



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

# **Synthetic Emergency Department Data Collection – Linked Representative Data Dictionary**

**July 2025**

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<b>Links to:</b>	Information Management Policy Framework <a href="https://ww2.health.wa.gov.au/About-us/Policy-frameworks/Information-Management">https://ww2.health.wa.gov.au/About-us/Policy-frameworks/Information-Management</a>

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## Abbreviations

AIHW	Australian Institute of Health and Welfare
DoH	Department of Health
ED	Emergency Department
EDDC	Emergency Department Data Collection
EDIS	Emergency Department Information System
GP	General Practitioner
HITH	Hospital In The Home
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification
PAS	Patient Administration System
SSU	Short Stay Unit
WA	Western Australia

## Purpose

The purpose of this *Synthetic Emergency Department Data Collection Data Dictionary* is to detail the data elements captured in the *Emergency Department Data Collection* (EDDC) linked representative synthetic data.

## Background

The generation of synthetic emergency department data by the Department of Health is dependent on good quality data entered into the collection at the source.

## Generation of data

The generation of EDDC synthetic data at the Department of Health is performed in accordance with the data definitions.

The scope of the synthetic EDDC data is record of presentations at Emergency Departments between 01/01/2022 and 31/12/2022. Synthetic instances that are close to the source data have been removed to protect the patients' privacy.

## Data definitions

The following section provides specific information about data elements generated in the synthetic EDDC, including definitions, permitted values, guide for use, rules and operational examples.

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

Where relevant, related national definitions have been referenced. The Department of Health Western Australia acknowledges the assistance of the Australian Institute of Health and Welfare (AIHW) for services provided in relation to METeOR, Australia's repository for national metadata standards for the health, community services, early childhood, homelessness and housing assistance sectors, which is owned by the AIHW.

## Aboriginal Status

<b>Field Name:</b>	ethnicity
<b>Definition:</b>	A person's Aboriginal status.
<b>Data Type:</b>	Numeric
<b>Format:</b>	N
<b>Permitted Values:</b>	0 Neither Aboriginal and/or Torres Strait Islander 1 Aboriginal and/or Torres Strait Islander

### Guide for use

There are three components to the Commonwealth definition of Aboriginal or Torres Strait Islander: descent, self-identification, and community acceptance. In practice, it is not feasible to collect information on community acceptance in general purpose data collections. Therefore, standard questions on Aboriginal status relate to descent and self-identification only.

Within Western Australia, the term Aboriginal is used in preference to Aboriginal and Torres Strait Islander, in recognition that Aboriginal peoples are the original inhabitants of Western Australia. No disrespect is intended to our Torres Strait Islander colleagues and community.

As a privacy preserving feature. In the synthetic dataset, codes 1, 2, and 3 have been aggregated into "Aboriginal and/or Torres Strait Islander". Other codes have been aggregated into "Neither Aboriginal and/or Torres Strait Islander".

### Examples

	Aboriginal Status
A person who identifies as Aboriginal attends the Hospital ED.	1 Aboriginal and/or Torres Strait Islander

## Referral Source

<b>Field Name:</b>	referral_source
<b>Definition:</b>	The source (person or organisation) from which the person presenting at the emergency department was referred or transferred.
<b>Data Type:</b>	String
<b>Format:</b>	N[N(1)]
<b>Permitted Values:</b>	1 Appointment 2 GP – Letter 3 GP – No letter 4 Self/relative 5 Clinic 6 Other hospital 7 Other 8 Health Direct 9 No GP access 10 Recalled medical staff 11 Unknown 12 Nursing Home 13 Hospital in the Home

## Guide for use

The collection of Referral Source is mandatory.

