

Why do some CCGs spend more on CAMHS than others ?

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Aims and hypothesis:

We aimed to explore factors which could predict the differences in CAMHS funding between CCGs. It was hypothesised that there might be relationships between the age distribution served by the CCG, local demand for CAMHS input, deprivation, and whether rural or urban.

Background:

In England, child and adolescent mental health services (CAMHS) are funded by Clinical Commissioning Groups (CCGs), and to a lesser extent by local authorities and NHS England. There is a wide variation in the amount spent per child or young person (CYP) in various CCGs, ranging from £20 to £191 per child.

Total CCG funding from the government is determined by a complex formula and is heavily influenced by past funding rather than based on current demand for care and the cost of providing it in the region.

To understand better some of the characteristics that may influence this disparity, we aimed to assess five different hypotheses:

1. CCGs with large CYP populations have lower per child spend.
2. An older population will draw resources away from CAMHS.
3. Spending per CYP is higher in areas with higher local demand
4. Rural areas spend more per CYP.
5. Areas with higher deprivation will spend more on CAMHS.

Methods:

Several data sources were combined, including; Children's Commissioner data, NHS Fingerprints data, YoungMind's data on CAMHS budgets, spending at Local Authority and CCG's that were available. Using the data that was available, linear regressions were conducted using Stata-16 to explore relationships in the data.

Results:

1	CCGs with large CYP populations have lower per child spend.	True
2	An older population will draw resources away from CAMHS.	True
3	Spending per CYP is higher in areas with higher local demand.	False
4	Rural areas spend more per CYP.	False
5	Areas with higher deprivation will spend more on CAMHS.	True

Hypothesis 1:

Figure 1 shows the relationship between the proportion of the population <18 and the CCG CAMHS spend per CYP. There is a significant negative correlation ($p < 0.001$) but $R^2 = 8.7\%$. Whilst there is a negative relationship, this only accounts for a small portion of the amount in variation spend, therefore other factors must contribute.

Hypothesis 2:

There is a significant negative correlation between the proportion of the population aged over 65 and the amount spent on CAMHS per child, after accounting for the proportion of Under 18s. ($R^2 = 15.8$ $p < 0.001$)

Hypothesis 3:

Demand was defined by the number of referrals to CAMHS services ($p = 0.258$, $R^2 < 0.01$) No significant relationship identified.

Hypothesis 4:

The amount of spending was not associated by how rural the area was. No significant relationship identified ($p = 0.75$ $R^2 < 0.001$)

Hypothesis 5:

Income Deprivation Affecting Children Index (IDACI) is a measure of child deprivation (higher scores indicate more deprivation). Multilinear regression identified the following:
 $\text{£ per child} = \text{£}163 + \text{£}105 * \text{IDACI} - \text{£}103 * \text{Over65 proportion} - \text{£}479 * \text{Under18 proportion}$ $R^2 = 22\%$

Removing Camden and Islington created the regression:

$\text{£ per child} = \text{£}102.55 + \text{£}100.42 * \text{IDACI} - \text{£}284.42 * \text{Under18 proportion}$. $R^2 = 16\%$
 IDACI remains a significant predictor after accounting for the proportion aged under 18. Across all CCGs, this accounted for 22% of the variation in per child spend.

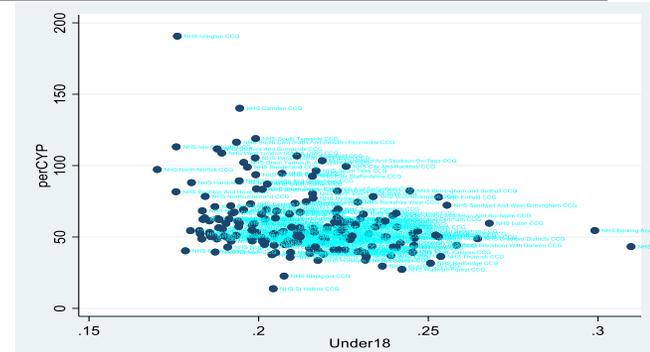


Figure 1: Graph showing negative association between proportion of population <18 and spend per CYP.

Discussion:

There are different factors that may explain CAMHS spending variation by CCG. Areas with higher proportion of CYP in the population, a smaller older adult population, and higher child deprivation spend more on CAMHS. Rurality and areas with a higher density of referrals did not correlate with spending per CYP.

However, despite the statistical relationships that were found between these variables and CCG spending, they only account for less than 25% of the variation in spending per child that is observed between CCGs.

There are two possible reasons for this:

1. Other relevant variables not included in the model
2. CCG discretion drives funding differences

CCGs have difficult value judgments to make and the outcomes of their decisions can be partially predicted by factors implying scarcity and competition, rather than local demand.

References: 1. Harker R. NHS Funding Allocations: Clinical Commissioning Groups. House of Commons Library; 2019 2. Gilhooly R, Clarke T. The state of children's mental health services 2020/21. Office of the Children's Commissioner; 2021 3. PHE. Children and Young People's Mental Health and Wellbeing - PHE [Internet]. Fingertips.phe.org.uk. 2021 4. Children's Mental Health Funding: Where Is It Going? <https://youngminds.org.uk>. 30 Oct 2018