Information for NAUSP Contributor Hospitals

National Antimicrobial Utilisation Surveillance Program (NAUSP)

Data principles and definitions

Reviewed: March 2019
The Australian Commission on Safety and Quality in Health Care provides funding for the development and coordination of NAUSP, analysis of data, and the production of related reports for the AURA Surveillance System. NAUSP is conducted by the Infection Control Service, Communicable Disease Control Branch, Department for Health and Wellbeing, South Australia.

NAUSP Data Principles and Definitions (March 2019)
Overview

NAUSP reports on antimicrobial utilisation in Australian acute adult inpatient settings. This provides a basis for epidemiological analysis of antimicrobial usage, facilitating awareness of environmental pressures for selection of resistant organisms within healthcare facilities.

Data are provided by representatives of contributing health facilities (contributor hospitals) that submit total monthly antimicrobial usage data and bed occupancy data via the NAUSP Portal. To facilitate comparisons between agents and contributors, the usage data for most agents are converted to a standardised usage density rate for each agent, defined as number of Defined Daily Doses (DDDs) (developed by the World Health Organization) used per 1000 occupied bed days (OBDs). This is an internationally recognised parameter for epidemiological investigation of medication usage.

Antimicrobial usage is the ‘numerator’ and bed occupancy is the ‘denominator’.

Contributor Hospitals

Whilst the primary focus of NAUSP is large Australian acute care facilities, smaller hospitals in the AIHW categories Public Acute Group C or Private acute group C are encouraged to participate. Because contributors are peered to facilitate appropriate comparisons, there are important considerations for smaller hospitals – see Benchmarking and Peer Grouping. Furthermore, as standard daily doses have not been defined for paediatric patients, the program is only valid in adult settings.

Reporting and Outcomes

Contributors are supplied with instructions on how to extract a report (Appendix 1) of antimicrobial usage within their hospital, stratified into specialist areas where applicable. Usage rates for six antimicrobial classes are available for routine reporting. Corresponding benchmarking rates, calculated from aggregate data of the selected benchmarking group (e.g. AIHW peer group, state, local health district) are also supplied for comparison. Aggregated, de-identified data are supplied to the Australian Commission on Safety and Quality in Health Care (ACSQHC) and contribute to Antimicrobial Use and Resistance in Australia (AURA) publications. A report giving usage rates for all agents in Australian hospitals is published biennially by the Australian Commission on Safety and Quality in Health Care (ACSQHC) through the Antimicrobial Use and Resistance in Australia (AURA) Program.

An important function of the reports is to provide an indication of exposure to antimicrobials in the Australian hospital environment, at both a national and local level. At a local level, NAUSP reports serve as an antimicrobial monitoring tool for participating hospitals and a means to identify trends for further investigation as part of an Antimicrobial Stewardship program.
Definitions

The following terms used by NAUSP are important for understanding NAUSP reports. Further explanations of other important concepts are included elsewhere in this document.

**Antimicrobial**

A drug that is classified as an anti-infective agent for systemic use within the World Health Organization Collaboration Centre for Drug Statistics Methodology’s (WHOCC) Anatomical Therapeutic Chemical (ATC) classification system. These include agents listed within category:

- A01AB (antiinfectives for local oral treatment)
- A02BD (combinations for eradication of H.pylori)
- A07AA (alimentary antibiotics)
- D01 (dermatologicals - antifungals(topical and systemic))
- D06 (dermatologicals – antibiotics/chemotherapeutics)
- D10AF (antiinfectives for treatment of acne)
- G01 (gynecological antiinfectives and antiseptics)
- J01 (antibacterials)
- J02 (antimycotics)
- J04AB02 (rifampicin)
- J05 (antivirals)
- P01AB (tinidazole)
- P01AX (atovaquone, nitazoxanide)
- P03A (ectoparasiticides, topical scabicides)
- S01AA/CA (antiinfectives – ophthalmological), incl. combinations
- S02AA/CA (antiinfectives – otological), incl. combinations

A full list of agents is available in the document [Antimicrobial Agents included in NAUSP reporting](#).
Antimicrobial Usage

The quantity of each antimicrobial agent used per reporting period (month) within the included wards and clinical areas.

