Government of **Western Australia**
Department of **Health**

Synthetic Hospital Morbidity Data Collection – Linked Representative

Data Dictionary

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Contents

Abbreviations

AIHW	Australian Institute of Health and Welfare
DOH	Department of Health Western Australia
DRG	Diagnosis Related Group
HMDC	Hospital Morbidity Data Collection
HMDS	Hospital Morbidity Data System
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification
ICU	Intensive Care Unit
KEMH	King Edward Memorial Hospital
NICU	Neonatal Intensive Care Unit
SCN	Special Care Nursery
WA	Western Australia

Purpose

The purpose of this Synthetic *Hospital Morbidity Data Collection Data Dictionary* is to detail the data elements captured in the Hospital Morbidity Data Collection (HMDC) linked representative synthetic data.

Background

The use of synthetic hospital morbidity data provided by the Department of Health is dependent on high quality data that is valid, accurate and consistent at the source. This linked representative synthetic data shares a linkage key with the 2025 linked representative *Emergency Department Data Collection.*

Generation of data

The generation of HMDC Synthetic data at the Department of Health is performed in accordance with the data definitions.

The scope of the synthetic HMDC data is records admitted to Inpatient Departments between 01/01/2022 and 31/12/2022.

Data definitions

This section provides specific information about data elements captured in the Synthetic HMDC, including definitions, permitted values, guide for use, and operational information.

All information relating to data elements in this data dictionary is specific to the Synthetic HMDC, and caution should be taken if these data elements are compared with those of other data collections.

Admission Datetime

Field name:	admission_datetime
Definition:	The date and time on which an admitted patient commences an episode of formal or statistical care.
Data type:	Datetime
Format:	DD-MM-YYYY HH:MM:SS
Permitted values:	N/A

Guide for use

An episode of care can have formal and statistical admission dates. A formal admission date is the date the hospital commenced treatment and accommodation of the patient. A statistical admission date is the date the patient commenced a particular care type.

A patient can have multiple statistical admission dates as their care type changes during their duration in hospital (i.e. acute care to rehabilitation care). Admission date cannot occur after separation date.

The ‘seconds’ component of the patient’s Admission Time is always reported as zeros.

Admission Time is captured in 24-hour clock format.

The admission time is when the patient commences the episode of care e.g. the commencement time of the admission or the time of birth in the case of a newborn born in the hospital.

Where a patient is assessed in an ED and the decision to admit is made, the admission commencement time should be the time the patient leaves the ED for admission to the inpatient ward.

Examples

	Admission Date
A patient is admitted to hospital on the 31 December 2020 at midnight.	31/12/2020 00:00:00
A patient arrives at the Emergency Department on the evening of the 13 April 2020 and remains in the Emergency Department until 5:00am the next day when they are admitted to a ward.	14/04/2020 05:00:00

Admission Status

Field name:	admission_status
Definition:	The mode of the patient's admission to the hospital.
Data type:	Numeric
Format:	Maximum N(1)
Permitted values:	3 - Elective - waitlist 4 - Elective - not waitlist 6 - Emergency - emergency department admission 7 - Emergency - direct admission

Guide for use

All patients must be assigned an admission status indicating if they were admitted on an emergency or elective basis, and if the admission was via a waitlist, emergency department (ED) or direct emergency admission.

A patient is admitted on an emergency basis if they are experiencing an illness or injury that requires assessment and treatment within 24 hours.

Emergency patients can be admitted via the ED or a direct admission to a specialty area (i.e. a critically ill patient who arrives at a hospital ED via an ambulance and is taken directly to the ICU).

A patient is admitted on an elective basis if they are experiencing an illness or injury that does not require assessment and treatment within 24 hours.

Elective patients can be admitted via the waitlist (i.e. a patient admitted after being on the Elective Surgery Waitlist for three months) or not waitlisted (i.e. a patient admitted for a scheduled caesarean section).

