

Chapter 2

Creating the Boston Medical Reserve Corps

Thomas M. Menino

Abstract Boston learned from the 9/11 disaster and the devastation following Katrina and Rita that volunteers are willing to help the people in need even by taking personal risks. The Boston Medical Reserve Corps trains public health emergency response volunteers to assist in case of need. Within 48 h, the volunteers can distribute medication to the entire population of the city. Basic training, exercises, and refresher courses are provided to prepare volunteers for biological, nuclear, or communicable disease events.

Introduction

There have been many lessons learned in the area of public health preparedness since the 9/11 disasters and the devastation that followed Hurricanes Katrina and Rita. The lessons about security, communication, and preparation are well documented. One of the more inspiring lessons learned is that in the event of a disaster, whether natural or manmade, Americans are willing to help those in need. Often with little regard for the danger to themselves, thousands of Americans from near and far did not wait to be asked before deciding to head to the affected areas and volunteer.

The City of Boston has taken these lessons to heart. We have developed our public health emergency response volunteer program, the Boston Medical Reserve Corps, to help ensure that we have a cadre of skilled, trained volunteers ready to support our city's public health response efforts. The Boston Medical Reserve Corps serves as an example of how a city government and its constituents can partner effectively to serve a community.

T.M. Menino (✉)
Mayor, Boston, MA, (1993–present)
e-mail: mayor@cityofboston.gov

The Boston Medical Reserve Corps

The Medical Reserve Corps (MRC) was created in response to President Bush's 2002 State of the Union address, where he called for increased volunteerism in support of our nation's security. The MRC is run out of the Office of the Surgeon General and is designed to be operated locally to meet the specific public health needs of the communities they serve. Currently, there are nearly 700 recognized MRCs around the country, with nearly 125,000 volunteers. The Boston MRC was created in 2003 and operates out of the Boston Public Health Commission's (BPHC) Emergency Preparedness Division.

The City of Boston and the Boston Public Health Commission's Emergency Preparedness Division designed the Boston Medical Reserve Corps to meet the Cities Readiness Initiative (CRI) objectives. The CRI is a federal effort to prepare major cities in the United States to distribute oral medications to their entire residential population within 48 h of the decision to do so. The federal government provides assistance to cities to help them increase their abilities to receive and dispense medicine and medical supplies from the Strategic National Stockpile. Large-scale public health emergencies could include bioterrorism attacks, accidents at nuclear facilities, or major disease outbreaks such as pandemic influenza.

The main model used to dispense medication in a CRI event is Points of Dispensing (PODs). These PODs allow for the distribution of medicine and/or other health-protecting supplies to people in the affected area during a large-scale public health emergency.

Operating the number of PODs necessary to provide mass prophylaxis to all Boston residents is a huge task. Thousands of volunteers working around the clock providing medical and logistical services will need to be activated in a very short-time period. This creates a serious human resource challenge. Each POD is really a small clinic. Patients requiring care will rely on medically trained volunteers to screen and treat them. Yet many more non-medical volunteers will be needed to handle supplies, to make sure the lines run smoothly, to maintain the needs of the facilities, to provide language translation, to distribute information, and a variety of other tasks essential to the smooth operation of a POD.

The Boston MRC provides volunteers to staff these PODs. "Response level" volunteers make up the majority of the Boston MRC. These volunteers go through a basic orientation and will be called upon in the event of an emergency. "Leadership level" volunteers, who complete nearly 10 h of additional training, will be responsible for managing volunteers as they run part of a clinic. In a large CRI event, Leadership level volunteers will be needed to perform key managerial roles.

Volunteer Recruitment

As our CRI planning ramped up, we began to ramp up our volunteer recruitment efforts. In the summer of 2006, we had about 400 volunteers, many of whom had signed up following the disasters of Hurricanes Katrina and Rita. With those

disasters moving off the front pages, and the newness and lack of notoriety of the MRC program, volunteer recruitment had dropped off considerably.

