Vulnerable Populations in a Disaster: The Reality of Puerto Rico

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Abstract

Background: The impact of disasters on the population does not discriminate on grounds of sex, age, or socioeconomic status. However, some populations may be more vulnerable than others to an emergency or disaster. Vulnerable populations include those with high risk of disease, injury and disability who often also lack the resources to address these challenges. Objective: Describe vulnerable populations who may be affected by a disaster in Puerto Rico. Methods: This study uses data from seven secondary databases of vulnerable populations from a comprehensive Hazard and Vulnerability Assessment (HVA) of the Puerto Rico public health, medical and mental/behavioral health systems. This HVA identified and documented the potential hazards, vulnerabilities and risks faced by Puerto Rico’s public health, medical, and mental/behavioral health systems. These data included socio-demographic aspects (children under 5 years old, persons over 65 years old, women heads of household and persons in poverty), persons with disabilities, homeless persons, and cancer and dialysis patients. Results: In Puerto Rico, almost half of the population (48%) lives under the poverty level and 20.4% of the population has at least one disability. Approximately 21% of the population is at a vulnerable age: about 15% of the population of Puerto Rico is older than 65 and 6% are children under 5 years of age. Methods: This study uses data from seven secondary databases of vulnerable populations from a comprehensive Hazard and Vulnerability Assessment (HVA) of the Puerto Rico public health, medical and mental/behavioral health systems. This HVA identified and documented the potential hazards, vulnerabilities and risks faced by Puerto Rico’s public health, medical, and mental/behavioral health systems. These data included socio-demographic aspects (children under 5 years old, persons over 65 years old, women heads of household and persons in poverty), persons with disabilities, homeless persons, and cancer and dialysis patients. This paper addresses the effectiveness of the preparedness and response capacity to respond to the special needs of vulnerable populations during an emergency or disaster.

Objectives

Introduce Describe vulnerable populations that may be affected by an emergency or disaster in Puerto Rico.

Methods

This study uses data from seven secondary databases of vulnerable populations from a comprehensive Hazard and Vulnerability Assessment (HVA) of the Puerto Rico public health, medical, and mental/behavioral health systems. This HVA identified and documented the potential hazards, vulnerabilities and risks faced by Puerto Rico’s public health, medical, and mental/behavioral health systems. These data included socio-demographic aspects (children under 5 years old, persons over 65 years old, women heads of household and persons in poverty), persons with disabilities, homeless persons, and cancer and dialysis patients.

Results

Table 1: Distribution of the Vulnerable Population by the Puerto Rico Department of Health Regions

Table 2: Vulnerable Population Rates by Health Conditions of Persons who Depend on Specialized Equipment for Services by Puerto Rico Department of Health Regions

Figure 1: Percentage of Population with Disability by Municipality

Figure 2: Percentage Distribution by Type of Disability for Children Aged 0 to 4 in Municipalities with the Largest Proportion of Disabled Persons

Figure 3: Percentage Distribution by Type of Disability for Children Aged 5 to 17 Years in Municipalities with the Largest Proportion of Disabled Persons

Figure 4: Percentage Distribution by Type of Disability for Adults Age 18 to 64 Years in Municipalities with the Largest Proportion of Disabled Persons

Figure 5: Percentage Distribution by Type of Disability for Adults 64 Years and Older in Municipalities with the Largest Proportion of Disabled Persons

Conclusions

Vulnerable populations may present difficulty in recovering from a disaster event, due to the lack of physical and emotional capability, or lack of social and economic resources during this type of event. The effectiveness of disaster response in terms of protecting vulnerable populations depends on effective planning. It is important to document and characterize vulnerable groups to be able to develop appropriate public policies. The needs of vulnerable populations must be addressed during all phases of preparedness, mitigation, response and recovery. Disaster response and recovery efforts will have a much higher probability of being effective if vulnerable populations are considered during the planning process.

References


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