Key performance indicators

Certification of Key Performance Indicators

East Metropolitan Health Service

Certification of Key Performance Indicators for the year ended 30 June 2022

We hereby certify that the key performance indicators are based on proper records, are relevant and appropriate for assisting users to assess East Metropolitan Health Service's performance and fairly represent the performance of the health service for the financial year ended 30 June 2022.

Ian Smith PSM
Board Chair
East Metropolitan Health Service
16 September 2022

Peter Forbes
Chair, Board Finance Committee
East Metropolitan Health Service
16 September 2022

Introduction

East Metropolitan Health Service (EMHS) expenditure and activity continued to be impacted by COVID-19 during the 2021-22 financial year, impacting the results related to efficiency Key Performance Indicators (KPIs) in particular.

As COVID infection rates have not abated, increased levels of expenditure continue to be experienced as EMHS must maintain staffing for the delivery of all admitted, emergency, non-admitted and mental health hospital services. Maintaining clinical safety and protocols continues to impact expenditure related to personal protective equipment (PPE) and increased costs in supply chains has flowed to increased expenditure for hospital supplies. Expenditure on staffing has increased, as EMHS addressed staff furlough and absences through agency, casual and backfill arrangements to maintain safe levels of staffing for clinical services and patient care. Population health activities for the wider EMHS catchment and community continued and increases in expenditure were primarily related to maintaining awareness of public health and hygiene standards within the wider community as it transitions into 'living with COVID'.

KPIs

Outcomes

KPIs assist EMHS to assess and monitor achievement of the following Department of Health (DoH) outcomes.

1. **Outcome one:** Public hospital-based services that enable effective treatment and restorative healthcare for Western Australians.

2. **Outcome two:** Prevention, health promotion and aged and continuing care services that help Western Australians to live healthy and safe lives.

KPI data legend

Example KPI data

YEAR	TARGET	ACTUAL
2021-22	**$000**	**$000**
2020-21	$000	$000
2019-20	$000	$000

The latest available data has been used to report performance, which for some KPIs means the results are for the 2021 calendar year

Unplanned hospital readmissions for patients within 28 days for selected surgical procedures (per 1000 separations)

Rationale

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

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

Target

The 2021 targets for unplanned readmissions for each procedure (per 1000 separations) are outlined below. Improved or maintained performance is demonstrated by a result below or equal to target:

(a) knee replacement	**≤ 23.0**
(b) hip replacement	**≤ 17.1**
(c) tonsillectomy & adenoidectomy	**≤ 81.8**
(d) hysterectomy	**≤ 42.3**
(e) prostatectomy	**≤ 36.1**
(f) cataract surgery	**≤ 1.1**
(g) appendicectomy	**≤ 25.7**

Results

(a) Knee replacement:

YEAR	TARGET	ACTUAL
2021	**23.0**	**15.4**
2020	23.0	26.1
2019	26.2	28.3

(b) Hip replacement:

YEAR	TARGET	ACTUAL
2021	**17.1**	**20.4**
2020	17.1	18.1
2019	17.1	15.0

(c) Tonsillectomy & adenoidectomy:

YEAR	TARGET	ACTUAL
2021	**81.8**	**138.7**
2020	81.8	106.4
2019	61.0	120.0

(d) Hysterectomy:

YEAR	TARGET	ACTUAL
2021	**42.3**	**73.2**
2020	42.3	67.8
2019	41.3	33.9

(e) Prostatectomy:

YEAR	TARGET	ACTUAL
2021	**36.1**	**49.3**
2020	36.1	59.1
2019	38.8	14.9

(f) Cataract surgery:

YEAR	TARGET	ACTUAL
2021	**1.1**	**2.4**
2020	1.1	1.5
2019	1.1	3.0

(g) Appendicectomy:

YEAR	TARGET	ACTUAL
2021	**25.7**	**30.1**
2020	25.7	21.4
2019	25.7	28.7

Commentary

EMHS strives to provide safe, high-quality care to its patients at all times. When there is variation in care and outcomes, EMHS has established processes to ensure individual clinical case reviews are conducted. This has occurred for all unplanned hospital readmissions for system wide learnings and to identify service improvement opportunities.

Performance for unplanned readmissions following knee replacement achieved target in 2021. The result can, in part, be attributed to the implementation of several quality improvement actions within orthopaedics, such as improved clinical pathways and standard operating procedures.

Unplanned readmissions following hip replacement, hysterectomy and prostatectomy procedures have exceeded target across 2021. While these results represent very small case numbers, several quality improvement actions have been identified from individual case reviews to streamline existing care delivery. EMHS will continue to monitor performance of this indicator.

Performance for tonsillectomy and adenoidectomy is over target for the third year in a row. Peer review of all readmissions is conducted as part of the ear, nose and throat (ENT) morbidity and mortality review process and case review has demonstrated that patients are often managed conservatively, being readmitted as a precaution with minor post-operative bleeding. This is standard practice across health services.

