National events like the terrorist attacks of 2001 and Hurricanes Katrina and Rita have focused attention on the need for recovery planning. Citizens who are physically and mentally healthy are necessary for any community to recover from a disaster. While there are a plethora of resources to assist state health agencies in planning for response operations, there are few resources available to plan for recovery operations.

Part of the challenge in developing recovery plans is that it can be difficult to distinguish between response and recovery activities. While they can be similar, the intent of the two is different. Disaster response is focused on the immediate need to protect human life and the physical infrastructure from the immediate effects of the disaster. Recovery, on the other hand, is broader in scope. The goal of recovery is to ensure the economic sustainability of a community and the long term physical and mental well-being of its citizens, to rebuild and repair the physical infrastructure, and to implement mitigation activities to reduce the impact of future disasters. The state health agency has a key role to play in all of these response and recovery activities.

Any disaster, no matter how large or small, disrupts the daily activity of a community. Initial response activities are necessary to protect citizens and infrastructure, but recovery activities allow a community to come back from a disaster. At its core, disaster recovery focuses on a return to order and normalcy within a community following a disaster.

One of the major challenges in defining recovery is that both the affected community and the disaster itself are unique. What any given community must recover from can vary considerably. Pre-event mitigation and response plans can have an impact on the level of damage

a community sustains after a disaster and this in turn will dictate the level and type of response activities that are necessary.

Also, more so than other aspects of the emergency management cycle, recovery can have profound impacts on the social, cultural and economic standing of a community. These effects should be acknowledged and addressed during the recovery process. Recovery can also mean different things to different communities. For some, recovery is a return to the way things were before the disaster. For others, recovery is an opportunity to rebuild better and stronger.

This issue brief frames some of the considerations states take into account when developing public health recovery plans.

Pre-Event Planning for Post Event Recovery

Planning for recovery is most effective if done before an event occurs. Recovery is a dynamic process and planning for every circumstance is often impossible, but a robust recovery plan acknowledges that unexpected contingencies will occur. It can provide a framework for the state health agency to adapt to the evolving situation[1].

State health agencies face a specific set of challenges in developing their own recovery plans. Little guidance and technical assistance, tailored for state health agencies, is available in comprehensive all-hazards plans. However, some of the guidance available to the emergency management community can be modified to apply to the public health needs of recovery.

Disasters have a huge impact on the physical and mental well-being of a community. State health agencies play an important role in protecting the safety and health of community

members as recovery efforts are under way. Agency personnel are directly involved in recovery activities such as environmental clean-up, disease monitoring and surveillance, public education campaigns, ensuring mental health services, and bringing hospitals and other health care facilities back on-line.

Public Health Activities in Recovery

- Restore health services and environmental safety to pre-event levels.
- Provide long-term follow-up to those affected by threats to the public's health.
- Implement recommendations from after-action reports following threats to the public's health.
- Restore health services and environmental safety to pre-event levels by identifying and implementing recommended changes documented in post-event evaluations.
- Ensure sustained, basic and surge capacities of public health resources to prevent, plan for, respond to, and recover from disasters.
- Address the psychosocial needs of impacted populations and responders during and after an emergency[2].

There is never ample time after a disaster to develop a long-term recovery plan that best meets the community's needs. Without clearly articulated goals and objectives, decisions made immediately following a disaster could limit the range of opportunities for long-term community recovery[3]. Pre-event planning provides the opportunity to develop partnerships that can sustain a successful long-term recovery process. For the state health agency, key partners can include hospitals, community health centers, emergency medical services, and the mental health community.

Recovery often takes much longer and involves a more complex set of activities than response activities. Recovery should be a deliberate, planned process that allows the community to define its own goals for recovery.

An essential purpose of the plan for post-disaster recovery and reconstruction is to provide some vision that serves as a beacon for decision makers and some framework within which decisions will be taken[3].

Managing recovery by goals and objectives, as opposed to activities, is one way to plan for recovery from a disaster, regardless of its cause. Four factors should guide the planning process: goals, strategy, priorities, and criteria[3]. For example, a community can collectively decide that its top recovery goals include having citizens return to their homes and maintaining access to care for the indigent populations. For each of these goals, a strategy should be developed to achieve the goal (e.g., restoring utilities before people return to their homes).

With goals and strategies identified prior to a disaster, action steps can be outlined after the event that take into account the social, economic and environmental conditions created by the disaster. Given that resources for recovery will be limited, goals should be prioritized based on pre-defined criteria that incorporate the possible condition of the community after the disaster, as well as local values and politics[3]. For example, Florida's plan states that the first step in the recovery process will be bringing essential services back online. Recovery can be considered "complete" when all the objectives have been met[4].

There are other concerns that should also be addressed prior to an incident. The delineation of key response and recovery roles and identifying where the decision making authority will be located within the state health agency will reduce confusion after an event.

It is important to have the state health agency legal counsel play an active role in developing and reviewing the agency's recovery plan. Federal aid, in the form of technical assistance, loans, loan guarantees, grants, and temporary housing, is administered through a variety of programs to both individuals and states. Each of these programs has legal requirements for

eligibility, and legal counsel should be consulted to ensure that the state is in compliance with the requirements of the programs[5].

New York State's Experience with Disaster Recovery

In 2006, New York experienced two major events that required the activation of both response and recovery activities. In June 2006 the state was hit hard with major flooding and in October, an early lake-effect snowstorm struck upstate New York. Policies and programs that were in place to assist New York with disaster recovery:

- New York has legislation in place which allows the Governor to make resources available if a federal disaster declaration has not yet been made. In particular, the state can authorize emergency Medicaid payments to a hospital.
- New York has built-in redundancy in their communication system which helps them ensure a seamless transition between response and recovery and allows for continuity in state services. During the October snow storm, health agency call centers in affected regions of the state were able to bounce calls to other call centers in the state.
- New York is actively working with their hospitals to develop Continuity of Operations plans to ensure essential services are provided.

