CSI 6: Schools, healthcare and housing: Are we becoming overcrowded?

Summary

- After a period of decline, class sizes for the youngest pupils (ages 5-7) have recently started to grow. For older pupils however there has been little change. At the same time, there are now more teachers per pupil in primary and secondary schools and the increase in numbers of teaching assistants has been even greater.
- NHS median waiting times for non-emergency referral to treatment (RTT) have recently been increasing for non-admitted patients, up from 4 weeks in 2008 to 5 weeks in 2014.
- Signs of overcrowding are beginning to show in emergency services in the NHS. In 2015, the proportion of patients waiting longer than 4 hours at major A&E centres rose to its highest level in a decade.
- The average number of rooms per person has continued to grow, although at a slower rate between 2001 and 2011 than in earlier decades. On the official bedroom standard, only 4.5% of households are overcrowded in England. However, London is far more crowded than the rest of the country, with low-income London areas hit the hardest.
- There are also large ethnic differences in overcrowding, with 42 % of Bangladeshi British households and 32 % of Pakistani British households being overcrowded.

Introduction

The potential overcrowding of public services and social infrastructure like schools, healthcare and housing has always been a major political and public concern and continues to be so. If demand rises and supply does not, people will find access to services more difficult, leading to longer waiting times, less space, or worsening overall service. Whether performance management by quantitative targets is efficient in the specific area in question or not, it seems fruitful to measure developments in access to social infrastructure and compare over time and place. We focus on class sizes in schools, waiting times in the NHS, and overcrowding in housing.

Measurement Issues

Measurements that are part of a performance management system need to be the subject of scrutiny. This is not because officials are reporting the wrong data, but because they tend to report data *only* on specific targets – those that the system rewards or punishes its institutions according to – perhaps missing other important aspects of healthcare. It is also the case for all topics in this briefing note that measures on specific thresholds tells little about the distribution below or above the threshold. Where possible, we have therefore chosen both measures that depict averages and those that depict distributions around the average.

For schools, this may be less of a problem, as performance management plays a relatively minor role in the English school system. However, as will be discussed, the data does omit some relevant aspects of topic, which is why apparently opposite trends in class sizes and pupil:teacher ratios are difficult to explain.

The NHS has been much more tightly controlled by data-driven benchmarks. We have chosen not to use some measures, such as waiting times for certain diagnostic tests, as these may be influenced too much by efforts to reach the specific targets rather than as an objective indicator of performance. Instead, broader, more general measurements were chosen.

Housing in England has, contrary to other European countries, always been measured in rooms instead of floor space. This gives rise to a number of uncertainties in terms of which rooms to include and which not to, and whether such measures are consistent over time and space. The current official standard is in terms of bedrooms per person, although long-term data is only available for overall rooms per person.

Are school classes really getting larger?

There is on-going public concern that school classes are becoming larger and therefore that children might not be getting the best from their schooling. For primary schools in England, this concern is borne out to some degree in that class sizes have increased from an average of 26.2 pupils per class in 2009 to 26.9 in 2014. However, the 2014 average is still below that seen in the late 1990s and early 2000s. The average hides differences between classes for different age groups, as the average class size for 5-7 year-olds (Key Stage 1) grew by 7% from 2007 to 2014 (from 25.6 to 27.4), while average class sizes for 7-11 year-olds (Key Stage 2) remained constant throughout the period. Meanwhile, average secondary school class sizes fell continuously from 21.7 in 1998 to 20.6 in 2009 and to 20.1 in 2014.

Just as average class sizes have gone up in primary schools in the last five years, the share of pupils in large classes (>30 pupils) has also recently shown signs of increasing slightly after a drop between 1998 and 2004. The lowest proportion of primary school pupils in large classes was reached in 2012, at 11.4% but increased to 12.5% in 2014.

Fig 1: Average class sizes are down compared the late 1990s but starting to rise again in primary schools; class sizes are falling in secondary schools

Average class sizes and percentage of pupils in classes larger than 30 in England. Source: Schools in England, years 1998-2004 and Schools, pupils and their characteristics, 2014. Data for 2005 are an estimated average of 2004 and 2006.



Are increases in class size due to falling numbers of teachers?

While the average size of a primary school class in England has risen slightly, there have never been fewer primary school pupils per teacher. A way of measuring that is by the pupil:teacher ratio, which is traced back all the way to 1947, at which point there were 30.7 pupils per teacher.

