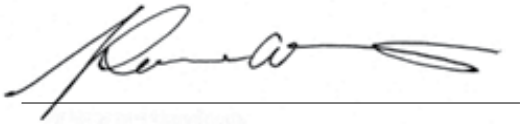
Key performance indicators

Certification of key performance indicators

Child and Adolescent Health Service

Certification of key performance indicators for the year ended 30 June 2023

We hereby certify that the key performance indicators are based on proper records, are relevant and appropriate for assisting users to assess the Child and Adolescent Health Service's performance, and fairly represent the performance of the Child and Adolescent Health Service for the reporting period ended 30 June 2023.



Dr Rosanna Capolingua AM
Board Chair
Child and Adolescent Health Service
7 September 2023

Dr Shane Kelly
Deputy Board Chair
Child and Adolescent Health Service
7 September 2023

OAG AUDITED

Effectiveness KPI – Outcome 1

Unplanned hospital readmissions for patients within 28 days for selected surgical procedures

Rationale

Unplanned hospital readmissions may reflect less than optimal patient management and ineffective care predischarge, post-discharge and/or during the transition between acute and community-based care.[1] These readmissions necessitate patients spending additional periods of time in hospital as well as utilising additional hospital resources.

Readmission reduction is a common focus of health systems worldwide as they seek to improve the quality and efficiency of healthcare delivery, in the face of rising healthcare costs and increasing prevalence of chronic disease.[2]

Readmission rate is considered a global performance measure, as it potentially points to deficiencies in the functioning of the overall healthcare system. Along with providing appropriate interventions, good discharge planning can help decrease the likelihood of unplanned hospital readmissions by providing patients with the care instructions they need after a hospital stay and helping patients recognise symptoms that may require medical attention.

The surgeries selected for this indicator are based on those in the current National Healthcare Agreement Unplanned Readmission performance indicator (NHA PI 23).

Target

The 2022 targets are based on the total child and adult population, and for each procedure are:

Surgical Procedure	Target (per 1,000)
Tonsillectomy & Adenoidectomy	≤ 85.0
Appendicectomy	≤ 25.7

Result

Tonsillectomy & Adenoidectomy

2020	2021	2022	Target
65.5	49.1	50.6	≤ 85.0

The rate of unplanned readmission for tonsillectomy and adenoidectomy was 50.6 per 1,000, which is below the target of 85.0 per 1,000. CAHS has protocols in place to provide education for parents in the post operative period. A check-in phone call is completed four days after surgery to assist with post operative pain management. CAHS has also reviewed post operative information provided to families to ensure information is available in various languages to assist culturally and linguistically diverse families in managing care in the post operative period.

Appendicectomy

2020	2021	2022	Target
16.5	11.0	15.0	≤ 25.7

The rate of unplanned readmissions for appendicectomy was 15.0 per 1,000, which is below the target of 25.7 per 1,000. Contributing to this result is CAHS' continued focus on timely access to theatre for appendicectomy to reduce the likelihood of complications and reduce length of hospital stay.

Reporting period: Calendar year, to account for lags in reporting due to time difference between index episode discharge date and clinical coding completion of readmission episode.

Data source: Hospital Morbidity Data Collection.

[1] Australian Institute of Health and Welfare (2009). Towards national indicators of safety and quality in health care. Cat. no. HSE 75. Canberra: AIHW. Available at: www.aihw.gov.au/reports/health-care-quality-performance/towards-national-indicators-of-safety-and-quality/summary.

[2] Australian Commission on Safety and Quality in Health Care. Avoidable Hospital Readmissions: Report on Australian and International indicators, their use and the efficacy of interventions to reduce readmissions. Sydney: ACSQHC; 2019. Available at: www.safetyandquality.gov.au/publications-and-resources/resource-library/avoidable-hospital-readmission-literature-review-australian-and-international-indicators.

Effectiveness KPI – Outcome 1

Percentage of elective wait list patients waiting over boundary for reportable procedures

Rationale

Elective surgery refers to planned surgery that can be booked in advance following specialist assessment that results in placement on an elective surgery waiting list.

Elective surgical services delivered in the WA health system are those deemed to be clinically necessary. Excessive waiting times for these services can lead to deterioration of the patient's condition and/or quality of life, or even death.[3] Waiting lists must be actively managed by hospitals to ensure fair and equitable access to limited services, and that all patients are treated within clinically appropriate timeframes.

