# Tender specifications

**The Emergency Department Syndromic Surveillance System:**

**“maintenance of the configuration of an emergency department clinical information system to enable cross-mapping of underlying data to a standardised set of fields for use in a national syndromic surveillance system”**

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# PART 1: TECHNICAL DESCRIPTION

# Context of the procurement

## Introduction

The Emergency Department Syndromic Surveillance System (EDSSS) is a national syndromic surveillance system that has been developed by Public Health England (PHE) and the Royal College of Emergency Medicine (RCEM). It is comprised of a sentinel network of emergency departments (EDs) across England and Northern Ireland that submit, on a daily basis, a small packet of data containing anonymised information on ED attendances.

The information is used by PHE to enhance its syndromic surveillance capacity to monitor the activity and spread of infectious diseases in the community.

### What is syndromic surveillance?

Syndromic surveillance is an established tool for monitoring the activity/spread of infectious diseases in the community in ‘real-time’, and assisting in the management of specific outbreaks or incidents. The PHE Real-time Syndromic Surveillance Team (ReSST) currently co-ordinates two national syndromic surveillance systems: the NHS 111 system, which monitors daily call activity and the underlying presenting symptoms for each call; and two GP surveillance systems including in hours and out of hours GP activity.

The systems are also designed to respond to incidents of potential public health importance e.g. influenza pandemics, air pollution, flooding and heatwaves, when specific reports are produced in ‘real-time’ and distributed to monitor affected areas for diseases/conditions of importance.

### Why is the EDSSS important?

ED syndromic surveillance is based upon the monitoring of patient attendances and presenting symptoms in near real-time. Patients present at EDs with more severe acute illness when compared to other sources of syndromic surveillance data e.g. telephone helpline and GP consultations, providing an opportunity to augment the other community-based surveillance systems for common community-based pathogens e.g. influenza and norovirus, environmental incidents such as heatwaves, and *Escherichia coli* O104 and haemolytic-uremic syndrome (HUS).

One of the main drivers for developing the EDSSS was the London 2012 Olympic and Paralympic Games. The Games required enhanced surveillance to monitor disease outbreaks and the potential public health impact from bioterrorist threats associated with this event. The large influx of participants and spectators to London from a large geographical area (and other sites across England) also increased the likelihood of outbreaks of disease e.g. norovirus, measles, and increased the burden on secondary care health facilities due to other conditions e.g. cardiovascular events. The EDSSS was secured as a public health legacy of the Games.

### What information is analysed by PHE?

Every day a small anonymised dataset is collected from each ED which contains information, including basic patient demographics, on each attendance. Total attendances can be monitored to identify the impact of seasonally circulating infections. Attendances can also be monitored by age group to identify the age-specific impact of pathogens.

The diagnosis code recorded by each emergency medicine clinician is a critical data item that is used to group each attendance into a syndromic clinical indicator. Examples include:

* All respiratory attendances
* Acute respiratory infections
* Gastrointestinal attendances
* Cardiac attendances
* Cold weather effects

Other key data collected include the triage category and presentation fields which can provide some information about the severity of attendance, and discharge status/referral which again can give an indication of the severity of the presenting patients by tracking the proportions of patients discharged to home, admission and intensive care.

### What are the benefits of the EDSSS?

Emergency departments and NHS Trusts participating in the EDSSS will benefit in several areas including:

* standardised data from its ED activity that enables better quality improvement and benchmarking activity;
* updating data collection to be compatible with the incoming Emergency Department Indicators that are replacing the four hour target;
* feedback to the hospital and ED about large-scale disease outbreaks e.g. seasonal flu, enabling the Trust to match acute bed capacity with need;
* the availability of receiving bespoke data reports from PHE if required.

### What is the impact of EDSSS on EDs?

None – the EDSSS is a passive surveillance system. Front line emergency medicine clinicians are not required to undertake any additional requirements in respect of coding etc. The technology used to collect, and securely transmit the small anonymised dataset to PHE each day is automated and requires no intervention

### What is the purpose of this tender?

PHE wish to contract the services of contractors who are able to continue the work involved in maintaining the EDSSS.

