TRACIE

HEALTHCARE EMERGENCY PREPAREDNESS INFORMATION GATEWAY

Recovery Planning Topic Collection 10/6/2016

ASPR

ASSISTANT SECRETARY FOR PREPAREDNESS AND RESPONSE

Topic Collection: Recovery Planning

Planning for recovery is just as essential as planning for response. Ideally, recovery plans would be developed before a disaster and would begin to be implemented during the response phase to support healthcare facilities and providers in returning to normal or establishing a new normal in order to provide continued care to the community following a disaster or emergency, and maintain financial viability. The resources in this collection highlight planning guidance/ guidelines, tools, lessons learned, and promising practices to assist healthcare emergency planners with recovery planning.

Each resource in this Topic Collection is placed into one or more of the following categories (click on the category name to be taken directly to that set of resources). Resources marked with an asterisk (*) appear in more than one category.

Must Reads

Federal Emergency Management Agency. (2015). National Disaster Recovery Framework.

> This document provides guidance to support recovery by disaster-impacted states, tribes and local jurisdictions. It defines core recovery principles; roles and responsibilities for coordinators and stakeholders; communication and collaboration among stakeholders; recovery planning guidance; and ways that communities can rebuild stronger, smarter, and safer.

Harvard School of Public Health Emergency Preparedness and Response Exercise Program and Massachusetts Department of Public Health. (2013). Essential Functions and Considerations for Hospital Recovery Version 2.

> Based on an extensive literature review (including federal guidelines), review of hospital plans, interviews with staff from hospitals affected by critical incidents, and lessons learned from a 2013 workshop on recovery-based lessons learned, the authors developed this document to help hospitals prepare to manage recovery from all types of events.

Institute of Medicine. (2012). Post-Incident Recovery Considerations of the Health Care Service Delivery Infrastructure - Workshop Summary.

This document is a summary of a workshop session during the 2012 Public Health Preparedness Summit that focused on sustaining health care delivery past the response phase of a disaster and the full recovery of local health care delivery systems. The session focused on identifying services to support the affected health care service delivery infrastructure and ways to facilitate long-term recovery. It also includes lessons learned from prior disasters to inform pre-incident planning for recovery and mass casualty care.

Institute of Medicine. (2015). Healthy, Resilient, and Sustainable Communities After Disasters: Strategies, Opportunities, and Planning for Recovery. (Book available for purchase; PDF is free for guests to download.)

This book is the result of a consensus study that included several public and closed meetings on disaster recovery. It emphasizes the need to understand that the disaster recovery process offers communities the unique opportunity to not only "return to normal," but to improve upon the status quo. Doing so can improve a community's resilience, health, preparedness for future events, and sustainability. Recommended: Review “Summary of Findings” sections to more easily navigate this extensive resource.

Raske, K. (2006). Greater New York Hospital Association Recovery Checklist for Hospitals After A Disaster. Greater New York Hospital Association.

Hospital staff can utilize this facility recovery checklist to check for potential issues in the facility after a disaster.

Runkle, J., Brock-Martin, A., Karmaus, W., and Svendsen, E. (2012). Secondary Surge Capacity: A Framework for Understanding Long-Term Access to Primary Care for Medically Vulnerable Populations in Disaster Recovery. American Journal of Public Health. 102(12):e24-32.

The authors advocate for the expansion of surge capacity plans to meet the chronic health care needs of vulnerable populations that increase following the acute phase of disaster response. They use a health services model to identify factors that perpetuate health disparities following disasters. To address these disparities, the authors recommend a baseline assessment of needs, with the expectation that such health care needs will expand post-disaster.

U.S. Department of Health and Human Services, Office of the Assistant Secretary of Preparedness and Response. (2015). Healthcare COOP and Recovery Planning: Concepts, Principles, Templates and Resources.

This guide includes an overview of healthcare continuity of operations planning, customizable templates, and other related resources. It includes links to information on continuity planning, online courses, and other COOP resources.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2015.) HHS Response and Recovery Resources Compendium.

This compendium offers an easy-to-navigate, comprehensive, web-based repository of HHS products, services, and capabilities available to state, tribal, territorial, and local agencies before, during, and after public health and medical incidents. The information spans 24 categories, and each category showcases the relevant disaster resources available from HHS, a brief description of each resource, and information on accessing each one.

U.S. Department of Homeland Security, Office of Cyber and Infrastructure Analysis. (2014). Sector Resilience Report: Hospitals.