Examples

	Admission Status
A patient is admitted for a knee reconstruction after being placed on the Elective Services Waitlist.	3
A patient is admitted to hospital to undergo a weekly dialysis session.	4

Patient Postcode Region

Field name:	patient_postcode_region
Definition:	Western Australian region of residence.
Data type:	String
Format:	X(4)
Permitted values:	Metro Perth Metropolitan Region South Southern Region of WA North Northern Region of WA Other Postcodes not covered by the above categories (unknown or interstate)

Guide for use

In the synthetic data, patient_postcode_region is derived from postcode that exists in the real data. In the synthetic data postcode was aggregated to regions of Western Australia using the following mapping:

- Metro: (Perth Metropolitan Region): Postcodes 6000–6038, 6050–6084, 6090–6182, and 6556–6558.
- South: (Southern Region of WA): Postcodes 6200–6710.
- North: (Northern Region of WA): Postcodes 6041–6044 and 6713–6770.
- Other: Postcodes not covered by the above categories, unknown, or interstate.

Examples

	Patient Postcode Region
A patient is admitted and has an address with postcode 6155	Metro
A homeless patient in WA is admitted with postcode 6999	Other
A patient is admitted and has an address with postcode 6721	North

Care Type

Field name:	care_type
Definition:	The clinical intent and purpose of the treatment being delivered.
Data type:	Numeric
Format:	Maximum N(2)
Permitted values:	21 - Acute Care 22 - Rehabilitation Care 23 - Palliative Care 24 - Psychogeriatric Care 25 - Maintenance Care 26 - Newborn 29 - Geriatric Evaluation and Management 32 - Mental Health Care

Guide for use

Care type refers to a phase of treatment and is designed to reflect the primary clinical intent and purpose of the treatment being delivered.

The treating medical practitioner is responsible for determining the Care Type and should decide which category of care is required during a hospital stay. More than one Care Type may apply during a hospital stay, each associated with a separate episode of care. However, only one care type may be reported to HMDC on the one day.

When the Care Type changes, the patient should be statistically discharged and then statistically re-admitted. A statistical type change can only occur when there is an authorised change in Care Type by the appropriate responsible medical practitioner. Statistical type changes should not occur for a change in Ward, Funding Source or Client Status.

Admitted care can be one of the following:

Acute care

Acute care is care in which the primary clinical purpose or treatment goal is to:

- manage labour (obstetric)
- cure illness or provide definitive treatment of injury
- perform surgery
- relieve symptoms of illness or injury (excluding palliative care)
- reduce severity of an illness or injury
- protect against exacerbation and/or complication of an illness and/or injury which could threaten life or normal function
- perform diagnostic or therapeutic procedures.

Acute care excludes care which meets the definition of mental health care.

Rehabilitation care

Rehabilitation care is care in which the primary clinical purpose or treatment goal is improvement in the functioning of a patient with an impairment, activity limitation or participation restriction due to a health condition. The patient will be capable of actively participating.

Rehabilitation care is always:

- delivered under the management of or informed by a clinician with specialised expertise in rehabilitation, and
- evidenced by an individualised multidisciplinary management plan, which is documented in the patient's medical record, that includes negotiated goals within specified time frames and formal assessment of functional ability.

Rehabilitation care excludes care which meets the definition of mental health care.

Palliative care

Palliative care is care in which the primary clinical purpose or treatment goal is optimisation of the quality of life of a patient with an active and advanced life-limiting illness. The patient will have complex physical, psychosocial and/or spiritual needs.

Palliative care is always:

- delivered under the management of or informed by a clinician with specialised expertise in palliative care, and
- evidenced by an individualised multidisciplinary assessment and management plan, which is documented in the patient's medical record, that covers the physical, psychological, emotional, social and spiritual needs of the patient and negotiated goals.

Palliative care excludes care which meets the definition of mental health care.

Psychogeriatric care

Psychogeriatric care is care in which the primary clinical purpose or treatment goal is improvement in the functional status, behaviour and/or quality of life for an older patient with significant psychiatric or behavioural disturbance, caused by mental illness, an age-related organic brain impairment or a physical condition.

Psychogeriatric care is always:

- delivered under the management of or informed by a clinician with specialised expertise in psychogeriatric care, and
- evidenced by an individualised multidisciplinary management plan, which is documented in the patient's medical record, that covers the physical, psychological, emotional and social needs of the patient and includes negotiated goals within indicative time frames and formal assessment of functional ability.

Psychogeriatric care is not applicable if the primary focus of care is acute symptom control.