Defined Daily Dose (DDD)

The average maintenance dose per day for a drug when used for its main indication in an adult. The World Health Organization Collaborating Centre (WHOCC) for Drug Statistics Methodology has determined standard DDDs for most drugs, listed within the Anatomical Therapeutic Chemical (ATC) Classification System. Use of this measure/metric enables the quantity of different antimicrobial agents to be standardised to a common parameter for comparisons between agents, at a local, national and international level. Because DDDs are based on adult dosing, this parameter cannot be used to measure antimicrobial usage in paediatric populations. Most topical antimicrobial agents have not been assigned a DDD by WHO. NAUSP has assigned DDD=1 for topical agents. When performing rate calculations for topical antimicrobials, DDDs should be disregarded.

\[
\text{Number of DDDs} = \frac{\text{Total grams used}}{\text{DDD value}}
\]

The ATC classification system is available online: [http://www.whocc.no/ddd/definition_and_general_considera/](http://www.whocc.no/ddd/definition_and_general_considera/)

Haematology/Oncology

The minimum requirements of a haematology/oncology unit to submit data by the haematology/oncology specialty are:

- On-call haematologist/oncologist
- Some inpatient services
- Integration of home based services with area based program
- Access to designated allied health services
- Some allied health undergraduate education
- Specialist RN/registrar/RMO

High Dependency Unit

For the purposes of NAUSP data submission, the minimum requirements of HDU are:

- Recovery area for post-operative patients
- Different high dependency area for general ward patients requiring observation over and above that available in general ward areas
- RN equivalent to 4hrs/patient/day (1:6) desirable
**Intensive Care Unit (ICU)**

For the purposes of NAUSP data submission, ICU refers to units that consist of at least five beds classified at:

- Level II or Level III as per College of Intensive Care Medicine of Australia and New Zealand, Minimum Standards for Intensive Care Units (*CICM Policy Document IC-01*); or
- Levels 4-6 (inclusive) of Clinical Services Capability Frameworks

As the volume and types of antimicrobials in ICU settings vary significantly from non-ICU settings, NAUSP reports these data separately where possible (i.e. ICUs that fit this definition and can supply appropriate numerator and denominator data).

**Respiratory**

The minimum requirements of a respiratory unit to submit data to NAUSP by the respiratory specialty are:

- Inpatient care by on-site general medical physician; generally an on-site respiratory specialist
- Specialist RN
- Access to lung function diagnostics (spirometry, volumes and gas transfer)
- Access to respiratory specialist for inpatient consultation
- Links with sleep service
- Access to designated allied health services
- Provision of NIV

**Specialty**

A ward or specialty within a hospital where both numerator and denominator data are available for granular submission.

**Other non-ICU**

Non-ICU usage that is not submitted at specialty level.

**Combined non-ICU**

Total usage minus ICU usage. For contributors with appropriately classified ICUs, NAUSP reports non-ICU usage separately to ICU usage.

**Total**

Combined usage for all reported areas of the health facility (i.e. ICU and all specialties/other non-ICU combined).

**Occupied Bed Days (OBDs)**

The total number of bed days of all admitted patients accommodated during the reporting period (month), taken from a count of the number of inpatients at about midnight each day. Patients admitted and separated (discharged or otherwise) on the same day are not included. Patients staying for a single night are counted as one (1) OBD.

**Usage Density Rate**

The number of DDDs used per 1,000 OBDs. This usage rate is widely accepted as an appropriate measurement of usage in non-ambulatory settings, and has been adopted by many international programs.

\[
\text{Monthly usage density rate (in DDDs per 1,000 OBDs)} = \frac{\text{DDD / month}}{\text{OBD / month}} \times 1,000
\]
Data Principles

Numerator: Antimicrobial usage data
The quantity of each antimicrobial agent used per month within the included wards or clinical areas.

Key Principles:
> The dataset indicates the monthly usage of each antimicrobial for acute adult inpatient wards (see Inclusions and Exclusions), expressed as number of DDD.
> ‘Antimicrobial’ refers to all relevant anti-infective agents within the World Health Organization (WHO) Anatomical Therapeutic Chemical (ATC) classification system, including antibiotics, antimycotics, antivirals and antifungals. From January 2019, topical antiinfectives are to be included in monthly data submissions.
> Antimicrobial usage datasets are obtained by the contributor from their local pharmacy dispensing system. These should contain the number of UNITS of each antimicrobial agent dispensed during the month.
> During data processing, wherever possible, NAUSP converts the quantity of UNITS of each agent to a number of DDDs or grams so that a monthly usage density rate can be calculated for each agent.
> Both imprest/ward stock usage and individual patient dispensing should be included.