Patients are prioritised based on their assigned clinical urgency category:

Category 1 – procedures that are clinically indicated within 30 days

Category 2 – procedures that are clinically indicated within 90 days

Category 3 – procedures that are clinically indicated within 365 days.

On 1 April 2016, the WA health system introduced a new statewide performance target for the provision of elective services. For reportable procedures, the target requires that no patients (zero per cent) on the elective waiting lists wait longer than the clinically recommended time for their procedure, according to their urgency category.

Target

The 2022–23 target is zero per cent for each urgency category. Performance is demonstrated by a result that is equal to the target.

Result

	2020	2021	2022	Target
Category 1	1.7%	4.7%	9.9%	0%
Category 2	29.2%	28.1%	28.7%	0%
Category 3	21.5%	26.8%	39.6%	0%

An average of 9.9 per cent of Category 1 patients were not treated within 30 days, 28.7 per cent of Category 2 patients were not treated within 90 days, and 39.6 per cent of Category 3 patients were not treated within 365 days.

CAHS is dedicated to ongoing improvement in service delivery and clinical management to ensure patients with the most critical clinical need are prioritised and treated as soon as possible. CAHS continually strives to improve access to elective surgery for patients.

The restrictions placed on elective surgery during the COVID-19 pandemic have had a significant impact on demand on the elective surgery wait list. There has been an enduring impact as we live with COVID-19.

CAHS has implemented a number of initiatives to manage the elective surgery waitlist including the:

- Commencement of four additional operating theatre sessions in 2022–23
- Commencement of commissioning and fit-out of an additional operating theatre due for completion in 2024
- Partnering with the Western Australian Country Health Service (WACHS) to deliver dental surgery in Busselton
- Continuing weekly surgical capacity planning meetings to ensure all elective theatre sessions are booked to maximum capacity.

Note: The result is based on an average of weekly census data for the financial year.

Reporting period: Financial year.

Data source: Elective Services Wait List Data Collection.

[3] Derrett, S., Paul, C., Morris, J.M. (1999). Waiting for Elective Surgery: Effects on Health-Related Quality of Life, International Journal of Quality in Health Care, Vol 11 No. 1, 47-57.

Effectiveness KPI – Outcome 1

Healthcare-associated *Staphylococcus aureus* bloodstream infections (HA-SABSI) per 10,000 occupied bed-days

Rationale

Staphylococcus aureus bloodstream infection is a serious infection that may be associated with the provision of health care. *Staphylococcus aureus* is a highly pathogenic organism and even with advanced medical care, infection is associated with prolonged hospital stays, increased healthcare costs and a marked increase in morbidity and mortality (SABSI mortality rates are estimated at 20–25 per cent).[4]

HA-SABSI is generally considered to be a preventable adverse event associated with the provision of health care. Therefore, this KPI is a robust measure of the safety and quality of care provided by WA public hospitals.

A low or decreasing HA-SABSI rate is desirable and the WA target reflects the nationally agreed benchmark.

Target

The 2022 target is ≤1.0 infections per 10,000 occupied bed-days.

Result

2020	2021	2022	Target
0.48	0.88	0.92	≤ 1.0

CAHS maintained its *S. aureus* bloodstream infection rate in 2022 at 0.92 per 10,000 occupied bed-days, which is below the WA health system target of 1.0 per 10,000 bed-days. The favourable result is due to a number of initiatives that CAHS has in place to prevent *S. aureus* infection, particularly *S. aureus* decolonisation of all children where a new central venous access device (CVAD) is inserted, a strong focus on hand hygiene and aseptic technique compliance, and the dedicated CVAD insertion and management service.

Reporting period: Calendar year, to account for lag in reporting in clinical coding completion.

Data source: Healthcare Infection Surveillance Western Australia Data Collection.

[4] van Hal, S. J., Jensen, S. O., Vaska, V. L., Espedido, B. A., Paterson, D. L., & Gosbell, I. B. (2012). Predictors of mortality in Staphylococcus aureus Bacteremia. Clinical microbiology reviews, 25(2), 362–386. doi:10.1128/CMR.05022-11.

