Protocol for the UK Severe Influenza Surveillance System (USISSL) Mandatory System – 2017/18
About Public Health England

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1. Background

1.1 Scope

Prior to the pandemic there was a recognised gap in surveillance of severe respiratory infection in the UK, in particular with regards to hospitalised cases of influenza. A pilot surveillance scheme for severe influenza, the UK Severe Influenza Surveillance System (USISS), was initiated during the 2010/11 post-pandemic influenza season in order to monitor and estimate the impact of seasonal influenza on the population and to describe the epidemiology of severe disease. The system was subsequently rolled out in the 2011/12 influenza season and has continued to operate since.

During the 2013/14 influenza season, the newly licensed live attenuated influenza vaccine (LAIV) was offered to all children aged 2-3 years in England and to children aged 4-11 years of age in a series of geographically discrete pilots. As such improved surveillance of laboratory-confirmed influenza in children was initiated, particularly around children with severe endpoints such as hospitalisation and Intensive Care Unit/High Dependency Unit (ICU/HDU) admission. The programme roll out has continued in subsequent seasons, with expansion of the targeted age groups each season. In the 2017/18 season, the national programme will include all children of reception school age to children of year 4 age (8 rising to 9 years). For the majority of children this will again be offered via school-based programmes. Children aged two and three years will be offered the vaccine through general practices. Vaccination will also continue to be offered to primary school-aged children (aged 5-10 rising to 11 years) in those areas that participated previously in primary school pilots in England. Subsequently in 2017/18 data collected through the USISS scheme will also be used to contribute to measuring the impact of the childhood influenza vaccination programme.

1.2 Objectives

1. To monitor and estimate the impact of severe influenza (both seasonal and pandemic) on the population
2. To describe the epidemiology of severe influenza in children and adults associated with intensive care unit admission and deaths in terms of age and influenza type
3. To contribute to monitoring the impact of the introduction of new live attenuated influenza vaccination programme for children aged 2 to 16 years of age
4. To assist monitoring of winter pressures on acute health services at a national level
5. To inform policy at all levels (national, regional and local)
2. Reporting influenza cases to USISS

All hospital Trusts are required to provide aggregate data on the number of ICU/HDU admissions with laboratory-confirmed influenza, within a one week period, by age group and influenza type/subtype.

2.1 Case definitions

A case is defined as:

Any individual admitted to hospital ICU/HDU
AND
has a laboratory confirmed influenza A (including H1, H3 or novel) or influenza B infection

An ICU/HDU admission is defined as:

Admission to a Paediatric / Neonatal or adult Intensive Care Unit or High Dependency Unit

Cases should be included in weekly reporting based on date of admission to ICU/HDU, and not by influenza laboratory date.

Cases who tested positive at another facility prior to admission to ICU/HDU should still be included.

Deaths which should be reported are defined as:

All cases who die in ICU/HDU with a laboratory-confirmed influenza infection (including A (H1, H3 or novel) or B).

Cases should be included in weekly reporting based on week of death (ie when the date of death falls within the week for which data is being reported), and not by influenza laboratory test date or by ICU/HDU admission date. Cases should be reported regardless of the time period spent in ICU/HDU.

Cases who were admitted to ICU/HDU and died after release into a general ward or discharge should be excluded from reporting.
2.2 Testing guidance

All patients admitted as an inpatient to hospital including ICU/HDU who meet the following criteria should be tested for influenza:

- History of or observed Fever (Temperature of 38 or more)
  AND
- At least two of: cough, sore throat, headache, rhinorrhoea, limb or joint pain, vomiting, diarrhoea, increased respiratory rate or poor feeding

Patients not meeting the above criteria may also be tested on the basis of clinical suspicion of influenza.

2.3 Data collection

2.3.1 Data collection

All hospital Trusts are required to provide aggregate data to the NHS Digital system, the Strategic Data Collection Service (SDCS), on the number of ICU/HDU admissions with laboratory-confirmed influenza, within a one week period, by age group and influenza type/subtype. The format of reporting is shown in Appendix 1.