In response, the city developed a comprehensive advertising campaign designed to reach both medical and non-medical volunteers. The campaign was designed to call upon the best of Boston residents. Using the tagline *Be One of Boston's Everyday Heroes*, the campaign showed a variety of people – medical and non-medical, young and old, students and parents – in heroic poses. The ads described key concepts of the program: ease of joining, free training provided, minimal time commitment, providing a valuable service to the City of Boston.

The campaign ran on the web sites of Boston's two major newspapers, *The Boston Globe* and *The Boston Herald*, as well as the free daily, *The Boston Metro*. The city placed advertisements on subway cars and at public transportation stations, with a particular focus on subway lines and stations that served hospitals. Placements were made in Boston's community newspapers and advertising kiosks around the city. We launched the campaign with a press conference at city hall where I spoke alongside then BPHC Executive Director John Auerbach and a Boston MRC volunteer. This campaign, launched in September 2006, has encouraged more than 1,200 new volunteers to join the Boston MRC, quadrupling the size of this critical volunteer group. Because of its success, this campaign was re-launched in June 2007 to continue to expand our volunteer numbers.

Basic Training

Having such a large group of volunteers would be useless without providing them with the quality training needed to allow them to succeed in the event of activation. In order to serve effectively during emergencies, volunteers need to know about the management structure during a response, potential roles they might hold, how they would be contacted in the event of an emergency, how to prepare themselves and their family before an emergency ever happens, and much more. Prior to the launch of the recruitment campaign, this basic training required of all volunteers was provided in person. Due to staffing limitations, training was only provided monthly, in the evening, at the BPHC offices, which are not so easily accessible by public transportation.

With ambitious growth goals, we had to identify a new way to train the expected sizable influx of new volunteers. The answer came in the form of new technology: online distance learning. In partnership with the Harvard School of Public Health's Center for Public Health Preparedness, an online version of our response level training was developed. The training is an interactive experience, with the volunteer going through a series of narrated power point slides, with checkpoint quizzes at the end of each section. Volunteers learn the purpose of the Boston MRC, and their roles and responsibilities, in addition to how to prepare themselves and their families before an emergency happens. The volunteers have the opportunity to hear a sample activation call and must also successfully complete a quiz at the end of the training in order to stay active.

Leadership Training

We have additional trainings that we require of our leadership volunteers. In the event of a CRI, we will rely on Boston MRC leadership level volunteers to perform managerial roles at PODs. Four additional trainings were created to give volunteers the skill they will need in order to perform these critical tasks.

The first of these additional trainings is our Managing Mass Dispensing Clinics training. In this 2-h training, volunteers get a refresher on the reasons for the activation of a POD. The roles and responsibilities of POD managers are explained in detail. The leadership staff that first arrives at the POD will be responsible for setting up the stations, organizing supplies, and doing all of the work necessary to prepare the POD before the rest of the volunteer staff arrives. In order to do this, the leadership volunteers must have an in-depth knowledge of the POD layout, the supplies they will have at their disposal and how they are to be used, and a sense of how the patients coming to the clinic will flow through the dispensing process.

In a large-scale operation such as this, there are bound to be many issues that will affect the way the clinic will operate. Weather, staffing limitations, distribution bottlenecks, and safety issues are just some of the factors that could create havoc during clinic operations. This training helps our leadership volunteers to identify and address a variety of issues affecting the opening and operation of a POD. A scenario-based discussion also allows Boston MRC volunteers to talk about how they might handle various situations.

The second leadership training is on Incident Command System (ICS), the management tool used by all response agencies to run emergencies response efforts. In a potential activation, Boston MRC leadership volunteers will need to understand how public health incidents are managed within a clinic as well as the overall incident response structure.

In the ICS training, Boston MRC volunteers learn about the key concepts of the structure, and how that structure is specifically implemented for POD operations in Boston. They are taught how to maintain specific channels of communication with supervisors and supervisees in order to ensure that information gets to the people who need it. The use of ICS forms is discussed, with particular attention paid to the job action sheet (JAS).

JASs are a list of immediate, ongoing, and demobilization tasks that are required of each job at a POD. Boston MRC leadership volunteers learn how to read and utilize a JAS to perform their job function correctly and to facilitate the transfer of their position to another volunteer when their shift is over.