Performance for cataract surgery is over target for the third year in a row. While rates continue to exceed the target, EMHS continues to undertake clinical case reviews to identify opportunities for improvement.

Readmissions following appendicectomy did not achieve target in 2021. The clinical case reviews of the episodes of readmissions noted a high degree of complexity with these individual cases but did not identify any significant trends or areas of clinical concern. EMHS will continue to monitor performance of this indicator.

Period:	2019 - 2021 calendar years
Contributing sites:	Armadale Health Service, Bentley Health Service, Kalamunda Hospital, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	Hospital Morbidity Data Collection (HMDC); WA Data Linkage System

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. 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 (0%) on the elective waiting lists wait longer than the clinically recommended time for their procedure, according to their urgency category.

Target

The 2021-22 target for patients waiting over boundary for all urgency categories is 0%. A result equal to target is desired.

Results

Category 1:

YEAR	TARGET	ACTUAL
2021-22	**0%**	**6.5%**
2020-21	0%	19.6%
2019-20	0%	27.0%

Category 2:

YEAR	TARGET	ACTUAL
2021-22	**0%**	**28.3%**
2020-21	0%	27.7%
2019-20	0%	18.9%

Category 3:

YEAR	TARGET	ACTUAL
2021-22	**0%**	**9.3%**
2020-21	0%	8.6%
2019-20	0%	3.3%

Commentary

In 2021-22, EMHS endeavoured to meet the clinical waiting times recommended for the urgency categories.

The restrictions placed on hospital elective surgery waitlists during the year due to COVID-19, and together with the increasing emergency surgery demand, has greatly impacted the elective surgery waitlist over boundary initiatives across all urgency categories.

EMHS implemented several key initiatives to manage the elective surgery waitlist, that included:

- targeted activity increases to reduce the patients waiting for an endoscopy was achieved between July and December 2021. This reduced over boundary cases by 85% before the elective restrictions were put in place in the first half of 2022
- additional theatre lists across multiple specialties to reduce the over boundary waitlist
- all sites targeted patients waiting over boundary across all specialties and categories.

Managing timely access to elective surgery in 2021-22 continued as a focus across EMHS, with improved performance in timeframes for urgency category one. However, some specialties continue to have access challenges due to increases in emergency demand and workforce shortages.

To maintain a sustainable elective surgery waitlist, EMHS has implemented longer term strategies that include:

- continuation of individual specialty management plans to maintain the ongoing waitlist demand by managing the demand and over boundary cases
- recommencement of selective specialty procedures in accordance with the British Association of Day Surgery (BADS) suitable for day surgery and reduce multiday admissions
- targeting the efficiency of elective surgery theatre utilisation across sites.

Period:	2019-20 – 2021-22 financial years (average of weekly census data)
Contributing sites:	Armadale Health Service, Bentley Health Service, Kalamunda Hospital, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	Elective Services Wait List Data Collection

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%).

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 2021 target for HA-SABSI is ≤1.0 per 10,000 occupied bed-days. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021	**1.00**	**1.09**
2020	1.00	0.84
2019	1.00	0.90

Commentary

During 2021, EMHS did not achieve the target for HA-SABSI with a result equating to 37 infections from 338,112 bed-days.

EMHS participates in a state-wide surveillance program and has robust processes for the review of all cases of HA-SABSI by infection control specialists and treating clinicians, to identify the factors that contributed to the individual cases and closely monitor infection rates.

EMHS sought an independent review of HA-SABSI during 2021 to identify any contributing factors related to healthcare that may have contributed to the 2021 result. The review identified and made recommendations for improvement during 2022, which EMHS are currently implementing.

These include a stronger focus on the application of guidelines for the management of invasive devices; embracing electronic journey boards and nursing care plans to incorporate visual prompts for clinicians monitoring invasive device sites; and ongoing education, training and regular hand hygiene auditing.

The EMHS Hospital-Acquired Complications (HAC) Strategy also includes strategies to reduce bloodstream infection rates across EMHS that are based on findings and lessons arising from the clinical review of cases.

Period:	2019 – 2021 calendar years
Contributing sites:	Armadale Health Service, Bentley Health Service, Kalamunda Hospital, Royal Perth Hospital
Data source:	Healthcare Infection Surveillance Western Australia (HISWA) Data Collection

EMHS on forefront in sepsis care

Sepsis is a serious medical condition that claims the lives of almost 9000 Australians every year. It occurs when the body has an extreme immune response to an infection, leading to tissue damage and organ failure.

People who survive sepsis are often left with profound long-term health problems. Though early detection and treatment is the key to improving sepsis outcomes, it is an illness that remains difficult to diagnose.

A strong focus on sepsis research over the past decade has put EMHS at the forefront of improving the detection and care of sepsis patients in WA.

