and broad spectrum antibiotics in the aforementioned high-risk areas.^{5,6} The treatment options for enterococcal sepsis are limited due to the emergence of vancomycin resistance.⁵ The most clinically relevant resistant phenotypes are:

- *vanA* – acquired high-level resistance to vancomycin and teicoplanin
- *vanB* – acquired moderate level resistance to vancomycin and *in vitro* susceptibility to teicoplanin.^{1,5,7,8}

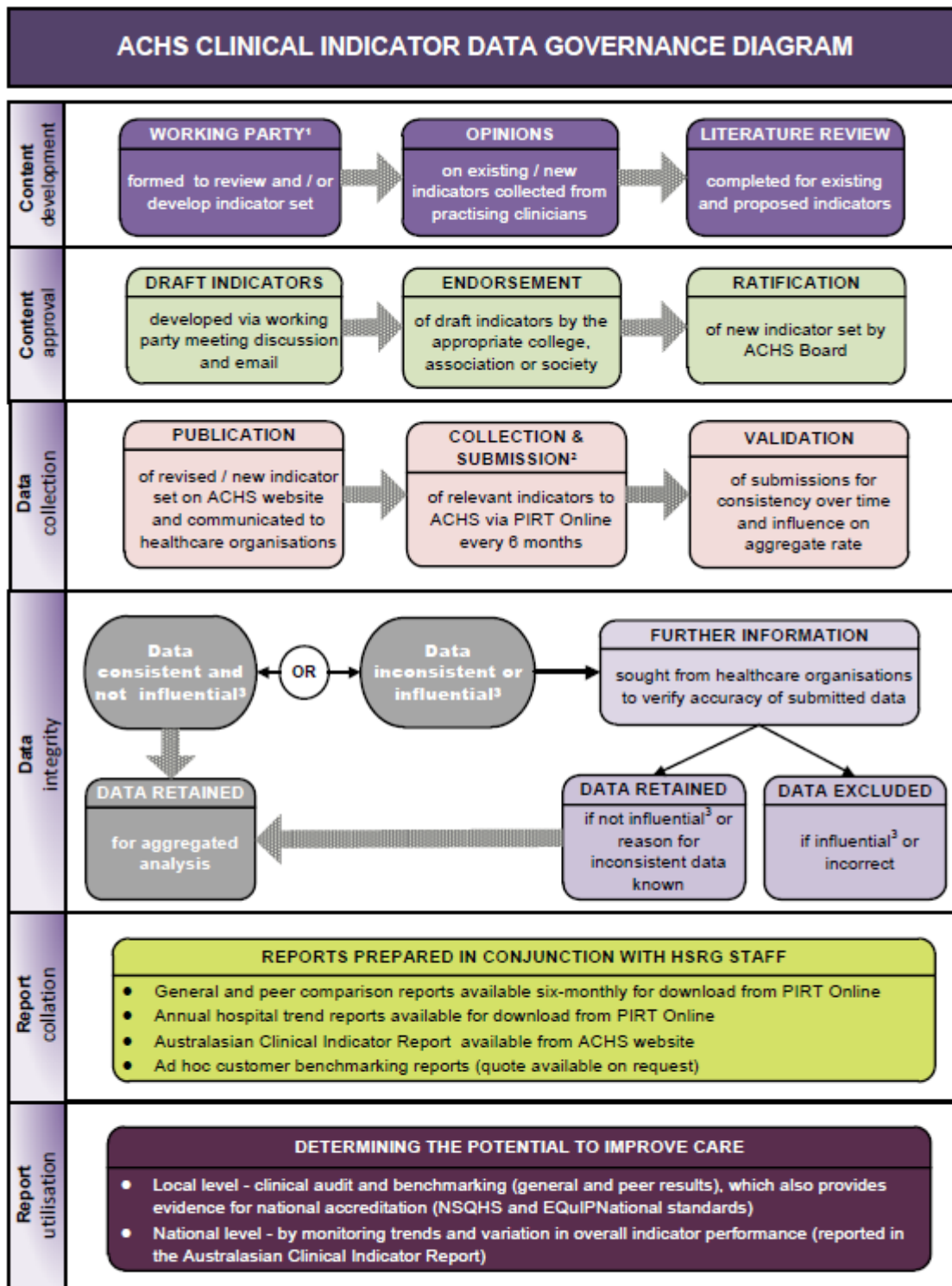
In order to reduce the transmission of this infection in hospitals, it is recommended that screening for VRE occur in an outbreak situation, which is in line with the HCO's guideline. Once the laboratory has confirmed the presence of VRE infection, it is imperative that the key personnel be notified to initiate the appropriate contact precautions.⁵ The process to prevent the transmission of infection for those admitted and transferred between wards should involve:

