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**HURRICANE KATRINA: UTILIZATION OF PRIVATE, NON-
GOVERNMENTAL HEALTH PROFESSIONALS
TIME FOR NEW STRATEGIES**

by

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September 2006

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TIME FOR NEW STRATEGIES**

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ABSTRACT

This thesis focuses on the medical as part of the public health response to Hurricane Katrina, specific to the issues of the private, non-governmental health professional. A brief survey was completed by 41 state level Bioterrorism Hospital Coordinators. Information obtained highlights the issues of the inability to deploy these private health professionals. Traditional governmental mutual aid mechanisms do not cover private non-governmental health professionals for workers compensation and death benefits.

A review of the potential deployment mechanisms provides insight to the challenges and complexity specific to private health professionals. The motivation for volunteerism highlights the importance of targeting volunteer activities to the motivation of the individual volunteer. Investigating the impact thwarting the private, non-governmental health professionals may have on future planning and response activities reinforce the need to modify the structures currently in place.

The National Response Plan stresses the importance of including private industry into emergency preparedness and response strategies. This thesis outlines a strategy to pilot a project working with an established state volunteer registry by providing mechanisms to *federalize* those pre-identified, pre-credentialed volunteer health professionals. Once completed, this pilot could be expanded to other states, ensuring a solid mechanism to quickly and safely mobilize this critical response discipline.

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To the Naval Postgraduate School faculty, administrative staff and members of cohort 0501/0502 your dedication to me as an individual and the study of Homeland Security were exceptional and shall be carried forward. .

Finally, this thesis proposes possible beginning steps that may be necessary to truly integrate private, non-governmental health professionals into emergency preparedness, Homeland Security planning and response. The frustration level reached an all time high during Katrina. Clearly a new paradigm is necessary. This thesis is dedicated to health professionals affected during Katrina, those who were able to volunteer, those that wished to but could not and those that work diligently every day caring for their neighbors, strangers and members of their community.

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I. INTRODUCTION

A. BACKGROUND AND OBJECTIVES

Hurricane Katrina struck the Gulf Coast area on August 29, 2005. Although it was anticipated to be a significant storm, the consequences of the Category three storm exceeded all predictions. The storm hit Louisiana, Mississippi and Alabama causing major disruption of all services. The destruction of homes and businesses across the region was devastating, and interruption of the ability to deliver medical services both from an infrastructure and human resources standpoint was catastrophic.

The United States' current medical infrastructure distinguished itself from traditional public health during the 1877 smallpox campaign. It was at this time that the focus on community prevention for public health and the specialized, technical medical care of the individual began to divide public and private health disciplines.¹ This division has continued to evolve over time as evidenced by governmental local and state public health agencies focusing on their specific populations' health and wellness, and only minimal governmental direct medical care facilities. The significance of this disparity is that in Michigan and many other states over 80% of medical health resources are owned and operated by private industry. There are no governmental or regulatory obligations for private, non-governmental health providers to engage in planning or responses to public health or other significant disaster events outside their own jurisdiction. Consistent with the medical communities health missions, private, non-governmental health professionals are willing to assist when needed. This was evident during the Hurricane Katrina response. Challenges exist, however, with the ability to incorporate these health professionals into the mechanisms that currently exist for deploying resources under governmental declarations of emergencies, Incidents of National Significance or other health related emergency. An Incident of National Significance is defined as those high-impact events that require a combined, coordinated response of federal, state, local, tribal and private sector, including non-governmental organizations to save lives and minimize

¹ Laurie Garrett, *Betrayal of Trust* (New York: Hyperion, 2000), 291.

damages.² Critical issues exist in the areas of financial remuneration, workers' compensation and death benefits.³ This issue came to the forefront during Hurricane Katrina when health professionals across the country were identified, registered, and agreed to assist but were unable to do so due to a lack of clear mechanisms and consistent information. Very few states were able to successfully deploy a team of volunteers. This inconsistency continues to significantly impact the medical health response from both the process as well as the psychological impact to health disciplines and serves as the impetus to thoroughly review the events of Hurricane Katrina. This review will summarize the issues associated with aid, the ability or inability to successfully deploy resources, identify strategies, and suggest solutions to fill a significant gap in both local and federal governments' processes to address the medical issues, focusing on health professionals' surge capacity.

B. RESEARCH QUESTION

What are the lessons learned during the Hurricane Katrina response specific to the ability or inability to deploy private, non-governmental healthcare workers? Could thwarting those desiring to volunteer have a significant impact on utilizing these important resources in future Homeland Security initiatives? This thesis will identify a strategic plan and policy recommendations to address inclusion strategies for this valuable resource for Homeland Security preparedness and response at the state and federal levels. A pilot project for the state of Michigan will be proposed for consideration. This pilot could initiate a process to improve mutual aid processes and rectify the disparity with private, non-governmental health professional's inclusion across the nation.

C. SPECIFIC OBJECTIVES

- Assemble information on the various methods used to deploy resources including private, non-governmental health professionals to assist with the Hurricane Katrina response.

² Department of Homeland Security, *National Response Plan, 2004*. Available [online] <http://www.dhs.gov/interweb/assetlibrary/NRPbaseplan.pdf> (accessed December 10, 2005).

³ Federal Emergency Management Agency, Medical Care and Evacuations, FEMA: Public Assistance. Available [online] www.fema.gov/nims/mutual_aid.shtm (accessed July 17, 2005).

- Identify the unique challenges associated with private, non-governmental health professionals that differ from traditional public safety response disciplines.
- Conduct a survey of each state's National Bioterrorism Hospital Preparedness Program focusing on the ability to assist with volunteer, non-governmental health professionals during the Hurricane Katrina response.
- Review the potential psychological implications of thwarting volunteerism of healthcare professionals.
- Develop a strategic plan which includes alternate methods and policy revisions to facilitate the deployment of private, non-governmental health professionals during a mass casualty event, recognizing the needs for adequate professional assurances and mutual aid agreements and/or compacts.

D. SIGNIFICANCE OF THE RESEARCH

Health professionals have a significant role to play in any large scale emergency. Not only do they possess a unique expertise, but a willingness to assist where needed. Current mutual aid agreements and compacts allow for the deployment of governmental resources, but lack the ability to enlist and deploy those disciplines with direct medical care provider's expertise.

The availability to surge health professionals during a governmental declaration of emergency, Incident of National Significance or other health emergency is an identified deficiency at the local, regional, state, and national level. The researcher explored these issues specific to Hurricane Katrina and has developed a strategic plan with specific changes to address this deficiency. These changes should reinforce the pledges made by the Department of Homeland Security (DHS), via the National Response Plan, to partner with the private sector a priority.⁴

⁴ Department of Homeland Security, *National Response Plan*, 2004.

A great deal of work needs to be done both now and in the future to address this complex issue. This thesis closes with a strategic plan that includes policy recommendations for consideration by any entity with responsibility to manage the medical aspects of a mass casualty event. These recommendations include referring to published and researched model mutual aid agreements and compact documents.⁵ Finally, a proposed pilot project in Michigan will be outlined for implementation. The research related to this topic will have a significant impact on the health and welfare of citizens across the country.

E. REVIEW OF RELEVANT LITERATURE

A critical review of the preparedness literature focusing on deployment of assets includes the methods and mechanisms surrounding mutual aid agreements and compacts. This literature is broad in focus and incorporates provisions for federal, state and local governmental agencies. The *National Emergency Management Association (NEMA)*, in February 2004, established proposed model intrastate mutual aid legislation which was used to establish the *Emergency Management Assistance Compact (EMAC)*.⁶ This has provided a framework for state and local governments to model agreements such as the *Michigan Emergency Management Assistance Compact (MEMAC)*.⁷ These materials assist with policy development but also demonstrate deficiencies in disciplines and processes. The private health sector in Michigan and other states has begun to establish mutual aid agreements between like agencies but must expand to contribute to homeland security and defense. In addition, understanding the mechanisms of those deployed directly by FEMA under *The Stafford Act*⁸ as well as those deployed by other professional organizations is critical in understanding the issues surrounding the deployment during Hurricane Katrina.

⁵ National Emergency Management Association, "*Model Intrastate Mutual Aid Legislation*," EMAC 2004. Available [online] <http://www.emacweb.org/docs/Wide%20Release%20Intrastate%20Mutual%20Aid.pdf> (accessed August 21, 2006).

⁶ The National Emergency Management Association (NEMA) Intrastate Mutual Aid Working Group, "Proposed Model Intrastate Mutual Aid Legislation," The NEMA 2004 Mid-Year Conference held in Washington, DC, February 10–13, 2004, 3–4.

⁷ The Michigan State Police Emergency Management Division, *Michigan Emergency Management Assistance Compact* (Lansing, MI: State of Michigan, 2004), 1.

⁸ Federal Emergency Management Agency, Robert T. Stafford Disaster Relief and Emergency Assistance Act. Available [online] <http://www.fema.gov/library/stafacts.htm> (accessed June 27, 2005).

Additional literature is being released addressing the military role during the Katrina aftermath, specific to the care of a large number of casualties. The *Terrorism and Domestic Response* article outlines the role of the Department of Defense in Katrina including validation of the need to interface with and involve the private sector businesses, volunteer and professional organizations, national professional societies and academic institutions in planning and response activities, including personnel.⁹

Critical to the literature review is a complex investigation of the legal issues associated with the deployment of human resources. Sources such as the experts at *The Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities* provide a chronological analysis of the challenges associated with workers compensation and death benefits to those private, non-governmental health professionals called to action through various mechanisms specific to the Katrina response.¹⁰

In addition to the above noted literature, supporting general governmental policy works are being published. The key sources include those from the *Department of Health and Human Services, Congressional Research Service, National Governors Association, and Government Accounting Office* publications that support the review and recommendations based on the Hurricane Katrina response. These ongoing additions to the compiled literature will provide a richer discussion surrounding the successful deployment and the challenges associated with health professional resources to assist with policy development recommendations for future research.

Finally, published literature including after action reports for Hurricane Katrina provide new and varied perspective on the complex issues. Those involved with mutual aid and private healthcare will need to remain alert to newly published materials.

F. EXPECTED FINDINGS AND POLICY OPTIONS

This thesis investigates some of the challenges associated with the deployment of critical medical resources during a state of emergency. The review of Hurricane Katrina will assist in identifying deficiencies in the current system and formulating

⁹Donald F. Thompson, "Terrorism and Domestic Response Can DoD Help Get It Right?" *Joint Force Quarterly*, no. 40 (1st Quarter 2006): 20.

¹⁰HRSA ESAR-VHP Legal & Regulatory Issue Project, *The Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities* (Baltimore, MD: Center for Law and the Public's Health, 2005), 2.

recommendations. It is anticipated that governmental agencies will have to make modifications to their state-based mutual aid compact, such as the Michigan Emergency Management Assistance Compact. In turn, the federal government will need to make modifications to mobilize this critical discipline during an Incident of National Significance or other public health emergency. A review of the Emergency Management Assistance Compact (EMAC) components as well as other mutual aid mechanisms demonstrates an opportunity to develop consistency across the country. These modifications may require updates to existing state and federal policies or the need to establish emergency executive orders when an event occurs. Executive orders may need to be established as part of comprehensive planning to ensure that all legal clearances are in place to address the issues of workers compensation and death benefits specific to private health professionals.

In addition, healthcare facilities may need to modify their internal mechanisms utilized to deploy their professionals to assist outside their jurisdiction as well as those policies that outline the utilization of incoming health professionals during a large scale, governmental declared emergency. These recommendations could significantly improve mobilization of critical medical human resources, thus better serving all health and Homeland Security agencies and improving medical response.

G. METHODOLOGY

Research methodologies included an initial and on-going literature review. Since Hurricane Katrina is a relatively recent occurrence, true historical data are non-existent. Therefore, several methods were used to collect information and thus develop recommendations.

A survey tool was developed and sent to the Department of Health and Human Services (DHHS), Health Resources and Services Administration (HRSA) Bioterrorism Hospital Coordinator for each of the states not significantly affected by Hurricane Katrina. This tool (see Appendix A) asked specific questions about the involvement of that particular state and their ability to mobilize private, non-governmental health professionals to the Hurricane Katrina effected areas. The investigator made every effort to receive at least a 60 percent response rate from those surveyed to assure the data would be deemed valid.

An extensive number of private and governmental meetings have been called to review after action reports on issues associated with Hurricane Katrina. Information from those meetings has contributed to the final strategic planning recommendations including those specific policy recommendations for implementation at the state and federal levels.

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II. AT THE ONSET—HEALTHCARE JURISDICTIONAL RESPONSIBILITIES

The *National Response Plan* (NRP), released in December 2004, is the framework for all governmental and voluntary agencies to operate during a disaster. Under the Secretary of Homeland Security, the Secretary at DHHS bears responsibility for *Emergency Support Function* (ESF) #8, specifically the coordination of public health and medical services. There are 15 designated functional areas within ESF #8 that DHHS and supporting agencies such as the American Red Cross bear responsibility for coordination:

- Assessment of health/medical needs;
- Health surveillance;
- Medical care personnel;
- Health/medical equipment and supplies;
- Patient evacuation;
- In-hospital care;
- Food/drug/medical device safety;
- Worker health/safety;
- Radiological/chemical/biological hazards consultation;
- Mental health care;
- Public health information;
- Vector control;
- Potable water/wastewater and solid waste disposal;
- Victim identification/mortuary services; and
- Veterinary services.¹¹

The National Disaster Medical System (NDMS) consists of response teams, normally 20–35 persons that can deploy to a scene or event and set up field operations that are designed to be self sustaining for up to 72 hours, anticipating further federal support. They can also assist in the transportation from an impacted site to final care

¹¹ Department of Homeland Security, *National Response Plan*, vol. ESF #8, (Washington, DC, 2004), ESF #8– 2.

destination points. The medical professionals within NDMS are licensed to practice in at least one U.S. jurisdiction and are not considered federal employees unless deployed. Once deployed, they fall under the federal protections that include liability and compensation packages.¹²

Initial actions following a potential major disaster or emergency includes the provision of Disaster Medical Assistance Teams (DMATs) and individual public health and medical personnel. DMATs are trained to provide triage, medical or surgical stabilization and continued monitoring until a final disposition and definitive medical care is delivered. Additionally, specialty DMATs can be deployed specific to events such as mass burn care, pediatrics, chemical or other complex needs. In addition, the federal government can mobilize other Department of Defense (DOD) and National Guard units, including Department of Veterans Affairs (VA) resources for specific medical missions.¹³

During Katrina medical and public health assets provided excellent care to thousands of displaced patients with conditions ranging from acute injuries to chronic medical conditions requiring complex medical interventions. Many felt that medical and public health professionals were the true heroes of the response. These professionals often had to improvise due to a delay to staging areas and procurement of supplies.¹⁴

The Association for Air Medical Services (AAMS), a private air transportation provider, represents 85 percent of all hospital transportation capabilities in the United States. They also maintain a web-based database, updated annually, listing air medical services and hospitals with the capacity to receive patients via this mechanism. Records indicate that during the entire Katrina response, only one governmental request was made for access and assistance with this database. However, consistent with humanitarian efforts, the AAMS companies provided support for medical evaluations without official contracts with hospitals or the government. A Mississippi EOC representative declined

¹² Domestic Social Policy Division, *Hurricane Katrina: The Public Health and Medical Response*, (Washington, DC: Congressional Research Service, 2005), CRS 12– 13.