That tradition is set to continue following RPH specialist emergency doctor **Stephen MacDonald**, being awarded one of four State Government-funded Fellowships in June 2022. This will enable him to continue to pursue important sepsis research, including:

- A long-term study analysing blood samples collected from ED patients suspected of sepsis. The study is designed to gain a better understanding of the mechanisms of illness with a view to finding new diagnostic tests and treatment targets.
- Establishment of a sepsis clinical registry that will enable Dr MacDonald and his colleagues to monitor the effectiveness of new sepsis resources that are being rolled out across EMHS hospitals.

  These resources have been designed to help healthcare staff detect potential sepsis cases early, enabling prompt treatment.

  By monitoring routine clinical data collected for the registry, Dr MacDonald will be able to see whether these resources have been effective in supporting best-practice guidelines.

  The registry will also enable monitoring of patient outcomes.
- An initiative involving EMHS' HIVE program, in which sepsis patients are closely monitored remotely by specialist doctors and nurses based in the HIVE command centre.

Dr MacDonald said that as well as being difficult to diagnose, sepsis is a condition for which treatment can be fragmented because sepsis patients often have complex multisystemic problems that require the involvement of numerous different specialists.

"While about a quarter of sepsis patients get admitted to the ICU, the rest will be dispersed across other areas of the hospital," he explained.

"This makes it harder to coordinate care for these patients.

"The measures we are implementing will give us better oversight of these patients so we can ensure that all the things that need to be done are carried out in a standardised way."

Dr MacDonald believes embedding research, innovation and evaluation within routine clinical activities is the key to improving the efficiency and effectiveness of care.

Survival rates for sentinel conditions

Rationale

This indicator measures performance in relation to the survival of people who have suffered a sentinel condition — specifically a stroke, acute myocardial infarction (AMI), or fractured neck of femur (FNOF).

These three conditions have been chosen as they are leading causes of hospitalisation and death in Australia for which there are accepted clinical management practices and guidelines. Patient survival after being admitted for one of these sentinel conditions can be affected by many factors including the diagnosis, the treatment given, or procedure performed, age, co-morbidities at the time of the admission, and complications which may have developed while in hospital. However, survival is more likely when there is early intervention and appropriate care on presentation to an emergency department (ED) and on admission to hospital.

By reviewing survival rates and conducting case-level analysis, targeted strategies can be developed that aim to increase patient survival after being admitted for a sentinel condition.

Target

Please see the target for each condition noted in the results per age group. Improved or maintained performance is demonstrated by a result equal to or exceeding target.

Stroke

Results

0 – 49 years:

YEAR	TARGET	ACTUAL
2021	**95.2%**	**96.3%**
2020	95.2%	94.7%
2019	94.4%	93.4%

50 – 59 years:

YEAR	TARGET	ACTUAL
2021	**94.9%**	**96.2%**
2020	94.9%	96.2%
2019	93.4%	95.6%

60 – 69 years:

YEAR	TARGET	ACTUAL
2021	**94.1%**	**95.9%**
2020	94.1%	99.5%
2019	93.5%	96.5%

70 - 79 years:

YEAR	TARGET	ACTUAL
2021	**92.3%**	**95.1%**
2020	92.3%	96.3%
2019	91.3%	95.9%

80+ years:

YEAR	TARGET	ACTUAL
2021	**86.0%**	**94.4%**
2020	86.0%	90.4%
2019	83.2%	93.2%

Commentary

Effective clinical engagement and coordination of care between the neurology, emergency and acute medical teams continues to result in excellent survival rates for patients experiencing this condition.

The performance of EMHS in the survival rate for stroke was met or exceeded target in all age ranges without exception. In the spirit of continuous quality improvement, all deaths are subject to a peer review as part of a morbidity and mortality review process, with actions taken to address issues and lessons learnt shared amongst clinical teams.

Acute myocardial infarction (AMI)

Results

0 – 49 years:

YEAR	TARGET	ACTUAL
2021	**99.1%**	**97.7%**
2020	99.1%	98.9%
2019	99.0%	100%

50 – 59 years:

YEAR	TARGET	ACTUAL
2021	**98.8%**	**100%**
2020	98.8%	98.9%
2019	98.9%	98.7%

60 – 69 years:

YEAR	TARGET	ACTUAL
2021	**98.1%**	**98.9%**
2020	98.1%	98.1%
2019	98.0%	98.6%

70 - 79 years:

YEAR	TARGET	ACTUAL
2021	**96.8%**	**97.0%**
2020	96.8%	98.2%
2019	96.5%	97.4%

80+ years:

YEAR	TARGET	ACTUAL
2021	**92.1%**	**94.6%**
2020	92.1%	94.4%
2019	92.2%	94.8%

Commentary

The performance of EMHS in the survival rate for acute myocardial infarction was equal to or exceeded target for all patients in the 50+ age ranges. This is largely attributed to our sustained timely access for patients to invasive coronary diagnostic and interventional procedures as well as effective inter hospital transfer arrangements of patients from Armadale Health Service (AHS) and St John of God Midland Public Hospital (SJGMPH) to Royal Perth Hospital (RPH).

