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Preparing Racially And Ethnically Diverse Communities For Public Health Emergencies

Minorities have historically been absent from preparedness planning, but recent efforts have produced new program and policy guidance.

by **Dennis P. Andrulis, Nadia J. Siddiqui, and Jenna L. Gantner**

ABSTRACT: The tragedy of Hurricane Katrina in New Orleans confirmed that effective implementation of public health preparedness programs and policies will require compliance from all racial and ethnic populations. This study reviews current resources and limitations and suggests future directions for integrating diverse communities into related strategies. It documents research and interventions, including promising models and practices that address preparedness for minorities. However, findings reveal a general lack of focus on diversity and suggest that future preparedness efforts need to fully integrate factors related to race, culture, and language into risk communication, public health training, measurement, coordination, and policy at all levels. [*Health Affairs* 26, no. 5 (2007): 1269-1279; 10.1377/hlthaff.26.5.1269]

THE WHITE HOUSE, CONGRESS, AND STATE and local governments have made emergency preparedness one of their highest priorities.¹ This long-term initiative will in essence require reorientation of the nation's public health and health care infrastructure to reach, educate, and care for all citizens. The tragedy of Hurricane Katrina in August 2006 offers a graphic portrait of what happens when communities' unique needs are not part of preparedness planning and execution. In New Orleans, poor racial and ethnic minorities suffered disproportionate magnitudes of destruction, injury, disease, and death.² Areas most damaged by Katrina were largely populated by low-income African Americans, many living in substandard housing and lacking access to personal transportation for evacuation.³ In addition, many African Americans did not flee ahead of the storm primarily because of communication barriers, including limited or no evacuation orders, inconsistent orders, or orders they could not understand and follow.⁴ In the

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aftermath, cultural differences and lack of financial resources have largely hindered effective recovery for these communities.⁵ Latinos and Asian Americans faced similar barriers during Hurricane Katrina, compounded by issues of language, culture, and their status as undocumented or uninsured residents.⁶

Beyond Katrina, studies on racial/ethnic minorities and public health emergencies consistently illustrate that minority communities are more vulnerable than others across the range of events before and after a disaster.⁷ Reasons are as varied and complex as they are important; they include socioeconomic differences, culture and language barriers, lower perceived personal risk from emergencies, distrust of warning messengers, lack of preparation and protective action, and reliance on informal sources of information.⁸

Effective implementation of public health preparedness programs and policies will require compliance from all residents, including diverse populations. Preparedness strategies will need to recognize factors related to culture, language, literacy, and trust that are likely to play a major role in achieving their objectives. To date, however, few concerted efforts have assessed the extent to which public health preparedness research, programs, and policies address these factors as integral components of preparedness.

The purpose of this study is to determine to what extent racial/ethnic minorities have been considered in public health emergency preparedness and to identify leading research; promising efforts; and resources for training, education, and initiative development. Emergency preparedness in our study refers to a community's readiness to react constructively to natural as well as human-made threats, to minimize harm to public health.⁹

Study Data And Methods

We identified and conducted a review of research, Web sites, and other resources and reports published by government agencies, academic institutions, and private-sector organizations, including community-based programs. Our goals were to identify research and interventions that address public health emergency preparedness for racially/ethnically diverse communities and to explore to what extent current interventions and initiatives consider these communities' distinct needs.

We identified peer-reviewed literature through a search of the PubMed database for 1977–2007 using the following key terms: race, ethnicity, vulnerable, at-risk, special needs, minority, immigrant, language, culture, public health, disaster, emergency, and preparedness. We also searched major government, private-sector organization, academic, and foundation Web sites for relevant reports and publications. We included in our review only those publications and peer-reviewed studies that explicitly addressed racial/ethnic minorities in the context of emergencies, disasters, and public health preparedness.

