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MEDICAL RESERVE CORPS VOLUNTEERS IN NEW YORK AND NEW JERSEY DURING SUPERSTORM SANDY

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EXECUTIVE SUMMARY: MEDICAL RESERVE CORPS VOLUNTEERS IN NEW YORK AND NEW JERSEY DURING SUPERSTORM SANDY
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WHY WE DID THIS STUDY

Superstorm Sandy resulted in 72 fatalities, and damage estimates totaled nearly $50 billion in the United States. Although many States in the northeastern United States were impacted by Superstorm Sandy, New York and New Jersey experienced the most damage. To assist with the response, the Department of Health and Human Services' network of volunteers, the Medical Reserve Corps (MRC), deployed volunteers in these two States. Previous Office of Inspector General reports identified State and local challenges in incorporating volunteers into emergency preparedness and response plans. Therefore, we sought to determine how these volunteers were used during the response to Superstorm Sandy and any challenges or successes associated with their use during that response.

HOW WE DID THIS STUDY

We collected information from five groups of MRC stakeholders in New York and New Jersey. These stakeholders were (1) MRC volunteers, (2) local health department staff, (3) local MRC coordinators, (4) State MRC coordinators, and (5) the regional MRC coordinator. Using the information we collected, we described MRC volunteers' response in New York and New Jersey for Superstorm Sandy. We also described the challenges and successes that these five groups of MRC stakeholders reported regarding the MRC volunteer response.

WHAT WE FOUND

MRC units in New York and New Jersey deployed over 2,000 MRC volunteers during the Superstorm Sandy response and reported that these volunteers provided over 18,000 hours of service. A large part of the MRC volunteer response included assisting shelter operations, such as distributing food and clothing or providing medical care. MRC stakeholders reported several challenges and successes during Superstorm Sandy. These challenges and successes were most frequently associated with communication, shelter staffing, and shelter operations.

WHAT WE RECOMMEND

Although our review was limited to the MRC response in New York and New Jersey, the challenges that MRC stakeholders reported experiencing there are ones that other States may encounter when using MRC volunteers during future incident responses. Conversely, the successes that MRC stakeholders identified may highlight practices for States, including New York and New Jersey, to improve their future responses. We recommend that the Assistant Secretary for Preparedness and Response (ASPR) work with States and localities, as appropriate, to strengthen plans for volunteer communication, shelter staffing, and shelter operations. ASPR concurred with our recommendations.

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OBJECTIVES

1. To describe Medical Reserve Corps (MRC) volunteers' response in New York and New Jersey during Superstorm Sandy.
2. To describe the challenges and successes associated with the MRC volunteer response to Superstorm Sandy.

BACKGROUND

On October 29, 2012, Superstorm Sandy (hereinafter referred to as Sandy) made landfall in the northeastern United States, severely damaging coastal areas.[1] Although Sandy had weakened from a hurricane to a "superstorm" by the time it reached the United States, the storm surge combined with high tides to cause widespread flooding along coastal areas, particularly in New York and New Jersey (see Figure 1). The storm resulted in 72 fatalities and damage estimates totaled nearly $50 billion in the United States.[2] To assist with the response, the Department of Health and Human Services' (HHS) network of volunteers, the MRC, deployed volunteers in New York and New Jersey.

Figure 1: Sandy Flooding

Photo courtesy of Paul Scharff Photography. Used with permission.

The Disaster Relief Appropriations Act (DRAA) was enacted in January 2013 to provide several Federal agencies with disaster response and recovery funds to assist States impacted by Sandy. The DRAA

[1] National Hurricane Center, *Tropical Cyclone Report: Hurricane Sandy (AL182012)*. Accessed at http://www.nhc.noaa.gov/data/tcr/AL182012_Sandy.pdf on April 29, 2014.
[2] Ibid. At least 147 deaths across the Atlantic basin were reported as having been directly caused by Sandy. Of these fatalities, 72 occurred in the mid-Atlantic and northeastern United States.

provided $800 million to HHS to assist in its Sandy response and recovery efforts.[3]

National Response Framework and Emergency Support Functions

Issued by the Department of Homeland Security, the National Response Framework (hereinafter referred to as the Framework) serves as a guide for national preparedness for and response to natural and manmade incidents.[4] It lists 15 Emergency Support Functions (ESFs)—for example, transportation (ESF #1) and communications (ESF #2).[5] The Framework also charges Federal departments and agencies with the responsibilities for specific ESFs to assist States, tribes, and localities when incidents occur.

HHS is the lead agency for ESF #8—public health and medical services. As such, it manages the Federal public health and medical response to an incident. One of the ESF #8 roles is to engage civilian volunteers—among them, MRC volunteers—to help fill needs for health professionals.[6]

In addition, HHS is one of the support agencies for ESF #6—mass care, emergency assistance, temporary housing, and human services. Mass care involves sheltering, feeding operations, emergency first aid, the bulk distribution of emergency items, and collecting and providing information on victims to family members.[7] Although MRC units are not typically the lead organizations for mass care and shelter operations, they may provide volunteer staff to support general and medical operations within shelters.

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[3] DRAA, 2013, P.L. No. 113-2 (Jan. 29, 2013). Some of the Federal agencies included the Department of Homeland Security and Environmental Protection Agency.

[4] Department of Homeland Security, *National Response Framework* (May 2013), p. 1 Accessed at http://www.fema.gov/media-library-data/20130726-1914-25045-1246/final_national_response_framework_20130501.pdf on April 30, 2015. The Framework—first released in January 2008—succeeded the National Response Plan, which was issued in 2004. In May 2013, the Department of Homeland Security released a newer version of the Framework. Note that the January 2008 version was in effect at the time of Superstorm Sandy.

[5] Federal Emergency Management Agency (FEMA), *National Preparedness Resource Library*. Accessed at http://www.fema.gov/national-preparedness-resource-library on March 18, 2015; Department of Homeland Security, *National Response Plan* (December 2004). Accessed at http://fas.org/irp/agency/dhs/nrp.pdf on May 5, 2015.

[6] FEMA, *Emergency Support Function #8—Public Health and Medical Services Annex*, p. 5. Accessed at http://www.fema.gov/media-library-data/20130726-1914-25045-3446/final_esf_8_public_health_medical_20130501.pdf on April 30, 2014.

[7] FEMA, *Emergency Support Function #6— Mass Care, Emergency Assistance, Housing, and Human Services*, p. 2. Accessed at http://www.fema.gov/media-library-data/20130726-1913-25045-6921/final_esf_6_mass_care_20130501.pdf on April 30, 2015.

Within HHS, the Assistant Secretary for Preparedness and Response (ASPR) organizes HHS's activities for preparedness and emergency support. ASPR, in coordination with the Centers for Disease Control and Prevention (CDC), also provides technical assistance on emergency preparedness to States and localities.

Medical Reserve Corps Volunteers

Formally authorized by Congress in 2006, the MRC was established in 2002 by the Office of the Surgeon General, part of HHS's Office of the Assistant Secretary for Health.[8] In 2013, responsibility for the MRC moved from the Office of Surgeon General to ASPR.

The MRC is a national network of volunteers that are organized into local units and managed by coordinators at the local level. These units are composed of medical and public health professionals as well as those without health care backgrounds.[9] MRC units prepare for and respond to natural disasters and other emergencies affecting public health.[10]

The combined fiscal year 2012 and 2013 budgets for the MRC were approximately $22 million, and in September 2014, there were over 1,000 MRC units nationwide.[11] These units collectively had more than 205,000 MRC volunteers. MRC volunteers are a critical component of incident response because they assist in emergency preparedness, response, and recovery. Because an incident is constantly changing, volunteer response must be flexible.

Within ASPR's Office of Emergency Management, the Division of the Civilian Volunteer Medical Reserve Corps (DCVMRC) provides guidance to local MRC units regarding recommended training. Since May 2009, the DCVMRC has recommended that all MRC members and coordinators receive training on two systems for incident response: the Incident

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[8] Congress authorized the MRC with the 2006 Pandemic and All-Hazards Preparedness Act, P.L. No. 109-417 (Dec. 19, 2006).

[9] Division of the Civilian Volunteer Medical Reserve Corps (DCVMRC), *MRC Strategic Plan 2011–2013*. Accessed at https://www.medicalreservecorps.gov/pageViewFldr/About/StrategicPlan1113#report on April 25, 2014.

[10] DCVMRC, *About the Medical Reserve Corps*. Accessed at https://www.medicalreservecorps.gov/pageviewfldr/About on March 17, 2015.