This report features information on the "Hospitals Segment" within the Healthcare and Public Health Sector and Direct Patient Healthcare Subsector. The authors share results from assessments and recommendations for improving system and facility resilience.

U. S. Government Accountability Office. (2015). Hurricane Sandy: An Investment Strategy Could Help the Federal Government Enhance National Resilience for Future Disasters.

The U.S. Government Accountability Office was asked to review federal efforts to strengthen disaster resilience during Hurricane Sandy recovery. This report addresses (1) how federal recovery funds were used to enhance resilience; (2) the extent to which states and localities were able to maximize federal funding to enhance resilience; and (3) actions that could enhance resilience for future disasters.

Zane, R., Biddinger, P., Gerteis, J., and Hassol, A. (2010). Hospital Assessment and Recovery Guide. U.S. Department of Health and Human Services.

This guide is designed to help hospital staff conduct an initial assessment of a hospital after a closure or evacuation due to an emergency event.

Education and Training

*Acosta, J.D., Chandra, A., Xenakis, L., et al. (2015). Partnerships for Recovery Across the Sectors (PRACTIS) Toolkit. RAND Corporation.

This toolkit incorporates lessons learned from a study on New York City's recovery from Hurricane Sandy into guidance for local health departments (LHDs). The toolkit provides LHDs three tools: (1) a sample survey and steps for fielding the survey to help LHDs locate and identify the key community-based organizations (CBOs) that can contribute to disaster response and recovery, (2) a quality improvement guide and sample quality improvement report to help users form guidance concerning partnerships between LHDs

and CBOs (and between CBOs), and (3) a tabletop recovery exercise for LHDs and CBOs.

Chandra, A. and Acosta, J. (2013). Building Resilient Communities: An Online Training. RAND Corporation.

This online, self-guided training takes participants through modules on community resiliency and resources, as well as other topics to enhance their resilience following a disaster. Health centers and hospitals are among the target audiences.

Federal Emergency Management Agency, Emergency Management Institute. (2010). IS-551: Devolution Planning.

This two-hour course is designed to provide both tools and practical knowledge necessary to develop an organization's devolution plans and procedures.

Federal Emergency Management Agency, Emergency Management Institute. (2013). IS-2900: National Disaster Recovery Framework (NDRF) Overview.

This two-hour course provides individuals supporting disaster recovery efforts with a foundation in National Disaster Recovery Framework (NDRF) key concepts, core principles and roles and responsibilities of NDRF leadership (including those of individuals and households to governmental entities at the local, state, tribal, and federal levels, and between public, private and nonprofit sectors.

Mangieri, W., Pereira, E., Chavez, A. et al. (2014). Healthcare System Recovery: Financial Sustainability After a Disaster. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response.

This 90-minute webinar focuses on ways to mitigate post-disaster recovery costs healthcare systems may face.

Event-Specific Lessons Learned

Abramson, D. and Culp, D. (2013). At the Crossroads of Long-Term Recovery: Joplin, Missouri Six Months after the May 22, 2011 Tornado. National Center for Disaster Preparedness, Columbia University.

Researchers interviewed key officials, community leaders, and individuals affected by the tornadoes that struck Joplin in 2011. This report highlights the town's "positive recovery trajectory," due to four critical actions and accomplishments involving: quick debris removal, the rebuilding and reopening of schools, hospital staff being retained while a sponsor committed to building a new facility, and the establishment of the Citizens Advisory Recovery Team.

Abramson, D., Culp, C., Sury, J., and Johnson, L. (2011). Planning for Long-Term Recovery Before Disaster Strikes: Case Studies of 4 US Cities: A Final Project Report. National Center for Disaster Preparedness, Columbia University.

The authors conducted case studies with four cities using four disaster scenarios (earthquake, tsunami, flood, and hurricane) to examine their long-term recovery plans. They conclude that four main variables influence the level of recovery planning: context, governance, framework, and resources.

Arrieta, M.I., Foreman, R.D., Crook, E.D., and Icenogle, M.L. (2008). Insuring Continuity of Care for Chronic Disease Patients After a Disaster: Key Preparedness Elements. American Journal of Medical Sciences. 336(2):128-33.

