

The tyranny and triumph of distance: Disaster response planning for decentralised mental health services

Factors such as distance, population distribution and cultural differences contribute to Queensland being considered Australia's most decentralised state. Queensland is Australia's second largest state, with an area of 1.7 million square kilometres, or approximately one quarter of the nation's total land area. Less than half of Queensland's 3.4 million people live in the capital city, Brisbane (Australian Bureau of Statistics (Queensland Office), 1998). As a result, many government and non-government services are increasingly decentralised, and agencies involved in responding to disasters are no exception.

Decentralisation and the resultant high degree of local control over services may be seen to have a number of advantages. These include improved effectiveness, sensitivity to local issues, faster response times, and greater commitment to service provision (Hodges, 1997). However, there are also disadvantages inherent in decentralisation, which present significant challenges to service planning. These include difficulty ensuring consistency between local areas, coordination of services between local areas, and difficulty providing the full range of services in areas where the local population is not sufficient to support these. Queensland Health has recently undertaken a project to implement effective disaster response planning by mental health services, which is both consistent and coordinated across the State. This experience has provided an excellent opportunity to examine the tensions between locally-based and centralised organisation, in addition to a review of effective strategies for meeting the community's specialist mental health needs in the circumstances of a disaster.

Disaster response arrangements and mental health services in Queensland

The provision of health services in Queensland is the responsibility of 39 district health services. The Mental Health Sub-Plan forms part of the Queensland Health Disaster Plan, which in turn is a functional plan of the State Disaster Plan (Figure 1).

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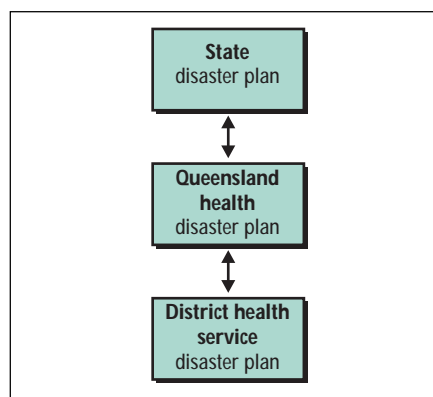


Figure 1: Queensland Health Disaster Planning

The Queensland Health Disaster Plan broadly outlines a strategy for activating a mental health service response. District health services are expected to have developed local procedures which correspond with the objectives set out in the Queensland Health Disaster Plan. Additionally, involvement of mental health services in the recovery phase of a disaster are activated and coordinated by the Department of Families, Youth and Community Care according to the Community Recovery Functional Plan.

Development of mental health disaster planning in Queensland has followed an interrupted course and the emphasis on particular roles to be adopted by mental health services in the disaster circumstances has shifted over time. This course reflects development and debate in the research literature, and variable commitment by stakeholders. In the early 1990's efforts to ensure implementation of appropriate disaster response planning included the distribution of a resource manual to mental health services, who were then responsible for preparing their own plans (Queensland Health, 1990). Subsequently, a review of mental health disaster response

plans was conducted in 1995. The review found that mental health services' participation in disaster planning, their ability to respond effectively, and the currency of plans was found to be widely variable across the State. Moreover, there was little coordination between district health services.

The full range of mental health services, with both community-based and inpatient services (Figure 2), is not available in all Queensland Health districts. This applies to most remote or predominantly rural districts with small populations. However, satellite mental health services have been developed in a number of key rural centres, which employ at least one mental health professional. These satellite services are

Key components of Queensland Mental Health Services:

- 1 Referral, intake and assessment, including extended hours capacity.
- 2 Continuing treatment, using a case management approach, including:
 - community treatment services
 - outreach services
 - acute inpatient treatment
 - mobile intensive treatment for identified 'at risk' individuals
 - extended inpatient treatment and rehabilitation services for special needs groups.
- 3 Mainstreamed, integrated services to promote continuity of care across service components.
- 4 Prioritised services to those most in need.

Targeted to people with mental disorders and serious mental health problems, including people suffering from acute and persistent psychoses, mood, anxiety, or eating disorders, and those with situational crises that may lead to self-harm or inappropriate behaviour directed towards others.

Figure 2: Ten-year Mental Health Strategy for Queensland 1996

each linked to, and supported by a principal mental health service centre, located in a major district health service (Queensland Health, 1996). There are currently 15 principal mental health service centres, with two more planned within the next two years. Eight of these are linked to a network of satellite services, based in the remaining 22 Queensland Health districts.

