Type of housing predicts rate of readmission to hospital but not length of stay in people with schizophrenia on the Gold Coast in Queensland

GRAEME BROWNE, MARY COURTNEY AND TOM MEEHAN

Graeme Browne RN, Lecturer Department of Nursing University of Southern Queensland,
Mary Courtney RN, Professor of Nursing, Queensland University of Technology and
Tom Meehan, Director Evaluation & Research, The Park Hospital, Centre for Mental Health.

ABSTRACT

Accommodation is considered to be important by institutions interested in mental health care both in Australia and internationally. Some authorities assert that no component of a community mental health system is more important than decent affordable housing. Unfortunately there has been little research in Australia into the consequences of discharging people with a primary diagnosis of schizophrenia to different types of accommodation. This paper uses archival data to investigate the outcomes for people with schizophrenia discharged to two types of accommodation. The types of accommodation chosen are the person's own home and for-profit boarding house. These two were chosen because the literature suggests that they are respectively the most and least desirable types of accommodation. Results suggest that people with schizophrenia who were discharged to boarding houses are significantly more likely to be readmitted to the psychiatric unit of Gold Coast Hospital, although their length of stay in hospital is not significantly different.

Key Words
Housing, schizophrenia, admission rates, boarding house.

INTRODUCTION

According to the National Mental Health Strategy (1994a), housing is considered the most crucial community support service needed for the success of the policy of deinstitutionalisation. There is substantial support for this view in Australia (Burdekin et al. 1993, Mental Health Strategy for Queensland 1996, The National Mental Health Strategy 1992) and internationally (World Health Organization 1990). This view is also well supported by research (Anthony & Blanch 1989, Baker & Douglas 1990, Posey 1990, Rosenfield 1990, Stroul 1989).

In spite of this and other evidence, housing for people with mental health problems is often of a poor standard (Burdekin et al. 1993) and there is a view that decision makers in mental health services do not take the issue of housing seriously (Quinn 1988, 1994).

Impact of housing on admissions and wellbeing

A two-year longitudinal study by Kirkpatrick et al. (1996) confirms that living outside institutions is the best place for people with schizophrenia. Participants had a history of schizophrenia and of prolonged or repeated treatment in a psychiatric hospital and a history of unsuccessful community functioning. Results demonstrated that quality of life and level of global functioning improved the longer the participants were out of hospital.

In the US, a study of 69 chronic psychiatric patients in two communities examined the relative contribution of housing versus psychiatric services to hospital readmission based on data on the use of mental health services, housing and financial assistance collected from patients' hospital records (Rosenfield 1990). Services for housing were a better predictor of success (that is, of not being hospitalised) than the existence of a mental health service, and the author concluded that housing services have a critical effect on relapse (Rosenfield 1990).

A much larger study (Baker & Douglas 1990) of 729 deinstitutionalised severely mentally ill people in New York state found a causal relationship between the quality of housing and global functioning and quality of life (QoL). That is, participants who remained in adequate and appropriate housing (as assessed by case managers) improved, and those in poor housing remained the same or deteriorated in their level of functioning. Participants who moved from poor quality housing to better housing improved in their global functioning; and vice versa - participants who moved from good to poor quality housing deteriorated in their global levels of functioning and their perceived QoL. The study concluded that quality of housing can impact significantly on the community adjustment outcomes of consumers (Baker and Douglas 1990).

Consumer Preferences and Housing Types

There is evidence that consumers of mental health services have a strong preference for normal living situations. Most consumers want to live alone or with a partner or friend and are opposed to living in supervised settings with other consumers (Anthony & Blanch 1989, Howie the Harp 1990, Keck 1990, Pace & Turkel 1990, Seilheimer & Doyal 1996, Tazman 1993, Tazman & Yoe 1989, Yeich, Mowbray, Bybee & Cohen 1994). Not only do consumers prefer to live in their own homes, with people of their choice - when they do, they have fewer symptoms, are less likely to be admitted (Carling 1989, Hodgins, Cyr & Gaston 1990, O'Rear 1990) and they appreciate the autonomy such housing provides (Morris 1996, Pace & Turkel 1990).

Unfortunately, choice and therefore autonomy is not often available to consumers (Srebnik, Livingston, Gordon & King 1995) but it is highly valued and leads to positive outcomes in terms of satisfaction with services (Morris, 1996), residential stability and psychological well being (Srebnik et al. 1995). Howie the Harp (1993) noted that for many people independent living is the only lifestyle they are interested in and any loss of freedom or self-determination is harmful.

