

# Creating efficiencies in the acute care pathway: the rapid assessment, treatment and discharge approach

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## Abstract

**Purpose** – *Despite contemporary mental health services shifting to a community-based model of care, acute inpatient care is still necessary for many patients experiencing an acute psychological crisis. As inpatient services cost the National Health Service nearly £600 million a year, initiatives to reduce time spent in hospital, whilst maintaining safety and quality, are being actively promoted on a national level. Mental health patients in Hertfordshire spend on average two weeks in hospital during their acute crisis. The aim of this study is to reduce bed occupancy rates by implementing a novel approach to inpatient management.*

**Design/methodology/approach** – *A pragmatic controlled clinical trial design was used to address the aim of this study.*

**Findings** – *The results demonstrate that, compared to a functionalized inpatient ward (one with a designated inpatient consultant psychiatrist conducting a weekly ward round), it is possible to reduce bed occupancy rates without increasing demand on other wards. Furthermore, 28-day readmission rates and total admissions over seven days were reduced.*

**Research limitations/implications** – *Limitations relating to the study design and potential generalisability to similar services are discussed. Further studies to triangulate the data are suggested.*

**Practical implications** – *This novel approach to inpatient management provides exciting data that suggest patients can be moved along the acute pathway more efficiently. Recommendations for further studies are made in light of the findings.*

**Originality/value** – *This paper will appeal to acute care clinicians, service managers, and commissioners of mental health services. It provides an evidence base for making efficiencies within the acute service whilst maintaining quality of care for patients.*

**Keywords** *Inpatient, Acute care pathway, Efficiency savings, New ways of working, Medical treatment, Mental health services*

**Paper type** *Research paper*

## Introduction

Acute adult inpatient services cost £585 million per year (Mental Health Strategies, 2010). Given the significant variation between Trusts in how beds are utilized, this area of mental health service provision has become a target for provider organizations and commissioners to meet the efficiency savings that are required from the government's most recent comprehensive spending review (Naylor and Bell, 2010).

Seventeen years ago Thornicroft and Strathdee (1994) highlighted efficiencies that could be made within the inpatient service. Some recommendations have been promoted, for example, the need for home assessment that has been nationally rolled out in the form of home treatment teams. However, many have fallen by the wayside. For example, they called for frequent inpatient review meetings that are led by senior clinicians. Unfortunately, up and down the country, weekly ward rounds for patients are still the norm. Junior doctors are still admitting patients to wards ignoring Thornicroft and Strathdee's call for senior clinicians to front load the acute service and gate-keep all admissions. Without a doubt, the explosion of

community-based mental health services has enabled inpatient demand to be reduced (Weich, 2008), but there are still areas for improvement in the acute care pathway to effect change and improve efficiency.

Inpatient mental health care in north-west Hertfordshire moved from an institutionalized to a community-based service in the mid- 1990s. Following the closure of the Hill End Hospital in 1994, acute adult inpatient services for the mentally ill moved to two 24-bedded community treatment units within St Albans. Albany Lodge served the catchment area of St Albans and St Julian's Ward served the catchment area of Dacorum with each district having its own Community Mental Health Team (CMHT).

In 2006, in response to a number of local and national drivers, Hertfordshire Partnership National Health Service (NHS) Foundation Trust (HPFT) adopted a "functional model" with one consultant psychiatrist providing inpatient medical care. This coincided with the closure of St Julian's and all inpatient care for north-west Hertfordshire moved to Albany Lodge. This "New Way of Working" was further developed in April 2010 with two consultant psychiatrists spanning the acute service pathway providing input not only to Albany Lodge, but also to the home-treatment teams for their respective catchment areas. The integration of both acute care teams has been shown to deliver further reductions in bed use with associated cost savings whilst increasing the quality of care that is provided (Audit Commission, 2010).

In continuing the pursuit to work with our stakeholders and improve the quality and effectiveness of care we provide, HPFT developed a four-year strategy to radically transform Hertfordshire's mental health services. Part of this strategy was to look at alternatives to traditional inpatient services and consider innovative alternatives such as host families (Pelletier *et al.*, 2009), crisis houses (Johnson *et al.*, 2005) and 72-hour assessment beds (Department of Health, 2007). Currently, HPFT are actively recruiting local families to provide therapeutic home environments for patients experiencing an acute crisis as well as planning crisis houses throughout the county.

