Use of a Modified Cluster Sampling Method to Perform Rapid Needs Assessment After Hurricane Andrew

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Study objective: To rapidly obtain population-based estimates of needs in the early aftermath of Hurricane Andrew in South Florida

Methods: We used a modified cluster-sampling method (the Expanded Programme on Immunization [EPI] method) for three surveys. We selected a systematic sample of 30 quarter-mile square clusters for each survey and, beginning from a random start, interviewed members of seven consecutive occupied households in each cluster. Two surveys were of the most affected area (1990 population, 32,672) at three and ten days after the hurricane struck; one survey was of a less affected area (1990 population, 15,576) seven days after the hurricane struck.

Measurements and main results: Results were available within 24 hours of beginning each survey. Initial findings emphasized the need for restoring utilities and sanitation and helped to focus medical relief on primary care and preventive services. The second survey of the most affected area showed improvement in the availability of food, water, electricity and sanitation ($P \leq .05$). There was no evidence of disease outbreaks.

Conclusion: For the first time, the EPI method provided population-based information to guide and evaluate relief operations after a sudden-impact natural disaster. An improvement over previous approaches, the EPI method warrants further evaluation as a needs assessment tool in acute disasters

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