There are a number of types of housing used by consumers of mental health services, including:

- Hospital residence, such as wards, cottages on the hospital grounds;
- Hostels or boarding houses - large rooming houses where consumers rent single rooms. Bathrooms are shared and the rooms may or may not have cooking facilities. Hostels and boarding houses are usually privately owned (Linhorst 1991, Slaughter, Lehman & Mayers 1991);
- Community group homes - houses in the community, which are generally shared by a small number of consumers. Group homes are usually sponsored by and supervised by mental health services or non-government organizations;
- Private accommodation - with family, friends or alone (Tazman 1993).

A review of 43 studies of consumer preferences related to housing and support services confirmed consumers consistently reported they would prefer to live in their own apartment or house with a friend, spouse or partner and not live with other consumers (Tazman 1993). Their second preference was living with families, then group

homes then hostels or boarding houses. The least desirable accommodation, outside hospital, was living in a hostel or boarding house (Tazman 1993).

Consumers living in private housing report a better quality of life, need less medication and have a higher level of global functioning (Baker and Douglas 1990, Carling 1990a, Carling 1993, Tazman 1993). At the other end of the desirability scale are hostels and boarding houses, with consumers living in hostels and boarding houses reporting poorer QoL, when compared to other types of community housing. They have more symptoms, need more medication and have a lower level of global functioning (Baker and Douglas 1990, Linhorst 1991, Posey 1990, Slaughter et al. 1991, Trieman 1997, Tazman 1993)

Research in Australia

There is limited research in Australia on housing for consumers of mental health services. Warren and Bell (2000) conducted a naturalistic study of 10 consumers with a diagnosis of schizophrenia and bipolar affective disorder. Their findings indicate that feeling safe and secure and living a normal life were important themes as was having a choice about whom they lived with. Warren and Bell concluded services should be developed in consultation with consumers as hostels and boarding houses were not what this group of consumers preferred.

Australian studies are critical of boarding houses (Health Care Complaints Commission 1996) and demonstrate that poor standards of housing contribute to readmission (Bergin et al.,1997). Cleary, Woolford and Meehan (1998), in a study of the experiences of people with schizophrenia in boarding houses in Sydney, concluded that although all the participants felt positive about their present boarding houses, it was important to remember that this group had little control over their living circumstances (given lack of security of tenure), and the authors argue that this contributes to a feeling of disempowerment.

The Gold Coast experience

On the Gold Coast it is estimated there are 72,184 people with a mental disorder (Baker 1997) with probably 3,200 of those suffering with schizophrenia. The Queensland Government spends less on mental health than any other state in Australia. Of this spending a smaller proportion is invested in community based mental health services (National Mental Health Strategy 1996). A report commissioned by Queensland Health to investigate the range of mental health services on the Gold Coast concluded that affordable housing was in crisis (Bruhn 1995). The report also drew attention to the difficulty in maintaining the rights and dignity of people with psychiatric disabilities in the absence of adequate housing. In a further report, Bruhn (1996) drew attention to the importance of accessibility of housing, as lack of accessibility can be a problem for people who are sometimes homeless and whose illness may make it difficult to deal with others.

Research and anecdotal evidence suggest there is a lack of quality affordable housing on the Gold Coast. This lack of housing has lead to increased hospitalisation for some people with mental health problems (Baker 1998). The housing situation of persons on the Gold Coast living on a pension means they suffer increased levels of stress. This stress is a result of living in expensive rented accommodation, which results in not having enough money to live on, or alternatively living in sub-standard accommodation so there is enough money for other needs. Neither of these positions helps in the maintenance of mental health (Baker 1998).

While there is limited research in Australia that examines the impact of housing on consumers in general (Warren & Bell 2001), there is even less that addresses the special needs of people with schizophrenia.

Patients of the psychiatric units from the Gold Coast Hospital (and other Australian mental health services) are discharged to their own homes as well as to boarding houses. This study explores the relationship between these two types of housing and re-admission rates to psychiatric in-patient units, for people with schizophrenia.

Aims of the Study

The aim of the study was to investigate the relationship between the type of housing people with schizophrenia are discharged to, their re-admission rates and length of stay in hospital, using archival data. It was expected that people with schizophrenia discharged to boarding houses would be significantly more likely to be admitted to hospital than people discharged to their own home and that length of stay would be about the same for both groups.

