Department of Health & Social Care

Guide to Abortion Statistics, England and Wales: 2018

Summary information from the abortion notification forms returned to the Chief Medical Officers of England and Wales

Published 13 June 2019

Contents

Introduction

1. This report is a supplementary document to the main commentary section of the Abortion Statistics publication which presents statistics on abortions carried out in England and Wales in 2018. This document provides more detail on those statistics and is intended to give the legal context as well as a technical guide to the concepts and methodology used.

2. The Department of Health and Social Care (DHSC) has published abortion statistics annually since 2002. These are available on the GOV.UK website. Statistics for years from 1974 to 2001 were published by the Office for National Statistics (ONS) in their Abortion Statistics Series AB, Nos 1 to 28. The reports for 1991 to 2001 are available electronically on request to abortion.statistics@dhsc.gov.uk. Statistics for years from 1968 to 1973 were published in the Registrar General's Statistical Review of England and Wales, Supplement on Abortion.

3. This publication is a National Statistic. It is a statutory requirement that National Statistics should be produced in accordance with the standards set out in the Code of Practice for Official Statistics. The UK Statistics Authority assesses all National Statistics for compliance with the Code of Practice. The results of the assessment of abortion statistics were published in February 2012.

The legislative context

4. The Abortion Act 1967, as amended by the Human Fertilisation and Embryology Act 1990, permits termination of a pregnancy by a registered medical practitioner subject to certain conditions. Legal requirements apply to the certification and notification of abortion procedures. Within the terms of the Abortion Act, only a registered practitioner can terminate a pregnancy. The doctor taking responsibility for the procedure is legally required to notify the Chief Medical Officer (CMO) of the abortion within 14 days of the termination, whether carried out in the NHS or an approved independent sector place and whether or not the woman is a UK resident. The Department of Health and Social Care provides a HSA4 form for this purpose. Further details are available on the GOV.UK website.

5. Except in an emergency, any treatment for the termination of pregnancy can only be carried out in an NHS hospital or an independent clinic approved for the purpose by the Secretary of State. After a pregnancy has reached 24 weeks gestation (defined as 24 weeks and 0 days and beyond), the abortion can only be carried out in an NHS hospital. Through contractual arrangements with Clinical Commissioning Groups (CCGs), a large number of approved independent sector places perform NHS-funded abortions.

6. A legally induced abortion must be certified by two registered medical practitioners as justified under one or more of the following grounds:

A the continuance of the pregnancy would involve risk to the life of the pregnant woman greater than if the pregnancy were terminated (Abortion Act, 1967 as amended, section 1(1)(c))

B the termination is necessary to prevent grave permanent injury to the physical or mental health of the pregnant woman (section 1(1)(b))

C the pregnancy has not exceeded its twenty-fourth week and that the continuance of the pregnancy would involve risk, greater than if the pregnancy were terminated, of injury to the physical or mental health of the pregnant woman (section 1(1)(a))

D the pregnancy has not exceeded its twenty-fourth week and that the continuance of the pregnancy would involve risk, greater than if the pregnancy were terminated, of injury to the physical or mental health of any existing children of the family of the pregnant woman (section 1(1)(a))

E there is a substantial risk that if the child were born it would suffer from such physical or mental abnormalities as to be seriously handicapped (section 1(1)(d))

or, in an emergency, certified by the operating practitioner as immediately necessary:

F to save the life of the pregnant woman (section 1(4))

G to prevent grave permanent injury to the physical or mental health of the pregnant woman (section 1(4))

Data Quality

Validation

7. The Department of Health and Social Care use a thorough process for inspecting and recording the information received on the forms in order to monitor compliance with the legislation and the extent to which best practice guidance from the Department of Health and Social Care is followed. Selected forms are scrutinised by a medical practitioner who may request further detail from the patient's medical record via the terminating doctor. Further details of the checks that are made on the data are available on the GOV.UK web site.

Data collection

8. Not all the information collected on form HSA4 is necessary for statistical purposes and some of the information that is used to monitor the Abortion Act is not stored electronically other than on scanned images of the forms. The scanned images of the forms are part of the system for processing the forms and they are kept for three years.