Models for service delivery in disaster planning literature

Since World War II, and in particular, since the 1970s, the involvement of mental health professionals in responding to disasters has been argued strongly (Pawsey, 1983, Raphael 1986, National Health and Medical Research Council, 1992). Contrary arguments are much less compelling, and have been based largely on the manner in which mental health services are provided; for example, stigmatisation of service recipients, over-diagnosis of pathology, etc (Pawsey, 1983). While most individuals affected by a disaster will experience a psychological response which may be seen as being part of a spectrum of 'normal' responses, a significant proportion may experience more clearly pathological responses (National Health and Medical Research Council, 1992, Bromet & Dew, 1995, Krug et al., 1998). The number of people affected psychologically is generally greater than the numbers physically affected, the effects may be less obvious, and they may easily become chronic conditions (New South Wales Health Department, 1996). A number of adverse psychological sequelae of disasters have been identified. In the immediate aftermath, acute stress reactions, organic disorders, acute anxiety and panic disorders, precipitation of psychotic states, fugue and other dissociative states, acute decompensation, sleep disturbance and inappropriate or suicidal behaviour have all been described. The longer term sequelae can include post traumatic stress disorder, depression, anxiety disorders, drug and alcohol abuse, psychological problems in those physically injured, complicated bereavement, and more generalised problems such as relationship and work difficulties, anger towards those perceived as responsible and survivor guilt (National Health and Medical Research Council, 1992, Bromet & Dew, 1995, Erikson & Lundin, 1996, Krug *et al*, 1998).

The literature provides less consistent guidance about what particular approaches mental health services should adopt in responding to disasters. The efficacy of some high profile mental health approaches, such as Critical Incident Stress

Debriefing, has recently been questioned (Deahl & Bisson, 1995, Raphael, Meldrum & McFarlane, 1995, Carr et al., 1997, Gist & Woodall, 1998), which has led to increasing awareness of the importance of well designed research. It has also resulted in much more cautious planning in the deployment of resources. Having said this, there is general support in the literature for the following elements (Raphael, 1986, McFarlane, 1989, Aptekar & Boore, 1990, National Health and Medical Research Council, 1992, McDonnell *et al*, 1995).

- The focus of the mental health service response should be ensuring continued access to mental health services for new and existing service recipients
- Involvement of mental health services at the earliest phase to assist in informing and coordinating the response
- Emphasis on healthy responses to disaster
- Utilising pre-existing relationships and roles as much as possible, to maximise continuity and community trust
- The site at which a mental health response is required is not necessarily the actual major incident or disaster site
- Education and information are provided to disaster workers and the general community prior to, and following a disaster
- Those in need of more specialist mental health assistance are identified
- Specialist mental health intervention is provided to the small proportion who are severely affected, or are at high risk of developing a disorder
- The presentation and needs of children and young people are different to adults (in location, timing and character), and specific child and youth mental health services need to be provided in addition to adult services
- Collaboration should occur with other services involved in a disaster response and the community recovery process.

Planning process

A 12-month project has been undertaken by the Mental Health Unit, Queensland Health in order to address these issues in a coordinated fashion across the State. The project is supervised by the Chief Psychiatrist, and employs a senior project officer. Importantly, the project has utilised a consultative framework in order to maintain an emphasis on localised arrangements, and to ensure ownership by key stakeholders. Membership of the steering committee has comprised officers with State-wide responsibilities and representatives of district health services. The committee determined that an effective strategy for ensuring consistency in disas-

ter response planning was to develop detailed guidelines which district health services were to adopt. However, the guidelines needed to reflect the wide variability in mental health service arrangements, interagency agreements, culture, and population distribution and size between districts. Therefore, a process of drafting and wide consultation was conducted, which utilised the experience of the district health services, in addition to other key agencies; some of whom had recent experience of a disaster.

Disaster planning guidelines for mental health services

The finalised disaster planning guidelines were endorsed at the Departmental level on 5 August 1998, as a benchmark for disaster planning for mental health services. The guidelines reflect the basic requirements deemed essential for an efficient and effective disaster response by mental health services, and were designed to be used in one of two ways:

- where mental health services already had sophisticated plans, the guidelines were intended to assist in reviewing the suitability of the existing disaster plans.
- Alternatively, the guidelines were structured in such a way as to allow for use as a template, onto which locally relevant information could be added.

Provision was made for the document's inclusion as a sub-plan of each district health service's disaster plan. In addition to the district health services, copies of the disaster planning guidelines were distributed to other key disaster response agencies at a State level, and to Emergency Management Australia.

The disaster planning guidelines for mental health services describe the activation, philosophy, provision, and review of mental health services in the circumstances of a disaster. The document was prepared in accordance with Section F (Mental Health Plan) of the Queensland Health Disaster Plan and the Queensland Disaster Management Principles. At the district level, the guidelines additionally form a supporting plan of the District Community Recovery Plan. Appointment, activities and responsibilities are outlined for the State Director of Mental Health, Mental Health Controller (who has responsibility for activation and oversight of the disaster response locally), Mental Health Response Coordinator, and Mental Health Response Team members. The guidelines additionally describe training and support requirements for staff.