[11] The number of MRC units includes volunteers in local areas within States and territories. DCVMRC, *Fiscal Year 2014 4th Quarter Progress Report*, p. 1. Accessed at https://mrc-cms.icfwebservices.com/File/DCVMRC_FY14_Quarterly_Report_4.pdf on January 26, 2015. The combined fiscal year budgets provide funding for program guidance and development.

Command System and the National Incident Management System.[12] MRC units have the flexibility to develop additional training on the basis of their individual needs.

DCVMRC Responsibilities in Preparation of an Incident. DCVMRC staff work with local, State, and regional MRC coordinators to support MRC activities.[13] The DCVMRC supports the MRC by providing technical assistance; coordination; communications; strategy and policy development; oversight for grants and contracts; training; and other associated services.[14] For instance, the DCVMRC directly oversees and coordinates communication among the MRC regional coordinators who represent the 10 MRC regions across the United States and its territories. The DCVMRC also functions as a clearinghouse for information and practices to help communities establish, implement, and maintain local MRC units nationwide. The DCVMRC also provides strategy development, policy development, and incident response coordination.[15]

Local, State, and Regional MRC Coordinators' Responsibilities in Preparation for and During an Incident. MRC coordinators have several responsibilities at the local, State, and regional levels. Local MRC coordinators are responsible for recruiting and retaining MRC volunteers prior to an incident, as well as for managing MRC units.[16] DCVMRC staff told us that during incident response, the local MRC coordinators are

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[12] DCVMRC, *NIMS Guidance*. Accessed at https://www.medicalreservecorps.gov/searchFldr/NIMSGuidance#3 on January 23, 2015. The Incident Command System is designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. This system is normally structured to facilitate activities in five major functional areas: command operations; planning; logistics; intelligence and investigations; and finance and administration. FEMA, *Incident Command System Resources*. Accessed at https://www.fema.gov/national-incident-management-system/incident-command-system-resources on April 30, 2014. The National Incident Management System is a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work together and manage incidents involving all threats and hazards—regardless of cause, size, location, or complexity—in order to reduce loss of life, loss of property, and harm to the environment. FEMA, *National Incident Management System*. Accessed at https://www.fema.gov/national-incident-management-system on January 27, 2015.

[13] Regional coordinators support MRC activities across multiple States.

[14] DCVMRC, *About the Division of the Civilian Volunteer Medical Reserve Corps*. Accessed at https://www.medicalreservecorps.gov/pageViewFldr/About/DCVMRC on April 23, 2014.

[15] Ibid.

[16] DCVMRC, *About Leading*. Accessed at https://www.medicalreservecorps.gov/leaderfldr/Lead on April 24, 2014.

primarily responsible for disseminating requests to MRC volunteers from local agencies (e.g., local health departments or emergency management agencies).[17] Local MRC coordinators also communicate with MRC volunteers to conduct situational awareness and to help coordinate the local MRC response.

According to DCVMRC staff, State MRC coordinators facilitate information sharing and communication among local MRC units within their State and with others outside of the State. Regional coordinators determine the needs of MRC stakeholders at the State and local level, provide technical assistance based on those needs, and communicate the needs to their Federal counterparts, as appropriate. Regional coordinators also monitor and facilitate information flow between State and local MRC stakeholders prior to and during incidents.[18]

MRC Volunteer Deployment and Responsibilities During an Incident. MRC volunteers are typically requested and activated by a local health department or emergency management agency within an area affected by the incident.[19] Depending on the size and severity of the incident, local leadership may request resources and personnel from outside the jurisdiction, such as other MRC units within the State, MRC units from other States within the region, or the Federal government.[20] Additionally, according to DCVMRC staff, volunteers may provide several services during an incident, such as working in shelters, distributing medication, or assisting with patient care in hospitals.[21]

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[17] Local health departments are tasked with carrying out local public health activities, such as enforcing laws to protect health and safety and developing disaster preparedness plans. Although these agencies are not part of the MRC network, they may request MRC volunteers during incidents, if necessary. Such requests are typically sent to volunteers via local MRC coordinators. Local coordinators may work extensively with local health departments, but they are not required to be employees of these departments or of HHS.

[18] DCVMRC, *About Regional MRC Coordinators*. Accessed at https://www.medicalreservecorps.gov/pageViewFldr/Coordinators/Regional on April 30, 2014.

[19] DCVMRC, *Guide to Emergency Operations for MRC Units*, p. 2. Accessed https://www.medicalreservecorps.gov/file/Promising_Practices_Toolkit/Guidance_Documents/Emergency_Preparedness_Response/MRC-EmergencyOperations.pdf on April 30, 2014. Depending on the locality, MRC volunteers may be requested by other entities, such as a State health department.

[20] HHS, *Getting Started: A Guide for Local Leaders*. Accessed at https://www.medicalreservecorps.gov/File/TASeries/0_Getting_Started_%28FINAL%29.pdf on April 30, 2014.

[21] MRC staff stated that prior to an incident, MRC volunteers typically engage in training. Immediately preceding an incident, they are in contact with their local coordinator or other management official to determine a location for the assembly of personnel and resources before deploying.

MRC volunteers serve under the direction of their local leadership but may work with several different organizations during their response to an incident. For instance, deployed MRC volunteers may work at shelters run by local governments or nonprofit organizations (e.g., the American Red Cross) to provide services, such health assessment and treatment.[22]

Previous OIG Work

In 2014, the Office of Inspector General (OIG) found that 89 percent of hospitals reported experiencing substantial challenges during the Sandy response.[23] These challenges represented a range of interrelated problems, from infrastructure breakdowns (such as electrical and communication failures) to community collaboration issues over resources (such as fuel, transportation, hospital beds, and public shelters). OIG recommended that ASPR continue to promote Federal, State, and community collaboration in major disasters. ASPR concurred with the recommendation.

In September 2009, OIG released two reports focused on preparedness for pandemic influenza. In one report, OIG found that 6 of 10 selected localities had not started to recruit, register, and train medical volunteers.[24] Additionally, the staff in the four localities that had started to do so were concerned that volunteers might not show up because of competing work commitments or concerns that they would not be legally protected during an incident. Additionally, the 10 selected localities conducted a total of 41 "medical surge" exercises, but the fewest number of these focused on the use of volunteers.[25] OIG, in part, recommended that ASPR should encourage States and localities to use existing Federal volunteer programs, such as the MRC. In addition, OIG recommended that ASPR address the issue of legal protections for medical professionals and volunteers who respond to public health emergencies. ASPR concurred with OIG's recommendations.

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[22] DCVMRC, *Joint Memorandum: American Red Cross and the MRC*. Accessed at https://www.medicalreservecorps.gov/partnerfldr/JointMemoTemplate/ARCMRCJointMemo on April 30, 2014.

[23] OIG, *Hospital Emergency Preparedness and Response During Superstorm Sandy* (OEI-06-13-00260), September 2014.

[24] Ibid.

[25] OIG, *Local Pandemic Influenza Preparedness: Medical Surge*, OEI-02-08-00210, September 2009. "Medical surge" is the ability to provide adequate medical evaluation and care during incidents that exceed the limits of the normal medical infrastructure of an affected community. The CNA Institute for Public Research, *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies*, p. I-5. Accessed at http://www.phe.gov/preparedness/planning/mscc/handbook/documents/mscc080626.pdf on January 27, 2015.

In the second report, OIG found that while 10 selected localities generally planned to use individuals from various sources, such as the MRC, to assist in the distribution and dispensing of vaccines and antiviral drugs during an influenza pandemic, these localities typically had not adequately estimated staffing needs.[26] OIG recommended, in part, that CDC should identify sufficient staff necessary to fill positions for distributing vaccines and antiviral drugs to and dispensing them at shelters. CDC agreed that localities need to develop actionable plans that identify personnel needed to staff these positions.

METHODOLOGY

We sent an electronic questionnaire to 466 MRC stakeholders in New York and New Jersey. These stakeholders were in one of the following five groups: (1) MRC volunteers, (2) local health department and office of emergency management staff (hereinafter referred to as local health department staff), (3) local MRC coordinators, (4) State MRC coordinators, and (5) the regional MRC coordinator.

We limited our questionnaires to MRC stakeholders in New York and New Jersey because these States experienced the most damage from Sandy, and the largest numbers of MRC volunteers were deployed in these two States.

We received responses from 262 of the 466 stakeholders. See Appendix A for a more detailed description of our methodology, including the number and response rate of MRC stakeholders who responded to our questionnaire.

We analyzed data from these stakeholders to describe MRC volunteers' Sandy response in New York and New Jersey from October 2012 to March 2013. We also analyzed the data to determine the challenges and successes associated with the MRC volunteer Sandy response in New York and New Jersey.