Effectiveness KPI – Outcome 1

Percentage of admitted patients who discharged against medical advice: a) Aboriginal patients; and b) Non-Aboriginal patients

Rationale

Discharge against medical advice (DAMA) refers to patients leaving hospital against the advice of their treating medical team or without advising hospital staff (e.g. absconding or missing and not found). Patients who do so have a higher risk of readmission and mortality[5] and have been found to cost the health system 50 per cent more than patients who are discharged by their physician.[6]

Between July 2015 and June 2017 Aboriginal patients (3.4 per cent) in WA were over 11 times more likely than non-Aboriginal patients (0.3 per cent) to discharge against medical advice, compared with 6.2 times nationally (3.1 per cent and 0.5 per cent respectively).[7] This statistic indicates a need for improved responses by the health system to the needs of Aboriginal patients.

This indicator provides a measure of the safety and quality of inpatient care. Reporting the results by Aboriginal status measures the effectiveness of initiatives within the WA health system to deliver culturally secure services to Aboriginal people. While the aim is to achieve equitable treatment outcomes, the targets reflect the need for a long-term approach to progressively closing the gap between Aboriginal and non-Aboriginal patient cohorts.

Discharge against medical advice performance measure is also one of the key contextual indicators of Outcome 1 "Aboriginal and Torres Strait Islander people enjoy long and healthy lives" under the new National Agreement on Closing the Gap, which was agreed to by the Coalition of Aboriginal and Torres Strait Islander Peak Organisations, and all Australian Governments in July 2020.

Target

The 2022 targets are based on the total child and adult population:

	Target
Aboriginal patients	≤ 2.78%
Non-Aboriginal patients	≤ 0.99%

Result

	2020	2021	2022	Target
Aboriginal patients	0.14%	0.33%	0.25%	≤ 2.78%
Non-Aboriginal patients	0.06%	0.04%	0.05%	≤ 0.99%

In 2022, CAHS recorded a DAMA rate of 0.25 per cent for Aboriginal patients, which is below the target of 2.78 per cent. For non-Aboriginal patients, the rate was 0.05 per cent, which is also well below the target of 0.99 per cent. Contributing to the continued favourable result, comparative to target, for Aboriginal patients is the Koorliny Moort (Walking with Families) program, which engages with Aboriginal people through the patient's journey. While these results demonstrate that CAHS continues to meet its targets for DAMA, CAHS continues to work towards reducing these rates even further.

Reporting period: Calendar year, to account for lag in reporting due to clinical coding completion.

Data source: Hospital Morbidity Data Collection.

[5] Yong et al. Characteristics and outcomes of discharges against medical advice among hospitalised patients. Internal medicine journal 2013:43(7):798-802.

[6] Aliyu ZY. Discharge against medical advice: sociodemographic, clinical and financial perspectives. International journal of clinical practice 2002;56(5):325-27.

[7] Australian Institute of Health and Welfare 2020. Aboriginal and Torres Strait Islander Health Performance Framework 2020 summary report. Cat. no. IHPF 2. Canberra: AIHW. Available at: www.indigenoushpf.gov.au/measures/3-09-discharge-against-medical-advice.

Effectiveness KPI – Outcome 1

Readmissions to acute specialised mental health inpatient services within 28 days of discharge

Rationale

Readmission rate is considered to be a global performance measure as it potentially points to deficiencies in the functioning of the overall mental healthcare system.

While multiple hospital admissions over a lifetime may be necessary for someone with ongoing illness, a high proportion of readmissions shortly after discharge may indicate that inpatient treatment was either incomplete or ineffective, or that follow-up care was not adequate to maintain the patient's recovery out of hospital.[8]

These readmissions mean that patients spend additional time in hospital and utilise additional resources. A low readmission rate suggests that good clinical practice is in operation. Readmissions are attributed to the facility at which the initial separation (discharge) occurred rather than the facility to which the patient was readmitted.

By monitoring this indicator, key areas for improvement can be identified. This can facilitate the development and delivery of targeted care pathways and interventions aimed at improving the mental health and quality of life of Western Australians.

Target

The 2022 target is ≤12 per cent.

Result

2020	2021	2022	Target
23.3%	13.6%	24.9%	≤ 12.0%

The rate of total hospital readmissions for 2022 is above the target of 12 per cent. It should be noted that this indicator does not distinguish between planned and unplanned readmissions. CAHS provides clinically appropriate planned admissions for young people who would benefit from an additional inpatient stay. While CAHS continues to strive to reduce the number of unplanned readmissions through care provided in community mental health services, CAHS will always prioritise the safety of young people and their families through admission to an inpatient mental health service when required.