The focus of the mental health service planning and response to a disaster will be

ensuring continued access to mental health services for new and existing service recipients. This may include:

- providing home-based services or transport to mental health services where appropriate
- ensuring necessary treatment is continued, including medications
- providing information to other emergency or recovery services and the general community about healthy responses to disasters, and coping strategies
- providing information to other emergency or recovery services and the general community about signs of mental illness, and referral and assessment resources and processes.

The mental health service will be represented at the local Community Recovery Committee and is responsible for negotiating and coordinating the provision of mental health services in conjunction with the other recovery agencies. Generally, the role of the mental health service in the community recovery process includes:

- education of recovery workers and the general community in the mental health aspects of disasters
- consultation and assistance to primary health care providers and crisis counselling services, and support for disaster affected persons
- consultation and assistance to existing organizational structures in psychological support of recovery workers.

Inter-district arrangements

Clearly, in those districts with small, low density populations, and those without the full range of mental health services, all of the roles outlined by the disaster planning guidelines could not be provided by that district's services alone. In order to solve this problem, the guidelines were designed such that the response could be coordinated between district health services, in a manner corresponding with mental health service network arrangements. That is, disaster response planning is designed to occur, not only in conjunction with other local agencies, but also with neighbouring district health services. Collaboration in staff support and training, and hand-over of coordinating roles are outlined.

An additional factor identified as a significant challenge to providing consistent disaster response planning is the very definition of disaster. What might be considered a distressing incident in a large community, might be seen as a disaster in a small community. For example, the traumatic death of a number of people in a small community might represent a significant proportion of the population. As

a result, the definition provided by the Queensland Health Disaster Plan, as any event of such magnitude that it overwhelms the resources available to combat it, was adopted. In addition, disasters are understood to affect the whole community, in addition to individuals alone; to require a total community response; and to produce chronic difficulties, rather than acute difficulties alone.

Implementation

The implementation of disaster response planning by the district health services has been lent a great deal of assistance by the involvement of key stakeholders throughout the development of the disaster planning guidelines. A sense of ownership has been fostered, which in turn has set a high priority on disaster response planning, and facilitated the process of adoption of the guidelines at the district level. From an early stage of this process, staff were identified in each district to coordinate activities and distribute information locally. A three-month deadline for implementation was set, during which time the project officer worked closely with these identified staff members, as well as other key district staff. The task was to ensure that essential activities were undertaken, and that local disaster response planning met the benchmarks set by the disaster planning guidelines. Staff awareness of the document was enhanced through a series of workshops and inservices, which provided an opportunity to discuss and problem-solve local challenges to effective implementation. The document is also accessible to Queensland Health staff via the State-wide electronic network, known as *QHIN*.

Review and continuous improvement of the implementation of appropriate disaster response planning by mental health services has been designed to occur at district, State and service network levels. A State-wide review was conducted following the initial implementation phase. Subsequent reviews are planned on a yearly basis, and following activation of the disaster plan.

Conclusion

Whilst the State Disaster Planning documents in Queensland contain broad guidelines for the provision of a disaster response by mental health services, the corresponding plans at the local level have historically lacked consistency, and in some cases were inappropriate, or inadequate. Factors which have presented a significant challenge to the implementation of consistent, and comprehensive plans included the distribution and coverage of mental health services across the State, the debate in the literature about effective approaches, local

expectations of mental health services, resource implications and the required continuation of services to priority groups. The strategy adopted by Queensland Health to overcome these challenges has sought to capitalise on the benefits of decentralised service structures. These include efficient mobilisation of resources, significant local expertise, and strong pre-existing local networks. The strategy was then incorporated into existing inter-district support arrangements to maximise understanding of roles and responsibilities.

Consistent with the approach outlined above, a further task to be undertaken by this project will be to develop standardised printed material that might be provided by mental health services to other disaster response agencies and the general community in the circumstances of a disaster. Once again, such a resource must contain locally relevant information, such as advice about available services. Additionally, a training package for mental health workers will be developed to augment local expertise in disaster response planning.

