Maximising resources in adult mental health

June 2010

This briefing asks what scope there is for improving the efficiency of the acute care pathway in adult mental health, while maximising quality.

Significant resources are spent on the adult mental health acute care pathway. The data shows there is wide variation in the use of inpatient beds, even after adjusting for the needs of different populations. And there is variation between bed days and spending on crisis resolution and home treatment (CRHT) teams.

The data is only the starting point. Mental health trusts and primary care trusts need to work together to understand the detail behind the headline figures.
How efficient is the adult mental health acute care pathway?

The Quality, Innovation, Productivity and Prevention programme (QIPP)\(^i\) stresses the need for more efficient care pathways that provide better-quality care, often by providing more treatment and care in the community. Mental health services have good experience of doing this already. CRHT teams have led to fewer patients needing hospital care. Patients, or service users, prefer treatment at home and clinical and social outcomes are just as good. But all providers and commissioners need to consider whether their acute care pathway of CRHT teams and inpatient care is working as efficiently as it can.

The NHS spends £1.4 billion per year on adult mental health inpatients,\(^ii\) £900 million of which is spent on acute inpatients. It spends a further £276 million on CRHT teams.\(^iii\)

But the data shows there is still wide variation in the use of inpatient beds, even after adjusting for the needs of different populations. And there is variation between bed days and spending on CRHT teams.

Understanding the reasons for the variation is important. Is it possible to use fewer beds and still provide high (or even higher) quality care? If all mental health trusts could achieve the median rate of bed days, the number of beds required would be reduced by 15 per cent. This is equivalent to £215 million that could be invested in making further improvements in mental health services.

These savings are, of course, theoretical. The data is only a starting point for further investigation about real services on the ground with the practitioners and users who know them best.

Service users with severe psychiatric illnesses tend to experience some periods when their symptoms become more intense and they need acute mental health services to help them return to stability. The introduction of CRHT teams was intended to provide intensive treatment in the community, ensuring that inpatient care was used only where necessary.

The National Audit Office’s report, *Helping People Through Mental Health Crisis: The Role of Crisis Resolution and Home Treatment Services* (Ref. 1), noted there was scope to maximise impact and improve value for money by ensuring that CRHT teams were properly resourced, fully functional and integrated within local mental health services. What does the picture look like now?

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\(^i\) The Department of Health has outlined quality, innovation, productivity and prevention as key enablers for achieving the necessary efficiency savings in the NHS.

\(^ii\) All data refers to mental health services for working-age adults.

\(^iii\) Reference costs 2008/09.
Differing population ‘needs’ explain some of the variation in bed days

There is wide variation in the use of beds. We have identified the population characteristics that have the strongest correlation with admission rates, and adjusted the primary care trust populations to take account of these characteristics (Figure 1). We are able to attribute more of the variation to population factors for psychosis than for all admissions.

After adjusting for population characteristics, there is still significant variation in inpatient activity

When we compare bed use there is significant variation in occupied bed days (Figure 2). We had to exclude 40 per cent of primary care trusts from our psychosis analysis because of poor data quality. Over 25 per cent of the admissions for this group of primary care trusts had no specified diagnosis.

Figure 1: The population characteristics that have the strongest correlation with admission rates

<table>
<thead>
<tr>
<th>All admissions</th>
<th>■ living environment deprivation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>■ health deprivation</td>
</tr>
<tr>
<td>Psychosis</td>
<td>■ percentage black population</td>
</tr>
<tr>
<td></td>
<td>■ employment deprivation</td>
</tr>
</tbody>
</table>

Source: Audit Commission

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i We used the most recent annual Hospital Episode Statistics (HES), including all inpatients coded to specialty 710 (adult mental health). HES do not differentiate bed types and include activity in the following NHS inpatient facilities: acute, rehabilitation, psychiatric intensive care and continuing care. We estimate that nationally about 90 per cent of inpatient activity is acute (70 per cent) and rehabilitation (20 per cent).

ii We compared PCTs rather than trusts because the population data is only available at PCT level.

iii ICD codes F20 to F31.

iv R-squared values (ie ‘percentage of the variation in admissions per 000 population’ which is explained by variation in demographic factors) are 53 per cent (psychoses) and 32 per cent (all admissions).