The 0-49 years age group is slightly below target, representing a small number of complex cases. Monitoring will continue across 2022, with all deaths subject to a peer review as part of a morbidity and mortality review process. Actions taken to address issues and lessons learnt are shared amongst clinical teams.

Fractured neck of femur (FNoF)

Results

70 - 79 years:

YEAR	TARGET	ACTUAL
2021	98.9%	97.6%
2020	98.9%	99.2%
2019	98.9%	100%

80+ years:

YEAR	TARGET	ACTUAL
2021	96.9%	98.3%
2020	96.9%	98.2%
2019	96.1%	98.5%

Commentary

The performance of EMHS in the survival rate for fractured neck of femur patients exceeded target in the 80+ years age group. The 70-79 years age group is slightly below target, representing a small number of complex cases. Monitoring of the fractured neck of femur pathway will continue across 2022 to actively identify any opportunities for improvement. In the spirit of continuous quality improvement, all deaths are subject to a peer review as part of a morbidity and mortality review process. Actions taken to address issues and lessons learnt are shared amongst clinical teams.

Period:	2019 – 2021 calendar years
Contributing sites:	Armadale Health Service, Bentley Health Service, Kalamunda Hospital, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	HMDC

Percentage of admitted patients who discharged against medical advice

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 and have been found to cost the health system 50% more than patients who are discharged by their physician.

Between July 2015 and June 2017 Aboriginal patients (3.4%) in WA were over 11 times more likely than non-Aboriginal patients (0.3%) to discharge against medical advice, compared with 6.2 times nationally (3.1% and 0.5% respectively). 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.

DAMA 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 2021 targets for admitted patients who discharged against medical advice are:

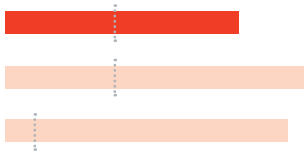
a) Aboriginal patients	**≤ 2.78%**
b) Non-Aboriginal patients	**≤ 0.99%**

Improved or maintained performance is demonstrated by a result below or equal to target.

Results

(a) Aboriginal patients:

YEAR	TARGET	ACTUAL
2021	**2.78%**	**5.87%**
2020	2.78%	7.51%
2019	0.77%	7.10%



(b) Non-Aboriginal patients:

YEAR	TARGET	ACTUAL
2021	**0.99%**	**1.16%**
2020	0.99%	1.44%
2019	0.77%	1.32%

Commentary

In 2021-22 key strategies were operationalised, with results demonstrating a reduction in DAMA rates for both Aboriginal and non-Aboriginal patients.

EMHS continues to work to improve the DAMA KPI. Key new strategies supporting DAMA performance across EMHS in 2021-22, include:

- EMHS undertook a deep review and analysis of patients with frequent or multiple DAMA, to identify targeted actions to reduce DAMAs in this cohort
- a Patient-Initiated Discharge (PID) process and form was introduced at RPH, allowing patients to be safely discharged in line with their health and social needs
- key consultation with Walk with Me and Homeless Health Care Leads to identify best practice management strategies for patients presenting with alcohol intoxication with or without homelessness.

EMHS is continuing to implement the following targeted strategies:

- improving cultural sensitivity in the organisation with Welcome to Country and DAMA videos and an Aboriginal Champion program, Kadadjiny Marr
- medical education, targeting safe discharge language and avoiding inappropriate use of the term DAMA in medical records
- sites to implement a process for safely discharging surgical patients whose surgery has been delayed or cancelled in target areas
- sites to implement a process for safely discharging the cohort of known and frequent DAMA patients admitted with alcohol intoxication.

Period:	2019 – 2021 calendar years
Contributing sites:	Armadale Health Service, Bentley Health Service, Kalamunda Hospital, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	HMDC

Percentage of live-born term infants with an Apgar score of less than seven at five minutes post delivery

Rationale

This indicator of the condition of newborn infants immediately after birth provides an outcome measure of intrapartum care and newborn resuscitation.

The Apgar score is an assessment of an infant's health at birth based on breathing, heart rate, colour, muscle tone and reflex irritability. An Apgar score is applied at one, five and (if required by the protocol) ten minutes after delivery to determine how well the infant is adapting outside the mother's womb. Apgar scores range from zero to two for each condition with a maximum final total score of ten. The higher the Apgar score the better the health of the newborn infant.

This outcome measure can lead to the development and delivery of improved care pathways and interventions to improve the health outcomes of Western Australian infants and aligns to the National Core Maternity Indicators (2020) Health, Standard 16/09/2020.