We train our leadership volunteers in key concepts of disaster behavioral health and psychological first aid as the third component of leadership training. In any emergency situation, coping with stress must be an important consideration. Imagine a public health scenario where a potentially fatal disease affects large portions of our city, as people are told to wait in lines to receive life-saving medication. Even with a strong public messaging campaign, volunteers at a POD are likely to encounter some level of confusion, fear, and panic among the patients and staff.

This 3-h training gives Boston MRC volunteers an understanding of how to provide the most basic support to those experiencing stress at a POD. They are taught how to recognize the signs of extreme stress in themselves and others. In situations involving their own stress, they are taught ways to practice self-care. In situations involving patients or other staff, the volunteers are taught methods for de-escalating a situation and for directing someone to mental health resources that are part of the POD staff structure. Finally, volunteers are given the chance to practice self-care as they are led through scenarios that role-play situations requiring psychological first aid that they might encounter as volunteers.

The last leadership level course is on volunteer management and leadership skills. In CRI events, Boston MRC leadership volunteers will likely have the responsibility of supervising other volunteers. This course helps the volunteers learn how to motivate volunteers and how to work effectively with other professional cultures that will be involved with the response, such as the Police Department, Fire Department, Emergency Medical Services, and the media. Volunteers are also taught to identify their own leadership skills, and how to utilize those skills to make the POD more effective.

Lectures to Maintain Interest of Volunteers

Once our volunteers are trained, they are available to be called upon at any time. However, even small-scale public health emergencies are rare, and it is likely that volunteers could go years without being asked to respond to an emergency. This makes the retention of volunteers very difficult. To aid in this effort, there is a quarterly Boston MRC lecture series to keep volunteers involved in the program. We present special topics of interest to Boston MRC members that help them stay current with public health issues. We have offered a session on Pandemic Flu, in which volunteers learned what influenza is and how it develops into a pandemic, how to prevent contracting influenza through use of respiratory precautions, and ways BMRC volunteers might be involved in a response to pandemic influenza.

We also offered a session on the Strategic National Stockpile, which is a federal program that assures the availability of essential medical materials to any community in the United States in a time of disaster. We explain how federal and local supplies get to our PODs, and how this supply chain relates the work Boston MRC volunteers do.

We held a lecture series event to describe how mass care has been used in the past and lessons learned from those events. Mass care is a means of providing shelter and other assistance to victims following a major disaster. While not a main volunteer role of Boston MRC volunteers, we may rely on them to assist with mass care operations in different types of emergencies. We discussed ways in which volunteers might be utilized in these instances. Upcoming lecture series events will be held on safety issues at a POD and an update on pandemic influenza. Other topics are in development.

Exercises

One of the best tools we have at our disposal for retaining volunteers, as well as preparing them to be effective POD staff and managers, is the use of exercises. As the Emergency Preparedness Division works to test its activation plans, Boston MRC volunteers are utilized to give them experience in the POD setting and to ensure that they are being taught the skills necessary to do their job safely, accurately, and efficiently.

In the summer of 2006, the EPD tested its capabilities to open a POD. It was important to learn how long it would take to open a POD, the resources needed to support a throughput of 1,000 doses per hour, and the staffing requirements needed to open the clinic in a relatively short amount of time. As part of that exercise, we invited some MRC leadership volunteers to participate. The volunteers were given their work assignments on the day of the event. Using their leadership training, the volunteers were effectively able to perform a variety of roles. They unloaded and sorted medical and non-medical supplies. Most importantly, they were able to work collaboratively, respond to problems, and come up with ideas to improve plans on the spot.