- When the New Labour government came to power in 1997, the ratio was 23.4, and in 2010 it was down to 20.9. By 2013, it stood at its lowest ever, at 20.8. The disparity with class sizes is difficult to explain.
- Moreover, the ratio between primary school pupils and adults including teaching assistants has fallen even faster, and went from 17.9 in 1997 to 11.3 in 2013. Note that this does not necessarily mean more attention for each child; it could be, for example, that teachers spend less time teaching, potentially due to an increasing amount of time spent on administrative duties, preparation or marking. However, according to the OECD, the number of average actual contact hours per primary school teacher rose by 4.7% from 2008ⁱ to 2010ⁱⁱ, and remained virtually constant from 2010 to 2012ⁱⁱⁱ.

Page | 3

Are waiting times for elective care in the NHS becoming longer?

Another major area of concern is access to healthcare. Successive governments have made it a priority to shorten waiting times for both elective and emergency care. Waiting times for elective care are measured as the time from when a patient gets a referral by a medical consultant for a specific treatment until that treatment actually starts. This can be measured for patients whether they are eventually admitted to hospital or not. A sharp drop of median waiting times for both types of patients from 2007 to 2008 occurred after the introduction of new targets. From then on, waiting times remained relatively constant until 2013, when they started to rise again. For hospitalized patients, they rose by 8.2% from 2010 to 2014^{iv}. Furthermore, a higher proportion of patients is now waiting for longer than the 18-week target in place until 2010.

Figure 2: Median waiting times for elective care in the NHS are increasing

Measured by NHS England with data on time-to-referral from each NHS trust. Source: NHS England, 2015.



Are waiting times for emergency services also increasing?

The number of patients using emergency services at major A&E centres continued to rise slightly over the past decade. In Figure 3 we show patients who

came on their own, and those admitted by ambulance or other emergency services. A key measure of waiting times for both groups is the percentage waiting longer than 4 hours from arrival until a decision to discharge or admit (standard patients) or from the decision to admit to actual admission (emergency patients). For both groups of patients, the Figure 3: Share of patients waiting longer than 4 hours is increasing. *Source:* NHS England, 2015.



proportion of patients waiting longer than 4 hours remained constant from 2006-2010, but grew between 2011 and 2015, meaning that a projected 11.1% of standard A&E patients had to wait for longer than 4 hours in Q3 of 2014 compared to 6.5% a year before, and 5.5% a year before that. Waits longer than 4 hours also grew from 4.1% to 8.9% over the same period for emergency patients.

Is the housing stock getting more or less crowded?

Throughout the 20th century, the average amount of space each person had in his or her home continued to grow. This was also the case for the decade between 2001 and 2011, although growth had slowed down from 7.3 % between 1991 and 2001 to 1.8 % between 2001 and 2011. Another way of measuring living space is to look at official standards of overcrowding. Overcrowding can be measured both by counting rooms and by counting bedrooms, and then comparing that number to a set standard.

		%
Location	Region	Overcrowded
Newham	London	25.2%
Brent	London	17.7%
Tower		
Hamlets	London	16.4%
Haringey	London	15.9%
Waltham		
Forest	London	15.4%
Southwark	London	15.3%
Hackney	London	15.2%
Ealing	London	13.9%
Barking and		
Dagenham	London	13.5%
Lambeth	London	13.2%
Country		
average	_	4.5%

Table 1: The 10 most overcrowded census districts, 2011.

Figure 4: Average number of rooms per person continues to increase, but more slowly from 2001-2011. Sources: Data for 1951-1971 from Halsey (2000)"; data for 1981-2011 from ONS (2015).



By 2011, only 4.5 % of households were overcrowded in England as a whole, when measuring by the bedroom standard. This compares to 34.6 % of households who had at least 2 bedrooms more than the standard.

At 13.5 % of households Inner London, which includes overcrowding in 25.2 % of households in Newham, is far more overcrowded than the rest of the country.

Outer London is also more overcrowded than the rest of the country, at 9.8 %. Outer London is much less homogenous than Inner London, though, overcrowding ranging from 3.8 % in Richmond upon Thames to 17.7 % in Brent.

Disparities are even greater when comparing ethnic • groups: 41.7 % of Bangladeshi British, 32.4 % of Pakistani British, and 31.7% of Black African British households are overcrowded.

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ⁱ OECD: "Education at a Glance 2010", Table D4.1, available at http://dx.doi.org/10.1787/888932310529.

 ⁱⁱ OECD: "Education at a Glance 2012", Table D4.1, available at: http://dx.doi.org/10.1787/888932668318.
ⁱⁱⁱ OECD: "Education at a Glance 2014", Table D4.1, available at http://dx.doi.org/10.1787/888933120062.

iv Measured as an unweighted annual average of monthly median times for each year.

v Halsey, A. H. in Halsey, A. H. and Webb, J. (eds.): "Twentieth-Century British Social Trends." London: Palgrave Macmillan (2000).