Operation Child-ID: reunifying children with their legal guardians after Hurricane Katrina

Mark A. Brandenburg, Sue M. Watkins, Karin L. Brandenburg and Christoph Schieche

Children constitute a vulnerable population and special considerations are necessary in order to provide proper care for them during disasters. After disasters such as Hurricane Katrina, the rapid identification and protection of separated children and their reunification with legal guardians is necessary in order to minimise secondary injuries (i.e. physical and sexual abuse, neglect and abduction). At Camp Gruber, an Oklahoma shelter for Louisianans displaced by Hurricane Katrina, a survey tool was used to identify children separated from their guardians. Of the 254 children at the camp, 36 (14.2 per cent) were separated from their legal guardians. Answering ‘no’ to the question of whether the accompanying adult was the guardian of the child prior to Hurricane Katrina was a strong predictor (27.8 per cent versus 3.2 per cent) of being listed as ‘missing’ by the National Center for Missing and Exploited Children (NCMEC). All the children at Camp Gruber who were listed as ‘missing’ by the NCMEC were subsequently reunited with their guardians.

Keywords: children, disaster, evacuees, Hurricane Katrina, National Center for Missing and Exploited Children

Introduction

Children constitute a vulnerable population and special considerations are necessary in order to provide proper care for them during disasters. Depending on the size and location of a disaster involving large numbers of children, preparedness and response organisations can include local government entities, national agencies, military coalitions, non-governmental organisations and the United Nations (Mandalakas and Torjesen, 2006; Burkle, 2002; Sharp et al, 1998; Markenson, Dimaggio and Redlener, 2005; Burkle and Hayden, 2001). A comprehensive disaster response for children should address the basic requirements of living, their medical needs and their particular vulnerabilities in the aftermath of a disaster (Brandenburg, 2006; American Academy of Pediatrics, 1997; O’Connor, Burkle and Olness, 2001). The basic needs of nutrition, shelter, sanitation and clothing must be provided as well as proper nurturing. Paediatric medical care includes the treatment of acute and chronic illnesses or injuries (physical and mental) as well as disease prevention. The prevention of injuries, both intentional and unintentional, is a critical component of a successful paediatric disaster response. A range of disaster response services are required to address these paediatric needs successfully. From multi-casualty incidents resulting from a conventional explosion to...
complex emergencies created by war, the specific services required for the effective management of children might differ but the basic principles of caring for children will remain the same.

The diagnosis and treatment of primary injuries sustained in a disaster are key components of the paediatric medical care provided. Depending on the type of disaster, primary injuries can include soft tissue injuries and open wounds, blunt trauma, asphyxia and drowning (Quinn, Baker and Pratt, 1994; Combs et al., 1992; Jain, Noponen and Smith, 2003; Quintana et al., 1997; Amir et al., 2005; Aharonson-Daniel et al., 2003). Preparing for mass casualties requires an understanding of paediatric trauma care and of the injuries most likely to occur in specific types of disaster (Holbrook, 1991; Waismann et al., 2003).

The prevention and treatment of secondary medical conditions and injuries in children in the aftermath of a disaster is another key component of a comprehensive disaster response. Secondary medical conditions typically include communicable infections, wound infections, gastroenteritis, dehydration and malnutrition (Damian et al., 1997; Quinn, Baker and Pratt, 1994). Children are more vulnerable to communicable diseases and environmental exposure than adults during humanitarian crises (Seaman and Maguire, 2005). Secondary injuries are either intentional (i.e. abuse and violence, both physical and sexual; abandonment; neglect; abduction; and exploitation) or unintentional (lacerations, carbon monoxide poisoning, falls, auto pedestrian injuries and drowning, etc.). The mental health consequences for children following disasters have also been well documented (Pfefferbaum, Seale and Brandt, 1993; Vogel and Vernberg, 1993; Baker, 2002).

Most of the secondary medical conditions and injuries suffered by children represent vulnerabilities that are particular to children. In times of disaster and widespread displacement children are vulnerable and more likely to suffer maltreatment by adults because they are less able to defend themselves or to comprehend maltreatment (Curtis, Miller and Berry, 2000); these experiences can have profound, short- and long-term physical and mental health consequences for their victims (Felitti et al., 1998). The separation of children from their guardians is also a recognised factor that affects the psychological responses of children after a disaster (Vogel and Vernberg, 1993), and places them at greater risk of intentional and unintentional injury.

