



Australian Government

Department of Health, Disability and Ageing

National Notifiable Diseases Surveillance System

Meningococcal Disease (invasive) Public Data Set

2009 to 2024

INTRODUCTION	2
DATA CAVEATS AND INTERPRETATION	2
General	2
Cross-border NNDSS Notification Protocol	3
Case definition and notification to the NNDSS	3
FIELD DEFINITIONS	3
Year and Month	3
State	3
Serogroup	4
Age Group	4
Sex	4
Indigenous status	5
Vaccination status	5
Total vaccinations	5
RESOURCES	6
ACKNOWLEDGEMENTS	6

INTRODUCTION

- The Invasive Meningococcal Disease (IMD) Public Data Set includes notification data collected on IMD caused by *Neisseria meningitidis* via the National Notifiable Diseases Surveillance System (NNDSS) from 1 January 2009 to 31 December 2024.
- See Table 1 for a description of the NNDSS data available in the IMD Public Data Set.

Table 1: NNDSS data available in the IMD Public Data Set

State or Territory	NNDSS Data
Australian Capital Territory	Australian Capital Territory data are not included in this data set. <i>See notes below with regard to how access to these data.</i>
New South Wales	Year, Month, State, Serogroup, Age , Sex, Indigenous Status, Vaccination Status, number and type of vaccines given.
Northern Territory	Year, Month, State, Serogroup, Age , Sex, Indigenous Status, Vaccination Status, number and type of vaccines given.
Queensland	Year, Month, State, Serogroup, Age , Sex, Indigenous Status, Vaccination Status, number and type of vaccines given.
South Australia	Year, Month, State, Serogroup, Age , Sex, Indigenous Status, Vaccination Status, number and type of vaccines given.
Victoria and Tasmania combined	Year, Month, State, Serogroup, Age , Sex, Indigenous Status, Vaccination Status, number and type of vaccines given.
Western Australia	Year, Month, State, Serogroup, Age , Sex, Indigenous Status, Vaccination Status, number and type of vaccines given.

- If IMD data for Australian Capital Territory (ACT) are required, a formal data request should be submitted directly to the Surveillance & Management, Communicable Disease Control, Health Protection Service. Please contact the Surveillance Officer on (02) 6205 2155 or at cdc@act.gov.au.

DATA CAVEATS AND INTERPRETATION

It should be noted there are several caveats to the National Notifiable Diseases Surveillance System (NNDSS) data for invasive meningococcal disease (IMD) notifications in this public dataset release:

General

- This invasive meningococcal disease (IMD) notification data is based on data extracted from the NNDSS on the date specified in the downloaded MS Excel IMD public dataset. Due to the dynamic nature of the NNDSS, data on this extract is subject to retrospective revision and may vary from data reported in published NNDSS reports and reports of notification data by states and territories.
- These notification data represent only a proportion of the total cases occurring in the community, that is, only those cases for which health care was sought, a test conducted, and a diagnosis made, followed by a notification to health authorities. The degree of under-representation of all cases is unknown and is most likely variable by disease and jurisdiction.
- In interpreting these data, it is important to note that changes in notifications over time may not solely reflect changes in disease prevalence or incidence. Changes in testing policies; screening programs including the preferential testing of high-risk populations; the use of less invasive and more sensitive diagnostic tests; and periodic awareness campaigns, may influence the number of notifications that occur annually.

Cross-border NNDSS Notification Protocol

- From 1 January 2009 the Communicable Diseases Network Australia (CDNA) implemented the Cross-border NNDSS Notification Protocol. The Protocol establishes that notifications are reported by the jurisdiction of residence, regardless of the jurisdiction of diagnosis. In the instance that a case is usually resident overseas, the notification is reported to the NNDSS by the jurisdiction of diagnosis.

Case definition and notification to the NNDSS

- The current surveillance case definitions for these infections, including any historical edits, are available at: <https://www.health.gov.au/resources/publications/invasive-meningococcal-disease-surveillance-case-definition>
- In September 2003, new national case definitions for notifications reported to NNDSS were endorsed by the Communicable Diseases Network Australia, with nearly all jurisdictions implementing the new definitions in January 2004 (New South Wales commenced in August 2004). Prior to the adoption of the national definitions, some jurisdictions used the 1994 NHMRC case definitions, some jurisdictions used modified definitions that were based on the NHMRC case definitions, and some others used definitions specific to the state for some diseases.
- The case definition for invasive meningococcal disease (IMD) was last reviewed in 2009, with changes implemented across all jurisdictions in 2010.

FIELD DEFINITIONS

Year and Month

The year and month refer to when the notified case was diagnosed with IMD.

Notes on interpretation:

- The diagnosis year and month are taken from the “Diagnosis date”, which is a derived field representing the disease onset date or when the date of onset is not known, the earliest of the specimen collection, the notification, or the notification received dates.

State

The State or Territory which sends the notification. Additionally, this field represents the jurisdiction of residence of the notified case. Where the case usually resides overseas, State is the jurisdiction where the diagnosis took place.

Data domain:

- NSW = New South Wales
- NT = Northern Territory
- Qld = Queensland
- SA = South Australia
- Vic/Tas = Victoria and Tasmania
- WA = Western Australia

Serogroup

The serogroup of the meningococcal bacteria causing disease in the notified case.