We conducted a search of Web sites during January–May 2007 using our key

terms to identify initiatives on preparedness and minority populations. Criteria for including Web sites were that they originate from the aforementioned public and private sources and that they offer at least generic information on emergency preparedness; 301 Web sites met these inclusion criteria for further analysis. We then categorized each site by whether preparedness for racial/ethnic communities was the primary area of focus, acknowledged or briefly discussed, or not mentioned and whether translated preparedness materials were available.

Study Findings

Our review identified a large and rapidly growing number of reports and peer-reviewed publications on emergency preparedness. However, we found a general paucity of information focusing specifically on racial/ethnic minorities. Of studies that did examine racial/ethnic differences in the context of emergencies, the majority were published before the early 1990s; since then, and until Hurricane Katrina, few research studies addressed this priority. Studies and reports identifying specific and strategic interventions or best practices for addressing the needs of this vulnerable group in public health emergencies are also uncommon. However, related initiatives and actions are beginning to emerge.

Of the Web sites we identified that provide information on emergency preparedness, 149 (49.5 percent) make no mention of racial/ethnic minorities; 114 (37.9 percent) acknowledge the importance of preparedness as it concerns these populations; and 38 (12.6 percent) provide information, materials, or publications that focus wholly or largely on preparing diverse communities. From these sources and our literature review, general themes and initiative areas emerged: emergency risk communication; training and education; resource guides for planners and responders; measurement and evaluation; and policy and program initiatives.

■ **Emergency risk communication.** Emergency risk communication is “the attempt by science or public health professionals to provide information that allows an individual, stakeholders, or an entire community to make the best possible decisions about their well-being.”¹⁰ Effective emergency risk communication requires the appropriate selection of messages, messengers, and methods of delivery to disseminate information to audiences from before an event to after it occurs.

Our review revealed that a growing number of government and private organizations are disseminating preparedness and response information to minority populations, particularly through translated resources. In fact, we found that of all Web sites included in our study, about one in three provide foreign-language materials. Among these are federal agencies such as the Federal Emergency Management Agency (FEMA) and the Centers for Disease Control and Prevention (CDC), national nonprofits such as the American Red Cross, and state and local emergency management agencies.

With general direction from national and state efforts, as well as local priorities, community-based organizations have also expanded their programs to reach

minorities in disasters. These and other initiatives have focused on building partnerships within the community to provide essential resources and information to prepare diverse residents, as well as tools and expertise to build the cultural and linguistic capacities of community volunteers and responders. For example, the Emergency Community Health Outreach (ECHO) network in Minnesota has established a unique partnership with a public television station to regularly broadcast short programs presented by representatives from ethnic refugee and immigrant groups in the state, in multiple languages and on topics including personal and government roles in disasters; family preparedness plans; pandemic flu; isolation and quarantine; severe weather; and crisis counseling.¹¹

Although translated resources offer a promising approach to communicating with immigrant and minority populations with limited English proficiency, studies caution that mere translation of English-language materials does not ensure that public health messages will be clear and easily understood.¹² In particular, English words and concepts in American culture might not be directly translatable to other languages.¹³ We found in our review that the vast majority of major public health and safety organizations—federal agencies in particular—tend to provide literal translations of English-language materials, with variable consideration of accuracy and cultural acceptability. Furthermore, our findings suggest that few current initiatives address the needs of English-speaking racial/ethnic groups requiring attention to culture, literacy, and trust. Although many studies suggest engaging faith-based organizations, developing community partnerships, and using other trusted venues to reach these populations, we found a paucity of such initiatives.¹⁴ Finally, we found that most resources and materials targeting minorities are disseminated primarily through the Internet. Unfortunately, many racial/ethnic groups might not benefit from these resources because of limited ability to access the Internet and limited skills to navigate complex Web-based systems predominantly in English.¹⁵

