Summary These guidelines describe the purpose and activities of the ED Surveillance Team in monitoring PHREDSS and reporting to Public Health Units (PHUs). It also describes the reasons that a PHREDSS Situation Report will be sent to a Public Health Unit (PHU) and provides guidance for PHUs in considering activity in response to receiving a PHREDSS Situation Report.

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Public Health Real-time Emergency Dept Surveillance System (PHREDSS) Public Health Unit Response

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Review date: 01-Jul-2015
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PUBLIC HEALTH REAL-TIME EMERGENCY DEPARTMENT SURVEILLANCE SYSTEM (PHREDSS) – PUBLIC HEALTH UNIT RESPONSE GUIDELINES

PURPOSE
These guidelines describe the purpose and activities of the ED Surveillance Team in monitoring PHREDSS and reporting to Public Health Units (PHUs). It also describes the reasons that a PHREDSS Situation Report will be sent to a PHU and provides guidance for PHUs in considering activity in response to a PHREDSS Situation Report.

KEY PRINCIPLES
PHREDSS provides daily monitoring of ED visits presenting with various health problems grouped into syndromes. Each PHREDSS signal is assessed by the ED Surveillance Team before further reporting. The ED Surveillance Team issue a Situation Report via electronic mail to relevant Departmental and Area Health Service public health authorities for consideration if one or more of the following criteria are met:

- A higher than expected or sustained increase in ED visits (an unseasonal increase) for a syndrome;
- A significant change in the epidemiology of a syndrome (such as the age or sex distribution);
- An increase in the severity or urgency of the ED visits for a syndrome (based on admission status or triage category);
- An increase in an inherently severe syndrome such as meningitis/encephalitis, critical care admissions or deaths in ED; or
- An increase in a syndrome of particular interest to a stakeholder or stakeholder group (eg. influenza-like-illness, gastrointestinal illness, annual childhood asthma epidemics, drug or alcohol misuse).

USE OF THE GUIDELINE
The level of response from a PHU to a PHREDSS Situation Report should be graded according to:

- the apparent size of the increase in the syndrome reported;
- the severity of the illness being caused;
- the opportunity for intervention by the PHU; and
- any existing local knowledge.

NSW Department of Health may direct or provide guidance for a coordinated response.

REVISION HISTORY

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<thead>
<tr>
<th>Version</th>
<th>Approved by</th>
<th>Amendment notes</th>
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<tr>
<td>July 2010 (GL2010_009)</td>
<td>Deputy Director-General Population Health</td>
<td>New Guideline</td>
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</table>

ATTACHMENTS

1. Public Health Real-time Emergency Department Surveillance System (PHREDSS) Public Health Unit Response Guidelines
PHREDSS provides daily monitoring of ED visits presenting with various health problems. Using the information transferred to the Department’s PHREDSS database, computer programs automatically prepare statistical reports that highlight unusual trends in a range of acute health problems. Situation reports arising from the system are sent by PHREDSS personnel using electronic mail to relevant Departmental and Area Health Service public health authorities for consideration.

**Surveillance Objectives**

- To provide early warning of increases in disease activity in the population that may not be evident through other routine surveillance.
- To provide situational awareness and supplement other information on trends in acute disease and injury in the NSW population.
- To monitor syndrome epidemiology to assist the development and monitoring of prevention strategies for the causes of these syndromes.

**Response options for the PHU receiving the situation report:**

The level of response should be graded according to the apparent size of the increase, severity of illness being caused, opportunity for intervention and local knowledge. The NSW Department of Health may direct or provide guidance for a coordinated response.

**Assessment** should:

- Consider other available information such as notifiable disease reports, the presence of demographic changes through mass gatherings or similar events.
- Include case characteristics, such as: number of people affected, seasonality, age, sex, place of residence and severity of illness (as measured by increases in triage urgency or the proportion of patients being admitted for further treatment or being admitted to a critical care illness). Further information relating to a situation report can be obtained from the PHREDSS team or directly from the PHREDSS reports or other PHREDSS query tools (see next page).

**Responses** may include:

- For sharp increases in the number of ED visits apparently caused by infections or toxins, contacting the relevant ED director, (and other relevant personnel who managed the cases) to determine the likely cause of the increase and unless there is a good alternative explanation, encourage testing for likely causal agents on patients presenting over the next few days with similar syndromes.
- Consultation with the relevant policy branch of NSW Health for advice.
- For diseases, including seasonal disease, where alerts to other clinicians or the public are considered likely to assist in prevention of further cases, the issuing of alerts through fax streams or the media.

**Heightened surveillance**

Options are available for heightened surveillance for planned events, such as mass gatherings, or emergencies. For planned events, several weeks notice is required. Options include: increased frequency of data updates; regular line listings of available data; reduced level at which increased activity is signalled, or creation of additional syndromes. For regular events, comparison with equivalent event days rather than the same weekday may be possible.
PHREDSS uses statistical methods to signal unusual occurrences in daily or weekly counts of ED visits categorised into a range of related diagnosis groupings. Each signal is assessed by the PHREDSS team before further reporting. Data available at 12 midnight on the previous day are included in the analysis. Total counts of ambulance arrivals, critical care ward admissions and ED deaths are monitored as well as diagnoses to identify large increases in severe illness. Reports are checked in the morning and afternoon on weekdays and mornings only on weekends and public holidays.

PHREDSS personnel evaluate each signal before issuing a “situation report”, as follows:

- Has there been a recent increase in ED visits?
- Is the increase expected at this time of year (a seasonal increase)?
- How big is the increase compared with both recent and seasonal activity?
- Has the epidemiology of the syndrome changed (such as the age or sex distribution)?
- Has the severity or urgency of the visits increased (based on admission status or triage category)?
- How long has the increase been sustained?
- Is the diagnosis grouping inherently severe, such as meningitis/encephalitis, critical care admissions and ED deaths?
- Is the phenomenon of known interest to our stakeholders? E.g.: influenza-like-illness; gastrointestinal illness; annual childhood asthma epidemics; and drug or alcohol misuse.

The PHREDSS team issues a situation report if the answers to these questions justify informing relevant health stakeholders. The reports generally provide an overview summary along with a description of how the recent epidemiology compares with usual epidemiology. The epidemiological factors include age, sex, mode of arrival at ED, triage urgency, departure status from ED, locality of patient residence.

PHUs can view the PHREDSS reports directly. Various tools to assist with line listing review and statistical analysis (NetEpi Analysis) and ‘keyword searches’ to identify patient visits meeting certain presentation criteria are available from the home page of the PHREDSS reports. Available fields for each ED visit include: medical record number (for some hospitals); date and time of arrival; mode of arrival; presenting problem and triage nurse assessment; triage urgency category; mode of separation; and ED diagnosis. Patient names, addresses and dates of birth are not recorded.

The PHREDSS reports home page is available from the Biosurveillance link at:

hoist.health.nsw.gov.au (NB: this is on the intranet, not the internet).

A username and password are required, which can be obtained by completing the one-page form available at:


and returning by facsimile to HOIST Support on: (02) 9391 9232.

For further information about PHREDSS please send an email to:
phredss@doh.health.nsw.gov.au