v Living environment, health and employment are three of the seven components of the index of multiple deprivation (IMD, 2007).
Figure 2: **There is a 20-fold variation in bed days for all admissions...**

...and a 12-fold variation for psychosis

*Source: Audit Commission*

**Admission rates and length of stay determine bed usage**

The number of bed days is affected by admission rates and lengths of stay. The data shows significant variation for both indicators (Figures 3-6).
Figure 3: Admission rates for all admissions vary six-fold

Source: Audit Commission

Figure 4: Admission rates for psychosis vary five-fold

Source: Audit Commission
Figure 5: **Length of stay for all admissions varies 15-fold**

Source: Audit Commission

Figure 6: **Length of stay for psychosis varies 14-fold**

Source: Audit Commission
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Why do some health economies appear to have significantly higher bed use than others?

It is likely the variation is due to a number of factors.

- Different mixes of acute and rehabilitation facilities. HES do not separately identify acute inpatient activity. We estimate nationally that about 70 per cent of inpatient activity is acute and 20 per cent rehabilitation. As the ratio will vary from service to service, this may explain some of the variation.
- The level of service provision. Those areas with relatively higher numbers of beds may be likely to attract more admissions.
- External factors such as the levels of homelessness and available accommodation.
- Different service models, clinical practice and performance.

We plan to visit a number of trusts to collect evidence to gain a greater understanding of how different service models have an impact on bed use, and will publish our findings later this year.

Are all CRHT teams operating at their full potential?

Mental health trusts and primary care trusts will want to understand the reasons for the local variation in bed use. A crucial part of that investigation has to be to consider how well CRHT teams are integrated in local mental health services. There is considerable variation between spend on CRHT teams and bed usage. Although there can be many reasons for this, an obvious aspect for local investigation is the relative effectiveness of the local teams and, therefore, the overall efficiency of the acute care pathway.

Research demonstrates that CRHT teams can significantly reduce bed use. However, the variation in bed days raises the question of whether the implementation of CRHT teams has been more effective in some areas than others.

i A 2006 study of inpatient admissions and CRHT team data by researchers at the North Eastern Public Health Observatory found that PCT areas with CRHT teams – particularly with 24/7 access – reported greater reductions in inpatient admissions than those without. Between 1999 and 2004, inpatient admissions fell by 10 per cent more in the 34 PCT areas with CRHT teams in place since 2001, and by 23 per cent more in the 12 of these on call around the clock than in the 130 areas without such teams by 2003-04. (Glover at al., ‘Crisis Resolution/Home Treatment Teams and Psychiatric Admission Rates in England’, British Journal of Psychiatry, vol. 189, pp441-445. doi: 10.1192/bjp.bp.105.020362).

ii The National Audit Office analysis of inpatient bed days between 1999-2000 and 2005-06 found that those PCT areas with a 24/7 CRHT team in place by 2000-01 saw considerably greater reductions in bed usage than those without access to a team during the same period. Average inpatient bed days per head of population weighted for mental health need fell by 21 per cent in the group with access to a 24/7 CRHT team compared with 10 per cent in the group without any access to a CRHT team by 2005-06. (National Audit Office, Helping People Through Mental Health Crisis: The Role of Crisis Resolution and Home Treatment Services, National Audit Office, 2007).
A key function of the CRHT teams is assessing service users to consider whether home treatment is a safe and clinically beneficial alternative to admission (gate-keeping). The teams’ effectiveness can be tracked over time locally and – if the data was available – nationally as well, in order to get an idea of relative performance. A crude measure of relative performance could be to compare spend on CRHT teams with bed days, in the expectation that inpatient activity might be less in those areas with relatively higher spending on these teams. But there is no clear pattern between bed days and CRHT team spend in mental health trusts (Figure 7).\(^i\)

The lack of correlation suggests that some CRHT teams are not as effective at gate-keeping admissions to ensure that inpatient care is only used when necessary. Indeed, we found no correlation between gate-keeping rates (ie the proportion of admissions gate-kept by CRHT teams\(^{ii}\)) and bed days (Figure 8).