The hypotheses tested were:

1. Admission rates will not be significantly different for people with schizophrenia who are discharged to their own home when compared to people discharged to a boarding house.
2. Length of stay in hospital will not be significantly different for people with schizophrenia discharged to their own home when compared to people discharged to a boarding house.

Research Design

For the purpose of this study the types of housing compared were private accommodation (such as the consumers' own home) and public accommodation (hostels and boarding houses). These two were chosen because the literature suggests they are respectively the most desirable and least desirable community-based housing options of consumers of mental health services.

Archival data, drawn from the Hospital Based Corporate Information Systems (HBCIS), were used to investigate the relationship between types of accommodation, admission rates and length of stay of the people with schizophrenia living on the Gold Coast. HBCIS (a large Queensland Health database) was chosen because it collects a wide range of data on in-patients of public hospitals in Queensland, including episode number, patients' length of stay in hospital and type of accommodation patients were discharged to. The HBCIS data used in this study include data from in-patient psychiatric units P1 and P2 at the Gold Coast Hospital.

Patients who met the following selection criteria were identified in the HBCIS data set and included in the study:

- aged between 18 and 65 years
- with an ICD-9 diagnosis of schizophrenia
- and with a previous admission to an in-patient psychiatric unit of the Gold Coast Integrated Mental Health Service between May 1995 and November 1998.

As the data set contained multiple admissions for some individuals, the last admission was used as the index admission. The HBCIS data set for the period May 1995 to November 1998 contained data for 391 people who met the criteria. Of these, 317 were discharged to live with the person's family or in their own homes and 45 were discharged to live in boarding houses. The remainder were discharged to other types of accommodation.

Results

Following data screening the HBCIS data were analysed using a t-test in order to test for differences in number of admissions and length of stay between people with schizophrenia discharged to boarding houses and people discharged to their own home. The analysis used "type of housing" as the independent variable and "length of stay" and "number of admissions" as the dependent variables.

Hypothesis 1: Admission Rates

Analysis of the HBCIS data revealed that people with schizophrenia discharged to a boarding house (n=45) had significantly more admissions than people discharged to their own home (n=317) (see Table 1). Therefore hypothesis one is rejected.

Table 1: Number of admissions for individuals by type of accommodation

Own home M(SD)	Boarding house M(SD)	t-value	P-value
3.17(3.12)	5.13(7.06)	-3.22	.0014

Note: Degrees of Freedom = 360

Hypothesis 2: Length of Stay

Analysis of the length of stay data from the last admission indicated that people with schizophrenia discharged to a boarding house (n=45) had a similar length of stay to people discharged to their own home (n=317) (see Table 2). This result supports the second hypothesis that there will not be a significant difference in the length of stay between the two groups.

Table 2: Length of stay at last admission by type of accommodation.

Own home M(SD)	Boarding House M(SD)	t-value	P-value
22.04(20.24)	22.17(26.07)	-0.04	.9675

Note: Degrees of Freedom = 360

Discussion

This study aimed to investigate the consequences of discharge to a boarding house or their own home for people with schizophrenia. In this study 45 patients (11.5% of the total) were discharged to boarding houses.

The findings from this study support previous studies that demonstrate housing does have a significant impact on outcomes for consumers (Anthony & Blanch 1989, Baker & Douglas 1990, Burdekin et al. 1993, Mental Health Strategy for Queensland 1996, The National Mental Health Strategy 1992, World Health Organization 1990, Posey 1990, Rosenfield 1990, Stroul 1989).

Although people with schizophrenia were found to be more likely to be readmitted if discharged to a boarding house than if discharged to their own home, their average length of stay during their admissions was not significantly different. There are several factors, including housing-related factors, that may impact on length of stay. Length of stay provides some indication of how long a consumer takes to recover from an acute episode of mental illness, with a more seriously ill or disabled person being more likely to stay longer in hospital (Hodgkins, Cyr & Gaston, 1990). Other factors including waiting for community placement, or relative lack of family/social supports, may make hospital stays longer; and medical officers could be influenced in their discharge decisions by concern about poor standard housing. Bed pressure and hospital policy could also impact on length of stay.

