Outcomes for patients with an acute mental illness in rural New South Wales who are treated in general beds in their local hospital

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This paper outlines a project currently being undertaken in rural NSW that aims to evaluate the mental health status and level of functioning of patients with acute mental illness in rural NSW who are treated by a general practitioner in a general bed of their local hospital. The project also aims to evaluate the effectiveness of this treatment. The significance of the project is discussed in light of the large number of patients with an acute mental illness who are being treated in the general beds of rural hospitals, and recommendations made for future policy directions in this important area of health care provision.

Background to the current project

Almost half of patients with an acute mental illness who live west of the Great Dividing Range in NSW and require inpatient admission are treated in general beds of their local hospital by a general practitioner rather than transferred to a specialised mental health ward or unit in the larger urban centres. These findings are significant, especially when considered in light of the principle of least restrictive care that frames the NSW Mental Health Act (1990); the State and Commonwealth policies of mainstreaming mental health services into general health services; findings of the NSW Mental Health Sentinel Events Review Committee Tracking Tragedy Report and the NSW Health Department’s Response to this Report; and the chronic shortage of specialised mental health beds across NSW.

A review of the literature located little published research in this area. Studies relate only to ‘rooming in’ projects and the use of telemedicine to support clinicians in rural areas to treat mental illness generally. In a study by Hungerford, general practitioners (GPs) were asked for the reasons they chose to treat patients with an acute mental illness in their local hospital and factors perceived as barriers to this treatment. Significantly, the majority of GPs agreed that they treated this patient group locally because they had no other choice, due to the lack of mental health beds in rural areas or difficulty in gaining admission for patients into the mental health units. Indeed, a number of GPs likened general beds in the local rural hospital to emergency departments (EDs) in metropolitan areas—that is, waiting rooms for patients until transfer and admission to an acute mental health unit could be arranged. Also examined as a part of this project were the major concerns of rural nurses who care for patients with an acute mental illness in general beds of the local hospital. The majority of nurses agreed that they lacked the knowledge, skills and experience to care effectively for this group of patients.

This preliminary study by Hungerford raised a number of questions, especially regarding the acuity of and outcomes for patients who are hospitalised in rural areas. For example, what is the mental health status of patients with a primary psychiatric diagnosis who are treated by a general practitioner in a general bed of a rural hospital? What is the level of psychological stress, resilience and quality of life of these patients? How does the mental health status and level of personal functioning of patients with a primary psychiatric diagnosis who are hospitalised locally, compare with patients who are transferred and admitted to mental health units, upon admission, discharge, and three months post-discharge?

Design and method of current project

In the current project, the mental health status and level of personal functioning of patients with a primary psychiatric diagnosis who are admitted to and discharged from the general bed of a rural hospital is compared to that of patients who are treated in a specialised mental health unit. The effectiveness of treatment for these two groups of patients is also compared. The approach taken is quasi-experimental, with information by gathered from a number of different sources.
Firstly, information is being obtained from or about two groups of patients and their carers from two rural Area Health Services, the Hunter New England Area Health Service and the Greater Southern Area Health Service. The first group of patients comprises those who have been admitted to the general beds of small rural hospitals with a primary psychiatric diagnosis, and their carers. The patient participants comprising this group are both males and females aged between 18 and 65 who have given consent to involvement in the study. The carer participants are males and females aged over 18 years who are viewed by the participants as their significant others, and who have given informed consent. At least 45 patient participants from this source are being recruited, to satisfy statistical power of 0.8 at the 0.5 level of significance.