Limitations

We did not independently verify the self-reported data we collected. Because of the low response rate by MRC volunteers, we do not project the data from our respondents to the populations of MRC stakeholders in New York, New Jersey, or nationwide.

[26] OIG, *Local Pandemic Influenza Preparedness: Vaccine and Antiviral Drug Distribution and Dispensing*, OEI-04-08-00260, September 2009.

Standards

This study was conducted in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

FINDINGS

Large-scale incidents like Sandy present constantly changing scenarios that require a swift and flexible public health response. The MRC is a national network of volunteers that serves as a critical component to support local public health resources during an incident. During the Sandy response, we found that MRC units in New York and New Jersey deployed over 2,000 MRC volunteers and reported that these volunteers provided over 18,000 hours of service. However, even a well-planned response can experience both challenges and successes during an incident. For instance, the same shelter and/or stakeholder may experience successes in one area (e.g., sufficient staff) but undergo challenges in another (e.g., insufficient medical supplies) during an incident. Further, a challenge that is reported at the beginning of the response may have been corrected during the response and may later be reported as a success (e.g., insufficient medical supplies at the beginning of the response and sufficient medical supplies later on). We found that across several MRC stakeholder groups, both challenges and successes during Sandy were most frequently associated with communication, shelter staffing, and shelter operations.

MRC units in New York and New Jersey deployed over 2,000 MRC volunteers during the Sandy response

To support response efforts in New York and New Jersey, a total of 2,027 MRC volunteers deployed from October 2012 to March 2013. Of these volunteers, 63 percent deployed in New York and 37 percent deployed in New Jersey. Additionally, 81 percent of the MRC volunteers in New York were from the New York City MRC unit. Table 1 shows the number and percentage of total MRC volunteers who deployed in New York and New Jersey.

Table 1: Number and Percentage of MRC Volunteers Who Deployed in New York and New Jersey During the Sandy Response

Deployment Location	Number of MRC Volunteers	Percentage of Total Deployed MRC Volunteers
New York*	1,267	63%
New Jersey	760	37%
Total	**2,027**	**100%**

Source: OIG analysis of Sandy MRC questionnaire data, 2014.
*Includes New York City.

During the Sandy response, the 2,027 deployed MRC volunteers were members of 37 of the 53 active local MRC units in New York and New Jersey. These MRC volunteers deployed to areas in 24 local health department jurisdictions in New York and New Jersey.

Of the MRC volunteers who deployed, 52 percent were either nurses (26 percent) or physicians (also 26 percent). The remaining 48 percent of MRC volunteers were health care workers with other specialties (e.g., social workers, emergency medical technicians) or were nonmedical personnel. MRC units in New York and New Jersey reported that MRC volunteers provided over 18,000 hours of service during the Sandy response from October 2012 to March 2013.

Local MRC coordinators from 34 of the 37 volunteer-deploying MRC units reported that their MRC volunteers assisted with shelter operations during the response. Shelter operations included food and clothing distribution, as well as medical triage and treatment (see Figure 2, depicting a shelter). The remaining three local MRC coordinators reported that their volunteers provided other assistance, such as providing wellness and occupational health services to other volunteers.

Figure 2. Shelter During the Sandy Response

Photo courtesy of Hunterdon County Division of Public Health Services. Used with permission.

Shelters were supported by volunteers from several organizations. For example, MRC volunteers from 22 local MRC units worked at shelters supported by the American Red Cross and/or other nonprofit organizations, such as the Salvation Army. In these shelters, MRC volunteers also worked alongside other Federal response partners, including National Disaster Medical System (NDMS) teams and the

Federal Emergency Management Agency's Community Emergency Response Teams.[27]

The challenges and successes during Sandy that MRC stakeholders reported were most frequently associated with communication, shelter staffing, and shelter operations

Nearly all MRC stakeholders (180 of 189) reported challenges and/or successes for the Sandy response.[28] One hundred forty-two of one hundred eighty-nine stakeholders (75 percent) reported one or more challenges; most frequently, these challenges were associated with communication, shelter staffing, and shelter operations. (See Appendix B for the list of challenges that these stakeholders reported.) In addition, 177 of 189 MRC stakeholders (94 percent) reported successes associated with the Sandy response. These successes fell into the same three areas in which MRC stakeholders identified challenges. (See Appendix C for the list of successes that these stakeholders reported.)

Communication challenges were most frequently associated with infrastructure failures and communication gaps among stakeholder groups

Seventy-nine of one hundred eighty-nine MRC stakeholders (42 percent) reported challenges associated with communication during the Sandy response.

The most frequently reported communication challenge was infrastructure failure (e.g., power outages, downed servers, and damaged electric equipment) that caused general communication problems, such as the ability to contact MRC volunteers and other stakeholders. For instance, one local MRC coordinator reported that nearly 80 percent of residents in

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[27] NDMS teams assist State and local authorities in dealing with the medical impacts of major peacetime disasters. An example of an NDMS team includes Disaster Medical Assistance Teams, which deploy to disaster sites with supplies and equipment to sustain themselves for a period of 72 hours while providing medical care at a fixed or temporary medical care site. HHS, *National Disaster Medical System*. Accessed at http://www.phe.gov/Preparedness/responders/ndms/Pages/default.aspx on February 10, 2014. Community Emergency Response Teams assist others in their neighborhood or workplace following an incident when professional responders are not immediately available to help. This assistance may include providing assistance to victims, damage assessment information, or organizing other volunteers to provide assistance as needed. FEMA, *Community Emergency Response Teams*. Accessed at https://www.fema.gov/community-emergency-response-teams on December 15, 2014.

[28] Although we received responses from 262 MRC stakeholders, 73 of the respondents were not involved in the Sandy MRC volunteer response. Therefore, our analysis is based on the responses from the 189 MRC stakeholders who were involved with the Sandy MRC volunteer response.

one county lost power, and communication with volunteers by phone or email became "virtually impossible." Similarly, one State MRC coordinator reported there was no power in affected areas, which limited cell phone and Internet service for several days.

The second most frequently reported communication challenge was gaps in communication among MRC stakeholder groups for reasons not associated with infrastructure failures. These communication gaps resulted from other factors, such as inadequate planning or failure to communicate with other stakeholders. For instance, one local MRC coordinator reported that because of a lack of communication between the local emergency operations center and the MRC, the local center was unaware of MRC needs and issues in affected areas. Similarly, another local MRC coordinator reported that there was "no open communication between the MRC unit and local health department."

The third most frequently reported communication challenge—reported by volunteers—was undefined or unclear roles for volunteers at shelters. MRC volunteers gave several examples of these unclear roles, such as volunteers who showed up but did not receive directives and shelter staff and leadership who "seem[ed] to have no idea what volunteers should be doing."

The fourth most frequently reported communication challenge was problems in following the chain of command or Incident Command System protocols. According to the stakeholders who reported this as an issue, the Incident Command System was not followed in various ways. For instance, one MRC volunteer reported that MRC volunteers had to communicate shelter needs to stakeholders even though this was not consistent with their chain-of-command role or assignment. Additionally, one local MRC coordinator reported that communication did not always follow Incident Command System protocols.

Communication successes were most frequently associated with the methods of communication, as well as MRC coordinators' responsiveness

Seventy-four of one hundred eighty-nine MRC stakeholders (39 percent) reported communication successes associated with the Sandy response.

The most frequently reported communication success was associated with methods of communication among MRC stakeholders during the Sandy response. For instance, one staff member from a local health department reported that the county had a backup electronic communication system in place before the storm, which enabled staff to communicate with MRC volunteers and other MRC stakeholders despite storm damage and power

outages. Several other stakeholders reported that texting worked well, especially during power outages. One staff member from a local health department also reported using a cell phone program that allowed access for health care responders despite extensive damage to the cellular network. Another respondent, a local MRC coordinator, reported that amateur ("ham") radio supported communication with emergency management officials.

The second most frequently reported communication success was that MRC coordinators were available and responsive to requests. For example, one volunteer reported that the MRC coordinator was readily available to discuss needs or issues and was very responsive to requests. Similarly, two staff members from a local health department reported that the State MRC coordinator was "always available" during the entire response.

Challenges in staffing shelters were most frequently associated with volunteers who were unable to deploy; however, some stakeholders reported sufficient numbers of volunteers

Ninety-two of one hundred eighty-nine MRC stakeholders (49 percent) reported a variety of challenges during the Sandy response that affected MRC volunteers' ability to adequately staff shelters in New York and New Jersey.

The most frequently reported challenge in staffing shelters was that MRC volunteers were often unable to deploy. According to these stakeholders, this occurred for several reasons, such as road closures, power outages, flooding, and limited transportation options because of the storm. For instance, one MRC coordinator reported that some MRC volunteers who were driving to a shelter were asked to turn back because of falling trees and blocked roads. MRC volunteers also reported that poor road conditions affected their ability to deploy to shelters (See Figure 3).