On 29 August 2005 a category 3 hurricane (Katrina) made landfall primarily in the US Gulf Coastal regions of Louisiana and Mississippi. Approximately 20 000 residents of New Orleans had already sought shelter in the New Orleans Superdome. Two days later one section of the Lake Pontchartrain levy system was breached and approximately 80 per cent of the city sustained major flooding; subsequently, another 20,000 New Orleans residents entered the Superdome.

In the early morning hours of 4 September 2005 approximately 1600 Hurricane Katrina survivors from New Orleans, almost 300 of them children, arrived at an evacuee camp in Oklahoma. These residents of New Orleans and surrounding areas, evacuated from the Superdome, travelled by bus for 31 hours to Camp Gruber—an Oklahoma National Guard base. The Oklahoma Army National Guard Joint Maneuver Training
Center is a 33,000-acre site located in the Cookson Hills, approximately 60 miles from Tulsa and 14 miles from Muskogee (http://www.globalsecurity.org, 2006). Evacuees were sheltered in a series of two-storey military barracks buildings with 5–6 large rooms per building. Up to 50 people were housed in each room.

Within 12 hours more than 30 patients with medical and psychiatric conditions were sent by ambulance to regional hospitals for evaluation and treatment. One adult (56 years old) died in camp shortly after being carried from the bus. In the next 48 hours approximately 1100 patient visits were logged for a variety of medical and psychiatric conditions.

The Pediatric Injury Response Team (PIRT) provided care to child survivors of Hurricane Katrina and implemented specific child-safety crisis measures in direct response to having almost 300 children living in the military barracks. Paediatric care was provided to 123 children (in 146 visits) at the Camp Gruber clinic. Paediatric medicines and equipment were provided by the regional paediatric trauma centre—Saint Francis Children’s Hospital. The average patient age was 5.7 years. Dermatitis was the most common medical condition diagnosed in children (29 patient visits, 19.0 per cent). The next most common medical conditions seen in children were: asthma (24 patient visits, 16.4 per cent), upper respiratory infections (20 patient visits, 13.7 per cent), diarrhoea (10 patient visits, 6.8 per cent) and skin or wound infections (8 patient visits, 5.4 per cent).

There is clear and convincing evidence that many countries throughout the world (including the United States) are ill-prepared to handle disasters involving large numbers of displaced or injured children (Markenson and Redlener, 2004; O’Connor, Burkle and Olness, 2001; Mandalakas and Torjesen, 2006; Roshal, 1999). The United States does not have a standardised approach to paediatric disaster preparedness. We are unaware of any standardised methods employed to address the needs of children in other Hurricane Katrina evacuee camps. In fact, the evacuee camp that served as the setting for this study was without a comprehensive, rapid plan for identifying and meeting the immediate needs of children separated from their guardians. Unfortunately, there was no registry of the children at Camp Gruber and any information recorded as they disembarked was not made available to the paediatric response team. The intervention reported below was devised in response to the need for an effective method for identifying and protecting separated children, the hypothesis being that a significant number of the unregistered children at Camp Gruber were travelling without legal guardians and were on the National Center for Missing and Exploited Children (NCMEC) list of children missing from Louisiana. The NCMEC was considered the most appropriate agency to report on and search for missing children after Hurricane Katrina and as a result was appointed by the Bush Administration to undertake this task.

During the first two days of Camp Gruber Operations reports were made by health care workers at the camp of evacuees attacking other evacuees. A number of patients were treated for acute psychosis and severe emotional distress and six were detained for psychiatric care in the first 48 hours. At least two suicide attempts were documented
in the first 48 hours. Some evacuees expressed concern and warned medical professionals to guard against the possibility of violence similar to that which occurred in the New Orleans Superdome. Although the authenticity of the stories could not be confirmed, medical personnel at Camp Gruber were soon hearing eyewitness accounts from patients of physical assaults, child abandonment, child rapes, gang attacks and murder that had allegedly occurred in the New Orleans Superdome. As a result, there was great concern for the physical and mental welfare of the children at Camp Gruber among health care workers at the medical clinic, particularly for children who might be separated from their primary guardians.

Methods
Child identification

On the third day of camp operations, ‘Operation Child-ID’ was launched with three primary objectives: a) to identify children separated from their legal guardians and reunite them; b) to help prevent intentional injuries from being inflicted on the children; and c) to help thwart abductions by placing matching identification hospital bracelets on all children and their accompanying adults (Brandenburg, 2005).

