Emergency planning for students with disabilities: a survey of Australian schools

Dr Helen Boon, Dr Lawrence Brown and Dr Paul Pagliano (James Cook University) outline recent research into the inclusiveness of school emergency management plans for children with disability. Ⓡ

ABSTRACT

Children with disabilities and special needs are among the most vulnerable when disaster strikes. Schools can play an effective role in mitigating the effects of natural disasters on students and their families through disaster preparedness and community-based risk reduction. However, recent research indicates that insufficient consideration is being given to the needs of students with disabilities in disaster management plans and policies of Australian education departments. This study involved a postal survey of schools in Western Australia (n= 45) and South Australia (n=35) to review the emergency management policies and plans in place with respect to students with disabilities. The results indicated that most schools had disaster management plans but not all plans made provision for students with disabilities, although the results varied according to the disability and the disaster envisaged. Moreover, most schools were not represented at Local Disaster Management Groups. This paper advocates for better preparedness in schools to support their students with disabilities and their families during natural disasters.

Introduction

Children with disabilities including chronic medical conditions and special health care needs, are among the most vulnerable to natural disasters (Balbus & Malina 2009). Many find it difficult to cope when their environment, and support systems are dramatically altered, especially those with limited understanding of the level of danger they are in during and after a disaster event (Kailes & Enders 2007) or who become anxious and confused in response to emergency signals (Scotti et al. 2007). Children require more preparation and assistance to fully participate in emergency evacuation plans or to move quickly from an area likely to be affected by a disaster (Peek & Stough 2010). Van Willigen et al. (2002) found that the evacuation rates were 9.25 per cent lower in households where one family member had a disability compared with other households in the aftermath of hurricanes Bonnie, Dennis and Floyd in the United States. Transportation issues and the lack of accessible shelters were reported as factors contributing to the decision not to evacuate.

Vulnerability may be compounded by social, structural and financial disadvantage. Frequently, children with disabilities lack adequate access to social and economic resources and possess limited levels of social capital, power and autonomy (Peek & Stough 2010). According to the Australian Institute of Health and Welfare (AIHW 2009), an estimated 168 500 Australian children had a severe disability in 2009, with the proportion of children with severe disabilities being highest amongst low-income households (29 per cent) and lowest amongst high-income households (7 per cent).

Schools can play an effective role in mitigating the effects of natural disasters on all students and their families including the most vulnerable (Ronan & Johnston 2005). For example, recent research in New Zealand illustrated how a school-based hazards education program increased knowledge and preparedness among students (Ronan, Crellin & Johnston 2012). According to recent Australian estimates, 10.6 per cent of all children under 18 have a schooling restriction (ABS 2009). The most prevalent disabilities among children are intellectual/learning disabilities, estimated at 166 700 of children under 18 (4.3 per cent) and physical/diverse disabilities, estimated at 162 800 of children under 18 (4.2 per cent) (AIHW 2009). Despite these numbers, little is known about the effectiveness of Australian school emergency planning for students with disabilities (Boon et al. 2011). The unique needs of these students are noted in all Australian state and territory government education emergency planning policies except for Tasmania and the Australian Capital Territory (Boon et al. 2012). However, there has been no systematic evaluation of the extent to which the particular needs of these students are addressed in disaster planning among Australian schools. Planning for the needs of

students with disabilities is of particular importance, not only because of their vulnerability, but also because of predicted climate change related increases in the severity and frequency of some natural disaster events across Australia (CSIRO 2011).

This study examined school-level emergency management and disaster policies and plans in Australia to determine the extent to which they consider the specific needs of students with disabilities and special needs.

Methodology

The present study involved a random postal survey of Australian schools in two states: Western Australia and South Australia. The aim of the project was to look at a range of schools across Australia. However, only the Education Departments in Western Australia and South Australia granted permission to conduct the survey with their schools and staff, despite ethics approval from the authors' university. Approximately 450 surveys were distributed to administrators in these two school systems.