¹³ Department of Homeland Security, *National Response Plan*, 9.

¹⁴ *The Federal Response to Hurricane Katrina Lessons Learned*, by Frances Fragos Townsend, Assistant to the President for Homeland Security and Counterterrorism (Washington, DC, 2006), 47.

the offer of 25 helicopters accessible to their hospitals, through EMAC, from Florida transport agencies. Finally, personal networking and established health relationships also provided valuable resources, often undocumented in the literature, in the absence of formal agreements.¹⁵

Post-event publications state that there were not enough medical resources and teams in position prior to landfall of the hurricane. This led to unnecessary delays in getting the equipment and supplies to the right people. Those that were deployed or remained in the area experienced compounding problems of poor communication and coordination and confusion over mission assignments. Medical officers and volunteers had little information on deployment. Their bags were packed and ready to go for days with uncertainty about deployment. “While some medical teams waited, without equipment or supplies to care for patients, state and federal officials squabbled over reimbursement”.¹⁶

Although both FEMA and DHHS made valiant efforts to activate federal emergency health resources and capabilities of the NDMS and the U.S. Public Health Services, only a limited number of federal medical teams were pre-deployed. Only one NDMS team was in that critical position to provide immediate medical attention in the aftermath of Hurricane Katrina.¹⁷ DHHS struggled in its NRP role as coordinating agent for ESF #8 due to a lack of control over vital medical assets and independent activities of FEMA with the deployment of NDMS, a critical resource. The deployment of medical personnel overall was reactive, not proactive.

However, as of September 9, 2005, post-Katrina, FEMA reported that it had deployed more than 87 NDMS teams in response to the hurricane. Of those 87, the entire nation’s 50 DMATs fanned out across the Gulf Coast working in austere conditions with limited resources. Many of the teams reported working under extreme fatigue with limited medical supplies, inadequate basic personal items such as food and water and

¹⁵ *A Failure of Initiative*, Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, (Washington, DC: U.S. Government Printing Office, 2006), 289-290.

¹⁶ *Ibid.*, 302.

¹⁷ *Hurricane Katrina: A Nation Still Unprepared Executive Summary*, Senate Committee on Homeland Security and Governmental Affairs, (Washington, DC: n.p., May 2006), 7.

intermittent electricity.¹⁸ The other teams deployed were associated with the Disaster Mortuary Operational Response Teams (DMORTs), Veterinary Assistance Teams (VMATs) and National Pharmacy Response Teams. It is important to note that NDMS does receive routine funding through the Public Health Programs of DHS Preparedness and Response Title and was further augmented on September 8th when President Bush signed the second emergency supplemental appropriation for Katrina related response.¹⁹ There continues to be concerns with these federal resources and the movement of the NDMS program between DHS and FEMA which may impact the ability of the federal agencies to orchestrate a pre-deployment adequately prior to an event.

The Medical Reserve Corp maintains a medical volunteer database which can theoretically be activated within 24 hours. This database was used to verify some volunteer credentials and link those volunteers with pre-existing rescue teams on the ground.²⁰

The Federal Medical Shelters (FMS) were a new component to the DHHS response resource. These are 250 bed rapidly deployable units for housing, triage and maintaining stable, displaced patients. These were first deployed during Katrina and were used to augment hospitals in the Gulf with surge capacity. It has been suggested that this expensive resource was significantly under utilized during Katrina as only one was pre-positioned, with the rest to follow during a chaotic time.²¹

Early reports from Louisiana suggest that the public health system was able to immediately implement processes to support continuity of critical services, credited to some all hazard improvements made since 2001. This included diverting public health laboratory functions to regional laboratories outside the effected area and working to re-route specimens appropriately.²² In addition local and state public health agencies were instrumental in providing vaccinations and other services to the responding communities.

¹⁸ *A Failure of Initiative*, 272.

¹⁹ Domestic Social Policy Division, *Hurricane Katrina: The Public Health and Medical Response* (Washington, DC: Congressional Research Service, 2005), CRS 12 – 15.

²⁰ *A Failure of Initiative*, 274.

²¹ *Ibid.*, 276.

²² Domestic Social Policy Division, *Hurricane Katrina*, 16.

The experiences of New Orleans' hospitals reinforce the need to better train and exercise this specific sector. Healthcare presents distinctive and different challenges in a community wide or catastrophic disaster. By its very nature, hospitals and health facilities house large concentrations of people who cannot manage their own evacuation or health status. Facility-specific and deployed resources were not adequate to meet this complex need.²³ This storm demonstrated the need for greater integration and harmonization of preparedness efforts, not only among the federal agencies but State and Local governments and the private and non-profit sectors as well. Much can and should be brought to the table pre-event, such as planning, identification of resources including personnel that can augment the response during and post event.²⁴

²³ Bradford Gray and Kathy Hebert, *After Katrina Hospitals in Hurricane Katrina*, ed. (Washington, DC: The Urban Institute, 2006), 14.

²⁴ *The Federal Response to Hurricane Katrina Lessons Learned*, 50.

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III. MUTUAL AID OPPORTUNITIES

In an effort to understand the specific challenges for private, non-governmental health professionals, brief reviews of the current mechanisms for mutual aid that can be elicited during an incident are in order. The participation of the federal government in any disaster assistance efforts are governed by what is usually referred to as The Stafford Act. The Robert T. Stafford Act, as amended by Public Law 106-390 on October 30, 2000, was intended to provide an orderly and continuing mechanism for assistance to state and local governments by the federal government in a disaster to expedite the rendering of aid, provision of assistance and the reconstruction and rehabilitation of specific devastated areas.²⁵ All requests for assistance to the President must be from the Governor of the affected state. Information such as the nature and amount of state and local resources which have been or will be committed to and preliminary estimates of supplemental federal disaster assistance must be included in the request. Funds are then allocated from the Disaster Relief Fund appropriated for that particular year. The Stafford Act focuses on joint responsibility for the effected agencies, governing bodies and the federal government.²⁶ In addition, this Act permits the federal government to “accept and utilize” the services of any state or local government with their consent.²⁷

In August 1999, FEMA published *9525.4 Medical Care and Evacuations*, a section specific to offering aid to publicly owned and private non-profit facilities. Private for-profit organizations are not eligible applicants for public assistance grant funds for either emergency medical treatment facilities or for evacuations. This section directs reimbursement when medical facilities in a disaster area experience increased patient loads and operating costs; FEMA does not generally reimburse healthcare facilities for those increased costs. However, FEMA will fund some emergency costs associated with providing additional facilities for emergency services in catastrophic disasters. This may include temporary tents or portable buildings for treatment of disaster victims, leased

²⁵ Federal Emergency Management Agency, (accessed June 27, 2005).

²⁶ Keith Bea, *Federal Stafford Act Disaster Assistance: Presidential Declarations, Eligible Activities, and Funding* (Washington, DC: Congressional Research Service, 2006), CRS, 1-2.

²⁷ *Hospital Emergency Assistance Act of 2005*, S.1393, 1st Session, 109th Congress, (July 13, 2005).

equipment and security for the temporary facilities. However, that which is not covered are those areas most likely to cripple health facilities such as emergency medical treatment of any kind, follow-up care of disaster victims, increased administrative and operational costs to the hospital due to increased patient load and costs associated with loss of revenue. Finally, some costs associated with evacuation and transporting may be eligible under this section. Specific personnel costs are defined as overtime for regular full time and extra hires to evacuate and assist in transportation of patients from the damaged facilities. Ineligible costs relate to any and all medical staff for transport and medications use associated with the transport process.²⁸

In July, a bill was introduced into the Senate to amend the Stafford Act called the “Hospital Emergency Assistance Act of 2005”. This amendment would provide a mechanism for reimbursement to certain for-profit hospitals. This proposed revision occurred after review of the 2004 Florida hurricane season, focusing on hospital damages. This puts for-profit hospitals in the same reimbursement category as non-profit facilities for potential federal relief assistance. It contains the provision that damage occurred during the declared major disaster and the for-profit hospital acted in accordance with all requirements of governmental or non-profit health facilities responding to the event. This is critical as the for-profit health facility may be the only access to care for a specific jurisdiction, their inability to reopen due to damage and financial crippling would impact both in the short and long term an entire community.²⁹ The bill was referred from the Senate to the house as H.R.3714 on September 8, 2005 and unfortunately as of this date remains in subcommittee status.³⁰ The inability to include for-profit hospitals into the planning and response activities could significantly negatively impact jurisdictions that may only have for-profit hospitals as their points of service during emergencies. Their reluctance to participate in a disaster could be based on their inability to receive reimbursement.

²⁸ FEMA Public Assistance, “9525.4 Medical Care and Evacuations”, Available [online] http://www.fema.gov/rrr/pa/9525_4.shtm (accessed June 17, 2005).

²⁹ Federal Emergency Management Agency, *Stafford Disaster Relief and Emergency Assistance Act*.

³⁰ THOMAS, Library of Congress. Available [online] <http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.3714> (accessed September 4, 2006).

Specific private organizations often have both formal and informal mutual aid agreements. These can be as sophisticated as a signed document that addresses legal, technical and procedural issues related to the sharing of personnel, equipment and other needed resources during an emergency. It could also be as simple as a handshake agreement between two Chief Executive Officers. The concern is that a less formal agreement may not address key issues such as liability and compensation or are not inclusive and lack robustness.³¹ Either of these have the same intention, to serve the facility when their resources have been stressed and exhausted, thus needing assistance. Regardless of potential governmental mutual aid that may be available, efforts continue via the DHS, Centers for Disease Control and Prevention (CDC) and the HRSA preparedness grants to encourage individual disciplines and agencies to establish mutual aid agreements. Each individual agency should bear that responsibility for their respective organization or system. This would include addressing the critical issues of reimbursement for expenses, insurance, malpractice, and liability protection for medical personnel, workers compensation, death benefits and verification of licensure where appropriate.

Many states across the country also have state specific governmental mutual aid compacts. The MEMAC is the State of Michigan public sector mutual aid compact. It is intended to facilitate a comprehensive and coordinated response to a major or widespread threat or catastrophic event in which a local and gubernatorial declaration of a state of emergency is anticipated or already issued. It is designed specifically for governmental entities such as counties, municipalities, townships, political subdivisions and interlocal public agencies.³² It was officially put into effect with the signature of the Governor in early 2006. In order for an individual governmental agency to sign onto MEMAC, all governmental agencies within that municipality must agree to sign on. Therefore, a public health agency cannot sign on if the local law enforcement chooses not to do so. This requires coordination amongst all governmental agencies within one jurisdiction to agree

³¹ National Emergency Management Association , <http://www.nemaweb.org> (accessed August 21, 2006).

³² K. Krzanowski, D. Chrysler, and K. Mark, *Mutual Aid: Unity of Purpose, Information and Resources, An Issue Brief for State and Local Public Health Policy Makers* (Lansing, MI., December 2004), 7.

that MEMAC is a benefit for their agencies. As with most mutual aid agreements, an authorized individual must have signed the document pre-event or it will not be honored should a jurisdiction attempt to sign on once an incident has occurred. The MEMAC was designated as an “opt in” compact which means governmental agencies must specifically sign on to be included in the compact. Current efforts are underway to get statewide signatory of all governmental jurisdictions within Michigan. However, it should be reinforced that MEMAC is for governmental agencies only and does not include private, non-governmental agencies including medical health.

Some states have established their statewide mutual aid compacts as “opt out” such as Missouri and Ohio. All governmental agencies are automatically included in the compact unless they specifically decline inclusion in writing. This methodology utilizes the path of least resistance for most governmental agencies and tends to promote the majority of governmental agencies participation in the statewide mutual aid compact. This decreases the workload to elicit signatories and proves beneficial once an event occurs.

Finally, the critical mutual aid compact that has the most impact for all states is the Emergency Management Assistance Compact. The EMAC was passed by Congress in 1996 and carried specific language that necessitates state legislative approval to join.³³ The EMAC offers state to state assistance during governor declared emergencies. As of May 2006 when Hawaii signed onto EMAC, all 50 states, Puerto Rico, and the Virgin Islands have enacted state legislation to become members of EMAC.³⁴ Administration of EMAC is by the National Emergency Management Association, EMAC Operations Committee. This committee is made up of representatives from each member state and meets at least bi-yearly. A smaller representative EMAC Executive Committee meets more frequently and ensures that EMAC is in a constant state of readiness and can flex to meet the ongoing needs of the member states.

³³ National Emergency Management Association, *Emergency Management Assistance Compact, Guidebook & Operating Procedures* (Washington, DC, 2003), A-1.

³⁴ National Emergency Management Association, "Hawaii Joins Emergency Management Assistance Compact," NEMA, 2006, Available [online] <http://www.nemaweb.org>, (accessed June 06, 2006).

There are specific benefits that EMAC offers and includes: a quick response to disasters using human resources and expertise of member states, state to state standardized process assistance during a Governor declared state of emergency to deploy resources, a legal foundation with terms that constitute a legal binding contractual agreement outlining responsibility for reimbursement by the affected not sending states, solves the problems of liability protection, workers compensation and death benefits, credential and licensure validation across state lines and finally it can move resources other compacts cannot such as medical resources, with the correct processes in place.³⁵

The legal issues are the primary reason that a state must enact legislation for participation in EMAC. Key articles of EMAC include Article V which recognizes a license, certificate, or other permit issued by any compact state as valid in the receiving state when requested to provide assistance to render aid necessary to meet the needs of the disaster. Article VI affirm officers or employees of a state shall be considered agents of the requesting state for tort liability and immunity purposes and thus shall not be liable on account of any act of omission in good faith. It should be noted that good faith does not include willful misconduct, gross negligence or reckless behavior. Article VIII defines that the state shall provide for the payment of compensation and death benefits to injured members of the emergency forces of that state and representatives of deceased members who sustain injuries or are killed while rendering aid to this compact. The key point is that the payment comes from the assisting or home state as if the injury or death were sustained within their own state. Reimbursement issues are covered in Article IX noting that any state rendering aid in another state as part of EMAC shall be reimbursed by the state receiving aid for any loss or damage to or expenses occurred during that deployment. The reimbursement process is well defined and timelines including the method to establish a pre-estimate of costs for the anticipated services prior to deployment.³⁶ It cannot be over emphasized that EMAC is for governmental agencies only. A sending state can deploy private resources provided they have the ability either through enacted legislation or a gubernatorial executive order to make private entities

³⁵ National Emergency Management Association, "Hawaii Joins Emergency Management Assistance Compact."

³⁶ National Emergency Management Association, *Emergency Management Assistance Compact, Guidebook & Operating Procedures*, A-5, 6–8.

“agents of the state” for the purposes of deployment through EMAC. Doing that provides all the above noted protections to anyone deployed.

