

Surgical site infection surveillance protocol

Edition 7.1

(Updated May 2019)

**Data Management
Supplement**

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Data Management

Efficient management of national and local data is vital to ensure intelligence is available to inform clinical decisions with which to improve patient outcomes. The responsibilities and requirements below set out actions to enable Scotland's SSI national dataset to be robust and fit for use by clinicians.

Local reports are available for healthcare providers to access on SSIRS. Collation of national data requires the minimum dataset to be transferred to HPS by the specified date.

Reporting requires:

- completion of denominator records by the 17th of the following month
- to enable inclusion of readmission and PDS data, infection data are required to be uploaded onto SSIRS website and completed by the 17th of the month following the 30 post operative day surveillance (i.e. Jan data by the 17th March) for analysis by HPS.

HPS publish a [commentary on quarterly epidemiological data](#). This commentary includes SSI surveillance data in addition to *Clostridioides difficile* infection, *Escherichia coli* bacteraemia and *Staphylococcus aureus* bacteraemia data. The specific quarters applied to publications are:

- Quarter 1 – January to March
- Quarter 2 – April to June
- Quarter 3 – July to September
- Quarter 4 – October to December

For dates see SSI data submission timetable <https://www.hps.scot.nhs.uk/web-resources-container/surgical-site-infection-surveillance-protocol-and-resource-pack-edition-71/>

Data management at a local level: Collect, and collate data locally. Quality check data at a local level. Feedback infection rates to clinical staff locally.

Surveillance coordinator responsible for:

1. Completeness of data.
2. Accuracy of data (i.e. check that the operation category matches the operative procedure).
3. Accuracy of denominator (all eligible patients). Processes are required to ensure all patients included in Standard surveillance have had forms completed, (cross checking with admission or theatre lists) or that all procedures are included within the denominator of light surveillance.
4. For those healthcare providers managing their data locally, not using HPS surveillance forms, they should have their own quality assurance mechanisms in place to ensure validity and reliability checks.
5. Transfer of the defined minimum dataset by deadline dates via the Surgical Site Infection Reporting System (SSIRS) to HPS. Transfer is required as a minimum, quarterly with the option of monthly dependant on local reporting requirements.

Data management at HPS: Collection, collation, and analyses of data. Ensure robust data validation for inclusion within the commentary on quarterly epidemiological data. HPS will notify the Infection Control Manager, of the publication of quarterly data and request local cascade.

SSIRS Validation checks:

1. Primary validations – include data checks for incomplete or ambiguous core data fields e.g. ‘abdominal hysterectomy’ can only be performed on a ‘female’ patient, or if presentation to surgery is ‘unplanned’ the OPCS code should correspond. Similarly the date of operation is not before the date of admission or if an infection is present, all relevant criteria is marked. It is a mandatory requirement that all NNIS risk data are complete, without which a record will remain incomplete.
2. Secondary validations – include data checks that can be accepted without completion and/or values that are outside the stated requirements e.g. duration of operation outside the stated t-times. This is to enhance the validation process.

Confidentiality

The information obtained by HPS is collected with a guarantee that it will:

- Be held in the strictest confidence
- Be used only for the purpose stated

The following points should be noted to ensure confidentiality, by healthcare providers and are in line with the Confidentiality and Security Advisory Group for Scotland (CSAGS) report:

- **CHI numbers are the only identifiable information sent to HPS for inclusion in the SSI surveillance dataset.**

LOCAL CONFIDENTIALITY

- Data completed on SSIRS are anonymised.
- SSIRS is password protected
- If a hospital decides to record data on which surgeon(s) perform a procedure for local use, these data should be coded to ensure anonymity.
- Where information is supplied to HPS as part of national surveillance activity obtaining specific consent to pass the information to HPS should be addressed as part of the healthcare providers process for informing patients about the use of data. Refer to the Data Protection Act¹ and the guidance for public sector organisations found at <http://ico.gov.uk>.

NATIONAL CONFIDENTIALITY

- Once received at HPS the information will be held in accordance with the Data Protection Act¹. All electronic data stored in password protected databases with restricted access.

The Freedom of Information Act 2000² and the Freedom of Information (Scotland) Act 2002³ gives the right to access information held by public authorities including: Central Government, Fire and Rescue Services, Local Authorities, NHS, Police, Schools. Information received at HPS will be held in accordance and may be subject to disclosure under this Act.

Data Reporting

National reporting:

- Quarterly reports at board level for mandatory procedures are included within the [commentary on quarterly epidemiological data](#) published on HPS website. These reports provide details on the number of procedures by category, cumulative incidence of SSI and confidence intervals and the corresponding national benchmark.
- An annual National HAI Report is published by HPS, which will include SSI surveillance data.
- In addition HPS will explore further methods to ease access to SSI data by NHS boards.

Recommendations for local reporting:

- Reporting should be carried out at least quarterly, depending on denominators locally.
- Reporting locally should involve active feedback to all members of the surveillance team (e.g. surgeons, ward and theatre staff, community staff, infection control team and management), to enable improvement measures to be actioned as appropriate.
- A suite of reports are available on SSIRS for use locally with the facility to compare local data with national.

Exception Reporting

Analyses are undertaken by HPS on a quarterly basis as part of the [commentary on quarterly epidemiological data](#) to identify any NHS board that are an exception.

An NHS board is deemed an exception if their incidence rate is:

- Above the upper 95% confidence limit in the funnel plot analysis for the current quarter as displayed in the main body of the report;

OR

- Above the 3rd standard deviation upper warning limit (UWL) for the current quarter of the long-term trend analysis (3 years) as displayed in separate Excel appendix to the report.

Once an exception is confirmed an email is sent to the NHS board's coordinator (e.g. Infection Control Manager (ICM) or NHS board HAI Executive Lead) at the same time as the quarterly report is circulated for pre-release Further details on this process can be found at the following link

https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2276/documents/1_Production%20of%20Quarterly%20Exception%20Reports-%20WI%20v1.0.pdf

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