Dataset Rules:
> Usage datasets must be submitted to the Portal in the specified Excel spreadsheet template with distinct columns for each element – see Data Elements.
> SPECIALTY, PRODUCT DESCRIPTION and QUANTITY are the minimum required elements. Please ensure there are no merged, highlighted or blank cells within the spreadsheet, and that there are no embedded tables.
> It is preferable if WARD DESCRIPTION is included. If WARD DESCRIPTION is not included in the dataset, NAUSP takes no responsibility for ensuring the necessary exclusions, and will assume all data are for appropriate inclusions/specialties.
> Quantities should be presented as the number of UNITS. If only PACK data are available, convert to UNIT data prior to submission by multiplying number of packs by pack size.
> The UNIT quantity for topical agents such as creams, ointments, eye drops, etc is the number of tubes or bottles
> The UNIT quantity for combinations used for eradication of H. pylori is the number of packs.
> The UNIT quantity used for ORAL LIQUID formulations is number of bottles NOT number of millilitres. Non whole numbers are accepted for part-bottles – see Data Elements table.
> Removal of antimicrobial usage data from excluded wards should be made prior to submission to NAUSP.
> If UNIT DESCRIPTION is not included in the dataset, NAUSP will assume all quantities refer to the appropriate units – see Accepted Unit Types.
> Any agents or dosage forms not required by NAUSP will be discarded automatically during processing. However, for ease of processing, contributors should only include the relevant drugs within the dataset (i.e. remove drugs that are not antimicrobials).
Discharge supplies should be excluded from the dataset prior to submission to NAUSP. Alternatively, if the dataset includes discharge supply, a separate report for discharge quantities must be generated and added (pasted) to the end of the dataset. Discharge supply quantities should be multiplied by -1 to ensure they are subtracted from the total drug usage.

If elastomeric infusions are sourced externally for hospital inpatients, please add “inpatient” to the description to ensure it is included in your submission. Historically these products have been discarded by the database on the assumption of Hospital in the Home (or similar out-of-hospital) use.

If prepack antimicrobials are used for hospital inpatients, please add “inpatient” to the description to ensure it is included in your submission. Historically product descriptions containing “PP” or “prepack” have been discarded by the database on the assumption that PP denotes take home packs at discharge. If prepack quantities relate to the number of packs, please convert the quantity to number of units (i.e. multiply number of packs by pack size).

If antimicrobials are for out-of-hospital use, please indicate in the product description. For example, add “PP” or “THP (take home pack)” to the end of the product description. This helps NAUSP to assign a suffix for discarded antimicrobials.

If clinical trial antimicrobials are administered at any time within your facility, please contact the NAUSP team regarding inclusion in monthly submissions. These will be addressed on a case-by-case basis.

Denominator: Occupied Bed Days (OBDs)
Total number of bed days of all admitted patients accommodated during the reporting period, taken from a count of the number of inpatients at about midnight each day.

Key Principles:

- The dataset indicates the monthly overnight Occupied Bed Day (OBD) count for acute adult in-patient wards (see Inclusions and Exclusions).
- The wards included in the OBD count should reflect the wards included in the usage data – i.e. the same inclusions and exclusions apply.
- OBD data are generally obtained from the local health informatics unit (e.g. Casemix).
- Occupied Bed Days are not equivalent to Patient Days. Patient Days are the sum of the lengths of stays of each patient separated during the reporting period, whereas Occupied Bed Days are the sum of a daily count of occupied beds, regardless of when the separation occurs. The use of Patient Days for monthly reporting will result in skewed results compared to Occupied Bed Days in some circumstances, however variation in annualised figures will be minimal.

Dataset Rules:

- Occupancy datasets are to be maintained by contributor hospitals, and forwarded to NAUSP for Quality Assurance when requested (approximately every six months).
- Occupancy datasets should preferably be recorded in an Excel spreadsheet format with distinct columns for each element. WARD DESCRIPTION and OCCUPIED BED DAYS are the minimum required elements – see Data Elements. A suggested template is available from the NAUSP Portal homepage. Ward occupancy datasets supplied to NAUSP should clearly define which wards are included vs those excluded, or only provide data for included wards.
If contributors can only supply a single figure indicating their OBD count for the period per specialty, NAUSP takes **no responsibility** for ensuring the necessary exclusions, and will assume that the figure corresponds to only the ward/specialty/area included in the relevant numerator.

