Data Dictionary

# NSW Emergency Department Data Collection

Legacy Data dictionary for data to 30 June 2023

October 2023

NSW GOVERNMENT

# Contents

# Background

The primary purpose of collecting Emergency Department data in NSW to monitor patient presentations to, and the activity undertaken in, the Emergency Departments (EDs) of public hospitals and in scope contracted private hospitals in NSW.

Each record in the Emergency Department Data Collection (EDDC) represents a presentation to an emergency department. An Emergency Presentation is where a person presents to the Emergency Department for emergency care and treatment. This includes patients that are transferred from another unit or ward within the facility or another facility's Emergency Department for treatment within the ED. Presentations to an Emergency Department include, but are not limited to, patients who:

- Register to be seen for an ED service but did not wait for the service to be delivered
- Are triaged and advised to seek alternate services, and then depart the ED
- Are dead on arrival if an ED clinician certifies the death
- Are provided with clinical assessment and advice via telehealth. Such services must be identified as being provided via telehealth

A patient treated in the ED who is subsequently admitted to the hospital will require the reporting of an ED presentation to the EDDC and an admitted patient record reported to the Admitted Patient Data Collection. All patients remain in-scope for this collection until they are recorded as having physically departed the emergency department.

## Changes to data collection – July 2023

On 1 July 2023 NSW Health launched a new centralised data warehouse known as EDWARD: a contemporary system to ensure our data and information is high quality, integrated, accessible and utilised.

This data dictionary document and variable lists describes the content and form of data collected in the previous system and are applicable for data relating ED visits prior to 1 July 2023.

CHEREL services will continue with NSW EDDC data to June 2023 in their current format.

Additional information on the timelines and detail regarding the structure, format, and availability of EDDC data relating to ED Visits on or after 1 July 2023 for linked data projects be made available once confirmed.

# Considerations for using EDDC in linkage studies

The NSW EDDC has substantial limitations. These limitations must be considered when planning a study using ED data, and, when interpreting and presenting the results.

## Limitations of EDDC for linkage studies

### Ed Coverage

- The EDDC commenced in 1994. It was only organised into a formal data collection from July 1996.
- Personal identifiers were included in the data collection from 1 January 2005 onwards.

- The number of hospitals participating in the EDDC has increased over time from approximately 52 in 1996-97 to 184 in 2016-17. The number of hospitals participating has been lower in rural Local Health Districts.
- The larger EDs participate in the EDDC so a substantial proportion of the NSW population is covered, however this varies over time. To determine the proportion of total NSW ED visits captured by the NSW EDDC, use the number of ED presentations reported in the NSW Department of Health Annual Report as a denominator, as this is an independent source of information collected on all hospitals.
- Only public hospital EDs are available for record linkage.
- Records from Northern Beaches Hospital are not yet available for linkage.

## Diagnosis coding

The NSW Admitted Patient Data Collection has diagnoses coded by trained clinical information managers who choose diagnoses from the Australian clinical version of the International Classification of Diseases (ICD). The EDDC, on the other hand, has diagnoses recorded by medical, nursing, or clerical personnel at the point of care. These personnel are not trained in clinical coding. The diagnoses are selected by keyword searching or tables of a limited set of diagnoses. The codes are assigned to the chosen diagnosis using tables built into the computer database program.

Other points to note are:

- There are several different computer programs used in NSW Emergency Departments (EDs). Different programs use different classifications to record the diagnosis, including ICD-9-CM (Clinical Modification), ICD-10-AM (Australian Modification), or SNOMED CT (see https://www.healthterminologies.gov.au/) If you intend on analysing ED diagnoses, you need to determine the codes from each of these classifications that relate to the disease or symptom grouping to be studied.
- Variation in computer programs and management practices at EDs may lead to variation in diagnosis coding practices. Some disease categories are not available in some programs but may be in others.
- A small number of hospitals have had limited completeness of diagnosis entry over some periods of time.
- You should carefully select which EDs to include in the analysis based on how long the ED has participated in the EDDC and specific diagnosis code and completeness factors.
- Symptoms can be, and often are, selected as diagnoses.
- Diagnoses can be very specific or very broad. For example, someone with the same symptoms might be assigned a diagnosis of "influenza" or "viral infection".