Another key partner in the recovery process is the private sector, which will have access to resources and supplies that the state health agency may need during recovery, as well as expertise in areas that would benefit the state, such as supply chain management.

Health Care System Recovery

A robust health care system is critical to both response and recovery efforts. Immediate health consequences will need to be addressed, along with ensuring care for pre-existing conditions. Restoration of the state health care system will be one of the agency's primary responsibilities.

As such, the state health agency may work closely with hospitals and other health care entities to identify risks and develop recovery plans.

The long-term economic stability and vitality of a community also depend on the presence of a sound health care system. Without access to proper care, community residents will leave and not return. However, one challenge is that the majority of hospitals and other health care providers in any community are generally privately owned, run on thin margins, and are expensive to build and repair. Health care system administrators will need adequate numbers of "paying patients" to make recovery a realistic option. It may be necessary to develop public policy to ensure that hospitals and other health care facilities have adequate resources to remain solvent during recovery[6].

Mississippi was faced with the challenge of ensuring its health and human services sector fully recovered in the aftermath of Hurricane Katrina. The Mississippi health and human services sector, in addition to providing essential services, also represents almost 12 percent of the state's economy and eight percent of the state's workforce, and is vital to the state's recovery effort. The Mississippi Governor's Commission on Recovery developed recommendations to ensure the expeditious recovery of the health and human services infrastructure in the state. One of the key recommendations proposed that the Mississippi Department of Health revise its Certificate of Need (CON) application process for health care institutions. The change means a health care facility must receive a CON from the Department of Health before undertaking any capital investment of more than $2 million. In non-disaster times the Department of Health uses the CON to control over-utilization of health care services. However, the regulations were not designed for a disaster on the scale of Hurricane Katrina. The Commission has now recommended development of an exemption or waiver for rebuilding facilities damaged by the storm.

Hurricane Katrina identified many challenges in Mississippi's trauma care system, including

inadequate funding before and after Hurricane Katrina, insufficient physician coverage, and poor coordination and allocation of resources. The Commission has asked the Department of Health to conduct an assessment of the state trauma system and to use the results of the assessment to assist hospitals and other emergency care providers to rebuild and improve the system[7].

State health agencies also have a role in ensuring that mental health services are provided to disaster victims. Tasks include coordinating mental health services and crisis counseling for both victims and responders, conducting surveillance on mental health impacts to inform programs and policies, and developing public education campaigns on signs and symptoms and available mental health services[8].

Case Study in Disaster Recovery: California

California's annual battles with wildfires have led to a wealth of recovery experiences and lessons learned. Among them:

- Response and recovery should begin at the same time. This is a recent policy shift brought about by studying response and recovery efforts following Hurricane Katrina.
- Wildfires are an anticipated occurrence. There is a regular item in the state budget for wildfire response and recovery activities that is adjusted on an annual basis.
- Better policies are needed to improve reimbursement of the private health care system for their response activities.

Short-Term and Long-Term Recovery

Disaster recovery includes meeting short- and long-term goals. Short-term recovery and response occur simultaneously and examples include public education campaigns on health and safety risks and environmental assessment. Addressing the mental health effects of a disaster may become part of a long-term recovery process, but is a significant component of an immediate recovery plan. The urgent environmental impacts of a disaster should also be addressed as soon as possible after an event.

Long-term recovery begins when immediate health and safety needs have been met and the focus shifts to reconstruction. Long-term recovery can be a lengthy process, taking years depending on the severity of the disaster. It is at this time that the community has the greatest opportunity to implement mitigation programs that can reduce the future impact of conditions that increase community risk[9].

Disasters are focusing events. During their immediate aftermath, as the community begins the process of recovery, its attention is focused on its own risks and vulnerabilities. During this time the community can address these issues and take actions designed to reduce the impact of future disasters[5].

Mitigation Enhances Recovery

Pre-event planning allows a community to address sustainable recovery efforts. These are broader than simply rebuilding after the disaster. Sustainable recovery is often slower and more deliberate and is reached when a community is able to survive future disasters[3]. As a result, there should be consensus before a disaster strikes that the community is committed to this level of recovery effort.

Mitigation involves activities that can prevent or reduce the impact of a disaster and should be a key component to the recovery process. While mitigation ideally would be an ongoing activity, the aftermath of a disaster can create new opportunities for new mitigation activities, the most important of which is that hazard mitigation becomes a public priority.

Mitigation is often thought of in terms of building codes and structural integrity[3]. The entire built environment is affected by disasters. Mitigation activities that look beyond buildings contribute greatly to a more sustainable community. Mitigation activities focused on houses and public places can directly reduce injury and mortality after a disaster[10]. Public health has direct responsibility for mitigation activities addressing the health care system and public health services such as environmental and water safety.

"Mitigation and prevention are the centerpiece of all long-term recovery processes because long-term development and recovery depends on the ability of the state and communities to ensure that the risk of future damage is minimized and controlled. Essentially, mitigation should be the foundation of sustainable community development."

– Recovery From Disaster – Minnesota Homeland Security and Emergency Management[11]

Conclusion

Planning for disaster recovery should be done with as much consideration as other aspects of emergency management. Recovery encompasses more than just restoring the physical infrastructure of a community. It involves a wide array of social, economic, and political factors that are necessary to ensure that the community remains vital. A comprehensive recovery plan, based on the principles of sustainability, is a vital tool to state health

agencies as they set out to assist their communities in recovery efforts.

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Acknowledgements

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