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Preparedness Grant Effectiveness Case Study: New York City

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FEMA

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1. Overview

In August 2021, the Federal Emergency Management Agency (FEMA) conducted a grant effectiveness case study with New York City (NYC), New York (NY) to understand how FEMA preparedness grant funding helped prepare NYC's mass fatality management (MFM) system for the significant increase in deaths related to the COVID-19 pandemic. FEMA conducted this case study virtually with representatives from NYC's MFM system, including NYC Emergency Management (NYCEM) and the NYC Office of Chief Medical Examiner (OCME).

Although the pandemic created significant challenges for NYC, Homeland Security Grant Program (HSGP) preparedness funding, which includes funding from the State Homeland Security Program (SHSP) and the Urban Area Security Initiative (UASI), helped NYCEM and OCME respond effectively. Additionally, Regional Catastrophic Preparedness Grant Program (RCPGP) funding was critical in supporting fatality management planning in the years prior to the pandemic. While not addressed in this report, other Federal funding, such as preparedness grants from the Department of Health and Human Services (HHS) Assistant Secretary for Preparedness and Response (ASPR), was also critical in support of NYC's fatality and pandemic preparedness and response. With UASI funding, NYC forged relationships with private and public partners through trainings to bolster local capacity, facilitate collaboration, and make technological investments through the UASI program to address major information technology (IT) challenges related to the MFM process. Case study participants reported that the combined effect of these investments significantly aided the response and helped overcome new challenges that emerged during the COVID-19 pandemic.

2. NYC MFM Background and COVID-19 Pandemic Challenges

NYC COVID-19 and non-COVID-19 deaths are managed by several organizations, including OCME, funeral homes, and hospitals. In March 2020, NYC's MFM system faced an unprecedented case load: more than 1,000 total fatalities a day (800 of which were COVID-19 pandemic-related fatalities), compared to NYC's historical average of 150 deaths per day.ⁱ The increase in deaths stressed MFM system personnel, resources, and equipment and posed several new challenges. For example, as an increasing number of individuals died at home, OCME and funeral homes faced greater demand for recovering decedents from non-hospital locations. As overused cremators encountered maintenance issues and morgues reached capacity, OCME was tasked with identifying additional locations to respectfully store decedents. Additional delays were created by administrative paperwork, existing rules and regulations for funeral homes in decedent processing, and an overworked logistics system for managing fatalities. Staff shortages required personnel to work outside their traditional capacity, often in emotionally challenging and traumatic circumstances. However, during the pandemic, hospitals coordinated with OCME and NYCEM to augment their capacity, and UASI-funded trainings that built the relationships between these partners proved crucial.

3. Funding History

Since 2013, NYCEM and OCME invested approximately \$4.2 million of UASI funding in the projects described in this report which supported the COVID-19 response. NYC also invested \$1.9 million of RCPGP funding on projects described in this report that impacted NYC's COVID-19 MFM.

4. Investments and Capability Impacts

4.1. Planning, Training, and Exercises

Both NYCEM and OCME reported that UASI funding supporting pandemic-related planning, training and exercises positively impacted their ability to respond to the COVID-19 pandemic. OCME specifically stated that years of UASI-funded MFM planning and exercises played a role in avoiding a more catastrophic situation, like those observed in other countries with similar dense urban populations (e.g., Italy, the first country to reach 10,000 COVID-19 fatalities).ⁱⁱ NYC previously developed and exercised the Pandemic Influenza Surge Plan for Managing In and Out of Hospital Deaths using \$1.6 million in FY 2007-2010 HHS ASPR HEPP funding. This plan was later updated using UASI funds and retitled Biological Incident Fatality Surge Plan for Managing In and out of Hospital Deaths. OCME updates this plan periodically and conducts reviews after major incidents to identify possible improvements. NYC also used UASI funds to develop mass fatality response plans during the H1N1 event, and those plans were updated with UASI and RCPGP funds following Hurricane Sandy and Ebola. This previous experience and planning proved to be a valuable framework to build the City's fatality management response during the COVID-19 pandemic. An example of this is that the early plans identified communication with the public as a key mission objective to successfully manage a mass fatality incident. As such, OCME has worked to ensure transparency in processes and centralize mechanisms to support missing persons reporting and case tracking. This is achieved through the development of the Unified Victim Identification System (UVIS), described below.

In addition, through the development of the mass fatality and pandemic surge plans, NYC effectively anticipated the challenges of procuring personal protective equipment (PPE) when COVID-19 struck and preemptively acquired a significant amount of PPE that proved crucial in protecting responders. Note that even with the proactive PPE procurement, the scale of the incident was such that there were still shortages. For example, PPE was not always available to mutual aid personnel deployed to assist with decedent processing, and this caused some processing delays.

Before the pandemic, OCME conducted a logistics exercise with the NYC Department of Health and Mental Hygiene (DOHMH) and City hospital systems to improve response effectiveness for mass casualty incidents and coordination in the event of a pandemic. During the pandemic, NYCEM and OCME trained substantial portions of the MFM system, including funeral directors, cemetery owners, and three NYC hospitals to improve coordination of the MFM operation. Because MFM operations have multiple steps and multiple stakeholders, coordination among these entities is a critical factor in avoiding bottlenecks in the overall system. As a result of these preparedness grant funded

trainings, exercises, and plans, NYCEM and OCME were more prepared to handle the worst-case scenario that came to fruition during the COVID-19 pandemic.