The following information is not stored:

- Terminating and certifying doctors' names
- Terminating and certifying doctors' addresses
- Terminating doctor's GMC number
- Patient name
- Patient reference including NHS number
- Patient address
- Detail about any medical conditions other than ICD10 Codes

Derived fields

9. Some of the data used in the tables are derived variables. More detail about these calculations is shown below:

- *Reported Date of Termination* is from the date of the surgical treatment or, for medical abortions, the date of prostaglandin or other medical agent. If a feticide is used, this date takes priority.

- *Age at Termination* is taken from Reported Date of Termination (see above) minus date of birth. Age at termination is collected in whole years.

- *Purchaser* is derived from information given about how the abortion was funded (NHS or Privately) together with clinic type (NHS hospital, Independent Sector, Private hospital). For example, a privately funded abortion within an Independent Sector organisation will be 'privately funded' and an NHS funded abortion within an Independent Sector clinic will be 'NHS Funded: Independent Sector'.

- *Area of residence (CCG/LA/region)* is derived from postcode of the woman's residence.

- *Duration of stay* is derived from date of discharge minus date of admission.

Incomplete information and imputation

10. Incomplete and incorrectly completed forms are returned to practitioners for completion and clarification. In a very small number of cases (about one-quarter of one percent), the information remains unavailable at the time of publication. Date of birth was missing from 39 records in 2018, gestation information from 54, postcodes from 53 and grounds from 38.

11. For the purposes of constructing statistics, values for missing items are imputed. Records with missing ages were assigned pro-rata to the 20-24 age group, as this is the modal age group, accounting for 26% of abortions. Missing gestations were imputed as 6, 7, 8, 9 or 10 weeks in equal distribution unless the method of abortion or diagnosis suggested otherwise. Missing postcodes were imputed with a random postcode from within the main local authority of other residents attending the same hospital or clinic. Missing grounds were imputed as ground C unless information on the form suggested otherwise.

Forms returned after the publication cut-off date

12. The 2018 figures in this annual bulletin are based on a snapshot of the records taken about six weeks prior to publication. A small number of notifications have been, and will continue to be, received after this cut-off date. Whilst these additional notifications are processed and the information retained in line with our retention policy, they are not included in future statistical releases.

Under-reporting of Ground E notifications

13. Ground E abortions are those performed because of fetal abnormality at any gestation. The medical diagnoses are coded to ICD10.

14. During 2013, it was brought to the Department of Health and Social Care's attention that the number of Ground E HSA4 notifications was lower than the number reported to the congenital anomaly registries. The Department of Health and Social Care has worked closely with the National Down's Syndrome Cytogenetic Register (NDSCR) to explore this discrepancy.

15. A matching exercise was carried out between the NDSCR data and Department of Health and Social Care notifications for 2011, 2012 and 2013 data. Results from the matching suggest that a Department of Health and Social Care notification was made for about 54% of NDSCR records and that almost half of Ground E notifications are missing. As recommended by the Royal College of Obstetricians and Gynaecologists, the Department of Health and Social Care has been working with clinics to rectify this under-reporting. In December 2016 the Department of Health and Social Care wrote to all Fetal Medicine Units, Antenatal Screening Midwives and administration staff reminding colleagues of doctors' responsibility to submit HSA4 forms to the relevant Chief Medical Officer. The letter was jointly signed by the Department of Health and Social Care, Royal College of Obstetricians and Gynaecologists and Maternal and Fetal Health Medicine Society. However, despite some progress being made, it is likely there is still a significant undercount presented in the ground E notification tables in this publication, so overall figures related to ground E notifications should be treated with caution.

16. Results from the matching exercise are published.

17. Between 2011 and 2013, there was a 17.8% increase in the submission of HSA4 Abortion Notifications for Down's syndrome.

Statistical methods used in this publication

Population estimates used for rates of abortion

18. Abortion rates are calculated using the conventional age range for women in their child bearing years, 15 – 44.

19. Abortion rates per 1,000 women for 2018 at a national level and at CCG level were calculated using the mid-2017 population estimates for England, Wales, England and Wales, Clinical Commissioning Groups and Locality Office, as published at 28th June 2018. Rates for earlier years were calculated using the latest population estimates available at the time the relevant annual reports were produced and have not been revised, either by using population estimates for the year in question or by using updated population estimates.