■ **Training and education.** Our review revealed an abundance of training and education programs, resources, and curriculum on public health emergency preparedness, with many addressing broadly the importance of meeting the needs of vulnerable populations. Moreover, since Hurricane Katrina, a growing number of these modules incorporate specific topics related to race, ethnicity, and culture. In particular, the academic Centers for Public Health Preparedness (CPHP), established by the CDC, provides courses, workshops, seminars, and training on minority preparedness, targeting a broad range of audiences. Recently offered programs have addressed such topics as cultural competence, language-specific risk communication, preparedness for Hispanic communities, and crisis communication for Native Americans.¹⁶ Although promising, many of these efforts have been short-term offerings at the basic or introductory level.¹⁷

To address these shortcomings and add dimension and population-specific relevance to training programs, certain community-based organizations are offering

culture-specific, practical programs. For example, Collaborating Agencies on Responding to Disasters (CARD), a California-based organization, works with neighborhood and community organizations to build their capacity to respond to the needs of their racial/ethnic populations in emergencies by supporting the development and implementation of individually tailored emergency plans; providing user-friendly and easily understood training on federal, state, and local response structures; and providing tabletop and practical exercises that incorporate issues around culture and language.¹⁸ Similarly, in San Francisco, the NICOS Chinese Health Coalition established a Chinatown Disaster Response Program to train community volunteers in leadership roles and to empower residents to prepare for independent survival.¹⁹ Specifically, each year the coalition coordinates a large-scale disaster drill in Chinatown to train volunteers on response and recovery in coordination with government and other agencies.

■ **Resource guides.** Resource guides are intended to provide guiding principles, recommendations, and resources to assist development, planning, and delivery of effective emergency warning, response, and recovery activities.²⁰ Although many are available on emergency planning broadly, few focus on minority populations. Exceptions include two resources issued by federal health and human services agencies. The Substance Abuse and Mental Health Services Administration (SAMHSA) has developed a guide to help states and communities “plan, design and implement culturally competent disaster mental health services for survivors of emergencies.”²¹ Similarly, the CDC has developed a workbook providing guidance to state, local, and tribal planners to define, locate, and reach special populations, including racial/ethnic minorities, in disasters.²²

Some states, such as Texas, Michigan, and Idaho, have begun to provide published guidance and direction on effective emergency risk communication, including conducting community health assessments to elicit major racial/ethnic groups, major languages spoken, preferred messengers, and barriers to preparedness within communities.²³ Although these federal and state sources offer directions for planning and responding to racial/ethnic groups affected by mass emergency events, questions of coordination, responsibility, and accountability remain largely unanswered.

■ **Measurement and evaluation.** Current literature reveals a general lack of discussion on standard metrics to measure and evaluate programs addressing needs of minorities in the context of disaster preparedness.²⁴ Our review of Web sites similarly reveals that metrics do exist to assess preparedness more broadly, but there is a lack of widely accepted evidence-based measures and performance indicators for assessing progress and level of preparedness of racial/ethnic communities. For example, the CDC has developed voluntary assessment inventories for local and state public health agencies to evaluate their capacity to respond to public health threats.²⁵ Embedded within these inventories are broad questions to evaluate capacity to respond to minority populations with limited English proficiency and capac-

ity to provide translated materials on preparedness and response. However, these measures and other similar metrics generally do not capture the capacity to address other major factors, such as culture, literacy, and trust.

Nonetheless, we found that in the immediate aftermath of Katrina, some state and local initiatives conducted rapid needs assessments of evacuees, by race/ethnicity, to identify and meet the unique needs of diverse populations.²⁶ For example, the Tri-County Health Department in Colorado conducted a needs assessment among a sample of evacuee households during their first week of arrival to metropolitan Denver.²⁷ The assessment revealed that the ethnic makeup of evacuees (55 percent black) was very different from that of Colorado's population (3.8 percent black). This important finding offered strong justification for the involvement of black church groups and community leaders in evacuee-service efforts to ensure cultural appropriateness. The Oklahoma State Department of Health conducted a similar needs assessment of evacuees to Oklahoma.²⁸ Its findings suggested the need to provide active outreach to a predominantly minority evacuee population with substantial pre-existing mental conditions.