- Medical practitioner(s) responsible for the care of the patient
- Nurse in charge of the ward or unit
- Infection control personnel
- Other personnel specified in the healthcare organizations VRE policy.⁵

References

1. Australian Commission on Safety and Quality in Health Care (ACSQHC). Reducing harm to patients from health care associated infection: the role of surveillance. Sydney NSW: ACSQHC; 2008.
2. Cattoir V, Leclercq R. Twenty-five years of shared life with vancomycin-resistant enterococci: is it time to divorce? *J Antimicrob Chemother.* 2013;68(4):731-42.
3. Lu C-L, Chuang Y-C, Chang H-C, Chen Y-C, Wang J-T, Chang S-C. Microbiological and clinical characteristics of vancomycin-resistant *Enterococcus faecium* bacteraemia in Taiwan: implication of sequence type for prognosis. *J Antimicrob Chemother.* 2012;67(9):2243-9.
4. Queensland Health. Screening and Clearance of Multi-resistant Organisms (MRO) June 2012 10th December, 2013. Available from: http://www.health.qld.gov.au/chrisp/policy_framework/guideline_4_MRO.pdf.
5. South Australia Health. Guidelines for the Management of Patients with Vancomycin-resistant *Enterococcus* (VRE) Colonisation/Infection. Management of Multi-Resistant Organisms [Internet]. August 2012 12th December, 2013. Available from: <http://www.health.sa.gov.au/INFECTIONCONTROL/Default.aspx?tabid=115>.
6. Hayakawa K, Marchaim D, Martin E, Tiwari N, Yousuf A, Sunkara B, et al. Comparison of the clinical characteristics and outcomes associated with vancomycin-resistant *Enterococcus faecalis* and vancomycin-resistant *E. faecium* bacteremia. *Antimicrob Agents Chemother.* 2012;56(5):2452-8.
7. Centre for Healthcare Related Infection Surveillance and Prevention. Protocol for the management of patients with vancomycin resistant *Enterococcus* (VRE) April 2013 10th December, 2013. Available from: <http://www.health.qld.gov.au/directives/docs/ptl/gh-hsdptl-029-2.pdf>.
8. Healthcare Infection Surveillance Western Australia (2012). HISWA Surveillance Manual. Perth WA: HISWA.

CLINICAL INDICATOR DATA GOVERNANCE DIAGRAM



- 1 Nominated representatives from relevant key health bodies (medical and health professional colleges, associations, and societies), consumer organisations, Health Services Research Group, and ACHS staff
- 2 First 12 months of a revised / new indicator set is considered a field study and monitored closely
- 3 Statistically influences aggregated data

ACHS CLINICAL INDICATOR REPORTS

Data collection periods

There are two reporting periods each year:

- January to June - HCOs must submit their data to the ACHS by **20 August**
- July to December - HCOs must submit their data to the ACHS by **20 February**

The collection, analysis and reporting system

Program members are supplied with comprehensive information on how to collect the data which is supplied in the Clinical Indicator (CI) User Manual. Further support is provided by Performance and Outcome Service (POS) team members via phone and email. In terms of collecting the data, the ACHS is not prescriptive about how HCOs collect the data, for example some indicators are collected via manual audit of medical records while others can be generated from internal computer systems, for example, adverse event or risk management systems. HCOs should however ensure they collect the information in strict accordance with the definitions in the User Manual. This ensures that data submitted to ACHS' National Aggregate Indicator Database (NAID) is consistent.