References

- Aptekar L. and Boore J.A. 1990, 'The emotional effects of disaster on children: A review of the literature', *International Journal of Mental Health*, 19 (2), pp. 77–90.
- Australian Bureau of Statistics (Queensland Office) 1998, *Queensland Yearbook*, ABS, Brisbane.
- Bromet E. and Dew M.A. 1995, 'Review of psychiatric epidemiologic research on disasters', *Epidemiologic Reviews*, 17, pp. 113–119.
- Carr V.J., Lewin T.J., Webster R.A. and Kenardy J.A. 1997, 'A synthesis of the findings from the Quake Impact Study: A two-year investigation of the psychological sequelae of the 1989 Newcastle Earthquake', *Social Psychiatry and Psychiatric Epidemiology*, 32, pp. 123–136.
- Deahl M.P. and Bisson J.I. 1995, 'Dealing with disasters: Does psychological debriefing work?', *Journal of Accident and Emergency Medicine*, 12, pp. 255–258.
- Erikson N.G. and Lundin T. 1996, 'Early traumatic stress reactions among Swedish survivors of the m/s Estonia disaster', *British Journal of Medical Psychology*, 169, pp. 713–716.
- Hodges A. 1997, *Disasters and disaster issues—the Australian experience*, Australian Insurance Law Association National Conference, 14 August, Adelaide.
- Gist R. and Woodall S.J. 1998, 'Social science versus social movements: The origins and natural history of debriefing', *Australasian Journal of Disaster and Trauma Studies* [Internet], 6, available from

http://massey.ac.nz/~trauma/issues/1998-1/gist1.htm

Krug E.G., Kresnow M., Peddicord J.P., Dahlberg L.L., Powell K.E., Crosby, A.E. and Annett J.L. 'Suicide after natural disasters', *New England Journal of Medicine*, 338, pp. 373-378.

McDonnell S., Troiano R.P., Barker N., Noji E., Hlady W.G. and Hopkins R. 1995, 'Long-term effects of Hurricane Andrew: Revisiting mental health indicators', *Disasters*, 19 (3), pp. 235-246.

McFarlane A.C. 1989, 'The prevention and management of the psychiatric morbidity of natural disasters: An Australian experience', *Stress Medicine*, 5, pp. 29-36.

National Health and Medical Research Council 1992, *Disaster management*, Australian Government Publishing Service, Canberra.

New South Wales Health Department. 1996, *NSW Healthplan*, State Health Publication Number (PH) 960098.

Pawsey R. 1983, *Organising a mental health response to a disaster*, unpublished report, Mental Health Division, Department of Health, Victoria.

Queensland Department of Emergency Services 1996, *Queensland State Disaster Plan*, GOPRINT, Brisbane.

Queensland Department of Families, Youth and Community Care 1994, *Community Recovery Functional Plan*, Brisbane, Queensland Department of Families, Youth and Community Care.

Queensland Health 1990, *Disaster mental health response and recovery plan: A resource manual*, Queensland Health, Brisbane.

Queensland Health 1995, *Queensland*

Health Disaster Plan, Queensland Health, Brisbane.

Queensland Health 1996, *Ten year mental health strategy for Queensland*, GOPRINT, Brisbane.

Raphael B. 1986, *When disaster strikes: How individuals and communities cope with catastrophe*, Basic Books, New York.

Raphael B., Meldrum L. and McFarlane, A.C. 1995, 'Does debriefing after psychological trauma work? Time for randomised controlled trials', *British Journal of Psychiatry*, 310, pp. 1479-1480.

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A new CRES publication

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D. I. Smith, S. Yu Schrelder, A.J. Jakeman, A. Zerger, B.C. Bates and S.P. Charles
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The literature on greenhouse climate change makes frequent reference to the possibility of marked changes to the magnitude and frequency of those natural hazards related to meteorological causes. The adverse impacts of these changes upon urban communities at risk from riverine flooding are often cited as examples. However, detailed studies that consider the effects of climate change scenarios on flood regimes are few and those that convert these changes in hydrology to estimates of urban flood damage are even more sparse. The review by the Intergovernmental Panel on Climate Change (IPCC) of the economic and social dimensions of climate change comments that little information is currently available regarding the socioeconomic impact of changes in frequency and intensity of river flood' (p.202, Bruce *et al.*, 1996). The study reported here attempts to redress this deficiency by considering the effects of climate change on flood losses for Australian case studies.

The report is presented in three parts, corresponding to the three aims of the project:

- to model flood frequency and magnitude under enhanced greenhouse rainfall intensifies.
- to use the greenhouse flood date to assess changes to vulnerability of flood prone urban areas and to express these in terms of tangible and intangible losses.
- to consider policy response to meet the changes to vulnerability and damage.

Four case studies were selected—the Hawkesbury-Nepean corridor, Queanbeyan, Canberra and the Upper Parramatta River. These were chosen because each had detailed building databases available and the localities are situated on rivers that vary in catchment size and characteristics. All fall within a region that will experience similar climate change with the available greenhouse scenarios. This is important because variations in catchment response to flood under similar conditions can be investigated.

The study was funded by a grant from the Atmospheric Protection Branch under the Climate Change Impacts and Adaptation Program administered by the Commonwealth Department of Environment, Sport and Territories.

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