

Changes to the Sexual and Reproductive Health Activity Dataset disclosure control methodology for 2019-20

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1 Changes to disclosure control methodology

1.1 In scope

The new methodology will be applied by the Analytical Services - Population Health, Clinical Audit and Specialist Care analytical team at NHS Digital in producing and disseminating outputs from the Sexual and Reproductive Health Activity Datasets (SRHAD) covering activity in the years 2019/20, 2020/21 and in future years.

This will include:

- Statistics on Sexual and Reproductive Health (SRH) Services, England, 2019/20 release due to be published 3rd December 2020.
- tabulations and bespoke table requests using SRHAD produced from 3rd December 2020.
- responses to Parliamentary Questions, Freedom of Information requests and media queries using SRHAD produced from 3rd December 2020.

1.2 Reason for change

When producing analysis we need to balance accuracy and timeliness of publication with disclosure control to reduce the risk of identifying individuals from the outputs.

The current SRHAD disclosure control rules for sub-national data involve the rounding of all counts to the nearest 5, rounding all rates/percentages to integers, and with some further manual suppression of counts where it is possible to identify values of 1 or 2 from published percentages.

Following an assessment of NHS Digital secondary care datasets a new fully automatable and robust disclosure control methodology was recommended and implemented.

As well as the benefits of automation, adopting the same approach is part of a move toward more consistent methods of disclosure control across NHS Digital datasets.

1.3 New methodology

For SRHAD we will be implementing the same disclosure control rules as those currently used on the NHS Digital secondary care datasets. These are described below.

Counts on national level data

No disclosure control required for small numbers.

Counts below national level

The following steps will be applied to reduce the risk of identifying individuals from small numbers.

- 1) If the national total is between 1 and 7 (inclusive), no sub-national breakdown will be displayed.
- 2) If the national total is greater than or equal to 8
 - a. Sub-national counts between 1 and 7 (inclusive) will be displayed as '**'.
 - b. Zeroes will be unchanged.
 - c. All other counts will be rounded to the nearest 5.

Please note that row and column totals will be calculated from the unrounded counts and then rounded, which means that the total of the individually rounded values may differ from the rounded total.

Simple calculations

For calculations such as percentages and rates it can be possible to work out the numerator and denominator because only one possible pair of values would give the percentage or rate being displayed, especially where the denominator is relatively small. Therefore, disclosure control also needs to be applied to simple calculations such as percentages, rates, mean, median or mode.

At national level:

No disclosure control is required.

At sub-national level:

- 1) All simple calculations are undertaken using rounded counts. For example, the numerator and denominator for a percentage will be rounded to the nearest 5.
- 2) Where the count of data in any part of the calculation is between 1 and 7 inclusive, no calculation is made and a '**' is displayed. For example, if the numerator of a percentage is between 1 and 7 a '**' will be displayed in the outputs.
- 3) Where the numerator is zero, the percentage/rate will be 0.
- 4) Where the unrounded numerator and denominator are greater than or equal to 8, the calculated value is displayed to the nearest whole number.

Complex calculations

For complex calculations such as standardised rates, confidence intervals and regression models, no disclosure control is required.

Additional approach to presentation of percentages

Calculating a percentage using a rounded numerator and denominator will result in a different value from the 'true' percentage that would have been calculated using unrounded values. This difference can be a number of percentage points if the denominator is relatively small.

Where the rounded denominator is greater than or equal to 400, the percentage using a rounded numerator and denominator is within +/- 1 per cent of the 'true' percentage.

SRHAD outputs at sub-national level produced by NHS Digital will therefore only display a calculated percentage (to the nearest whole number) where the rounded denominator is greater than or equal to 400. Users will be able to assume that this is within one percentage point of the 'true' percentage. A percentage will not be displayed where the denominator is less than 400.

This presentational approach to percentages does not form part of the disclosure control method, and users making their own calculations are free to take a different presentational approach if they wish.

Further details

Full details of the secondary care disclosure control methodology is available here:

<https://digital.nhs.uk/binaries/content/assets/website-assets/publications/files/change-to-disclosure-control-methodology-used-for-hospital-episode-statistics-and-emergency-care-data-set-from-september-2018.pdf>

Please refer to this paper for detailed information on the impact of using rounded data in the calculations of percentages and rates, along with example data.

Products that will not be produced this year

The anonymised record level SRHAD csv file and guidance document will not be produced for 2019/20, as further work is required to make this compatible with the new disclosure control rules detailed above. A further review of options regarding the release of this data will be undertaken in 2020/21.

2 Feedback on the changes

We welcome any questions, comments or feedback relating to the new disclosure control method.

Please quote "Feedback on changes to the SRHAD dataset" in the subject title of any correspondence via the contact methods listed below.

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