A group of volunteers was assembled that included the camp Medical Director, 12 Registered Nurses and two additional staff members. Three ‘Strike Teams,’ each consisting of four nurses, worked to locate children (under 18 years of age) in the camp and to implement the assessment tool. Each team was accompanied by Oklahoma Highway Patrol or Oklahoma National Guard personnel for personal protection because there had already been two minor assaults on health care personnel in the camp. Each group walked the campgrounds and entered the barracks and other buildings in order to locate as many children as possible to obtain and record basic information as prompted by a survey form (see figure 1). Nurses asked specific questions from the survey and recorded the answers on the forms. This standardised survey form was used to collect specific information about the location of the child in the camp, the identity of the accompanying adults and whether an accompanying adult was the legal guardian of the child. The form asked specifically whether the supervising adult at the shelter was the same person who had acted as guardian before the hurricane. The relationship between the adult and the child was also documented.

If an adult was present with the child(ren), information was recorded about the adult and the adult was given a matching hospital bracelet. These hospital bracelets enabled camp staff to identify the children already registered and served as a method for matching children with their supervising adults; this was an effort to thwart any attempt that might be made by other adults to abduct a child from Camp Gruber.

The specific steps taken in Operation Child-ID were to:

1. recognise that some children in the shelter were not with their usual guardians and that these children were at ‘high-risk’ of being listed as missing by family members;
2. create a group of volunteers (18, primarily MDs and RNs, in this case) to conduct paediatric social assessments;
3. find and register all the children in the shelter;
4. use a survey form to question each child about their sleeping location in the shelter, age and relationship to the adult who was currently supervising the child;
5. attach a hospital-style identification bracelet to the child and a matching one to the supervising adult(s) and monitor frequently to ensure that the wristband matched that of the adult(s) seen with the child while in, or when leaving, the evacuee shelter;
6. review the data sheets promptly to identify those children not travelling with their legal guardians, consider these children to be at ‘high-risk’ and submit the names of these children to the NCMEC;
7. generate a complete list of all children in the shelter, including those not on the ‘high-risk’ list, and submit these names to the NCMEC;
8. when a response is received from NCMEC that a child in the shelter has been listed as missing, immediately locate the child in order to pursue reunification, and establish and monitor the safety and well-being of the ‘missing’ child.

**Family centred living**

In addition to the above-mentioned measures, families with children were housed in separate barracks from couples without children and single males (several of the single males were later found to have been New Orleans gang members, fugitives or felons). A licensed daycare centre was also set up to provide a comfortable and safe environment.
for many of the children. The daycare centre enabled the accompanying adults to devote much-needed time and energy to their healthcare, finances, housing and clothing as well as other needs. Also, in collaboration with the PIRT, a regional child safety group (Safe Kids Tulsa Area) launched a separate initiative to prevent unintentional paediatric injuries at Camp Gruber. Games, entertainment and basketball courts were also provided for the older children by various non-profit groups.

Results

Not a single child or adult refused to provide information or to wear a hospital bracelet. Operation Child-ID resulted in the identification of 254 children at Camp Gruber with the following age distribution: 0–5 years: 63 (24.8 per cent), 6–12 years: 119 (46.8 per cent), 13–18 years: 70 (27.6 per cent) and Unknown: 2 (0.08 per cent).

Child reunification

Thirty-six of the children (14.2 per cent) were separated from their legal guardians, either parents or grandparents. Of these separated children, six (16.7 per cent) were with an aunt, three (8.3 per cent) were with an uncle, two (5.5 per cent) were with siblings, three (8.3 per cent) were with cousins, one (2.8 per cent) was with a female friend, five (13.9 per cent) were with an aunt and an uncle, 10 (27.8 per cent) were with grandmothers, four (11.1 per cent) were with fathers, one (2.8 per cent) was with a godparent and one (2.8 per cent) was travelling alone. Because these children were deemed at high-risk of being listed as missing, their names were sent as a priority to the NCMEC for cross-checking against the national list of missing children. The first positive match was confirmed in under 30 minutes. Over the next seven days it was confirmed that 10 (27.8 per cent) of the children were on the NCMEC list of missing children.