Reporting period: Calendar year, to account for lag in reporting due to time difference between index episode discharge date and clinical coding completion of readmission episode.

Data source: Hospital Morbidity Data Collection (Inpatient Separations).

[8] Australian Health Ministers Advisory Council Mental Health Standing Committee (2011). Fourth National Mental Health Plan Measurement Strategy. Available at: www.aihw.gov.au/getmedia/d8e52c84-a53f-4eef-a7e6-f81a5af94764/fourth-national-mental-health-plan-measurement-strategy-2011.pdf.aspx.

Effectiveness KPI – Outcome 1

Percentage of post-discharge community care within seven days following discharge from acute specialised mental health inpatient services

Rationale

In 2017–18, one in five (4.8 million) Australians reported having a mental or behavioural condition.[9] Therefore, it is crucial to ensure effective and appropriate care is provided not only in a hospital setting but also in the community.

Discharge from hospital is a critical transition point in the delivery of mental health care. People leaving hospital after an admission for an episode of mental illness have increased vulnerability and, without adequate follow up, may relapse or be readmitted.

The standard underlying this measure is that continuity of care requires prompt community follow-up in the period following discharge from hospital. A responsive community support system for persons who have experienced a psychiatric episode requiring hospitalisation is essential to maintain their clinical and functional stability and to minimise the need for hospital readmissions. Patients leaving hospital after a psychiatric admission with a formal discharge plan that includes links with public community-based services and support are less likely to need avoidable hospital readmissions.

Target

The 2022 target is ≤75 per cent.

Result

2020	2021	2022	Target
94.1%	87.2%	78.8%	≤ 75%

In 2022, 78.8 per cent of young people who were admitted to CAHS acute specialised mental health inpatient services were contacted by a community-based mental health service within seven days of discharge, which is above the target of 75 per cent. CAHS is committed to supporting safe transitions of care from hospital to the community for our young people and will consider strategies to address the declining trend.

Reporting period: Calendar year, to account for reporting delays caused by time difference between episode discharge date and clinical coding completion of non-admitted post-discharge episode.

Data source: Mental Health Information Data Collection, Hospital Morbidity Data Collection (Inpatient separations).

[9] National Health Survey: First results, 2017-18 financial year | Australian Bureau of Statistics (abs.gov.au).

Efficiency KPI – Outcome 1
Service 1: Public hospital admitted services

Average admitted cost per weighted activity unit

Rationale

This indicator is a measure of the cost per weighted activity unit compared with the State target, as approved by the Department of Treasury and published in the 2022–23 Budget Paper No. 2, Volume 1.

The measure ensures a consistent methodology is applied to calculating and reporting the cost of delivering inpatient activity against the state's funding allocation. As admitted services received nearly half of the overall 2022–23 budget allocation, it is important that efficiency of service delivery is accurately monitored and reported.

Target

The 2022–23 target is ≤$7,314 per weighted activity unit.

Result

The average admitted cost per weighted activity unit was $8,007 in 2022–23, which is 9.5 per cent above the target. The target was developed at a whole of WA health system level and the same target applies to all Health Service Providers.

In 2022–23 the cost profile continued to be affected by the outcomes of the COVID-19 pandemic. The combination of the higher cost profile, particularly due to the Government's Enhanced Wages Policy, which also included a one-off Cost-of-Living payment, and the slower-than-normal activity generated, contributed to the indicator being above target. Increases were noted in employment costs to address the continuing pressures in clinical areas including the full year costs of opening additional beds on the wards. In addition, the hospital workforce capacity increased to ensure adequate staffing levels, to maintain safety and quality measures, and cost pressures were also seen within surgical consumables and increases in pharmaceutical supplies.

2020–21	2021–22	2022–23	2022–23
Actual	**Actual**	**Actual**	**Target**
$6,866	$7,816	$8,007	$7,314

Note: Weighted activity units adjust raw activity data to reflect the complexity of services provided to treat various conditions. WA health system hospitals utilise the Australian Refined Diagnosis Related Groups classifications to assign cost weights to each diagnostic group.

Reporting period: Financial year.

Data sources: Health Service financial system, Hospital Morbidity Data Collection.