Data domain:

- A
- B
- C
- E
- W
- Y
- X
- Unknown

Notes on interpretation:

Where serogroup information is reported as 'unknown' these notifications include the following:

- Isolates that were non groupable: where determination of the serogroup was attempted by the laboratory, but was not successful, and is reported as a non-groupable strain.
- Isolates that were not grouped: where the serogroup is not available because testing could not be undertaken, including for the following reasons: there was no isolate, the isolate was not referred for grouping, the isolate was not viable, there was insufficient genetic material from the isolate for grouping to occur or the case was diagnosed clinically.

Age Group

Age in years of the notified case at onset of disease presented in 5-year age groups. Age is based on the age of the individual as reported to the health authority or the calculated age at onset, using the difference between date of birth and diagnosis date. The age at onset is always rounded down to the age at last birthday, for example a case aged 3 years and 10 months at disease onset is reported as being 3 years. Age groups are presented according to a notified case's age in completed years, for example the 00-04 years age group includes cases from birth to 4 full years of age, but less than 5 years of age.

Where age at onset is not reported by the jurisdiction, it is calculated by determining the age at the date of diagnosis.

Data domain:

- Five-year age groups: 0 to 84 years
- 85+: 85 years and over

Sex

These data represent the sex of the individual at the time of notification.

Data domain:

- Male
- Female
- X
- Unknown.

Notes on interpretation:

- In accordance with the Australian Government Guidelines on Recognition of Sex and Gender 'X' can equal indeterminate, intersex or unspecified.
- 'Unknown' is reserved for where no information on sex is provided.

Indigenous status

The determination of the Indigenous status is by descent, self-identification, and community acceptance. Only the Indigenous status text descriptor field has been provided:

Data domain:

- Indigenous (Aboriginal and/or Torres Strait Islander origin)
- Non-Indigenous (Not of Aboriginal or Torres Strait Islander origin)
- Unknown (Not stated, unknown or blank)

Notes on interpretation:

- While Indigenous status for IMD is generally high, it should be interpreted with caution as completeness of this field varies from year to year and jurisdiction to jurisdiction.

Vaccination status

A notified case's reported vaccination status

Data domain:

- Vaccinated
- Not Vaccinated
- Not applicable
- Unknown

Notes on interpretation:

- The vaccination status is a derived field based on the vaccination history provided by states and territories.
- Vaccination status relates only to the vaccines against the meningococcal serogroup causing the disease.
- Vaccinated - the notified case was vaccinated against the meningococcal serogroup causing the disease at least 2 weeks before onset of the disease.
- Not vaccinated - the notified case was not vaccinated against the meningococcal serogroup causing the disease or was not vaccinated for IMD, or because vaccination was not applicable.
- Not applicable - the notified case was not vaccinated because the case was not eligible for vaccination, either because the case was too young or a vaccine effective against the causative serogroup was not available prior to disease onset.
- Unknown - the vaccination status of the notified case is missing/blank, not recorded or the serogroup was unknown.

Total vaccinations

The total number of any vaccinations given for invasive meningococcal disease.

Notes on interpretation:

- The total vaccinations given field represents the sum of all vaccines given in the adjacent columns (J through T).
- A case can be "not vaccinated" even when vaccines have been given, as per vaccination status interpretative notes above.
- Vaccines available in the public and or private domain in Australia for invasive meningococcal disease are listed in columns J through T as follows:
 - Mencevax ACWY – for serogroup A,C,W, Y disease
 - Menomune - for serogroup A,C,W, Y disease
 - Meningitec - for serogroup C disease
 - Menugate - for serogroup C disease
 - Neis Vac-C - for serogroup C disease

- Nimenrix – for serogroup A,C,W, Y disease
- Bexsero - for serogroup B disease
- Menactra - for serogroup A,C,W, Y disease
- Menveo - for serogroup A,C,W, Y disease
- Menitorix - for serogroup C disease
- MenQuadfi – for serogroup A, C, W, Y disease
- Meningococcal B vaccine (unknown type)
- Meningococcal ACWY vaccine (unknown type)
- Meningococcal C vaccine (unknown type)

For recommendations related to meningococcal vaccination please refer to the Australian Immunisation Handbook listed in resources below.

RESOURCES

It is recommended that the following resources are used in interpreting the data provided:

- Australia's notifiable diseases status: Annual report of the National Notifiable Diseases Surveillance System Annual report series published in Communicable Diseases Intelligence, available at: <http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-pubs-annlrpt-nndssar.htm>
- Invasive Meningococcal W Disease National Surveillance Reports, available at: https://www.health.gov.au/diseases/meningococcal-disease-invasive?utm_source=health.gov.au&utm_medium=callout-auto-custom&utm_campaign=digital_transformation
- National Centre for Immunisation Research and Surveillance Vaccine Preventable Diseases and vaccination coverage series of reports available as supplements a: <http://www.health.gov.au/internet/main/publishing.nsf/Content/cdisupplements-1-lp>
- For more information on the programmatic aspects of meningococcal vaccines please consult the following sources:
 - The National Immunisation Program available at: <https://www.health.gov.au/initiatives-and-programs/national-immunisation-program>
 - The Australian Immunisation Handbook web version 2022 (updated June2023) available at: <https://immunisationhandbook.health.gov.au>
 - National Centre for Immunisation Research and Surveillance vaccination history tables, available at: <https://www.ncirs.org.au/health-professionals/history-immunisation-australia>

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ACRONYMS

CDNA	Communicable Diseases Network Australia
IMD	invasive meningococcal disease
NHMRC	National Health and Medical Research Council
NNDSS	National Notifiable Diseases Surveillance System