Figure 3: Poor Road Conditions After Sandy Affected Volunteer Availability To Deploy to Shelters

Photo courtesy of Paul Scharff Photography. Used with permission.

MRC stakeholders also reported challenges associated with the difficulty in coordinating the transportation of MRC volunteers from less-affected areas of the State to areas with greater damage. For instance, one MRC volunteer reported that it was difficult to determine a definite meeting location and time for MRC volunteers in western New York before they traveled to a shelter in a coastal area of the State, outside their MRC unit's jurisdiction.

Further, staff from one local health department reported requesting nearly 150 MRC volunteers to assist with their Sandy shelters. Of this number, only 26 volunteers were able to deploy to shelters. Staff attributed the lack of MRC volunteers to "transportation issues due to flooding and power outages throughout the Sandy response period" and stated that the county "was understaffed during the entire response."

Competing work or personal obligations also meant that many MRC volunteers were not able to deploy to shelters. For instance, one MRC coordinator reported that many MRC volunteers had to work in other medical facilities (e.g., their places of employment) during the response and were thus unavailable to deploy as volunteers. Similarly, another coordinator said that it was very difficult to staff shelters, primarily because of MRC volunteers' work commitments. Personal issues also affected MRC volunteers' availability to deploy—for example, some volunteers needed to repair their damaged homes and others needed to evacuate from their own storm-damaged neighborhoods.

The next most frequently reported challenge in staffing shelters was the low numbers of MRC volunteers with medical specialties, such as nurses. These staffing shortages were not specifically associated with deployment problems (e.g., a low turnout of volunteers as a result of road closures or power outages), but may have resulted from other factors, such as challenges in MRC units regarding recruitment and retention. For instance, one MRC volunteer reported that because it was difficult to find additional nurses to staff shelters, the volunteer had to work shifts of 14–16 hours to compensate. Further, another staff member in a local health department reported that shelters often did not receive the number of MRC volunteers they requested, especially volunteers with health care backgrounds.

The next two most frequently reported challenges in staffing shelters were associated with deployment. First, MRC stakeholders reported challenges related to liability and licensure concerns. For instance, staff at one local health department reported that "many MRC volunteers did not want to deploy to shelters without having a clearly defined understanding of liability coverage." Additionally, one local MRC coordinator stated that that coordinator's unit had to turn away several volunteers with medical specialties, such as physicians, because of liability concerns and because volunteers were not licensed to practice in that State. Second, MRC volunteers reported that shelters had too many MRC volunteers. For example, one MRC volunteer reported there were more volunteers present at a shelter than needed, causing the volunteer to spend a long time waiting for directions. As a result, the volunteer became frustrated and left early. Another volunteer reported that MRC volunteers with specific medical specialties were not needed at an overstaffed shelter during the response.

MRC stakeholders also reported communication challenges that caused low MRC volunteer turnout. For instance, one local MRC coordinator reported not being able to communicate with MRC volunteers because of power outages; as a result, the numbers of MRC volunteers who deployed to local shelters were low.

In contrast to these challenges, 54 of 189 MRC stakeholders (29 percent) reported successes associated with shelter staffing in New York and New Jersey during the Sandy response. The most frequently reported success was that shelters had sufficient numbers of MRC volunteers. For instance, several MRC volunteers and local health department staff reported that their shelters were well-staffed, with sufficient staff to provide all required services.

Shelter operations challenges were most frequently associated with having insufficient shelter supplies

Sixty-eight of one hundred eighty-nine MRC stakeholders (36 percent) reported challenges associated with shelter operations.

The most frequently reported shelter operations challenge was that shelters had insufficient supplies, such as diabetic supplies, oxygen supplies, bedding, food, and clothing. In addition, some of the medical supplies (e.g., drugs) were expired. One MRC volunteer reported that a shelter had insufficient medical supplies and other materials because operational plans did not exist. An MRC coordinator reported that the coordinator's team arrived at a special medical needs shelter and found that it was a "tent with nothing in it." The MRC volunteers at this shelter had to develop impromptu plans and procedures to gather supplies and provide patient care.

The second most frequently reported shelter operations challenge—reported by MRC stakeholders—was that MRC volunteers lacked shelter-specific training (e.g., how to operate or serve as a volunteer in a shelter). For instance, one local MRC coordinator reported that prior to Sandy, very few of that coordinator's unit's MRC volunteers had experience in operating shelters. Another coordinator stated that MRC volunteers in the coordinator's unit who deployed had not received any training in shelter operations prior to deployment.

The next two most frequently reported areas of concern were:

- Volunteers reported that shelters lacked special-needs services. For example, MRC volunteers reported that services to address residents with special needs, including mental health counselors and resources for those with chronic illnesses, were lacking. One volunteer stated that "aged nursing home residents [were] on uncomfortable cots for 2 weeks." Another volunteer stated that the shelter where the volunteer served could not provide adequate sheltering resources for clients with multiple special needs.
- Volunteers also reported challenges associated with structural and building problems with shelters. One volunteer noted that the shelter where that volunteer served was "inadequate and had been designated as an [un]inhabitable location by the city where it was located." Another volunteer reported that people were sheltered in a sports arena with several ice rinks. However, the ice rinks were not de-iced, which forced evacuees to sleep on the cold floor "covered in cardboard" for warmth.

The next most frequently reported challenge—reported by MRC volunteers—was disorganization and a general lack of planning at shelter locations. MRC volunteers also reported that some shelters had not planned for individuals' long-term needs, such as power, water, and food, over the course of the response.

Finally, MRC volunteers reported that shelters offered inadequate patient transportation to locations such as medical facilities. For instance, one volunteer reported that patients could be transported to medical facilities only in personal vehicles because the county did not provide additional vehicles. Additionally, one volunteer reported that a shelter did not have emergency vehicles to transport patients to medical facilities and no means to travel to a pharmacy to obtain additional medication.

Shelter operations successes were most frequently associated with MRC volunteers who had sufficient training and shelters that had sufficient supplies

Although 48 stakeholders reported challenges with training and supplies, 85 stakeholders reported successes in these areas. Overall, 154 of 189 MRC stakeholders (81 percent) reported successes associated with shelter operations, including training and supplies.

The most frequently reported shelter operations success was associated with MRC volunteers who had sufficient training or previous experience to assist shelter operations. For example, one volunteer reported having participated in drills before Sandy, which provided helpful experience. Additionally, another volunteer reported having gained experience by previously responding to Hurricane Katrina. These respondents may have been in different shelters or received different training than those who reported training challenges. Stakeholders also reported that volunteers received "just-in-time" training that helped them while working in shelters.[29]

The second most frequently reported shelter operations success was that shelters had sufficient supplies. For instance, one volunteer reported that a local health department was able to obtain sufficient oxygen supplies by borrowing and receiving donations from private organizations. Another stakeholder reported that a shelter initially had limited medical supplies (i.e., a challenge) but that over the course of the response, staff acquired them from nearby medical providers (i.e., a success).

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[29] "Just-in-time" training is typically provided to volunteers shortly before they deploy or begin providing volunteer services. Such training covers critical information and tasks for the specific incident.

The third most frequently reported shelter operations success was that shelters were well-organized. For example, one volunteer stated that a shelter's "people, organization, and supplies were fantastically set up." Another volunteer reported that a shelter was "very organized." These stakeholders may have worked in different shelters than those who reported challenges in this area, or they may have had different perceptions of the same shelter.

CONCLUSION AND RECOMMENDATIONS

During the Sandy response, MRC units in New York and New Jersey deployed over 2,000 MRC volunteers and reported that these volunteers provided over 18,000 hours of service. MRC stakeholders reported challenges and successes during Sandy that were most frequently associated with communication, shelter staffing, and shelter operations. Although our review was limited to the MRC response in New York and New Jersey, these reported challenges highlight issues that other States may encounter while using MRC volunteers during future incident responses. Conversely, the successes that MRC stakeholders identified may highlight practices for States, including New York and New Jersey, to improve their future responses.

Many of the challenges identified in this report resemble those identified in previous OIG work. These include staffing challenges, such as volunteers who do not show up for scheduled shifts because of competing work or other commitments and other stakeholders' concerns that volunteers might not be legally protected during an incident.