Reasons for locating the project within the Hunter New England and Greater Southern Area Health Services relate to the distinctively rural character of these Area Health Services. The Hunter New England covers a geographical area of over 130 000 square kilometres—the size of England—stretching from Morisset and Newcastle in the south, to Taree and Armidale in the east, to Merriwa and Wee Waa in the west, to Moree and Tenterfield in the North. It is populated by approximately 840 000 people and provides health care to 20% of the State’s aboriginal population. While the city of Newcastle is a metropolis, overall the Area Health Service is rural in character and predominated with primary industries such as agriculture, including winemaking, cattle, sheep, and broadacre crops; and fishing and forestry. The Greater Southern Area Health Service is situated in the south west of New South Wales, bordered by the Murray River (the NSW–Victorian border) in the south, Crookwell and Hillston in the north, the Pacific Ocean in the east, and Hay in the west. It encompasses over 166 000 square kilometres, and is populated by just under 450 000 people. As with the New England Region, the Greater Southern Area Health Service is distinctively rural in character, predominated by primary industries such as agriculture, forestry and fishing.

The second group of participants in the project comprises patients from the same two Area Health Services who are transferred from outlying areas and admitted to acute mental health units, and the carers of these patients. Participating Inpatients Units are the Banksia Mental Health Unit in Tamworth and Gissing House in Wagga. The patient participants are males and females aged between 18 and 65 who have given consent to involvement in the study. The carer participants are males and females aged over 18 years who are viewed by the participants as their significant others. At least 45 participants who have been admitted to Mental Health Units from outlying areas are to be recruited, to satisfy statistical power of 0.8 at the 0.5 level of significance.

The type of information being collected and collated from participants includes a specifically designed pre-tested self-reporting questionnaire to collect data regarding their demographic details (including age, gender, aboriginality, disability, town/postcode of residence, number of community (mental health) services (including government and non-government services) known to or used by patient participants in their place of residence; distance from hospital; family support; and also preferences with regard to location of admission and satisfaction with treatment at that location.

Patient participants are also being asked to complete three other validated Instruments. The first of these is the Kessler Non-specific Psychological Distress Scale (K-10). This Instrument yields a global measure of ‘psychological distress’. A brief self-report questionnaire, the K-10 comprises 10 items and uses a 5-point scale to assess level of anxiety and depressive symptoms in the last 4 weeks. The K-10 contains both low and high threshold items and is considered especially suitable for large population studies. Validity, reliability and sensitivity to change over time have all been assessed as adequate to very good.13

The next research Instrument used is the WHO Quality of Life Survey Brief Australian Version (WHO QoL-BREF). This yields a measure of ‘quality of life and health’. A brief self-report instrument, the WHO QoL-BREF comprises 26 items that use a 5-point scale to assess physical and psychological health, social relationships, environment and overall perception of quality of life and health over the last two weeks. Validity, reliability and sensitivity to change over time have all been assessed as adequate to good.15
The third research Instrument used with the patient participants is the Brief Resilient Coping Scale (BRCS). This is a four-item measure on a 5-point Likert Scale was designed to capture tendencies to cope with stress in a highly adaptive manner. It has adequate internal consistency, text-retest reliability, and validity.16

The demographic survey, together with the above Instruments were combined into a single questionnaire. Participants are being asked by a mental health worker to complete the questionnaire upon admission and immediately prior to discharge. The questionnaire is also being posted out 3 months post-discharge with a reminder letter posted 2 weeks later to those who have not responded.

Carer participants are being asked to complete a different research Instrument. The Experience of Care-Giving Inventory (ECI) is a comprehensive measure of the experience of caring for a relative with a serious mental illness. It comprises 66 items arranged in 10 subscales assessed using a 5-point scale. These subscales are difficult behaviour, negative symptoms, stigma, problems with services, effects on the family, need for backup, dependency, loss, positive personal experience and good aspects of relationship. This Instrument has been shown to have satisfactory validity and reliability when used in relation to caregivers of persons with a mental illness.18 Again, participants are being asked by a mental health worker to complete the questionnaire upon admission and immediately prior to discharge. The questionnaire is also being posted to participants 3 months post-discharge with a reminder letter posted 2 weeks later to those who have not responded.