■ **Policy and program initiatives.** Policies and widely accepted best practices on integrating and engaging minorities in preparedness plans have historically been lacking.²⁹ More recently, several agencies and organizations at the national, state, and local levels have started to support efforts, and in some cases taken the lead, in promoting related programs and initiatives.

Federal level. Federal agencies are funding and stimulating initiatives for engaging racial/ethnic communities in preparedness activities.³⁰ For example, the Office of Minority Health (OMH) of the U.S. Department of Health and Human Services (HHS) recently provided funding to train emergency managers and responders to provide culturally and linguistically appropriate services (CLAS) to Latino populations in disasters.³¹ Similarly, recent collaborations with the National Institutes of Health's Centers of Excellence in Partnerships for Community Outreach, Research on Health Disparities, and Training (Project EXPORT) have emerged to build a cadre of academic health centers that can serve as screening, surveillance, communication, and response resources for areas with large minority populations.³²

State and local activity. State and local support for programs addressing minority preparedness has also gained momentum, particularly in the aftermath of 9/11 and Hurricane Katrina. For example, some state and local health departments are conducting surveys, interviews, and focus groups with their racial/ethnic communities to identify barriers to communication, preferred content areas on preparedness, preferred channels of communication, and opportunities for collaboration. Others have developed surveys to collect and monitor data on the capacity of public health agencies and health clinics to respond to these communities.³³

Private organizations. Increased program initiatives have also emerged among private organizations. The Henry J. Kaiser Family Foundation, for example, has supported an evaluation study of Hurricane Katrina, which addresses warning infor-

mation and evacuation behavior by race/ethnicity.³⁴ Similarly, the California Endowment has provided support for programs focused on bioterrorism preparedness and outreach to vulnerable populations, including those located in border regions.³⁵

Directions For The Future

Our study was intended to provide a review and synthesis of information as well as a status report on current research and interventions for integrating racial/ethnic communities into emergency preparedness planning and execution. However, because the field is dynamic, projects in progress and emerging studies or initiatives are likely not captured here. In particular, state, local, and community efforts that are rapidly evolving—for example, the growing involvement of racial/ethnic community leaders in communication planning for pandemic flu plans since Hurricane Katrina—are likely to add content and experience to the field.³⁶

Nonetheless, results from our review covering three decades reveal gaps in planning as well as promising programs or critical resources that offer directions for future research, initiatives, and policy development. We identified five areas of focus for integrating diverse communities into emergency preparedness. Two assumptions underlie this focus: First, to be effective in reaching these populations, programs and policies will require adaptation not just at the community level but also at state and national levels; and second, the needs of diverse populations must be integrated not only with more self-evident areas, such as risk communication and community engagement, but also with many other preparedness priority areas within public health such as surge capacity, quarantine, and isolation.

■ **Emergency risk communication strategies.** Conclusions from our review reinforced the belief that informing diverse communities will require agencies and providers to tailor public health messages, use trusted messengers, and use channels likely to result in populations that are knowledgeable and willing to undertake and adhere to recommendations.³⁷ To achieve this objective will require not only translation of related materials but also adaptation to ensure their accuracy and acceptability. Simply translating materials might not suffice if language is offensive, unacceptable, or perceived differently by people of different race/ethnicity. Expanded use of audio/video tools, printed materials with pictograms (especially for people with low literacy), interpreters, and other channels of communication might need to be part of this repertoire.

