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Community recovery: six ideas to close ‘intent-to-capability’ gaps

Major General Chris Field AM, CSC, Australian Army

This paper is based on two interrelated issues common to community recovery. First, community recovery is optimised when communities lead and take credit for community achievements (Jans, p. 9). Second, community-based recovery may include a mismatch between a community’s recovery *intent* and a community’s recovery *capabilities*. This mismatching creates an ‘intent-to-capability gap’.

The following six ideas can help close community recovery intent-to-capability gaps. These ideas can:

1. sustain vulnerable communities
2. enable leadership seeking collective impact
3. align boundaries
4. develop relationships in *Phase Zero* (the time encompassing all community activities prior to the beginning of a disaster event)
5. enable charities and volunteers in response and recovery
6. sustain compatible communications networks.

Community intent-to-capability gaps led recovery operation decisions for both *Operation Queenslander, 2011-2013* and *Operation Queensland Recovery, 2017-2019*. What was identified was that recovery is best when ‘state-enabled’ and ‘community-led’ (Queensland Reconstruction Authority, 2017, p. 12). In other words, leaders at all levels of government and non-government organisations should employ resources and work collaboratively with other stakeholders to support and enable community recovery, thereby closing community intent-to-capability gaps.

Community recovery defined

Smith and Wenger (2006, pp. 234–57) suggest applicable conditions when designing, implementing and reflecting on community recovery. In 2011, the Australian Government Attorney General’s Department adapted the ideas of Smith and Wenger, concluding that the design and success of community recovery programs depend upon (Commonwealth Attorney-General’s Department, 2011, p. 18):

- pre-disaster community-level variables, such as local capacity and previous disaster experience
- characteristics of the disaster, such as intensity, scope, speed of onset and duration of impact

- facilitators of disaster recovery, such as ability to leverage resources, self-reliance and self-determination
- impediments to disaster recovery, such as viewing disaster recovery programs as an entitlement and over-reliance on recovery programs.

Six ideas on closing the community recovery intent-to-capability gap

Idea 1: sustain support to vulnerable communities with a focus on elderly, disadvantaged, renters, at-risk homeowners, not-for-profit organisations, primary producers and small business owners. To close the community recovery intent-to-capability gap, this idea requires:

1. problem framing
2. a focus on people’s resilience.

Problem framing

This idea commences with framing, defining and understanding the community recovery problems that need solving. Following a natural disaster, first responders such as fire and rescue, state emergency, police services and local authorities, compile rapid damage assessments which quickly map vulnerable communities to assist in framing the problem at hand. Simultaneously, multiple agencies provide their own comprehensive data sets to define the problems requiring solutions. Precision in this data is important. Examples of metrics and critical information requirements that enable the framing, understanding and solving of community recovery problems, include:

- number of people affected
- geographic areas impacted
- Local Government Areas (LGAs) activated under Natural Disaster Relief and Recovery Arrangements
- kilometres of roads and rail repaired
- sea and airports reopened
- number and value of grants paid to affected people

- value of community recovery exceptional circumstances grants paid to primary producers, not for profit organisations and small business
- number of volunteer organisations active in affected areas and amount of volunteer work performed
- number of homes and businesses with power and water restored
- number of schools and early childhood centres reopened
- number of inspections of government assets and quantity government assets assessed as damaged
- hectares and number of parks and forests reopened
- number and value of insurance claims.

Once damage from a disaster event is framed, defined, assessed and understood, the recovery, reconnection and rebuilding of communities is now a problem that is known and can be solved. In an engineering and project management sense, post-disaster problems are scoped, resources are applied and recovery commences.

A focus on people’s resilience

However, not all disaster recovery, reconnection and rebuilding problems can be defined as an engineering project. People matter. Emphasising this point, Winston Churchill’s physician, Lord Moran, described courage (or resilience) as analogous to ‘small change’ – every individual carries a different amount... but ‘no [person] has an unlimited stock of courage [or resilience]’ (Moran, 1987, pp. 22-23).

A focus on people’s resilience is an idea, a state of mindfulness and a feeling that, in the case of communities, is best achieve by locals for and with locals. A bias for resilience recognises, as noted by Lord Moran, that resilience is finite. We each have our own reservoirs of resilience. These reservoirs are our responsibility to refresh for others and ourselves.

Caring for vulnerable communities and closing the community recovery intent-to-capability gap requires locally designed, led and coordinated recovery planning and plans. Demonstrating this requirement, *Operation Queensland Recovery, 2017-2019*, includes eight Local Recovery Plans,¹ enabling accelerated local planning written as plans-on-a-page articulating:

- recognition of local leaders as drivers of recovery such as the Mayor, Council Chief Executive Officer and Disaster Recovery Officer
- local authority values. Ethically informed, values based local leadership inspires, resources and enables people and communities to identify and reach their own potential (Campbell, 2016)
- recovery narrative describing what is the local concept of operations to achieve recovery? What is the purpose of local recovery efforts? Through which methods is recovery achieved? What does successful recovery look like?

- local recovery group functions, membership and tasks.
- what projects are required? Why are projects needed? Who will lead required projects? When are projects complete? Where are projects located? How are resources identified and gathered for the project?

Idea 2: enable leadership that produces collective impact at local individual, community, mayoral and council levels. Collective impacts are structured and disciplined approaches to bringing cross-sector organisations together to focus on a common agenda resulting in long-lasting change. To close the community recovery intent-to-capability gap, this idea requires:

1. collective impact
2. preliminary planning guidance

Collective impact

Kania & Kramer, 2011 and O’Neil & Graham, 2012 note collective impact, enabled through combined and collaborative leadership, are critical in achieving community-led recovery and enabling community-based resilience. Their five requirements for collective impacts are:

1. common agenda
2. shared measurement systems
3. mutually reinforcing activities
4. continuous communication
5. backbone support organisations

Preliminary planning guidance

Enabling collective impact to close community recovery intent-to-capability gaps during post-disaster recovery, includes the articulation of early or preliminary guidance provided by leaders to their planners. Preliminary guidance is the leader’s opportunity to articulate their intent and vision to their planners. In recovery operations, a leader writes and provides preliminary guidance to planners for the execution of operations based on:

- the environment
- known problems to be solved
- direction from higher authorities, including government
- the leader’s personal understanding of the mission combined with their professional knowledge and experience

¹ The eight Local Recovery plans were developed by Mayors, Chief Executive Officers and leaders of: Gold Coast City Council; Isaac Regional Council; Livingstone Regional Council; Logan City Council; Mackay Regional Council; Rockhampton Regional Council; Scenic Rim Regional Council; and, Whitsunday Regional Council.

- the leader’s personal understanding of the mission combined with their professional knowledge and experience

Idea 3: align boundaries where opportunities to review, clarify and align geographic and organisational boundaries are opportunities to bolster cohesive communities. To close the community recovery intent-to-capability gap, this idea requires:

- review, clarify and align boundaries
- plan-to-plan

Review, clarify and align boundaries

Boundaries potentially available for review, clarification and alignment include:

- federal and state departments, services and disaster management boundaries
- local government areas
- areas of disaster alert coverage
- rulings on Natural Disaster Relief and Recovery Arrangements (NDRRA)
- areas of media and internet coverage
- areas enabled by service providers such as water and electricity networks
- probabilistic storm tide modelling and water catchments areas
- roads, bridges and rivers employed as boundaries

Plan-to-Plan

In closing community recovery intent-to-capability gaps during post disaster recovery it is important to note that time is not a free good. As the military scholar, Clausewitz noted in war-planning, everything is (Clausewitz, 1989, p. 50):

... very simple, but the simplest thing is difficult. The difficulties accumulate and produce a friction ... [and] through the influence of an infinity of petty circumstances, which cannot be properly described on paper, things disappoint us, and we shall fall short of the mark.