EMAC was a success during the Hurricane Katrina response with a total of 1,403 requests for assistance processed and 46,288 personnel deployments for an estimated cost of \$515.9 million. Personnel included: firefighters, search and rescue personnel, HAZMAT personnel, emergency medical technicians, law enforcement, fish and wildlife personnel and inspectors, corrections, airport maintenance, ambulances, medical doctors, registered nurses and National Guard troops.³⁷

Louisiana and Mississippi relied heavily on EMAC, which provided the system for sharing National Guard troops and other resources. It was noted that the magnitude of the demands did strain the EMAC process and identified limitations in the system for future improvements. This included the mechanisms for processing the volume of incoming resources.³⁸

Although the focus of this paper is on Incidents of National Significance or catastrophic events in which a Governor and or the President would declare a state of emergency and thus initiate specific activities including EMAC and federal support; additional challenges do exist in the ability of states to share assets and personnel quickly and effectively during events that are not declared emergencies. Beyond the scope of this thesis are the significant legal challenges that need to be addressed in the development of mutual aid agreements for non-catastrophic emergencies which could be specific to healthcare. There is a need for further study and recommendations on this specific issue.³⁹

³⁷ *A Failure of Initiative*, 250.

³⁸ *Hurricane Katrina: A Nation Still Unprepared Executive Summary*, 11.

³⁹ Chris Logan, *Beyond EMAC: Legal Issues in Mutual Aid Agreements for Public Health Practice* (Washington, DC: NGA Center for Best Practices).

IV. RESPONSE TO HURRICANE KATRINA SURVEY

After action reports and new information on the issues associated with Hurricane Katrina continues to be published and will be a source of study in the future. However, it was important to gather targeted information that focused on the medical health aspects of the response. In order to do that a survey tool was developed to gather information from each of the states except Louisiana due to obvious impact. Six questions were focused on the issues associated with mutual aid mechanisms to deploy private, non-governmental health professionals. In addition, each state could indicate their interest in receiving the cumulative report of the findings at the completion of this project.

A requirement of the DHHS National Bioterrorism Hospital Preparedness Program (NBHPP) is the designation within each state of a Bioterrorism Hospital Coordinator. This individual routinely works with their respective health organizations and professionals as well as their state emergency operation center on activities associated with Emergency Support Function #8. The assumption was that this individual in each state would have access to the information and knowledge necessary to accurately complete the survey.

The survey tool was emailed to each state's Bioterrorism Hospital Coordinator with a stated return deadline. Two additional emails and/or hard copies, if requested, were sent to those states that did not respond within the established deadline. In addition, in May 2006 a national conference of the NBHPP Bioterrorism Hospital Coordinators was held in Washington, DC. The survey tool was available in electronic and hard copy for completion by any state that wished to complete it during that meeting. This provided an opportunity for the researcher to personally approach those states that had failed to complete the survey and presented an opportunity for specific questions to be answered, thus facilitating dialogue on the intent of the survey information in relation to thesis integration.

A total of 39 states responded with completed surveys out of the 49 sent for a return rate of 80%. This return rate demonstrates solid validity of the data since a statistical survey is considered to be valid when a response rate of approximately 60 percent is returned.⁴⁰

A question by question response summary can be located in Appendix A and contains detailed information on each item. The following is a summary of the important information attained.

A. NATIONAL IMPACT

The survey validates that although the hurricanes catastrophically impacted the states of Mississippi, Alabama and Louisiana, the majority of the country felt the effects in varying degrees. Noting that this survey only asked questions related to the state governments' involvement in healthcare personnel support of Katrina, one might suppose that every state was impacted. Of the 39 reporting states, only nine stated they were not involved in mutual aid requests for health personnel. Seven state did deploy health professionals, two of those seven did have health professionals deployed through mechanisms outside of the state structure oversight. One western state indicated that one of their large hospital systems did work directly with DHHS and the American Hospital Association (AHA) initiative to deploy a team of health professionals to New Orleans. An eastern seaboard state noted they were aware of an EMS provider that self-deployed and another was contracted directly through FEMA.

B. MUTUAL AID REQUEST PROCESS

The survey clearly indicated that multiple request and processing methods were used to manage the requests within each of the states. The majority of states, 30 out of 39, used the state to state mutual aid process of the EMAC. This high number indicates that the majority of states were using the national EMAC process to identify potential resources whether or not they were actually deployed.

The second highest response for the requesting process focused on private industry compacts or mutual aid agreements. The most common example would be a national healthcare system that has facilities in other states. The corporate office made

⁴⁰ Track Marketing Group, "Frequently Asked Questions," Available [online] <http://www.takesurvey.com/responserate.htm> (accessed August 14, 2006).

arrangements with hospitals in non-affected areas. This occurred, for example in Michigan. The sending healthcare facility worked directly with the effected hospital in Louisiana. The corporate office served as the clearing house for mechanisms to support this process. In this way, the affected facility could identify the specific personnel and resources needed and worked to mobilize them expeditiously. Issues like personnel compensation, workers compensation and death benefits were not a concern since the employees were still working for their same corporation, just in a different location.

Intra-state mechanisms proved useful within impacted states like Alabama that worked through established mutual aid agreements to mobilize in state resources to hospitals on the Gulf coast that were affected. This was facilitated by their Department of Health. It was evident in the survey that other states used this mechanism to assist with FEMA deployments, and self deployed evacuees into their state, including management of medical and public health needs. The establishment and expansion of intra-state mutual aid agreements between private healthcare entities continues to be a focus of the DHHS NBHPP preparedness initiative, well underway across the country.

The third response mechanism fell into the “other” category and often noted initiatives associated with non-governmental volunteer organizations such as the local American Red Cross and faith-based organizations which deployed resources based on communications outside of the State Emergency Management structure of EMAC process.

State and local jurisdictional compacts were tied as the last mechanism utilized to deploy resources. This is where states identified the utilization of their established Medical Reserve Corp staff, which in some states was integrated into their state-based Emergency System for Advance Registration-Volunteer Health Professionals process. Finally this mechanism was most often cited when deploying or utilizing governmental health resources for volunteers responding within the state specific response. It should be noted that this response focused on the care of evacuees that presented to bordering and destination states versus actual deployment out of their state.

C. HEALTH RESOURCES MOBILIZED OUTSIDE OF GOVERNMENTAL STRUCTURES AND IMPACT

The genesis of this survey question came directly from an experience in Michigan during the Katrina response. One of the largest private EMS agencies in one of the emergency preparedness regions deployed after being contacted by the American Ambulance Association with a need for their services in New Orleans. This occurred directly between the two organizations. That is an acceptable practice and the needs for EMS resources were clearly demonstrated. However, this deployment left this particular region without sufficient coverage for routine EMS calls over a holiday weekend. Because this occurred outside of the State Emergency Operations Center (SEOC) or Community Health Emergency Coordinating Center (CHECC) knowledge, neighboring jurisdictional mutual aid had to be enacted to provide services within Michigan.

For those states surveyed that answered this question, 19 out of 39 or 48% indicated a similar activity of resource deployment outside the state emergency operation center's awareness. Sometimes this was done by other federal or volunteer organizations but the issues of self-deployment clearly augmented this problem. Several states indicated the attempts to self-deploy by partners but an intervention ceased that activity. In addition, comments were provided that indicated this as a burden on their states' health resources, especially for those rural states experiencing diminished health resources as a routine practice. This was most often cited in response to EMS resources.

D. LIABILITY PROTECTION ISSUES

The issues of liability protection appear to pose the least amount of challenge when addressing volunteer health professionals. Most states indicated that there were mechanisms to protect their health volunteers, with ten states indicating the protection would be the same as for state governmental employees. A disclaimer noted that the volunteer must be working within the established state structure, under either gubernatorial or Presidential declared emergency or specific state enacted statutes. Two states indicated there was no process and three noted they were currently working to resolve this specific issue. Many noted that their current NBHPP preparedness initiative to establish their state based ESAR-VHP program, had laid adequate ground work for discussion and investigation of the liability issues.

E. WORKERS COMPENSATION ISSUES

The issues associated with workers compensation become more complex and challenging with many states unsure of the level of protection for volunteer health professionals. The same ten states as noted in liability protection stated their volunteers would be covered by state level workers compensation if deployed for a state or national declared emergency. However, eight states noted there was no process to protect their volunteers and four were working on a method at the time of the survey. One state indicated they purchased specific workers compensation policy during Katrina listing the names of the individuals deployed from that state. This was not mentioned by any other survey participant.

Interestingly, four states indicated the workers compensation would be covered under EMAC, but it is unclear if the writer understood that the EMAC process utilizes the sending states workers compensation and other benefits by making those deployed “agents of the state”. Of particular concern is the one state that indicated the coverage would be provided by the “parent employer” but it was unclear if that had been validated or assumed because additional information was not provided.

F. DEATH COMPENSATION ISSUES

This question appeared to hold the most uncertainty by those that completed the survey: 11 noted no process, three did not know, and three are working on this critical issue. Only six states indicated that volunteer health professionals would be covered if deployed as “agents of the state” and one state covers those who participate in a pre-identified response team. Again, four states felt that those deployed would receive benefits under EMAC.

G. ENACTMENT OF ANY EXECUTIVE ORDERS SPECIFIC TO PRIVATE NON-GOVERNMENTAL HEALTH PROFESSIONALS

Of the 39 surveys, 25 or 64% indicated their governmental agencies did not need to enact any type of executive order specific to activities associated with the deployment of private, non-governmental health professionals. Three states stated they did not know if this occurred and four indicated a specific executive order was enacted by their Governor. All of the four specifically cited the need to make specific health professionals “agents of the state” and support activities necessary for deployment to Katrina effected

areas. In addition, one mid-western state executive order empowered the deployment of one or more mobile support units and provided general funds to support resources necessary.

H. UNANTICIPATED FINDINGS FROM SURVEY

A positive outcome of Hurricane Katrina and the survey was an increased awareness by state level Bioterrorism Hospital Coordinators of the traditional emergency management process utilized during an emergency. Most specifically, issues associate with EMAC and other mutual aid processes. It was evident that a significant number of coordinators are unclear as to what exactly EMAC does and does not cover, including issues of financial compensation, workers compensation and death benefits. These is particularly disturbing as Bioterrorism Hospital Coordinators, representatives of state government, deal directly with health disciplines and must be knowledgeable of processes to advocate inclusion into traditional public safety and Homeland Security initiatives. One mid-west Bioterrorism Hospital Coordinator confided in the survey author a total misunderstanding of the process and a concern that their program deployed 40-50 health practitioners without adequate coverage, simply because of a lack of understanding of the process.

In Michigan, during the Katrina response, the EMS providers verbally challenged the need for state level awareness of those deployed outside the SEOC process. Agencies that were directly deployed by FEMA or another national organization did not feel it a concern of the state. However, their deployment impacted services within geographic areas of Michigan, forcing the enactment of local mutual aid compacts to cover critical services within Michigan. This situation demonstrated the “need to know” by both local and state emergency management agencies so that overall coverage is insured. This demonstrates the need for clear education and instruction to all first responders on issues of deployment, volunteerism and the level of protection.

In addition, several comments on the completed surveys demonstrated that the Bioterrorism Hospital Coordinators had the mechanisms to identify volunteers but the challenges and resultant inability to actually deploy them were significant. This frustration was noted in the actual survey completed but also in personal conversation

between the survey author and other HRSA state level coordinators at National meetings and on Katrina related conference calls.

Finally, this author was surprised that few surveys mentioned the actual deployment of volunteer health professionals via the DHHS and AHA web site. Most mentioned the gathering of names and data but the absence of solid deployment numbers. As noted, over 33,000 health professionals registered on the site but just over 3000 actually were deployed. The information obtained indicated a great deal of challenges existed at the federal level in completing the validation of licensure and credentials necessary in a timely basis to support deployment when needed.⁴¹ This lack of information would lend itself to further investigation and study of those who were successfully deployed through this mechanism.

⁴¹ Atila Omer, (Executive, Collaborative Fusion) interview with author, written notes, Washington, DC, May 4, 2006.

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V. VOLUNTEER HEALTH PROFESSIONAL ISSUES

Despite the noted medical resources that were deployed through the NDMS, early reports indicated that triage centers, hospitals and field hospitals were overwhelmed and requesting more personnel. On September 3, DHHS initiated activities to identify volunteer health professionals to deploy to affected areas. Within the Public Health Service Act, 42 U.S.C 312, there is a provision that authorizes the Secretary of DHHS to augment emergency response personnel by deploying them as intermittent disaster response personnel as a member of the NDMS. In addition, there were efforts to identify a mechanism to deploy them as temporary unpaid federal employees. This process is described further in the strategic plan of this document but suffice to say, by September 19, 2005, the call for additional persons had been rescinded and the actual number of individuals deployed and mechanisms to protect them are still unclear.⁴²

Many after action reports reference the HRSA ESAR-VHP program. This program initiated in 2005, is designed to assist local, state and federal planning initiatives and includes national authorities in identifying and verifying the status of volunteer health professionals. Each state will develop the database based on national standards that as of September 2006 have not been finalized by HRSA. These standards will include verification of license and credentials. The ESAR-VHP program has contracted with *The Center for Law and the Public's Health* at Georgetown and John Hopkins Universities. They assisted real time during Katrina to provide consultation and guidelines to assist in the complicated processes of deploying private, non-governmental employees and continue to publish materials on their web site regularly.⁴³

Overall, DHHS was successful in mobilizing and credentialing a relatively small number of health professionals to Hurricane Katrina areas. Most of this was due to the assistance of private companies, like Kaiser Permanente who processed over 3,400

⁴² Domestic Social Policy Division, *Hurricane Katrina: The Public Health and Medical Response*, 20–21.

⁴³ "Emergency System for Advance Registration of Volunteer Health Professionals," HRSA, 2006, Available [online], <http://hrsa.gov/esarvhp/legregissues/default.htm> (accessed August 22, 2006).

volunteers and actually deployed over 1,000 persons.⁴⁴ Unfortunately, this detailed information is not yet available to validate the impact both financial and psychological this deployment has had on this organization. Efforts to pursue this information continue.

Finally, two state systems were able to respond to the request for help due to pre-event planning, training and exercising under previous Bioterrorism preparedness initiatives. The South Carolina MED-1 is a self-contained emergency and operating room mobile hospital with 100 hospital beds and all necessary resources. The MED-1 was federalized, deployed, and staffed by a team of volunteers from the Carolina Medical Center, Public Health Service and other medical volunteers. This unit treated almost 5,000 patients and is considered one of the true success stories of the overall medical response.⁴⁵

On September 2, 2005, the state of Nevada received an email requesting the transport of its mobile medical facility (NV-1) to the New Orleans Airport. It had been federalized to assist at the airport. However, upon arrival, they were informed this asset was no longer needed and eventually this excellent resource was routed to Gulfport, MS. The delay in initial deployment of this resource was blamed on confusion of need and previous deployment requests. Once again, this resource was staffed by volunteer health professionals, the Nevada Hospital Association and Public Health Service Officers. In total, NV-1 saw almost 500 patients by the end of September, reinforcing the value of the established state-based mobile facility and accompanying resources.⁴⁶

It must be stressed that thousands of lives were saved, a tribute to the medical professionals and volunteers who worked tirelessly in austere health conditions. Yet, information continues to demonstrate that the lack of planning not a lack of effort contributed to problems that hindered further success. There were not nearly enough medical personnel teams in position prior to landfall and a lack of mechanisms to mobilize the volunteers the federal government requested, leaving many feeling disappointed and unimportant.