## Examples

	Aboriginal Status
A patient has GP referral letter to visit Royal Perth Hospital ED.	2 – GP – Letter
A patient has Perth Children's Hospital doctor referral to Sir Charles Gairdner Hospital ED.	6 – Other hospital

## Affected by Drugs and or Alcohol

<b>Field Name:</b>	affected_by_drugs_and_or_alcohol
<b>Definition:</b>	Patient affected by drugs or alcohol.
<b>Data Type:</b>	Numeric
<b>Format:</b>	[N]
<b>Permitted Values:</b>	0. Patients are not affected by either drugs or alcohol 1. Patients are affected by either or both drugs and alcohol

### Guide for use

This flag is applied to all patients relating to whether the patient demonstrates any effects of drugs or alcohol

### Examples

	Affected by Drugs and Alcohol
The patient demonstrates no effects caused by either drugs or alcohol	0
The patient demonstrates effects by either drugs or alcohol or both	1

## Age Range

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

## Bed Request Datetime

<b>Field name:</b>	bed_request_datetime
<b>Definition:</b>	Date and time that an inpatient bed is requested for a patient.
<b>Requirement status:</b>	Conditional
<b>Data type:</b>	Datetime
<b>Format:</b>	DD-MM-YYYY HH:MM
<b>Permitted values:</b>	N/A

### Guide for use

The collection of the Bed request date and time is conditional. It is expected for all patients who are admitted. When no bed is available in the hospital the patient may be transferred to another hospital for admission.

### Examples

	Bed Request Datetime
An ED clinician has requested a bed for a patient on 14 October 2022 at 1:45pm.	14-10-2022 13:45

## Clinical Care Commencement Datetime

<b>Field Name:</b>	clinical_care_commencement_datetime
<b>Definition:</b>	Time clinical care commenced- first time seen by a healthcare practitioner.
<b>Data Type:</b>	Datetime
<b>Format:</b>	DD-MM-YYYY HH:MM
<b>Permitted Values:</b>	N/A

### Guide for use

The time recorded when a patient is first seen by a healthcare practitioner. This time is when the patient is first seen by a doctor in a metro hospital but can be when a patient is first seen by a nurse in some rural establishments.

### Examples

	Clinical Care Commencement Datetime
Patient was seen by a nurse in a rural health establishment on 14 October 2022 at 1:45pm.	14-10-2022 13:45
Patient was seen by a doctor in metro ED on 14 October 2022 at 1:45pm.	14-10-2022 13:45

## Departure Status

<b>Field Name:</b>	departure_status
<b>Definition:</b>	The outcome of a patient's ED attendance. Also known as Episode End Status, Disposition or Emergency Discharge Status.
<b>Data Type:</b>	Numeric
<b>Format:</b>	N
<b>Permitted Values:</b>	<ol style="list-style-type: none"> <li>1. Admitted to ward/other admitted patient unit</li> <li>2. ED service event completed; departed under own care</li> <li>3. Transferred to another hospital for admission</li> <li>4. Did not wait to be attended by medical officer</li> <li>5. Left at own risk</li> <li>6. Died in ED</li> <li>8. Referred to After Hours General Practitioner</li> <li>9. Unknown</li> <li>10. Admitted to ED Observation Ward</li> <li>14. Returned to Hospital in the Home</li> <li>19. Discharged After Admission</li> <li>20. Reversal</li> </ol>

### Guide for use

Further details about the permitted values and use are detailed below:

1. If the patient was admitted to the hospital ward. This includes inpatients being returned to a physical ward.
2. If the patient's service event is complete and then leaves ED under their own care.
3. If transferred to (an) other acute hospital – refers to patients separated to another acute care facility. This includes designated psychiatric units that are part of an acute hospital.
4. If the patient did not wait to be attended by a health care professional for clinical care to commence.
5. Left at own risk after being attended by a health care professional but before the non-admitted patient emergency department service episode was completed.
6. Refers to patients separated due to their death while at ED.
8. If the patient got referred at ED triage to other Health Care Service for treatment.
9. Unknown
10. When the patient is admitted to ED Short Stay Unit as a result of triage.
14. Returned to Hospital in the Home
19. Discharged after Admission
20. Reversal