In attempting to ameliorate ‘an infinity of petty circumstances’ a Plan-to-Plan helps guide planners through their planning processes. The Plan-to-Plan keeps planners on track through, for example, the ADF’s six-stage military planning process (Australian Defence Force, 2015, p. 1-1):

- scoping and framing
- mission analysis
- course of action development
- course of action analysis, wargames and comparisons
- course of action decision
- orders preparation, execution and rehearsals.

Idea 4: sustain developing relationships in *Phase Zero* which is the time encompassing all community activities prior to the beginning of a disaster i.e. everything that can be done prior to communities preventing, preparing, responding, recovering, reconnecting and rebuilding from disaster events. To close the community recovery intent-to-capability gap, this idea requires:

- building relationships
- rehearsing relationships

Building relationships

In October 2006, General Charles Wald, Deputy Commander United States (US) European Command, brought ‘Phase Zero’ into the military joint lexicon (McDonald, Jones & Frazee, Summer 2012, pp. 123-135). General Wald emphasised that Phase Zero encompasses all activities prior to the beginning of Phase 1—that is, everything that can be done to prevent conflicts from developing in the first place.

Extrapolating General Wald’s *Phase Zero* idea, is the idea that community recovery is enhanced through *Phase Zero Relationships*. These relationships encompass all community activities prior to the beginning of a disaster—that is, everything that can be done prior to a community preventing, preparing, responding, recovering, reconnecting and rebuilding from a disaster event.

The first example of a Phase Zero Relationship is the work of the Local Government Association of Queensland (LGAQ). In its 121st year as a peak body, the LGAQ enables Phase Zero Relationships through its mission to connect, innovate and achieve for all 77-member councils in Queensland.

LGAQ pre- and post-disaster learning events, such as the May 2017 LGAQ Disaster Management Conference in Mackay, planned and conceived before Tropical Cyclone Debbie, are critical in building local community recovery and resilience. Ultimately, LGAQ’s work enables a feeling of collegiality and support to Queensland’s local governments before, during and after challenging disaster events.

The second example of a Phase Zero Relationship was the Premier of Queensland’s March 2017 visit to India, to meet with the energy company Adani to discuss the Carmichael Coal project, with eight regional Queensland mayors, from Townsville, Rockhampton, Mackay, Gladstone, Whitsunday, Charters Towers, Isaac and Central Highlands.

A number of these Mayors commented to the author that the relationships they formed with their Mayoral colleagues during the Indian visit, established mutual trust and shared understanding between Councillors. These Phase Zero Relationships amongst Mayors enhanced inter-council communications, saved time and accelerated efforts to recover, reconnect and rebuild Queensland before, during and following Tropical Cyclone Debbie’s impact on Queensland.

Rehearsing relationships

Finally, Phase Zero, is the ideal time to rehearse relationships, interactions and decision making closing the community recovery intent-to-capability gap between:

- state, district and local disaster management organisations, centres, groups and first responders
- leaders responsible for the management of roads, sea ports, airports, railways and essential public infrastructure.

Idea 5: enable charities and volunteers in response and recovery as complementary community-based capabilities to government and business services. To close the community recovery intent-to-capability gap, this idea requires:

- complementing first responder capabilities
- charities and volunteers in response and recovery

Complementing first responder capabilities

Complementing first responder capabilities are community-based capabilities, including: charities, volunteers, not-for-profit organisations and caring citizens. This combination of traditional first responders with community-based capabilities in response and recovery created powerful synergies. In 2017, these synergies meant that, despite one-third of Queensland impacted by Tropical Cyclone Debbie, Queensland’s communities continued to place the needs of others ahead of themselves.

The selflessness and momentum of Queensladers in response ensured that, enabled by first responders, charities and volunteers people were supported, homes rebuilt, schools reopened, public areas and parks cleared, businesses and tourism re-energised, agriculture revitalised, roads, rail, air and sea ports reconnected, so that communities could resume their preferred patterns of life.

Charities and volunteers in response and recovery

Some demonstrated charity and volunteer capability ideas closing the community response and recovery intent-to-capability gap include:

- government-led and enabled community recovery hubs, community recovery referral & information centres and outreach teams to focus and unite communities as key sources of information, including information on charities and volunteers.
- websites on the quantum and variety of available charity, volunteer, not-for-profit organisations and caring citizens support for individuals and communities.

- providing easily accessible spontaneous volunteers’ nomination, acceptance and accountability systems (Australian Red Cross, 2008).
- harnessing volunteer-based water, food, shelter, transportation, early warning and communications enablers including: water-purification and distribution systems; kitchens and barbecues; accommodation; couriers and drivers; amateur radio clubs; emergency liaison officers; and, flood wardens

Idea 6: sustain compatible communications networks where opportunities to create mobile, integrated and diversified communications networks are opportunities to build resilience in communities, while maintaining a shared understanding and mutual trust in peoples’ time of need. Some ideas on compatible communications networks to close the community recovery intent-to-capability gap, are:

- Plan and ensure the maintenance of integrated, mobile, durable communication system redundancy along with complementary networks such as: social media; messaging; email; mobile phone; satellite; digital radio networks; voice over internet protocols; very high frequency, ultra-high frequency, and high-frequency radios.
- Task a single entity, government, peak body or non-government organisation, to contact affected people following a disaster event.
- Provide a single point of information for critical information including weather warnings, road closures, river levels and coastal conditions.
- For citizens in need, government employees are government. Therefore, ensure all government employees supporting recovery efforts and interacting with the community, can speak lucidly on all aspects of available non-government and government recovery support, including NDRRA arrangements. This small action, taking responsibility to assist people in their time of need, provides confidence to citizens.
- Maintain open communications with peak bodies, including local government associations, river trusts, statutory and non-statutory authorities and insurance councils. This ensures rapid assistance to people who feel overwhelmed by a natural disaster event. Peak bodies, by definition, hold a pervasive view that can quickly simplify issues for people in need.

Conclusion

This paper aims to assist future leaders and planners to understand of post-natural disaster response and recovery environments. The paper is premised on two interrelated issues common to community recovery. First, community recovery is optimised when communities lead and take credit for community achievements. Second, community-based recovery may include mismatching between a community’s recovery

intent and a community’s recovery capabilities. This mismatching creates an intent-to-capability gap.

Community *intent-to-capability* gaps led conclusions for both *Operation Queensland, 2011-2013* and *Operation Queensland Recovery, 2017-2019* that recovery efforts are best ‘state-enabled and community led’. In other words, state and Commonwealth leaders employ resources and work collaboratively with key stakeholders to support and enable community recovery, thereby closing community *intent-to-capability* gaps.

In closing community *intent-to-capability* gaps, this paper articulates six ideas on community recovery from natural disasters. Together, these six ideas can close community recovery *intent-to-capability* gaps. These ideas are designed to sustain: support to vulnerable communities; enabling leadership seeking collective impacts; aligning boundaries; developing relationships in *Phase Zero*; charities and volunteers in response and recovery; and, compatible communications networks.