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Figure 7: **There is no negative correlation between bed days and CRHT team spend**

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\(^i\) There is no negative correlation when the weighted population is used.

\(^{ii}\) An admission has been gate-kept by a CRHT team if they have assessed the service user before admission and if they were involved in the decision-making process, which resulted in admission.
Can we make the acute care pathway more effective?

While there will be many reasons for the variation between spend on CRHT teams and bed use, it is worth considering what factors can have an impact on the CRHT teams’ effectiveness. These may include:

- the absence of an integrated pathway, where medical staff work separately from the CRHT team, can create a barrier to effective gate-keeping of admissions and early discharge;
- some teams lack the capacity to operate on a 24-hour basis, provide home treatment to all those who need it and enable early discharge. Other health professionals may not fully understand how the acute care pathway works. This means that some CRHT teams spend valuable time assessing inappropriate referrals;
- a lack of alternatives to admission may increase the use of inpatient stays; and
- areas with relatively higher number of beds may be likely to attract more admissions.
Case study

Norfolk and Waveney Mental Health NHS Foundation Trust

By adopting an integrated team approach, the Trust reduced its acute beds by almost a third from 2005 to 2008. Data collected through the Audit Commission’s Mental Health Benchmarking Club shows the Trust has significantly lower bed days and shorter lengths of stay than most others (Figure 9). The Care Quality Commission’s overall rating of the Trust’s services in 2009 was ‘excellent’ for use of resources and ‘excellent’ for quality.

And the Trust performs well in terms of the relationship between its spend on CRHT teams and bed usage (Figure 10).

The reduction in the use of inpatients saves the Trust about £1 million a year. Low admission rates and short lengths of stay mean that most service users are able to retain their links with their local community when they require acute care, by receiving most of their care in the community rather than in hospital.

Source: Audit Commission 2010
Figure 9: Comparison of Norfolk and Waveney’s performance against other mental health trusts

**Low bed levels**

![Graph showing comparison of low bed levels between Norfolk and Waveney and other mental health trusts.](image)

**Very low bed days**

![Graph showing comparison of very low bed days between Norfolk and Waveney and other mental health trusts.](image)

*Source: Audit Commission’s Mental Health Benchmarking Club*
Figure 9: **Comparison of Norfolk and Waveney’s performance against other mental health trusts**

**Medium admission rates**

![Graph showing medium admission rates comparison between Norfolk and Waveney and other mental health trusts.](image)

**Short lengths of stay**

![Graph showing short lengths of stay comparison between Norfolk and Waveney and other mental health trusts.](image)

*Source: Audit Commission’s Mental Health Benchmarking Club*
Quality

Quality and outcome measures are limited in mental health services and we have not included any within this briefing. Most service users and carers prefer community-based treatment, and research has shown that clinical and social outcomes achieved by community-based treatment are at least as good as those achieved in hospital (Ref. 2). The Payment by Results Quality and Outcomes Project should start to provide health economies with tools to measure the quality of their care pathways.

Improving value for money

The pressure is on for all NHS organisations to improve value for money. If all mental health trusts could achieve the median rate of bed days, the number of beds required would be reduced by 15 per cent. This is equivalent to £215 million per annum, which could be invested in making further improvements in mental health services.
These savings are, of course, theoretical. The data is only a starting point. Trusts and primary care trusts need to work together to explore in much more detail the facts behind the headline figures and the efficiency of their own acute care pathway.

We will work with trusts and primary care trusts, using our improvement tools, to help them gain a greater understanding of local services and come up with solutions which provide better value for money.

**Want to find out more?**

If you would like to find out more about the Audit Commission’s Mental Health Benchmarking Club and how we can assist you in improving the efficiency of your organisation, please get in touch with your usual Commission contact or email nhsefficiency@audit-commission.gov.uk

**References**


The Audit Commission is an independent watchdog, driving economy, efficiency and effectiveness in local public services to deliver better outcomes for everyone. Our work across local government, health, housing, community safety and fire and rescue services means that we have a unique perspective. We promote value for money for taxpayers, auditing the £200 billion spent by 11,000 local public bodies.

As a force for improvement, we work in partnership to assess local public services and make practical recommendations for promoting a better quality of life for local people.

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