## Examples

	Departure Status
A patient who attended Hospital ED is sent home after being treated by an ED doctor.	2 – ED service event completed; departed under own care
A patient who attended Hospital ED is admitted as they require further medical care.	1 – Admitted to the hospital (SSU / HITH / ward)
A patient who attended Hospital ED decided that they did not want to wait to be seen by medical staff after having been triaged.	4 – Did not wait to be attended by medical officer
A patient who attended Hospital ED has care commenced by a health care professional but left the ED before the episode was completed.	5 – Left at own risk

## Discharge Datetime

<b>Field Name:</b>	discharge_datetime
<b>Definition:</b>	The Date and time that the patient is discharged from the ED.
<b>Data Type:</b>	Datetime
<b>Format:</b>	DD-MM-YYYY HH:MM
<b>Permitted Values:</b>	N/A

### Guide for use

The date that the patient is physically discharged from ED.

If the service episode is completed without the patient being admitted, then record the date the patient's emergency department non-admitted clinical care is completed.

If the service episode is completed and the patient is referred to another hospital for admission, then record the date the patient's emergency department non-admitted clinical care is completed.

If the patient did not wait, then record the date the patient leaves the emergency department or was first noticed as having left.

If the patient left at their own risk, then record the date the patient leaves the emergency department or was first noticed as having left.

If the patient was registered, advised of another health-care service, and left the emergency department without being attended by a health-care professional, then record the date the patient leaves the emergency department.

### Examples

	Discharge Datetime
A patient who was discharged from Hospital on 15 March 2022 at 2:00 pm.	15-03-2022 14:00
A patient presented to a Hospital ED on 5 April 2022 at 10:00am, they left the hospital 2 hours later before being seen by medical staff	05-04-2022 12:00

## Establishment Code

<b>Field Name:</b>	establishment_code
<b>Definition:</b>	A unique four-digit number that is assigned by Department of Health (WA) to hospitals and other health related locations or establishments. This number is encrypted.
<b>Data Type:</b>	Numeric
<b>Format:</b>	NNNN
<b>Permitted Values:</b>	N/A

### 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 may also be assigned an establishment identifier.

## Mental Health Admission

<b>Field Name:</b>	mental_health_admission
<b>Definition:</b>	Flag all Mental admissions based on departure status of admitted and Principal Diagnoses and or symptoms.
<b>Data Type:</b>	Numeric
<b>Format:</b>	[N]
<b>Permitted Values:</b>	0. Not admitted following a mental health related attendance 1. Admitted following a mental health related attendance

### Guide for use

This flag is applied for patients who have a mental health attendance and are subsequently admitted to hospital

This field has been pre-calculated in the synthetic data set.

### Examples

	Mental Health Admission
A patient who has a mental health attendance, but the ED event is completed by the patient departing under their own care	0
A patient who has a mental health attendance who is later admitted to hospital	1

## Mental Health Attendance

<b>Field Name:</b>	mental_health_attendance
<b>Definition:</b>	Flag all Mental health attendances based on certain Primary Diagnoses or symptoms.
<b>Data Type:</b>	Numeric
<b>Format:</b>	[N]
<b>Permitted Values:</b>	0. Not mental health related 1. Mental health related

### Guide for use

The calculation is based on whether the patient has one of a certain set of primary diagnosis codes, or whether the patient has any of a defined set of symptoms regardless of their primary diagnosis code.

This field has been pre-calculated in the synthetic data set.

### Examples

	Mental Health Attendance
A patient who has a primary diagnosis code which is not included in the mental health attendance calculation and does not have any of the defined symptoms recorded	0
A patient who has a primary diagnosis code which is included in the mental health attendance calculation and or have any of the defined symptoms recorded	1

## Metropolitan Hospital Flag

<b>Field Name:</b>	metropolitan_hospital_flag
<b>Definition:</b>	Whether the Hospital the patient visited was a Metro hospital.
<b>Data Type:</b>	Numeric
<b>Format:</b>	[N]
<b>Permitted Values:</b>	0. Rural hospital 1. Metropolitan hospital

### Guide for use

This flag is applied based on the location of the hospital. If the hospital is located within the geographical area defined as metro, then the metropolitan hospital flag is applied. If the hospital is not located in the geographical area defined as metro then the rural hospital flag is applied.