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Social recovery for the elderly: learnings from south-west Queensland

Annabelle VH Johnstone and Brooke R Winters, Department of Communities, Child Safety and Disability Services, Queensland

Introduction

Over past decades in Australia the occurrence of natural disasters has seen the development of sophisticated disaster management responses. We have seen the development of systems for immediate disaster response, the restoration of public assets, and for longer-term human and social recovery.

Within disaster-affected areas, the elderly are identified as one of the more vulnerable groups, needing a targeted response before, during and after a natural disaster. South-west Queensland has, in recent years, experienced a number of disaster events related to extreme flooding. The physical, psychological and economic impact on some communities has been significant.

This paper looks at learnings from these experiences related to better supporting ageing populations in times of natural disasters. These learnings come from feedback from government and non-government agencies involved in managing the recovery from recent disasters in south-west Queensland, as well as from community members who lived through the disasters. The two most significant learnings are that the elderly should be involved in disaster planning in their own local areas and that disaster management planning and response communication with the elderly needs to be adapted to their needs. Ultimately, a best-practice system lies in true integrated service delivery; one that is elderly-centred, easy to access, protected by quality safeguards, accountable and, most of all, outcomes focused.

So what makes populations, particularly ageing populations ‘vulnerable’? The International Federation of the Red Cross and Red Crescent Societies (2016) defines ‘vulnerability’ as the ‘diminished capacity of an individual or group to anticipate, cope with, resist and recover from the impact of a natural or man-made hazard’. While the concept of vulnerability is both relative and dynamic in nature, it is most often associated with poverty, social isolation, insecurity and defencelessness. Isolation from family, friends, and community, through



Flash flooding in Toowoomba January 2011.
Image: Annabelle Johnstone

physical immobility, financial restraints, mental incapacity and limited communication can lead to insecurity and defencelessness, and potentially form a lethal cocktail when a natural disaster hits. The World Health Organization (WHO 2002) defines vulnerability as ‘the degree to which a population, individual or organization is unable to anticipate, cope with, resist and recover from the impacts of disasters’.

Human and social recovery focuses on the provision of immediate shelter, life support and human needs to persons affected by or responding to a disaster (State Disaster Management Plan 2014-15). Disaster recovery is the coordinated process of supporting affected communities in the reconstruction of the physical infrastructure, restoration of the economy and environment, and support for the emotional, social, and physical wellbeing of those affected. During the recovery phase, the Australian Government provides funding to state and local governments who work with communities to distribute funding and assist recovery.

Some elderly people need extra support during disasters. This paper explores the learnings gathered from agencies and personnel who lived and worked during the 2010/2011 extreme flooding events in south-west Queensland. These people had first-hand experience of how elderly residents coped and the models of service delivery that were used to support recovery.

Method

This study adopted qualitative and quantitative methodologies in gathering information. Methods of data gathering included a formalised survey, discussions with recovery workers and the authors’ first-hand knowledge and experiences of recent disasters. For the purpose of this study, the ‘elderly’ were defined as people over 65 years of age.

The survey was conducted in 2016, and participants included emergency services personnel, the non-government human services sector and members of the public living in areas affected by the disasters. Over 700 people were invited to complete the survey, with a 24.2 per cent return rate. The purpose of the survey was to explore the views of those involved in the response to identify best practice in human and social recovery.

The survey consisted of 18 questions and sought information on perceptions of vulnerability of the elderly, recommend strategies to help reduce the vulnerability of, and to enhance service delivery to the elderly following a disaster.

Results and discussion

Older people and vulnerability to disasters

Fourteen per cent of respondents believed that all people over the age of 65 are vulnerable to natural disasters. 76 per cent on the other hand, believed that some people over 65 are vulnerable to natural disasters, while 10 per cent believed that no elderly people were vulnerable.

Geographical location was considered to be the biggest contributing factor to older people’s vulnerability and included distance from towns, friends, family or neighbours, or living in an area prone to flood, cyclone or bushfire. Other significant factors included social isolation, medical issues, and disability.

The majority of respondents felt that lack of personal resilience, economic issues and institutional living were relatively insignificant factors.

The elderly and effective communication

The results highlighted the need for local, state and federal disaster management plans to include information specifically for older people and be tailored more towards their needs. Almost 97 per cent of respondents identified the importance of using easy-to-read formats and a variety of delivery modes when distributing disaster-related information. Ninety-six per cent of respondents agreed that disaster plans should identify local community networks that can assist with developing disaster preparedness and resilience.

Over 72 per cent of respondents identified existing networks as being important in information delivery and reducing vulnerability. The mode of delivery of information (warnings and messages) before, during and

after the event was also seen as significant. Ninety-six per cent of respondents considered door-knocking would be most effective and that older people were likely to utilise home visits during or after a disaster. Seventy per cent of respondents felt older people would access services by phone, whereas devices such as smartphone apps, Facebook, Twitter were unlikely to be utilised.

Involvement of the elderly in disaster management planning

Fifty-five per cent of respondents felt that older people never participate in planning and preparedness and 43 per cent felt that older people participated occasionally mainly due to older people not being aware of disaster planning processes. Others suggested that disaster plans are often written without consultation because of time limitations, financial constraints, lack of access to older people, or a mindset that ‘we know what’s best for our community’. Some felt that older people are represented indirectly in the planning process, but most agreed there is limited direct consultation with older people.

Recommendations

Older people are more likely to have experienced disasters. They have important local knowledge about the behaviour of floodwaters; how fast floodwaters have risen in the past and when to evacuate. It is essential that older people be included in the design of policies, plans and mechanisms including early warning signs (Sendai 2015-2030, p. 23). The HelpAge (2016) website states:

Older people have valuable historical knowledge on local climate-related shocks and stresses, either because they have lived through them or from stories handed down over generations. They may also have traditional coping strategies that have been forgotten over time but may be worth re-introducing to strengthen the community’s resilience.

There is perhaps no area where relationships are more critical than in disaster planning and response, and that these relationships must be built before disasters strike (Rother 2006, p. 13). Disaster risk reduction requires an all-of-society engagement and partnership. It also requires empowerment and inclusiveness, and paying special attention to people disproportionately affected by disasters, especially those who are the most economically challenged. Gender, age, disability and cultural perspective should be integrated in all policies and practices and women and youth leadership should be promoted. Older people are important resources for their families and communities particularly during times of crisis. Their years of experience can make them models of personal resilience and sources of inspiration and practical knowledge. They give voluntary aid, care for grandchildren or neighbours and participate in support or recovery initiatives. Including older persons in planning for and responding to emergencies benefits the whole community (Cornell *et al.* 2012, p. 8).

Preparing for disasters - reducing the impacts of disasters on older people

Approximately 80 per cent of respondents believed that to reduce the impacts of disasters, public information including weather warnings, preparedness measures, advice on evacuation, support services, and clean up are vitally important. For elderly people, the information must be targeted and promoted in multiple mediums and formats.

Sevety per cent of respondents identified coordination between agencies as vital in reducing the impact of disasters. Over 50 per cent of respondents felt that disaster education programs specifically for older people and specialist training for emergency services personnel would help reduce disaster impacts on older people.

Recommendations



Community Recovery Centre, Goodna January 2011.

