

Referrals to the Gender Identity Development Service, 2018–2019, across 195 Clinical Commissioning Groups in England

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1. Referrals to the Gender Identity Development Service (GIDS) from each Clinical Commissioning Group (CCG) in England for each year from 2012 to late 2019 (more precisely, ‘information held by this Trust as at 11 November 2019’) is available thanks to a Freedom of Information request by R. Tyler:

https://www.whatdotheyknow.com/request/referrals_to_gids_by_county

These numbers evidently refer to calendar years and not financial years.

2. Many CCGs merged during this period:

<https://www.england.nhs.uk/ccg-details/#mergers>

The information provided by the GIDS pertained to CCGs existing at the year of reporting, and so these need to be aggregated to provide consistent geographical units over time. The GIDS data did not reflect the two mergers that occurred in April 2019. (For example, the GIDS still reported referrals in 2019 separately for Erewash CCG, Hardwick CCG, North Derbyshire CCG, and Southern Derbyshire CCG, though all four joined as Derby and Derbyshire CCG in April 2019.) Therefore I aggregate referrals into CCGs with boundaries existing in April 2018, numbering 195.

3. Population estimates of these CCGs is available for mid 2017, which is the latest available estimate for CCGs with the boundaries existing in April 2018:

<https://www.ons.gov.uk/file?uri=%2fpeoplepopulationandcommunity%2fpopulationandmigration%2fpopulationestimates%2fdatasets%2fclinicalcommissioninggroupmidyearpopulationestimates%2fmid2017/sape20dt5mid2017ccgsyoaestimatesformatted.zip>

The next estimates, for mid 2018, used the CCGs existing in April 2019, because they were published in October 2019.

4. For many CCGs, especially in earlier years, annual referrals were reported as ‘<5’, denoting a range from 1 to 4. In 2018, for example, 33 out of the 195 CCGs were recorded with this range. In such cases, I impute the number as 2. With this imputation, the total of referrals in 2018 is calculated as 2,380. This corresponds reassuringly to the 2,396 referrals from England in 2018/19 reported on the GIDS website:

<https://web.archive.org/web/20190722103107/http://gids.nhs.uk:80/number-referrals>

5. The total number of referrals in 2018 and most of 2019 is calculated as 4,553. Of these, 4,328 (95%) can be allocated to a CCG. The remainder were reported by the GIDS as ‘(blank)’ or in a handful of cases attributed to commissioning hubs which encompassed multiple CCGs.

6. For England as a whole, the number of referrals (in 2018 and 2019) divided by the population under the age of 18 (at mid 2017) is 0.000384. In other words, the rate was 38.4 referrals per 100,000 children and adolescents. The same rate can be calculated for each CCG. This rate can then be divided by the national rate to express the CCG's rate relative to England as a whole. The lowest rate was 5.3 in Redbridge; its relative rate is 14% (5.3 divided by 38.4), and so its rate of referral was only one-seventh that of England as a whole. The highest rate was in 121.7 in Blackpool; its relative rate is 317% (121.7 divided by 38.4), and so its referral rate was more than three times higher than in England overall.

7. Because the absolute number of referrals from any CCG is small, it is important to ascertain whether a disparity between a CCG's rate and the overall English rate—a relative rate much smaller or larger than 100%—is due simply to chance. I calculate this using the exact hypothesis test for a binomial random variable. Any disparity where the probability is over 0.05 should not be considered significant. For example, Airedale, Wharfedale, and Craven CCG had a 36% higher rate of referral than England overall, but that could simply be due to random fluctuations. The smaller the probability, the greater our confidence that the divergence between the CCG and England overall is not due to chance. Blackpool, for example, has a probability of 0.000000007 and so we must conclude that there is something peculiar about Blackpool which led to so many more referrals to the GIDS.

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Sorted by column D

Columns:

- A. CCG, according to boundaries established in April 2018.
- B. Number of referrals in 2018 and 2019 (as recorded in November 2019).
- C. Referrals (column B) divided by population (at mid 2017) under 18 years of age, multiplied by 100,000.
- D. Rate relative to England overall: the CCG's cell in column C divided by the cell for England.
- E. Probability that disparity is due to chance: two-sided p -value from a binomial exact test where the hypothesized probability is $4,553 / 11,866,957$, the number of successes is the number of referrals from the CCG, and the number of trials is the CCG's population under 18.