

# Estimating the impact of removing independent sector providers on RTT – methodology and general notes

## Objectives

Our aim is to calculate the likely impact on waiting times of withdrawing independent sector provision from NHS patients. We estimate that impact in terms of their effect on the:

- number of people waiting, and the
- mean time those patients spend waiting for treatment

We do this by forecasting figures at set time periods after independent sector provision has been removed. Initially, we calculate these figures for the following time periods:

- 1 year
- 3 years
- 5 years

While this paper focuses on the impact on referral to treatment times, it should be noted that independent providers also deliver extensive care to patients who are not on the RTT pathway, for example in diagnostics, mental health, primary and community care as well as in other acute settings where RTT measurements are not collected. Therefore, this work describes just one area of many that would be adversely affected by withdrawing independent sector provision.

## Assumptions

This model considers the impact of proposals to remove independent provision from NHS patients. It makes the following assumptions:

1. NHS providers are on average across England's running at capacity. If this assumption is true, it follows that the number of people waiting would either be broadly static or rising. This prediction is consistent with recent waiting time trends.
2. Given that the rolling 12-month average for the total number of people waiting has risen steadily for several years, we are ignoring any likely rises just to keep pace with demand. Our estimates of growth relate solely to the impact of withdrawing independent sector provision. Therefore, our approach is likely to significantly underestimate the total number of people waiting and waiting times.
3. NHS providers will need to pick up all lost capacity caused by the removal of independent sector care for NHS patients. In practice, we expect some patients would opt out of NHS provision in response to rising waiting times.
4. The NHS does not increase its capacity for the duration of this model. While we recognise that any government that chose to shut off independent sector provision would want to increase NHS capacity, this would need to be built from scratch and would take between three-to-five years to go live.
5. Independent sector provision is completely halted on day 1.
6. We have only calculated CCG-level waiting times for those CCGs that are currently in operation, i.e. those that have RTT data for the last available month
7. When aggregated to other geographies, we have only considered lower super output areas (LSOAs) that are within those geographies. This ignores a sizeable level of activity commissioned by NHS England, so in turn understates the likely impact. To make the figures clearer, each spreadsheet contains a line showing centrally commissioned activity (with your organisation code X24).

8. When aggregating to other geographies, we weight each constituent LSOA by total population in the LSOA as a proportion of the total population count across the CCG.

## Methodology

### A. Calculate CCG-level impact

By assuming the NHS is running at capacity, we take the total volume of admitted and non-admitted patients over the course of the past year to equate to the maximum number of patients per year that can be handled.

Thinking about this using the analogy of fluid dynamics, we are assuming  $\text{Flow rate} = \text{Volume} / \text{Time}$ .

We aggregate RTT data at CCG level, calculating the admitted and non-admitted volume of patients treated over the course of the past 12 months by:

1. independent providers
2. NHS providers

We also calculate the total incomplete waiting time (i.e. number of patients waiting) for each CCG for the last month for which data is available.

The volume of patients treated by NHS providers at each CCG allows us to calculate peak NHS capacity.

Given future volume is fixed and the flow rate cannot increase without new facilities which have to be built from scratch. The only thing that can change is time (i.e. people wait longer).

We calculate a new total RTT time to treat the CCG's total patients by dividing the new volume of patients by each CCG's peak flow rate. The difference between the time taken for these patients to enter the pathway, and the time taken for these patients to leave the RTT pathway, represents the additional waiting time faced by each patient at the end of the process.

The additional number of people waiting is calculated by the gap between the total volume of patients entering RTT pathways and those leaving the pathway over the given time period.

### B. Aggregating to other geographies

We take the total number of people waiting, and the waiting time data for each CCG, and divide this into all component LSOAs, weighted by population in those LSOAs.

This allows us to reconstruct data for any other geographical area for which the component LSOAs are known, for example local authority districts and Parliamentary constituencies.

Once we have an estimate of waiting times and the total number of people waiting in those geographic areas, we calculate the mean waiting times, and forecast the impact of removing independent sector provision in the same way as described above for CCGs.

## Caveats

In addition to the assumptions noted above, caution should be used if aggregating the results to create totals as the component rows may not cover all geographies.

For example, the CCG-level output only contains data relating to CCGs that existed during the last available data collection. Also, mean values are calculated for the specific rows to which they relate. They are therefore weighted accordingly, and a mean across a wider geography would require re-calculation to ensure it is appropriately weighted.

The results contain headings that relate to the number of people waiting. More precisely, this is the number of RTT pathways. It is possible that a single patient may be on more than one pathway.

## Data sources

1. RTT data  
<https://www.england.nhs.uk/statistics/statistical-work-areas/rtt-waiting-times/>  
(full CSV files. 12 months to Aug 19)
2. Mid-year LSOA population estimates  
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/lowersuperoutputareamidyearpopulationestimates>
3. ONSPD  
<https://geoportal.statistics.gov.uk/datasets/ons-postcode-directory-august-2019>

From the ONSPD dataset we have used:

- CCG names and codes UK as at 04\_19
- LSOA (2011) names and codes UK as at 12\_12
- Westminster Parliamentary Constituency names and codes UK as at 12\_14

4. Organisation Data Service data  
<https://digital.nhs.uk/services/organisation-data-service/data-downloads>  
Organisation files to identify NHS and independent sector providers