Image: Annabelle Johnstone

Reduced mobility and muscle strength, increasing health issues, impaired vision and hearing, greater susceptibility to heat and cold and changes to nutritional requirements increases vulnerability. Many frail or housebound older people are less able to evacuate quickly or protect themselves from harm (Styron 2006, p. 19). Emergency managers and recovery agencies need to ensure these are taken into consideration in planning and supports and services are available immediately following a disaster to limit the impacts on older people.

Connecting older people to human and social recovery services is a challenge. Elaine Wethington (2013) from the Cornell Ageing and the Environment Initiative, noted that older people are particularly vulnerable, because many no longer drive and have difficulty using public transportation. She recommended working through

churches and community organisations as the best way of understanding the local elderly population.

Human and social recovery following a disaster

Human and social recovery is both immediate in terms of evacuation and response, and mid- to long-term when trying to achieve reorientation and normalisation. Evacuations are difficult for elderly people. During the 2011 floods, many elderly people would not evacuate if they could not take their pet. This issue had not been considered by disaster management planners. For example, post-Hurricane Katrina research (SNAKE Project 2006), identified that approximately 44 per cent of potential evacuees did not evacuate because they didn’t want to leave their pets. Anderson, Lord, Hill and McCune (2015, p. 32) argue that older adults are at high risk of physical illness and emotional disorders, particularly those of lower socio-economic status. Pet ownership has the potential to reduce impacts by providing companionship, reducing social isolation and enhancing physical activity and wellbeing. The vital roles that pets play in supporting post-emergency functioning and resilience building has also been noted by Taylor, Lynch, Burns, and Eustace (2015, p. 18)

A longer-term challenge is the post event clean-up and rebuilding. The impact of water, mud, or fire, has economic, social and emotional consequences. Sevety per cent of survey respondents saw practical assistance like clean-up and rebuilding as the most significant service with accommodation assistance the next priority. Factors such as long-term case management, health and medical assistance, personal support and counselling rated as less significant.

Financial assistance and material aid was not a high a priority for older people with only 1.8 per cent of respondents rating this element. This could be due to older people generally being more financially secure, owning their own home and having home and/or contents insurance to cover loss and damages.

Social networks are critical to ensuring older people access the information and services they need following a disaster. Studies show that established networks are the most effective way of disseminating information. (SNAKE Project 2006, p. 7). Styron (2006 p. 19) noted that by using existing networks such as meals on wheels, medical services, seniors groups or social activities, services can be more effectively delivered. This was supported by over 72 per cent of survey respondents.

Following on from this, 96 per cent of respondents identified the coordination of disaster response and recovery efforts between and across community based services providing assistance to the elderly as ‘very important’.

The SNAKE Project, in researching social and human responses to Hurricane Katrina, deployed teams to capture snapshots of service delivery to those with disabilities, seniors and medically managed persons. They found that a total of 85.7 per cent of the community-

based groups did not know how to link clients with their emergency management system.

In our research, respondents identified the challenge of keeping services and networks outside of the usual response and recovery networks, informed. They suggested this could be done through regular bulletins, interagency/network meetings and briefings, webpages and other social media to ensure up-to-date information is available.

Highly rated service delivery options utilised after the 2010/11 floods, included: home visits by agencies, community recovery centres and one-stop-shops where a range of services were available in one place. Some respondents identified that these centres can become overwhelming and noisy, so the use of appointments or allocation of a dedicated space specifically for older people would help to eliminate confusion and long waits.

Services accessible by phone such as information, referrals to specialist services and counselling, were highly rated and approximately 70 per cent of respondents stated the elderly were likely to access phone services. This could be due to a number of factors including: not wanting to or unable to leave home; fear of being away from home; lack of ability to drive or access transport; not wanting to get caught in a busy recovery centre; or not wanting to leave home whilst cleaning up.

Services and information available for older people need to be tailored to meet their needs. Agencies cannot afford to be siloed in their service delivery or specialist to the exclusion of all others. They need to be supportive, compassionate, patient and willing to spend enough time with the older person to ensure their needs are being met. Case management is an appropriate service model, with one agency taking on the brokerage role in assisting the elderly to navigate the service system and to help coordinate clean up, rebuilding and repair services.

Towards best practice for the elderly: a case for an integrated human and social recovery framework

Queensland is impacted almost yearly by floods and cyclones. Its population lives largely on the coastline and many townships are built on flood plains and rivers. Queensland has had to develop flexible and effective forms of service delivery to support a diverse population over a large and sparse land mass. While financial support to disaster affected individuals and communities is largely provided by the Federal Government, physical, emotional and material support is the responsibility of the state and local authorities. A number of government departments have specialist responsibilities, all overseen by a state disaster coordination centre whose final governance rests with the cabinet-led Queensland Disaster Management Committee.

Operations during the 2010/11 floods saw a tiered approach to service delivery, including telephone assessment and triage, outreach by multidisciplinary teams, operation of multi-tenant (comprising of government, non-government and private sector) multi-

service recovery centres, long term case management and rebuild programs. Services provided included everything from financial assistance, information, referral, counselling, insurance, legal advocacy, rebuilding advice, housing, material aid and reconnection to essential services. These services through outreach and recovery centres, supported the most vulnerable Queenslanders—those socially and economically vulnerable, those with disabilities and the elderly.

In our quest for ‘best practice’, it is also essential to identify the processes that did not go well. During the flood response and recovery efforts challenges were identified, some of these affecting all persons, some specific to the elderly:

- agencies unaware of location of elderly people
- increased choices creating a demand on resources meaning that elderly people don’t get prioritised
- duplication and redundancy of services
- overlapping eligibility for different programs
- variation of rules, standards and reimbursement from program-to-program
- multiple and duplicated assessment processes
- variation in quality between case managers

‘Best practice’ is a method or technique that has been generally accepted as superior because it produces results that are better than average and it then becomes a standard way of doing things to achieve the best results.

Our research and knowledge of the practices adopted in the 2011 floods identified that any best practice framework for dealing with a cohort of elderly people, needs to focus on a number of critical design principles.

Mitigation and prevention planning

- early identification of vulnerable elderly;
- early engagement of elderly in disaster planning in their local areas;
- adaptation of disaster management planning and response communication to specific needs of elderly;
- planning of services for the elderly, assessment and preparation for evacuation and recovery; and
- planning of elderly-centered community recovery processes so that assessments are individually orientated, implemented and monitored.

Activation and response

- easy to access community supports, information and referral, timely intake and eligibility determination;
- appropriate quality governance including incident reporting and response, risk assessment/ balance with choice, monitoring of behavioral and pharmacological interventions; and
- ensuring elderly are protected and well looked after, treated with dignity and respect, and that they understand due process and grievance procedures.

Recovery

- provision of sufficient providers (agencies/staff), adequate staff training, and provider monitoring to ensure appropriate safeguards for the elderly;
- monitoring and measurement of outcomes to ensure effective and appropriate client participation; and
- responsiveness to changing needs/choices and participant direction.



Information is distributed at a Community Recovery Centre, Bundamba January 2011.
Image: Annabelle Johnstone

Evaluation

- assessment of satisfaction levels of the elderly so that learnings can be incorporated ; and
- disaster management system performance, as it applies to elderly people - this needs to include the systematic gathering and analysis of performance data, community participation in designing and appraising that performance and improvement activities, financial accountability, a system that strives to improve quality.

Conclusion

Some believe that all older people are vulnerable to the impact of disasters simply because of their age. With age comes illness, mobility issues, hearing and vision impairment and a range of other factors that might contribute towards vulnerability. However, many older people are highly resilient and have much to offer the community when it comes to planning for disasters.