For sites submitting **specialty-specific data**, the OBDs associated with each specialty must be easily identifiable in the OBD recording template.

**Inclusions and Exclusions**

The focus of NAUSP is to give an indication of environmental pressures for selection of resistant organisms within acute healthcare facilities. Therefore, it is structured to report on antimicrobial usage in acute inpatient settings.

The following wards and clinical areas are **included**:

- Acute adult inpatient surgical beds
- Acute adult inpatient medical beds
- Adult intensive care unit beds
- Adult high dependency beds
- Adult emergency department beds (Note 1)
- Adult inpatient specialist beds (Note 2)
- Adult acute inpatient rehabilitation beds (Note 3)
- Adult inpatient theatre (Note 4)

The following wards and clinical areas are **excluded**:

- All paediatric and neonatal beds (Note 5)
- Hospital in the Home usage
- Palliative care beds
- All day procedure wards (e.g. day surgery, infusion suites, dialysis chairs, Haematology/Oncology day centres etc.)
- All long term care beds (e.g. non-acute rehabilitation facility, aged care residential) (Note 6)
- All psychiatric beds (Note 6)

NAUSP acknowledges in many hospitals there are combined wards of both included and excluded bed types. Please identify and discuss these wards with the NAUSP team. The proportion of included and excluded beds within the combined ward is required for consideration.

**Note 1** – All pre-pack or discharge supplies should be excluded; NAUSP can assist with this during data processing. Occupancy data should only include inpatient beds occupied overnight (e.g. extended care units).

**Note 2** – Specialty areas (e.g. maternity, haematology/oncology) within general hospitals have previously been incorporated into the ‘non-ICU’ usage and occupancy data. Please separate where drug usage and OBD data are available. Hospitals with only specialty care (e.g. maternity hospitals, rehabilitation centres) will be peer-grouped accordingly; please contact NAUSP for more information.

**Note 3** – Acute rehabilitation is defined as an average length of stay of < 15 days.

**Note 4** – Inpatient theatre usage is included in NAUSP on the assumption a corresponding OBD is recorded in the inpatient ward where the patient is transferred to following theatre.

**Note 5** – The NAUSP methodology has not been validated for use in paediatric settings.

**Note 6** – Long term care beds (ALOS >15 days) and psychiatric beds are excluded to enable comparisons with other international hospital antimicrobial utilisation surveillance programs. Comparisons to acute care inpatient settings are also difficult due to varying casemix, and the low rate of antimicrobial use in psychiatric settings is well understood.
Data Elements

The following table describes the elements for inclusion in datasets supplied to NAUSP.

<table>
<thead>
<tr>
<th>Name</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital/Facility</td>
<td>Text</td>
<td>Enter the hospital name as it appears in the Portal  &gt; Must be in the Hospital name format as supplied in My Details in NAUSP portal. (Note: the hospital name should include state / territory)</td>
</tr>
<tr>
<td>Year</td>
<td>Number</td>
<td>Enter the year 20XX</td>
</tr>
<tr>
<td>Month</td>
<td>Selection</td>
<td>Select the month from the drop down menu  &gt; Month must be in the format supplied</td>
</tr>
<tr>
<td>Ward Description</td>
<td>Text</td>
<td>Provide description of ward/unit name, ward activity or ward code</td>
</tr>
<tr>
<td>Specialty</td>
<td>Text</td>
<td>Assign each entry with its NAUSP specialty (ensure name is exactly as per NAUSP specialties).  &gt; If an area/ward is not included in specialty-specific reporting, it must be assigned other non-ICU  &gt; If the origin of the data is not known, it must be assigned Total</td>
</tr>
<tr>
<td>Product Description</td>
<td>Text</td>
<td>Provide name of drug (generic or brand), strength, formulation (caps, vials etc), and pack size (bottle volume for oral liquids)</td>
</tr>
<tr>
<td>Quantity</td>
<td>Number</td>
<td>Only numerical integers accepted.  &gt; Number of units dispensed (not packs)  &gt; Non-whole numbers (e.g. part bottles) will be rounded to nearest whole number  &gt; Negative values (e.g. return dispensing) are accepted  &gt; Quantity of oral liquids should be in number of bottles, not volume.</td>
</tr>
<tr>
<td>OCCUPIED BED DAYS (Denominator)</td>
<td>Number</td>
<td>Number of overnight Occupied Bed Days (OBD) for period (month) for the Specialty (as described above).  &gt; Must be whole integer</td>
</tr>
</tbody>
</table>

See Appendix 2 and Appendix 3 for example spreadsheets, and related resources on the NAUSP website. The NAUSP data upload template is available from the Portal homepage.