The survey was constructed to reflect the authors' knowledge of how the specific needs of students vary according to their particular disability or special needs, and how these have a unique impact on the capacity of each student to evacuate safely during various emergency situations and to comprehend and recover from particular emergencies. For example, an evacuation plan for a school should address the needs of a student with visual impairment very differently to those of a student with an intellectual disability. Similarly, school policies to manage emergency and disaster situations would be expected to assist staff in their efforts to help students with disabilities recover from their experiences, and to understand how the particular special need of the student could impact on this recovery.

The survey was structured to obtain information about school planning for each disability type in each of the anticipatory, acute, and recovery phases of an emergency. The anticipatory phase reflects the period of time when an emergency or disaster is anticipated but has not yet occurred. The acute phase includes the period of the emergency or disaster and its immediate aftermath. The recovery phase is the period of time beyond the acute phase of the emergency or disaster, where the school is seeking to return to 'business as usual'.

Results

A total of 80 survey responses were received. This comprised 45 schools from Western Australia and 35 schools from South Australia. The response rate (18 per cent) to the survey is consistent with results obtained from postal surveys, commonly found to range between 15-50 per cent (Burns 2000).

Tables 1a–c provide an outline of the demographic characteristics of the responding schools. Most schools were rural schools and the surveys were generally

completed by principals or deputy principals. On average, approximately 5 per cent of students in each school had a verified disability, and 10.3 per cent of students had verified special needs such as Attention Deficit Hyperactivity Disorder (ADHD) or dyslexia, results reflecting lower than average rates in Australia[1] (ABS, 2009).

Table 1a: Demographic Characteristics of the Responding Schools—Description of the School

Category	Characteristic	Percentage of respondants
State	WA	56.3%
	SA	43.8%
Respondent Role	Principal / Deputy Principal	84.8%
	Teacher	6.3%
	Other	8.9%
Type of School	Primary School	38.0%
	Middle School	2.5%
	Secondary School	35.4%
	P-10 or P-12	16.4%
	Senior	3.8%
	Secondary and Senior	3.8%
Location	Metropolitan	34.2%
	Urban Regional	19.0%
	Rural	46.8%

Table 1b: Demographic Characteristics of the Responding Schools—Staff and Student Population

Category	Mean +/- Standard Deviation	Median (Inter-quartile Range)	Mini-mum	Maxi-mum
Number of Staff	86 +/- 150	49 (29; 80)	5	950
Student Population	468 +/- 363	350 (191; 672)	16	1730
% of Students with Verified Disability	5.0% +/- 4.9%	3.0% (2.0%; 6.0%)	0.2%	25.0%
% of Students with Verified Special Needs	10.3% +/- 15.2%	5.5% (3.0%; 10.0%)	0.4%	90.0%

1   The ABS and other bodies reporting on disabilities only count disabilities such as Down Syndrome, intellectual impairment and visual impairment and so on. Special needs such as ADHD and dyslexia, and chronic illness which do not carry extra funding, are not 'counted'. It has been estimated that 18 per cent of all children have special educational needs.

Table 1c: Demographic Characteristics of the Responding Schools—Events Experienced

Event	Percentage of respondents
Bushfire / Wildfire	35.9%
Building Fire	50.0%
Flash Flood	10.4%
Cyclone	11.7%
Violent Intruder	39.0%
Flood	14.3%
Pandemic / Disease Outbreak	18.2%
Heat Emergency	28.6%
At Least One of the Above	77.5%

The results indicated that 77.5 per cent of all respondent schools had experienced a disaster, with fire (bush fire or building fire) being the most common.

Table 2 indicates the status of school disaster plans. Most schools (96.3 per cent) had a plan in place and most of these plans (73.8 per cent) had been updated within the last year. Despite the prevalence and currency of these plans, most schools were not represented at the local Disaster Management Group meetings.

