

Analysis Method Notice

Reduction in Cases of Meticillin Sensitive Staphylococcus Aureus (MSSA) Bacteraemia

This notice describes an Analysis Method that has been developed for use in the production of published national outcome indicators, performance measures and/or currencies, which are derived directly from NHS Wales data.

The Analysis Method has been reviewed by the Analysis Methodologies Group and its output submitted to the Welsh Information Standards Board (WISB) for potential accreditation.

*It should be noted that, where the data flow on which the analysis is being undertaken has not been reviewed by WISB (see 'Status of WISB Data Standards Assurance' below), accreditation of the analysis method **cannot** be interpreted as an approval of the underlying data standards or the quality of the data used.*

It is recognised that formal review and/or assurance of the data flow may have been undertaken by other bodies, where those data are being formally published; for example, as Official Statistics'. In such circumstances, users of this method are advised to contact the relevant organisations should they require further information on the underlying quality of the specified data source.

For further details about the group, including Terms of Reference and membership, please visit the following website:

<http://howis.wales.nhs.uk/sites3/page.cfm?orgid=742&pid=56696>

WISB Reference: ISRN Ref. 2013/031

Please address enquiries about this Analysis Method the NHS Wales Informatics Service Data Standards Team.

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WISB Analysis Method Appraisal Assessment	<p>Accredited This Analysis Method has been appraised by WISB and is felt to:</p> <ul style="list-style-type: none"> • Meet the specified indicator requirement, in that it is suitable for its calculation / derivation; • Is reproducible by organisations, where appropriate.
WISB Analysis Method Appraisal Outcome(s)	<u>Outcome</u>

Status of Data Standards Assurance	<p>WISB Reviewed The data used in this Analysis Method are based on data item standards that have been through the Information Standards Assurance Process.</p>
WISB Decision	Conditionally Approved
Data Standards Assurance Outcome(s)	<u>Outcome</u>

Indicator

The number of laboratory-confirmed cases of Meticillin Sensitive *Staphylococcus aureus* (MSSA).

Target:

Reduction

Performance is monitored on a Health Board (provider) basis.

Rationale / Context

Meticillin Sensitive *Staphylococcus aureus* (MSSA) is an infection caused by the *Staphylococcus aureus* bacteria which is able to be treated with most penicillin based antibiotics and has yet to become resistant to the more common antibiotics enabling the treatment to be cleared up easier than it would be if it was resistant in the case of Meticillin Resistant *Staphylococcus aureus* (MRSA). The infections it causes are the same as those caused by any *Staphylococcus aureus* bacterium.

In some people, *Staphylococcus aureus* can sometimes get into the bloodstream and travel to internal parts of the body to cause more serious infections. From the healthcare service point of view patients who remain in hospital longer due to infection mean that other patients cannot be treated as quickly and infection outbreaks can cause severe disruption to a hospital or community healthcare service. The health service has to bear the cost of diagnosis and treatment of these infections, the extended length of stay (which often results) and the use of more expensive treatment that may be needed. Infection Control services must also be paid for and bed / ward closures and cancellation of operations / admissions that can result from these infections are also a hidden burden for the health service.

Data Source

DataStore (via the Welsh Healthcare Associated Infection Programme, Public Health Wales).

Definitions:**Definitional Guidance:**

For those sites where the new LIMS is not yet in use, the allocation of cases as an inpatient or non-inpatient is based on whether the specimen was taken on an inpatient ward. DataStore therefore includes categories of the types of ward in the hospitals in Wales ("wholoc"). The new LIMS and DataStore uses a patient classification field ("PATCAT") to identify whether a case has been allocated as an inpatient or non-inpatient. Because LHBs are using the "PATCAT" field in different ways, a combination of the "PATCAT" and the "wholoc" is used to assign the cases. LHBs have the opportunity to update the classification via audit if they disagreed with the automated classification.

Both inpatient and non-inpatient MSSA cases are included. Non-inpatient locations include outpatient, day case and mixed locations within a hospital and all samples submitted from the community via GPs and nursing homes. Samples from unknown locations are assumed to be from inpatients.

Duplicate records are removed (known as 'de-duplication' by removing from the dataset any positive report occurring within 14 days of another positive report from the same patient. De-duplication is based on all records regardless of whether they are from inpatient or non-inpatient locations. The classification of the case can be changed during the audit process, if required.

The following data items and terms are relevant

Data Items:

n/a

Terms:

n/a

Detailed Specification

Data from each of the lab information systems across Wales is automatically copied over into DataStore, a Public Health Wales data warehouse system. For the new all Wales laboratory systems (LIMS) this automatic copy over happens once a day and for those labs that haven't moved over to the new LIMS, the copy over happens around every 2 hours. Data relating to Welsh patients whose sample was processed in a microbiology laboratory in England is manually entered into a separate database, which holds the extracted data from DataStore.

Calculation:

Numerator

The number of laboratory-confirmed cases of Meticillin Sensitive *Staphylococcus aureus* (MSSA).

Denominator

n/a

Reporting Format / Frequency

Monthly.

The monthly reporting represents a count of all inpatient and non-inpatient cases of laboratory-confirmed MSSA for the previous calendar month, taken via a data download from the DataStore system.

Welsh Government publish performance monitoring data at an all-Wales and individual Health Board level only. However, data are available at a more granular level (by hospital) via Public Health Wales.

Areas for Future Development

The following points reflect considerations raised by either the Analysis Methodologies Group or WISB in terms of aspects of the Analysis Method that require further investigation or development.

For a full breakdown of the issues considered, please refer to the formal WISB Outcome for this Analysis Method, which can be access via the Information Standards Assurance website:

<http://howis.wales.nhs.uk/sites3/page.cfm?orgid=742&pid=52532>

This section details any areas the Analysis Methodologies Group felt needed further consideration / review by the 'sponsor' of the method.

- The group sought clarification from PHW as to the processes by which DataStore was populated with data – i.e. whether this was a manual or automatic data entry process.
- Minor amendments to the detail provided in the 'rationale / context' section was also requested.

Appendix A – Additional Information

n/a

Appendix B – SQL Code (where applicable)

Important: The following code is intended for information purposes only. It will contain references to specific references (servers, data item descriptions etc.) that are applicable within the NHS Wales Informatics Service only and therefore will not be suitable for direct application to local (LHB) data.

n/a