HCOs are required to submit their data to the ACHS using the Performance Indicator Reporting Tool (PIRT). This tool, known as PIRT Online, is accessible via a secure internet site.

Reports to individual healthcare organisations

Six-monthly comparative reports

The comparative reports are provided on a six-monthly basis and are designed with simplicity and ease of use in mind. Compare your facility's performance against all others submitting data for a CI and against similar (peer group) facilities.

Each report provides information to identify statistically significant differences between the individual organisation, all HCOs and peer groups. Outlier data is easily flagged for follow up and to facilitate communication of results to relevant clinicians and management.

The reports also identify potential gains to be made if a HCO's rate was improved to that of the average and provides information on peer and Australian / New Zealand participation.

Reports are available to members approximately six to seven weeks after the end of the data submission period. A Sample Report is provided in Appendix 1.

HCO trend report

Since 2005, ACHS has also provided members with a HCO Trend Report of their CI data submitted over the last eight years. The HCO Trend Report displays results in both a graphical and numerical format allowing for easy examination of how your organisation is performing against others in the industry. The trended data have more power to identify areas where an organisation's rate differs from the national rate, and hence areas of ongoing concern may be recognised. The HCO Trend Report can help organisations to prioritise areas for improvement and is an important addition to the six-monthly reports that members receive.

Published reports

The ACHS publication, the *Australasian Clinical Indicator Report (ACIR)*, is published annually and reports aggregated results on all CIs at a national level.

The publication identifies:

- The aggregate rates.
- The 20th and 80th centiles – the rates at which the top 20% of organisations are already performing and regarded as the goals to achieve depending on whether the desired rate is low or high.
- The national gains – defined as the number of patients / consumers whose quality of healthcare could potentially be improved if the mean was improved to that of the 20th or 80th centile.
- The trends in incidence since establishment of the national data set.
- Significant variation of rates of performance.
- The number of outlier HCOs and the number of patients affected by this and whose care could be improved if these HCOs altered their practices to those of the majority.
- Rate differences between various strata - public and private, metropolitan, non-metropolitan and states.

Custom benchmarking reports

The POS team is also able to provide corporate groups with custom benchmarking reports which allow comparison of CI rates within a specific group of HCOs, for example, an Area Health Service or a private hospital group. These reports are typically supplied in excel format allowing members to do further analysis if required.

Reports to the relevant College, Association or Society

To assist in the development and review of CIs, reports are developed for the CI Working Parties. The reports describe any statistically significant differences between strata such as, public / private sector HCOs, non-metropolitan / metropolitan and states. Each College / Society / Association is also invited to comment on the results and remark on any variations in practice. College comments are published each year in the *Australasian Clinical Indicator Report*.

Interpreting the Clinical Indicator reports

HCOs need to review the results of the comparative reports to see if there is any statistical difference between their rate and the Australian / New Zealand general or peer comparison rate. When differences are identified HCOs need to question why there is a difference. The ACHS CIs are not case or risk adjusted however the peer group stratifications are regularly reviewed to ensure similar HCOs are being compared. By reviewing results with risk management in mind, HCOs can prioritise areas for quality improvement.

The Observed minus expected (O-E) calculation (“the excess”)

The O-E (*excess events*) identifies the difference that could be made if an organisation was able to move their rate to the aggregate rate. If the excess is large, then further investigation into the possible causes may be required.

HCOs can prioritise those results that require attention by reviewing indicators which have a:

- large excess and the 99% confidence interval does not include the aggregated rate (**high priority**);
- large excess but the 99% confidence interval includes the aggregated rate;
- small excess and the 99% confidence interval does not include the aggregated rate;
- small excess but the 99% confidence interval includes the aggregated rate (**low priority**).