Deriving age standardised rates of abortion

20. Age standardised rates allow comparison between populations which may contain different proportions of people of different ages. The European Standard Population (ESP) is a widely used artificial population structure for the calculation of directly age standardised rates. The replacement of the ESP first used in 1976 with an updated version published in 2013 resulted in an increase of all-cause mortality rates for England and Wales by 85% and all-site cancer incidence rates for England by some 48%. Figures using the 1976 and 2013 ESPs are therefore not comparable. Information about this change in methods can be found on the ONS website.

21. The effect of implementing the 2013 ESP for abortion age standardised rates is small. The vast majority of abortions occur within the age range 15-44. The 1976 ESP assumed equal populations at each single age between 15-44 (see Annex table 1 below). The 2013 ESP made only a small change to the populations within age range 15-44 such that although not equal, it remains fairly uniform. Thus, the 2013 ESP brings the abortion age standardised rates down by about 4% in recent years and 2% in earlier years. The time series using 2013 ESP age standardised rates back dated to 1968 is presented in Table 1 of the detailed tables.

22. The formulae used to calculate the age-standardised abortion rates are given below:

For the analysis of trends in abortion rates for England and Wales:

$$Age\ Standardised\ Rate = \frac{\sum_{all\ ages\ i} rate_i ESP_i}{\sum_{i=15}^{44} ESP_i}$$

Where 'ratei' is the crude rate for women aged i and ESPi is the population of women aged i in the 2013 European Standard Population.

For the area analyses in table 10b:

$$Age\ Standardised\ Rate = \frac{\sum_{i=15}^{44} rate_i ESP_i}{\sum_{i=15}^{44} ESP_i}$$

where the rate for women aged under 16 (rate 15) =

$$\frac{number\ of\ abortions\ to\ women\ under\ 16}{population\ of\ 15\ year\ olds}$$

and the rate for women aged 44 and over (rate 44) =

$$\frac{number\ of\ abortions\ to\ women\ aged\ 44\ and\ over}{population\ of\ 44\ year\ olds}$$

Table 1 - European Standardised Population

Age group	1976 ESP	2013 ESP
Under 1	1,600	1,000
1-4	6,400	4,000
5-9	7,000	5,500
10-14	7,000	5,500
15-19	7,000	5,500
20-24	7,000	6,000
25-29	7,000	6,000
30-34	7,000	6,500
35-39	7,000	7,000
40-44	7,000	7,000
45-49	7,000	7,000
50-54	7,000	7,000
55-59	6,000	6,500
60-64	5,000	6,000
65-69	4,000	5,500
70-74	3,000	5,000
75-79	2,000	4,000
80-84	1,000	2,500
85 and over	1,000	-
85-89	-	1,500
90-94	-	800
95 and over	-	200
Total	100,000	100,000

Source: Eurostat

Confidence intervals

23. The figures recorded in this report are the outcome of a stochastic process – that is, they are influenced by chance or random processes such as fertilisation. Each recorded figure is only one of a range of results that could have occurred under the same circumstances if those random processes had led to different outcomes. It is often the underlying circumstances or process that is of interest and the actual value observed gives only an imprecise estimate of this 'underlying risk'. For example, users are often interested in understanding whether there has been a change in rates of abortion, perhaps reflecting a change in the prevalence of risky sexual behaviour, a change in attitudes towards the options available in pregnancy or a change in access to services. To assess this, it is necessary to determine if the observed change is one that is unlikely to be the result of random fluctuation and therefore offers evidence that a real change has occurred.

24. A confidence interval can be calculated around each observed value, which gives a range in which the expected or average value resulting from the underlying process is likely to fall. The 95 per cent confidence intervals have been calculated for some of the observed values in tables 10a, 10b, and 10c. These are known as such, because if it were possible to repeat the underlying process under the same conditions a large number of times (that is, 'rerun' the year over and over again), 95 per cent of the confidence intervals calculated in this way would contain the average value from those runs. When assessing the observed results for the year, it is usual to assume that there is only a 5 per cent chance that the expected or average value falls outside the 95 per cent confidence interval.

25. The confidence interval may be used to compare an estimate against a target or benchmark value. If the target or benchmark value is outside the confidence interval it can be inferred that the difference between the estimate and the target is statistically significant at the 95 per cent confidence level.