Target

The 2021 target for the percentage of live-born term infants with an Apgar score of less than seven at five minutes post delivery is ≤1.8%. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021	**1.80%**	**1.37%**
2020	1.80%	1.54%
2019	1.80%	1.29%

Commentary

Across 2021 EMHS' performance has remained below target, which is indicative of the quality of care and skilled workforce providing maternity and neonatal services in EMHS hospitals. EMHS closely monitors performance against this and many other maternity performance and outcome measures to ensure EMHS maternity services maintain a high standard of care.

Period:	2019 – 2021 calendar years
Contributing sites:	Armadale Health Service, Bentley Health Service, St John of God Midland Public Hospital
Data source:	Midwives Notification System

Provision of information, guidance, and crisis response

EMHS furthered work on a project to strengthen our **Mental Health Emergency Response Line** and its equivalent service for consumers outside the metropolitan area, Rural Link (known collectively as MHERL).

The improvement project was established in response to recommendations from a 2019 review into the service, which provides 24-hour over-the-phone support for people experiencing a mental health crisis.

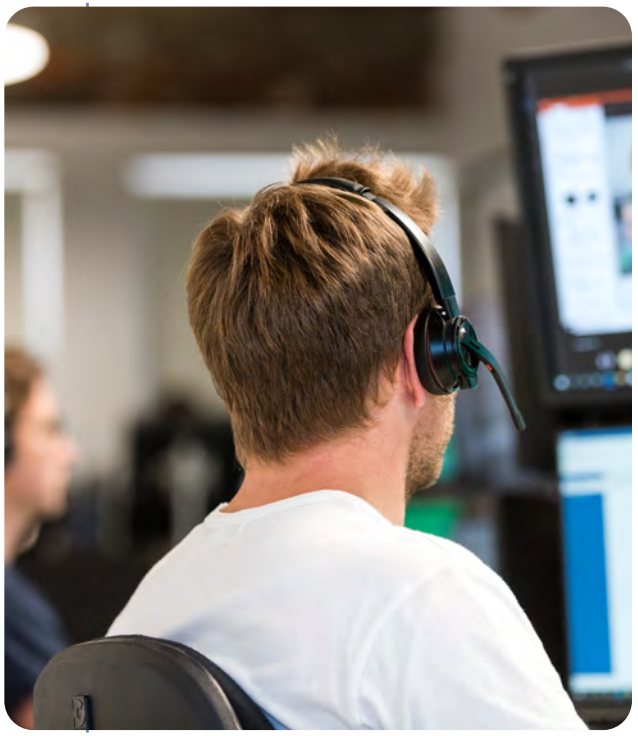
Among the project's main achievements were:

- a statewide process for escalation of care and handover of care for consumers with urgent mental health needs
- improved pathways for facilitating coordinated access for consumers to other mental health and emergency services
- an enhanced consumer feedback system
- recruitment of consumers to ensure strong consumer input into the service redesign, ongoing service provision and governance
- strengthened engagement with Aboriginal stakeholders to help MHERL become a more culturally secure service for Aboriginal consumers
- updated governance processes, as per the Public Sector Commission Good Governance Principles.

Heading into 2022-23, the project will focus on:

- developing and implementing two new roles as part of the MHERL team — a **Suicide Intervention Coordinator** and **Aboriginal Mental Health Worker**
- rebranding of the service to create a unified presence across WA that incorporates consistent messaging about what consumers can expect when contacting the service
- implementing a **Statewide Crisis Journey Board** to augment existing clinical handover processes and facilitate follow-up of referrals from MHERL
- exploring further opportunities for service provision to CaLD communities and alternative modes of provision, such as Telehealth.

Supports Sustainable Health Review (SHR) recommendation 11b (see page 63)



During 2021-22, MHERL had **17,183** contacts for mental health crisis support

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.

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.

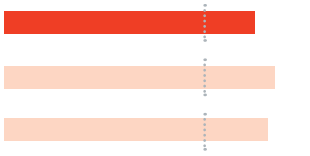
By monitoring this indicator, key areas for improvement can be identified. This can facilitate the development and delivery of targeted care pathways and interventions aimed at improving the mental health and quality of life of Western Australians.

Target

The 2021 target for readmissions to acute specialised mental health inpatient services within 28 days of discharge is ≤12.0%. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021	**12.0%**	**14.9%**
2020	12.0%	16.1%
2019	12.0%	15.7%



Commentary

With demand for services and patient acuity high, readmission rates have remained relatively steady when compared year on year. The result this year is a positive reflection of the strategies that have been implemented with a focus on reducing the level of unplanned readmissions to mental health inpatient services.

These strategies include:

- Commencement of the Youth Community Assessment Treatment Team, which provides early intervention and timely support to young adults experiencing mental health concerns. Benefits include, and are not limited to, admission diversion, prevention of readmission and facilitation of early discharge.
- Continuation of the Hostel Inreach Initiative. This project aims to increase mental health and physical health treatments and supports to an at risk/vulnerable cohort, as well as reduce ED presentations and admissions.