## Other limitations

- The other main source of primary care in Australia is general practice services. Because of variability in GP service availability, limited consultation hours and variation in bulk billing practices, ED activity may be very sensitive to availability of GP services.
- Emergency Departments have different visit types, the most common being an "Emergency Visit". The data field “Type of visit” records this, however the accuracy of this field is uncertain. Since 2007, the gradual rollout of new ED patient management software in most NSW hospitals may have led to a change in the accuracy of this field over time.
- Introduction of the new ED patient management software may have led to an unpredictable change in the accuracy of the "mode of separation" field over time at some hospitals. This field records the departure status of the patient, such as "Departed following treatment", or "Admitted to a critical care ward". Some problems with this field were not identified until well after introduction of the software and may have taken some time to correct.

# Geographical boundaries

- Census year geographical boundaries, based on the patient residential address at the time of admission are available for all years and records. When considering which version(s) of a boundary to select, you should consider which boundary versions are used in the relevant area level data for the project (e.g. population data, SEIFA, or ARIA indices, other data source in a linked data project).
- Postcode is not considered a geographical boundary.

# Access to information on Aboriginal and Torres Strait Islander peoples

An application to the Aboriginal Health and Medical Research Council (AH&MRC) ethics committee should be made for research projects for which one or more of the following apply:

- The experience of Aboriginal people is an explicit focus of all or part of the research
- Data collection is explicitly directed at Aboriginal peoples
- Aboriginal peoples, as a group, are to be examined in the results
- The information has an impact on one or more Aboriginal communities
- Aboriginal health funds are a source of funding

Research that is not specifically directed at Aboriginal people or communities, such as for the total population or a sub-population (e.g., rural NSW, people over 50 years old) can still potentially impact on Aboriginal people.

However, an application for such research need only be made to the Committee if any one of the following applies:

- Any of the five factors listed above are present: or
- Aboriginal people are known, or are likely, to be significantly over-represented in the group being studied (e.g., compared to the 2.1% of the total NSW population as shown in the 2006 Census); or
- The Aboriginal experience of the medical condition being studied is known, or is likely, to be different from the overall population; or
- There are Aboriginal people who use the services being studied in distinctive ways, or who have distinctive barriers that limit their access to the services; or
- It is proposed to separately identify data relating to Aboriginal people in the results.

The AH&MRC ethics committee have some specific requirements, including evidence of community engagement in the research. Relevant documents can be found on the AH&MRC website at: http://www.ahmrc.org.au. If you are unsure whether an application to the AH&MRC Ethics Committee is required, please seek the advice of the Ethics Committee secretariat (T: 02 9212 4777)

# Data Custodian

Executive Director, System Information and Analytics, NSW Ministry of Health.

CHeReL organises data custodian sign-off for NSW APDC data on behalf of the researcher. To arrange sign-off, please contact:

Research Project Manager

Centre for Health Record Linkage

NSW Ministry of Health

1 Reserve Road

ST LEONARDS NSW 2065

Post: Locked Mail Bag 961

North Sydney NSW 2059

Phone: 02 9391 9924

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Email: MOH-CHeReL@health.nsw.gov.au

# Variable list

Note that the variable list below is valid for data to June 2023 only.

| Variable | Description/Notes | Name[s] in dataset | Codes |
|---|---|---|---|
| Facility type | The category of the facility through which the health service is delivered. | facility_type | |
| Peer group | Facility peer grouping (Public Hospitals only) For more information please see: https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=IB2016_013 | peer_group | Codes: Peer group |
| Local Health District of Facility | | area_identifier | Codes: Local Heath District (LHD) |
| Facility identifier | The specific establishment where the presentation occurred. Where information on specific facilities is required, specify by name. | facility_identifier | Code lists are updated regularly. |
| Arrival date | Date at which the person presents for the service | arrival_date | |
| Arrival time | Time at which the person presents for the service | arrival_time | |
| Triage date | The date on which a person who presented to an Emergency Department was triaged (i.e., assessed by a Triage Nurse). | triage_date | |
| Triage time | The time at which a person who presented to an Emergency Department was triaged (i.e., assessed by a Triage Nurse). | triage_time | |
| Doctor seen date | The date that the first medical officer commences assessment or treatment of the patient. | first_seen_clinician_date | |
| Doctor seen time | The time that the first medical officer commences assessment or treatment of the patient. | first_seen_clinician_time | |
| Nurse Practitioner seen date | The date that treatment is commenced by a nurse. | first_seen_nurse_date | |
| Nurse Practitioner seen time | The time that treatment is commenced by a nurse. | first_seen_nurse_time | |