26. Confidence intervals are also often used to compare two observed values (for example, abortion rates within two regions.) Sometimes in such cases statistical testing is undertaken by seeing if the two confidence intervals overlap. This is quick and easy to do, but not necessarily conclusive: whilst it is safe to assume that non-overlapping confidence intervals indicate a statistically significant difference, it is not always the case that overlapping confidence intervals do not.

27. The method for estimating a confidence interval varies depending on whether it is for a percentage, count, crude rate or standardised rate. The methods used are those detailed in the Association of Public Health Observatories' Technical Briefing 3: Commonly used public health statistics and their confidence intervals.

For example, the 95 per cent confidence interval associated with:

- The figure of 200,608 for the total number of abortions of residents in England and Wales is 199,731 - 201,488 (Table 10a);

- The age standardised rate of 17.4 abortions per 1000 resident women aged 15-44 in England and Wales is 17.3 - 17.4 (Table 10b);

Disclosure Control

28. The Data Protection Act 1998 places a statutory obligation on the Department of Health and Social Care to ensure that the statistics we release on abortion do not relate to a living individual who can be identified from those data alone or in conjunction with other available information, unless the conditions laid out in the Act are met. In recent years, the Department of Health and Social Care has attempted to meet this obligation by following the disclosure guidance for abortion statistics developed by the Office for National Statistics in July 2005. A judgment was handed down in 2011 by the High Court in a case relating to the release of information on principal medical condition for abortions performed under Ground E, showed that the disclosure controls set out in the guidance were overly cautious in some circumstances. The format of the tables in the annual report have therefore been revised, with a more limited degree of suppression applied, where still necessary to avoid the disclosure of personal data.

29. The Department published the Disclosure Control Protocol for Abortion Statistics in June 2015.

Perturbed values in tables 10 and 11

30. In Tables 10 and 11 values in six Local Authorities have been randomly perturbed to prevent disclosing numbers of abortions in areas with very small population sizes that lie in the intersections of Local Authorities and Clinical Commissioning Groups. This allows the values to be presented for these Local Authorities rather than being supressed as in previous years.

31. These Local Authority pairs were York and North Yorkshire, Buckinghamshire and Oxfordshire and Stoke-on-Trent and Staffordshire. Values have been randomly perturbed by a number between -5 and +5, excluding 0. While these adjustments affect the values and total within these Local Authorities the overall totals at Local Authority and age group level are preserved. The level of adjustment has a minor impact on the Local Authorities total – the minimum total for these Local Authorities is around 500, so each individual adjustment would be a maximum change of 1%.

32. A patient record was randomly selected in a Local Authority requiring perturbation in each age category (Under 18, 18-19, 20-24, 25-29, 30-34, 35 and over) and each funding category (NHS funded, NHS Independently funded, Privately funded). Each of these records was allocated a value at random (uniform probability) from -5 to +5, excluding 0.

33. A corresponding record was randomly selected from the adjacent Local Authority in each of the age and funding categories. These records were randomly selected from records with matching age category, funding category, gestation group, method, and previous abortions. The corresponding record was weighted inversely, for example if the first record was assigned +2, the corresponding record would be -2. This ensured that relative proportions in these groups were retained through the tables.

34. These records were weighted in the dataset such that the perturbed values feed through all calculations relating to these Local Authorities. For example, a record allocated a 2 for perturbing would be weighted twice as much as other data points in the analysis.

35. Worked example:

- In LA1, there are 10 records for women aged <18, one of these is randomly selected, and assigned a random weighting from -5 to +5, excluding zero – for example a weighting of 2.

- This record, has gestation 3-9 weeks, was surgical, had zero previous abortions and was NHS Independently funded.

- In LA2, there are 12 records for women <18, of those there are 7 records with gestation 3-9 weeks, surgical method, had zero previous abortions and NHS Independently funded. One of these 7 is picked at random, and assigned the opposite weighting, e.g. -2.

- This is repeated for each age category and each funding category.