The use of assessment beds to reduce inpatient stays and promote community-based treatment of acute mental disorder is not a new idea. Agrawal and Murphy (2008) provide positive outcome data from a 72-hour psychiatric assessment unit that was set up in Essex in 2005. All patients were admitted for up to 72-hours to initially assess their needs and identify any barriers to discharge. A decision was then made whether to "admit" the patient to a traditional inpatient unit or continue to support the patient in the community. Over a two-year period, they report being able to reduce their out of area beds to zero and generate sufficient capacity within their system to be able to close a 23-bedded acute ward. They did, however, report that for those patients who were subsequently "admitted" to an inpatient unit, the average length of stay increased. In their qualitative evaluation of the service, they identified two-core reasons for its success: early input from senior medical staff and alternatives to inpatient care being made available.

Albany Lodge started to pilot the Rapid Assessment, Treatment and Discharge (RAD) program in November 2010 (Hertfordshire Partnership NHS Foundation Trust, 2010). This program was devised by the authors in conjunction with the local acute service managers as an alternative to the 72-hour assessment unit. It incorporates the core elements of the Essex service and also the recommendations made by Thornicroft and Strathdee (1994), but implemented on a treatment ward. Although other UK mental health providers have adopted the Essex model of assessment beds (Inglis and Baggaley, 2005) with similarly encouraging results, to our knowledge, no other provider has incorporated the core elements within a treatment ward. In addition to reducing bed occupancy rates, all patients would benefit from greater continuity of medical and nursing care. Although shorter psychiatric admissions are thought to promote recovery and social inclusion, there is evidence that early discharge in a particular sub-group of patients can increase early discharge adverse outcomes (Lieberman *et al.*, 1998).

The main aim of this study was to reduce bed occupancy rates by promoting a safe and efficient throughput of patients through the acute care pathway. In consultation with our

commissioners, we felt a realistic and achievable target would be to reduce the number of beds to 16 whilst maintaining safety for our patients. Although this marginally exceeds the Royal College of Psychiatrists (1998) recommendation for units to contain up to 15 patients, it concurs with their experience that, on average, community-orientated CMHT's only require between six and eight beds at any one time.

## Method

### *Design*

To address the aim of this study, a pragmatic-controlled clinical trial design was used. The purpose of this evaluation was to generate preliminary data in a quick and cost-effective way as a basis for future more complex investigations. Ethical approval was considered but not deemed necessary as this study constitutes a service evaluation.

The variables of the study were: inpatient setting (RAD approach vs traditional functional approach), number of complete treatment episodes within the study period, length of stay, readmissions within 28 days and out of area CMHT bed days. Suicide data were not collected due to the short evaluation period.

### *Functional inpatient model versus rapid assessment, treatment and discharge approach*

HPFT currently has four inpatient sites situated around the county. Albany Lodge is a standalone inpatient unit that is located in the heart of St Albans. It serves the local population with a catchment area of 278,800. The unit provides single sex accommodation for up to 24 inpatients. Two consultant psychiatrists provide input to both the home treatment team and the inpatient unit for their respective catchment area. Essex ward, a 20-bedded unit located in the west of the county (Watford) adopts a true "functional approach" with two whole time equivalent consultant psychiatrists providing full-time medical input to two similar-sized wards serving the 270,800 catchment area.

Prior to the implementation of RAD, patients would typically have their care reviewed once a week at the consultant-led multidisciplinary ward round. As part of the RAD approach ward rounds were discontinued. On admission, all patients (both detained and non-detained) were given information regarding the approach. All new patients were seen the next working day by the multidisciplinary RAD team to plan care and discuss obstacles for discharge. The RAD team comprised a consultant psychiatrist, a nurse from the Crisis and Home Treatment team, a ward nurse, the service user and their carer. Patients and carers were informed that the admission was only part of their recovery and their journey through the acute pathway would involve home treatment if deemed safe and/or appropriate. Patients and carers were seen regularly by the junior medical staff with the consultant psychiatrist reviewing patients on a needs-led basis. Pre-discharge Care Programme Approach meetings were held on the ward after a period of leave or in the community, dependent on patient preference or circumstance.

### *Procedure*

Patients admitted to both wards between the 31 July and 31 October 2010 (Phase 1) received treatment "as usual". Between the 1 November 2010 and 1 February 2011 (Phase 2) patients admitted to Albany Lodge were managed according to the RAD approach. Patients admitted to Essex Ward continued to be managed "as usual". Out of area referrals and detained patients admitted to Albany Lodge during Phase 2 were still managed according to the RAD approach. Data were extracted from the Trust's electronic performance management software (Cognos). Only complete treatment episodes of care between dates were included.

## Results

Table I demonstrates the key findings of this study.