Additional information is being collected and collated by mental health clinicians. This information includes the Health of the Nation Outcome Scale (HoNOS), a 12 item scale designed to provide a brief, accurate, and relevant measure of mental health and social functioning. Each item measures a type of problem commonly presented by patients in mental health care settings and each is scored on a five point scale ranging from 0 (no problem) to 4 (severe/very severe problem). The 12 items are intended to cover four areas of mental health: behaviour (i–iii), impairment (iv and v), symptoms (vi–viii), and social functioning/context (ix–xii). Patients are rated on the HoNOS when sufficient information has become available. Ratings are carried out either by a single practitioner or using input from the clinical team. ‘Outcome’ is measured by comparing a patient’s scores at two points in time, using individual item scores, the dimensional subscores, and the total score. Research indicates that HoNOS is sensitive to change across time and to differences in illness type and severity, and has a sufficient degree of both construct and criterion related validity to fulfil the requirements of a mental health outcome scale for routine use in clinical settings.19–21

The second instrument used by mental health workers is the Global Assessment of Functioning Scale (GAF). This scale measures the ‘functioning’ of a patient as a single rating scale, the lowest level of functioning over the last week. Its range is 1–100, divided into 10 equal intervals, with anchors provided at each interval, with reliability, validity, and sensitivity to change over time have been rated as adequate.22,23

Finally, Information is being obtained from the Mental Health Administrations of each of the Area Health Services. This includes the number of community (mental health) services (including government and non-government services) available to patient. Other information is being obtained from the patient participant’s medical records, with consent, and includes:

- presenting problem
- time of day of current admission
- availability or access to mental health support services
- reasons for admission to local hospital/mental health unit
- psychiatric symptoms (type, level of severity)
- diagnosis
• possibility of mis-diagnosis
• medication (including type, dose, frequency)
• number incidents/reportable incidents/critical incidents during their stay
• specialist consultation (including type of specialist—e.g. psychiatrist, mental health worker)
• previous contact with mental health service(s)
• previous psychiatric history
• previous admission(s) with psychiatric diagnosis (number, diagnosis, lengthy of stay, outcome)
• location of previous admission(s) with psychiatric diagnosis.

A summary of this information is provided in Table 1, which outlines details of the variables to be measured by the study, the instrument to be used to collect the data, and the data collection schedule.

Repeated measure of covariance (or equivalent regression-based analyses) will be used to examine patterns of change over time and factors predicting improvement. The research team has access to data support at the Centre for Rural and Remote Mental Health in Orange, NSW, attached to the University of Newcastle, to advise and assist with data management and analysis.

The project was approved by the Hunter New England and Greater Southern Area Health Service Research Ethics Committees. Ethical issues related to the participation of patients and their significant others in the project were resolved through the anonymity of participation and de-identification of all surveys. In addition, informed consent has been obtained from each participant, with normal consent obtained from patients prior to undertaking of the in-depth file audits.

Significance of project and policy recommendation

As noted by Hungerford¹, most GPs surveyed in the sample rural area in NSW, Australia, agreed that they had little other choice than to treat patients with an acute mental illness in their local hospital. Transferring them to mental health units was often not an option because of a lack of availability of mental health beds or because psychiatrists declined to accept referrals. However, many of the smaller rural communities have no access to after-hours mental health workers, minimal access during the day to ongoing community support; and no back-up resources to enable the implementation of the immediate high frequency observation recommended for acutely suicidal patients. It may be suggested, then, that the clinical risk, appropriateness, or even level of need for admission to a mental health unit for clients located in rural areas be gauged, not only upon the initial presentation of the client, psychiatric history and social circumstances, but also by environmental factors such as available resources or support.

This project seeks to examine such issues. In so doing, it also supports the finding that a large proportion of patients with an acute mental illness who are located in rural areas and require inpatient admission are treated in general beds in their local hospital with few reportable incidents. Moreover, the original study undertaken by Hungerford¹ suggests that there are benefits to such admissions, including family involvement, continuity of care with the GP and community case worker, and a reduction in stigma.