Accepted Unit Types

NAUSP only accepts usage data provided as the smallest unit type for each formulation, with the exception of:

- oral liquids which are counted as number of bottles, not volume (mL)
- eye drops, eye ointments, creams, ointments, lotions, shampoos are counted as bottles, tubes etc
- clotrimazole vaginal pessaries (6 x 100mg), which are counted as packs.
- combination packs for eradication of H. pylori

Data supplied as ‘number of PACKS’ (e.g. pre-pack boxes where they are used for inpatients) should be converted to number of individual units by the contributor before submitting to NAUSP. Contributors can check that oral liquids have been entered as number of bottles through using the rate calculation “QA Check oral liquids” template to regularly validate their antimicrobial liquid usage.
The following table summarises accepted unit types for the majority of formulations.

<table>
<thead>
<tr>
<th>Formulation</th>
<th>Accepted unit type (examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral solid formulations</td>
<td>Tablet, Capsule</td>
</tr>
<tr>
<td>Oral liquid formulations</td>
<td>Bottle</td>
</tr>
<tr>
<td>Parenteral formulations</td>
<td>Ampoule, Vial, Infusion, Bag</td>
</tr>
<tr>
<td>Inhaled formulations</td>
<td>Nebule, Nebulising solution</td>
</tr>
<tr>
<td>Rectal formulations</td>
<td>Suppository</td>
</tr>
<tr>
<td>Vaginal formulations</td>
<td>Tube, Pessary</td>
</tr>
<tr>
<td>Topical preparations</td>
<td>Tube, Bottle</td>
</tr>
<tr>
<td>Eye/Ear preparations</td>
<td>Bottle, Tube</td>
</tr>
</tbody>
</table>

National Benchmarking and Peer Grouping

NAUSP reports include aggregate comparator rates to enable contributors to compare usage of each agent to a relevant benchmark. Peer grouping is guided by the Australian Institute of Health and Welfare (AIHW) Classifications. Where this is not possible for a particular hospital, NAUSP will negotiate an appropriate peer grouping with the contributor hospital based on hospital size, location and types of services offered. Benchmarking groups may include AIHW peer groups at national or state level, and local health networks where applicable.

**AIHW Classifications**

The following list outlines hospitals that are eligible to contribute to NAUSP:

- Principal Referral
- Public Acute Group A/B/C
- Private Acute Group A/B/C
- Specialist Women’s and children’s hospitals (public and private, women’s data only)
- *Specialist rehabilitation hospitals (public and private)

Priority is given to hospitals with more than 50 beds where data interpretation and rate comparisons are reliable. NAUSP is aware of potential issues relating to data interpretation in smaller hospitals, but will discuss options with these sites as required. More information on AIHW peer group descriptions and considerations is available via the [AIHW website](https://www.aihw.gov.au).

* Long-term rehabilitation wards and centres that are part of existing acute-care hospitals are not yet able to be included in data submission.
Data Submission

How to submit data

All data must be submitted via the NAUSP Portal in the specified data template, compliant with data specifications. For further information on how to extract, format, and submit data, please see the NAUSP Portal User Guide.

When to submit data

Contributor hospitals are encouraged to submit data monthly, as soon as practicable after the completion of a month.

Late submission and missing data

Contributor hospitals that have not submitted data for more than three consecutive months may have reporting access restricted for a short period to facilitate the generation of six-monthly national and state reports. Contributors on restricted access must contact the NAUSP team to have access restored. If there are extenuating circumstances necessitating delayed submission, please discuss these with the NAUSP team.

Data Accountability and Quality Assurance

NAUSP relies upon the integrity of the data uploaded by contributor hospitals, and it is the responsibility of contributor hospitals to ensure that data provided are accurate and complete. For this reason it is important that there is someone at each contributor site who is prepared to take responsibility for data integrity and is available for NAUSP to contact should there be any queries.

NAUSP has a number of mechanisms built into the data processing procedures to provide quality assurance (QA) checks. While NAUSP will query significantly abnormal results from time to time, the QA processes can only ensure that the data included in reports is accurate according to the data supplied by the contributor – i.e. we cannot vouch for the accuracy of the data supplied.