| Variable | Description/Notes | Name[s] in dataset | Codes |
|---|---|---|---|
| Departure ready date | The date recorded to indicate that patient management undertaken in an Emergency Department was completed, and the patient was ready to depart the ED. | departute_ready_date | |
| Departure ready time | For the admitted patient, the time at which the assessment and initial treatment of the person is completed. For the Non-admitted patient, the time at which the assessment and initial treatment of the person is completed such that if home arrangements of the person (including transport) were available the person could depart. | departute_ready_time | |
| Actual departure date | For the admitted patient this refers to the date the person is either 1) transferred to a ward or other unit or 2) leaves the ED for transfer to another unit. For non-admitted patients this refers to the date at which the assessment and initial treatment is completed and/or they physically leave the department. | actual_departure_date | |
| Actual departure time | For the admitted patient this refers to the time the person is either 1) transferred to a ward or other unit or 2) leaves the ED for transfer to another unit. For non-admitted patients this refers to the time at which the assessment and initial treatment is completed and/or they physically leave the department. | actual_departure_time | |
| Triage category | Triage is the process used to classify patients according to the urgency of their needs for medical and nursing care | triage_category | Codes: Triage category |
| Referral source | Source from which the person was referred to this service | ed_source_of_referral | Codes: Referral source |
| Type of visit | The reason the person presents to the Emergency Department | ed_visit_type | Codes: ED visit type |
| Mode of arrival | Mode of transport by which the person arrives | arrival_mode | Codes: Mode of arrival |
| Mode of separation | The status of the person at separation from the Emergency Department | mode_of_separation | Codes: Mode of separation |
| Referred to on departure | Referred to at the end of the Emergency Department Contact. | referred_to_on_departure_recode | Codes: Referred to on departure |
| Clinical codeset | An identifier to identify the classification scheme a principal diagnosis has been mapped to. | clinical_codeset | ICD10AM; ICD10V8; ICD9CM; SNOMEDCT |
| Principal ED Diagnosis | The diagnosis or condition established after assessment to be responsible for the person presenting to the Emergency | ed_diagnosis_sct, ed_diagnosis_code | Cerner FirstNet sites – SNOMED CT |

| Variable | Description/Notes | Name[s] in dataset | Codes |
|---|---|---|---|
| | Department. If the person is admitted as an inpatient it is the equivalent of the admission diagnosis.<br>For Cerner FirstNet sites, this variable is captured as “Discharge Diagnosis”. For EDIS and iPM sites it is known as “Principal Diagnosis” | | EDIS, iPM and Health-e-care – ICD9 and ICD10 |
| Compensable status | A person is classified as a compensable patient if they are entitled to the payment of, or have been paid compensation, damages or other benefits (including a payment in settlement of a claim for compensation, damages or other benefits) in respect of the injury, illness or disease for which he or she is receiving care and treatment. | compensable_status | Codes: Compensable status |
| Department of Veterans Affairs card type | Indicates the type of Veterans Affairs card | DVA_card_type | 1 = White Card; 2 = Gold Card; 3 = Orange Card |
| Sex | The biological sex of the patient. | sex | Codes: Sex |
| Age | The age in years of the patient (derived) | age_recode | Arrival date – date of birth |
| Age group | Five year age group, derived from re-coded age | age_grouping_recode | Codes: Age group |
| Birth date | Full date of birth will only be supplied if sufficient justification is supplied that age is insufficient. Year and month may be provided | birth_date | |
| Country of birth | | country_of_birth | SACC 2016 |
| Marital status | The marital status of the patient at time of presentation | marital_status_nhdd | |
| Indigenous status | Whether the person is Aboriginal or Torres Strait Islander, based on the person’s own self-report. See notes above regarding access to this variable. | indigenous_status | |
| Need for interpreter service | Need for interpreter services as perceived by the person. Whether or not an interpreter is actually provided is not relevant. | need_interpreter_service | ' ' = Interpreter not needed; ‘Y’ = Interpreter needed |
| Preferred language | The language (including sign language) most preferred by the person for communication | preferred_language_ascl | ASCL 2016 |
| State of residence | Indicates the Australian state of residence for the patient. | state_of_recidence_recode | Codes: State of usual residence |