The data collection will be mandatory for all NHS Acute Trusts under Section 259(1) of the Health and Social Care Act 2012. It has been approved by the Data Standards Assurance Service (DSAS)/Data Coordination Board by NHS Digital with DCB Number DCB2043 Amd 62/2017.

The Devolved Administrations of Scotland, Wales and Northern Ireland will be running parallel reporting schemes.

2.3.2 Data entry

This will be completed using the NHS Digital web-based reporting system, Strategic Data Collection Service (SDCS). The designated user in each Trust could be an infection control practitioner, nurse, medical or microbiology consultant, information officer, administrative assistant, depending on resources at each Acute Trust.

To submit the data to the USISS system, a designated Trust user will access the NHS Digital SDCS reporting tool:
https://datacollection.sdcollection.nhs.uk/

Data should be reported each Wednesday by 11:00 for all admissions the previous week (Monday 00:00 to Sunday 23:59).
2.3.3 Data security and confidentiality

Data collection is undertaken under permissions granted by the National Information Governance Board for Health and Social Care (NIGB) and in accordance with The Health Service (Control of Patient Information) Regulations 2002. In addition, the collection has been approved by the Data Coordination Board of NHS Digital with DCB Number DCB2043 Amd 62/2017.

2.4 Dissemination of results

2.4.1 Dissemination of results

Summary data from this surveillance system will be distributed on a weekly basis to stakeholders and via the PHE National Influenza Weekly Reports (published each Thursday at 1400 during the influenza season on the PHE website).

A USISS specific weekly report will also be distributed to all participating trusts.

Detailed analysis will be undertaken following collection of data for a suitable period (such as six/twelve months) using the data listed in Appendix 1 and to contribute to an evaluation of the direct and indirect impact of the universal childhood influenza vaccination programme as a whole.

2.4.2 USISS mandatory scheme outputs

Disease burden and severity:

- Cases described by age and influenza subtype
- Incidence, prevalence, total number of laboratory confirmed cases by trust, region and nationally
- Number of laboratory confirmed cases admitted to ICU/HDU
- Case fatality ratio by age group and influenza type/sub-type

Emergence of novel strains

- Increasing trends in case numbers, severity or mortality
- Increase in non-subtypable respiratory specimens

2.5 Period of operation

This system is planned to operate between week 40 (2017) and week 20 (2018) each season. The capability will exist to operate outside of these times in situations of urgent public health need (such as pandemic influenza activity).
We request that users enter all new laboratory confirmed cases of influenza that were admitted during the previous week (Monday at 00:00 to Sunday at 23:59) and update previous weeks with newly available information eg further laboratory results.
### Weekly ICU/HDU FLU SURVEILLANCE

Data corresponding to admissions in the week below (Please select from drop down):

Ensure all yellow fields are populated

<table>
<thead>
<tr>
<th>Flu Type</th>
<th>Under 1</th>
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<th>17-44</th>
<th>45-64</th>
<th>65+</th>
<th>TOTAL</th>
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<td>Influenza B</td>
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<td>Influenza/non subtypable</td>
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| Flu Type                      | Under 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 to 44 | 45 to 64 | 65+ | TOTAL |
|-------------------------------|---------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|-------|---------|-----|-------|
| Influenza A, H1N1pdm09        | 0       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |       |         |     |       |
| Influenza A (H3N2)            | 0       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |     |         |      |     |       |
| Influenza A, unknown subtype  | 0       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |       |         |     |       |
| Influenza B                   | 0       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |       |         |     |       |
| Influenza/non subtypable      | 0       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |       |         |     |       |
| TOTAL                         | 0       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0   | 0   |       |         |      |     |       |

Number of laboratory confirmed influenza admissions in Level 2 and Level 3 Care (HDU/ICU)