We recommend that ASPR, in collaboration with Federal agencies (e.g., CDC, the Federal Emergency Management Agency) or nonprofit organizations (e.g., the American Red Cross), provide guidance or technical assistance to States and localities (including State and local MRC staff), as appropriate, to improve their plans, address these challenges, and be better prepared to respond to future incidents. Specifically, ASPR should continue to:

Work with States and localities to strengthen plans for volunteer communication

These plans can be strengthened by ensuring that they include the following:

- Systems and backup systems for communications with MRC volunteers in the event of infrastructure failures before and during an incident.
- Protocols for ensuring effective communication between MRC volunteers and other stakeholders (e.g., emergency operations centers, local health departments) before and during an incident, and plans for overcoming communication gaps if they develop.
- Methods for clearly communicating roles to volunteers at shelters and for following appropriate communication chains within the shelter (e.g., the Incident Command System).

Work with States and localities to strengthen plans for shelter staffing

These plans can be strengthened by ensuring that they include the following:

- Enhanced recruiting efforts for all volunteers, including those with specific medical specialties (e.g., physicians, nurses), and staffing projections that account for absenteeism rates due to storm-related damage or competing work or personal obligations. These actions will increase the likelihood that shelters have sufficient personnel, including those with specific medical specialties.
- Specific volunteer liability and licensure procedures to ensure that concerns related to these issues do not prevent volunteers from deploying for future incidents.
- Methods for tracking and monitoring MRC volunteer deployment to ensure that shelters are adequately staffed. For example, the plan should contain information about when and how to relocate MRC volunteers from overstaffed shelters to those that are understaffed. The plan should also include as an assessment of the number of non-MRC staff (e.g., staff from the American Red Cross) deployed at shelters.
- Multiple methods for MRC volunteer transportation to affected areas during an incident. This may require States or localities to develop agreements to use law enforcement vehicles or other local vehicles to transport MRC volunteers.

Work with States and localities to strengthen plans for shelter operations

These plans can be strengthened by ensuring that they include the following:

- Methods for obtaining medical supplies and ensuring that staff periodically review inventory to maintain adequate supply levels and ensure that medical supplies have not expired.
- Methods to ensure that shelter facilities are appropriate (e.g., that they have sufficient space and temperature controls) and have adequate services available for all populations (e.g., special-needs populations), or to ensure that localities are capable of redirecting evacuees to special-needs shelters, if necessary.
- Strategies to address transportation to medical facilities for patients who require further care.

Additionally, ASPR should consider establishing a minimum level of training required on a regular basis (e.g., annually) for all volunteers. ASPR could work with States and localities to determine these minimum requirements on the basis of national competencies and local needs. This would ensure that volunteers have received training in critical areas either before they deploy or—using a "just-in-time" model—as soon as they deploy. These critical areas include shelter operations and other facets of response (including the Incident Command System) and working with special-needs populations.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

ASPR concurred with all three of our recommendations and stated that it is using the findings of this report to identify and implement actions to strengthen MRC competencies and coordination. ASPR also stated that shelter staffing requires coordination of efforts among Federal, State, and local stakeholders as well as with nongovernmental organizations, such as the American Red Cross. Additionally, ASPR stated that as it develops specific initiatives to address the challenges within this report, further resources may be required to fully achieve success.

In response to our first recommendation, ASPR stated that it is drafting guidance for MRC units on best practices in communications during power outages. Additionally, ASPR is working to enhance collaboration among MRC coordinators and other stakeholders before, during, and after public health and medical emergencies. Finally, MRC has engaged other partners to revise the MRC core competencies to provide more concrete information to MRC units about several topics for training, including the Incident Command System.

In response to our second recommendation, ASPR stated that it has developed and launched an MRC toolkit that contains a set of expectations and performance measures that MRC unit leaders can use to enhance their units' capabilities and operations. This toolkit also addresses many concerns and issues related to shelter staffing, such as assessing community needs and tracking and managing volunteers.

In response to our third recommendation, ASPR stated that it will continue to work with stakeholders to address issues and concerns regarding shelter operations. In response to our statement that ASPR should consider establishing a minimum level of training required for all volunteers, ASPR stated that the MRC toolkit it developed addresses many concerns about training needs for volunteers. ASPR said that it will continue to provide additional assistance—i.e., toolkits and guidance documents—to MRC units, but that it believes that increased resources will best solve the training issues identified in this report.

We support ASPR's efforts to strengthen competencies and coordination throughout the MRC network. We believe that the actions ASPR describes will enhance the capabilities of MRC units to be effective partners in future incidents. For the full text of ASPR's comments, see Appendix E.

APPENDIX A

Detailed Methodology

Data Collection

We collected questionnaire data between September and December 2013 from MRC stakeholders to describe MRC volunteers' response in New York and New Jersey for Sandy from October 2012 to March 2013. We also collected questionnaire data to determine the challenges and successes associated with the MRC Sandy volunteer response in New York and New Jersey.

We sent our electronic questionnaire to 466 MRC stakeholders in New York and New Jersey. These stakeholders were from one of the following five groups: (1) MRC volunteers, (2) local health department staff, (3) local MRC coordinators, (4) State MRC coordinators, and (5) the regional MRC coordinator.[30]

We coordinated with ASPR and DCVMRC and reviewed previous OIG reports and existing literature to identify common challenges or successes associated with MRC volunteers' response to incidents.[31] For each issue we identified, we asked the MRC stakeholders to indicate whether, during their response to Sandy, that issue was a challenge or a success. If the MRC stakeholder indicated that something was a challenge or success, we asked for a description of the challenge or success. In addition, we asked each MRC stakeholder to describe any other challenges or successes unrelated to the topics we identified.

We also asked each stakeholder to provide a description of MRC volunteers' response activities while deployed. Finally, we asked MRC stakeholders to describe any nonprofit or other response teams with whom MRC volunteers worked during their deployment.

We received responses from 262 of the 466 MRC stakeholders; however, only 189 of these stakeholders reported challenges or successes associated with Sandy. The other 73 stakeholders did not provide this information for several reasons—for example, a locality might not have requested any MRC volunteers, or a local MRC coordinator might not have had any MRC volunteers deploy from that coordinator's unit. See Table A-1 for the number of MRC stakeholders that we surveyed and the response rate for all MRC stakeholders.

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[30] This MRC region includes New Jersey, New York, Puerto Rico, and the Virgin Islands.

[31] When we initially coordinated with DCVMRC staff in 2013 and 2014, the DCVMRC had not yet fully transitioned to ASPR.

Table A-1: MRC Stakeholders and Response Rates, 2013

MRC Stakeholder Group	Number of MRC Stakeholders Surveyed	Number of Respondents	Response Rate
MRC Volunteers	330	126*	35%
Local Health Department Staff	80	80	100%
Local MRC Coordinators	53	53	100%
State and Regional MRC Coordinators	3	3	100%
Total	**466**	**262**	**54%**

Source: OIG analysis of 2013 MRC stakeholder respondent data, 2014.
*Note: Of the 204 volunteers who did not respond to our request, we were not able to contact 7 volunteers because we did not receive accurate contact information for them from State MRC coordinators. We contacted the remaining 197 volunteers, but they did not respond to our request.

MRC Volunteers. To identify MRC volunteers who deployed in response to Sandy, we worked with MRC coordinators in New York, New Jersey, and New York City to develop a list of all MRC volunteers who deployed in these areas. These coordinators initially reported a total of 1,540 MRC volunteers deployed, and these MRC volunteers served as our sampling population.[32]

We organized the 1,540 MRC volunteers into three strata on the basis of where they deployed. Stratum one included 1,028 MRC volunteers that deployed in New York City. Stratum two included 239 MRC volunteers that deployed in New York State, outside of New York City. Finally, stratum three included 273 MRC volunteers that deployed in New Jersey

From these 1,540 MRC volunteers, we selected a stratified simple random sample of 330 MRC volunteers. Of these 330 volunteers, we selected 135 from stratum one, 95 from stratum two, and 100 from stratum three. We sent a questionnaire to these selected volunteers, and we contacted them by phone and/or email up to three times to ask them to complete our questionnaire.

Overall, 126 MRC volunteers completed the questionnaire, yielding a weighted response rate of 35 percent. Because of the low response rate of MRC volunteers, we cannot project the data from our MRC stakeholder respondents to the populations of MRC stakeholders in New York, New Jersey, or nationwide. See Table A-2 for the number of sampled MRC volunteers, the number of respondents, and the response rates by stratum and overall.

[32] Initially, MRC coordinators in New York, New Jersey, and New York City reported that 1,540 MRC volunteers deployed in response to Sandy. After data collection, they reported that 2,027 volunteers deployed. Because we had already sent our data collection instruments to selected volunteers, 1,540 serves as the population from which we selected our sample.

