VIEWPOINT

Waikato mental health service reorganisation: a model to reduce bed needs?

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Amongst the most significant problems to confront adult mental health services are, firstly, how to provide sufficient acute beds, and secondly, how to evaluate different service models.

Because of the multiple relevant variables and the pressures to provide according to both needs and demands, models of service delivery, as opposed to specific treatments, appear rarely to be evaluated by randomised controlled trials. The more common technique, and very much a second best, is to use historical controls. An alternative is to use groups matched on as many of the variables as possible, and to apply critical inspection of the available data.[1] The data reported in this paper can be seen as following that former methodology. However, because the results are so dramatic, and are consistent with some other published reports,[1,2] we consider the developments at Health Waikato should be available for others to critique or choose to emulate.

The Adult Mental Health Service model in operation at Health Waikato is similar to one first developed at West Morton (Queensland) and which is associated with a dramatic reduction in acute inpatient bed requirements. That Australian service commenced in its present form approximately five years ago and was awarded the gold medal for the best-integrated mental health service in Australia and New Zealand at the 1999 THEMHS Conference in Melbourne.[3,4]

A recent review of South East Queensland's Psychiatric Services, prompted by an apparent adult acute bed crisis, found essentially that the only services which appeared able to cope adequately with the numbers of acute beds provided, had a similar model of service delivery.[2]

The Scene

Health Waikato Limited, a Hospital and Health Service (HHS), delivers to a population of approximately 320 000 people, of whom 20% are Maori. The service deals with all the usual general mental health issues. Three multidisciplinary teams service the Hamilton urban area. They are resourced on the basis of twenty FTE and fifteen

acute beds per 100 000 total population, with some variation for specialist FTE such as Dual Diagnosis and cultural (Maori) workers. The approach is aimed at maximising supporting people in their own social environment throughout all phases of their disorders. Patients are admitted when that is seen as providing potential therapeutic gain. These beds are managed by the same team which treats the patient in the community. Thus, the hospital is not seen as the key resource from which all other programmes emanate.

In addition to this clinical service, the non-government organisation (NGO) sector provides a range of residential, meaningful activity and day programmes. Integration with the NGO sector has been slow to develop. The contribution they make to reduced inpatient utilisation is likely to be significant but did not change over the period of this study.

Amongst the characteristics of the region is the diverse geographical distribution of the population, with many isolated areas which are serviced by predominantly two rural teams, but the bulk of the population lies within a one-hour drive of central Hamilton. A major challenge for the service is the very high proportion of Maori who are heavy service users.

For decades, psychiatric services had been provided from Tokanui Psychiatric Hospital, about 40 km south of Hamilton. In more recent years, there was an inpatient acute ward at Waikato Hospital, which augmented the Tokanui acute services. Closure of Tokanui in 1997 transformed the service from a total of 134 adult beds, of which 66 were conceptualised as acute, to the present model which has 54 adult acute beds (including ten intensive care, plus four for Tauranga) and thirteen rehabilitation/step-down beds collocated in a purpose built facility on the main Waikato Hospital site.

The new service combines the effective components of inpatient and community care, where the same clinical team delivers treatment in both hospital and community settings as a means to ensure a consistent treatment approach and to maximise continuity of care. Integration is the term which currently describes this service approach and it remains a key imperative for mental health service development in New Zealand.[5-7]

A seven-day-a-week 24-hour Community Assessment and Treatment Team (CAT) and a five-day-a-week extended hours Mobile Intensive Treatment Team (MIT) provide intensive treatment and acute crisis services (Note: CAT corresponds to PACE, and MIT to PACT in recent British, publications[4]). These services are staffed by each of the three geographically defined Hamilton Urban Teams and work in collaboration with their colleagues within the broader team. This 'matrix' arrangement ensures the integrated functioning of the teams. For instance, every team meeting has representatives of CAT and MIT present, which ensures that failures through communication barriers are minimised. The two rural teams emulate this model, albeit through a more mixed approach, which sees each key-worker performing first line CAT and MIT functions in addition to their general clinical casework responsibilities.

Features of these two specialist service components are: limited provision of crisis respite as an alternative to hospitalisation, intensive case management, smaller caseloads, extended hours capability, improved ability for liaison with general practitioners and community NGO groups, and the ability to be highly mobile.