The list of the 218 remaining children at Camp Gruber was submitted to the NCMEC two days later. Of these names, seven (3.2 per cent) had been identified as missing by the NCMEC. Answering ‘no’ to the question in the survey about whether the child was travelling with his/her guardian of before Hurricane Katrina was, therefore, a strong predictor (27.8 per cent versus 3.2 per cent; fisher’s exact test one-sided p value <0.0001) that the child would be listed as ‘missing’ by the NCMEC.

It is estimated that approximately 50 children were never registered at Camp Gruber because they had either left the camp before Operation Child-ID or were simply not found by staff members. Of the remaining 26 children not travelling with their legal guardians, 11 were lost to follow-up because they left Camp Gruber and were not able to be evaluated subsequent to determining their status as being legally separated; 11 more were already in the process of being reunited with their legal guardians after making contact with them through means other than the NCMEC or the efforts of this project (i.e. the Red Cross, the Federal Emergency Management Agency FEMA, or the Oklahoma Department of Emergency Management); one child was found to
be doing well and the supervising adult was in the process of trying to locate the guardians; 3 children were found to be erroneously listed as legally separated. None of these children had special medical needs or other concerns identified during their safety and well-being assessments.

**Operation Child-ID: case reports**

The following case reports from Camp Gruber illustrate the importance of the rapid identification and registration of children displaced by Hurricane Katrina.

**Early identification of a high-risk situation and reunification**

A 10-year old male child was processed out of the camp immediately after he was found to have been travelling alone without family or friends. Within 24 hours the boy was reunited with his mother who was located at an out-of-state shelter.

**Reunification of children and parents**

A nine-year old boy was reunited with his mother shortly after the Camp Gruber Medical Director provided his name to the NCMEC. He was travelling with his 67-year old grandmother who was not his usual guardian and who had chronic medical problems that created significant difficulty ambulating. His physical examination was unremarkable. His grandmother revealed to us that his demeanor went from depressed to playful and smiling immediately after he was informed that his mother was alive and well and looking for him.

**Child abuse prevention**

Four siblings were found to be travelling with an uncle who was not their legal guardian. It was later found that the uncle had told our staff that he was the children’s guardians before Hurricane Katrina when, in fact, he was not. The parents had lost or given up custody of the children six years before after an intervention by the Louisiana child welfare authorities. The grandmother was the children’s legal guardian but she had been evacuated to another city as a result of the hurricane. In accordance with the initial requests made by the grandmother in Texas, who claimed legal guardianship, attempts were made to have custody of the children transferred back to her. A custody dispute began, but local authorities would not remove the children without evidence that the grandmother did in fact have legal guardianship. Two days later three staff members each reported separate, eyewitness accounts of physical assault on two of the children by the uncle. Child welfare staff and the Oklahoma Highway Patrol were immediately summoned and the children were taken into custody with plans to send them to their, previously identified, legal guardian in Texas. On thorough examination, the children were all found to be healthy and without evidence of physical injury. The children were placed in a protective environment by the Oklahoma child welfare authorities and later reunited with their legal guardian.
Discussion

*When preparing for and responding to disasters, the golden rule must remain: ‘Principles’ not ‘Protocols’* Kobi Peleg, PhD., MPH, Director, Israel Center for Trauma and Emergency Medicine Research.

‘Principles’ not ‘protocols’

Disasters differ from one another in many ways, including the geographic location, the number of casualties, the distribution of injured or displaced people, the types of injuries and their severity, the availability of rescue teams and the size of team required, equipment needs, the distance from hospital, and so on. One of the most important lessons learned from the study of mass-casualty incidents by paediatric trauma experts is that fixed protocols should not be set. Instead, principles should be used that allow for flexible responses to all variables (Peleg et al., 2003). In paediatric disasters, the issues of food, shelter, clothing, sanitation, disease and injury prevention, and medical care must all be addressed. Every disaster shelter is different and approaches must be adapted to circumstances. It is highly likely that the methods used in Operation Child-ID would have to be modified according to the layout of each shelter and the way that it is organised.

The Oklahoma PIRT was formed to provide care for the children at Camp Gruber, including emergency and chronic medical care; child–guardian identification, abduction or exploitation prevention services, child abuse prevention, missing child or guardian reunification and a licensed daycare facility (‘Operation Child-ID’) as well as injury prevention and control measures (‘Operation Child-Safe’).