Table A-2: MRC Volunteers and Response Rate by Stratum, 2013

Stratum	Sampling Population	Number of Sampled Volunteers	Number of Volunteer Respondents	Response Rate
New York City	1,028	135	42	31%
New York (outside New York City)	239	95	36	38%
New Jersey	273	100	48	48%
Total	**1,540**	**330**	**126**	**35%**

Source: OIG analysis of 2013 MRC Volunteer Respondent Data, 2014.

Local Health Department Staff. We worked with New York and New Jersey State MRC coordinators to create a list of appropriate individuals (e.g., county health directors, emergency response coordinators, and public health officers) in local health departments to complete our questionnaire.[33] After identifying these individuals, we sent a questionnaire to local health department staff in 79 counties in New York and New Jersey. We also sent one questionnaire to staff in the New York City local health department, which covers five additional counties in New York State.

Staff in all of these 80 localities completed our questionnaire; however, we analyzed only the responses from the 24 local health departments that received MRC volunteers in their jurisdictions. The remaining 56 localities did not receive MRC volunteers during the Sandy response.[34]

Local MRC Coordinators. We worked with the State MRC coordinators to create a list of all active local MRC units and coordinators (i.e., the units and coordinators that were recruiting MRC volunteers at the time we began data collection) in New York and New Jersey during the Sandy response. Using this list, we determined there were 53 active units, and we sent a questionnaire to the MRC coordinator associated with each of them. Coordinators from all 53 units completed our questionnaire; however, we considered only the responses from the 36 units that deployed MRC volunteers for Sandy.[35]

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[33] We defined "appropriate individuals" as those who worked, coordinated, or communicated with MRC stakeholders (e.g., MRC volunteers, local coordinators) during the MRC response.

[34] These localities did not receive volunteers for several reasons. For instance, some localities were not affected by Sandy and did not need volunteer assistance. Other localities were affected by Sandy but received help from organizations other than the MRC.

[35] One MRC coordinator reported that volunteers from a unit deployed in response to Sandy, but this coordinator did not report any challenges or successes associated with the response. Therefore, we did not include this coordinator's responses in our analysis.

State and Regional MRC Coordinators. We sent a questionnaire to the State MRC coordinators in New York and New Jersey and the regional MRC coordinator. All three of these coordinators completed our questionnaire.

Data Analysis

Describing MRC Volunteers' Response. Using the information provided by State and regional MRC coordinators, we determined the extent to which MRC volunteers deployed in response to Sandy (i.e., the number of MRC volunteers who deployed in New York and New Jersey). We also reviewed descriptions of MRC volunteers' activities from all five MRC stakeholders groups to determine the type of services that MRC volunteers provided and whether they worked with response teams from nonprofits (e.g., the American Red Cross) or other organizations.

Identifying Challenges and Successes Associated With the MRC Sandy Response. To describe the challenges and successes of the Sandy response, we conducted qualitative data analysis on the responses we received from all five stakeholder groups. We first organized the reported challenges and successes, separately, into common themes that we most frequently identified during our analysis (i.e., communication, shelter staffing and shelter operations). If a challenge or success addressed multiple themes, we treated each of the unique concepts of the response as a separate challenge or success. If a respondent cited the same challenge or success in response to multiple questions, we counted it as a single challenge or success. Additionally, respondents may have reported both challenges and successes that fell into the same theme. For instance, if a volunteer reported challenges relating to communications infrastructure (e.g., power outages), but successes associated with an MRC coordinator who was responsive, we would count these responses as a communication challenge and success, respectively. We classified each concept within a response into one, and only one, category.

We developed a theme if we identified 25 or more related challenges or successes across respondents. For instance, we developed the communication theme after identifying 25 responses that addressed communication challenges. Because respondents raised challenges and successes beyond the common challenge or success topics we identified and included in our questionnaire, the themes we developed were related, but not identical, to the questions we asked MRC stakeholders.

If a challenge or success could not be categorized into a theme because there were not at least 24 other challenges or successes dealing with the same topic, we categorized it into an "other" theme. For instance, MRC stakeholders reported successes associated with volunteer resiliency during the Sandy response, but it was not mentioned frequently enough to constitute a theme.

We then categorized each challenge or success within each theme into one or more subthemes. We developed subthemes if they contained five or more related challenges or successes. If a challenge or success could not be categorized into a subtheme, we placed it in the theme's "other" subtheme. See Appendix D for the number of other challenges and successes within New York and New Jersey reported, by theme.

APPENDIX B

Sandy Challenges Reported by Medical Reserve Corps (MRC) Stakeholders Within New York and New Jersey, 2013

Challenge Themes and Subthemes	MRC Volunteers (n=126)	Local Health Department Staff (n=24*)	Local MRC Coordinators (n=36*)	State and Regional MRC Coordinators (n=3)	Total** (n=189) (NY n=100) (NJ n=89)
Communication *New York* *New Jersey*	**33**	**15**	**28**	**3**	**79** ***50*** ***29***
General communication problems due to infrastructure failures (e.g., power outages, limited cell service, etc.) *New York* *New Jersey*	4	14	21	1	40 *20* *20*
Communication gaps among stakeholder groups unrelated to power outages, etc. *New York* *New Jersey*	6	1	8	1	16 *11* *5*
Undefined or unclear MRC volunteer role *New York* *New Jersey*	11	0	0	0	11 *8* *3*
Chain of command or Incident Command System not followed *New York* *New Jersey*	2	1	2	0	5 *2* *3*
Shelter Staffing *New York* *New Jersey*	**53**	**17**	**19**	**3**	**92** ***58*** ***34***
MRC volunteers unable to deploy *New York* *New Jersey*	27	14	11	3	55 *39* *16*
Low number of MRC volunteers with medical specialties *New York* *New Jersey*	8	2	1	1	12 *3* *9*
Liability and licensure concerns *New York* *New Jersey*	0	4	7	1	12 *5* *7*
Too many MRC volunteers *New York* *New Jersey*	10	0	0	0	10 *10* *0*
Communication problems caused low MRC volunteer turnout *New York* *New Jersey*	3	1	3	0	7 *3* *4*

continued on next page

Sandy Challenges Reported by Medical Reserve Corps (MRC) Stakeholders Within New York and New Jersey, 2013, Continued

Challenge Themes and Subthemes	MRC Volunteers (n=126)	Local Health Department Staff (n=24*)	Local MRC Coordinators (n=36*)	State and Regional MRC Coordinators (n=3)	Total** (n=189) (NY n=100) (NJ n=89)
Shelter Operations	**51**	**10**	**7**	**0**	**68**
New York					***38***
New Jersey					***30***
Insufficient shelter supplies	29	7	0	0	36
New York					*20*
New Jersey					*16*
Lack of shelter-specific training	6	2	6	0	14
New York					*4*
New Jersey					*10*
Special-needs services lacking	8	0	0	0	8
New York					*6*
New Jersey					*2*
Structure and building problems	8	0	0	0	8
New York					*4*
New Jersey					*4*
Disorganization and a general lack of planning	7	0	0	0	7
New York					*5*
New Jersey					*2*
Inadequate patient transportation	6	0	0	0	6
New York					*3*
New Jersey					*3*

*Sample size reflects respondents in jurisdictions or units with deployed MRC volunteers rather than all respondents for stakeholder group.
Note: Some MRC stakeholders reported more than one challenge. The shaded rows represent all challenges reported by MRC stakeholders within a theme, including "other" challenges. See Appendix D for more details on the "other" challenges reported by MRC stakeholders.
**Challenges reported by MRC stakeholders in New York include those from the MRC regional coordinator, New York State, and New York City.
Source: OIG analysis of Sandy MRC questionnaire data, 2014.

APPENDIX C

Sandy Successes Reported by Medical Reserve Corps (MRC) Stakeholders Within New York and New Jersey, 2013

Success Themes and Subthemes	MRC Volunteers (n=126)	Local Health Department Staff (n=24*)	Local MRC Coordinators (n=36*)	State and Regional MRC Coordinators (n=3)	Total** (n=189) (NY n=100) (NJ n=89)
Communication *New York* *New Jersey*	**37**	**14**	**20**	**3**	**74** ***29*** ***45***
Methods of communication among stakeholders *New York* *New Jersey*	18	12	16	2	48 *13* *35*
MRC coordinators were available and responsive to requests *New York* *New Jersey*	18	5	4	2	29 9 20
Shelter Staffing *New York* *New Jersey*	**25**	**14**	**12**	**3**	**54** ***27*** ***27***
Sufficient number of MRC volunteers *New York* *New Jersey*	21	7	2	1	31 *18* *13*
Shelter Operations *New York* *New Jersey*	**114**	**20**	**19**	**1**	**154** ***84*** ***70***
MRC volunteers had sufficient training *New York* *New Jersey*	44	11	18	1	74 *31* *43*
Sufficient shelter supplies *New York* *New Jersey*	17	2	1	0	20 *8* *12*
Well-organized facility/shelter *New York* *New Jersey*	9	0	0	0	9 *4* *5*

*Sample size reflects respondents in jurisdictions or units with deployed MRC volunteers rather than all respondents for stakeholder group. Note: Some MRC stakeholders reported more than one success. The shaded rows represent all successes reported by MRC stakeholders within a theme, including "other" successes. See Appendix D for more details on the "other" successes reported by MRC stakeholders.
**Successes reported by MRC stakeholders in New York include those from the MRC regional coordinator, New York State, and New York City.
Source: OIG analysis of Sandy MRC questionnaire data, 2014.