The authors interviewed 30 key informants, including health and social service providers that provide healthcare to the under- and uninsured along the Mississippi and Alabama Gulf Coast. Pre-disaster issues of importance were patient education and preparedness; evacuation guidance and support; planning for special medical needs shelters; and health care provider preparedness. Post-disaster issues were communication; volunteer coordination/credentialing; and donation management, particularly for medications.

Arrieta, M.I., Foreman, R.D., Crook, E.D., and Icenogle, M.L. (2009). Providing Continuity of Care for Chronic Diseases in the Aftermath of Katrina: From Field Experience to Policy Recommendations. Disaster Medicine and Public Health Preparedness. 3(3):174-82.

The authors interviewed 30 key informants, including health and social service providers that provide healthcare to the under- and uninsured along the Mississippi and Alabama Gulf Coast. Respondents indicated that mental health, diabetes mellitus, hypertension, respiratory illness, end-stage renal disease, cardiovascular disease, and cancer were medical management priorities after a disaster. The most frequently mentioned barrier to providing care was maintaining continuity of medications. Inaccessible medical records, poor patient knowledge, and financial constraints also impacted care. Implemented or suggested solutions included better pre-disaster patient education; support for electronic medical records at community health centers; and better management of donated medications/medical supplies.

Kirsch, T., Mitrani-Reiser, J., Bissell, R. et al. (2010). Impact on Hospital Functions Following the 2010 Chilean Earthquake. Disaster Medicine and Public Health Preparedness. (Abstract only.) 4(2); 122-128.

The authors describe loss of functions and structural damage experienced by hospitals in Chile following a major earthquake. Loss of communications capability was cited by hospital administrators surveyed as being most problematic.

Lee, D., Smith, S., McStay, C., et al. (2014). Rebuilding Emergency Care After Hurricane Sandy. (Abstract only.) Disaster Medicine and Public Health Preparedness. 9:1-4.

The authors describe their experience managing a freestanding emergency department at the Bellevue Hospital Center in New York City following Hurricane Sandy. They provide a model that could possibly be replicated to rebuild emergency care capacity following future natural disasters.

Office of the Inspector General. (2014). Hospital Emergency Preparedness and Response During Superstorm Sandy. U.S. Department of Health and Human Services.

The authors surveyed 174 Medicare-certified hospitals located in declared disaster areas in Connecticut, New Jersey, and New York during Superstorm Sandy and conducted 10 site visits and collected other types of data. They found that a small percent of hospitals (7%) evacuated during the storm (the rest sheltered in place). The report describes several cases of flooded hospitals and recommends continued community disaster collaboration.

U. S. Government Accountability Office. (2015). Hurricane Sandy: An Investment Strategy Could Help the Federal Government Enhance National Resilience for Future Disasters.

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Williams, R., Williams, G., and Burton, D. (2012). The Use of Social Media for Disaster Recovery. University of Missouri Extension.

The authors share lessons they learned from creating and maintaining the "Joplin Tornado Info" and "Branson Tornado Info" Facebook pages.

General Information

Abramson, D., Culp, D., Johnson, L., and Bertman, L. (2012). Disaster Recovery: Guidance for Donors. National Center for Disaster Preparedness, Columbia University.

The authors discuss non-traditional ways that donors can help communities recover and rebuild after disasters. The article includes strategies for supporting recovery and community preparedness for recovery.

Abramson, D., Stehling-Ariza, T., Park, Y., et al. (2010). Measuring Individual Disaster Recovery: A Socioecological Framework. National Center for Disaster Preparedness, Columbia University.

The authors developed a framework for measuring disaster recovery based on five measures: housing stability, economic stability, physical health, mental health, and social role adaptation.

Columbia University, Earth Institute, National Center for Disaster Preparedness. (2010). Day Three- Regional Resiliency and Health Challenges in the Aftermath of Nuclear Terrorism.

This webpage summarizes the agenda and provides a link to the conference proceedings for a conference that explored the after effects of a nuclear detonation, and factors influencing resiliency. Hospital capacity and coordination was one of the key areas identified as being in need of additional resources and attention.

Hardy, D. and Miller, L. (2009). Urban Area Recovery Planning with CBR Hazards: Lessons Learned from Seattle and Denver. Federal Emergency Management Agency.

The document can help emergency planners establish an approach and process for creating a multijurisdictional recovery framework for urban areas. The authors focus on chemical, biological, and radiological events.

Institute of Medicine. (2012). Post-Incident Recovery Considerations of the Health Care Service Delivery Infrastructure - Workshop Summary.