Psychogeriatric care excludes care which meets the definition of mental health care.

Maintenance care

Maintenance (or non-acute) care is care in which the primary clinical purpose or treatment goal is support for a patient with impairment, activity limitation or participation restriction due to a health condition. Following assessment or treatment the patient does not require further complex assessment or stabilisation. Patients with a care type of maintenance care often require care over an indefinite period.

Maintenance care excludes care which meets the definition of mental health care.

Newborn care

Newborn care is initiated when the patient is born in hospital or is nine days old or less at the time of admission. Newborn care continues until the care type changes or the patient is separated:

- patients who turn 10 days of age and do not require clinical care are separated and, if they remain in the hospital, are designated as boarders
- patients who turn 10 days of age and require clinical care continue in a newborn episode of care until separated
- patients aged less than 10 days and not admitted at birth (for example, transferred from another hospital) are admitted with a newborn care type
- patients aged greater than 9 days not previously admitted (for example, transferred from another hospital) are either boarders or admitted with an acute care type
- within a newborn episode of care, until the baby turns 10 days of age, each day is either a qualified or unqualified day
- a newborn is qualified when it meets at least one of the criteria detailed in Newborn qualification status.

Within a newborn episode of care, each day after the baby turns 10 days of age is counted as a qualified patient day. Newborn qualified days are equivalent to acute days and may be denoted as such.

Geriatric evaluation and management

Geriatric evaluation and management is care in which the primary clinical purpose or treatment goal is improvement in the functioning of a patient with multi-dimensional needs associated with medical conditions related to ageing, such as tendency to fall, incontinence, reduced mobility and cognitive impairment. The patient may also have complex psychosocial problems.

Geriatric evaluation and management is always:

- delivered under the management of or informed by a clinician with specialised expertise in geriatric evaluation and management, and
- evidenced by an individualised multidisciplinary management plan, which is documented in the patient's medical record that covers the physical, psychological, emotional and social needs of the patient and includes negotiated goals within indicative time frames and formal assessment of functional ability.

Geriatric evaluation and management excludes care which meets the definition of mental health care.

Mental health care

Mental health care is care in which the primary clinical purpose or treatment goal is improvement in the symptoms and/or psychosocial, environmental and physical functioning related to a patient's mental disorder. Mental health care:

- is delivered under the management of, or regularly informed by, a clinician with specialised expertise in mental health;
- is evidenced by an individualised formal mental health assessment and the implementation of a documented mental health plan; and
- may include significant psychosocial components, including family and carer support.

Examples

	Care Type
A patient is admitted for respite care in an acute hospital setting whilst their usual carer is away on holidays.	25

Client Status

Field name:	client_status
Definition:	The type of hospital service being provided to the patient.
Data type:	Numeric
Format:	Maximum N(2)
Permitted values:	0 - Funding Hospital 1 - Qualified Newborn 2 - Unqualified Newborn 4 - Nursing Home Type 6 - Admitted Client 10 – Contracted Care Unqualified Newborn

Guide for use

This data element should be collected in conjunction with Care Type.

Funding Hospital
Refers to a hospital funding a patient's care that is provided under contract to another hospital/health service.

Qualified Newborn
Refers to a newborn who is less than 10 days old and who is the subsequent live born infant of a multiple birth or is admitted to/remains in hospital without their mother, or is admitted to a Level 2 Special Care Nursery (SCN2) or Neonatal Intensive Care (NICU) facility. It is important to note that newborns meeting the above criteria are only recorded as 'qualified' when they have accumulated one day of qualified care during their admission.

Unqualified Newborn
Refers to a newborn which has not met at least one of the 'Qualified Newborn' criteria. All newborns who do not accumulate one day of qualified care during their admission are reported as unqualified.

Nursing Home Type Patient
Refers to a patient receiving Maintenance (non-acute) Care for a continuous period exceeding 35 days in one or more hospitals (with a break of no more than 7 consecutive days).

Admitted Client
Refers to a patient for whom the hospital accepts responsibility for treatment/care. Admitted patients do not include same day patients whose procedures do not require hospital admission, patients who are dead on arrival, aged care and flexible care residents, or mothers who elect to deliver at home and their newborn(s) are born at home (unless delivery is under an approved homebirth program and newborns requiring inpatient admission post-delivery) or boarders. Admitted Client may include same day patients whose procedures are cancelled if the patient meets other admission criteria.