This study looked at how services were delivered to older people during the 2011 flooding event in south-west Queensland. Improved communication methods

and more face-to-face service delivery were effective strategies used. Some older people are socially isolated and do not have a network of people with whom they engage regularly. Any effective human and social recovery system must ensure these vulnerable elderly are connected early to the essential networks and services.

Ultimately, best practice lies in truly integrated service delivery, one that is elderly-centred, easy to access, protected by quality safeguards, accountable and most of all outcomes focussed.

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Post disaster temporary memorialising: psychosocial considerations for disaster managers

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Temporary memorialising after community crises is “the rule, rather than the exception” (Eyre, 2007). Participation in collective memorialising provides people affected by crisis with a safe space to express their grief, shock, sadness and can be an important first step in the grieving process (Rosenblatt, 1997).

In recent years in Australia, and around the world, we have seen many examples of temporary memorialising after a range of sudden, unexpected critical incidents. Examples include the flower tributes, in Melbourne following the Bourke St incident in January 2017, the Dreamworld accident in October 2016, the truck attacks in Nice in July 2016 and Berlin in December 2016, the Grenfell Tower fire in London and the Manchester Arena bombing in 2017 among others.

Despite the predictability of temporary memorials, their occurrence and evolution is rarely considered in emergency management. In many cases they are considered a problem that needs to be managed rather than a tool for supporting the recovery of the affected community. In addition to the rushed logistical and planning implications for emergency managers, there are implications for community healing as well as the psychosocial wellbeing of those working to manage temporary memorials.

In 2016, I completed a Churchill Fellowship to explore the implications of temporary and permanent memorials on psychosocial recovery. Key findings from my Fellowship relate to the increasing public desire to preserve temporary memorials, the role of archivists, the financial, psychosocial and management implications of preserving memorial items and the psychosocial impacts of supporting people at memorial sites as well as collecting and collating memorial materials (Whitton 2016).

This paper will build on the findings in that report and look at practical considerations for disaster managers, government workers and others who may find themselves managing temporary memorials after a critical incident.

Temporary memorials will occur

Temporary memorialising is predictable post disaster behaviour, and can be expected after certain kinds of crisis events (Eyre 1999). Temporary memorial behaviour is most common after human caused crisis events (Whitton, 2016). These include, but are not limited to, terrorist acts, mass casualty criminal incidents, transport accidents and industrial incidents. Temporary memorialising also often occurs following the deaths of celebrities and other high-profile people, particularly if the death is premature or sudden (Whitton 2016). Events that trigger temporary memorial behaviour are usually high-profile and widely reported in the media.

The high-profile nature of these events, coupled with a communal experience of fear, terror, loss and grief contributes to these emotions being expressed publically rather than privately (Gortner & Pennebaker 2003). These rituals, such as participation in temporary memorialising, provide people with a safe space to express their grief and can be important in individual healing (Rosenblatt 1997). While temporary memorialising as a post-death ritual is not new behaviour, there are some theories that suggest it is becoming a more widespread phenomenon (Doss 2010). Doss (2010) suggests that the rising occurrence of temporary memorials may be due to more traditional forms of mourning, such as participation in religious rites, no longer meeting the needs of communities (Doss 2010, Richardson 2010).

Temporary memorials occur at, or near, the site of the disaster

Following crises, people tend to converge at places of impact to express their shock and grief (Eyre 2007, Richardson 2010). Temporary memorials will occur at, or

near, the site of death or a related place where people come together. Often sites are cordoned off or off-limits to the general public. When this occurs, temporary memorial items will be placed on and along cordons or fencing, or other barriers that mark the site of the incident.

If people are not able to access the site, memorialising may occur at other locations, or landmarks, associated with the crisis or the people who have died. This has occurred on multiple occasions. For instance, following the downing of Malaysian Airlines Flight MH17 in 2014, a temporary memorial was established in Kiev at the Dutch embassy, as the majority of passengers on the flight were Dutch. Similarly, after the loss of the *Columbia* space shuttle in 2003 small memorials appeared across Texas at sites where debris had landed (Doss 2010).

In some cases, temporary memorials at the key landmarks occur in addition to memorials at the site of death. For example, following the Paris attacks in November 2015, a temporary memorial was created at the Place de la Republique. While not a site of one of the attacks, nor of the January 2015 attacks, the square and the monument were significant places of public gathering following both the January 2015 and November terror attacks in Paris.

Items are emotionally laden

Temporary memorials are a ‘public archive of feeling’; meaning that the feelings and emotions of the public are embedded into memorial items (Doss 2008). This includes the practices that surround the memorial itself such as moving, removal or public gatherings (Doss 2008). Doss explains that a ‘transmission of affect’ occurs at temporary memorials (Doss 2010), whereby the feelings and emotions expressed by people are transferred onto the physical environment they participate with (Doss 2010). Essentially temporary memorials and memorial items carry the feeling and emotion of those who have participated in the memorial. Following the Boston Marathon bombing in 2013 a curator for the New England Museum Association involved in removing the temporary memorial explained:

That sneaker was a sneaker a minute ago, but when a person places that sneaker on that pole, it's infused with meaning and emotion.
(Graham 2013)

In practice, this has implications for how the memorial is moved or interacted with by both the public and agencies tasked with removing the memorial. Each item represents an individual, or group of individuals, who felt compelled enough by their strong experience of emotion to participate in the memorial (Whitton 2015). As such, inappropriate handling of memorial items can cause further distress to people who have been, or feel, affected by the crisis (Whitton 2015).

Messaging is influenced by social media

The internet and social media allow for people who don’t, or can’t, visit temporary memorials to participate in memorial rituals virtually. This behaviour influences temporary memorials through the commentary and messaging that permeates the online world. Messaging and imagery also influence other, offline memorial behaviour. For example, following both the Pulse nightclub shooting and Manchester Arena bombing people had popular associated imagery tattooed on their bodies. Some notable examples of online and social media imagery and commentary that have influenced offline memorial behaviour are outlined in Table 1.

Table 1: Memorial behaviour influenced by online messaging and imagery.

| Event | Online message/ image | What/where |
|-------------------------------------|--|---|
| Manchester Arena bombing, May 2017 | Worker bee image | Tattoos |
| Pulse nightclub shooting, June 2016 | Rainbow pulse image | Tattoos |
| Death of UK MP Jo Cox, June 2016 | #lovelikejo | Messaging at temporary memorial and memorial events |
| Paris attacks, November 2015 | Jean Jullien's image of the peace sign adapted to include the Eiffel Tower at its centre | Imagery at temporary memorial |
| Sydney siege, December 2014 | #illridewithyou | Messaging at temporary memorial |
| Boston Marathon bombing, April 2013 | #bostonstrong | Messaging at temporary memorial |

Moving and removing temporary memorials

There is no standard length of time that memorial items remain in place, it varies. Table 2 outlines eight significant temporary memorial events between 2012-2017 and the length of the time the memorial was in place for. The time varies between 10 days and four months.

Temporary memorials by nature are not lasting. The weather and the location of temporary memorials tend

to dictate when the memorial will need to be removed. Items such as paper, cardboard and flowers do not last long when exposed to the weather are damaged easily. High temperatures, rain and wind will accelerate this. People may find it upsetting or disrespectful if memorials are badly damaged or look uncared for.