Providing support to the GPs and nurses who are, in turn, providing care to patients with an acute mental illness in rural areas, is crucial. But just as important is quantifying the acuity of and outcomes for patients with acute mental illness who are treated in the general beds of rural hospitals, and comparing this to outcomes for patients who are transferred to acute mental health units for specialised treatment. Notions of equity must be considered. Patients with an acute mental illness in rural Australia should be provided with health care that is equal to that provided to those in urban and metropolitan areas. It is anticipated that the results of this project will confirm the positive clinical and
personal outcomes for patients in rural Australia with an acute mental illness who are treated by
general practitioners in general beds of their local hospitals. This, in turn, will suggest the need for
health service providers to plan, manage and make available the best possible health care to this patient
group.

Conclusion

Many patients with an acute mental illness are treated by their GPs in the general beds of rural
hospitals. Quantifying the acuity of and outcomes for these patients is important to ensure that people
with a mental illness located in rural areas are receiving care that is equal to that received by patients
located in urban and metropolitan areas. The project described in this paper seeks to achieve this
quantification. In so doing, it is anticipated that policy and planning around the treatment of people
with an acute mental illness in rural Australia will be improved.

Table 1  Research variables and data collection techniques

<table>
<thead>
<tr>
<th>Variable group</th>
<th>Variable name</th>
<th>How collected/measurement scale</th>
<th>Collection time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual: Personal Factors</td>
<td>Demographic information</td>
<td>Demographics questionnaire</td>
<td>Admission End</td>
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<tr>
<td></td>
<td></td>
<td>Area Mental Health Administration; Availability or access to mental health support services in locality; File audit; Previous contact with mental health service(s)</td>
<td></td>
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<tr>
<td>Quality of Life</td>
<td>Quality of Life</td>
<td>World Health Organisation Quality of Life (WHOQoL-BREF)</td>
<td>Admission Discharge 3 months</td>
</tr>
<tr>
<td>Resilience, Coping</td>
<td>Resilience, Coping</td>
<td>Brief Resilient Coping Scale (BRSC)</td>
<td>Admission Discharge 3 months</td>
</tr>
<tr>
<td>Individual: Clinical Factors</td>
<td>Experience of Caregiving for Significant Other</td>
<td>Experience of Caregiving Enventory (ECI)</td>
<td>Admission Discharge 3 months</td>
</tr>
<tr>
<td></td>
<td>Mental Health and Social Functioning</td>
<td>Health of Nation Outcome Scale (HoNOS) (McClelland, Trimble, Fox, Stevenson, Bell)</td>
<td>Admission Discharge 3 months</td>
</tr>
<tr>
<td>Severity of Symptoms</td>
<td>Severity of Symptoms</td>
<td>Global Assessment Scale (GAS) (Spitzer, Gibbon, Endicott); File audits and database searches; Presenting problem; Reasons for admission to local hospital/mental health unit; Psychiatric symptoms (type, level of severity); Diagnosis; Possibility of mis-diagnosis; Medication (including type, dose, frequency); Number incidents/reportable incidents/critical incidents during their stay; Specialist consultation (including type of specialist—e.g. psychiatrist, mental health worker); Previous psychiatric history; Previous admission(s) with psychiatric diagnosis (number, diagnosis, length of stay, outcome); Location of previous admission(s) with psychiatric diagnosis; Length of stay; Readmission rate; If admitted to a general bed, subsequent admission to mental health unit</td>
<td>End</td>
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References


Presenters

Catherine Hungerford has a background in research, nursing, counselling, and teaching. Her PhD is in Communication Studies. Catherine is currently a Nurse Unit Manager at the Banksia Mental Health Unit in Tamworth, in rural NSW. Her current research on outcomes for patients treated for acute mental illness in rural hospitals builds upon her first project, in which she identified reasons why rural GPs choose to admit these patients locally rather than transfer them to specialised mental health facilities in the larger regional centres.

Edwina Champain has a background in social work, with ten years’ clinical and management experience in rural mental health and community health settings. Edwina pursues social justice in the form of high quality services to reduce the suffering of people affected by mental health problems. This involves supporting mainstream services to provide the best mental health care universally, selectively and in the acute field.