APPENDIX D

Other Sandy Challenges Reported by Medical Reserve Corps (MRC) Stakeholders Within New York and New Jersey, 2013

Challenge Themes	MRC Volunteers (n=126)	Local Health Department Staff (n=24*)	Local MRC Coordinators (n=36*)	State and Regional MRC Coordinators (n=3)	Total** (n=189) (NY n=100) (NJ n=89)
Communication (e.g., MRC volunteers not having contact information for shelter managers)	14	2	5	1	**22**
New York					***19***
New Jersey					***3***
Shelter Staffing (e.g., lack of MRC volunteer tracking and reporting systems)	18	5	4	2	**29**
New York					***17***
New Jersey					***12***
Shelter Operations (e.g., not having adequate sanitation stations for medical MRC volunteers or residents)	17	4	1	0	***22***
New York					***16***
New Jersey					***6***
Other (e.g., MRC volunteers were not working within their scope of practice)	30	0	7	2	**39**
New York					***28***
New Jersey					***11***

*Sample size reflects respondents in jurisdictions or units with deployed MRC volunteers rather than all respondents for stakeholder group.
**Challenges reported by MRC stakeholders in New York State include those from the MRC regional coordinator.
Note: Some MRC stakeholders reported more than one challenge.
Source: OIG analysis of Sandy MRC questionnaire data, 2014.

Other Sandy Successes Reported by MRC Stakeholders Within New York and New Jersey, 2013

Success Themes	MRC Volunteers (n=126)	Local Health Department Staff (n=24*)	Local MRC Coordinators (n=36*)	State and Regional MRC Coordinators (n=3)	Total** (n=189) (NY n=100) (NJ n=89)
Communication (e.g., effective communication with American Red Cross)	19	4	13	2	**38**
New York					***19***
New Jersey					***19***
Shelter Staffing (e.g., MRC volunteers arriving at assigned shelters on-time)	4	9	12	3	**28**
New York					***10***
New Jersey					***18***
Shelter Operations (e.g., local health departments were able to feed volunteers and had sufficient space for MRC volunteers)	111	18	1	0	**130**
New York					**75**
New Jersey					**55**
Other (e.g., MRC volunteers displayed resilience during Sandy)	65	10	17	3	**95**
New York					**51**
New Jersey					**44**

*Sample size reflects respondents in jurisdictions or units with deployed MRC volunteers rather than all respondents for stakeholder group.
**Successes reported by MRC stakeholders in New York State include those from the MRC regional coordinator.
Note: Some MRC stakeholders reported more than one success.
Source: OIG analysis of Sandy MRC questionnaire data, 2014.

APPENDIX E
Agency Comments

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the Secretary

Assistant Secretary for
Preparedness & Response
Washington, D.C. 20201

TO: Suzanne Murrin
Deputy Inspector General
Department of Health and Human Services

FROM: Nicole Lurie, MD, MSPH /S/
Assistant Secretary for Preparedness and Response

SUBJECT: Office of Inspector General's Draft Report: *Medical Reserve Corps Volunteers in New York and New Jersey During Superstorm Sandy*, OEI-04-13-00350

The Office of the Assistant Secretary for Preparedness and Response (ASPR) appreciates the opportunity to review and comment on the Office of Inspector General's (OIG) draft report: *Medical Reserve Corps Volunteers in New York and New Jersey During Superstorm Sandy* (OEI-04-13-00350). Thank you for your review of this important issue.

The Medical Reserve Corps (MRC) program was under the authority of the Office of the Assistant Secretary for Health (OASH) during the response to Superstorm Sandy. In an effort to build on recent experiences during the activation of the MRC during this major response, ASPR is utilizing the findings of this OIG report to identify and implement actions to strengthen MRC competencies and coordination throughout the network. As the report highlights, MRC units struggled to appropriately staff shelters and communicate with state and local entities during the response, demonstrating gaps in training and operational capacity for particular MRC units. ASPR is actively examining methods to capture and communicate MRC units' capabilities to state and local partners, promote consistent MRC baseline capabilities nationally, and enhance how MRC units are utilized during a response. As ASPR develops specific initiatives to address the gaps within this report – such as additional trainings, technical assistance, and identification and implementation of best practices – additional resources may be required to fully achieve success.

ASPR concurs with OIG's general recommendation that "ASPR, in collaboration with federal agencies (e.g., CDC, the Federal Emergency Management Agency) or non-governmental organizations (e.g., American Red Cross), provide guidance or technical assistance to states and localities (including MRC staff in these areas), as appropriate, to improve their plans, address these challenges, and be better prepared to respond to future incidents." Consistent with OIG's findings, there are many factors that impact communications and operations during a response to an incident. It is important to note, however, that the MRC does not operate in isolation and many MRC functions are dependent on the management and operations of other organizations, both governmental and nongovernmental. Broader coordination and integration with partners throughout the spectrum of response and emergency management will further improve communication and coordination during a response.

Agency Comments (Continued)

Since the transition of the MRC from the Office of the Surgeon General in the OASH to ASPR in November 2014, ASPR has initiated efforts to integrate MRC within its existing national and regional programs in order to make best use of operational efficiencies and to ensure improved situational awareness and coordination. Currently, ASPR's MRC program office consists of headquarters and regional staff providing the local MRC units with information and guidance. ASPR strategically aligned MRC with other regionally-focused programs to improve awareness, understanding, and coordination among other state, local, and regional stakeholder partners. Specifically, ASPR is working in the near-term to enhance collaboration among the MRC Coordinators; the Office of Emergency Management Regional Administrators and Regional Emergency Coordinators; and the Hospital Preparedness Program (HPP) Field Project Officers to support states and localities before, during, and after public health and medical emergencies.

Additionally, ASPR has been evaluating the effectiveness of MRC units. Through a cooperative agreement with the National Association of County and City Health Officials (NACCHO), ASPR recently directed a survey of state and local health and emergency management officials on their perceptions of MRC units. The results indicate MRC units are important, reliable, and can overall enhance public health promotion, preparedness, and emergency response capabilities at the state and local level. The survey also found that the greatest facilitator for continued success is funding. ASPR will leverage other capabilities – such as Regional Emergency Coordinators who offer technical assistance and information sharing with state partners – to augment and enhance MRC staff efforts. However, additional funding may be required in the future to address gaps and to ensure the MRC network continues to be a strong, viable, and reliable resource that enhances public and medical health in communities.

OIG Recommendation #1: Work with States and Localities to Strengthen Volunteer Communication Plans.

These plans can be strengthened by ensuring that they include:

(a) Systems and backup systems for MRC volunteer communication in the event of infrastructure failures before and during an incident;

(b) Protocols for ensuring effective communication between MRC volunteers and other stakeholders (e.g., emergency operations centers, local health departments) before and during an incident, and plans for overcoming communication gaps if they develop; and,

(c) Methods for clearly communicating roles to volunteers at shelters and for following appropriate communication within the shelter (e.g., Incident Command System).

ASPR concurs with this recommendation and provides the information below to support concurrence. While the activities listed below will be valuable, MRC units face gaps in training due to a lack of resources. ASPR will continue to allocate funding to support MRC units but the level of investment will be directly tied to the allocation of already limited and diminishing budgets in out-years.

(a) Communication infrastructure failures occur during most disasters and were clearly a concern during Superstorm Sandy. Because local MRC units are primarily an asset of local public health and emergency management, the MRC program staff continues to provide MRC units with information regarding systems and backup systems for communications. ASPR is drafting guidance for MRC units on best practices in communications during electrical outages. Following the release of the guidance document in late spring 2015, all MRC units

Agency Comments (Continued)

will be encouraged to consider these best practices, share their ideas and information with the MRC network, and implement the practices that will help them to mitigate future communication failures in their jurisdictions.