Table 2: Length of time in-situ for select temporary memorials between 2012-2017.

| Event | Date | Length of time in-situ |
|--|-------------------|-------------------------------------|
| Manchester Arena bombing, UK | May 22, 2017 | 3 weeks (Bardsley, 2017) |
| Bourke St incident, Australia | January 20, 2017 | 11 days (Australian Red Cross 2017) |
| Dreamworld accident, Australia | October 25, 2017 | 3 weeks (Australian Red Cross 2017) |
| Pulse nightclub shooting, USA | June 12, 2016 | 3 months |
| Paris attacks, France | November, 2015 | 4 months* (Whitton 2016) |
| Sydney siege, Australia | December 15, 2014 | 8 days (Whitton et al 2015) |
| Boston Marathon bombing, USA | April 15, 2013 | 2 months (Whitton 2016) |
| Sandy Hook massacre, USA | December 14, 2012 | 7 weeks (Hicks, 2012) |
| *This includes memorials removed by the Paris City Archives only. The memorial at the Place de la Republique was in place until September 2016, over 10 months (Whitton 2016). | | |

Most temporary memorials occur in public spaces or other spaces open to the public that are relatively easy to access. The memorial and high foot traffic impacts the usual use of the area. People are likely to spend some time near the memorial, which can be problematic, and in some cases dangerous if the memorial is near busy roads or areas with high pedestrian numbers. There are also psychosocial implications for the people who live or work in the area. It can be highly distressing for people to be confronted with communal grief and distress of others for extended periods of time.

People understand that temporary memorials are not permanent and need to be removed. The removal process should be considered as a form of service or communication by responsible agencies—it should be thoughtful, considered and appropriate. The psychosocial implications of removing these cared for and emotive items are significant. Poor or disrespectful handling of

memorial items can be distressing for people impacted by the events and those who have participated in the memorial (Whitton 2015). Where behaviour and/or the removal or handling of items at the memorial is perceived to be inappropriate or disrespectful it can inflame negative feelings towards individuals and authorities.

Preservation of temporary memorials

Temporary memorials are emotionally significant places to individuals and communities that participate and nurture them. This connection to the memorial and memorial items can leave communities unable to dispose of the memorial (Whitton 2016). There is an increasing expectation that items will be preserved after the dismantling of temporary memorials. This expectation is sometimes promoted or reported on by the media, increasing the pressure on the community to preserve memorial items.

It is often unclear whose responsibility it is for the preservation of memorial items. In most cities and towns there is no dedicated organisation responsible for the management of temporary memorials (Whitton 2016). In some cases the affected community may choose to take ownership of the preservation process. This occurred following the 2012 Sandy Hook massacre in Newtown, Connecticut. Many people from the community volunteered to be involved in digitising and storing memorial items (Whitton 2016). Despite an offer from a corporate storage company to do the digitisation quickly, the community chose to continue their own process.

We have infrastructure where we can scan, whatever they're going to do as a community we could probably scan in hours. They wanted to continue to do the scanning themselves because it was really part of the community healing process, the way that they sort of brought volunteers together as part of this project... Samantha Joseph, Iron Mountain.

In many cases, local or city archives or libraries take, or are given, responsibility for preserving and archiving temporary memorial items. In order to store memorial items with their existing collections and protect these collections from contamination, archivists must ensure items are cleaned and sanitised before storage. This can take a long time and be quite expensive. Following the Boston Marathon bombing, it took the Boston City Archives with one dedicated archivist a year to clean, sort and catalogue memorial items in their collection. In Paris, after the November 2015 terror attacks it took a team of archivists from the Paris City Archivists four months.

Role of preservers

Being involved with temporary memorials can be emotionally challenging work, whether it be preserving items or providing psychosocial support at temporary

memorials. It is likely people who do the work of preserving memorial items are neither experienced emergency managers nor have experience working in disasters (Whitton 2016). It is more likely that people will be professional archivists, librarians, museum professionals or people who specialise in document and object storage. Usually these people are also from the community where the crisis event occurred. They may have been personally affected by the event or have friends or family members that were affected. While it can be healing to be involved in removal and preservation work, the cumulative effects of long-term exposure to disaster can lead to negative mental health implications. Reading or hearing distressing stories of loss over a long period can contribute to vicarious trauma (Headington Institute 2008). It can take a long time to complete preservation work, so support for people doing the work needs to be long-term.

Guiding principles

Be inclusive

Participation with temporary memorials can be helpful for individual and community healing after crisis events. At temporary memorials people will find others who are experiencing similar feelings and emotions. This shared experience normalises their feelings of sadness, loss and grief and can assist in re-establishing feelings of social solidarity and belonging (Eyre 1999). It is important that all those who feel affected can access and participate with the memorial. Barriers to collective expression of shock, anger, disbelief, grief and other emotions can hinder recovery and successful grieving following death (Eyre 1999).

Be supportive

Temporary memorials bring together a range of people, having a range of emotional experiences. Some people do not have their own informal support networks, and draw upon the collective nature of temporary memorials to seek support. Skilled psychosocial support personnel should be in place to help them make sense of the experience.

Be respectful

The practice of temporary memorials does not suit everyone, however for those it does; it is a powerful and potentially healing experience. People working at, or involved in removal or preservation of, the memorial must be respectful of those who choose to participate and the role that this experience may have in the management of their grief.

Be consultative

Collective trauma events have wide reaching impacts. More people than those directly impacted will feel

affected and wish to contribute to the process. Failure to engage with a broad array of stakeholders could lead to negative outcomes in permanent memorial processes and hinder community healing.

Plan removal

The psychosocial implications of handling memorial items poorly or inappropriately can be significant and have potentially negative outcomes. The removal process needs to be thoughtful, considered and appropriate. Pre-planning, while a memorial is still in place, is recommended to allow appropriate removal arrangements to be determined.

Practical considerations

While the temporary memorial is in place:

- Pre-plan for how to manage the removal of temporary memorial/s.
- Allow the memorial to ‘grow’, do not try to encourage or interfere with development of temporary memorials.
- Consider locating psychosocial support personnel/ volunteers at the site to provide support and assistance.
- Consider whether survivors, families of the deceased or people injured may want to visit the memorial.
- Consider the upcoming weather forecast when determining how long the memorial should remain in place.
- Consult with affected community before moving/ removing memorial.
- Start thinking about potential preservation of the memorial and who or what organisation will be responsible for this.

Removal of the memorial:

- Communicate broadly prior to removing the memorial and be clear with what will be happening with memorial items.
- Memorials and memorial items carry much emotion and should be treated respectfully.
- Consult with the affected community about archiving/preserving the memorial items. There may be particular items, e.g. photographs or personal belongings that they may wish to retrieve from the memorial site.
- Being involved with temporary memorials can be emotionally challenging work. People who provide support at, or are involved in preserving temporary memorials will need to be supported.

Conclusion

Post disaster memorialising is an integral part of community recovery. Temporary memorials become important sites of hope, social connection and recovery for people directly affected and the broader community.

Planning for collective memorialising needs to be integrated into post disaster recovery planning. It also demands taking a psychosocial approach to the planning, management and preservation of both temporary and permanent memorials alike, to ensure the positive, long term recovery of individuals and community.

