Using conception data to monitor progress on teenage pregnancy
About Public Health England

Public Health England’s mission is to protect and improve the nation’s health and to address inequalities through working with national and local government, the NHS, industry and the voluntary and community sector. PHE is an operationally autonomous executive agency of the Department of Health.

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**Overview**

This note has been produced by Public Health England (PHE) to serve as a review for local areas on the data that is available to monitor the progress on reducing teenage conceptions at a local level.

Data on teenage conceptions (numbers and rates) are produced by the Office for National Statistics (ONS) and are published on the ONS website. PHE will provide additional analysis (see section three for full details), however any data queries should be made direct to ONS.

This note provides:

- background information on the sources and definitions used by ONS when producing conception statistics
- an overview of the available conception data (including information on the timing of data releases and where to access the data)
- links to resources provided by PHE to help areas monitor progress on teenage conception
Conception statistics: sources and definitions

Data on conceptions is compiled by combining information from registrations of births and notifications of legal abortions. Conception data includes pregnancies that result in:

- one or more live or still births (a maternity)
- a legal abortion under the Abortion Act 1967

They do not include miscarriages or illegal abortions.

Date of conception

The date of conception is estimated using recorded gestation for abortions and stillbirths, and assuming 38 weeks gestation for live births.

Age at conception

A woman’s age at conception is calculated as the number of complete years between her date of birth and the date she conceived. In many cases her birthday will occur between conception and the birth or abortion. For example, a woman may conceive at age 17 and give birth at age 18. The conception and birth may also occur in different calendar years. For these reasons, the number of conceptions to teenage women in a given year will not match the number of births and abortions to teenagers occurring in that year.

Timing

As conception data is compiled partly from birth registrations (which can be undertaken up to six weeks after a birth), the raw data required to identify the date of conception are not available until up to 11 months after the event (abortion data is, of course, available sooner). ONS require a further three months to collate, input, validate and compile the data, so statistics are published at least 14 months after the end of the period to which they relate.

Further information about ONS conception statistics

For more information on data quality, legislation and procedures relating to conception statistics see conceptions metadata and conceptions quality and methodology information document.
Available data

There are three main releases of conception data to be aware of:

Annual conception data

Annual conception data are released in February each year (usually the fourth Tuesday of the month). Given the 14-month lag in the data, the latest data available (released in February 2013) are for 2011. The data are available here: www.ons.gov.uk/ons/rel/vsob1/conception-statistics--england-and-wales/index.html

Under 18 conceptions

Annual data on under 18 conceptions are available going back to 1998. Data is available for all top tier local authorities (LAD1) and local authority districts (LAD2) in Table 6. The following figures are provided for each local authority:

- number of conceptions
- rate of conceptions per 1,000 girls aged 15–17
- rate of conceptions leading to abortion
- rate of conceptions leading to maternity
- proportion of total conceptions ending in abortion

Under 16 conceptions

Less detailed information is available on under 16 conceptions. The smaller numbers involved limit the extent to which it is possible to disaggregate the data.

Annual data on under 16 conceptions for top tier local authorities is only available from 2009 onwards at Table 5. The following figures are provided for each local authority:

- number of conceptions
- rate of conceptions per 1,000 girls aged 13–15
- proportion of conceptions ending in abortion

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1 Rates for 2002-2010 were published based on populations (mid-year estimates for 2002-2010 based on the 2001 Census) that have since been rebased. PHE have recalculated these rates using the updated populations.

2 Ibid

3 Ibid

4 Rates for 2009-2010 were published based on populations (mid-year estimates for 2009-2010 based on the 2001 Census) that have since been rebased. PHE will be recalculating these rates using the updated populations.
Data on under 16 conceptions for all local authorities (top tier and county districts) is available as three year aggregates for 2008–10 to 2009–11. Data is available in Table 7 on:

- number of conceptions
- rate of conceptions per 1,000 girls aged 13–15\(^5\)
- proportion of conceptions ending in abortion

**Quarterly data on under 18 conceptions**

Quarterly data on under 18 and under 16 conceptions in England is available going back to 1998. Data for quarter one (Jan–March) of the previous year is published at the end of May. In other words, data for quarter one of 2012 was published in May 2013, quarter two data was published in August and quarter three data in November. Quarter four data is published alongside the annual data the following February. Data is usually published on the fourth Tuesday of the month.

England figures on the number and rate of conceptions and the proportion of conceptions ending in abortion for under 16s and under 18s are available via the ONS website. These figures are presented in the quarterly conceptions spreadsheet below (England page):


Top tier local authority quarterly data on under 18 conceptions (number and rate of conceptions) is also published by ONS at the link below (see quarterly numbers). Data on quarterly rates is available for 2011 and later (see quarterly rates) and the publication timetable is the same as for the England data.

www.ons.gov.uk/ons/rel/vsob1/quart-conc-to-women-und-18/index.html

**Under 18 conception data at sub local authority level**

Having data on teenage conceptions available below local authority level allow teenage pregnancy leads to target their work within local authority areas towards the most at risk. Nearly all local authorities, even those with relatively low levels of teenage pregnancy overall, will contain some high rate areas.