Table 2: Status of School Disaster Plans

Measure	Status	Percentage of respondents
Type of School Disaster Plan	Any Plan	96.3%
	Generic District / System-Wide Plan	15%
	Generic District / System-Wide Plan with Modifications	51.9%
	A Unique School-Specific Plan	37.5%
Currency of Plan(s)	Updated within Last Year	73.8%
	Updated within Last 5 Years	15.0%
	Updated in Last 6 to 10 Years	5.0%
	Unknown	6.3%
School Represented at Local Disaster Management Group	Yes	27.6%
	No	56.6%
	Unknown	15.8%

Table 3 provides details of the disaster plans of respondents. As noted, a distinction was made between the anticipatory, acute and recovery phase of hazards, which were defined in the school surveys.

The percentage of respondents reporting having disaster plans varied according to the type of disaster and disaster phase, reflecting in part that not all schools were at risk of all disasters. For example, 51.3 per cent of respondents reported having a disaster plan that specifically addressed the acute phase of a bushfire/wildfire but only 15.0 per cent of respondents had a disaster plan that addressed the acute phase of a cyclone, as many of the responding schools were located far inland from the coast.

When the needs of students with disabilities were considered, these varied according to the type of disability. For example, 27.5 per cent of respondents reported that their bushfire/wildfire plan specifically addressed the issues of children with physical or mobility impairments in the acute phase compared to 26.3 per cent for students with sensory impairments and 30.0 per cent for students with emotional or behavioural disabilities. Nonetheless, across all disasters and disaster phases, less than one-third of school disaster plans specifically addressed the needs of students with disabilities—for some hazards, as few as 10 per cent to 15 per cent of disaster plans specifically addressed the needs of students with disabilities.

Table 4 outlines the results of respondent needs for additional resources, infrastructure or professional advice. Approximately a quarter of respondents indicated they needed additional resources, infrastructure or professional advice on disaster planning across all hazards.

Discussion

The above results reflect the views of respondents on how students with disabilities including those with special needs are incorporated into school emergency planning. While it is acknowledged that the results do not adequately represent all Australian state and territory schools, the results nonetheless provide some understanding of how school emergency plans reflect the needs of students with disabilities and perhaps also how state education policies are implemented at a local level.

It appears that the needs of students with disabilities are not adequately reflected in school emergency plans although the extent to which this occurs varies according to the disaster and disability type. It is axiomatic that not all schools would be at risk of all disasters. Accordingly, the results indicate differences between the percentages of respondents having emergency plans for each disaster. However, we believe that all Australian schools should make provision for children with disabilities and special needs in their emergency plans for each disaster, as advocated in other countries (Save the Children USA 2012). While children with disabilities and special needs on average represented 5 per cent and 10 per cent respectively of the student population among respondents, these students are among the most vulnerable to disasters. These students require inclusive emergency plans to be developed and implemented at the school level because

Table 3: Percentage of Schools with Disaster Plans Addressing Each Disaster Phase and Provisions for Students with Disabilities

Plan	Phase	Plan specifically addresses Hazard	Plan makes provisions for students with …				
			Physical/ Mobility Impairment	Chronic Conditions/ Special Needs	Sensory Impairments	Emotional/ Behavioural Disability	Cognitive Impairment
Bushfire/ Wildfire	Anticipatory	50.0%	27.5%	31.3%	26.3%	30.0%	31.3%
	Acute	51.3%	27.5%	30.0%	26.3%	30.0%	30.0%
	Recovery	46.3%	25.0%	28.8%	25.0%	27.5%	28.8%
Cyclone	Anticipatory	13.8%	11.3%	12.5%	11.3%	12.5%	12.5%
	Acute	15.0%	11.3%	12.5%	11.3%	12.5%	12.5%
	Recovery	12.5%	10.0%	10.0%	8.8%	10.0%	10.0%
Flood/Flash Flood	Anticipatory	22.5%	15.0%	17.5%	15.0%	13.8%	15.0%
	Acute	21.3%	13.8%	16.3%	13.8%	12.5%	13.8%
	Recovery	15.0%	10.0%	12.5%	10.0%	8.8%	10.0%
Pandemic/ Disease	Anticipatory	21.3%	15.0%	16.3%	12.5%	15.0%	16.3%
	Acute	18.8%	13.8%	15.0%	11.3%	13.8%	15.0%
	Recovery	17.5%	12.5%	13.8%	10.0%	12.5%	13.8%
Heat Wave	Anticipatory	31.3%	25.0%	26.3%	21.3%	23.8%	26.3%
	Acute	28.8%	25.0%	27.5%	22.5%	25.0%	27.5%
	Recovery	25.0%	23.8%	26.3%	21.3%	22.5%	26.3%