⁴⁴ *A Failure of Initiative*, 274.

⁴⁵ *Ibid.*, 277.

⁴⁶ *Ibid.*

VI VOLUNTEERISM PSYCHOLOGICAL IMPLICATIONS

The ability to mobilize those that stood ready to deploy could have lasting effects on the identification and willingness of this discipline to volunteer in the future. A review of issues associated with volunteerism could assist in postulating the potential impact thwarting volunteerism during the response to Hurricane Katrina and the effects it may have on current and future Homeland Security initiatives. This is an important point of consideration in reviewing all mechanisms to support an integrated response to public health or mass casualty emergencies.

Volunteerism has been a staple of American societies for years. Each year the American Red Cross mobilizes relief to victims impacted by more than 60,000 disasters nationwide, a record 72,883 in 2005.⁴⁷ This is in addition to one of their main directives of over 50 years to provide the largest supply of blood and blood products in the United States. Activities associated with volunteerism are synonymous with the words “American Red Cross” as they boast of training over 11 million people in life-saving skills, provide direct health services to 1.8 million people, contribute over 22 million locally relevant community service activities, expand services to aid in international disasters in more than 50 countries, and continue their mission to transmit emergency messages between members of the United States Armed Forces and their families. Certainly the breadth of these activities would necessitate a substantial infrastructure. However, in Fiscal Year 2002, ninety-seven percent of American Red Cross staff is volunteers, over 1.2 million people.⁴⁸

Other volunteer organizations boast similar statistics for services provided. The Volunteers of America, formed in 1896, help nearly two million people in over 400 communities through thousands of human service programs that are coordinated by 39 offices within 44 states. In 2005, this national, nonprofit faith-based organization utilized the services of 95,000 volunteers to continue their mission to help those in need to rebuild

⁴⁷ American Red Cross, *The American Red Cross 2005: Highlights and Statistics*, Available [online] <http://www.redcross.org/press/highlights05/> (accessed September 19, 2006).

⁴⁸ American Red Cross, *The Faces of Service*, Available [online] <http://www.redcross.org/news/vo/profiles> (accessed June 16, 2006).

their life through various housing, healthcare, and human service support activities.⁴⁹ These organizations demonstrate the depth of established organizations at a national level but literally thousands of smaller, community-based volunteer organizations exist across the country and bridge a critical gap for local, state and federal agencies in services they provide.

Volunteer service organizations must constantly recruit volunteers, identify mechanisms to maintain communications and promote satisfying experiences during actual volunteer commitments. This must all occur while fostering methods to seek and maintain enduring commitments from their volunteer force. Recognizing the diverse make up of volunteers, strategies for matching their skill and individual motivational goals, with the right volunteer opportunity, are critical to ensure durable success. People wish to contribute efforts to impact or affect some of the major problems facing society often through volunteerism: violence, hunger, homelessness and illiteracy. This volunteerism allows people to help people, and at the same time, address some of societies' more global issues.⁵⁰

There are reasons why individuals volunteer. At first glance, it may seem that acts of volunteerism are similar when in fact the motivational processes behind individual volunteerism may be quite different. A study by E. Gil Clary and colleagues hypothesized six functions potentially served by volunteerism and designed multiple studies to test these theories. The first function is the recognition that the act of volunteerism allows an individual to express humanistic concern for others. Second is the opportunity for the volunteer to learn new skills while utilizing their current knowledge and skills was also very important. Third is being part of a social group and engaging in activities seen as important to others. Fourth is the potential to improve a current or future career opportunity. Fifth is the reduction of guilt feelings by the volunteer of being more fortunate, often predicating them to assist those who are less fortunate. Finally, the sixth is the personal satisfaction or ego boost derived from participating in a volunteer activity. All of the noted issues ultimately provide a positive, personal reward and increased

⁴⁹ Volunteers of America, 2006, Available [online] <http://www.voa.org> (accessed June 15, 2006).

⁵⁰ E. Gil Clary, Mark Snyder, Robert D. Ridge, Peter K Miene and Julie A. Haugen, "Matching Messages to Motives in Persuasion: A Functional Approach to Promoting Volunteerism," *Journal of Applied Social Psychology* 24 (1994): 1129–1130.

satisfaction and self-esteem for the actual volunteer.⁵¹ It is clear that people offer to volunteer with needs and motives important to them. However, the volunteer activity may or may not fulfill those needs. It is important to meld the persons and the situations in a manner that creates sustained helpfulness of volunteerism.⁵²

A recent “need” to volunteer has been expressed to and by high school and college students. More and more high schools and universities are requiring or giving academic credit to individuals engaged in approved volunteer activities. Once the student successfully completes the volunteer requirements and has achieved the desired outcome, admission to college, the experience gained through that volunteer activity could impact continued or future volunteer activities. In addition, students engaging in volunteerism gain an understanding of potentially related occupations and careers to obtain real world experience. Clearly these students have invaluable skills in obtaining a job compared to one who has not volunteered.⁵³ A study by Clary et al., demonstrated that volunteers, who received benefits relevant to their primary volunteer motivational focus, were not only more satisfied with their service but also intended to continue these actions in both the short and long-term future.⁵⁴ This was validated by a recent news report that avows many college students, shaped by recent events of September 11, 2001 and Hurricane Katrina are applying to service organizations in record numbers. Individuals in their early 20’s feel that channeling their activism into helping others provides them the opportunity for “service-learning”, helping others while helping themselves.⁵⁵

Individuals like to “belong”; this belonging often includes participating in a social structure. Volunteerism can provide that social structure. Volunteers that become part of a group adapt together to provide fellow member support and offer to protect each other, share resources, pool valuable information and ultimately contribute to the greater good. Denial of that opportunity can have an impact. A study by Baumeister et al. looked at the

⁵¹ E. Gil Clary, Robert D. Ridge, Arthur A. Stukas, Mark Snyder, John Copeland, Julie Haugen and Peter Miene, "Understanding and Assessing the Motivations of Volunteers: A Functional Approach," *Journal of Personality and Social Psychology* 74, no. 6 (1998): 1517-1518.

⁵² Ibid, 1529.

⁵³ John C. Anderson and Larry F. Moore, "The Motivation to Volunteer," *Journal of Voluntary Action Research* 7, no. 3-4 (July-October 1978): 120.

⁵⁴ Clary, Ridge et al., 1526.

⁵⁵ Beth Walton, "Volunteer Rates Hit Record Numbers," *USA Today*, July 7, 2006.

effect of social exclusion on cognitive processes and concluded that the anticipated aloneness or the inability to be part of a group did reduce intelligent thought and seemed to put the mood of those excluded into a neutral state. This mood also appeared to demonstrate an active effort to suppress their overall emotion.⁵⁶ Thus, one might conclude that socially isolating a highly sought after professional, such as a physician or nurse could decrease their desire to be engaged. The suppression of their emotional response to future events or the neutralization of their need to think through and become engaged may impact their desire and ultimate action in the future.

Individuals wishing to volunteer may not be allowed to do so. As mentioned, volunteering adds social roles to ones life, and therefore should yield mental health benefits. But the inability to fulfill or lose this social role affects psychological distress in both men and women.⁵⁷ During Hurricane Katrina, early news reports highlighted the impact the hurricane had on the current medical infrastructure. News reels ran 24/7 showing patients on roofs of hospitals awaiting helicopter evacuation. Almost concurrently, states across the country were standing up their state emergency operation centers anticipating that this Incident of National Significance would impact areas far beyond those directly hit by the storm. Communications expressed the need for health professionals from affected states through mutual aid agreements processes such as the federally established EMAC. When this occurred many states utilized their DHHS HRSA National Bioterrorism Preparedness Program state level point of contact to communicate the need for physicians, nurses, nurse aides and Emergency Medical Services personnel to stakeholders statewide. This included gathering the required volunteer demographic information and communicating the information on deployment conditions to those interested in volunteering, thus assisting in their decision-making process to volunteer or decline. All states recognized the importance of gathering this information expeditiously and efficiently due to the critical nature that existed, most notably in Louisiana. This urgency led aggressive activities in states across the nation.

⁵⁶ Roy F. Baumeister, Christopher K Nuss and Jean M Twenge, "Effects of Social Exclusion on Cognitive Process: Anticipated Aloneness Reduces Intelligent Thought," *Journal of Personality and Social Psychology* 83, no. 4 (2002): 817, 825.

⁵⁷ John Wilson and Marc Musick, "The Effects of Volunteering on the Volunteer," Duke Law, Available [online] <http://www.law.duke.edu/journals/lcp/articles/lcp62dAutumn1999p141.htm> (accessed May 23, 2006).

Concurrently, other federal departments were seeking medical and health volunteers through other mechanisms, including directly contacting national organizations such as the American Ambulance Association, American Hospital Association and the American Nurses Association. The DHHS also established a web site⁵⁸ where health professionals interesting in volunteering for deployment could register, indicating their availability, special skills, and expertise. This caused confusion for health professionals due to multiple disparate messaging and thus many registered with their state structure as well as the national DHHS website, duplicate information. It should be noted that as of May 2006 more than 33,000 health professionals and relief personnel registered on the DHHS site but fewer than 3,000 of them were ever contacted for deployment.⁵⁹ The number of individuals that registered on this site may stem from the partnership DHHS established with the American Hospital Association during Katrina. The AHA agreed to set up an emergency conference call with hospital chief executive officials across the country to discuss registration of their staff to volunteer on the DHHS website. Most state governmental agencies were unaware of the first and subsequent calls, unless they had a close partnership with their state hospital association. Fortunately, this was the case in Michigan. The state government officials and a member of the Michigan Health and Hospital Association (MHA) joined calls together almost everyday at the beginning of the Hurricane Katrina response. One could infer that the support of the DHHS web registration site, by national and state level hospital associations, contributed to the large number of registrants. Studies conducted to engage the appropriate functions to persuade volunteers, (in this case the persuasive strategy to enlist chief executive officials of hospitals, a consumer of volunteer services) may have contributed to the psychological motivation of people to action, that being registration on the site.⁶⁰

For example, the Michigan NBHPP Bioterrorism Hospital Coordinator continued to gather names of individuals wishing to volunteer, per the EMAC requests, including contacting discipline-specific Michigan employers to ensure that their agency agreed to

⁵⁸ United States Department of Health & Human Services, Available [online] <https://volunteer.ccrf.hhs.gov> (accessed May 30, 2006).

⁵⁹ Omer interview.

⁶⁰ Clary, Snyder, et al., "Matching Messages to Motives in Persuasion," 1145.

allow the individual time off without compromising their current operations. As this process unfolded eventually for weeks, individuals and groups of health professionals began to express anger at state offices for the delay in deployment. The health coordinating center as well as the SEOC was flooded with incoming communications indicating that persons were ready to deploy and individual physicians in some of the rural Michigan areas had cancelled their patients for two weeks in anticipation of imminent deployment despite any directives to do so. Health professionals became angered and could not understand why the process was not working and expressed many emotions, most of which were not supportive of the perceived governmental processes to provide aid to the affected areas.

Most importantly health professionals began to deploy on their own due to a lack of coordination for this discipline and when they perceived a critical need for their services as demonstrated by the media and national professional organization communications to their members. Those that self-deployed were often rejected upon arrival to the affected area, due to a lack of verified credentials, and the inability to house, feed or train those that “just showed up”. These “spontaneous volunteers” created significant challenges for the incident command structure in the Katrina affected areas. This further fueled the challenges and unrest of those that wished to volunteer, those who could not, and those that did and were turned away. The EMS personnel that self deployed returned to Michigan frustrated as the need for their skills and services was present, but the structure to implement it did not exist.

An advanced certified emergency nurse, called to express her anger with the process stating, “I have so many skills to offer and would be there in hours if someone would just help me get there. This is really not right”!⁶¹ It appeared that she, as well as thousands of health professionals, felt “rejected” since they did not fit into any established mutual aid structure. Their status of being private, non-governmental health professionals and their lack of definitive access to protections similar to those deployed under the current EMAC structure, kept them from being safely deployed. Studies have shown that rejection of any form registers specifically in the brain, in the same manner as

⁶¹ Kathleen Wahl (Registered Nurse), interview with author, Lansing, MI, September 9, 2005.

physical pain. People who are rejected are less likely to adapt behaviors to fit into society.⁶² Again, this social distancing by not deploying one responder, namely health professionals, but mobilizing others such as local law enforcement, creates a measurable “painful response” that can and seems to still have long-term implications. As a governmental emergency planner, the issue of physicians and nurses “not fitting” is the most often asked question when visiting a hospital or EMS agency. This is exacerbated when the continued focus is to engage private health entities to partners with local, state, and federal government on issues of integrating emergency response plans such as the National Response Plan.

The hurricane season starts, one year post Katrina, and the processes described are unchanged. The good news is that dialogue is occurring at the local, state, and federal levels on methods to better utilize and protect private health volunteers during an Incident of National Significance. However, the mechanisms have not changed nationwide.

In Michigan, the milieu of volunteerism has gained new momentum. In January 2006, Michigan launched a system called the MI Volunteer Registry available at www.MIVolunteerRegistry.com. This state-based system is designed to merge with the DHHS ESAR-VHP programs, currently under development in states across the country. The most common question asked, in conjunction with the registry, relates to the issues identified during the non-deployment period of Katrina: workers compensation, death benefits and the ability to integrate into the established emergency management processes including EMAC.

Healthcare professionals spend their entire career serving others. The act of volunteering augments that focus by helping others without receiving financial compensation fosters trust and intimacy between other like professionals, increases the subjective well-being by taking steps to make a difference, and reinforces a concept that reciprocal help will be forthcoming when needed. All of this supports a sense of control

⁶² Naomi I. Eisenberger, Matthew D. Lieberman and Kipling D. Williams, “Rejection Really Hurts, UCLA Psychologists Find,” *Science Daily*, 1995-2006, Available [online] <http://www.sciencedaily.com/releases/2003/10/031010074045.htm>, (accessed May 25, 2006).

over one's life and environment, which meets a basic psychological need and decreases the physical and psychological association of despair, exclusion and social isolation.⁶³

In conclusion, reviews of the above functional, personal and social motivations that support volunteerism promote sustained helping behavior. Satisfied volunteers meet their own psychological needs and identify the importance of continued volunteerism. This author would surmise, based on the research reviewed and communications with healthcare professionals that were unable to volunteer, that negative attitudes and feelings of social isolation and diminished importance in the traditional public safety response process resulted from the challenges experienced during Hurricane Katrina. As Michigan continues to seek health volunteers for their registry, mechanisms to provide inclusion versus exclusion must be designed, implemented, and reinforced by appropriate messaging, and incorporating these concepts into local, regional and state on a regular basis. It will be critical for overall Homeland Security initiatives that this occurs across our country. In addition, the deployment issues of Hurricane Katrina could provide a rich database of issues and subject for further research. Each of the 33,000 health professionals who volunteered on the DHHS web-site could be queried on a significant number of issues that could shed important light onto the short and long-term psychological effect of non-deployment. Questions directed at future intent for volunteerism and perceptions of governmental processes may provide useful insight to future strategies.