Owing to the low-cell counts, we have not undertaken rigorous statistical testing to compare means. Albany Lodge dealt with 56 complete treatment episodes during Phase 1 of the study compared with 61 complete treatment episodes on Essex Ward. The number of

**Table 1** Comparison of two inpatient wards before and after the implementation of the RAD approach

	Phase 1: 31 July-31 October 2010		Phase 2: 1 November 2010-1 February 2011	
	Albany Lodge (24 beds) n = 56	Essex Ward (20 beds) n = 61	Albany Lodge (24 beds) n = 44	Essex Ward (20 beds) n = 56
Age (years)	38.1	39.3	40.6	41.9
Average Length of Stay (Days)	17.3 (mean)	13.2 (mean)	17.5 (mean)	14.7 (mean)
	13.5 (median)	9.0 (median)	8.0 (median)	10.5 (median)
	≤5 days	≤5 days	≤5 days	≤5 days
	19.6% (11)	29.5% (18)	29.5% (13)	27% (15)
	>7 days	>7 days	>7 days	>7 days
	70% (39)	54% (33)	59% (26)	66% (37)
Catchment area "over spill" bed days spent out of locality (complete episodes in time period)	175	172	141	38
Percentage bed occupancy (including leave)	88.0%	90.4%	66.2%	94.4%
Number of patients readmitted within 28 days	4	4	2	7

complete treatment episodes for both wards were less during Phase 2 of the study. Average (median) length of stay (which also includes leave off the ward) decreased for Albany Lodge and increased marginally for Essex Ward during Phase 2 of the study. Albany Lodge demonstrated an increase in short-treatment episodes ( $\leq 5$  days) and a reduction in long admissions ( $> 7$  days). Percentage bed occupancy rates at Albany Lodge were reduced during Phase 2 of the study. This represented the closure of eight beds for reasons highlighted above. Despite this closure, out of area "over spill" bed days and readmission rates decreased following the implementation of the RAD approach.

## Discussion

This local pilot study demonstrates that during Phase 2 of the study, we were able to reduce our bed occupancy rates on Albany Lodge without generating increased "overspill" onto other wards. These results are similar to those obtained from psychiatric assessment units (Agrawal and Murphy, 2008; Inglis and Baggaley, 2005). We did not, however, demonstrate a reduction in mean length of stay following the implementation of the RAD approach. This was due to three patients in Phase 2 of the study (all at Albany Lodge) having extended admission periods of over 67 days, which inflated the length of stay data. Removing these outliers and utilizing the median, the average length of stay dropped from 13.5 to 8 days. Within English, acute adult psychiatric populations, the median length of stay is 15 days (Thompson *et al.*, 2004). Our approach compares favorably to this and demonstrates a length of stay below the national average. Despite a reduction in median length of stay, readmission rates were not adversely affected. This is consistent with Liebermann *et al.*'s (1998) findings that a shorter length of stay is not necessarily associated with increased readmission rates.

Both wards required other inpatient facilities within the Trust to accommodate patients. Reasons for this included the lack of provision of electro-convulsive therapy at Albany Lodge, the need for sex-specific beds at critical admission times and other patient specific factors (e.g. patient choice).

In our study, between 40 and 70 per cent of all psychiatric inpatient admissions were over seven days regardless of approach to inpatient management. Those patients, who could be discharged from inpatient care within five days formed only the minority of admissions. Destination on discharge could have included transfer to another ward, hospital or higher secure setting, therefore, actually underestimating overall length of stay in hospital. This study suggests that examining barriers to discharge in longer stay patients would be a suitable target for future research.

## Study limitations

Although the design of this study poses limitations with regard to internal validity, this may be offset by the potentially useful generalisability of findings to other similar services. Another limitation is the lack of qualitative data from service user's or staff. Given that the coalition government is keen to promote patient choice as well as devolve commissioning contracts to local general practitioner consortia (Department of Health, 2010) finding out how these stakeholders view this service change and whether they would support this model of working would be helpful. Further studies could, therefore, help triangulate the data in this respect. Other limitations to this study include the lack of testing to generate statistical differences between the two wards as well as the relatively short evaluation period.

## Conclusion

Inpatient units are expensive and unpleasant places to be in (Sainsbury Centre for Mental Health, 2005). With service user groups keen to transform the inpatient landscape and promote radical alternatives to traditional inpatient care (Faulkner and Williams, 2005), it is up to providers to meet the challenge of its customers. We present preliminary data that shows how traditional inpatient units can respond to this challenge by adopting a needs-led model that can produce a leaner and more efficient service. Although there will always be a demand for acute psychiatric beds, we must remember that the patient experience is perhaps more important than the actual cost of the admission.

### Implications for practice

- Psychiatric inpatient units are an appropriate target for efficiency savings.
- Changing the medical management of inpatients can reduce bed occupancy and average length of stays.
- Integrating the acute care pathway with early input from senior medical staff is a suitable vehicle to facilitate this change.
- Qualitative feedback from service users would help evaluate this approach further.

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