Finally, who delivers the message and where that message is delivered are critical to its acceptability and comprehension among diverse residents. For example, a federal government official might not be the best source for communicating on preparedness before immigrants or among African Americans familiar with the legacies of Tuskegee and especially with Hurricane Katrina. Alternatively, trusted sources in or familiar with these communities might be much more likely than other sources to have preparedness communications received, understood, and ac-

cepted. This includes both individuals and channels such as media controlled by racial/ethnic groups, faith-based organizations, community leaders, and community-based outreach workers.³⁸ To that end, community engagement is essential for fully integrating diverse populations into programs that traverse the spectrum of preparedness requirements. Resources such as the American Medical Association's report on the dimensions of communication in health care as they affect vulnerable populations may have considerable relevance and applicability for emergency risk communication as well.³⁹

■ **Public health training content.** People charged with carrying out public health preparedness planning and implementation participate in a variety of training activities. Identified government- and community-based programs offer some direction for involving diverse communities. These and other programs should expand or adapt their protocols to include general as well as strategic practical education, tailored to the needs of training participants. For example, tabletop exercises for the American Red Cross or emergency responders should be constructed to present how an event would unfold in a neighborhood composed primarily of Spanish-speaking residents, or where there may be a mix of minority and white residents. Training programs also should consider adding specific content to incorporate unique circumstances of their diverse communities. For example, overcoming distrust may be of paramount importance, if not a first step, in immigrant or other communities with prior negative experiences with government programs.⁴⁰ Similarly, assuring availability of interpreters or language lines is likely critical for those with limited English proficiency. In addition, lessons learned from diversity and health as in the issuance of National Standards of Practice for Interpreters in Health Care may offer guidance in assuring adequacy of interpretation in emergencies.⁴¹ These and other racially and culturally relevant content should be considered in the context of core preparedness functions and, unlike most current programs, should occur more than one time and beyond introductory levels.

■ **Coordinating federal, state, and local resources, roles, and responsibilities.** The documented lack of information and guidance on coordinating responsiveness and responsibilities is a major barrier to implementing effective preparedness programs for diverse communities. Given the complexity of population need in the context of emergencies, coordination at all levels of preparedness will need to occur. Agencies and groups representing diverse constituents at the local level, for example, can facilitate critical linkages between service sectors such as health care providers, public health, and housing or emergency relief. Guidance from representative organizations can help states and federal agencies in formulating effective strategies for reaching racially/ethnically diverse vulnerable populations. Part of this coordination effort should include centralizing information, resources, and initiatives and offering a related e-mail information and discussion list that can link expertise and experience with the needs of agencies and organizations charged with preparedness responsibilities.

■ **Evidence-based measurement and evaluation.** Efforts to assess the effectiveness of preparedness programs can benefit from including measures to determine the presence of disparities in both processes and outcomes. For example, some localities that have developed sociodemographic profiles of their communities can evaluate their risk communication strategies in planning for an event both generally and for specific culturally diverse communities whose English proficiency is low by asking questions around comprehension and acceptability of translated materials. Similarly, localities can determine the differential effectiveness of their programs for subgroups by assessing adherence to evidence-based service and treatment protocols and access to care, in addition to traditional measures of morbidity and mortality.

■ **National and state preparedness policies and program priorities.** State and community agencies and organizations are the primary players in implementing related interventions; however, state policymakers and the federal government play critical roles in bringing attention to and supporting the full engagement of diverse residents. The emerging state and federal leadership offers an important opportunity to identify and advance critical diversity objectives. For example, for monitoring and measurement, discussions around racial/ethnic disparities for state and federal governments have suggested that they establish standards and expectations in the effectiveness of risk communication. Deviations from those standards as they affect varied populations can offer measures determining equality of application and effect.⁴² Federal and state governments (as well as foundations and other private-sector organizations) can direct specific support to address the major gaps in coordination and shortcomings in risk communication and other areas, while also testing and expanding the application of innovations.

Finally, there is a need to draw on the expertise and integrate the perspectives of key organizations and individuals in the fields of cultural competence and disparities reduction with public health preparedness. Engaged communities can share their experiences to assist related initiatives elsewhere. Bringing together these resources will help incorporate diversity more fully into emerging initiatives and policies for communities across the nation.

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Initial and selected findings were presented at the National Emergency Management Summit in New Orleans, Louisiana, 5 March 2007.

NOTES

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