⁶³ Wilson and Musick, "The Effects of Volunteering on the Volunteer," 9.

VII. STRATEGIC PLANNING TO FACILITATE IMPLEMENTATION

A. FUNDAMENTAL IMPORTANCE OF ESTABLISHING MECHANISM

Hurricane Katrina presented multiple challenges for local, state and federal agencies. Early in the event, it became clear that the need for experienced medical professionals was a priority. Within hours of the levy break, calls went out nationwide expressing the need for medical health professionals; healthcare services were overwhelmed in Mississippi, Alabama, and most notably Louisiana. Requests for assistance were communicated through traditional emergency management mechanisms such as state emergency operations centers. Concurrently, states were investigating the availability of volunteer health professionals by pulling lists together recognizing the need to assess what impact the deployment of this work force would have on their home state.

Early in the process it became clear that the demand for health professionals was not being met, through emergency management via the EMAC the national mechanism established for *governmental* agencies to share resources during an emergency and/or natural disaster.

In an effort to expedite the identification and deployment of non-governmental health professionals, the DHHS contacted the American Hospital Association to seek assistance. A conference call was established with AHA Chief Executive Officers across the country requesting volunteers. To support this process, DHHS established a web site for the collection of health professional's information in anticipation of deployment. Although thousands of individuals registered on the site, the mechanism to verify credentials, establish a set of core competencies and coordinate the deployment became extremely complex, which prevented contacted individuals from responding despite a continued demonstrated need.

Although this activity did not successfully deploy needed resources, it reactivated a process for Washington to "federalize" private, non-governmental health professionals in the time of an Incident of National Significance specific to a public health concern.

Utilizing organizations such as the American Hospital Association, American Medical Association (AMA), American Osteopathic Association (AOA) and the American Nurses Association (ANA) provided important sponsorship by strong, political advocates.

B. ENVIRONMENTAL SCAN SUPPORTING THE STRATEGIC IDEA

Almost one year post-Katrina, there remains no mechanism to enlist and deploy private, non-governmental health professionals for an Incident of National Significance. Nationwide, the availability of governmental nurses and physicians is dwindling and their areas of expertise are not generally acute healthcare. The traditional public health infrastructure is currently being reinforced through the CDC bioterrorism preparedness funding, which includes adding staff across the country. However, most of these health professionals lack the current knowledge and training to function independently in a medical environment. They would also lack the skills to function in the currently needed high tech medical environment. The governmental “medical” health professionals currently employed nationwide most often work in a mental health or corrections environment. In addition, deploying these scarce professionals out of state facilities through EMAC would certainly leave a gap in the sending state.

Each of the 50 state HRSA programs is coordinating a state based registry called ESAR-VHP. Working closely with each state based coordinator would provide the Principal Federal Official (PFO) a list of health professionals that agree to volunteer in an event. This established registry includes the verification of professional licensure and credentials to a level that is consistent nationwide. Establishing a mechanism to federalize those volunteers within the registry pre-event would expedite response and improve outcomes not only for those affected, but for those individuals who wish to volunteer thus share their unique skills and expertise. Again, this allows states to utilize a large number of highly trained, established health professional resources.

C. ALTERNATIVE MECHANISMS TO FEDERALIZING

In an effort to demonstrate that the strategic plan for the United States government to establish a mechanism to federalize private, non-governmental health professionals, is a viable solution to a known deficiency, alternative mechanisms and associated challenges must be presented and reviewed.

One alternative would be that the current employer of the private, non-governmental healthcare workers would continue to provide liability protection; as well as workers compensation and death benefits for any of their employees that responded to the call for assistance during an Incident of National Security. This would only be for those deployed as part of a state/federal deployment system. This process actually did occur during Katrina but not through the governmental EMAC process. Large health conglomerates such as Kaiser Permanente, working with DHHS, did deploy a team to Louisiana and covered all of their costs including necessary equipment, financial compensation for professional services and expenses. This is a unique situation as all of their health professionals are employees of the system and thus, are covered when performing any duties as directed by their employers.

This activity was a win-win situation for Louisiana health system(s) and Kaiser who were able to meet their humanitarian mission. All financial support came from within the Kaiser system including their insurance carriers for issues such as compensation and liability. It should be noted that an impact statement from this deployment has not been released by the Kaiser system as of this time, so it is impossible to note the true costs of this effort (which may take years to determine should any of their employees suffer a negative outcome from this experience). Although this worked well, there are few healthcare systems across the country that fit this model. Most healthcare systems are independent and contract with their medical staff. Medical staffs carry their own insurance policies which detail where and how their coverage exists. Should a physician function outside these provisions, generally they are not covered. This simple fact, adds a complex layer for a health professional to independently volunteer, even as part of a health system team due to the insurance issues.

In an effort to address this insurance issue, large malpractice and insurance carriers could modify existing policies to include the ability to cover their policy holders when responding to an Incident of National Significance. This would present a complex issue, not insurmountable, but may take years for such an industry to come to consensus on the terminology and benefits. Therefore, this could be an alternative that should be investigated for the long-term but will not provide a consistent, nationwide short-term method to address this short fall.

A second alternative would be the ability of a state in which the private, non-governmental health professional works, to make individuals or groups “an agent of the state” for the purposes of deployment and would thus allow that individual to access all coverage as a governmental employee, most notably those outlined in EMAC. This mechanism will also present unique challenges starting with the basic notion from Article IV of the United States Constitution that ensures each state’s ability to form its own republic form of Government. Thus, all states’ structures vary and the ability to form such a proposal would require significant actions beginning with legal advisors within state level public health agencies. It would require extensive legal review and development of proposals that would need to be forwarded to the state Attorney Generals office, and ultimately forcing ratification of new legislative and gubernatorial activity within each state and territory.

It should, however, be noted that most states, through their legislative acceptance of EMAC have established a mechanism to utilize private, non-governmental general contractors at the time of an emergency. When a state does not have enough resources or equipment to accomplish a task such as restoring power, clearing debris or search and rescue, they elicit the private contractors through established mechanisms to assist. However, this process does not exist for private, non-governmental health professionals. This may be due to the previous absence of the need for individuals with specific medical expertise in high volume necessary during Hurricane Katrina in 2005. Also, the magnitude of medical equipment and costs that need to be deployed in such a scenario may also be a factor in this limitation.

It should be noted that several states, during the Katrina response, did enact an Executive Order to make a small number of private health professionals “agents of the state” to facilitate their response to the EMAC request. Although the numbers are small, these states and their eventual after action reports, including costs and future implications, may provide critical information for other states when making future planning decisions. Again, this alternative provides a potential solution to the challenge but is not one that can be immediately impacted due to the variation in state governments and the legal implications of such action. This should be a focus for future, long term

alternatives. However, it does not answer the immediate request for private, non-governmental health professionals needed in the current or future public health focused Incidents of National Significance.

D. NEW BUSINESS OR SET OF PROGRAMS NEEDED FOR THE STRATEGIC IDEA TO BE IMPLEMENTED

The ability to federalize private, non-governmental health professionals will require specific infrastructure at the state level to support the requests from the federal government. This infrastructure includes a nation-wide standard mechanism to identify, register and credential health professionals in advance. With that comes the need to consistently identify necessary resources and resource typing such as:

1. Equipment

Each state would need to purchase and maintain computer hardware and software to support the maintenance of a database of health professionals and their verified credentials. This would most likely require a secure Internet site with redundant server back-up and mechanisms to access data in the event of a power outage. Additionally a basic set or template of deployable generic medical equipment, resource typed would be established nationally. This can range from basic first aid to sophisticated mobile medical facilities. The state would need to manage this inventory of equipment. It is recognized that this could occur through collaboration with private health entities.

2. Training

Specific programs would be a critical component to ensure that all personnel deployed have a minimal set of competency-based education and training. This would include knowledge about chemical, biological radiological, nuclear and explosive events. Mental or behavioral health aspects of responding over time in austere, difficult work environments as well as any specific equipment that would be expected must be included. Currently, the DHHS, HRSA contracts with University-based level *Centers of Excellence* as part of their Bioterrorism Preparedness programs. These centers could be tasked with developing specific coursework that would demonstrate a minimal level of competency prior to deployment. All of the management and tracking would be done within the respective state and available to the federal government upon request.

3. Policy

Significant policy changes would be required at the local, state and federal levels to facilitate implementation. Most notably would be modifications to NEMA, EMAC, FEMA and federal processes that offer inclusion of private, non-governmental health professionals more broadly into personnel and resource typing guidelines. EMAC processes would identify mechanisms to federalize private, non-governmental health professionals, thus providing them comprehensive coverage. State and local government and private agencies processes would develop specific policies on the deployment, backfill and parameters of the federal governmental deployment.

E. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND CHALLENGES (SWOC) ANALYSIS AND STRATEGIC ISSUE DEVELOPMENT

Stressing the importance of the DHHS and DHS National Priority of medical surge capabilities, the federal government's ability to implement the appropriate protections necessary to utilize private, non-governmental health professionals is a critical first step. This would significantly support local and state initiatives as well.

1. Strengths

- DHHS has multiple health-related agencies that have information on their specific mission and/or capability. This would include the HRSA programs; NBHPP, ESAR-VHP, and EMS, primary care initiatives such as Migrant and Rural Health and Federally Qualified Health Center Programs.
- DHHS post-Hurricane Katrina had an opportunity to evaluate their response and identify and implement opportunities for improvement. This includes the issue surrounding private medical health professionals.
- Other departments within the federal government have resources to contribute to improved capability and response. This would provide them the opportunity to utilize such resources by integrating current silos that exist in planning and implementing a response.
- DHS has become the overall coordinating agency of 22 previously separate agencies that have responsibilities for homeland security and defense. It is critical that DHHS and DHS have established relationships

both vertically and horizontally. This should include databases of resources and personnel available to assist for significant events.

- Two agencies within DHHS, CDC and HRSA, work with state public health agencies that are responsible for medical and public health. Through this relationship, a network of professionals exists whose primary function is to maintain responsibility for coordination of planning and response within their states. These 62 grantees have tremendous resources available at the local, regional and state levels.
- DHHS also has access to and a working relationship with the Public Health Service, the United States Department of Veterans Affairs and other governmental resources that have medical personnel to assist in an event.
- HRSA has ESAR-VHP. This is an initiative that is being rolled out in 3 phases, but establishes a minimum standard for all 62 grantees (states and territories) to collect and credential volunteer health professionals. These would be pre-certified and available should a mechanism be present to deploy them for assistance inter or intra-state.

2. Weaknesses

- Compartmentalized structure exists within DHS and the previously independent 22 agencies.
- CDC and HRSA need to improve coordinating efforts at the federal level between their agencies despite the two national priorities of medical surge and mass prophylaxis.
- Lack of consistent mechanism to credential healthcare professionals whether governmental or non-governmental.
- The ESAR-VHP program is still in development. Ten grantees are in phase 1 (initial) and have a registry in place; 22 grantees are in phase 2 and are at varying degrees of implementation. The remaining 30 grantees are just starting the process as phase 3 states. In addition, the ESAR-VHP

program at the national level has not finalized guidelines for credentialing or the technical standards of the program for the grantees. Therefore, no two systems are alike or finalized as of the date of this writing.

- Lack of national, consistent mechanism that enables the utilization and deployment of private, non-governmental health professionals.
- Minimal governmental medical resources to meet the needs of an Incident of National Security. This was demonstrated during the Katrina response and continues as of this writing.
- Lack of consistent mechanism to cover the issues of liability protection, workers compensation or death compensation nationwide for private, non-governmental healthcare workers.
- Efforts to establish basic mutual aid between healthcare systems within states is complex and inconsistent inter and intra-state. This fact complicates the ability to expand beyond a single event to one of multiple states.
- The legal milieu within the United States complicates the ability for private, non-governmental healthcare professionals to leave their normal work environment and volunteer during an event.
- Many health professionals would put themselves at risk regardless of the lack of protection provided or the conditions in which they would practice. This willingness to serve, thwarted during Katrina may effect a homeland security response in the future. In addition, a lack of structure for coordinated deployment results in spontaneous unsolicited volunteers, (known as *suv*), also risky to those responders and those coordinating the response.

3. Opportunities

- Developing independent systems for deployment that would meet the needs of various health professionals across all 50 states and territories would be impossible. Developing a system that is coordinated at the

federal level would provide support to states and territories. This system could establish a baseline credentialing system and establish consistent training, education and exercising capabilities.

- Demonstrate strong, collaborative leadership of the federal government to local and state government and the private sector.
- Demonstrate that the lessons learned from Hurricane Katrina supported the federal government action to address the issues associated with care of large numbers of victims, including when healthcare facilities can no longer deliver care.
- Significantly improve morbidity and mortality associated with a mass casualty or other public health emergency.

4. Challenges

- Variation among health professionals and expertise and the need to establish baseline competencies with education, training and exercises.
- Making non-governmental health professionals “temporary unpaid government employees” presents significant paperwork issues that must be streamlined pre-event to expedite deployment processes.
- Communication consistently to all 62 HRSA grantees in a manner that fosters trust and collaboration between the federal government and state government. Currently, a lack of trust related to a states volunteer work force exists...what will happen once they forward the information to the federal system? A concern that the federal government will keep a database of those previous volunteers and not continue to work with state processes that have been established.
- The financial implications of making non-governmental employees, temporary governmental employees specific to workers compensation and death compensation. Potential long-term financial drain on federal budgets.

- Health professionals want to volunteer and will often deploy outside of structured systems. A solid structure must be instituted to avoid spontaneous volunteers and encourage following a consistent system to identify and deploy.
- Maintaining interest and attention of identified volunteers in the absence of an Incident of National Significance and deployment.
- Mechanism to pre-credential and identify a high level expertise of health professionals.

F. BENCHMARKING

Benchmarking this initiative will be difficult because no system at the federal level exists with which to accurately benchmark. A process will be developed to review experience of those states that had established a system to urgently deploy private, non-governmental health professionals during Hurricane Katrina. The states that established such systems did so in collaboration with their state government enacting an Executive Order to cover their employees as “agents of the state”. Although it is early to assess the impact of this activity, especially related to long-term implications on those governments, this small set of data will be useful. Each of the 62 HRSA ESAR-VHP programs will report a set of “best practices” or challenges.

Another important source of data will be the review of the collaborative effort of DHHS with the AHA database to identify health professionals to deploy. Although over 33, 000 volunteer health professionals signed onto the database, a significantly lower number were deployed due to the complexity of credential verification and process associated with deployment. However, both of these systems have valuable information to use to benchmark a more sophisticated, well thought out system than that which currently exists.