It is important to remember that variations in the data collected can be found in almost every CI. There will almost always be a range of performance identified. There are many reasons for these variations. It is not always possible to identify the reasons for the variation. If variation is found however, it is essential that healthcare providers thoroughly examine the cause and implement action for improvement if required.

CIs flagged as significantly different should be investigated at the organisational level to determine the reason for this difference.

To investigate results and implement change an organisation should follow a quality improvement process such as the Plan, Do, Check, Act cycle or Clinical Practice Improvement Method. Further information on these quality improvement processes can be found in *The Risk Management and Quality Improvement Handbook* available on the ACHS website www.achs.org.au

In combination with other quality improvement strategies, CIs can allow for successful probing of potential and actual problems. Other data sources that can be used in combination with the CIs may include:

- adverse events and/or complication data;
- incident reports;
- consumer complaint data;
- staff / patient satisfaction data.

WHAT AREAS DO THE CURRENT CLINICAL INDICATOR SETS COVER?

Currently the ACHS has 20 Clinical Indicator sets. Below is a listing of the current indicator sets and the areas which they cover.

Anaesthesia & Perioperative Care version 6

Pre-anaesthesia period
Intraoperative period
Patient recovery period
Postoperative period
Management of acute pain
Obstetric anaesthesia care

Cancer Care version 1

Access
Assessment
Treatment
Outcomes
Follow-up
Support Services

Day Patient version 6

Preadmission preparation
Procedure non-attendance
Procedure cancellation
Episode of care adverse events
Unplanned return to the operating room
Unplanned transfer / admission
Discharge
Departure
Post-discharge follow-up

Emergency Medicine version 6

Waiting time
ST-segment elevated myocardial infarction (STEMI) management
Emergency department mental health presentations
Critical care
Sepsis management
Discharge communication
Pain management
Unplanned re-attendance

Gastrointestinal Endoscopy version 3

Failure to reach caecum / neo-terminal ileum
Colonoscopy adverse outcomes
Adenoma detection
Oesophageal perforation after dilatation
Aspiration following GI endoscopy
Sedation in GI endoscopy

Gynaecology version 7

Blood transfusion
Injury to a major viscus
Laparoscopic management of an ectopic pregnancy
Thromboprophylaxis for major gynaecological surgery
Mesh repair
Menorrhagia

Hospital in the Home version 5

Patient safety, selection, communication and care co-ordination
Service interruption
Unexpected deaths

Hospital-Wide version 12.1

Hospital readmissions
Return to operating room
Pressure injuries
Inpatient falls
Patient deaths
Blood transfusion
Thromboprophylaxis
Minimum standards for rapid response system (RRS) calls
Surgery

Intensive Care version 5

Access and exit block
Intensive care patient management
Intensive care patient treatment
Central line-associated bloodstream infection
Utilisation of patient assessment systems
Empathetic practice

Maternity version 8

Outcome of selected primipara
Vaginal birth after caesarean section (VBAC)
Major perineal tears & surgical repair of the perineum
General anaesthesia for caesarean section
Antibiotic prophylaxis and caesarean section
Exclusive breastfeeding
Postpartum haemorrhage and blood transfusions
Foetal growth restriction (FGR)
Apgar score
All admission of term neonate to a neonatal intensive care nursery (NICN) or special care nursery (SCN)
Specific maternal peripartum adverse events

Infection Control version 5

Infection surveillance
Surgical antibiotic prophylaxis (SAP)
Haemodialysis access-associated bloodstream infection surveillance
Vancomycin resistant enterococci
Staff immunisation
Occupational exposures to blood and / or body fluids

Mental Health version 7

Diagnosis and care planning
Physical examination of patients
Prescribing patterns
Electroconvulsive therapy
Use of seclusion and restraint
Major critical incidents
Length of stay
Mental Health Act status
Continuity of care
Community care

Oral Health version 4

Returns to the dental centre
Endodontic treatment
Children's dental care
Radiographs