We rely on exercises to help us inform our planning efforts. The feedback from Boston MRC volunteers proved to be invaluable. One of the main lessons learned from this exercise was about our clinic setup. The staff initially envisioned a clinic with three lanes of traffic for dispensing the medication. One lane would be a standard dosing lane, or “express lane,” for those receiving the most common medication. A second lane would be for those requiring suspension dosing, meaning those who would need their medication broken down and mixed with water to make it easier to swallow. The third would be for complex treatment, which would apply to families in which some members required standard dosing and others required suspension dosing. Our volunteers noted that such a system could cause a long wait time for clinic patients, which could mean that bottlenecks may form at the entrance of the clinic, within the clinic, and at the clinic exit.

We took these suggestions and used them to update our CRI plans. Instead of three different lines, all medication lanes were made “express lanes.” In this plan, anyone can go to any line. Each station will have all the medications necessary for the particular response. If suspension dosing is required, every station will have an information sheet with directions for suspension dosing. This allows for shorter processing time per patient, reduces any confusion that could arise by having lines with different functions, and helps ensure that each patient receives the same information.

This information was added to our trainings, and we used this new streamlined model in our exercise in the summer of 2007. The 2007 exercise picked up where we left off in 2006. This time we were testing our ability to dispense medication, both in terms of time and in terms of accuracy. To meet our CRI goal, we determined that we needed to have a throughput of at least 1,000 doses per hour. For this exercise, we used Boston MRC volunteers to serve as clinic staff: nurses who were

dispensing medication; triage staff who greeted and screened incoming patients; queue management staff, who managed the flow of patients into and out of the clinic; and medical evaluation staff, who handled patients with special medical conditions. In addition, we used other MRC volunteers as patient simulators, who played different “characters” with different ages, medical histories, children, etc.

The first part of this exercise was an activation call to our clinic staff volunteers using the Mayors Emergency Alert Notification System, or MEANS. This system performs a callout to selected people registered in the MEANS to alert them to a specific condition. In this case, the condition was that MRC volunteers were needed to run a POD in response to a simulated Anthrax release. Virtually all of the volunteers were able to listen and respond to this activation call successfully.

The second part of the exercise was a just-in-time training of our POD staff. This is the type of training that volunteers would receive prior to being sent to a POD site. Here volunteers receive incident-specific information, as well as a refresher on POD layout, staffing, and management. The volunteers were registered and trained at the DelValle Institute for Emergency Preparedness just as they would be in the event of a real emergency.

The final part of the exercise was the running of the POD. Patient simulators went through the clinic in virtually the same way they would in a real CRI event. They were screened, led through the clinic, and treated by Boston MRC volunteers. Our goal was to dispense at a rate of 1,000 doses per hour. Largely due to the efforts of the Boston MRC volunteers, we were able to dispense at a rate of more than 1,800 per hour and no one was given the wrong medication.

Support for Non-CRI Events

CRI events, thankfully, do not occur very often. But many other types of public health emergencies occur more regularly, and often these emergencies will exceed the resources of the Boston Public Health Commission’s staffing resources. Boston MRC volunteers are utilized in these situations. Since the Boston MRC was created in late 2003, there have been a number of activations of support clinics to curb outbreaks of Hepatitis A, Meningitis, and most recently, measles.

In the summer of 2006, there was a measles case at the John Hancock building, the largest building in Boston, located in the heart of the city. The exposed person had contact with employees on multiple floors of the building, where 80% of the air is recycled. There were many potential exposures within the building and elsewhere, and the BPHC’s Communicable Disease Center made the decision to open a clinic in the building to treat those potentially exposed who did not have proof of vaccination. Boston MRC volunteers played critical roles that ensured the success of our clinic operations: Volunteer nurses helped dispense medication and a volunteer pharmacist and two of his students helped to prepare vaccines. Having this cadre of volunteers available made the job of seeing thousands of patients a very manageable task.

Future

In the coming months and years, the Boston MRC will continue to grow to help reach our goal of more than 4,000 active volunteers. As new exercises are conducted, and as the threats that affect the public health change, trainings will be updated in order to keep our volunteers as prepared as possible for potential activations. In addition, a yearly refresher course is being developed which will keep our volunteers up-to-date with the most current information and allow us to update our database as contact information changes.

The Boston Medical Reserve Corps is a key element of our emergency preparedness strategy and a great example of a partnership between constituents and government.



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