# Objectives of the work

## Specific objectives

The specific objectives of this work are:

**To maintain existing EDs that have been recruited to the EDSSS.** The EDSSS currently uses EDs which mainly use the ‘Symphony’ clinical information system, produced by EMIS Health. The contractor should be able to resolve technical issues at each existing participating Symphony ED including problems where new underlying tables within the Symphony clinical information system require mapping to existing fields within the minimum dataset. The contractor should also be able to identify and resolve changes to the local clinical information system that may impact on the mapping and/or collection of data and thus must have established contacts within each relevant Trust.

## Methodology/Approach

In order to carry out the work of maintaining the existing EDSSS EDs (at time of writing, 31 EDs), the future contractor will have to demonstrate that they can perform the technical maintenance tasks involved in ensuring the continued daily data extraction from the existing EDSSS EDs **without any interruption to supply**. In particular, the future contractor will have to undertake several steps at each site to achieve this including:

1. *working with PHE and other external contractors,* to identify current or potential future problems with the mapping of tables/terms within the clinical information system to fields/descriptors within the RCEM Emergency Care Dataset.
2. *provide a daily view of the dataset,* a live view of the data extract must be made available to other external contractors, on a daily basis, who are co-ordinating the secure collection, encryption and transfer of the data to PHE.
3. *developing and applying routines,* undertaking the development work required to update existing routines within the clinical information system to enable real-time mapping of emergency medicine table terms to minimum dataset descriptors, should changes be agreed with PHE to be necessary. This must include the confirmation of authorisation from the Trust, where required.
4. *working with Trust IT employees*, and in particular local managers of the clinical information systems, and senior Heads of IT, to ensure that assurance is provided that any required changes to existing EDSSS data extraction routines will not impact on the local live systems.

In order to undertake the steps outlined above, it is critical that the future contractor must have direct and/or remote access to the clinical information system in existing EDSSS sites. The EDSSS currently uses EDs which mainly use the ‘Symphony’ clinical information system, produced by EMIS Health. The contractor would therefore be required to obtain the permission of the local NHS Trust and the legal owner of the Symphony clinical information system (EMIS Health), to enable the maintenance of each site including: assessment of, and if necessary, the application of any changes/ updates to the routines already in place at reporting EDSSS locations.

**Security/data protection/NHS standards**

The future contractor should have all relevant credentials required for working with databases containing patient identifiable information. The contractor should also be able to demonstrate that they comply with all NHS data security requirements and relevant data protection laws. In order to gain access to the clinical information systems over the secure N3 network, the contractor should also have access to the N3 network through a dedicated N3 portal.

# Duration

The duration of the contract, which includes delivery of all works described in these specifications, shall be 12 months, with the possibility of extending for a further period of 12 months following the agreement of all parties. All deliverables described in paragraph 4 below are required to be completed within this 12 month period, but it is important that the existing daily data flow from existing EDSSS EDs continues to flow without interruption.

# Deliverables, meetings and timetable

## Deliverables

The future contractor shall present the following deliverables:

1. **Database view:** the contractor will deliver a daily view of the ‘PHE Anonymised Dataset’ (of the RCEM Emergency Care Dataset), from each existing ED participating in the EDSSS, to other external contractors who are co-ordinating the secure collection, encryption and transfer of the data to PHE as described in paragraph 2.2b.

In ensuring the delivery of the daily database view, the contractor will undertake required maintenance of existing EDs (at time of writing, 35 EDs participating in EDSSS), resolving all problems in a timely and efficient manner, where appropriate working with PHE and other external contractors to overcome problems as described in paragraph 2.2a&c.

All deliverables are to be produced in English.

# Terms of approval of reports

After reception of each report, PHE will have 20 working days in which:

* To approve it, with or without comments or reservations;
* To reject it and request a new report.

If PHE does not react within this period, the report shall be deemed to have been approved.

Where PHE requests a new report because the one previously submitted has been rejected, this shall be submitted within 20 working days. The new report shall likewise be subject to the above provision.