- Continuation of the Project Air / Dialectical Behaviour Therapy Program for Adult Community Royal Perth Bentley Group (RPBG). Project Air is a Personality Disorders Strategy that aims to enhance treatment options for people with Personality Disorders and their families and carers. A key component of Project Air is the Gold Card Clinics, which provide brief psychological interventions to frequent presenters to EDs, in the context of psychosocial crisis with emotion dysregulation, suicidal ideation or self-harming behaviour, supporting admission diversion, readmission and treatment.
- Continuation of the Active Response Team (ART) service at both RPBG and Armadale Kalamunda Group (AKG), in partnership with various Non-Government Organisation (NGO) providers of mental health services, in order to maximise the care planning and support opportunities to keep patients well in the community.
- Commencement of Momentum QP (Youth Mental Health and Alcohol and Drug Homelessness Service). EMHS' partnership with Richmond fellowship, Anglicare and Cyrenian House, provides residents with a 12-month recovery-focused program with referrals, including from ED and mental health inpatient units. Aims include, but are not limited to, providing treatment and reducing hospital presentations, admissions and readmissions.
- St John of God Midland Head to Health offers assessment and short to medium term treatment to adults experiencing mild to moderate mental health concerns, immediate care to access information and assistance navigating to other appropriate services.

EMHS continues to strive to reduce the number of readmissions to acute specialised mental health inpatient services within 28 days of discharge.

Period:	2019 – 2021 calendar years
Contributing sites:	Armadale Health Service, Bentley Health Service, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	HMDC (inpatient separations)

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. 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.

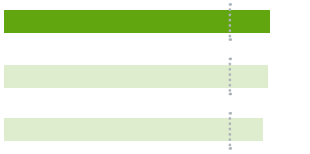
The standard underlying this measure is that continuity of care requires prompt community follow-up in the period following discharge from hospital. A responsive community support system for persons who have experienced a psychiatric episode requiring hospitalisation is essential to maintain their clinical 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 2021 target percentage of post-discharge community care within seven days following discharge from acute specialised mental health inpatient services is ≥75.0%. Improved or maintained performance is demonstrated by a result equal to or above target.

Results

YEAR	TARGET	ACTUAL
2021	**75.0%**	**87.8%**
2020	75.0%	87.1%
2019	75.0%	85.5%



Commentary

Over the past three years EMHS has consistently exceeded the 75% target. This result demonstrates our commitment to connecting with our public mental health acute inpatients within a week of being discharged from hospital to assist our consumers through a key transition of care.

Period:	2019 – 2021 calendar years
Contributing sites:	Armadale Health Service, Bentley Health Service, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	Mental Health Information Data Collection (MIND) (ambulatory mental health service contacts); HMDC (inpatient separations)

Average admitted cost per weighted activity unit

Rationale

This indicator is a measure of the cost per weighted activity unit (WAU) compared with the state target, as approved by the Department of Treasury and published in the 2021-22 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 2021-22 budget allocation, it is important that efficiency of service delivery is accurately monitored and reported.

Target

The 2021-22 target for average admitted cost per WAU is $6907. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021-22	$6907	$7197
2020-21	$7073	$6733
2019-20	$7026	$6501

Please note: 2019-20 and 2020-21 actuals have been restated in accordance with the 2021-22 Outcome Based Management Key Performance Indicator Data Definition Manual

Commentary

The target for 2021-22 was developed by WA Health for all Health Service Providers (HSPs). EMHS has not performed favourably against the 2021-22 target with an average admitted cost per WAU of $7197, which is $290 above the target of $6907. The 2021-22 result is also $464 above the actual average admitted cost per WAU in 2020-21.

EMHS' performance in 2021-22 was impacted in the first part of the reporting year by the residual effects of changes in elective surgery schedules, which resulted in lower than anticipated inpatient activity. Performance in the latter part of the year was also impacted by increased staffing costs associated with preparing for a 'surge' in expected COVID patients attending hospitals and covering staff furloughing as a result of COVID protocols.

Period:	2019-20 – 2021-22 financial years
Contributing sites:	Armadale Health Service, Bentley Health Service, Kalamunda Hospital, Royal Perth Hospital, St John of God Midland Public Hospital, St John of God Mount Lawley (contracted services)
Data source:	OBM allocation application; Oracle 11i financial system; HMDC extracts; TOPAS; webPAS; Contracted Health Entity's (CHE) discharge extracts

Average Emergency Department cost per weighted activity unit

Rationale

This indicator is a measure of the cost per WAU compared with the state target as approved by the Department of Treasury, which is published in the 2021-22 Budget Paper No. 2, Volume 1.