Paediatrics version 5.1

Appropriateness
Adverse events
Documentation
Paediatric anaesthesia

Radiation Oncology version 5

Consultation process
Treatment planning
Treatment delivery

Rehabilitation Medicine version 6

Timely assessment of function on admission
Assessment of function prior to episode end
Timely establishment of an initial multidisciplinary rehabilitation plan
Multidisciplinary discharge documentation
Functional gain achieved by rehabilitation program
Discharge destination

Pathology version 4.1

Chemical pathology
Haematology
Anatomical pathology
Microbiology
Whole of service

Radiology version 6

Adverse patient events
CT dosimetry
Patient identification and consent
Critical test result notification

APPENDIX 1: SAMPLE COMPARATIVE REPORT

ACHS Clinical Indicator Program

USER GUIDE –

Interpreting the ACHS Comparative Reports

INTRODUCTION

The ACHS Performance and Outcomes Service (POS) team provides the ability for members to produce comparative reports from a secure, online reporting tool - The *Performance Indicator Reporting Tool* (PIRT). The reports contain an organisation's rate, its 99% confidence interval, the expected number of events and the number of excess events. These measures are presented to assist HCOs assess to what extent their rate varies compared to other organisations submitting data. It will provide evidence for HCOs to either determine areas for improvement or reinforce the existing level of performance.

HCOs can produce two reports for each set of Clinical Indicators (CIs) submitted: a General Comparison Report and a Peer Group Comparison Report. The General Comparison Report compares all organisations that have submitted data for a particular set of CIs whereas a Peer Group Comparison Report compares an organisation with similar (peer group) organisations. Similar organisations are determined on the information that is provided to the ACHS in the PIRT program. For example, the Intensive Care CI set requires selection of one of the following classifications:

- Adult ICU - Level III
- Adult ICU - Level II
- Adult ICU - Level I
- Paediatric ICU

A sample 'Peer Comparison – Day Patient Clinical Indicators Version 6' report accompanies this guide to enable you to interpret the reports.

Export Data to Excel

PIRT Online also allows members to export their data in an excel format to facilitate further analysis if required.

Should you require further assistance in interpreting the reports, or in how to use the data results for quality improvement activities please contact the POS team on 02 9281 9955 or e-mail pos@achs.org.au

How to read the six-monthly Comparative Reports

#	Field	Explanation
1	Day Patient version 6	This is the Clinical Indicator (CI) set that has been submitted. The same information will be found in the General Comparison report.
2	ACHS Organisation Code	This is a unique identifier code that the ACHS designates to organisations for confidentiality reasons. The organisation code is a 5 or 6 digit number.
3	First / Second half 2019	This identifies the reporting period.
4	Category	This identifies the type of organisations submitting data for a particular CI set.
5	Total number of organisations submitting data for First / Second half 2019	This identifies the total number of organisations submitting data for a particular CI set and reporting period.
6	CI No.	The CI number obtained from the relevant version of the <i>ACHS CI User Manual</i> . This identifies which CI has been selected for submission.
7	Description	A summary description of the CI that an organisation has reported.
8	Your Numerator	The number of events / cases with a given outcome or process reported by the organisation.
9	Your Denominator	The total number of cases at risk of the outcome or process within the organisation or the total population of interest.
10	Your Rate	The rate is calculated by dividing the numerator by the denominator and multiplying this by 100 to create a percentage. <i>Example: Sample Report CI 3.1</i> $1 / 2125 \times 100 = 0.047\%$
11	99% Confidence Interval for Your Rate	The confidence interval provides an interval estimate of your rate and indicates the uncertainty in the rate caused by random variation. Confidence intervals have an upper and lower limit, which provide the plausible values for the rate. <i>Example: Sample Report CI 3.1</i> The lower limit is 0.00 and the upper limit is 0.168. The interval 0.00 – 0.168 has a 99% chance of containing the true rate for your organisation.

