
Primary Health Care and the Midwest Flood Disaster

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Synopsis

The Midwest flood disaster of 1993 ravaged communities across a 9-State area. Homes were destroyed, roads closed, and services disrupted. Economic costs, including loss of revenue from farming and loss of jobs, are estimated at more than \$1 billion. Even as people continue to rebuild their lives 1 year later, renewed flooding has occurred in some areas.

A community-based primary health care system can be described as a system of services that (a) offers all members of a family continuous, comprehensive, quality health services throughout their lives; (b) includes case management and coordinated referrals to other related services when necessary; (c) is usually provided by family practitioners, general internists, general pediatricians, obstetricians-gynecologists, nurse practitioners, certified nurse midwives, and physician assistants; and (d) has community involvement in the development and management of the system to assure that it meets the changing needs and the diversity of the people it is designed to serve.

This paper uses the floods to describe the impact of a disaster on primary health care services and primary health care systems. This includes changes in the demand for services (as evidenced by the frequency and type of patient visits) and the ability of the system to respond to these changes. The effect of a disaster on access to primary health care is discussed.

MANY COMMUNITIES in the United States lack an adequate health care system or sufficient providers to meet the existing need for primary health care. Even where services are available, they may not be accessible to some people because of cost, language or cultural barriers, lack of transportation or child care, or other reasons. Poor and low income people, minorities, and special populations—the homeless, mentally ill, elderly, adolescents, migrants and seasonal farmworkers, immigrants, people with HIV-AIDS, people with physical disabilities, and so on—can be at particular risk of lacking access. A major disaster like the Midwest floods of 1993 affects both primary health care services and systems and can create a new vulnerable population that may also experience short and long-term access problems.

Primary Health Care Following a Disaster

When disaster first strikes, accidents or emergencies are the most common reasons for people to seek health care. In most cases, the rapid response of local

providers of care, disaster medical assistance teams, volunteers, and others helps to assure that accident and emergency patients receive appropriate intervention. During this time, there is usually a decrease in visits for diagnosis or treatment of minor illnesses and chronic conditions.

After the initial emergency phase, the need for primary health care services is likely to increase. Along with the gradual resumption of routine visits for primary care, there is both an increase in the number of visits and in the number of new patients seeking services.

The increase in primary health care visits following the initial phase of a disaster stems from many sources, including the disruption of routine health maintenance behaviors like taking daily medications for diabetes, hypertension, or other chronic conditions. Contaminated water, sewers, or food can also lead to illnesses and increased visits. Visits for injuries can continue for a long time as the clean up and repair goes on.

Perhaps even more significant are visits resulting

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from the stress caused by the disaster itself. For example, depression, domestic violence, and substance abuse problems that are either exacerbated by or a direct result of the disaster can be widespread and may be either a primary or secondary reason for increased primary health care visits.

In addition to increased visits by their current patients, public health care facilities such as community health centers can expect an influx of new patients following a disaster. Although some of these new patients may not have needed health services previously, there are others who may have lost their regular source of care (facility closed due to damage, provider no longer available) or be unable to use their regular source of care (roads closed, loss of insurance coverage, and so on).

Depending on the nature and extent of the disaster, its aftermath is the time when the primary health care system may be least able to provide needed services. A health care system, especially one serving the poor, may have been inadequate or overburdened before the disaster, and its ability to respond is often adversely affected by destroyed or damaged buildings and equipment, lack of drugs and other supplies, and increased shortages of health care providers. Communication may be difficult, and local services for water and sewage treatment or contracted services for things like laboratory work or laundry may have been affected. Providers and other staff members also may have suffered personal loss, limiting their ability to provide services. The suboptimal functioning of the health care system can reduce the availability of services and limit access to care.

Although data are limited, the 1993 Midwest floods have affected the demand for primary health care services in some regions, and this demand is challenging the systems that provide these services. Following are some examples:

In the 3 months following the Midwest floods (August through October 1993), Primary Health Care, Inc., a federally funded community health center in Des Moines, IA, experienced a 32-percent increase in primary health care visits. The increase anticipated

prior to the floods was 11 percent. During this same period, the center had 360 new patients, a 30-percent increase over the 279 new patients who came in March through May 1993, prior to the floods. These data were reported in January 1994 by Dr. Bery Engelbretson, Executive Director of Primary Health Care, Inc.

In St. Louis, MO, Grace Hill Neighborhood Health Center, also a federally funded community health center, started a Health Care for the Homeless Program in St. Charles County in April 1993. There were 30 encounters in June, the program's third month, but more than 200 in July and nearly 500 in October after renewed flooding in the county, according to a personal communication from Eloise Crayton, Neighborhood Health Center, Inc., in February 1994.