Displaced children

Hurricane Katrina, the ensuing New Orleans flood and the chaos in the Superdome and Convention Center displaced over 2000 children across the United States. Children can survive their parents and other family members in large scale disasters involving mass casualties. Children are more vulnerable to communicable diseases, environmental exposure and injuries than adults and are dependent on others for their basic needs and care. Planning for large numbers of homeless and even orphaned children is essential to disaster preparedness and management, and recognising the importance of keeping children together or reuniting them with their parents is critical to the management of children in mass casualty incidents. By quickly reuniting the child with the primary caregiver, the mental health of the family is better preserved, the acute effects of community panic and upheaval are reduced and the effects of post-traumatic stress are minimised.

All medical clinic and shelter directors providing care to child survivors after a disaster should be aware that a large number of separated children might result. Operation Child ID, as implemented at Camp Gruber, is one method of systematically identifying children who have been separated from their legal guardians. The ideal approach, however, is immediately to register all children in this fashion on their arrival at an
evacuee shelter. This becomes even more important in situations where evacuees are moved from one shelter to another, thereby creating more opportunities for separation. It is important to note that this work does not require physicians or nurses, and could easily be performed by trained social workers, public health personnel, psychologists or childcare experts.

Answering ‘no’ to whether the adult travelling with a child was the child’s guardian before Hurricane Katrina was a strong predictor (27.8 per cent versus 3.2 per cent) that the child was listed as missing by the NCMEC. The process of searching the databases and—when necessary—asking the children and adults for further details is labour-intensive. As a prioritisation strategy in disasters, the names of all children in disaster shelters should be submitted to a centralised location such as the data bank at the NCMEC to ensure the highest sensitivity in detecting missing children. This does not identify those situations where the supervising adult is either mistaken or mis-stating the facts of guardianship. The names of all the children in evacuee camps should therefore be submitted, although ‘high-risk’ names should be submitted first in order to expedite their cross-checking.

At Camp Gruber immediate registration was not conducted and a great deal more effort was required in order to obtain the necessary information on the children being sheltered. The use of photographic identification badges that match those of the parents would also have been an improvement over the bracelets because this would have allowed for more efficient cross-checking by staff members in the camp. A digital data entry system would have made this information-gathering exercise more efficient and allowed the collection of more detailed information (such as date of birth, identifying birthmarks or scars, accompanying notes or personal effects, home address, names of relatives, where the child was found and any known contact information including telephone numbers and email addresses). On a larger scale, it would be beneficial if all countries had centralised tracking systems to which all shelters could provide evacuee information for the purposes of tracking and reuniting children with their primary carers.

**Correspondence**

Mark A. Brandenburg MD, Vice Chair, Department of Emergency Medicine, Oklahoma Institute of Disaster and Emergency Medicine, Room 2B09, University of Oklahoma College of Medicine, Tulsa, 4502 East 41st Street, Tulsa, OK 74135, US. Telephone: +001 918 660 3458; fax: +001 918 660 3821; e-mail: mark-brandenburg@ouhsc.edu.

**Acknowledgements**

Great appreciation goes to Jim Mercy and Wendy Heaps at the Centers for Disease Control and Injury Prevention for their assistance in reviewing and assisting in the preparation of this manuscript.

We also appreciate the work of the following individuals and groups at Camp Gruber and their support of this project: Oklahoma State Department of Health; Commissioner
Mike Crutcher, Tim Cathey; Maria Alexander; Linda Hathaway; Sue Mallonee; Oklahoma Medical Reserve Corps: Medical Director John Sacra, Kelly Deal, Tulsa Director; Mae Brandenburg; Saint Francis Hospital: Vice President Lynn Sund; Tulsa Red Cross: Laura Morrison; Salvation Army; Oklahoma State Highway Patrol; Oklahoma National Guard and many other participating individuals and organisations.

Endnotes
1 Mark A. Brandenburg is Vice Chair of the Department of Emergency Medicine, Oklahoma Institute for Disaster and Emergency Medicine at the University of Oklahoma College of Medicine, Tulsa; Sue M. Watkins is the Trauma Program Manager at Saint Francis Hospital, Tulsa, Oklahoma; Karin L. Brandenburg is Senior Vice President with Global International, Washington, DC; and Christoph Schieche is a Resident of Internal Medicine at the University of Oklahoma College of Medicine, Tulsa. Each author is a disaster responder with the Oklahoma Medical Reserve Corps.

References