Efficiency KPI – Outcome 1
Service 2: Public hospital emergency services

Average Emergency Department cost per weighted activity unit

Rationale

This indicator is a measure of the cost per weighted activity unit compared with the State target as approved by the Department of Treasury, which is published in the 2022–23 Budget Paper No. 2, Volume 1.

The measure ensures that a consistent methodology is applied to calculating and reporting the cost of delivering emergency department activity against the state's funding allocation. With the increasing demand on Emergency Departments and health services, it is important that Emergency Department service provision is monitored to ensure the efficient delivery of safe and high-quality care.

Target

The 2022–23 target is ≤$7,074 per weighted activity unit.

Result

The average Emergency Department cost per weighted activity unit was $9,669 in 2022–23, which is 36.7 per cent above the target. The target was developed at a whole of WA health system level and the same target applies to all Health Service Providers.

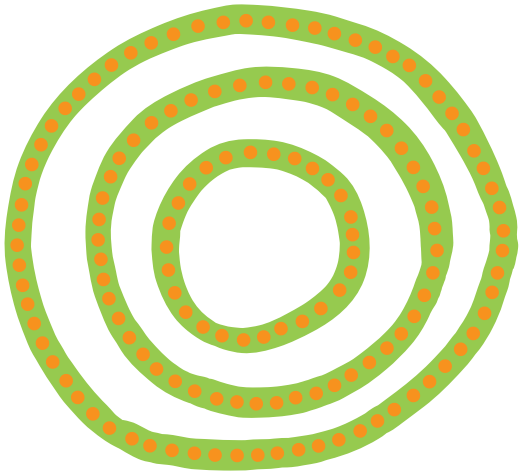
Activity levels in the Emergency Department continued to increase and presentations were higher than the prior year. The higher cost profile which contributed to the indicator being above target is mainly because of the specialist paediatric services, increase in staff costs due to the Government's Enhanced Wages Policy, which also included a one-off Cost of Living payment to all staff, the increase in the Emergency Department's workforce capacity to maintain appropriate safety and quality measures, including Emergency Department reforms.

2020–21	2021–22	2022–23	2022–23
Actual	**Actual**	**Actual**	**Target**
$7,056	$9,200	$9,669	$7,074

Note: Weighted activity units adjust raw activity data to reflect the complexity of services provided to treat various conditions. WA health system hospitals utilise the Australian Refined Diagnosis Related Groups classifications to assign cost weights to each diagnostic group.

Reporting period: Financial year.

Data sources: Health Service financial system, Emergency Department Data Collection.



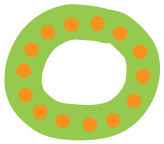
Efficiency KPI – Outcome 1
Service 3: Public hospital non-admitted services

Average non-admitted cost per weighted activity unit

Rationale

This indicator is a measure of the cost per weighted activity unit compared with the State (aggregated) target, as approved by the Department of Treasury, which is published in the 2022–23 Budget Paper No. 2, Volume 1.

The measure ensures that a consistent methodology is applied to calculating and reporting the cost of delivering non-admitted activity against the state's funding allocation. Non-admitted services play a pivotal role within the spectrum of care provided to the WA public. Therefore, it is important that non-admitted service provision is monitored to ensure the efficient delivery of safe and high-quality care.



Target

The 2022–23 target is ≤$6,982 per weighted activity unit.

Result

The average non-admitted cost per weighted activity unit was $8,574 in 2022–23, which is 22.8 per cent above the target. The target was developed at a whole of WA health system level and the same target applies to all Health Service Providers.

In 2022–23, the cost profile continued to be affected by the flow on effect of the COVID-19 pandemic. The combination of the higher cost profile due to the Government's Enhanced Wages Policy, which also included a one-off Cost-of-Living payment to all staff, inflationary cost pressures, and an increase in hospital workforce to ensure adequate staffing levels post-COVID-19 management and response and to maintain safety and quality measures, have contributed to the indicator being above target.

2020–21	2021–22	2022–23	2022–23
Actual	**Actual**	**Actual**	**Target**
$6,318	$7,207	$8,574	$6,982

Note: Weighted activity units adjust raw activity data to reflect the complexity of services provided to treat various conditions. WA health system hospitals utilise the Australian Refined Diagnosis Related Groups classifications to assign cost weights to each diagnostic group.