Finally, those private health systems that deployed resources, whether via pre-established mutual aid agreements between corporate facilities in the affected areas or as part of their humanitarian efforts, should be contacted and a comprehensive review for a SWOC analysis of the activity should be conducted to help establish recommendations and alternative methods. A brief description of the plan will include: an extensive review

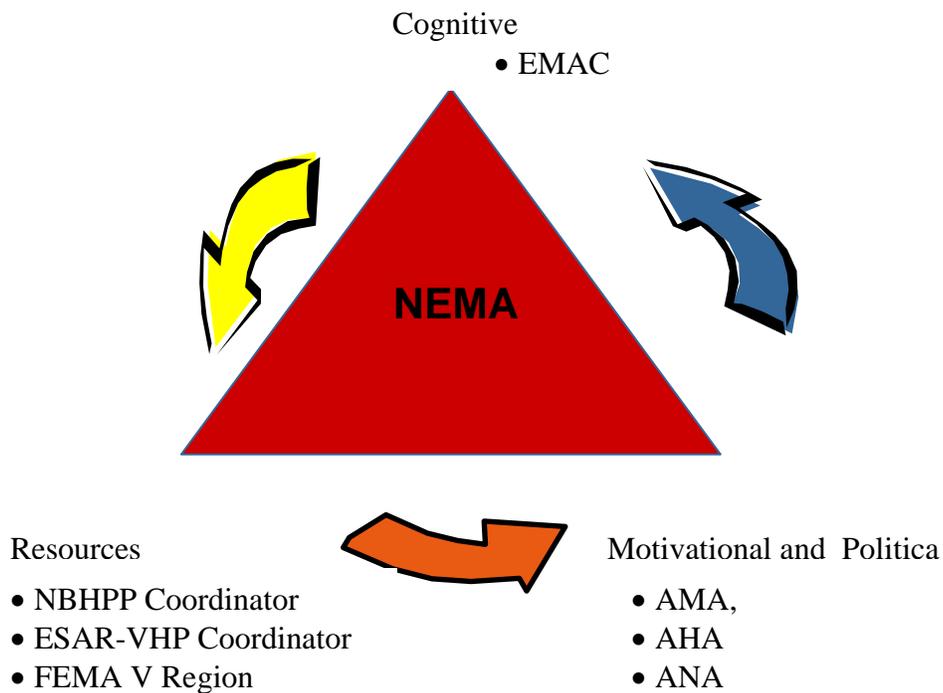
of each of the ESAR-VHP programs for the ability or inability to deploy private, non-governmental health professionals; an extensive review of the private health systems that deployed personnel as a result of pre-established mutual aid or humanitarian efforts, assessment of current capabilities to utilize this specific group of persons, determine best practices identified during Hurricane Katrina, analysis of action steps to meet deficiencies, including consistent credentialing, training, education and exercising of those individuals; and draft a strategic plan for deploying private, non-governmental health professionals investigating all alternatives; federal, state and individual organizations. This plan would then be shared with stakeholders for review and revision as necessary. Then those stakeholders that are influential to the success of the process would be enlisted to assist in moving the project forward. It will be important to efficiently move the process forward, making necessary modifications as needed.

G. DRIVING THE PLAN

A critical component for implementing this plan is the identification of the four organizational hurdles to strategy execution. For the purposes of this activity, the driving organization will be the National Emergency Management Agency (NEMA) that has coordinated the activities of the inter-state mutual aid agreement known as EMAC. This compact forms the basis of mutual aid and deployment of resources for all 50 states. This compact is designed specifically for inter-state mutual aid agreement of governmental entities. Since this plan focuses on the need to identify and integrate private, non-governmental resources into the EMAC process, it is helpful to identify the four organizational hurdles to strategy execution; cognitive, motivational, political and resource.⁶⁴

⁶⁴ W. Chan Kim and Renee Mauborgne, *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant* (Boston, MA: Harvard Business School Press, 2005), 150.

Figure 1. Hurdles to Strategy Execution



Many believe that the EMAC system is not broken, thus no need to modify. There is a lack of recognition that medical personnel are not currently part of EMAC. Hurricane Katrina demonstrated the urgent need and shortcomings in governmental medical resources and the ability to mobilize them at the onset of the event. Nearly one year later, medical services have not been 100% resolved and significant gaps continue to exist. EMAC requests continue to the states for physicians, nurses and medical para-professionals.

1. Motivational and Political Hurdles

The driver of the plan should work with National Associations such as the American Medical Association, American Health and Hospital Association and American Nurses Association as these organizations have significant membership that were and continue to express concern with the availability of medical services in Louisiana. In addition, they hold significant lobbying power in Washington. All of these organizations

had ground up movement of their membership to try to assist during Hurricane Katrina. Most of them were unsuccessful due to the difficulties of the EMAC process.

2. Resource Hurdle

The NEMA may be unable to grasp a process to identify and manage the identification, credentialing process, and deployment of private, non-governmental health professionals across the country. This would be a formidable task for one association working with federal agencies due to the diversity of systems and processes. Each state has a NBHPP as part of DHHS preparedness funding. The state coordinator of this program has direct contact with both hospital and pre-hospital health professionals working to establish intra-state regional preparedness initiatives. This person should be accessed for knowledge of state specific resources, including political climate of the state on this issue. Each state, through a DHHS preparedness initiative has an ESAR-VHP Coordinator. Their position, present in all 62 grantees is responsible for establishment of a state volunteer registry developed to meet minimal technical guidelines established by DHHS. The registry would provide immediate access to names and significant credentialing and educational backgrounds of those registered. The NEMA, working with state emergency operations centers could work directly with the one state coordinator to assist in identifying and mobilizing these important resources. This would also enable the sending state to maintain knowledge of any resources deployed out of their state and when those resources return. This would help ensure the state medical system and their citizens are not put into jeopardy by minimizing access and possible redundancy in a state specific event.

H. PILOT INITIATIVE TO IMPLEMENT THE PLAN

Michigan could serve as a state system to pilot the process and implement the plan to utilize private, non-governmental health professionals during an Incident of National Significance. Since the DHHS NBHPP and ESAR-VHP point of contact in Michigan has an extensive experience in emergency preparedness and could serve as the single point of contact. In this role, the responsibility to maintain an extensive list of all 180 hospital Chief Executive Officers, 800 Life Support Agencies Medical Directors as well as the 24/7 contact information for the Medical Coordinating Center in each of Michigan's Eight Emergency Preparedness regions facilitate immediate access. In

addition, this position sits on the State of Michigan, Emergency Management Homeland Security Division (EMHSD) State Coordinating Committee(s) which serves to monitor and implement the activities of the Department of Homeland Security (DHS) granting process statewide. This includes the identification and management of personnel needed during an event that would necessitate the standing up of the State Emergency Operations Center. The Michigan Community Health Emergency Coordinating Center serves as the lead agency for an ESF#8 events, working specifically on the identification, coordination and communication of health professional volunteers and medical resources with the SEOC.

The pilot in Michigan would include the pre-identification of a core group of health professionals that have volunteered through their ESAR-VHP registry (found at www.MIVolunteerRegistry.org). Currently there are almost 900 registered volunteers. Once a core group representing diverse healthcare professionals and expertise was identified within the registry, their credentials would be verified. This verification is based on the *Interim Technical and Policy Guidelines, Standards, and Definitions* of the DHHS ESAR-VHP Program. This includes relevant education, professional training, licensure, certification, and clinical practice information. Since the ESAR-VHP is a national program, the credentialing components establish common personnel resource definitions that will make ordering and dispatching personnel during an incident more efficient and work to ensure that authorities receive the personnel they need during an emergency or disaster.⁶⁵ This Michigan group would receive specific training opportunities that would be exercised at least semi-annually. Concurrently, mechanisms for their deployment, including identification of EMAC components and mechanism to work with their primary employment agencies would be established with those key stakeholders that are part of this core team.

All activities would be established in conjunction with current emergency preparedness initiatives at the local, regional, and state levels to ensure activities do not happen in specialty silos. In addition, since this is a pilot project routine conference calls

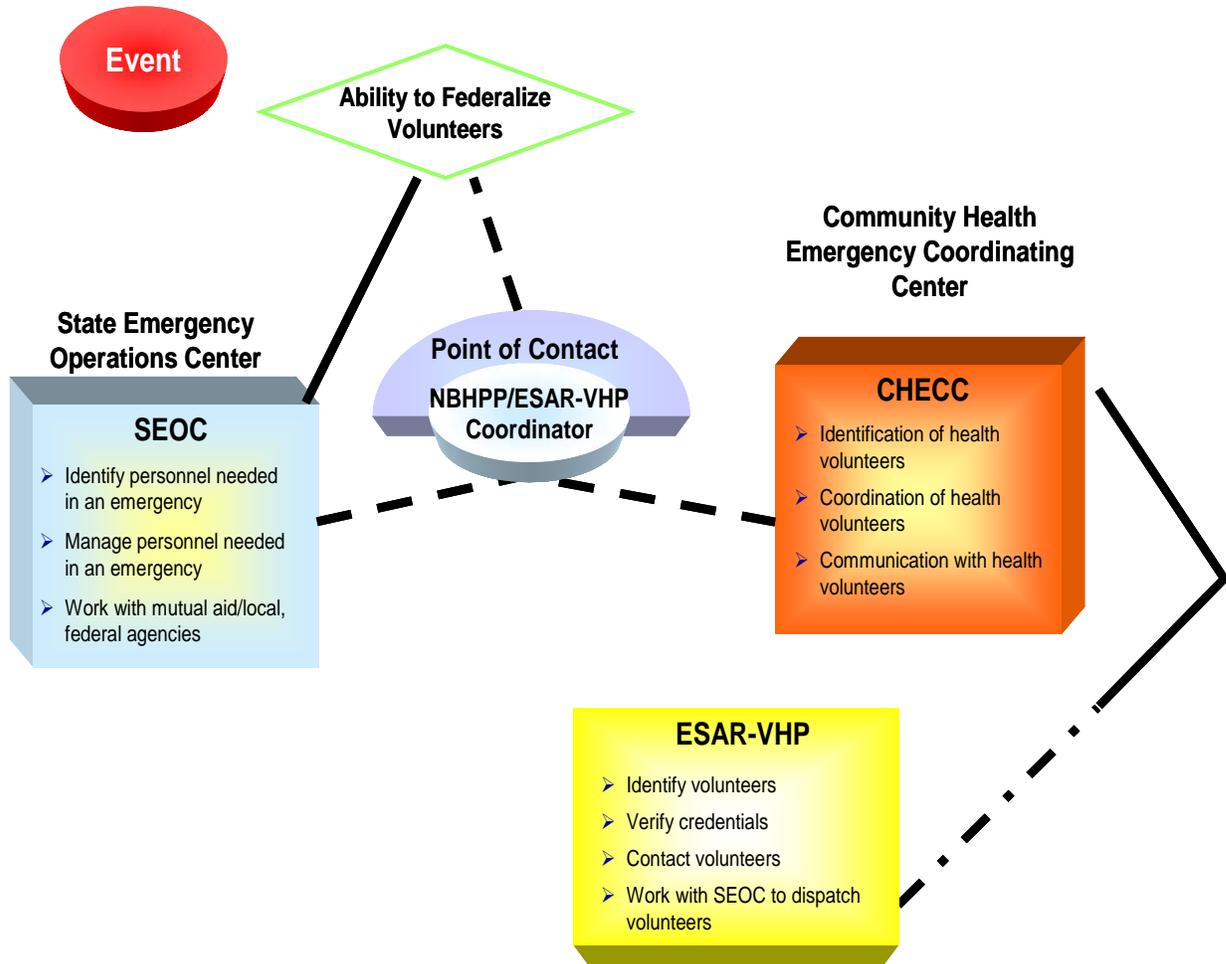
⁶⁵ Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) Program, *Interim Technical and Policy Guidelines, Standards, and Definitions*. Division of Healthcare Preparedness, vol. 2, *Health Resources Services Administration* (Washington, DC: Department of Health and Human Services, June 2005), 29-30.

with NEMA and other federal agencies as identified would be established, based on the status of the project to keep initiatives on track and/or make modifications as necessary. This would include timelines and deliverables. Should this core team and processes prove to be successful in the early stages, Michigan could work with the FEMA Region 5 Coordinator to identify a border state to begin a similar project.

Mr. Edward Buikema is the current FEMA V Regional Director. His former position was as the Commanding Officer of the Michigan State Police Emergency Management Division. This historical relationship has worked favorably for Michigan through a continued close collaboration of Michigan State Police and Community Health administrative team. This includes opportunities to lecture at Michigan conferences forging that continued knowledge of Michigan structure and initiatives. He is knowledgeable of the challenges of private, non-governmental health professionals, the local and state emergency management resources and maintains the broad federal perspective. During Hurricane Katrina, Mr. Buikema was deployed to Washington, DC to staff the National Resource Coordination Center (NRCC).⁶⁶ Mr. Buikema has been briefed on this proposal and has agreed to provide information if necessary that could assist in moving the pilot project forward. This may include communication with other FEMA departments and administration and more importantly the NEMA Administrative Staff. His support of this project lends significant validity to the importance of recognizing the inherent challenges and assisting in federal intervention strategies that may be necessary as the pilot unfolds. This would reinforce the important need for mechanisms to provide inter-state support during a significant incident.

⁶⁶ Edward Buikema (FEMA Region V Director), interview with author, Troy, MI, March 31, 2006.

Figure 2. Pilot Initiative



At all times, the Michigan Department of Community Health Director and the Office of Public Health Preparedness Director would receive activity updates to ensure that the Department, Governors Office as well as the Attorney Generals Office was informed of this pilot project initiation. As this is an election year, all efforts to identify the progressive and important nature of this pilot project to the Governor Office may help ensure responsive actions, mechanisms to support the pilot and a platform to notify the Citizens of Michigan of this innovative preparedness initiative. Thus providing the important link to citizen and industry buy in.

Individual healthcare professionals, Michigan health professional organizations such as the Michigan's State Medical Society, Osteopathic Association, Nurses Association, Respiratory Therapy Association, and healthcare facilities and systems statewide continue to express significant support of any preparedness activities that incorporate private sector consistent with the direction of the National Response Plan. The ability to capitalize on the frustration expressed with Hurricane Katrina response to market and publicize both the registry and the pilot initiative can significantly drive this plan forward recognizing that not all will support the pilot but will be interested in the results.

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VIII. CONCLUSION

The implementation of the ability to federalize private, non-governmental health professionals during an Incident of National Significance would bridge a significant gap that currently exists in the ability of the United States to adequately respond to a public health and/or medical health event. It is recognized that this is a substantial undertaking that requires close collaboration of local, state, and federal governments with private industry. However, the federal government has recognized that one of the seven national priorities must address the ability to surge the medical system. This will be unattainable without significant modifications of the system as it exists today. When state and local resources are exceeded during a catastrophe, the role of the federal government is particularly vital and “would reasonably be expected to play a more substantial role than in an ‘ordinary’ disaster”.⁶⁷

Using Michigan as a pilot site with support of the FEMA Region V Division Director allows a controlled process that once tested and modified can be adapted across the country, utilizing the valuable wealth of private health resources available and more importantly, providing economy of scale. The proposal to develop a team of health professionals for intra-state and possible inter-state deployment is consistent with a recommendation contained in an EMAC 2004 After Action report. The recommendation to deploy complete teams of personnel with a designated leaders or coordinator proved the most effective structure for managing and controlling resources during the event.⁶⁸ In addition, the Hurricane Katrina After Action Reports reinforce the need to more fully integrate the private and non-profit sectors into their planning and preparedness initiatives. This includes the designation of specific individuals, again could be a state level coordinator, to work directly with private sector organizations and elicit input for planning, training and exercises.⁶⁹

⁶⁷ *Hurricane Katrina: A Nation Still Unprepared Executive Summary*, 4.