		<p>The range of the limits will vary according to the size of the sample, that is, the number of events / cases identified. A larger sample will have a smaller confidence interval than a rate for smaller samples.</p> <p>When reading the comparative reports, look at the aggregate rate for all organisations and see whether it falls inside or outside the 99% confidence interval limit.</p> <p>If the aggregate rate falls outside the 99% confidence interval limit, the organisation is said to be statistically significantly different to all other organisations submitting data for that particular CI.</p> <p>If the aggregate rate falls within the 99% confidence interval limit, an organisation can interpret this as indicating that their rate is not statistically significantly different to the overall rate, but note that this does not imply that their rate is the same as the overall rate.</p> <p>The difference between rates may identify areas for improvement or validate a level of service that is achieving a rate that is statistically more desirable than the average rate.</p>
12	Your expected number of events	<p>The expected number of events is calculated by assuming that the average rate of all other organisations who have submitted data was your rate.</p> <p>The expected number of events is calculated by multiplying the denominator by the aggregate rate for all organisations and then dividing this by 100.</p> <p><i>Example: Sample Report CI 3.1</i></p> <p>$2125 \times 0.327 / 100 = 7$ expected number of events</p>
13	Number of organisations submitting data	<p>The total number of organisations submitting data for a particular CI. In the Peer Comparison report this is subdivided into public and private sector organisations.</p>
15	Aggregate rate for all organisations	<p>The aggregate rate for all organisations is the average rate of all organisations submitting data for a particular CI.</p>
16	Outlier	<p>Flag indicates where an organisation is statistically significantly 'different' to all other organisations submitting data for that particular indicator and where the result is undesirably lower or higher than the expected rate.</p> <p>Star indicates the organisation is statistically significantly 'different' to all other organisations submitting data for that particular indicator and where the result is desirably lower or higher than the expected rate.</p>

<p>11, 13 & 15</p>		<p>When looking at an organisation’s rate, in comparison to the aggregate rate for all organisations, it is important to consider the excess events and the 99% confidence interval in order to obtain a complete picture of an organisation’s performance. The results can be used to prioritise which areas should be reviewed as follows:</p> <ul style="list-style-type: none"> • The excess events are large and the 99% confidence interval does not include the aggregate rate (<i>high priority</i>) • The excess events are large but the 99% confidence interval includes the aggregate rate • The excess events are small and the 99% confidence interval does not include the aggregate rate • The excess events are small and the 99% confidence interval includes the aggregate rate (<i>low priority</i>)
<p>16</p>	<p>Graph</p>	<p>The Confidence interval, your rate and aggregate rate are presented for the indicator in a graph.</p>

Sample Report

(1)  Day Patient version 6


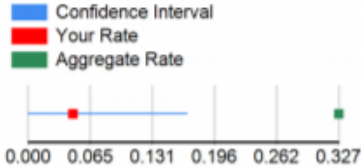



(2) ACHS organisation code: 123456

(3) First Half 2019

Australasia

(4) Public Facility

(5) Total number of organisations for the selected category submitting data for this set for First Half 2017: 3

CI NO (6)	Indicator Number/Description (7)	Your Numerator (8)	Your Denominator (9)	Your Rate (10)	99% Confidence Interval for Your Rate (11)	Your Expected Number of Events (12)	Number of Orgs Submitting Data 1H2017 (13)	Aggregate Rate for These Organisations 1H2017 (14)	Outlier (15)	Graph (16)
3.1	Cancellation of the procedure after arrival due to pre-existing medical condition (L)	1	2125	0.047%	(0.000-0.168)	7	2	0.327%		
5.1	Unplanned return to operating room on same day as initial procedure (L)	2	2034	0.098%	(0.000-0.277)		1			
6.1	Unplanned transfer or overnight admission related to procedure (L)	34	2034	1.672%	(0.941-2.402)	10	2	0.503%		

(L) – a low rate is desirable, (H) – a high rate is desirable, (N) – desirable rate is unspecified
 % - per 100, * - per 1,000, ^ - per 10,000, X̄ - mean, M - median



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