Reporting period: Financial year.

Data sources: Health Service financial system, non-admitted Patient Activity and Wait List Data Collection.

Efficiency KPI – Outcome 1
Service 4: Mental health services

Average cost per bed-day in specialised mental health inpatient services

Rationale

Specialised mental health inpatient services provide patient care in authorised hospitals. To ensure quality of care and cost-effectiveness, it is important to monitor the unit cost of admitted patient care in specialised mental health inpatient services. The efficient use of hospital resources can help minimise the overall costs of providing mental health care and enable the reallocation of funds to appropriate alternative non-admitted care.

Target

The 2022–23 target is ≤$2,984 per bed-day

Result

The average cost per bed-day in specialised mental health inpatient services increased significantly in 2022–23 to $4,449 which is 49.1 per cent above the target. The decline in financial performance in 2022–23 is attributable to the continuation of furloughed staff because of COVID-19 early in the financial year, the impact of a higher cost profile due to the Government's Enhanced Wages Policy, which also included a one-off Cost-of-Living payment to all staff, as well as inflationary cost pressures affecting consumables and supplies.

2020–21	2021–22	2022–23	2022–23
Actual	**Actual**	**Actual**	**Target**
$2,750	$3,374	$4,449	$2,984

Reporting period: Financial year.

Data sources: Health Service financial system, BedState.

Efficiency KPI – Outcome 1
Service 4: Mental health services

Average cost per treatment day of non-admitted care provided by mental health services

Rationale

Public community mental health services consist of a range of community-based services such as emergency assessment and treatment, case management, day programs, rehabilitation, psychosocial, residential services and continuing care. The aim of these services is to provide the best health outcomes for the individual through the provision of accessible and appropriate community mental health care. Efficient functioning of public community mental health services is essential to ensure that finite funds are used effectively to deliver maximum community benefit.

Public community-based mental health services are generally targeted towards people in the acute phase of a mental illness who are receiving post-acute care. This indicator provides a measure of the cost-effectiveness of treatment for public psychiatric patients under public community mental health care (non-admitted/ambulatory patients).

Target

The 2022–23 target is ≤ $648 per treatment day.

Result

The average cost per treatment day of non-admitted care provided by public clinical mental health services rose in 2022–23 to $796, which is 22.8 per cent above the target. The financial performance in 2022–23 is attributable to a combination of higher operating costs including the impact of the Government's Enhanced Wages Policy, which also included a one-off Cost-of-Living payment to all staff, as well as inflationary cost pressures on supplies and consumables in 2022–23 and lower treatment days due to the continuation of COVID-19 impact on staffing and patient attendance.

2020–21	2021–22	2022–23	2022–23
Actual	**Actual**	**Actual**	**Target**
$581	$653	$796	$648

Reporting period: Financial year.

Data sources: Health Service financial system, Mental Health Information Data Collection.

Efficiency KPI – Outcome 2
Service 6: Public and community health services

Average cost per person of delivering population health programs by population health units

Rationale

Population health units support individuals, families and communities to increase control over and improve their health.

Population health aims to improve health by integrating all activities of the health sector and linking them with broader social and economic services and resources as described in the WA Health Promotion Strategic Framework 2022–2026.[10] This is based on the growing understanding of the social, cultural and economic factors that contribute to a person's health status.

Target

The 2022–23 target is ≤ $226 per person.

Result

The average cost per person of delivering population health programs by population health units in 2022–23 was $262, which is 16.0 per cent above the target. The higher cost profile which contributed to the indicator being above target is mainly because of increase in staff costs due to the Government's Enhanced Wages Policy, which also included a one-off Cost-of-Living payment to all staff, as well as inflationary cost pressures on supplies and consumables in 2022–23 and a lower target set for 2022–23.

2020–21	2021–22	2022–23	2022–23
Actual	**Actual**	**Actual**	**Target**
$239	$242	$262	$226

Reporting period: Financial year.

Data sources: Health Service financial system, Australian Bureau of Statistics.

[10] A draft WA Health Promotion Strategic Framework 2022-2026 was released for public consultation on 7 December 2021 and closed on 18 February 2022. A final copy has not been released. See https://consultation.health.wa.gov.au/chronic-disease-prevention-directorate/draft-wa-health[1]promotion-strategic-framework-2022/ for further information.