

Policy Briefing

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Commissioning and system reform: New research results

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Introduction

This briefing note summarises some new results from the Centre for Health Economics on the impact of system reform on commissioning patterns of Primary Care Trusts (PCTs). It examines the concentration of elective referrals by commissioners amongst providers and shows how this pattern has changed over time.

Recent NHS policy initiatives such as payment by results and patient choice increase the ability of patients and commissioners to 'shop around' amongst secondary care providers. In addition, policy has sought to encourage a mixed supply of care involving new providers from the private and public sector. If commissioners are active on behalf of their patients and have the opportunity to make use of a broader range of providers, this will be reflected in the pattern of their referrals for elective care.

In addition, the introduction of payment by results (PbR) means that commissioners have an incentive, for those conditions covered by PbR, to target providers with the capacity to deliver shorter waiting times and to take advantage of new providers by directing money where patients choose to go.

What did we do?

We used Hospital Episode Statistics (HES) for the financial years 1997/98 to 2007/08. We looked at the pattern of elective admissions for NHS and private providers, linking them with practices and the commissioning organisations in which the practice was based. We considered the number and type of hospitals used by commissioners and constructed measures of concentration of hospital use which capture the degree to which elective admissions are concentrated in hospitals - less concentration means that commissioners are using a wider range of hospitals to serve their patients.

Fig 1. No. of providers and elective admissions, by type of providers and by year

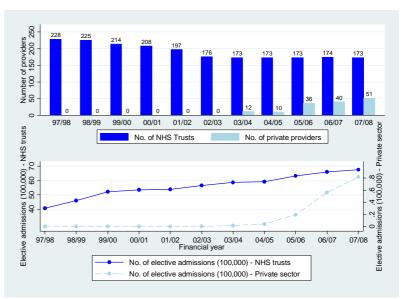
Changes on the provider side

Changes in commissioning behaviour are related in part to the organisation of the provider side of the system. Figure 1 shows the number and type of providers and the volume of elective activity between 1997/98 and 2007/08. Many NHS hospital mergers took place prior to 2002/03 but subsequently provider numbers have been stable. We account for mergers in our subsequent analysis of commissioning trends as appropriate. The number of private providers has grown since 2002/03 as has the number of elective admissions for NHS patients in the private sector.

Figure 2 shows the share of the elective admissions by NHS and private sector providers in 2007/08. It distinguishes amongst three groups of Health Resource Groups/conditions:

- The first 15 HRGs covered by PbR policy in 2003/04.
- The second (additional) group of 33 HRGs covered by the policy in 2004/05.
- All other HRGs which came into the policy in a phased way from 2005/06 onwards.

The first and second groups of HRGs account for larger shares of private sector output (40%) than of NHS provider output (20%).



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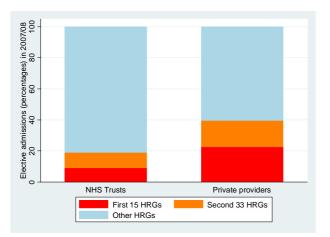


Fig 2. Elective admissions (%) in 2007/08, by type of provider and by Health Resource Group

Changes on the purchaser side

One of the major challenges in investigating trends over time in the NHS is that organisational change shifts the geographical boundaries of the commissioning organisations. To look at trends as far back as 1997/98 we needed to take account of the switch from 100 Health Authorities (HAs); to 302 PCTs in 2002/03; to 152 PCTs in 2006/07. Ignoring these changes would misrepresent the degree of concentration of admissions because, even without any shift in the destination of patients, the admissions would be less concentrated when there are fewer, larger commissioners and more concentrated when there are larger numbers of smaller commissioners. We therefore allowed for this by creating 'frozen' boundaries whereby we assign the admissions to PCTs according to where each practice would have belonged in each of the relevant years. For example, analysis at 'frozen' 2002/03 PCT level means that we show the patterns for admissions of patients who were in practices belonging to the 2002/03 PCTs, for every year of the analysis. We report results only at the 2006/07 PCT level but a similar trend is evident at all three levels. In commenting on the results we focus mainly on trends since 2002/03.

Trends in concentration over time

We measured concentration of admissions at PCT level over time in three ways:

- The total number of NHS and private sector providers used by PCTs.
- The share of admissions at the largest provider ('main share'). This represents the importance of the main hospital to the PCT.
- An index of concentration ('Herfindahl Index') at PCT level. This is used in other sectors to measure the degree of competition between firms using the market shares of all firms. It can vary between 0 and 1 where a lower value represents lower concentration (ie more competition).