The State of Missouri has reported significant increases in the incidence of domestic violence and alcohol consumption in areas where the population was affected by the floods. The system of shelters that serve as the State's main resource for battered women had a 111-percent increase in the number of women that had to be turned away because of lack of space in September 1993 compared with September 1992. In Jefferson City, hotline calls increased 27 percent and shelter requests in October 1993 rose 42 percent compared with October 1992. Other areas report similar increases in domestic violence, with alcoholism or substance abuse cited as a correlating factor, according to information provided by the Office of Governor Mel Carnahan on December 15, 1993.

Access to Primary Health Care

The combination of increased frequency of patient visits, increased number of new patients, and a decrease in the ability of the system to provide services typically results in decreased access to primary health care.

In the Midwest, the floods created new barriers to obtaining health care. Numerous people who previously had a regular source of health care became homeless or displaced, moving frequently to shelters or temporary housing. Others lost jobs or faced new financial burdens. Transportation was a problem for many because of the loss of vehicles, damaged roads, or reduced public transportation.

While a disaster may not directly result in illness, it can decrease access to health care services, prescription drugs, and other health or medical

equipment and supplies. Certain populations, such as the elderly who are less mobile and less adaptable to emergency situations, are particularly vulnerable.

The needs of special populations should be considered in disaster situations. Each of these groups has special needs that may be exacerbated or created by a disaster, resulting in new barriers to care. Health care providers need to be aware of different physical and social responses to stressful conditions, and they should be prepared to address cross-cultural mental health issues.

Needs Assessment

To determine the primary health care needs in a community following a disaster, the entire range of primary health care services should be inventoried, including services to treat injuries and acute and chronic illnesses, and programs for family planning, maternal and child health, dental care, mental health, and preventive services such as immunizations. The availability of case management and outreach is particularly important following a disaster and should be given high priority.

The assessment should include current needs as well as short and long-term projected needs, which are not only likely to increase, but also to change over time. For the Midwest flood disaster, it is expected that the flood-related primary health care service needs will continue to evolve for several years. The lingering effects of stress-related factors such as loss of loved ones, homes, farm land, security, belongings, neighbors, business, and employment must also be considered.

All geographic areas, regardless of whether they currently have Federal resources, such as a federally funded community health center or a National Health Service Corps provider, for example, and regardless of whether the area has received a Presidential Disaster Declaration, should have a needs assessment if they have been affected by the disaster.

Identifying the primary health care needs in a community requires assessing both the service requirements and the resources (financial and nonfinancial) of a community. States can use their Primary Care Access Plans to help determine changes in both needs and resources as a result of a disaster. The Primary Care Access Plans, required by the Bureau of Primary Health Care (BPHC) of the Public Health Service (PHS), contain baseline data that identify resources on a county and, in some cases, sub-county level, and prioritize needs within a State. These plans can be used to measure changes following a disaster.

Primary health care facilities like community health

centers can also use the "Primary Care Facility and Program Assessment Guide" developed by BPHC to determine their needs (1). The State or regional primary care association is an important resource to assist primary care facilities in assessing their needs.

Determining the needs for primary health care services after a disaster is the responsibility of the affected State or county. Early involvement of key participants is crucial to identifying needs and restoring services. Key participants in this process are the State health officer and appropriate components within the State health department and local health departments, as well as nongovernment organizations such as the State or regional primary care association, other nonprofit agencies, and volunteer organizations. The PHS Field Office for the affected area is the Federal point of contact for the State.

In the Midwest, entire States were affected by this disaster. The nine with declared disasters areas were Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin. Most disasters are more localized. Regardless of the scope of the area affected, it is important to conduct a thorough needs assessment as soon as possible so that services can be restored quickly.

Federal Response

The initial response to the 1993 Midwest flood disaster brought medical equipment, supplies, and technical experts, including clinicians, into the affected areas to provide immediate assessment, coordination, and services to those in need. The restoration of primary health care services and the rebuilding of primary health care systems began soon afterwards. Federal assistance was provided to assist States in identifying short- and long-term needs, in developing strategies to address the needs, and in obtaining resources to help alleviate the needs.

PHS, an agency of the Department of Health and Human Services (HHS), is the lead Federal agency responding to public health and medical care needs during an emergency. Through the PHS Office of Emergency Preparedness, the Midwest Flood Health and Medical Task Force was formed to develop and implement a coordinated, multi-State strategy to address health and medical issues resulting from the Midwest flood disaster. The Task Force consisted of seven working groups—primary care, mental health, food safety, environmental health, disease control and surveillance, vector control, and public communication and information management.

The primary care workgroup of the Task Force was formed to address the primary health care and social

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service needs of the nine States affected by the floods and assure that the Federal response to the disaster included comprehensive planning and multi-agency coordination. It was chaired by the Deputy Director of BPHC, who represented the Health Resources and Services Administration (HRSA) of PHS and included the PHS Regional Health Administrators from the affected regions (Region V, Region VII, and Region VIII) and representatives from the affected States. The Administration on Aging (AoA) and the Administration on Children and Families (ACF), both agencies of HHS, were invited to participate in the workgroup to facilitate a comprehensive and coordinated response.