4.2. Body Collection Points (BCPs) and Portable Morgue System

NYC used more than \$1.1 million from FY 2013-2020 in UASI funding to purchase equipment related to fatality management, and many of these investments played a direct role in the OCME's COVID-19 response. For example, OCME and NYCEM secured BCPs, which are temperature-controlled units utilized to temporarily store decedents and distributed them to all NYC hospitals during COVID-19 to surge their mortuary capacity. Though each BCP can store 45 to 100 decedents, at peak, multiple BCPs were deployed to a single hospital to manage the increased fatalities. In addition, BCPs were helpful in providing families and funeral homes with additional time to retrieve decedents before the eventual transfer of unclaimed decedents to long-term freezer storage.

NYC also used these funds to help equip and provide NYC's Disaster Portable Morgue Units (DPMUs) and provide additional capacity to OCME's Forensic Pathology Centers (FPC) throughout the city. DPMUs provide temporary, end-to-end mortuary services, including storage capacity and decedent processing. In total, four DPMUs were stood up as part of the pandemic surge plan. The largest, Disaster Portable Morgue Unit Four, was situated at the South Brooklyn Marine Terminal.

4.3. Public and Private Sector Partnerships Before and During the COVID-19 Pandemic

As highlighted in the report, MFM is a multi-step and multi-stakeholder system involving hospitals, government, crematoriums, and funeral homes. Trainings, exercises, coordination calls, and other engagement efforts are therefore necessary to establish relationships and facilitate effective fatality management. NYCEM and OCME invested \$600,000 in FY 2005-2017 UASI funding and \$400,000 in FY 2007-2010 HEPP funding in training, and exercises that were instrumental in preparing for the COVID-19 pandemic response due to the unprecedented number of fatalities occurring in hospitals, care facilities, and in private homes. An example of how critical partnerships are to MFM occurred during the 2014 Ebola Virus Disease (EVD) outbreak, in which NYCEM and OCME coordinated with 10 hospitals designated to care for highly infectious disease patients and worked with the Centers for Disease Control and Prevention (CDC) to develop decedent storage and transport practices. In turn, this experience helped guide the COVID-19 MFM response.

4.4. Data Visualization Software

NYC also invested UASI funds in data visualization software and tools that helped officials understand and track the workload at each step of the MFM process. Geographic information system (GIS) mapping tools like ESRI's Survey123 allowed response teams to designate and track work assignments, upload documents, and make necessary notifications to key stakeholders in the BCP and DPMU operations. Some of this functionality had not been built prior to the pandemic, and NYC was able to implement those successfully during the early stages of the outbreak.

4.5. Unified Victim Identification System (UVIS)

UVIS is a UASI-funded tool that collects and consolidates ante and postmortem data then utilized to facilitate decedent identification. UVIS combines the resources of the New York City Police Department (NYPD), OCME, 311, DOHMH, NYC Regional Health Information Organization (RHIO), and NYCEM to establish a centralized call center and data repository of missing person information. UVIS, combined with conferencing technology to replace an in-person family assistance center, enabled OCME to more effectively make next-of-kin notifications. This was crucial given the high volume of decedents during the pandemic. Since UVIS had been in place since 2012, response teams were familiar with this system before COVID-19, contributing to a more efficient response.

5. Recommendations

During the case study, NYCEM and OCME presented the following recommendations for FEMA's preparedness grant program administration.

1. Federal grant performance periods are limited to three years, meaning that the receiving entity has only three years to spend awarded funds. Local and federal procurement regulations make it extremely difficult for a jurisdiction to complete grant activities within this timeframe. Larger projects - such as building an end-to-end data management solution such as UVIS - can be hindered by such regulations. As a result, jurisdictions may choose to leverage smaller, easier procurements to satisfy grant investments over choosing the more substantial projects that require procurement and management of multi-year contracts.
2. HSGP provides funding to implement investments that enhance terrorism preparedness and serve to build, sustain and deliver the 32 core capabilities essential to achieving the National Preparedness Goal of a secure and resilient nation. These funds are not intended to manage day-to-day operations of any jurisdiction. However, NYC recommends that systems leveraged during a disaster should be utilized on a day-to-day basis to ensure responders are familiar and competent in the systems, processes, and plans.
3. Federal grant reporting requirements, although well intended to ensure that jurisdictions are responsible stewards of taxpayer monies, are complicated and duplicative. The effort required to obtain, liquidate and maintain these grants is such an onerous addition to daily operations that jurisdictions may opt to forego the grant opportunity or find that they need to spend additional funds on grant administration. NYC recommends FEMA streamline grant reporting requirements to balance the grantee's fiduciary responsibility with work effort.

6. Conclusion

MFM is a complex, emotional operation that requires substantial resource management and personal engagement. The increase in fatalities caused by the COVID-19 pandemic significantly taxed NYC's MFM personnel, systems and processes. However, assisted by FEMA preparedness funding, NYCEM and OCME managed the expanded workload by applying a combination of traditional investments and innovative solutions. Since 2008 when NYC developed pandemic and

MFM-related plans, NYC has regularly updated, trained, and exercised these plans to ensure their functionality. NYC also established strong partnerships with other players in MFM, including public agencies and the private sector, which proved crucial in handling the surge of fatalities. Equipment purchased with grant funds as well as the UVIS infrastructure, were critical tools in managing the unprecedented decedent storage and next of kin notification needed because of the COVID-19 pandemic.

7. Appendix A: References

ⁱ <https://www1.nyc.gov/assets/doh/downloads/pdf/vs/2017sum.pdf>

ⁱⁱ <https://www.cnn.com/2020/03/28/europe/italy-coronavirus-cases-surpass-china-intl/index.html>