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baseline assessment of needs, with the expectation that such health care needs will expand post-disaster.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2012). Healthcare Preparedness Capabilities: National Guidance for Healthcare System Preparedness: January 2012.

This document outlines eight capabilities for preparedness that should be used to develop and strengthen health care system emergency response capabilities.

U.S. Department of Homeland Security, Office of Cyber and Infrastructure Analysis. (2014). Sector Resilience Report: Hospitals.

This report features information on the "Hospitals Segment" within the Healthcare and Public Health Sector and Direct Patient Healthcare Subsector. The authors share results from assessments and recommendations for improving system and facility resilience.

Zhong, S., Clark, M., Hou, X. et al. (2015). Development of Key Indicators of Hospital Resilience: A Modified Delphi Study. (Abstract only.) Journal of Health Services Research and Policy. 20(2):74-82.

The authors developed a framework for key indicators of hospital resilience, which they categorized into eight domains, 17 subdomains, and 43 indicators (which are functional and fairly broad). They contend that the framework may be used for assessment purposes, as well as to inform priorities for emergency response.

Guidance/Guidelines

Federal Emergency Management Agency. (2015). National Disaster Recovery Framework.

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Based on an extensive literature review (including federal guidelines), review of hospital plans, interviews with staff from hospitals affected by critical incidents, and lessons learned from a 2013 workshop on recovery-based lessons learned, the authors developed this document to help hospitals prepare to manage recovery from all types of events.

Lawrence Livermore National Laboratory. (2012). Key Planning Factors for Recovery from a Radiological Terrorism Incident. Federal Emergency Management Agency.

The authors describe seven key planning factors that can help communities prepare for and recover from a radiological incident. Section 4.2 of the guide focuses on public health and medical priorities.

Louisiana Governor's office of Homeland Security and Emergency Preparedness. (2013). Procurement Guide: Getting and Keeping Your FEMA Grant Dollars.

This guide was created to assist eligible applicants in identifying and applying the required federal regulations (44 CRF 13.36) when using FEMA funds for the procurement of disaster and non-disaster materials, supplies, public works projects and services.

*U.S. Department of Health and Human Services, Office of the Assistant Secretary of Preparedness and Response. (2015). Healthcare COOP and Recovery Planning: Concepts, Principles, Templates and Resources.

This guide includes an overview of healthcare continuity of operations planning, customizable templates, and other related resources. It includes links to information on continuity planning, online courses, and other COOP resources.

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This document outlines eight capabilities for preparedness that should be used to develop and strengthen healthcare system emergency response capabilities.

Virginia Department of Health. (2015). Critical Resource Shortages Planning Guide. Virginia Department of Health.

The resources on this webpage provide guidance on managing shortages of critical resources during the preparedness, response, and recovery phases of a disaster. The Hospital Implementation Guide can help hospital planners develop plans to address shortages in critical resources.

Yale New Haven Health System, Center for Emergency Preparedness and Disaster Response. (2014). A Quick Guide: FEMA Reimbursement for Acute Care Hospitals.

This guide provides information on the Federal Emergency Management Agency's (FEMA) hospital reimbursement policies and the related application process.

Zane, R., Biddinger, P., Gerteis, J., and Hassol, A. (2010). Hospital Assessment and Recovery Guide. U.S. Department of Health and Human Services.

This guide is designed to help hospital staff conduct an initial assessment of a hospital after a closure or evacuation due to an emergency event.

Information Technology (IT) and Utility Issues

*California Emergency Medical Services Authority. (n.d.) Incident Planning Guide: Utility Failure. (Accessed 9/9/15.)

This document includes a series of questions to guide hospitals in planning for utility failures associated with systems such as power, water, heating, ventilation, air conditioning, medical air, vacuum, or medical gases.

Non-hospital Setting

Centers for Medicare and Medicaid Services. (n.d.) Emergency Preparedness for Dialysis Facilities. (Accessed 10/21/15.)

This is a guidance document for chronic dialysis centers to use in the development of their emergency plans. Pre-event planning, response, and recovery are discussed.

Kopp, J., Ball, L., Cohen, A. et al. (2007). Kidney Patient Care in Disasters: Emergency Planning for Patients and Dialysis Facilities. Clinical Journal of the American Society of Nephrology. 2(4):825-38.