(b) In 2013, MRC headquarters staff developed and launched the *MRC Factors for Success* (see https://www.medicalreservecorps.gov/FactorsForSuccess), a comprehensive set of expectations and performance measures that MRC unit leaders can utilize to enhance MRC unit capabilities and operations. Resources, including guidance, templates and links are included to assist unit leaders achieve their goals and improve the sustainability of their units. Other training, communication, and technical assistance resources provided to the MRC network include the MRC leaders' listserv, MRC-TRAIN, an online learning management system (see https://www.mrc.train.org) and monthly MRC Well Check webinars. ASPR is working in the near-term to enhance collaboration among the MRC Coordinators; the Office of Emergency Management Regional Administrations and Regional Emergency Coordinators; and the HPP Field Project Officers to support states and localities before, during, and after public health and medical emergencies.

(c) Since the MRC is a local asset, MRC program staff provides tools and guidance to encourage best practices at shelters and for other situations. Under a cooperative agreement, MRC and NACCHO are revising the MRC Core Competencies to provide more concrete information to MRC units about several training topics, including the Incident Command System. This document will be released in spring 2015.

OIG Recommendation #2: Work with States and Localities to Strengthen Shelter Staffing Plans.

These plans can be strengthened by ensuring that they include:

(a) Enhanced recruiting efforts for all volunteers, including those with specific medical specialties (e.g., physicians, nurses), and ensure that staffing projections account for absenteeism rates due to storm-related damage or competing work or personal obligations. These actions will increase the likelihood that shelters have sufficient personnel, including those with specific medical specialties;

(b) Specific volunteer liability and licensure procedures to ensure that concerns related to these issues do not prevent volunteers from deploying for future incidents;

(c) Methods for tracking and monitoring MRC volunteer deployment to ensure that shelters are adequately staffed (e.g., should contain information about when and how to relocate MRC volunteers from overstaffed shelters to those that are understaffed); and,

(d) Methods to ensure state and/or local plans contain multiple methods for MRC volunteer transportation to affected areas during an incident. These plans could include developing agreements to use law enforcement or other local vehicles to transport MRC volunteers.

ASPR concurs with this recommendation. Shelter staffing requires the coordination of efforts between Emergency Support Function (ESF)-6 (mass care) and ESF-8 (public health and medical) leadership in the state and local emergency operations centers as well as during coordination with nongovernmental organizations, such as the American Red Cross. ASPR provides the following activities to support efforts that address OIG's recommendations. While these resources are useful for individual MRC units, the NACCHO survey conducted in early 2015 found that MRC units would be able to best augment their volunteer cadre size through additional resources such as recruitment and retention activities and additional training for members. The survey found funding is the best facilitator of an effective MRC unit, and with

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additional funds MRC units would be able to hire administrative personnel dedicated to the recruitment and retention of volunteers capable of supporting specific functions including supporting shelter operations. ASPR will continue to allocate funding to support MRC units but the level of investment will be directly tied to the allocation of already limited and diminishing budgets in out-years.

(a) The *MRC Factors for Success* toolkit mentioned above addresses many concerns and issues regarding staffing of shelters under the following factors: 1.2 Assess Community Needs; 4.4 Determine Unit Composition; 4.5 Develop Position Descriptions; 5.1 Develop Volunteer Recruitment Plan; 5.3 Recruit Volunteers; 7.3 Train Volunteers; 8.3 Establish Policies and/or Procedures to Utilize and Manage Volunteers; 9.2 Track and Manage Volunteers; and, 10.1 Develop A Volunteer Retention and Recognition Program. Resources such as guidance documents and best practices will continue to be added to the toolkit as they are identified and developed.

(b) MRC units currently function under a patchwork of inconsistent state and local legal protections. Some MRC units rely on the limited protections of state Good Samaritan Acts or the Volunteer Protection Act, while others receive coverage from state emergency management acts that provide coverage only during declared emergencies. MRC headquarters staff continues to mitigate potential liability risks by promoting good risk management practices, including those described under factors 11.1 Develop a Risk Management Plan and 11.2 Determine Volunteer Legal Protections. The topic of legal protections was also addressed during the February 2015 MRC Well Check webinar.

(c) MRC units do not typically manage shelters. Instead, these units are traditionally used to augment staff and assist with general and medical shelter needs as identified. Since the inception of the MRC in 2002, the involvement of MRC volunteers in the sheltering of community members has increased substantially; this shelter-related activity is now frequently reported by MRC units. For example, since October 2014, MRC units have reported over 270 activities related to shelter training, planning, or operations.

(d) Since the MRC is a local asset, MRC program staff provides tools and guidance to encourage best practices. Mentioned above, the *MRC Factors for Success* toolkit can address concerns about transportation needs under factors 8.3 Establish Policies and/or Procedures to Utilize and Manage Volunteers or 9.2 Track and Manage Volunteers. Resources such as guidance documents and best practices will continue to be added to the toolkit as they are identified and developed.

OIG Recommendation #3: Work with States and Localities to Strengthen Shelter Operations Plans.

These plans can be strengthened by ensuring that they include:

(a) Methods for obtaining medical supplies and ensuring staff periodically review inventory to maintain adequate supply levels and ensure medical supplies have not expired;

(b) Methods to ensure that shelter facilities are appropriate (e.g., have sufficient space and temperature controls) and have adequate services available for all populations (e.g., special needs), or ensure localities are capable of redirecting evacuees to special needs shelters, if needed;

(c) Strategies to address transportation to medical facilities for patients who require further care; and,

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(d) Establishing a minimum level of training required on a regular (e.g., annual) basis for all volunteers. ASPR could work with states and localities to determine these minimum requirements based on national competencies and local needs. This would ensure that volunteers have received training in critical areas, such as shelter operations, and other facets of response, including Incident Command System, and working with special needs populations, before they deploy or immediately following their deployment, using a "just-in-time" model.

ASPR concurs with this recommendation and will continue to work with its ESF-6 and ESF-8 partners and stakeholders to address shelter operations issues and concerns. MRC units do not typically manage shelters. Instead, these units are traditionally used to augment staff and assist with general and medical shelter needs as identified. While this report focuses on MRC and MRC's efforts to enhance shelter operations, this recommendation could be directed toward other entities that are responsible for overseeing the activities outlined in parts (a) through (d). At the ASPR level, regional staff works with state and local contacts to advance planning efforts for shelter operations, to better integrate federal surge capabilities, and to target the requirements of special needs populations before, during, and after public health emergencies.

(a) As implied in the paragraph above, this recommendation is not specifically within the scope of ASPR's programs or initiatives. ASPR has regional points of contact who work with state and local partners to identify needs before, during, and after public health disasters. If gaps are identified and communities are unable to provide care for impacted populations, ASPR's National Disaster Medical System can augment medical care and services. In addition, with the transfer of the MRC program to ASPR in November 2014, ASPR monitors the utilization of MRC units to augment the provision of health care and provide supplemental services within communities. Finally, ASPR awards grants to states via the HPP to support preparedness efforts within the state and local health care infrastructure. HPP investments over the last decade have resulted in communities being able and capable of responding to public health and medical disasters with limited support from the federal government.

(b) As implied in the paragraph above the response to part (a), this recommendation is not specifically within the scope of ASPR's programs or initiatives. ASPR has regional points of contact who work with state and local partners to identify needs before, during, and after public health emergencies.

(c) As implied in the paragraph above the response to part (a), this recommendation is not specifically within the scope of ASPR's programs or initiatives.

(d) Regarding ASPR's establishment of a minimum level of training required on a regular basis for all volunteers, ASPR addresses this recommendation through the *MRC Factors for Success* toolkit. Since the MRC is a local asset, MRC program staff provides tools and guidance to encourage best practices in MRC units. The *MRC Factors for Success* toolkit addresses many concerns about training needs for volunteers (see toolkit factors 7.3 Train Volunteers; 8.3 Establish Policies and/or Procedures to Utilize and Manage Volunteers; and, 9.2 Track and Manage Volunteers). Resources such as guidance documents and best practices will continue to be added to the toolkit as they are identified and developed. While the toolkit will be a valuable resource to MRC units, they may not be as effective as increasing resources available specifically for training MRC units. If a certain standard of training is required, then enough resources must be available for MRC units to effectively

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provide training. ASPR will continue to provide additional assistance to MRC units in a financially prudent way (i.e., toolkits and guidance documents), but believes that increased resources will best solve the training issues found in this report.

Thank you again for carrying out this study and permitting us to review this draft report. The findings of this OIG report identifies gaps that could be alleviated with increased resources to support training and recruitment and retention activities. We will continue to seek new ways to collaborate with our federal partners and nongovernmental organizations in preparing the nation for natural disasters and other public health emergencies. Please direct any questions to Serina Vandegrift by telephone at 202.205.0050, or by e-mail at Serina.Vandegrift@hhs.gov.

/S/

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