Assessing Disaster Preparedness Among Select Children’s Summer Camps in the United States

LEARNING OBJECTIVES:
Describe the deficiencies in the disaster preparedness of national summer camps.

LIMIT: 250 words (245 current)

BACKGROUND/PURPOSE: Man-made and natural disasters are increasingly common. Summer camps are at particular risk for multiple pediatric casualties when a disaster occurs. Degree of disaster preparedness among summer camp settings is unknown. We assessed disaster preparedness and use of local resources by selected summer camps nationally for a range of man-made and natural disaster situations.

METHODS: We partnered with CampDoc.com, a national, web-based health records system, to send camp leadership (315 camps) a 14-question online survey of disaster preparedness. One response from each camp was selected in the following order of importance: (1.Owner 2.Director 3.Physician 4.Nurse 5.Medical Technician 6.Office Staff 7.Other). Results were analyzed using descriptive statistics.

RESULTS/OUTCOMES: Responses from 181 camps were received, with complete responses from 169 individual camps. Majority of respondents were camp directors (52.1%). No plans were available for the following disasters: Prolonged power outage (23%); Lockdown for crisis situation (15%); Large illness outbreak (15%); Tornado/high wind (11%); Evacuation for fire, flood, or chemical spill (9%); and other Severe Weather (8%). Many camps did not post emergency plans online (53%); had no plans for special-needs children (38%); were without a method to rapidly communicate information to parents (25%); and had no method to identify children for evacuation and reunification (40%). Majority (75%) had not worked with medical organizations for disaster planning.

CONCLUSIONS: A substantial proportion of summer camps were missing critical components of disaster planning. Future interventions must focus on increasing partnerships with local and national organizations and developing specific guidelines.
Expanded Summary:
Disasters, whether man-made or natural, are unpredictable, devastating, and increasingly more common. Children comprise almost 50 percent of individuals impacted by disasters and are physiologically more susceptible than adults to adverse effects of chemical or biological exposures. Developmentally, they may be unable to understand or comprehend the event, limiting their ability to protect themselves or to escape from harm. Pediatric specific vulnerabilities are increasingly apparent through recent events such as Hurricane Katrina, Hurricane Sandy, and the school shooting at Sandy Hook Elementary. Media publicity has led to a growing national awareness of the importance of pediatric disaster preparedness and its current shortcomings.

Disaster planning is especially necessary in summer camp settings because regardless of etiology, young children are at particular risk for multiple casualties in the event a disaster occurs. Nationally 11 million children attend summer camps yearly. Summer camps may be ‘soft’ primary targets in shootings or terrorist attacks because of their dense number of children in a small area combined with their inability to escape from harm. This risk was highlighted by the tragic 2011 mass shooting at a summer camp in Utøya, Norway.

According to a national 2014 report, many states were found lacking in disaster preparedness among schools and child care centers. However, because primary and secondary school disaster preparedness or that of medical personnel has been the focus of the majority of prior studies, the degree of disaster preparedness among summer camps and camp workers’ training needs are completely unknown. Many states currently do not mandate specific summer camp disaster plans for evacuation, family-child reunification, or the care of special needs children. Disaster preparedness research nationally has been limited by the lack of access to summer camp leadership and unavailability of a uniform electronic record and database system among summer camps.

Our study is an effort to determine if national summer camps for children are adequately prepared to provide care across a range of natural and man-made disasters. We collaborated with CampDoc.com, a national, web-based electronic health records company that manages health forms, medications, allergies, and illness and injury tracking for many summer camps in the United States. With the help of CampDoc.com, we utilized a database of over 315 camp organizations and targeted camp leadership, including directors, nurses, techs, EMTs, camp owners to gather information. We surveyed a convenience sample of twenty regional summer camps in the local Michigan area using an online survey tool of 14 questions related to disaster preparedness in summer camp settings. Questions focused on whether camps had specific disaster plans in place for man-made and natural disasters, medical emergencies, and intruder/lockdown scenarios. We also asked whether camps’ disaster plans addressed several critical aspects of disaster preparedness, including care for children with special needs, emergency supplies, family reunification plans, and emergency evacuation and transportation. Lastly, we asked if camps had coordinated with local EMS/Fire and state-based organizations for disaster planning.

We received responses from 181 camps, with 169 camps with complete responses. Camp types included Overnight/Resident Camps (59.7%); Day Camps (20.7%); Medical
Almost 18% of camps were located greater than 20 miles from a major medical center, and 36% were at least five miles away from police or fire departments. Survey respondents included Directors (52.1%), Nurses (14.2%), Office Staff (10.1%), Physicians (5.3%), Owners (5.3%), and Other (11.2%). Respondent camp leadership experience were >10 years (50.3%), 5-10 years (24.9%), 2 to <5 years (20%), and < 2 years (5.3%) and the majority of respondents (79%) had worked at their current camp greater than 2 years. Most camps surveyed took care of children with common types of disabilities food allergies (83%); asthma (66%); mobility issues (requiring wheelchair or assistance -27%); diabetes requiring medications (56%), development or cognitive impairment (34%); and hearing or speech impairment (28%).

We found that many respondents either completely lacked specific plans or were unsure of any plans for the following emergency situations: lockdown for crisis situation (45%), a medical emergency such as an outbreak requiring quarantine (35%), evacuation due to fire, flood, or chemical spill (20.7%), prolonged power outage (68%), tornado/high wind (23.6%), or other environmental emergencies/severe weather (19.5%). While 99% of camps had first aid supplies, many camps were without important supplies including car/booster seats for evacuation (68%), bunker/shelter (35%), extra vehicles for evacuation (26%), isolation area for quarantine (21.3%), or emergency supplies of extra water (20%) or food (17%). Only 20% of camps made emergency plans available online for parents, and 48% of camps had identification methods for children in case of evacuation. The majority (57%) of respondents were unaware or unsure if there was a designated evacuation site for meeting parents if evacuation was needed. Over 25% of camps did not discuss emergency plans with parents and another 25% did not have a method to rapidly communicate emergency information to parents. Most camps (75%) had not participated in meetings with local or national medical organizations. Only 45% of camps and 16% of camps had met with or consulted with the American Camp Association and Association of Camp Nurses for disaster preparedness respectively.

We found that a substantial proportion of summer camps were missing critical components of disaster planning. Our work highlights the importance of preparedness in a vulnerable pediatric population in summer camp settings. Future interventions should focus on developing specific guidelines for camps’ disaster plans that include essential emergency supplies, children with special needs, digitally accessible emergency information, family/child identification and reunification, and evacuation/relocation. In order to improve camps’ disaster preparedness, increasing partnerships with local and national medical organizations are also necessary. Efforts to adequately prepare for a disaster in summer camp settings are challenging and therefore require the involvement of the entire community and medical organizations with disaster expertise at the local, regional, and state level.
References:

1. Ablah E, Tinius AM, Konda K. Pediatric emergency preparedness training: are we on a path toward national dissemination? J Trauma. 2009;67: S152-S158.