| Variable | Description/Notes | Name[s] in dataset | Codes |
|---|---|---|---|
| LHD of residence | Local Health District of residence (2010 boundaries) | LHD_2010_code | Codes: Local Heath District (LHD) |
| Primary Health Network 2015 | Primary Health Network 2015 | PHN_2015_Code | PHN Boundaries |
| Australian Statistical Geography Classification (ASGC) 2001 Boundaries | Statistical Local Area 2001 | SLA_2001_code | ASGC 2001 |
| | Local Government Area 2001 | LGA_2001_code | |
| ASGC 2006 Boundaries | 2006 Statistical Local Area 2006 | SLA_2006_code | ASGC 2006 |
| | Local Government Area 2006 | LGA_2006_code | |
| ASGC 2011 Boundaries | Statistical Local Area 2011 | SLA_2011_code | ASGC 2011 |
| Australian Statistical Geography Standard (ASGS) 2011 Boundaries | ASGS 2011 Statistical Area Level 2 | SA2_2011_code | ASGS 2011 |
| | ASGS 2011 Statistical Area Level 3 | SA3_2011_code | |
| | ASGS 2011 Statistical Area Level 4 | SA4_2011_code | |
| | Local Government Area 2011 | LGA_2011_code | |
| ASGS 2016 Boundaries | ASGS 2016 Statistical Area Level 2 | SA2_2016_code | ASGS 2016 |
| | ASGS 2016 Statistical Area Level 3 | SA3_2016_code | |
| | ASGS 2016 Statistical Area Level 4 | SA4_2016_code | |
| | Local Government Area 2016 | LGA_2016_code | |

CEE are unable to commit to any specific time frames relating to linkage of EDWARD sourced data. CEE are unable to commit to any specific time frames relating to linkage of EDWARD sourced data.

# Code lists

## Codes: Compensable status

| Code | Description |
|---|---|
| 1 | Non-compensable |
| 2 | WorkCover |
| 3 | Motor Accident Act |
| 4 | Transcover |
| 5 | Other Compensable |
| 6 | Medicare Ineligible/Overseas Visitor |
| 7 | Department of Veteran's Affairs |
| 8 | Defence Force personnel |
| 9 | Eligible Overseas Visitor |

## Codes: Referral source

| Code | Description |
|---|---|
| 1 | Self, family, friends |
| 2 | Specialist |
| 3 | Outpatient clinic |
| 4 | General Medical Practitioner or Dentist (not hospital based) |
| 5 | Residential Aged Care facility |
| 6 | Other hospital in Area Health Service |
| 7 | Other hospital outside Area Health Service |
| 8 | Other hospital outside NSW |
| 9 | Mental health |
| 10 | Department of Community Services |
| 11 | Other Community Service, other than Health |
| 12 | Prison or Justice Health |
| 14 | Occupational Health |
| 15 | Other health service |
| 16 | Community Health Service |
| 17 | After hours or co-located service |
| 18 | Hostel/group home |
| 19 | Employer |
| 99 | Other |

## Codes: ED visit type

| Code | Description |
|---|---|
| 01 | Emergency presentation |
| 02 | Return visit - planned |
| 03 | Unplanned return visit for continuing condition |
| 04 | Outpatient clinic |
| 05 | Privately referred, non-admitted person |
| 06 | Pre-arranged admission: without ED workup |
| 08 | Pre-arranged admission: with ED workup |
| 09 | Person in transit |
| 10 | Dead on arrival |
| 11 | Disaster |

## Codes: Local Heath District (LHD)

| Code | Description |
|---|---|
| X700 | Sydney LHD |
| X710 | South Western Sydney LHD |
| X720 | South Eastern Sydney LHD |
| X730 | Illawarra Shoalhaven LHD |
| X740 | Western Sydney LHD |
| X750 | Nepean Blue Mountains LHD |
| X760 | Northern Sydney LHD |
| X770 | Central Coast LHD |
| X800 | Hunter New England LHD |
| X810 | Northern NSW LHD |
| X820 | Mid North Coast LHD |
| X830 | Southern NSW LHD |
| X840 | Murrumbidgee LHD |
| X850 | Western NSW LHD |
| X860 | Far West LHD |
| X630 | Sydney Children's Hospitals Network |
| X690 | St Vincent's Health Network |
| X180 | Forensic Mental Health Network |
| X170 | Justice Health |
| X910 | NSW not further specified |
| X920 | Victoria |
| X921 | Albury (Victoria in-reach) |
| X930 | Queensland |
| X940 | South Australia |

| Code | Description |
|---|---|
| X950 | Western Australia |
| X960 | Tasmania |
| X970 | Northern Territory |
| X980 | Australian Capital Territory |
| X990 | Other Australian Territories |
| X997 | Overseas Locality |
| X998 | No Fixed Address |
| 9999 | Missing |