### Examples

	Metropolitan Hospital Flag
A hospital is located outside of the geographical area determined to be metro area is classed as rural	0
A hospital is located in the geographical area determined to be metro	1

## Mode of Arrival

<b>Field Name:</b>	mode_of_arrival
<b>Definition:</b>	Patient's mode of arrival at the ED.
<b>Data Type:</b>	Numeric
<b>Format:</b>	N
<b>Permitted Values:</b>	<ol style="list-style-type: none"> <li>1. Private transport</li> <li>2. Public transport</li> <li>3. Ambulance</li> <li>4. Hospital transport</li> <li>5. Police/Correctional Services</li> <li>6. Helicopter rescue</li> <li>7. Royal Flying Doctor Service</li> <li>8. Other</li> <li>9. Not Stated/Unknown</li> <li>10. Taxi</li> </ol>

### Guide for use

This field provides information regarding how they arrived at the ED.

If a patient is transported by the Royal Flying Doctor Service to an airport and then taken to hospital by ambulance, the Royal Flying Doctor Service must be coded as it takes priority over other forms of transport.

### Examples

	Mode of Arrival
A patient arrived at Hospital by St John WA Ambulance.	3 – Ambulance
A patient evacuated to Hospital by emergency helicopter.	6 – Helicopter rescue
Royal Flying Doctor Service evacuates a patient from smaller hospital to a larger regional or metro hospital. The patient lands at an airport close to the transfer hospital and the patient is transferred from the airport to the next hospital by ambulance.	7 – Royal Flying Doctor Service

## Person Identifier

<b>Field Name:</b>	synth_person_ID
<b>Definition:</b>	The encrypted root number from data linkage.
<b>Data Type:</b>	Numeric
<b>Format:</b>	X (50)
<b>Permitted Values:</b>	N/A

## Guide for use

Every Patient receives a unique Person Identifying Number, which is generated by Data Linkage Branch. This linkage key is shared with linked representative Hospital Morbidity Data Collection.

## Potentially Avoidable General Practitioner Type Attendance

<b>Field Name:</b>	potentially_avoidable_general_practitioner_type_attendance
<b>Definition:</b>	This flag is applied if the ED attendance meets a list of specific criteria. This calculation has already been applied to the data present in this data set.
<b>Data Type:</b>	Numeric
<b>Format:</b>	[N]
<b>Permitted Values:</b>	0. Non avoidable Attendance 1. Avoidable Attendance

### Guide for use

This field includes a number of data variables in its calculation and has therefore been pre-calculated in the synthetic data set.

## Presentation Datetime

<b>Field Name:</b>	presentation_datetime
<b>Definition:</b>	The date and time the patient first arrives at the Emergency Department.
<b>Data Type:</b>	Datetime
<b>Format:</b>	DD-MM-YYYY HH:MM
<b>Permitted Values:</b>	N/A

## Guide for use

Presentation Datetime is the earliest point of contact within an emergency department. It is the reference period for all Emergency department local reporting.

## Examples

	Presentation Datetime
A patient presented to a Hospital ED on 10 May 2022 at 07:02am.	10-05-2022 07:02

## Primary Diagnosis ICD-10-AM Chapter

<b>Field name - Dataset:</b>	primary_diagnosis_ICD10AM_chapter
<b>Definition:</b>	Chapter level roll of the Principal Diagnosis.
<b>Data type:</b>	String
<b>Format:</b>	[X(255)]
<b>Permitted values:</b>	

### Guide for Use

Derived from Primary Diagnosis. Groupings based on AIHW grouping as per Emergency department care 2016–17: Australian hospital statistics report.