Table 2a Example to show LA totals before perturbing

LA	Total Abortions	NHS funding	NHS Independent funding	Privately funded
LA1	600	200	200	200
LA2	600	200	200	200

Table 2b Example to show perturbed values

LA	Total Abortions	NHS funding	NHS Independent funding	Privately funded
LA1	2	1	4	-3
LA2	-2	-1	-4	3

Table 2c Example to show final LA totals after perturbing

LA	Total Abortions	NHS funding	NHS Independent funding	Privately funded
LA1	602	201	204	197
LA2	598	199	196	203

Geographical coding and naming

36. In 2018, NHS England granted approval for the following changes, with effect from the 1st April 2018:

    NHS region South of England (E40000004), replaced by South East (E40000005) and South West (E40000006).

    New area teams created: Hampshire Isle of Wight and Thames Valley (E39000041), Kent Surrey and Sussex (E39000042), South West North (E39000043) and South West South (E39000044).

    Newly formed clinical commissioning groups: NHS Newbury and District, NHS North and West Reading, NHS South Reading and NHS Wokingham CCGs to form NHS Berkshire West CCG (E38000221), NHS Birmingham South Central, NHS Birmingham CrossCity and NHS Solihull CCGs to form NHS Birmingham and Solihull CCG (E38000220), NHS Bristol, NHS North Somerset, and NHS South Gloucestershire CCGs to form NHS Bristol, North Somerset and South Gloucestershire CCG (E38000222), NHS Aylesbury Vale and NHS Chiltern CCGs to form NHS Buckinghamshire CCG (E38000223), NHS Bracknell and Ascot, NHS Slough and NHS Windsor, Ascot and Maidenhead CCGs to form NHS East Berkshire CCG

(E38000224) and NHS Leeds North, NHS Leeds South and East and NHS Leeds West CCGs to form NHS Leeds (E38000225).

Due to a boundary change, the following CCG codes were changed: NHS Fylde and Wyre CCG (E38000226), NHS Greater Preston CCG (E38000227) and NHS Morecambe Bay CCG (E38000228)..

37. On the 1st April 2013 Clinical Commissioning Groups assumed commissioning of termination of pregnancy services under the health system reforms. Further information on the Coding and Naming for Statistical Geographies is available.

Rounding

38. Percentages are subject to rounding and totals may not agree with the sum of the component figures shown. Rates are also rounded.

Symbols

39. The following symbols are used in the tables:

. = not applicable

.. = suppressed value to protect patient confidentiality

Further Information

Enquiries

Enquiries about the data or requests for further information should be addressed to:

Abortion Statistics
Department of Health and Social Care
39 Victoria Street
London
SW1H 0EU
e-mail: abortion.statistics@dhsc.gov.uk

Links

This bulletin for 2018, and previous bulletins for 2011-2017 can be found on the Gov.uk website: https://www.gov.uk/government/collections/abortion-statistics-for-england-and-wales

Previous bulletins for 2002 to 2011, can be found on the Department of Health and Social Care website:

https://www.gov.uk/government/collections/abortion-statistics-for-england-and-wales

http://transparency.dh.gov.uk/category/statistics/abortion

Data for 1991 to 2001 can be sent by email on request.

Information about disclosure control protocol published 9th June 2015 can be found at:

https://www.gov.uk/government/publications/abortion-statistics-protocols-on-disclosing-personal-data

Information on abortions carried out in Scotland can be found at:

http://www.isdscotland.org/Health-Topics/Sexual-Health/Abortions

Information about the release of abortion statistics in Scotland can be found at:

http://www.isdscotland.org/Products-and-Services/Data-Protection-and-Confidentiality/Disclosure-Protocol-Version-2-2-WEBversion.pdf

Facts and figures about abortion in the European Region can be found at:

http://www.euro.who.int/en/health-topics/Life-stages/sexual-and-reproductive-health/activities/abortion

Information on the incidence and recent trends in legal abortion worldwide can be found at:

http://www.guttmacher.org/pubs/journals/3310607.html

Conception statistics for England and Wales are available at:

http://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/conceptionandfertilityrates/bulletins/conceptionstatistics/previousReleases

Statistics on the National Chlamydia Screening Programme are available at: https://www.gov.uk/government/statistics/national-chlamydia-screening-programme-ncsp-data-tables

The British Isles Network of Congenital (BINOCAR) collect and publish data on terminations of pregnancy for fetal anomaly;

http://www.binocar.org/Publications/Reports

Published to GOV.UK in pdf format only.

Global and Public Health/Population Health/Global and Public Health Analytical

www.gov.uk/dhsc