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Health and disaster risk reduction regarding the Sendai Framework

Lennart Reifels, Paul Arbon, Anthony Capon, John Handmer, Alistair Humphrey, Virginia Murray, Caroline Spencer and Diana F Wong

An expert workshop was held at the University of Melbourne in July 2017 to consider disaster risk reduction for the health sector under the Sendai Framework. Outcomes were recommendations for alliances and partnerships to link researchers and government across disaster risk reduction and health to inform policy and practice.

Introduction

Health is a pivotal dimension to be addressed within an all-hazards approach to disaster risk reduction. It is also a key point of convergence across global and national policy frameworks.

The recent synchronous adoption of the landmark UN agreements: the Sendai Framework for Disaster Risk Reduction, Sustainable Development Goals (SDGs), COP21's Paris Climate Conference, World Humanitarian Summit and Habitat III has created a rare but significant opportunity to build coherence across different but overlapping policy areas. Extreme weather and climate events are projected to increase in frequency, intensity, and duration over the coming decades with climate change. It is apparent that the events themselves could potentially increase the vulnerability of individuals, communities, and regions and lead to longer recovery times (Ebi & Bowen 2016). Taken together these UN agreements make a more complete resilience agenda as building resilience requires action spanning development, humanitarian, climate and disaster risk reduction areas and for multi hazard assessments. These develop a dynamic, local, preventive, and adaptive urban governance system at the global, national, and local levels (Murray et al. 2017).

The Sendai Framework for Disaster Risk Reduction 2015-2030 is the principal global treaty to guide disaster risk reduction efforts (UNISDR 2015). The Sendai Framework reflects an important shift away from managing disaster impacts and towards reducing disaster risk. Health resilience is strongly promoted throughout.

The Sendai Framework calls for broad disaster risk reduction (DRR) activities that reduce the effects of disasters with respect to loss of life, injury and health impacts as well as on the wider socioeconomic determinants that affect population health. These include property damage, loss of livelihoods and services, social

and economic disruption, and environmental damage. The use of scientific evidence to inform policy and formulate effective initiatives and interventions is crucial to DRR within health (Murray et al. 2015). The importance of health as a core dimension in DRR was emphasised within the Bangkok Principles following the UNISDR International Conference on the Implementation of the Health Aspects of the Sendai Framework for Disaster Risk Reduction 2015 – 2030 (UNISDR 2016). These principles are further developed in the UNISDR Fact sheet: Health in the Context of the Sendai Framework for Disaster Risk Reduction (UNISDR 2017) and in the WHO Technical Guideline Series on Health Emergency and Disaster Risk Management (WHO, PHE, UNISDR 2017).

Effective DRR hinges upon concerted national implementation and it is critical to examine the implications of the DRR paradigm across societal sectors and health domains. The 2030 targets of the Sendai Framework call for substantial global reductions in disaster-related mortality, number of affected people, direct economic loss and damage to critical infrastructure. The UN General Assembly agreed to 38 indicators to measure progress against the Sendai Framework's seven global targets (UNGA 2017). Using these indicators, Australia has already prepared an initial report on its Sendai Framework data readiness (Australian Government 2017). The benefits of this approach to the Australian emergency management sector are clear: improved preparedness, more effective response, rehabilitation and reconstruction and more effective post-disaster recovery and reconstruction to 'build back better' (Raine 2017). However, it is considered a significant challenge for Australia to fully engage with this international monitoring and reporting process. Nonetheless, at the recent UNISDR Global Platform for Disaster Risk Reduction in Cancun, Mexico from 22-26 May 2017, Senator Concetta Fierravanti-Wells, Minister for International Development and the Pacific, in delivering Australia's official statement, reaffirmed that the Australian Government is firmly

committed to implementing the Sendai Framework (Fierravanti-Wells 2017).

Following the Global Platform meeting, an expert workshop ‘Health and Disaster Risk Reduction: State of the Art and Implications for Australia’ was held at the University of Melbourne in Victoria on 10 July 2017. The workshop was jointly hosted by the Centre for Mental Health, Melbourne School of Population and Global Health and the European Union Centre on Shared Complex Challenges. The workshop was conducted in collaboration with partners at Flinders University, RMIT, University of Sydney and Public Health England. The expertise of national and international experts and practitioners was sought from the health and emergency management sectors. The intent was to explore the critical intersections of the fields of health and DRR and implications of the Sendai Framework for Australia. The programme is available in Annex 1 and the list of participants in Annex 2. A number of participants who attended the Global Platform meeting and two research papers led by the WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Group (Chan & Murray 2017; Lo *et al.* 2017) informed the structure and process of this inaugural Expert Workshop.

What was discussed?

A review of the Sendai Framework pointed towards health, science and technology to engage with transdisciplinary and interdisciplinary partners to provide evidence to inform policy and practice. The implementation of the Sendai Framework requires national reporting on indicators every two years. A summary of Australian-based resources and disaster databases was included. The need for partnerships within localities and across decision making areas within government at all levels and with all healthcare, academic and private organisations was key within Australia. Mental health effects arising from all hazards have been identified as a major area of concern (Tsutsumi *et al.* 2015), as all disasters impact on the health of the population; bringing about substantial losses and disruptions to health systems. The example of the impact of a recent incident, [‘thunderstorm asthma’ in November 2016 in Victoria] on the population was used to demonstrate the complex nature of such events. The preparedness for healthcare response in the US was shared and the role of primary care in disasters was discussed. The Australian Red Cross reported on its work to encourage people-centred action in their RediPlan (Australian Red Cross 2017).

Workshop discussions focused on identifying principal risks or hazards across health domains and fields of practice and key strategies to mitigate these risks. Following lively discussions between the four working groups, outputs recommended that it was important to know the hazards and risks that exist but plan and train for an all-hazard approach (Coburn *et al.* 2013) recognising that interagency communication for preparing, warning and informing Australian communities and the wider public requires trust. It was essential to listen and understand local community issues and to have a dialogue with mutual trust and respect. A call for the recognition of the

central place of health across all national and global policy frameworks was made.

In the closing panel the following recommendations were made

- Consider producing an interpretive statement of the Sendai Framework to assist all levels of government to understand its implications for Australia and its relevance to global, national and local initiatives.
- Consider developing local hazards risk assessments to develop an Australian National Risk Register, possibly using the UK National Risk Register as a model.
- Consider creating an Australian DRR Research network/alliance that maintains a research registry that could reflect the UK Alliance for Disaster Risk Reduction model (UK Alliance 2016). Suggestions for how such an alliance could be facilitated include linking to support decision-makers at all levels of government and building partnerships between academics, their discipline and their universities or other relevant organisations and to celebrate the rich and diverse Australian disaster research community.
- Consider creating a partnership to enhance foresight and early warning, possibly using as a model the UK Natural Hazards Partnership, which was established in 2011 (Natural Hazards Partnership 2011). This provides a network of government and academic partners to support early warning and other activities called for by the UK Cabinet Office for communications and services for civil contingencies, governments and the responder community. This is important because no such partnership exists in Australia and it would appear from the UK experience that such a collaboration between similar organisations strengthens consistent DRR standards and guidelines and improves outcomes.

Fulfilling the Sendai Framework objectives requires concerted action from key stakeholders across government, academic, sectoral and community levels to address existing research gaps to reflect the all-hazards approach. The WHO Official Statement at the Global Platform Cancun May 2017 (WHO 2017) states it values collaboration and partnerships and that the ‘recent development of WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Group (Chan & Murray 2017; Lo *et al.* 2017) brings together representatives of Member States and academia who are committed to strengthening the evidence base for health policy and practice’ is important. It would be beneficial if Australian academic health professionals were encouraged to engage in this activity.