Table 4: Schools Reporting a Need for Additional Resources, Infrastructure, or Professional Advice on Disaster Planning

Plan	Generally	Specifically regarding provisions for students with …				
		Physical/ Mobility Impairment	Chronic Conditions/ Special Needs	Sensory Impairments	Emotional/ Behavioural Disability	Cognitive Impairment
All Hazards	25.0%	26.3%	26.3%	25.0%	23.8%	23.8%
Bushfire/Wildfire	21.3%	17.5%	16.3%	16.3%	16.3%	16.3%
Cyclone	13.8%	12.5%	12.5%	10.0%	11.3%	11.3%
Flood/Flash Flood	12.5%	7.5%	7.5%	6.3%	6.3%	5.0%
Pandemic/Disease	17.5%	11.3%	11.3%	10.0%	11.3%	11.3%
Heat Wave	16.3%	10.0%	8.8%	8.8%	8.8%	8.8%

the context of the school will, in part, determine the support necessary for each student's needs. The child and his or her carers and families should also be actively involved in developing these emergency plans as they will best understand what their child's needs may be and how they may be accommodated.

Emergency planning needs to occur for all phases of a disaster from disaster preparedness through to disaster recovery. Preparedness and evacuation responses need to be practised by persons with disabilities and those who are responsible for assisting

them. For example, the International Federation of Red Cross and Red Crescent Societies (2007) noted that the Associated Blind Organisation had developed and practiced an evacuation plan and drill for its visually impaired staff with the help of the New York City Fire Department. This plan and its practice were instrumental in the safe evacuation of the Associated Blind Organisation's staff from the 11 September 2011 attack on the World Trade Center in New York. In the case where a school building is damaged by a weather disaster and becomes unusable for a period of time, as occurred after *Cyclone Yasi* and the Brisbane floods,

it is important that contingency plans be in place to ensure that the students, especially those who have a disability, are not excluded. The loss of schools, both in terms of the physical building and the educational access that the institution provides, can be particularly problematic for students with disabilities, as they face many barriers in accessing education on a day-to-day basis and their home environment might be ill prepared to substitute the educational impact that they miss from school (International Federation of Red Cross and Red Crescent Societies 2007).

It is noteworthy that the majority of respondents indicated that their school was not represented at the local Disaster Management Group or that they did not know whether or not this was the case. Given that local Disaster Management Groups are responsible for planning all aspects of disaster mitigation, prevention, preparedness and response in a local area, the absence of a school representative is significant in terms of ensuring that the school is adequately informed about disaster preparedness and that the needs of its students are addressed and integrated into community-wide disaster planning.

It would be useful to extend the results of the present study by continuing its application in other states and territories. Further, qualitative research with school management personnel may provide further insight into how schools are able to prepare for emergencies with respect to students with disabilities and to corroborate these research results by reviewing some of the emergency plans for each school. Up to a quarter of all respondents indicated that they would like additional resources, infrastructure or professional advice on disaster planning. Perhaps the school resources available through the Australian Emergency Management Institute Disaster Resilience Education for Schools website[2] could be bought to the attention of teachers, or it could be that these resources are not suitable for use within the current school curriculums. Additional research may help elucidate how schools can be better integrated into disaster planning structures and be able to care for all students in disaster settings including the most vulnerable.

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2 Disaster Resilience Education for Schools website. At: http://schools.aemi.edu.au.

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