It is generally accepted by mental health services that, for some people, as their mental illness progresses their standard of living goes down. It could be argued that the consumers living in boarding houses were likely to be more disabled than those who can maintain a relationship with their family or a flat or house of their own. If this were true, it could be expected that the time spent in hospital would be longer for people living in boarding houses. The impact of these factors that may influence length of stay on the admissions in this study is unknown, and further studies would be required to shed light on the question of any relationship between severity of illness, length of stay and type of housing.

Conclusion

Hospital admission has a great financial cost to the community and personal cost to individuals and their families. This study supports the findings of earlier research that type of housing influences risk of readmission. The development of a theoretical understanding of the relationship between readmission and housing would make a significant contribution to the delivery of mental health services.

This study also raises the larger question of why so little attention is paid to consumer housing by mental health services and the Department of Housing. The National Mental Health Strategy, the World Health Organization and Burdekin et al. all seem to have considered housing critical to de-institutionalisation yet it remains a very low priority for mental health services.

Acknowledgements

The authors wish to thank the Gold Coast Integrated Mental Health Service for their invaluable support in this project.

References

Anthony, W. 1993, 'Recovery from mental illness: the guiding vision of the mental health service system in the 1990s', *Psychosocial Rehabilitation Journal*, vol. 16, no. 4, pp. 11-23.

Anthony, W. & Blanch, A. 1989, 'Research on community support services: what have we learned', *Psychosocial Rehabilitation Journal*, vol. 12, pp. 55-81.

Australian Health Ministers Advisory Council 1992, *National Mental Health Policy*. Canberra; Australian Government Publishing Service.

Baker, F. & Douglas, C. 1990, 'Housing environments and community adjustment of severely mentally ill persons'. *Community Mental Health Journal*, vol. 26, no. 6, pp 497 - 505.

Baker, J. 1998, *Gold Coast City Housing Needs Assessment*. Gold Coast Housing Network. Gold Coast.

Bergin, J., Bashir, M., Armitage, P., Hunt, G., Hornsey, J., Shea, M., Puru, D., Skelton, S., Meehan, T., Bach, d., Waghorn, T., Maybury, K., Cleary, M. & Lynch, W. 1997, *Acute Care for People with Schizophrenia Living in the Cental Sydney Area*. Sydney: NSW Department of Health.

Bruhn, R. 1995, *Community Development Project Mental*. Brisbane: Queensland Health, Mental Health Branch.

Bruhn, R. 1996, *Community Development Project Mental health*: Needs Assessment Report. Brisbane: Queensland Health, Mental Health Branch.

Burdekin, B., Guilfoyle, M., & Hall, D. 1993, *Human rights and mental illness; report of the national inquiry into the human rights of people with mental illness*. Canberra; Australian Government Publishing Service.

Carling, P.J. 1989, 'Access to housing: corner stone of the American dream', *Journal of Rehabilitation*, vol. 55, pp 6-8.

Carling, P.J. 1990a, 'Major mental Illness, housing and supports', *American Psychologist*, vol. 45, no. 8, pp 969 - 975.

Carling, P.J. 1990b 'Supported housing: an evaluation agenda', *Psychosocial Rehabilitation Journal*, vol. 13, no. 4, pp 95 - 104.

Carling, P.J. 1993, 'Housing and supports for persons with mental illness: emerging approaches to research and practice', *Hospital and Community Psychiatry*,. vol. 44, no. 5, pp 439-449.

Cleary, M., Woolford, P. & Meehan, T.1998, 'Boarding House Life for People With a Mental Illness: an Exploratory Study', *Australian and New Zealand Journal of Mental Health Nursing*. vol. 7. pp 163-167.

Health Care Complaints Commission 1996, *The care and Management of People With Mental Illness Residing in Boarding Houses*, Who Require Treatment with Psychotropic Medication. Sydney: Health Care Complaints Commission.

Heard, R. & Harris, L 1999, 'Experimental, quasi-experimental and correlational quantitative research designs', In V. Minichiello, G. Sullivan, K. greenwood and R Axford (eds.) *Handbook for Research Methods in Health Sciences*. Sydney: Addison Wesley.

Hodgins, S., Mireille, C., & Louise, G. 1990, 'Impact of supervised apartments on the functioning of mentally disrobed adults', *Community Mental Health Journal*. vol. 26, no. 6, pp 507- 516.

Howie The Harp 1990, 'Independent living with support services: the goal and future for mental health consumer', *Psychosocial Rehabilitation Journa*l, vol. 13, pp 85 - 89.