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Appendix 1: Health disaster risk reduction regarding the Sendai Framework

Expert workshop

Following on from the recent UNISDR Global Platform for Disaster Risk Reduction, this one-day conference-workshop is designed to draw upon the expertise of national and international experts and practitioners from across the health and emergency management sectors, to explore the health implications of the Sendai Framework and DRR paradigm for Australia.

Monday 10th July 2017

10:00am-4.30pm

Upper East Room, University House, 112 Professors Walk The University of Melbourne

With Guest Speakers and Panellists:

Prof Virginia Murray, FRCP, FRCPATH, FFPH, FFOM

Prof Virginia Murray is the Public Health Consultant in Global Disaster Risk Reduction for Public Health England, supporting her role as vice-chair of the United Nations International Strategy for Disaster Reduction (UNISDR) Scientific and Technical Advisory Group, a member of the Integrated Research on Disaster Risk (IRDR) scientific committee, and Co-Chair of IRDR's Disaster Loss Data (DATA).

Prof John Handmer, BA (Hons), MA, PhD

Prof John Handmer leads RMIT's Risk and Community Safety research group, is an Honorary Professor at the University of Melbourne, and holds visiting positions at IIASA and the University of Stuttgart. He works on the human dimensions of disasters and climate change adaptation and is a member of the International Council of Science's research committee on disaster risk.

Prof Paul Arbon, RN, BSc, DipEd, Grad Dip Health Ed, PhD, AM

Prof Paul Arbon is a Matthew Flinders Distinguished Professor, Director of the Torrens Resilience Institute and the Flinders University WHO Collaborating Centre for Mass Gatherings and Global Health Security. The Torrens Resilience Institute was established in 2009 to improve the capacity of organisations and societies to respond to disruptive challenges that have the potential to overwhelm local disaster management capabilities and plans.

Prof Anthony Capon, BMedSci, MBBS, PhD, FAFPHM

Prof Tony Capon is the Interim Director of the University of Sydney Planetary Health Initiative. Tony is a public health physician and authority on environmental health and health promotion. His research focuses on urbanisation, sustainable development and human health. A former director of the global health institute at United Nations University, he has held professorial appointments at ANU and University of Canberra.

A/Prof Tener Goodwin Veenema, PhD, MPH, RN, FAAN

A/Prof Tener Goodwin Veneema is an internationally recognised expert in disaster nursing and public health emergency preparedness. As president and CEO of the Tener Consulting Group, Dr Veenema served as senior consultant to the US Government, including the departments of Health and Human Services, Homeland Security and Veterans Affairs, the Administration for Children and Families, and most recently the Federal Emergency Management Agency (FEMA).

Chair and Moderator:

Dr Lennart Reifels, Research Fellow, Centre for Mental Health Melbourne School of Population and Global Health.

| | | |
|---------|--|---|
| 9:30am | Registration and coffee upon arrival | |
| 10:00am | Workshop opening and objectives | Chair: Dr Lennart Reifels |
| 10:10am | International Policy Context <ul style="list-style-type: none">Sendai Framework for Disaster Risk ReductionHealth within the Sendai FrameworkThe Place of DRR within health | Prof Virginia Murray |
| 10:30am | The Australian Context: National Risk Profile and Policy <ul style="list-style-type: none">Australia's Disaster Risk ProfileAustralia's DRR policy and Sendai Implementation landscapePrincipal disaster health risksSendai health implementation requirements | Prof John Handmer Prof Paul Arbon |
| 11:00am | Discussion – Q & A | Dr Lennart Reifels |
| 11:30am | Morning Tea | |
| 11:50am | Impulse Presentation: <ul style="list-style-type: none">Understanding and reducing disaster mental health risks – insights from EuropeEmerging health threats: Thunderstorm asthmaHealth synergies across global agreementsQuestions and Discussion | Dr Lennart Reifels Dr Elizabeth Ebert Prof Anthony Capon |
| 12:30pm | Lunch | |
| 1:15pm | Practice Reports: Snapshot of practical strategies to reduce disaster risk across different health sector settings: <ul style="list-style-type: none">Hospital sector & workforcePrimary careNGO/CommunityDiscussion Q & A | A/Prof Tener Goodwin Veenema Dr Penny Burns Kate Brady |
| 2:15pm | Workshop: <ul style="list-style-type: none">Explore principal disaster risks in the health sector and for population healthIdentify key strategies to reduce and manage these risksIdentify key requirements for effective health emergency and disaster risk reduction | Facilitated groups identify principal health risks within their field. Development of key strategies to reduce these risks, and identification of future requirements for effective health emergency and disaster risk reduction |
| 3:15pm | Afternoon Tea | |
| 3:30pm | The Way Forward: <ul style="list-style-type: none">Opportunities, challenges and strategies for reducing Australia's health emergency and disaster risksDisaster-risk informed resilience planning in the health sectorKey strategies to integrate health within DRR and DRR within healthFuture research partnerships: Health-EDRM | Moderator: Dr Lennart Reifels Panellists Prof Paul Arbon Prof Virginia Murray Prof Virginia Murray and Panellists |
| 4:15pm | Conclusions | Dr Lennart Reifels |
| 4:30pm | Close | |



Appendix 2: Health and disaster risk reduction regarding the Sendai Framework

Expert workshop

Monday 10th July 2017
10:00am-4.30pm
Upper East Room, University House, 112 Professors
Walk The University of Melbourne

Chair and Moderator

Dr Lennart Reifels, Melbourne School of Population and Global Health

Speakers

Prof Paul Arbon, Torrens Resilience Institute, Flinders University
Ms Kate Brady, Australian Red Cross
Dr Penny Burns, Australian National University
Prof Anthony Capon, Planetary Health Initiative, University of Sydney
Dr Elizabeth Ebert, Bureau of Meteorology
Prof John Handmer, Risk and Community Safety Research Group, RMIT
Prof Virginia Murray, Public Health England
A/Prof Tener Goodwin Veenema, Johns Hopkins University

Dr Petra Buergelt, Charles Darwin University
Mr Andy Chan, Department of Justice
A/Prof Dale Dominey-Howes, University of Sydney
Dr Michelle Dunn, Attorney-General's Department
Dr Julie Dunsmore, Sydney Medical School
A/Prof Michael Eburn, Australian National University
Mr Glenn Elliott, Department of Justice
A/Prof Helen Evans, HNE Consulting
Dr Alistair Humphrey, Canterbury District Health Board
Dr Mayumi Kako, Flinders University
A/Prof Lidia Mayner, Flinders University
Mr John Nairn, Bureau of Meteorology
Ms Jane Nurse, Phoenix Australia
Prof Elizabeth Ozanne, University of Melbourne
Mr Tam Quach, Department of Health and Human Services
Ms Marian Schoen, EU Centre on Shared Complex Challenges
Ms Zoe Smith, Department of Health and Human Services
Dr Caroline Spencer, Monash University
Rev Stuart Stuart, VCC Emergencies Ministry
Dr Melanie Taylor, Macquarie University
Ms Diana Wong, Monash University
Ms Annabelle Workman, EU Centre on Shared Complex Challenges
Ms Angharad Wynne-Jones, Arts House

Participants

Dr Linda Anderson-Berry, Bureau of Meteorology
Prof Frank Archer, Monash University
A/Prof Graham Brewer, University of Newcastle