Contributors’ data are subject to QA processes every six months on completion of June and December data uploads. The NAUSP team will review OBD submissions, ward inclusions and exclusions, and data for the period. This system ensures all data are validated twice per year.

Additional QA activities that contributor hospitals assume responsibility for include:

> Acknowledgement of flagged drug quantities loaded during data upload (for example, quantities less than 50% or greater than 200% of the previous 12 months’ average);

> Visual inspection of datasets as part of the standard operating procedures for preparing, loading and processing within the database; and

> Visual inspection of reports produced to identify any apparent abnormal variation.
Data Security and Privacy

All data submitted via the NAUSP Portal are stored in a secure database housed behind the SA Health firewall. Only staff working directly for the SA Health Infection Control Service or eHealth Systems Application Services have access to all data, and confidentiality and privacy standards will be upheld at all times.

Access to the NAUSP Portal is obtained only via registration, and only for facilities within which the external user is employed. All external user registrations must first be approved by the NAUSP administration team.

NAUSP is not a mandatory program, and contributor hospitals must indicate their willingness to participate in the program. This is facilitated by NAUSP requesting signed agreement from an authorised executive representative of the contributor hospital. Even after agreeing to participate, submission of data is entirely voluntary, and NAUSP will not demand or claim to compulsorily acquire any particular data from any contributor hospital.

From time to time there may be circumstances where it is deemed of benefit (to NAUSP or other stakeholder) to incorporate identifiable data into a published report. This will only be undertaken with prior notification of individual contributors involved.
Appendix 1: Example Standard NAUSP report

Preset text: NAUSP Data Principles and Definitions (March 2019) 13
Appendix 2: Example numerator dataset - antimicrobial usage data

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital/Facility</td>
<td>Seattle Grace Test Hospital (SA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year (yyy)</td>
<td>2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month</td>
<td>Feb</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
<th>Ward description</th>
<th>Specialty</th>
<th>Product description (name, strength, form, pack/1ig qty/ml)</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Aciclovir 200mg , tablets</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Aciclovir 250mg/10ml , injection</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Aciclovir 500mg/20ml , injection</td>
<td>115</td>
</tr>
<tr>
<td>11</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Amoxicillin - Clavulanic Acid 875mg-125mg , tablets</td>
<td>65</td>
</tr>
<tr>
<td>12</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Amoxicillin 1g , Injection</td>
<td>36</td>
</tr>
<tr>
<td>13</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Amphotericin B (Liposomal) 30mg , injection</td>
<td>40</td>
</tr>
<tr>
<td>14</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Anidulafungin 100mg , injection</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Anidulafungin 100mg , injection</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>WARD SE</td>
<td>Haematology/Oncology</td>
<td>Azithromycin 500mg , injection</td>
<td>11</td>
</tr>
<tr>
<td>17</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Azithromycin 500mg , tablets</td>
<td>50</td>
</tr>
<tr>
<td>18</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Benzylpenicillin 1.2g , injection</td>
<td>17</td>
</tr>
<tr>
<td>19</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Cefepime 2g , injection</td>
<td>165</td>
</tr>
<tr>
<td>20</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Ceftazidime 1g , injection</td>
<td>19</td>
</tr>
<tr>
<td>21</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Ceftiraxone 1g , injection</td>
<td>20</td>
</tr>
<tr>
<td>22</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Cephalexin 500mg , capsules</td>
<td>180</td>
</tr>
<tr>
<td>23</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Cephazolin 1g , injection</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Chloramphenicol 1% , eye ointment, 4g</td>
<td>520</td>
</tr>
<tr>
<td>25</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Ciprofloxacin 100mg/50ml , injection</td>
<td>2</td>
</tr>
<tr>
<td>26</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Ciprofloxacin 200mg/100ml , injection</td>
<td>30</td>
</tr>
<tr>
<td>27</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Ciprofloxacin 400mg/200ml , injection</td>
<td>227</td>
</tr>
<tr>
<td>28</td>
<td>ICU</td>
<td>Intensive care Unit (ICU)</td>
<td>Ciprofloxacin 500mg , tablets</td>
<td>5</td>
</tr>
<tr>
<td>29</td>
<td>WARD 4C</td>
<td>Other non-ICU</td>
<td>Clindamycin 600mg/4ml , injection</td>
<td>4</td>
</tr>
<tr>
<td>30</td>
<td>WARD 4C</td>
<td>Other non-ICU</td>
<td>Clindamycin 600mg/4ml , injection</td>
<td>9</td>
</tr>
<tr>
<td>31</td>
<td>WARD 4C</td>
<td>Other non-ICU</td>
<td>Clotrimazole 1% , cream, 20g</td>
<td>30</td>
</tr>
<tr>
<td>32</td>
<td>WARD 4D</td>
<td>Other non-ICU</td>
<td>Clotrimazole 1% , cream, 20g</td>
<td>2</td>
</tr>
<tr>
<td>33</td>
<td>WARD 4D</td>
<td>Other non-ICU</td>
<td>Dicloxacillin 500mg , capsules</td>
<td>11</td>
</tr>
<tr>
<td>34</td>
<td>WARD 4D</td>
<td>Other non-ICU</td>
<td>Doxycycline 100mg , tablets</td>
<td>24</td>
</tr>
<tr>
<td>35</td>
<td>WARD 4D</td>
<td>Other non-ICU</td>
<td>Erythromycin (as Lactobionate) 1g , injection</td>
<td>14</td>
</tr>
<tr>
<td>36</td>
<td>WARD 4D</td>
<td>Other non-ICU</td>
<td>Epsom Salts 200mg , tablets</td>
<td>47</td>
</tr>
</tbody>
</table>
# Seattle Grace Test Hospital - Occupied Bed Days 2017