⁶⁸ *2004 After-Action Report Hurricane Response* (Lexington, KY: National Emergency Management Association), B - 13, NEMA.

⁶⁹ *Hurricane Katrina: A Nation Still Unprepared*, 20.

In February 2006, *The Federal Response to Hurricane Katrina Lessons Learned* was published. This document contains critical information that can and should be used to address issues and provide opportunities for improvement in all sectors at all levels. The following quotation reflects our future:

Hurricane Katrina prompted an extraordinary national response that included all levels of government – Federal, State and local-the private sector, faith-based and charitable organizations, foreign countries, and individual citizens. People and resources rushed to the Gulf Coast region to aid the emergency response and meet victims’ needs. Their actions saved lives and provided critical assistance to Hurricane Katrina survivors. Despite these efforts, the response to Hurricane Katrina fell far short of the seamless, coordinated effort that had been envisioned by President Bush when he ordered the creation of the National Response Plan in February 2003. Yet Katrina creates an opportunity-indeed an imperative-for a national dialogue about true national preparedness, especially as it pertains to catastrophic events. We are not as prepared as we need to be at all levels within the country: Federal, State, local and individual. Hurricane Katrina obligates us to re-examine how we are organized and resourced to address the full range of catastrophic events-both natural and man-made. The storm and its aftermath provide us with the mandate to design and build such a system.⁷⁰

⁷⁰*The Federal Response to Hurricane Katrina Lessons Learned*, 3.

APPENDIX A—RESPONSE TO HURRICANE KATRINA SURVEY

Thank you for taking the time to complete this survey. This survey will be used as the data collection tool for a Masters Thesis at the Naval Postgraduate School (NPS). The thesis will be a case study of Hurricane Katrina focusing on issues associated with mutual aid mechanisms to deploy private, non-governmental health professionals. The results of the survey will be confidential, not anonymous, please indicate state_____.

For the purpose of this tool, health professionals are defined as any licensed provider such as physicians, nurses, behavioral health and emergency medical services personnel. “State” is defined as any governmental entity that was involved in the response to Hurricane Katrina requests for assistance.

1. **Was your state involved in any way with the requests for health care personnel to the Hurricane Katrina effected area?**

Yes

No

If no, end of survey please return survey to:

Linda Scott

scottlin@michigan.gov

Michigan Bioterrorism Hospital Coordinator

Michigan Department of Community Health

Office of Public Health Preparedness

201 Townsend St.

Lansing, MI 48909

2. **How were the mutual aid requests handled in your state? (Choose all that apply):**

Emergency Management Assistance (EMAC)

State Level Compact

Local Jurisdiction

Private/Industry Compact ie: hospital to hospital

Other: _____

3. **Were any state health resources mobilized outside of the governmental mutual aid structure? Such as private EMS agencies/vehicles, health related personnel etc.**

No

Yes

If yes, describe any impact on your own states medical resources.

4. **How does your state address the issues of liability for volunteer health professionals, please be specific?**

5. **How does your state address the workers compensation coverage for Volunteer health professionals, please be specific?**

How does your state address the death benefit for volunteer health professionals, please be specific?

6. **Did your state government enact any executive orders to enable the deployment of private health professionals to the Hurricane Katrina area?**

No

Yes

If yes, please describe actions taken:

Would you be willing to share a copy(s)?

No

Yes, if so please provide appropriate point of contact and contact information:

Name: _____

Phone: _____

Email Address: _____

Upon completion of this survey please submit to:

Linda Scott
Michigan Bioterrorism Hospital Coordinator
Michigan Department of Community Health
Office of Public Health Preparedness
201 Townsend St.
Lansing, MI 48909

scottlin@michigan.gov

If you would like to receive the results of this survey please complete the information below:

Name: _____

Address: _____

Email Address: _____

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APPENDIX B—SURVEY TOOL WITH COMMENTS

1. Was your state involved in any way with the requests for health care personnel to the Hurricane Katrina effected area?	
No	9
Yes	30

2. How were the mutual aid requests handled in your state?	
Emergency Management Assistance (EMAC)	30
State Level Compact	6
Local Jurisdiction	6
Private/Industry Compact	12
Other	11
<ul style="list-style-type: none"> • Emergency Management Agency • Deployed volunteer healthcare workers to hospitals, intra-state etc. in Alabama gulf coast communities. • State Health Department, however we were not successful in providing volunteers because no request was received through FEMA/XEMA. We received word from the affected states that they needed healthcare volunteers, but because the requests didn't go through FEMA, we could not address protections for the volunteers. There were a few private entities (hospitals) that sent teams and individuals who went on their own. We have an ESAR-VHP program in place for nurses so we intended to use that system to call upon nurses. • Requests through associations (hospital, primary care, mental health, maternal child health) • Federal MRC deployed state MRC to gulf coast states • Some hospital deployed on their own, outside of the EMAC • Feds "willy-nilly" cherry picking assets • A ESF#8 supporting agencies veteran administration and the red cross • Governor's Executive Order • Medical Reserve Corps – American Red Cross • Volunteers were self deployed after reported mass calls for mutual aid by the media and HHS • Agreements with: Faith Based Community, National Guard, CDC, Law Enforcement, University of XXXX for Medical Sciences • Some healthcare provider volunteers who had registered with a Medical Reserve Corps unit were deployed as MRC volunteers with other relief agencies, such as the Red Cross. These MRC volunteers were the only deployed volunteers to the Gulf area other than state employees (aside from self-deploying individuals and those who went with a church group) 	

3. Were any state health resources mobilized outside of the governmental mutual aid structure? Such as private EMS agencies/vehicles, health related personnel, etc.	
No	9
Yes	20
Unknown	2
Attempted but interrupted	1

If yes, describe any impact on your own states medical resources.

- No significant impact
- Office of Emergency Management were sent. Key personnel, especially from OEM was going for prolonged period of time
- We sent 12 EMS crews and ambulances to Texas for 2 months. No impact on EMS coverage in state. There were various health professionals who deployed on own with various not for profit entities, but some were deployed through the state
- For the shelter established for evacuees, it was hard to fund nurses for coverage. Community healthcare centers were used for chronic care. Private EMS were used for transport of evacuees.
- Without a system in place to deploy resources in a controlled manner, self-dispatching of EMS agencies, hospital staff, etc. impacts our state in that it reduces the number of volunteers that would be available to respond to any state response.
- Depleted the states resources to respond to another event
- EMS agencies sent ambulances through FEMA. They did not report problems.
- Very limited resources in XXX to start with. Significant confusion as requests came from federal agencies through various associations essentially ignoring the National Response Plan. Some requests came by EMAC, a tedious process. Other deployments, such as DMAT, National Guard.
- As soon as we realized that there were efforts underway to deploy state resources outside of the state emergency response structure, we took efforts to coordinate with the various organizations/agencies involved in order to not adversely affect the state response.
- Hospital personnel did not use our structure exclusively. Emergency Medical Services did use the state EMAC system for deploying.
- There was no significant impact on health resources. However, the impact on Medicaid Funds was substantial.
- Private sector staff was deployed using a Governor's Executive Order
- National Medical Reserve Corps partnered with the American Red Cross to deploy healthcare professionals. Of the 350 MRC members deployed, 64 were from XXX. The XXX Hospital Association developed teams to be deployed following HHS procedures. No XXX hospital teams were formalized or deployed.
- 1 team of 4 WIC volunteers from the XXX Department of Health and Human Services
- We had some ambulance services from our eastern border cities that deployed with another states team.
- Breakdown in communication – unsure if state health resources were mobilized
- There were several evacuees that had serious, acute and/or chronic medical problems that needed immediate attention. The XXX Bureau of Emergency Medical Services coordinated with local ambulatory care to transport those patients with serious medical conditions to local hospitals.
- We are aware of some hospitals and private EMS services that deployed either on their own or via a request from private organization, etc. The only impact was regarding the confusion related to reimbursement. The state works only under the auspice of EMAC as the legal and reimbursement issues are covered when deployed under this compact.
- Other than self-dispatched volunteers, private EMS agencies and vehicles were utilized only after pulling them into the state process of becoming state assets allowing for EMAC. It was difficult to utilize private entities and faith based groups because they are not specifically addressed in the Stafford Act or EMAC.
- There were not as many health care professionals here to help when the evacuees came here from Louisiana, but we (as a state) still maintained the resources to function and provide care.

4. How does your state address the issues of liability for volunteer health professionals, please be specific?	
Treated as state employees	10
EMAC	5
Declared disaster	3
Specific statutes	3
Working on the process	3
No process in place	2
Establish a Memorandum of Understanding	1
Good Samaritan Laws	1
Dedicated team	1
Being considered/received presently	
<ul style="list-style-type: none"> • We have a state website where volunteers register and electronically sign. This signature covers them under state policies. • Just passed legislation on 5/5/06 that gives them liability protection (medical agencies) if they are under the direction and control of a state agency and are not being paid while a volunteer. This was not in place during Katrina. • XXX has liability protection for its MRC members under general municipal law section XXXK which allows our volunteers to be considered extensions of XXX Department of Health workforce if volunteering for us. • Volunteers, health and non-health, were required to sign a volunteer form; making them “agents” of the XXX, allowing them liability coverage • The XXX Attorney General’s opinion is that volunteers who are deployed through the Department of Health have the same liability coverage as state employees. • If an individual or state asset go through our emergency management structure, through EMAC, they become “agents of the state” and designated as part of Civil preparedness force. Only then will liability, worker’s comp and death benefits be covered by the State, the same as it would for a State employee. • Under EMAC liability issues are covered • Through the specific state EMA Act and state department of public health rules and regulation, state based emergency response team members are considered non-paid state employees during state declared disasters. • During a statewide emergency they would be considered state employees. XX has a law that eliminates liability concern for health care agencies if the governor determines the system is overwhelmed and they operate with an approved plan. • We are still working on it with proposed new legislation. Right now the governor can declare an emergency and issues such as professional license statutes can be ‘relaxed’ but liability cannot. If our licensees went to another state, they would have to rely on that state’s protections, if any. • Current plan is to provide liability coverage for identified/verified and pre-credentialed health professionals to be made “emergency state employees” to provide liability and workers compensation and accidental death benefits as well as a salary and appropriate travel costs. Pending approval by legislature and governor. • Our state has passed legislation to provide liability protection for Medical Reserve Corp volunteers. We integrated our MRC and ESAR VHP programs to cover hospital volunteers. We also have the ability to designate “free clinics” which offers some liability protection. • A MOU was created making the volunteers state employees. • Volunteers are handled through EMAC; therefore their liability is covered. • It has been addressed through the Good Samaritan Act. Anyone including healthcare personnel volunteering their services are protected. • Our state was not able to deploy healthcare workers, although we worked with EMAC to try to establish a list of volunteers based on their requests. Our state’s volunteer system was not in place to allow a timely recruitment and deployment. So, although liability was under discussion, we never actually deployed workers. 	

- For particular emergencies there is not establish a Volunteer Health Professional in hospital setting yet.
- We have several statutes that provide immunity. We also used the Governor's Executive Order and EMAC provisions.
- SBXX was signed out January 11, 2006, after the Hurricane Katrina event.
- XXX Lay Title 37-B, Title XX of Main Emergency Powers defines volunteer health professionals as members of emergency management forces and act as agents of the State.
- We have not yet solved this issue. For out of state deployment they were made temporary employees of the state.
- This is an issue we are currently working on. Currently only during times of a state disaster are the volunteers covered. All state employees that were deployed were covered by the EMAC agreement
- Employees of the state are not liable for the exercise or performance, or the failure to exercise or perform a discretionary function or duty, in carrying out emergency management provisions of Chart 2, Title XX. Rev. Stat. 26-314(A). Emergency management provisions instituted during Governor declared, "state of emergency". Immunity not extended to willful misconduct, gross negligence or bad faith. Volunteers enrolled or registered with a local or state emergency management agency during a declared "local" or "state of emergency" under the authority of Title XX are treated just as officers and employees of the state who perform similar work for liability purposes. Immunity extends to the performance of training for authorized functions or duties.
- XXX passed legislation XXXXX Disaster medical assistance teams a few years ago giving the department authority to establish public health response teams. Since then XXX has developed medical and environmental health response teams and is in the development stages for an epidemiology response team. With the legislation any member of a public health response team that acts pursuant to the division of the chapter in law is considered an employee of the state under chapter 669, shall be afforded protection as an employee of the state under section 669.21 and shall be considered an employee of the state for purposes of workers' compensation and death benefits provided they follow a number of requirements. The teams include both public and private partners.
- Volunteer health professionals in the state of XX practice under their own liability or that of which entity they are associated with. There is currently no mechanism for in-state volunteers to be protected under state liability or workman's comp.
- If health professionals volunteer and operate under the umbrella of the XXXX Department of Health and Human Services, it is in our opinion that they are assumed employee status and would be covered under XXXX policy. Also, XXXX has a law (Act XXXX, House Bill 1236, Regular Session 2005, Subtitle; an act to establish a statewide mutual aid system, amending XXXX Emergency Services Act code 12-75-103) that defines emergency responder and protects those who volunteer during a state of emergency from prosecution.
- Individuals registered as Medical Reserve Corp members are given sovereign immunity from liability to the same extent as are state employees performing their assigned duties. This liability protection for MRC volunteers protects them from civil liability if they provide aid or treatment in good faith, absent of gross negligence and do not receive any compensation for their services. This applies when the volunteer is engaged in emergency services and preparedness activities.