Funding Resources

The Congress appropriated \$75 million in Supplemental Contingency funds for PHS to address the health and medical needs in the nine flood-affected States. To access these funds, States first had to apply for funds from the Federal Emergency Management Agency (FEMA). Only requests that were not approved by FEMA could be considered for PHS Supplemental Contingency funding.

The primary care component of the Midwest Flood Health and Medical Task Force was initially allocated \$36 million. Of this amount, AoA received \$7 million, ACF \$20.8 million, and HRSA \$8.2 million. Additional funds were provided subsequently as other needs were identified.

As part of the recovery efforts, AoA provided funding through its Disaster Advocate Program and gap-filling Disaster Services Program. The Disaster Advocate Program assists older persons to access needed services and provides emotional support for frail or impaired older persons. Gap-filling Disaster Services are any services needed and not currently available or accessible to assist older persons with recovering from the disaster. They can cover assistance with household chores, transportation,

meals programs, legal assistance, repair services, and so forth.

ACF expanded the Social Services Block Grant and Community Services Block Grant Programs in the States affected by the floods. These programs provide transportation, family counseling, child care, food and personal items, cleaning supplies, weatherization of homes, repair and replacement of furnaces and water heaters, utility assistance, home repairs, emergency assistance, moving-relocation assistance, outreach and case management for the elderly, protective child welfare services, and supportive services for the homeless or displaced.

BPHC provided funding to community health centers, migrant health voucher programs, State health departments, and a primary care association. These funds were to

- expand primary care services, outreach services, health services for the homeless, primary care services to migrants, home visits by public health nurses, family planning services, and clinical services to the elderly;
- provide additional health care providers and personnel;
- establish county health units to provide primary health care services;
- repair, renovate, and clean health care facilities;
- provide equipment and medical supplies;
- cover uncompensated care, increase sliding fee adjustments, and service delivery costs; and
- provide portable dental equipment, a dental sealant program, and additional dental providers.

The agencies of the Primary Care Workgroup (HRSA, ACF, AoA) are continuing to monitor the health and social services needs in the Midwest.

Discussion

The United States has experienced several major disasters in the last few years, including Hurricanes Hugo, Andrew, and Iniki, the Midwest flood disaster, and the California earthquakes of 1989 and 1994. With each disaster, knowledge and expertise increases, and the ability to respond effectively improves. As a result of lessons learned from Hurricane Andrew, PHS was able to form the Midwest Flood Health and Medical Task Force rapidly, greatly enhancing coordination between and among Federal agencies and States. Applications for PHS Supplemental Contingency Funds were reviewed quickly and grant awards issued in a matter of weeks. Onsite technical assistance was provided throughout

the process.

However, the provision of resources to a disaster-struck area raises difficult national policy issues. For instance, many communities in the Midwest that were affected by the floods had inadequate primary health care services before the disaster. Should services be restored only to their pre-disaster condition, or is this an opportunity to expand and improve conditions? Also, other communities within a State may have needs that are greater than those of communities affected by the floods. Should Federal funds be provided to disaster-affected areas when other areas have greater needs?

These issues pose a dilemma for health planners, administrators, the Congress, and government officials. Although there is no clear answer, it is useful to note that the PHS Supplemental Contingency funds were made available to provide additional needed resources to affected States as quickly as possible to meet the excess demand for services attributable to the flood. Providing an infusion of resources into a community struck by a disaster when other communities have more severe ongoing needs may appear unfair initially. The ripple effect of a disaster, however, with the loss of homes, jobs, support systems, and lifestyle, calls for a rapid and sustained response to prevent further loss and to rebuild lives.

Building primary health care systems is a develop-

mental process that requires ongoing community involvement and support. It also requires an increasingly complex level of technical expertise to manage the clinical, financial, and administrative demands of the system. To address the existing need of increased access to primary health care services for the underserved, PHS provides support to community and migrant health centers, health care for the homeless programs, the National Health Service Corps (which makes available primary care providers such as physicians, nurse practitioners, dentists, and others to areas that are designated as health professional shortage areas), and numerous other programs.

The Midwest flood disaster devastated the lives of many people and continues to affect the lives of countless others. In the midst of this adversity lies the opportunity to improve the conditions of the people affected by the floods. Assuring access to primary health care services in communities affected by the floods contributes greatly to the restoration of people's lives and improves their well-being.

Reference

1. Emergency response manual for primary care. Bureau of Primary Health Care, Health Resources and Services Administration, Public Health Service, Bethesda, MD, 1994.