A0 (A00-B99)	Certain Infectious and parasitic diseases
C0 (C00-D48)	Neoplasms
D5 (D50-D89)	Diseases of blood and blood forming organs and certain disorders involving the immune mechanism
E0 (E00-E90)	Endocrine, nutritional and metabolic diseases
F0 (F00-F99)	Mental and behavioural disorders
G0 (G00-G99)	Diseases of nervous system
H0 (H00-H59)	Diseases of eye & adnexa
H6 (H60-H95)	Diseases of ear & mastoid process
I0 (I00-I99)	Diseases of circulatory system
J0 (J00-J99)	Diseases of respiratory system
K0 (K00-K93)	Diseases of digestive system
L0 (L00-L99)	Diseases of the skin and subcutaneous tissue
M0 (M00-M99)	Diseases of musculoskeletal system and connective tissue
N0 (N00-N99)	Diseases of genitourinary system
O0 (O00-O99)	Pregnancy, childbirth and the puerperium
P0 (P00-P96)	Certain conditions originating in the perinatal period
Q0 (Q00-Q99)	Congenital malformations, deformations and chromosomal abnormalities
R0 (R00-R99)	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified ill-defined conditions
S0 (S00-T98)	Injury, poisoning and certain other consequences of external causes
U0 (U00-U49)	Provisional assignment of new diseases of uncertain aetiology or emergency use
U5 (U50-Y98)	External causes of morbidity and mortality
Z0 (Z00-Z99)	Factors influencing health status and contact with health services
Missing (MISSING)	ICD-10-AM Chapter Code not recorded

## Self Harm Attendance

<b>Field Name:</b>	Self_harm_attendance
<b>Definition:</b>	Flag if patient self harm injured
<b>Data Type:</b>	Numeric
<b>Format:</b>	[N]
<b>Permitted Values:</b>	0. Not a self harm related attendance 1. A self harm related attendance

### Guide for use

This flag is applied based on clinical assessment. If the patient demonstrates an injury that was intentionally caused to the patient by the patient, then the self-harm related attendance flag is applied.

## Sex recorded at birth, code

<b>Field Name:</b>	sex
<b>Definition:</b>	A person's sex recorded at birth based upon their sex characteristics.
<b>Data Type:</b>	Numeric
<b>Format:</b>	N
<b>Permitted Values:</b>	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.

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" and code 9 "Not stated/Inadequately described" were removed from the synthetic data due to low numbers raising privacy concerns if synthesised.

### Examples

	Sex
A patient presented to ED and discloses their sex recorded at birth is male.	1 – Male
A patient presented to ED discloses that their sex recorded at birth is male, but they currently identify as a female.	1 – Male

## Triage Category

<b>Field Name:</b>	triage_category
<b>Definition:</b>	The urgency of the patient's need for medical and nursing care, as represented by a code.
<b>Data Type:</b>	Numeric
<b>Format:</b>	N(5)
<b>Permitted Values:</b>	<ol style="list-style-type: none"><li>1. Resuscitation: immediate (within seconds)</li><li>2. Emergency: within 10 minutes</li><li>3. Urgent: within 30 minutes</li><li>4. Semi-urgent: within 60 minutes</li><li>5. Non-urgent: within 120 minutes</li></ol>

### Guide for use

The collection of Triage category is Mandatory.

A patient must have a triage assessment completed as soon as possible on arrival, to enable them to be prioritised on the basis of illness or injury severity and their need for medical and nursing care.

The patient must be assigned a triage category based on the Australasian Triage Scale (ATS). The triage category cannot be retrospectively changed to another category except under exceptional circumstances, for example, if the patient's condition deteriorates during the course of their episode and a second triage assessment was conducted to reflect a different triage category.

Produced by:  
Information and Performance Governance  
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Purchasing and System Performance Division  
The Department of Health Western Australia

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