Accurate OBDS are essential to the accurate calculation of antimicrobial usage rates - a small change in denominator can make a huge difference to the calculated rate. Please ensure included wards are all those from which antimicrobial usage data is sourced, and that occupancy data are not provided for excluded wards. See NAUSP website for details on exclusions (e.g. pediatrics, outpatients, psychiatric).

Please take care to ensure the correct wards are included! Ward usage and report terminology can change over time so regular checking of description is recommended.

<table>
<thead>
<tr>
<th>Ward Code</th>
<th>Jan-17</th>
<th>Feb-17</th>
<th>Jul-17</th>
<th>Aug-17</th>
<th>Sep-17</th>
<th>Oct-17</th>
<th>Nov-17</th>
<th>Dec-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Included wards</td>
<td>NAUSP Specialty</td>
<td>85</td>
<td>57</td>
<td>154</td>
<td>140</td>
<td>88</td>
<td>101</td>
<td>78</td>
</tr>
<tr>
<td>Ward A</td>
<td>High Dependency Unit (HDU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward B</td>
<td>other nonICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward C</td>
<td>other nonICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward D</td>
<td>other nonICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward E</td>
<td>other nonICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward F</td>
<td>other nonICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward G</td>
<td>other nonICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward H</td>
<td>Hematology/Oncology</td>
<td>68</td>
<td>53</td>
<td>44</td>
<td>47</td>
<td>57</td>
<td>66</td>
<td>57</td>
</tr>
<tr>
<td>Ward I</td>
<td>Obstetrics/Gynecology</td>
<td>67</td>
<td>58</td>
<td>12</td>
<td>28</td>
<td>67</td>
<td>44</td>
<td>75</td>
</tr>
<tr>
<td>Ward J</td>
<td>ICU</td>
<td>67</td>
<td>58</td>
<td>12</td>
<td>28</td>
<td>67</td>
<td>44</td>
<td>75</td>
</tr>
<tr>
<td>Ward K</td>
<td>HITH</td>
<td>57</td>
<td>66</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NAUSP OBDS:</td>
<td>ICU</td>
<td>57</td>
<td>66</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Haematology/Oncology</td>
<td>68</td>
<td>53</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>High Dependency Unit</td>
<td>85</td>
<td>97</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Obstetrics/Gynecology</td>
<td>44</td>
<td>47</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other nonICU</td>
<td>341</td>
<td>389</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total NAUSP beds | 595 | 664 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

By listing your hospital’s excluded wards, we can cross-check OBBD and drug usage data and ensure no excluded wards are mistakenly included in the drug usage upload file.

The total cell will turn green if the total matches the sum of all wards.

(This check is to ensure any beds that do not fall under a specialty are assigned to "Other nonICU")
For more information

National Antimicrobial Utilisation Surveillance Program
Communicable Disease Control Branch
11 Hindmarsh Square
Adelaide SA 5000
Telephone: 1300 232 272
Email: Health.NAUSPhelp@sa.gov.au

Public–I1–A2 Version 6.2

© Department for Health and Ageing, Government of South Australia. All rights reserved