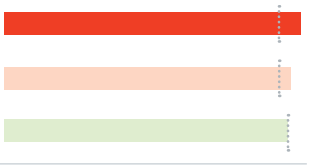
The measure ensures that a consistent methodology is applied to calculating and reporting the cost of delivering ED activity against the state's funding allocation. With the increasing demand on EDs and health services, it is important that ED service provision is monitored to ensure the efficient delivery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

Target

The 2021-22 target for average ED cost per WAU is $6847. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021-22	$6847	$7353
2020-21	$6853	$7098
2019-20	$7071	$7039



Please note: 2019-20 and 2020-21 actuals have been restated in accordance with the 2021-22 Outcome Based Management Key Performance Indicator Data Definition Manual

Commentary

The target for 2021-22 was developed by WA Health for all HSPs. The actual average ED cost per WAU is $506 above the 2021-22 target of $6847. It is also $255 higher than the actual average cost of $7098 in 2020-21 when compared to the performance in that year.

EMHS EDs remain open and fully prepared for all emergencies on a 24/7 x 365 basis to ensure staff and patients always remain safe and protected irrespective of other environmental factors. In 2021-22, ED costs have increased, due primarily to the additional safeguards implemented to address recommendations from health reports into ED waiting room practices and processes for maintaining patient safety.

Period:	2019-20 – 2021-22 financial years
Contributing sites:	Armadale Health Service, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	OBM allocation application; Oracle 11i financial system; Emergency Department Data Collection (EDDC)

Marquees a triage triumph for EMHS

To prevent COVID-19 spreading through our hospitals, EMHS had to ensure non-COVID patients were kept apart from those known to have — or suspected of having — the virus.

Large marquees, erected outside the EDs of RPH, AHS and SJGMPH were central to EMHS' efforts to achieve this separation.

The structures were designed to serve as temporary triage stations for patients seeking emergency care — including those arriving by ambulance.

Arrangements were introduced that required patients to present to the marquees where staff would assess their COVID status and direct them appropriately. Known cases were automatically streamed into the ED's 'red zones'. Those assessed as being at low risk of COVID were given the green light to enter the ED, while anyone suspected of having COVID was given a RAT.

The marquees project was a major logistical exercise and a significant accomplishment for EMHS. At RPH alone, to accommodate the new structure, extensive road and site works were needed, including the closure of a portion of Victoria Square to traffic, the removal of parking bays, adjustment of the main hospital entrance and removal of a concrete island to enable the re-routing of access to ambulance bays.

AHS was similarly challenged and worked closely with outside agencies to create an entirely new traffic flow for ambulances, ambulatory visitors and carers.

The marquees themselves were carefully planned and configured to include patient waiting zones, designated swabbing stations, screening and triage spaces, and discrete donning and doffing areas.

On top of this, the new structures had to be waterproof, connected to hospital power supplies and fitted with reverse cycle air-conditioning and duress alarms.

In a race against time to ensure our hospitals were ready for the anticipated rise in COVID cases following the opening of the WA border, the marquees were erected and up and running within a matter of weeks, an accomplishment that highlighted the commitment of EMHS staff to ensuring the health and safety of our community.

Royal Perth and Armadale Hospital COVID Triage marquees

Average non-admitted cost per weighted activity unit

Rationale

This indicator is a measure of the cost per WAU compared with the state (aggregated) target, as approved by the Department of Treasury, which is published in the 2021-22 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 2021-22 target for average non-admitted cost per WAU is $6864. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021-22	**$6864**	**$6093**
2020-21	$7025	$6004
2019-20	$6992	$7569

Please note: 2019-20 and 2020-21 actuals have been restated in accordance with the 2021-22 Outcome Based Management Key Performance Indicator Data Definition Manual

Commentary

The target for 2021-22 was developed by WA Health for all HSPs. EMHS has performed positively against the 2021-22 target of $6864 by $771. Although EMHS has performed positively against the target in both 2020-21 and 2021-22, the actual average cost of $6093 is $89 more when compared to the actual average cost of $6004 in the previous year.

Non-admitted activity is related to inpatient activity, as patients who are discharged from hospital are generally referred to non-admitted services for follow-up consultations and medication. Non-admitted activity can include services provided to patients in outpatient clinics, community based clinics or in the home, procedures, medical consultation, allied health or treatment provided by clinical nurse specialists.

Although EMHS experienced a decline in inpatient activity as a result of some residual effects of COVID protocols, the health service has been able to maintain the previous year's positive performance with respect to the ratio of expenditure to activity for non-admitted services.