Funding Qualified Newborn
Refers to a hospital funding a qualified newborn's care that is provided under contract to another hospital/health service.

Funding Unqualified Newborn
Refers to a hospital funding an unqualified newborn's care that is provided under contract to another hospital/health service.

Examples

	Client Status
A newborn baby is transferred from KEMH to Bunbury Regional Hospital aged three days and admitted with his mother for routine perinatal care for 1 night. Note: The baby cannot be a boarder given their age of<10	2
A patient is admitted to hospital for an appendectomy.	6

Date of Principal Procedure

Field name:	date_of_procedure
Definition:	The date on which a principal surgical procedure commenced during an inpatient episode of care.
Data type:	Date
Format:	YYYY-MM-DD
Permitted values:	N/A

Guide for use

The Principal Procedure Date is to be recorded for all principal procedures undertaken during an episode of care.

Examples

	Date of Procedure
A patient is admitted for a Vaginal Hysterectomy that was performed on 20/02/2011.	2011-02-20
A patient is admitted in labour and had to have an emergency Caesarean section for foetal distress on 18th April 2012.	2012-04-18

Major Diagnostic Category - Current

Field name:	major_diagnostic_categ_current
Definition:	The current major diagnostic category associated with the principal procedure.
Data type:	Numeric
Format:	Maximum N(2)
Permitted values:	N/A

Guide for use

These are mutually exclusive categories into which all possible principal diagnoses fall. The diagnoses in each MDC correspond to a single body system or aetiology, broadly reflecting the specialty providing care. There are 23 of these.

Each MDC is then partitioned according to whether or not an intervention is performed. This preliminary partitioning into MDC's occurs before a DRG is assigned.

There are two types of partitions that MDC's are divided into- Intervention and Medical. The partition is generally determined by either the presence or absence of a procedure.

MDC mappings are available online from the Independent Health and Aged Care Pricing Authority website: https://www.ihacpa.gov.au/resources/ar-drg-version-100

Refer to AR-DRG Version 10.0 Descriptions (Excel) for MDC descriptions and DRG mappings.

Examples

	Major Diagnostic Category
A patient is admitted to hospital and diagnosed with tonsillitis.	3

Metropolitan Hospital Flag

Field name:	metropolitan_hospital_flag
Definition:	Flag to show whether the hospital was a metropolitan or rural/regional hospital.
Data type:	Numeric
Format:	N(1)
Permitted values:	0 - Rural/regional hospital 1 - Metropolitan hospital

Guide for use

The metropolitan hospital flag is derived based on whether the patient received treatment at a metropolitan or rural/regional hospital.

Examples

	Metropolitan Hospital Flag
A patient is admitted to a hospital in the northern suburbs of Perth	1
A patient is admitted to a hospital in the Pilbara	0

Establishment Code

Field name:	establishment_code
Definition:	A unique four-digit number that is assigned by Department of Health (WA) to hospitals and other health related locations or establishments.
Requirement status:	Mandatory
Data type:	Numeric
Format:	NNNN

Guide for use

An establishment refers to an authorised/accredited physical location where patients can receive health care and stay overnight. This includes acute hospitals, residential aged care and nursing homes, rehabilitation and residential mental health facilities. For the purposes of reporting and other business requirements, virtual hospitals, same-day clinics, surgeries, nursing posts, detention centres or prisons must also be assigned an establishment code.

In the synthetic data the real establishment codes have been encrypted as a privacy preserving measure.

Person Identifier

Field name:	synth_person_ID
Definition:	The identifier generated for synthetic data.
Data type:	Numeric
Format:	Maximum N(7)
Permitted values:	N/A

Guide for use

This data element is synthesized by the DoH and used for synthetic data only. This linkage key is shared with linked representative Emergency Department Data Collection.

Principal Procedure

Field name:	principal_procedure
Definition:	The primary clinical intervention.
Requirement status:	Optional
Data type:	String
Format:	X(10)
Permitted values:	Refer to ACHI 12th Edition (effective from 1 July 2022)

Guide for use

Clinical interventions are those that are surgical in nature, and/or carry a procedural risk, and/or carry an anaesthetic risk, and/or require specialised training, and/or require special facilities or equipment only available in an acute care setting.

