



Centre For Health Economics

Research Bulletin

January 2011

- Even though the budget is ring-fenced the NHS has to make substantial efficiency improvements over the next five years.
- Geographical variations in productivity exist even after taking account of differences in the types of patients treated; in quality of care; and in the prices that organisations pay for staff, buildings and capital.
- Our analysis indicates the parts of the country there may be greatest scope for improvement.
- The NHS could cut expenditure by £3.2 billion without reducing the number of patients treated if all parts of the country were as productive as the South West.

This is the first in a new series of 'Research Bulletins' produced to summarise the results of CHE research.



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Improving the Productivity of the English NHS

The NHS is required to make efficiency savings of £5bn a year, to be re-invested in front-line services. Reductions in the variation of productivity across England would go some way to achieving the government's ambition. Let's see why.

To start we need to understand what is meant by productivity. The concept we employ is that used in the national accounts for calculating things like Gross Domestic Product. Here productivity measures the ratio of the amount of output produced to the amount of input used to produce the output. The fewer inputs used for a given amount of output, the higher is productivity.

But how are health service 'outputs' and 'inputs' defined and measured? The amount of NHS output comprises the number and type of patients treated in different healthcare settings and the quality of the care received, captured by waiting times and post-discharge survival rates. Information about who is treated and where is available from datasets such as the hospital episode statistics and reference cost returns, the latter providing information about care provided in non-acute and community settings. NHS input includes NHS and agency staff, equipment and supplies, and buildings.

If efficiency savings are sought by reducing the amount of inputs, there is a danger that fewer patients will be treated and the quality of their care will deteriorate. To guard against this danger, input reductions will have to be targeted where

there is greatest scope for improvement. This involves identifying variations in performance and encouraging poor performers to attain the standards of the best. Our recent work applies the methodology used in the national accounts to look at productivity across geographical areas of England, defined by Strategic Health Authority boundaries.

We analyse data for 2007/8 and take account of differences in the types of patients treated; in quality of care; and in the prices that organisations pay for staff, buildings and capital. We find regional variation in productivity ranging from 5% above the national average in South West to 6.5% below the national average in East Midlands (see figure 1 where SHAs are ordered and grouped by population size).

What is driving these regional differences? Figure 2 shows output and input per head for each SHA. South Central, South East Coast and East Midlands, with populations of around 4m, produce less output than the other SHAs. They also use proportionately more inputs to produce these outputs than elsewhere, the discrepancy being most pronounced in East Midlands.

Contrast this with the group of SHAs with populations of around 5m. South West, with the smallest population of this group, has the highest output and input use is lower than in Yorkshire & the Humber and West Midlands. Consequently because both outputs are higher and inputs are lower in the South West than elsewhere, its productivity is highest. East of England has

relatively low output but this is more than offset by its relatively lower input use, the net effect being above average productivity.

Productivity is above the national average in the North East (with the lowest population) and in the North West and London (with the highest populations). For all three SHAs this is because output exceeds input.

Let's suppose that all regions could become as productive as the South West or, more accurately, as productive as the average Primary Care Trust in the South West. If this benchmark were met across the country, the NHS could treat the same number of patients with £3.2bn fewer resources each year. This suggests substantial scope for improvement. The next steps would be to identify the reasons why organisations in the South West are more productive than elsewhere and to share best practice.

Reference:

Bojke C, Castelli A, Laudicella M, Street A, Ward P. Regional variation in the productivity of the English National Health Service: Centre for Health Economics, University of York, CHE Research Paper 57.

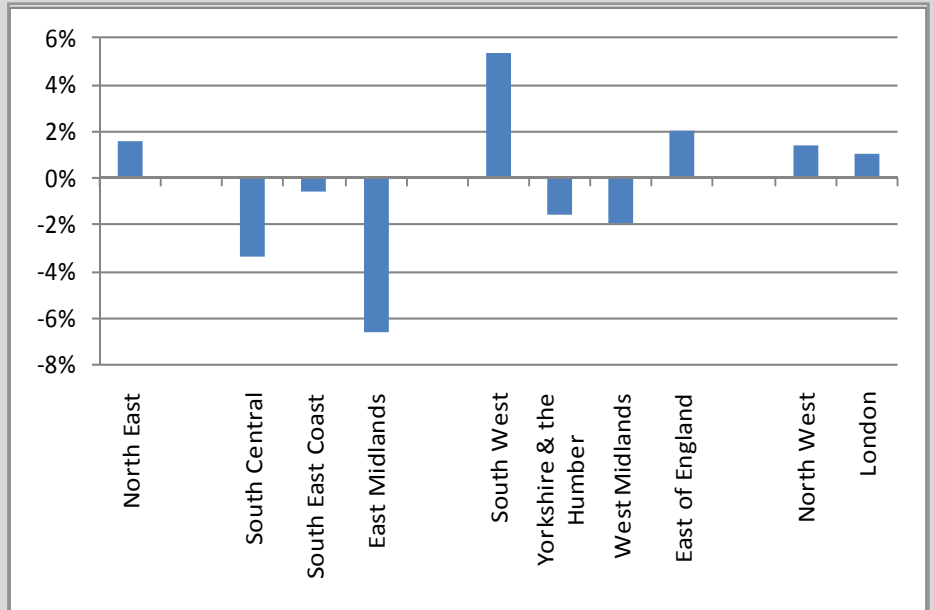


Fig 1: Productivity by SHA

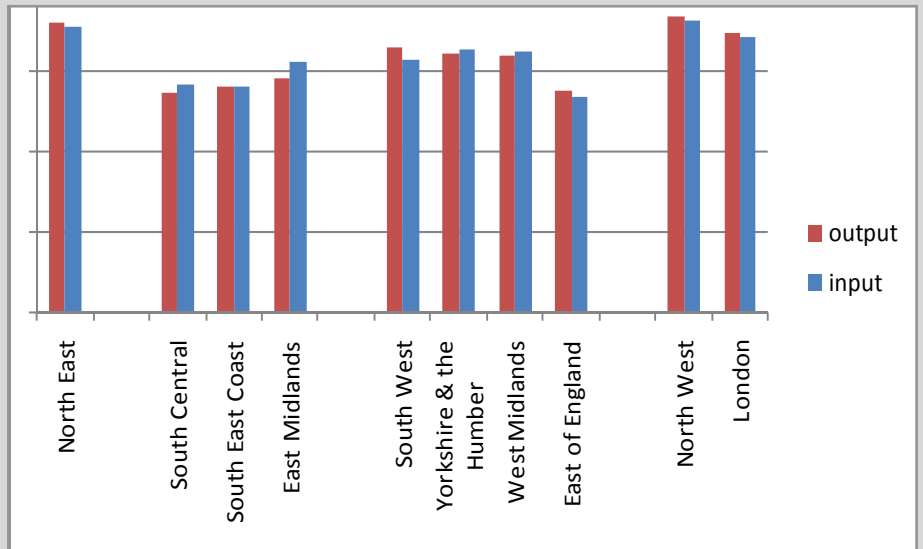


Fig 2: Output and input per head by SHA

Project team:

Chris Bojke, Adriana Castelli, Mauro Laudicella, Andrew Street, Padriac Ward

For further information contact:

Andrew Street, Professor of Health Economics, Centre for Health Economics, University of York
andrew.street@york.ac.uk