## Codes: Indigenous Status

| Code | Description |
|---|---|
| 1 | Aboriginal |
| 2 | Torres Strait Islander |
| 3 | Aboriginal and Torres Strait Islander origin |
| 4 | Neither Aboriginal nor Torres Strait Islander |
| 5 | Indigenous – not further specified |
| 8 | Declined to respond |
| 9 | Unknown |

## Codes: Marital Status (NHDD)

| Code | Description |
|---|---|
| 1 | Never married |
| 2 | Widowed |
| 3 | Divorced |
| 4 | Separated |
| 5 | Married (including de facto) |
| 6 | Not stated/inadequately described |

## Codes: Age group

| Code | Description |
|---|---|
| 1 | 0 - 4 years |
| 2 | 5 - 9 years |
| 3 | 10 - 14 years |
| 4 | 15 - 19 years |
| 5 | 20 - 24 years |
| 6 | 25 - 29 years |
| 7 | 30 - 34 years |
| 8 | 35 - 39 years |
| 9 | 40 - 44 years |

| Code | Description |
|---|---|
| 10 | 45 - 49 years |
| 11 | 50 - 54 years |
| 12 | 55 - 59 years |
| 13 | 60 - 64 years |
| 14 | 65 - 69 years |
| 15 | 70 - 74 years |
| 16 | 75 - 79 years |
| 17 | 80 - 84 years |
| 18 | 85+ years |
| 19 | Missing / invalid data |

## Codes: Mode of arrival

| Code | Description |
|---|---|
| 1 | State Ambulance vehicle |
| 2 | Community/public transport |
| 3 | Private vehicle |
| 4 | Helicopter Rescue Service |
| 5 | Air Ambulance Service |
| 6 | Internal ambulance/transport |
| 7 | Police/Correctional Services vehicle |
| 8 | Other, e.g. undertakers/contractors |
| 9 | No transport (walked in) |
| 10 | Retrieval |
| 11 | Internal bed/wheelchair |

## Codes: Mode of separation

| Code | Description |
|---|---|
| 1 | Admitted: To ward/inpatient unit, not a critical care ward |
| 2 | Admitted and discharged as inpatient within ED |
| 3 | Admitted: Died in ED |
| 4 | Departed: Treatment completed |
| 5 | Departed: Transferred to another hospital without first being admitted to the hospital transferred from |
| 6 | Departed: Did not wait |
| 7 | Departed: Left at own risk |
| 8 | Dead on arrival |
| 9 | Departed: For other clinical service location |
| 10 | Admitted: To critical care ward (including HDU/CCU/NICU) |
| 11 | Admitted: Via operating suite |

| Code | Description |
|---|---|
| 12 | Admitted: Transferred to another hospital |
| 13 | Admitted: Left at own risk |
| 99 | Registered in error |

## Codes: Sex

| Code | Description |
|---|---|
| 1 | Male |
| 2 | Female |
| 3 | Indeterminate/Intersex |
| 4 | Transgender |
| 9 | Not stated/inadequately described/unknown |

## Codes: Peer group

See NSW Hospital Peer groups 2016

## Codes: State of usual residence

| Code | Description |
|---|---|
| AAT | Australian Antarctic Territory |
| ACT | Australian Capital Territory |
| NS | Not Stated / Inadequately described |
| NSW | New South Wales |
| NT | Northern Territory |
| OS | Overseas |
| OT | Other Territories |
| QLD | Queensland |
| SA | South Australia |
| TAS | Tasmania |
| VIC | Victoria |
| WA | Western Australia |

## Codes: Triage category

| Code | Description |
|---|---|
| 1 | Resuscitation |
| 2 | Emergency |
| 3 | Urgent |
| 4 | Semi urgent |
| 5 | Non urgent |
| U | Any or none |

## Codes: Referred to on departure

| Code | Description |
|---|---|
| 01 | Review in ED - Scheduled |
| 02 | Review in ED - As required' |
| 03 | Community Health (excluding Mental Health/Alcohol & Drugs) |
| 04 | Home Nursing |
| 05 | General Practitioner/LMO' |
| 06 | Outpatient Clinic' |
| 07 | Other' |
| 08 | Not referred' |
| 09 | Not known' |
| 10 | Specialist' |
| 11 | Mental Health, Alcohol and Other Drugs Inpatient Facility' |
| 12 | Mental Health, Alcohol and Other Drugs Non-Inpatient Facility |


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