The following points should be taken into account when selecting procedures to code but it should be noted that sequencing of procedures, including the Principal Procedure, would not affect AR-DRG grouping.

When no procedure was performed for treatment of the principal diagnosis, use the following hierarchy:

- Procedure performed for treatment of additional diagnoses
- Diagnostic/exploratory procedure related to the principal diagnosis
- Diagnostic/exploratory procedure related to the additional diagnoses

Examples

	Separation Date
A patient is admitted to hospital to undergo an excision of a lesion on their breast (31500-00).	2019-07-01 14:00:00
A patient is admitted to hospital to undergo an emergency caesarean section (16520-03) and internal fetal monitoring (16514-00).	2019-02-20 00:00:00

Separation Datetime

Field name:	separation_datetime
Definition:	The date and time on which an admitted patient completes an episode of care.
Data type:	Date
Format:	DD-MM-YYYY HH:MM:SS
Permitted values:	N/A

Guide for use

The patient can be formally or statistically discharged from hospital anytime after admission.

If a patient dies in hospital, the separation date is the date of death.

Formal Separation/Discharge

- Refers to an administrative process that ceases a record of the patient's treatment and accommodation within a hospital. The Separation Date for a formal separation/discharge will be the date the hospital completed treatment and accommodation of the patient.

Statistical Separation/Discharge

- Refers to an administrative process that occurs within an episode of care and captures the end date the patient received a particular care type. The Separation Date for a statistical admission will be the date the patient completed a particular Care Type.

The ‘seconds’ component of the patient’s Separation Time is always reported as zeros.

Separation Time is captured in 24-hour clock format.

The time the patient was clinically declared neurologically dead is not the recorded time of separation. The separation time is when the patient’s life has ended, cessation of heartbeat and the formal notification of death is made.

Examples

	Separation Date
A patient is discharged from hospital on 1st July 2019 at 2pm	2019-07-01 14:00:00
A patient is transferred from hospital on 20th February 2019.	2019-02-20 00:00:00
A patient dies on 23rd March 2019 at 9:15am	2019-03-23 09:15:00

Sex recorded at birth, code

Field name:	sex
Definition:	A person's sex recorded at birth based upon their sex characteristics.
Data type:	Numeric
Format:	Maximum N(1)
Permitted values:	1 - Male 2 - Female

Guide for use

The collection of Sex is mandatory.

Sex is often used interchangeably with gender, however they are distinct concepts and it is important to differentiate between them.

When comparing the concepts of sex and gender:

- Sex is understood in relation to sex characteristics.
- Gender is about social and cultural differences in identity, expression and experience.

While they are related concepts, caution should be exercised when comparing counts for sex with those for gender.

Sex recorded at birth is important clinical information and must be collected for all patients. To ensure accuracy and consistency of data collection, gender diverse patients must still report their sex recorded at birth and their current gender in the gender field.

Code 3 "Another term" was removed from the synthetic data due to low numbers raising privacy concerns if synthesised.

Examples

	Sex
A patient is admitted from the waitlist to undergo surgery, the patient advises their sex is female.	2 – Female
A patient directly admitted to the ward discloses that their sex recorded at birth is male but they currently identify as a female.	1 – Male
A patient is admitted from the waitlist to undergo gender affirmation surgery from male to female.	1 – Male

Age Range

Field Name:	age
Definition:	Patient age at the time of presentation.
Data Type:	Numeric
Format:	X (120)
Permitted Values:	N/A

Guide for use

Ages are grouped in 5-year brackets and displayed as the lowest number in the bracket

Ages between 0-4 Age in data set = 0

Ages between 5-9 Age in data set = 5

Ages between 10-14 Age in data set = 10

Ages between 15-19 Age in data set = 15

Ages between 20-24 Age in data set = 20

Ages between 25-30 Age in data set = 25

continuing

Examples

	Recorded Age
A patient aged 87 at time of presentation	85
A patient aged 24 at time of presentation	20
A patient aged 9months at time of presentation	0

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