The crisis intervention component of the service is effectively the entry point for most cases. People presenting in distressed states are assessed on a 24-hour basis, generally without delay. Assessments are conducted by a multi-disciplinary team of clinical professionals who aim to define the specific needs of the individual and their lack of social network support that apparently contributed to the crisis.

These needs are then met immediately with intensive social support and clinical interventions. This may include assistance in resolving major stresses, other clinical or medication interventions, or finding suitable accommodation in the community. Some respite care options are available as an alternative to admission for those who cannot return to their normal accommodation and who require frequent supervision or oversight until their crisis resolves. In practice, though, these options were rarely used over the period of this study.

The major advantages appear to be in the manner in which patients are assisted to carry on their every day roles in the community and helped to resolve stresses thought to be contributing to the current crisis. However, it is clear that this highly individualised approach is labour intensive and requires substantial coordination among the members of the crisis team. Although research data suggest that many admissions to hospital can be avoided or shortened, there is relatively little evidence of added benefit in reductions to impairment, disability or handicap for this, or for more traditional approaches, when they are compared.[8]

The Facts

Utilisation of hospital beds at Health Waikato has fallen since the introduction of the new integrated model of service delivery in 1997. Table 1 shows objective quantitative data for the last six months of each of the three years 1996, '98 and '99. During 1997, the old model of service delivery was in transition from Tokanui. It is intended particularly to emphasize the effect of the new service model on the percentage of adult acute beds occupied, since that is often seen as a major problem with psychiatric services. By the end of 1998, the new model of service had commenced but was only partially implemented. By the end of 1999, virtually all components of the model were operating.

Table 1. Percent occupied adult acute beds and supportive data.

July-Dec	Total Acute Beds	Average Percent Occupied	IPC Person Days	Actual FTE Staff (Community)	Service Model
1996	66	93.8	3887	67.1	"Old"
1998	50	85.0	2121	91.6	New (Partial)
1999	50	69.1	1764	100.5	New (Evolved)

IPC: intensive psychiatric care.

The Table shows that despite a drop in acute bed numbers, paralleling implementation of the integrated community based service model and the progressive implementation of full mobile assertive outreach (MIT and CAT) capacity, the average bed occupancy dropped noticeably. Correspondingly, the number of community FTE has increased by an additional 35 positions. The reduction in intensive psychiatric care bed days between 1996 and the end of 1999 may be a 'quality' performance indicator. It must be noted that four of these intensive psychiatric care beds are primarily supplied to another HHS - Pacific Health Care in Tauranga which controls admission and discharge. The use of these beds, while reflected in the data above would further improve the Health Waikato Limited results if these admissions were removed.

Table 1 clearly illustrates a reduction in average occupancy over a three-year period. Obviously, there may be a number of variables contributing to this situation, which are beyond our control to measure. However, the results are consistent with previous research, which has seen a reduction in hospitalisation, or hospital usage, where integrated services have been

established in association with a range of accommodation and support services through the NGO sector.[1,9,10]

In particular, it should be noted that closure or downsizing of other major psychiatric hospitals in New Zealand cities, and the development of assertive crisis teams has not been associated with equivalent reductions in bed utilization, so the findings are unlikely to be simply a manifestation of the "Hawthorn effect".

Conclusions

The Health Waikato experience emulates that of the West Morton Integrated Mental Health Service, where reduced inpatient utilisation has been attributed to service integration. Health Waikato similarly attributes their success to three basic features. Firstly, implementation of a service model which combines the effective components of inpatient and community care into a 'tight-seamless' model of patient care which eliminates the need for inter-team communication. Secondly, the specialist provision of CAT and MIT functions which assess the value of hospitalisation or continued hospitalisation versus supportive intensive treatment in the patient's own home or an alternative community setting. Thirdly, the existence of a significant but limited range of community NGO service options, including housing for patients with intensive, high support needs.

The question that must surely be asked is: "*Can we afford to demand more empirical evidence for service design efficacy and efficiency, in the light of such dramatic results, and in the presence of such apparently overwhelming problems in many of our New Zealand mental health services?*"

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