5. How does your state address the workers compensation coverage for Volunteer health professionals, please be specific?	
Treated same as state employee	10
No process in place	8
Currently working on process	4
EMAC	4
Established an MOU	1
Purchased a specific compensation policy	1
Rely on "parent employer"	1
Dedicated team	1
Under review currently	
<ul style="list-style-type: none"> • We have a state website where volunteers register and electronically sign. This signature covers them under state policies. • We are awaiting direction from XXX on this issue. We are hoping/expecting that it will eventually be provided by the state. • Liability protection (medical agencies) if they are under the direction and control of a state agency and are not being paid while a volunteer as state employees go to max limits provided to state employees. • Volunteers, health and non-health, were required to sign a volunteer form; making them "agents" of the XXX, allowing them liability coverage • There is currently no legislation that addresses this, however, at this time, if a volunteer is injured in the service of the state, they could file a claim with the Board of Adjustment. • If an individual or state asset go through our emergency management structure, through EMAC, they become "agents of the state" and designated as part of Civil preparedness force. Only then will liability, worker's comp and death benefits be covered by the State, the same as it would for a State employee. • Under EMAC liability issues are covered • Through the XEMA Act and XXPH rules and regulation, XX medical emergency response team members are considered non-paid state employees during state declared disasters. • Local event = local coverage, state event = state coverage • It is our understanding that our state would be responsible for workers comp of XXX volunteers if the state deployed them. If they volunteer on their own they would be covered by the employer IF the employer sent them as their employee. Otherwise, they have no guarantees. • Currently None exists. • MRC is covered under the state workers compensation program when deployed as part of an official state response effort. • A MOU was created making the volunteers state employees. • Volunteers are handled through EMAC; therefore, their workers compensation is covered. • That is still being debated. The current thought is that if they are operating in an official volunteer capacity, the state will assume this responsibility, but it is not yet settled. • This issue was a topic of discussion and still is to this day with respect to our ESAR VHP program. • Cannot answer • Private sector and state employees covered under state law and Governor's Executive Order. Local government employees covered under employer provisions. • No • LD XXXX clarifies that health volunteers who sign up through the XXX Emergency Management Agency become agents of the state. • We have purchased a policy for our volunteers. When we deploy them we pay the individual premium cost and submit the names and SS# within 72 hours. • This is an issue we are currently working on. Currently only during times of a state disaster are the volunteers covered. All state employees that were deployed were covered by the EMAC agreement. 	

- Emergency workers and volunteers have immunity from liability, exemptions for laws, ordinances and rules, and are eligible for all pensions, relief, disability workers' compensation and other benefits that apply to the activity of officers, agents, employees or emergency workers of the state or any political subdivision when performing their respective emergency functions.
- At this time XXXX does not have a mechanism in place to cover this situation.
- In a word.....we don't, or not yet at least. It is my understanding that under EMAC, the receiving state shall provide or reimburse for workers comp coverage, but for Non-EMAC response, we are relying on the "parent employer" (in many cases, hospitals) to maintain workers comp for their volunteer employees. Whether they will honor this or not is not known.

6. How does your state address the death benefit for volunteer health professionals, please be specific?

Currently no process	11
Covered as state employees when working in that capacity	6
EMAC	4
Working to address issue	3
Unknown	3
Rely on "parent employer"	1
Establish a MOU	1
Dedicated team coverage	1

- There is none at this time. If it should be created for volunteers we expect it will come from the state level.
- Only benefit is through worker's compensation. However, if professional is part of a mobile response unit, they may have an additional death benefit. Law is not real clear in this area.
- I don't know? I don't recall the issue arising.
- File a claim with the Board of Adjustment.
- If an individual or state asset go through our emergency management structure, through EMAC, they become "agents of the state" and designated as part of Civil preparedness force. Only then will liability, worker's comp and death benefits be covered by the State, the same as it would for a State employeee.
- Unsure
- Through the XEMA Act and XDPH rules and regulation, XXX team members are considered non-paid state employees during state declared disasters.
- They would pay equal to a similar job class at the state. That is a problem when you are discussing physicians who are independent practitioners.
- If the governor declares an emergency then this could be addressed in his declaration. However, it is not assured that he would do this. Bottom line: we are not sufficiently prepared for this.
- Currently none exists.
- Not addressed at this time.
- A MOU was created making the volunteers state employees.
- Volunteers are handled through EMAC; therefore, any death benefits offered through EMAC would be covered.
- Not yet addressed
- Currently not addressed
- Cannot answer
- Private sector and state employees covered under state law and Governor's Executive Order. Local government employees covered under employer provisions.
- No
- Not yet addressed
- This is an issue we are currently working on. Currently only during times of a state disaster

are the volunteers covered. All state employees that were deployed were covered by the EMAC agreement.

- Activity of officers, agents, employees or emergency workers of the state or any political subdivision when performing their respective emergency functions are eligible for state or local jurisdiction death benefits.
- There is no death benefit in this state for volunteer health care professionals outside of those affiliated with a fire department or law enforcement unit.
- Again, at this time XXXX does not have a mechanism in place to cover this incident.
- Again, same as for workers comp. If the volunteer has an employer who provides death benefit coverage, the state expects (but cannot compel) the employer to provide if the volunteer is killed while volunteering. I believe that many private life insurance (and auto coverage if killed in an auto accident while deployed as a volunteer) will honor the policy death benefit.
- XXXX stated that individuals were deployed without a clear understanding of the issues of protections. There was clearly a lack of understanding of the issues associated with private, non-governmental health professionals.

7. Did your state government enact any executive orders to enable the deployment of private health professionals to the Hurricane Katrina area?

No	25
Yes	5
Not Sure	3

If yes, please describe actions taken:

- Order to empower one or more mobile support units. Included allocating resources that include personnel, governmental and private medical responders that offer assistance.
- MOU process with volunteers to make them “agents of the state”.
- Governor issued executive order to make private sector staff deputy directors of XXXX Department of Homeland Security for purposes of deployment.
- Executive order making them temporary state employees
- By the request of the governor executive orders and licensure board resolutions were enacted to waive residency requirements for health care professional evacuees in XXXX temporarily for these people to be able to practice in XXXX. Also, executive orders were issued to waive a state statute of emergency prescriptions from 72hrs to 30 days.

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LIST OF REFERENCES

- A Failure of Initiative*. Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina Washington, DC: U.S. Government Printing Office, 2006.
- American Red Cross. *The Faces of Service*. Available [online] <http://www.redcross.org/index.html>. (accessed 16 June 2006).
- . *The American Red Cross 2005: Highlights and Statistics*. Available [online] <http://www.redcross.org/press/highlights05/> (accessed 19 September 2006).
- Anderson, John C. and Larry F. Moore. "The Motivation to Volunteer." *Journal of Voluntary Action Research* 7, no. 3-4 (July-October 1978): 120-129.
- Baumeister, Roy F., Christopher K. Nuss and Jean M Twenge. "Effects of Social Exclusion on Cognitive Process: Anticipated Aloneness Reduces Intelligent Thought." *Journal of Personality and Social Psychology* 83, no. 4 (2002): 817-827.
- Bazan, Elizabeth B. *Robert T. Stafford Disaster Relief and Emergency Assistance Act: Legal Requirements for Federal and State Roles in Declarations of an Emergency or a Major Disaster*, RL33090. Washington, DC: CRS. American Law Division, 2005.
- Bea, Keith *Federal Stafford Act Disaster Assistance: Presidential Declarations, eligible Activities, and Funding* RL333053. Washington, DC: CRS Government and Finance Division, 2006.
- . *Organization and Mission of the Emergency Preparedness and Response Directorate: Issues and Options for the 109th Congress* RL33064. Washington, DC: CRS. Government and Finance Division, 2005.
- . *The National Preparedness System: Issues in the 109th Congress*. RL32803. Washington, DC: CRS Government and Finance Division, 2005.
- . Sula P. Richardson, L. Cheryl Runyon and Kae M. Warnock. *Minnesota Emergency Management and Homeland Security Authorities Summarized*. RL32327. Washington, DC: CRS. Government and Finance Division, 2004.
- Bentley, Jim. (Vice-President of the American Hospital Association.) Washington, DC, 2005. National weekly conference calls, September 2005.
- Bowman, Steve, Lawrence Kapp and Amy Belasco. *Hurricane Katrina: DOD Disaster Response*. RL33095. Washington, DC: CRS. Foreign Affairs, Defense, and Trade Division, 2005.

- Braden, Jennifer Brennan. "Vol. 12: Preparing for and Responding to Bioterrorism." *Consequence Management: for Public Health Professional Staff*. Seattle, WA: Northwest Center for Public Health Practice, 2002.
- Clary, E. Gil, Mark Snyder, Robert D. Ridge, Peter K Miene and Julie A. Haugen. "Matching Messages to Motives in Persuasion: A Functional Approach to Promoting Volunteerism." *Journal of Applied Social Psychology* 24 (1994): 1129-1149.
- Daniels, R. Steven and Carolyn L. Clark-Daniels. *Transforming Government: The Renewal and Revitalization of the Federal Emergency Management Agency*. Birmingham, AL: The PricewaterhouseCoopers Endowment. The Business of Government, 2000.
- Department of Health and Human Services Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) Program. *Interim Technical and Policy Guidelines, Standards, and Definitions*. Edited by Division of Healthcare Preparedness. Vol. 2, *Health Resources Services Administration*. Washington, DC. June 2005.
- Department of Homeland Security. *National Response Plan*, 2004. Available [online] <http://www.dhs.gov/interweb/assetlibrary/NRPbaseplan.pdf> (accessed: 10 December 2005).
- . *National Response Plan. ESF #8*, Washington, DC, 2004.
- Domestic Social Policy Division. *Hurricane Katrina: The Public Health and Medical Response*. Washington, DC: Congressional Research Service, 2005.
- Eisenberger, Naomi I., Matthew D. Lieberman and Kipling D. Williams. "Rejection Really Hurts, UCLA Psychologists Find." *Science Daily*, 1995-2006. Available [online] <http://www.sciencedaily.com/releases/2003/10/031010074045.htm>. (accessed 25 May 2006).
- Federal Emergency Management Agency. *Medical Care and Evacuations*. Available at www.fema.gov/nims/mutual_aid.shtm (accessed: 17 June 2005).
- . "Robert T. Stafford Disaster Relief and Emergency Assistance Act." Available [online] <http://www.fema.gov/library/stafact.shtm>. (accessed 27 June 2005).
- Garrett, Laurie. *Betrayal of Trust*. New York: Hyperion, 2000.
- Gilmore, James S. *Forging America's New Normalcy: Securing Our Homeland, Preserving Our Liberty*. Arlington, VA: The RAND Corporation, 2003.
- Gonzales, Alberto R, Regina B Schofield and Domingo S. Herraiz. *Mutual Aid: Multijurisdictional Partnerships for Meeting Regional Threats*, NCJ 210679. Washington, DC: U.S. Department of Justice, Office of Justice Programs, 2005.

- Gray, Bradford and Kathy Hebert. *After Katrina: Hospitals in Hurricane Katrina*. Washington, DC: The Urban Institute, 2006.
- Heinrich, Janet. *New Department Could Improve Coordination but Transferring Control of Certain Public Health Programs Raises Concerns*. GAO-02-954T. Washington, DC: GAO, 2002.
- Kim, W. Chan & Renée Mauborgne. *Blue Ocean Strategy*. Boston: Harvard Business School Press, 2005.
- Kosat, Kevin R. *Disaster Response and Appointment of a Recovery Czar: The Executive Branch's Response to the Flood of 1927*. Analyst in American National Government. Washington, DC: The Library of Congress, 2005.
- Lister, Sarah A. *Hurricane Katrina: The Public Health and Medical Response*. Washington, DC: CRS Report for Congress, Domestic Policy Division, 2005. The Library of Congress, Order Code RL33096.
- Logan, Chris. *Beyond EMAC: Legal Issues in Mutual Aid Agreements for Public Health Practice*. Washington, DC: NGA Center for Best Practices. National Governors Association.
- National Emergency Management Association. *Emergency Management Assistance Compact*. Guidebook & Operating Procedures. Washington, DC. 2003.
- . "Hawaii Joins Emergency Management Assistance Compact." NEMA, 2006. Available [online] <http://www.nemaweb.org>. (accessed 06 June 2006).
- . *2004 After-Action Report Hurricane Response*. Lexington, KY: 2004.
- . "Model Intrastate Mutual Aid Legislation." EMAC, 2004. Available [online] <http://emacweb.org/docs/Wide%20Release%20Intrastate%20Mutual%20Aid.pdf>. (accessed 21 August 2006).
- National Health Policy Forum *Medical Response for Terrorism and Public Health Threats: One Region's Experience*. Washington, DC: 2003.
- Omear, Jodi. *NGA Statement on Federalizing Emergencies*. Washington, DC: National Governors Association, 2005. Available [online] <http://www.nga.org/portal.site/nga/> (accessed: 25 October 2005).
- Omer, Atila. Interview by author, 4 May 2006. Interview 1, transcript. Collaborative Fusion.
- Rabkin, Norman J. *Hurricane Katrina Providing Oversight of the Nation's Preparedness, Response, and Recovery Activities*, GAO-05-1053T. Washington, DC: U.S. Government Accountability Office, 2005.

- Ridge, Robert D., Arthur A. Stukas, Mark Snyder, John Copeland, Julie Haugen and Peter Miene. "Understanding and Assessing the Motivations of Volunteers: A Functional Approach." *Journal of Personality and Social Psychology* 74, no. 6 (1998): 1516-1530.
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by Public Law 106-390*, October 30, 2000. Washington, DC: Federal Emergency Management Agency, 2000. Available [online] <http://www.fema.gov/library/stafact.shtm> (accessed: 27 June 2005).
- Senate Committee on Homeland Security and Governmental Affairs. *Hurricane Katrina: A Nation Still Unprepared Executive Summary*. Washington, DC: n.p., May 2006.
- Smith, Stephanie. *General Services Administration Federal Facilities Affected by Hurricane Katrina*, RS22281. Washington, DC: CRS, 2005.
- The Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities. *HRSA ESAR-VHP Legal & Regulatory Issue Project*. Baltimore, MD, 2005.
- The Michigan State Police Emergency Management Division. *Michigan Emergency Management Assistance Compact*. Lansing, MI: State of Michigan, 2004.
- The National Emergency Management Association (NEMA) Intrastate Mutual Aid Working Group. "Proposed Model Intrastate Mutual Aid Legislation." In *The NEMA 2004 Mid-Year Conference held in Washington, DC 10-13 February 2004*. Washington, D.C.: NEMA, 2004.
- THOMAS (Library of Congress). *Emergency Assistance Act of 2005*. Available [online] <http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.3714>. (accessed 5 September 2005).
- Thompson, Donald F. "Terrorism and Domestic Response Can DoD Help Get It Right?" *Joint Force Quarterly*, no. 40 (1st Quarter 2006): 16-22.
- Townsend, Frances Fragos. *The Federal Response to Hurricane Katrina Lessons Learned*. Washington, DC. 2006
- United States Congress. Senate. *Hospital Assistance Act of 2005*. Senate 1393. 109th Congress. 1st Session. (July 13, 2005).
- United States Department of Health & Human Services, Available [online] <https://volunteer.ccrf.hhs.gov>. (accessed 30 May 2006).
- United States Department of Homeland Security. *Homeland Security Presidential Directive 8*. Washington, DC: Government Printing Office, 2005.
- United States General Accounting Office. *Human Capital Opportunities to Improve Federal Continuity Planning Guidance*. Washington, DC: Government Printing Office, 2004.

Volunteers of America, 2006. <http://www.voa.org>. (accessed 15 June 2006).

Wahl, Kathleen RN. Interview with author, 9 September 2005. Phone communication. Owosso Memorial Hospital. Lansing, MI.

Walton, Beth. "Volunteer rates hit record numbers." *USA Today*, 07 July 2006.

Wilson, John and Marc Musick. "The Effects of Volunteering on the Volunteer." *Duke Law*, <http://www.law.duke.edu/journals/lcp/articles/lcp62dAutumn1999p141.htm>. (accessed 23 May 2006).

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