The authors provide recommendations for an emergency plan for dialysis patients that includes considerations for continuity of care during emergencies, and recovery in the post-disaster setting. Preparedness tasks to ensure patient safety are presented along a timeline.

Plans, Tools, and Templates

*Acosta, J.D., Chandra, A., Xenakis, L., et al. (2015). Partnerships for Recovery Across the Sectors (PRACTIS) Toolkit. RAND Corporation.

This toolkit incorporates lessons learned from a study on New York City's recovery from Hurricane Sandy into guidance for local health departments (LHDs). The toolkit provides LHDs three tools: (1) a sample survey and steps for fielding the survey to help LHDs locate and identify the key community-based organizations (CBOs) that can contribute to disaster response and recovery, (2) a quality improvement guide and sample quality improvement report to help users form guidance concerning partnerships between LHDs and CBOs (and between CBOs), and (3) a tabletop recovery exercise for LHDs and CBOs.

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This document includes a series of questions to guide hospitals in planning for utility failures associated with systems such as power, water, heating, ventilation, air conditioning, medical air, vacuum, or medical gases.

Denver Urban Area Security Initiative. (2012). Wide Area Recovery and Resiliency Program (WARRP) Denver UASI All-Hazards Regional Recovery Framework.

This document outlines how the Denver Urban Area Security Initiative will make critical recovery decisions at a regional level; the document can also be used by local jurisdictions when developing recovery plans. The authors include annexes on recovering from biological, chemical, and radiological/nuclear incidents.

Raske, K. (2006). Greater New York Hospital Association Recovery Checklist for Hospitals After A Disaster. Greater New York Hospital Association.

Hospital staff can utilize this facility recovery checklist to check for potential issues in the facility after a disaster.

University of North Carolina, Gillings School of Global Public Health. (2015). Disaster Recovery Tracking Tool: Measuring Recovery through Healthy Community Indicators.

This tool provides 79 metrics, organized within 10 focus areas, for facilitating a community's evaluation of disaster recovery outcomes and tracking progress toward recovery. By using this tool, a community can assess pre- and post-disaster conditions, using baseline and current data, and providing the end-user with a valuable means of prioritizing recovery goals and activities. The focus areas and quantifiable metrics support and build community capacity by providing a basis for informed decision-making.

*U.S. Department of Health and Human Services, Office of the Assistant Secretary of Preparedness and Response. (2015). Healthcare COOP and Recovery Planning: Concepts, Principles, Templates and Resources.

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available from HHS, a brief description of each resource, and information on accessing each one.

Agencies and Organizations

Note: The agencies and organizations listed in this section have a page, program, or specific research dedicated to this topic area.

Federal Emergency Management Agency. Recovery Directorate.

Federal Emergency Management Agency. Response and Recovery.

U.S. Department of Homeland Security. Resilience.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. Division of Recovery.

U.S. Recovery Accountability and Transparency Board.

This ASPR TRACIE Topic Collection was comprehensively reviewed in August and September 2015 by the following subject matter experts (listed in alphabetical order): ***Eric Alberts****, BS, FPEM, CHS-V, CDP-1, CHPP, CHEP, SEM, CFRP, FABCHS, Manager, Emergency Preparedness, Orlando Health, Inc. (Hospital System);* ***Paul D. Biddinger****, MD, Center for Disaster Medicine, Massachusetts General Hospital, and Harvard TH Chan School of Public Health EPREP Program;* ***Peter Brewster,*** *U.S. Department of Veterans Affairs, Director, Education and Training;* ***Benjamin Dauksewicz****, MA, CEM, Mount Sinai St. Luke's–Roosevelt;* ***Natalie N. Grant****, MPH, Program Analyst, HHS ASPR, Office of Emergency Management (OEM), Recovery, and Hurricane Sandy Health & Social Services Recovery Support Function Field Coordinator;* ***John Hick,*** *MD, HHS ASPR and Hennepin County Medical Center;* ***Bill Mangieri,*** *CBCP, CHEP, Field Project Officer Region VI, National Healthcare Preparedness Program, Office of Emergency Management, Assistant Secretary for Preparedness& Response, U.S. Department of Health & Human Services;* ***Esmeralda Pereira****, MS, Division Director, Recovery, U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response;* ***Mary Russell****, EdD, MSN, Emergency Services, Boca Raton Regional Hospital; and* ***Matthew L. Smith,*** *Chief, Continuity of Operations Branch, HHS/ASPR/OEM Division of Resilience.*