Incidence of whooping cough

Purpose:

To help reduce the incidence of whooping cough.

Definition of indicator and its variants:

Notifications of whooping cough (pertussis).

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Sex</th>
<th>Age group</th>
<th>Organisation (see glossary)</th>
<th>Current data</th>
<th>Trend data</th>
<th>File-worksheet name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of notifications</td>
<td>P</td>
<td>All ages</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>2014</td>
<td></td>
<td>04D_089NO</td>
</tr>
<tr>
<td>Notification rate per 100,000 and number of notifications</td>
<td>P</td>
<td>&lt;1</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>2011-14</td>
<td></td>
<td>04D_089CR</td>
</tr>
<tr>
<td>Directly age-standardised notification rate per 100,000 and number of notifications</td>
<td>P</td>
<td>&lt;15</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>2011-14</td>
<td></td>
<td>04D_089DR</td>
</tr>
</tbody>
</table>

Numerator:

Numerator data - Notifications of whooping cough in the respective calendar year(s).

Source of numerator data - Public Health England (PHE), Notifications of infectious diseases (NOIDs).

Comments on numerator data - Whooping cough is notifiable under the Public Health Acts and Infectious Disease Regulations. Detailed statistics and a description of the reporting system are published by PHE – see link below.

In previous and recent Public Health Law, it was a requirement to notify infectious diseases by paper report. However there were known cases of reporting via non paper reports. In late 2010 a letter was sent to Local Health Protection Units (HPUs) informing them not to notify upwards any cases that were not formally notified in writing. As a result of this the number of notifications declined from the end of 2010 and through 2011.

A policy decision reversed the decision to only allow cases notified in writing, after which point the number of correct notifications improved, but the issue was not completely resolved. This means that the Notifications of Infectious Diseases (NOIDS) data is not consistently reported through the period concerned.

Due to this, PHE have moved to using laboratory confirmed cases and, from 2010, cases of infectious diseases were recorded in a web-based management support tool (HPZone).

Whooping cough is a cyclical disease with increases occurring every 3-4 years. The epidemic nature of whooping cough results in a variation in incidence from year to year, irrespective of vaccination levels, until coverage is extremely high. An indicator that shows wide variations on a year to year basis can be difficult to interpret. As there are marked annual variations in notifications of whooping cough, a four-year average is used for the notification rates.

Denominator:

Denominator data - 2011 Census based mid-year population estimates for the respective calendar year(s).

Source of denominator data – Office for National Statistics (ONS).

Comments on denominator data - The population figures used are ONS mid-year estimates for 2011-14 derived from the 2011 Census with allowance for subsequent births, deaths, migration, and ageing of the population.

Statistical methods:


Interpretation of indicators:
Quality of indicator - Annex 12: Evaluating the quality of clinical and health indicators (Compendium of population health indicators > Statistical methods and disclosure control > Methods of the HSCIC Indicator Portal https://indicators.hscic.gov.uk for details) describes the criteria that should be used to judge the quality of this indicator. The application of the criteria is dependent on the context (e.g. describing a single organisation, comparing several organisations) and the level (e.g. national / regional with large numbers of events, local with small numbers of events) at which the data are to be used.

Further reading:


Updated: May 2016