Table 1 shows the results for all elective admissions over the entire period at the level of 'frozen' 2006/07 PCTs.

In the figures that follow we present these trends using index numbers where 100 is set equal to the value of each measure in 1997/98.

Figure 3 illustrates the trends for all elective admissions at the level of 'frozen' 2006/07 PCTs. The pattern is clear from all three measures and the trends are very similar at all frozen HA and PCT levels: an increase in concentration in the

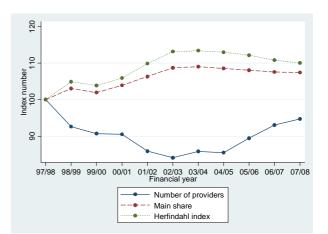


Fig 3. Trends in Commissioning patterns for all HRGs

Table 1. Commissioning trends for	or all providers	, all HRGs (20	06/07 PCTs)
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	1997/8	1998/9	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
Number of providers											
Mean	15.20	14.08	13.79	13.76	13.07	12.79	13.05	13.00	13.60	14.14	14.40
Standard deviation	6.63	6.45	6.66	6.41	5.79	5.81	5.80	5.71	5.98	6.35	5.98
Main share											
Mean	0.58	0.60	0.59	0.60	0.62	0.63	0.63	0.63	0.63	0.62	0.62
Standard deviation	0.19	0.20	0.20	0.19	0.20	0.19	0.19	0.20	0.19	0.19	0.19
Herfindahl index											
Mean	0.43	0.45	0.45	0.46	0.48	0.49	0.49	0.49	0.49	0.48	0.48
Standard deviation	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.20

early years followed, since 2002/03, by a decline in concentration. In the last five years, the average number of providers used rises (12.8 to 14.4); the proportion of admissions accounted for by the main provider declines (63% to 62%); and the index of concentration falls (0.49 to 0.48).

Trends in concentration across PCTs

Map 1 shows the level of concentration across PCTs in England in 2007/08 (using the boundaries of the 152 PCTs in place in 2006/07).

Map 2 shows the change in concentration between 2002/03 and 2007/08 by PCT. Many areas have experienced a reduction in concentration, whilst parts of the North West, Midlands, East Anglia and South West have experienced an increase.

Trends in concentration by type of condition

Analysis of trends by the three HRG groups outlined earlier is shown in Figures 4-6 (all at the 2006/07 'frozen' PCT level) and the vertical lines indicate when the national tariffs applied to the different subsets of HRGs.

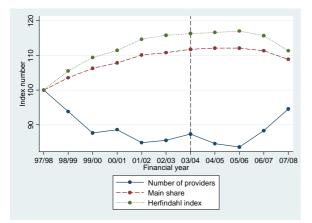


Fig 4. Commissioning patterns for all providers, first 15 HRGs

For the first 15 HRGs covered by PbR from 2003/04, we see an initial fall in the number of providers used and a fairly constant degree of concentration. From 2005/06, the trend is towards use of a larger number of providers and a corresponding decline in concentration measures.

The commissioning trends for the second 33 HRGs under PbR are shown in Figure 5. From year

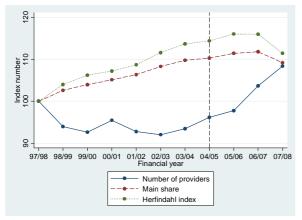
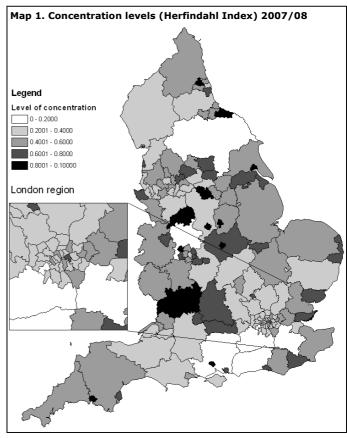
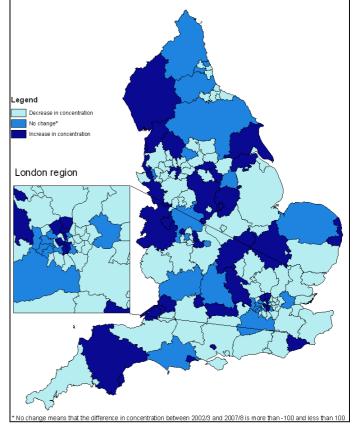


Fig 5. Commissioning patterns for all providers, second 33 HRGs

2004/05 (when the national tariffs apply to these HRGs), the number of providers increases. The measures of concentration show an *increase* in concentration from 2004/05 to 2006/07, while decreasing during the last year.