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\(^5\) Rates for 2008-10 and 2009-11 have been published based on mid-2011 populations only. Following the publication of mid year estimates for 2008-2010 based on the 2011 Census, PHE will be recalculating these rates using the updated populations.
Data below local authority level should, however, be interpreted with caution. Because of the small numbers of conceptions involved, numbers can vary widely from year to year and will be subject to large confidence intervals. Where there are fewer than five conceptions in a particular area, the data will be suppressed by ONS to ensure that individuals cannot be identified from the data.

2009–11 data

ONS currently provides sub local authority data on under 18 conceptions by (2001) Census Area Statistics (CAS) ward. The latest data, covering the period 2009–2011, was available in July 2013 and ONS contacted teenage pregnancy leads when the data was available.

To comply with data protection requirements, ward data is only available on application to ONS and following completion of a data access agreement. This data remains available to local authorities free of charge. Ward data for 2010–12 will be available in July 2014.

ONS provide the number of under 18 conceptions by ward 2009–11, conception rates by ward and confidence intervals around the ward rates. The width of these confidence intervals reflects the small number of conceptions on which these rates are based. As populations for 2011 are not available for CAS wards, the population denominator used is the sum of the 2009 population estimate and two times the 2010 population estimate.

Future data releases

ONS considered providing data on under 18 conceptions by middle super output area (MSOA) rather than ward. In response to customer feedback, ONS has decided to continue producing these statistics for wards.

Production of population estimates for 2001 CAS wards was stopped after 2010, so future releases of small area conception figures will be for the 2011 Census merged wards.

The 2011 Census merged wards, like 2001 CAS wards, are a frozen geography, but are based on 2011 electoral ward boundaries. If the Census estimate for an electoral ward falls below 1,000 persons or 400 households, the ward is merged with a neighbouring ward, or wards, until this threshold is reached.

The 2009–2011 figures will be revised in 2014 once population estimates for Census merged wards are available for each year.
PHE resources using teenage conception data

Public Health England has produced a range of tools to assist in presenting and interpreting the conceptions data. All data and intelligence resources produced by PHE are now available from the Data and Knowledge gateway. Key sources relating to teenage pregnancy include:

Public Health Outcomes Framework (PHOF)

Under 18 conceptions is one of the indicators included in the framework. More details of the framework and specifications for the indicators are available here: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_132358

The PHOF data tool currently contains under 18 conception rates for top tier local authorities from 1998 to 2011. These rates are the rebased rates, as calculated by PHE. The local authority district data will be reproduced within the tool in a future update. The data tool is available from: www.phoutcomes.info

Teenage pregnancy interactive mapping

Interactive mapping tools have been produced for under 18 data at local authority and ward level and under 16 data at local authority level. These interactive maps provide various different ways of looking at the data including highlighting where area rates are significantly higher or lower than the national average, charting changes in conception rates since 1998 and mapping conception rates by levels of area deprivation and education. These resources are currently being updated with rebased rates, and are available from: www.apho.org.uk/resource/view.aspx?RID=116354

Forecasts of under 18 conceptions

Forecasts of under 18 conception rates for all top tier local authorities are available up to 2020. Forecasts are based on data on conception rates 1992–2010. The forecasting method used predicts the future rate for an area, taking account all past trends in the data but giving greater influence to more recent data. These forecasts are also currently being updated with rebased rates, and are available from: www.apho.org.uk/resource/view.aspx?RID=116533
For more information about the interactive mapping and forecasting tools, please contact Dave Jephson (David.Jephson@phe.gov.uk)

Service snapshots – teenage pregnancy

These snapshots are available for all top tier local authorities and provide area level data on a range of risk factors associated with teenage pregnancy including demographic factors, family background, education and engagement in other risky behaviours, for example, drinking alcohol. They are available in the Child and Maternal Health section of the PHE data and knowledge gateway.
Other relevant data

In addition to the published data on teenage conceptions, other data is available that will be of interest to those looking to monitor teenage conception rates at a local level.

Abortion data

The Department of Health publish annual data on abortions in May each year. Annual figures on the number and rate of abortions to under 18 year olds are available broken down by clinical commissioning group (CCG) and top tier local authority.

Abortion data are available sooner than conceptions data (because there is no need to wait for maternities to take place). Given the high proportion of teenage conceptions that result in abortion, these data provide a good lead indicator of the likely future trend in teenage conception rates.

The 2012 data are available here:

Contraception data

Finally, the Health and Social Care Information Centre publish regular statistics on the use of contraceptive services, including contacts at contraceptive clinics by age and gender. The latest figures are available from the Health and Social Care Information Centre website.