Period:	2019-20 – 2021-22 financial years
Contributing sites:	Armadale Health Service, Bentley Health Service, Kalamunda Hospital, Royal Perth Hospital, St John of God Midland Public Hospital, St John of God Mount Lawley (contracted services)
Data source:	OBM allocation application; Oracle 11i financial system; Non Admitted Patient Data Collection (NAP DC)

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

Rationale

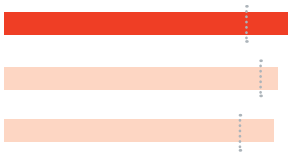
Specialised mental health inpatient services provide patient care in authorised hospitals. To ensure quality of care and cost-effectiveness, it is important to monitor the unit cost of admitted patient care in specialised mental health inpatient services. The efficient use of hospital resources can help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

Target

The 2021-22 target for average cost per bed-day in specialised mental health inpatient services is $1533. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021-22	**$1533**	**$1783**
2020-21	$1622	$1724
2019-20	$1492	$1694



Please note: 2019-20 and 2020-21 actuals have been restated in accordance with the 2021-22 Outcome Based Management Key Performance Indicator Data Definition Manual

Commentary

EMHS' actual average cost of $1783 is $250 above the 2021-22 target of $1533, and it is also $59 above the actual performance of $1724 in 2020-21.

The EMHS' average cost has only marginally increased against the actual 2020-21 average cost of $1724. Although the actual performance in 2021-22 is relatively close to the actual average re-stated cost for 2019-20, the costs associated with treatment of complex mental health cases has increased over the reported timeframes and is reflective of the increasing complexities associated with supporting and treating mental health in the community.

Period:	2019-20 – 2021-22 financial years
Contributing sites:	Armadale Health Service, Bentley Health Service, Royal Perth Hospital, St John of God Midland Public Hospital
Data source:	OBM allocation application; Oracle 11i financial system; BedState

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 2021-22 target for average cost per treatment day of non-admitted care provided by mental health services is $445. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021-22	**$445**	**$400**
2020-21	$415	$346
2019-20	$420	$383

Please note: 2019-20 and 2020-21 actuals have been restated in accordance with the 2021-22 Outcome Based Management Key Performance Indicator Data Definition Manual

Commentary

EMHS has performed marginally better (by $45) against the 2021-22 target of $445 for the average cost per treatment day of non-admitted care provided by mental health services.

The increase in costs in 2021-22 relates primarily to the increased level of care services provided within a community setting, particularly as the community required higher levels of support outside of hospital settings to cope with the effects of COVID protocols. Providing increased care and care-based community services can impact a health service's ability to perform efficiently, particularly if cost increases associated with higher levels of community care are related to general environmental cost pressures outside the health service's immediate control.

Period:	2019-20 – 2021-22 financial years
Contributing sites:	Armadale Mental Health Service, Bentley Mental Health Service, Royal Perth Hospital (psychiatry), Specialised Aboriginal Mental Health Service, Midland Mental Health Service
Data source:	OBM allocation application; Oracle 11i financial system; Mental Health Information Data Collection (MIND)

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.

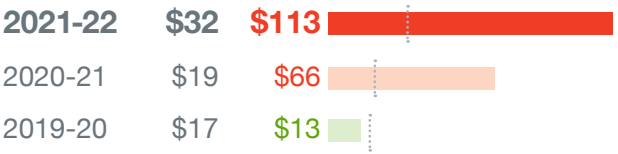
Population health aims to improve health by integrating all activities of the health sector and linking them with broader social and economic services and resources as described in the WA Health Promotion Strategic Framework 2017–2021. This is based on the growing understanding of the social, cultural and economic factors that contribute to a person's health status.

Target

The 2021-22 target for average cost per person of delivering population health programs by population health units is $32. Improved or maintained performance is demonstrated by a result below or equal to target.

Results

YEAR	TARGET	ACTUAL
2021-22	**$32**	**$113**
2020-21	$19	$66
2019-20	$17	$13



Please note:

- 2019-20 was based on 2014-18 population estimates
- 2020-21 was based on 2015-19 population estimates
- 2021-22 is based on the 2016-20 population estimates
- 2019-20 and 2020-21 actuals have been restated in accordance with the 2021-22 Outcome Based Management Key Performance Indicator Data Definition Manual

Commentary

The target for 2021-22 was developed at a WA Health level for all HSPs. EMHS' average cost per person of delivering population health programs was $113, which is $81 above the target of $32.

The 2021-22 target increased by $13 when compared to the 2020-21 target, however both targets were not adjusted for COVID-19 expenditure pressures that related to the preparation for, and response to, the pandemic. These expenditure pressures included servicing quarantine hotels, supporting mobile testing in the community, establishing and maintaining COVID-19 vaccination clinics and responding to other public health protection measures.

If COVID-19 related expenditure was excluded from the calculation of the indicator, the EMHS performance results in 2021-22 are favourable against the 2021-22 target and comparable in dollar value to pre-COVID average cost for delivering population health programs within EMHS' catchment area.

Period:	2019-20 – 2021-22 financial years
Contributing sites:	East Metropolitan Health Service health region
Data source:	OBM allocation application; Oracle 11i financial system; Estimated Resident Populations for 2016-20 and 2021 population projection provided by the Epidemiology Directorate, Public and Aboriginal Health Division, WA Department of Health