Map 2. Increase/decrease in absolute concentration from 2002/03 to 2007/08



The pattern of concentration for the other HRGs shown in Figure 6 are similar to the overall patterns shown in Figure 3 with an increase in number of providers used from 2005/06 when the tariff began to be rolled-out. It is possible that the immediate impact on commissioning behaviour of the first 15 HRGs covered by PbR was limited by the availability of alternative providers, especially from the private sector. The much more immediate response seen for the second group of 33 HRGs appears to support this hypothesis.

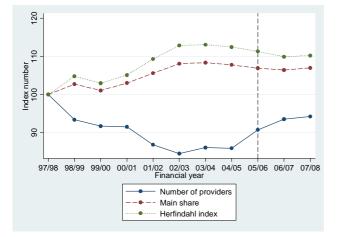


Fig 6. Commissioning patterns for all providers, other HRGs

'Switching' measures

The trends reported above measure concentration of use but do not provide any information about the volatility of market shares since they do not depend on the identity of hospitals used in any given year. A PCT could have the same measures in two years with the same set of hospitals, or with an entirely new set.

To see how active commissioners are in moving their business amongst hospitals, we measure *switching* between hospitals. We constructed measures based on changes in the identity of hospitals used by populations from year to year. The identity of hospitals used may change because of mergers, with no change in actual patterns of the use, so we purge our analysis of all hospitals involved in, or created by, mergers between years.

We calculated three measures of switching (details are available from authors) and the results reflect broadly the trends reported earlier, with increasing concentration in use of hospitals between 1998/9 and 2002/3, followed by a subsequent reduction in concentration from 2002/3 onwards.

Discussion

Simple comparisons of trends in commissioning are confounded by the significant organisational and geographical changes in the NHS on both the purchaser and provider side of the system. We have taken account of such changes in our analysis of the trends in elective admissions at practice and PCT level over an eleven year period in order to undertake a comprehensive quantitative analysis of commissioning behaviour. We previously found that the abolition of GP fundholding from 1999/2000 onwards led to an increase in the concentration of commissioning.¹ We might expect that Practice Based Commissioning will also affect commissioning patterns.

The more recent trends identified in this paper, whilst not very pronounced, suggest that commissioning has generally become less concentrated recently, more providers are used, and dependence of PCTs on their main hospital has declined, although there have been increases in concentration in the earlier years of policy reform. There are variations across the country and by type of condition. Those HRGs chosen for the early operation of the national tariff appear to have generated greater shifts in commissioning, albeit with a time lag, perhaps as the supply side of the system responded.

However, it is difficult to attribute the changes to specific policies and the results presented here are purely descriptive. Although they may suggest that overall the policies to encourage active commissioning and a mixed supply-side have had some effect on the behaviour of commissioners, it is possible that other policies such as waiting times targets, have also played a role. More detailed econometric analysis which is underway will shed more light on these issues. In addition, we cannot draw conclusions about the ultimate impact on patients and taxpayers. The latter depends crucially on whether the shifts in admissions have brought gains in terms of improved guality, convenience and value for money. Some of these issues will be considered in the future work outlined below.

Future work

We will explore the impact on aspects of commissioning behaviour of the following policies:

- Patient choice we are currently identifying the impact of choice policies on concentration and on the geographical destination of admissions.
- Foundation Trusts we are examining the use of Foundation Trusts by commissioners.
- Practice Based Commissioning (PBC) we will add data on PBC from the IPSOS-MORI quarterly survey of GPs and from the national GP WorkLife survey in order to investigate the impact of PBC.

We will undertake econometric analysis to explore robustly the impact of the above policies and we will also consider links between patterns of admissions and measures of quality such as waiting times, in order to comment on the ultimate impact on patients.

¹The research builds on previous work: Dusheiko M, Goddard M, Gravelle H, Jacobs R. Explaining trends in concentration of health care commissioning in the English NHS. *Health Economics*. 2008;17(8):907-26