Howie The Harp 1993, 'Taking a new approach to independent living', *Hospital and Community Psychiatry*, vol. 44, no. 5, pp 413.

Jablensky, A., McGrath, J., Herrman, H., Castle, D., Gureje, O., Morgan, V. & Korten, A. 1999. People living with a mental illness: An Australian study 1997-98 an overview. *National Mental Health Strategy* (accessed 25th August 2003) www.health.gov.au/hsdd/mentalhe

Keck, J. 1990, 'Responding to consumer housing preferences: the Toledo experience', *Psychosocial Rehabilitation Journal*, vol. 13, no. 4, pp 51 - 58.

Morris, M. 1996, 'Patient's perceptions of psychiatric home care', *Archives of Psychiatric Nursing*, vol. 3. pp 167 - 183.

Morse, J.M. 1998 'Designing Funded Qualitative Research', In N.K. Denzin & Y.S. Lincoln (eds.), *The Landscape of Qualitative Research: Theories and Issues*. London: Sage.

National Health and Medical Research Council 1995, *Ethical Aspects of Qualitative Methods in Health Research: An Information Paper for Institutional Ethics Committees*. Canberra: Australian Government Publishing Service.

National Health and Medical Research Council 1999, Supplementary Note 2 - Research on children, the mentally ill, those in dependent relationships or comparable situations in NH&MRC, *Statement on Human Experimentation and Supplementary Notes 1992*. [On-line]. Avaliable: www.health.gov.au/hfs.nhmrc/ethics/humanexp/supp2.htm

National Mental Health Strategy 1992, *National Mental Health Strategy*. Canberra: Australian Government Publishing Service.

National Mental Health Strategy 1994a, *National Mental Health Report*. Canberra: Australian: Government Publishing Service.

National Mental Health Strategy 1994b, *National Mental Health Report Overview*. Canberra: Australian Government Publishing Service.

National Mental Health Strategy Evaluation Steering Committee 1997, *Survey of National Organisations*. National Mental Health Strategy.

O'Rear, G. 1990, 'Way Station: a comprehensive approach to residential services for and with people with a serious mental illness', *Psychosocial Rehabilitation Journal*, vol. 12, no. 3, pp 77 - 80.

Pace, S. & Turkel, W. 1990, 'Participants, community volunteers and staff a collaborative approach to housing and support', *Psychosocial Rehabilitation Journal*, vol. 13, no. 4, pp 81-83.

Polit, D. & Hungler, B. 1993, *Essentials of Nursing Research*. (3rd ed). Philadelphia: Lippincotte.

Posey, T. 1990, 'A home, not housing', P*sychosocial Rehabilitation Journal*, vol. 13, pp 3-4.

Rosenfield, S. 1990, 'Homelessness and rehospitalisation: the importance of housing for the chronically mentally ill', *Journal of Community Psychology*, vol. 19. 1. pp 60 - 69.

Seilheimer, T.A. & Doyal, G.T. 1996, 'Self-efficacy and consumer housing satisfaction', *Community Mental Health Journal,* vol. 32, pp 549 - 559.

Stroul, B. 1989, 'Community support systems for people with long term mental illness: a conceptual framework' *Psychosocial Rehabilitation*, vol. 12, pp 9-26.

Tazman, B. 1993, 'An overview of surveys of mental health consumers' preferences for housing and support services', *Hospital and Community Psychiatry*, vol. 44, no. 5, pp 450-455.

Tazman, B. & Yoe, J. 1989, *Vermont Consumer Housing and Support Preference Study*. Burlington VT: Centre for Community Challenge.

Warren, R. & Bell, P. 2000, 'An exploratory investigation into the housing preferences of consumers of mental health services', *Australian and New Zealand Journal of Mental Health Nursing*, vol. 9, pp 195-202.

World Health Organisation 1990 'Report of a World Health Organisation (WHO) meeting on consumer involvement in mental health services: Mannheim, Federal republic of Germany', *Psychosocial Rehabilitation Journal*, vol. 14(1), pp 13-20.

Yeich, S., Mowbray, C.T., Bybee, D., & Cohen, E. 1994, 'The case for a "supported housing" approach: a study of consumer housing and support preferences', *Psychosocial Rehabilitation Journal*, vol. 18, no. 2, pp 75 - 86.