

Executive Summary

The Strategic National Stockpile (SNS) is the federal program that provides states with medical assets in times of need. It is a vital resource during major incidents, and SNS planning concepts are used regularly for many public health activities. Public health agencies at all levels of government continue to develop practices and procedures to improve their SNS readiness. From information systems to track resource needs, to plans to manage inventory and dispense pills; state, local, and federal public health agencies are engaged in a variety of innovative efforts to meet the unique needs of their communities. This paper describes diverse approaches to SNS planning based on particular state circumstances and reveals common challenges and opportunities that inform improved SNS planning and all-hazards public health preparedness.

Introduction

The Strategic National Stockpile (SNS) is a federally-maintained cache of pharmaceuticals and other medical supplies that can be deployed to any location in the nation in response to a terrorist attack or other public health emergency. The SNS, then known as the National Pharmaceutical Stockpile, was first deployed following the September 2001 terrorist attacks, carried on some of the few airplanes allowed to fly that day.¹ More recently, it was deployed following Hurricane Katrina. Within 24 hours of Mississippi's request for the Stockpile, SNS assets were distributed to nine critical treatment centers.² State, territorial, local, and federal public health agencies continue to plan, train and exercise

to ensure similar rapid, effective responses to future incidents.

A key SNS component is the push package, which is a supply of medical materiel appropriate to a wide range of threats that can be shipped by the Centers for Disease Control and Prevention (CDC) to an affected location within 12 hours of the decision to deploy. States and territories can also request specific supplies which can be drawn down from existing SNS inventory or rapidly purchased by CDC. The federal government is responsible for purchasing and maintaining SNS assets, granting requests from states for deployment of the Stockpile, delivering SNS assets to requesting states and territories, and providing ongoing technical assistance to state and local health agencies.

Billions of dollars have been invested by the federal government in recent years toward building and maintaining the physical assets of the SNS.³ However, it is cooperation between the federal government and state, territorial and local health agencies that assures SNS assets rapidly end up in the hands of the affected public.

State, territorial, and local health agencies are responsible for all aspects of SNS response once assets are delivered by the federal government. The federal government is closely engaged with states in the planning process and is responsible for assessing state and local programs. State, territory,⁴ and local health agency⁵ SNS plans are assessed primarily on the following 13 capabilities:

- Development of a mass prophylaxis plan
- Management of SNS/command and control
- Requesting SNS
- Tactical communication
- Public information and communication capability
- Security
- Receipt, storage and staging or regional/local distribution sites
- Controlling inventory
- Repackaging
- Distribution
- Dispensing
- Treatment center coordination
- Training, exercise and evaluation

The organizational structure of health agencies varies considerably from state to state, leading to significant differences in how state health agencies plan to deploy their capabilities. In some jurisdictions, the state or territorial health agency assumes all SNS-related responsibilities from requesting SNS assets to dispensing medication to the public. In other jurisdictions, the state health agency is primarily responsible only to the point of delivering SNS assets to local distribution points; the state plays a supportive role to local health agencies in all other aspects of the response.

In fiscal years 2002 and 2003, state and territorial health agencies received dedicated funding totaling \$130 million to help establish their SNS programs and to begin planning activities. State health agencies now use funds from their preparedness cooperative agreements with the CDC to support ongoing planning needs, staffing, training, exercising, and evaluation. The following pages offer a snapshot of how various health agencies are dealing with this immense planning and logistical challenge. Rather than focusing on specific capabilities, the examples described in the following pages can be loosely categorized as dealing with the management and dispensing of SNS assets. As such, many of the examples touch

on multiple capabilities. None of the activities described will apply in all jurisdictions. Instead, they should be viewed as promising practices to meet the needs and use the resources available in specific jurisdictions.

Pharmaceutical Situational Awareness – Michigan and Colorado

The SNS is a rarely used asset and, like other federal resources, is only requested when all locally available resources have been exhausted. Like many other states, Michigan and Colorado have developed methods to assess pharmaceutical resources available within the state and established protocols for the use of these resources. Knowledge of existing resources pre-event and established procedures for determining availability at the time of the event enable states to gain the situational awareness necessary to determine where to direct resources available within the state and when to request assistance from other states and the federal government. With advanced situational awareness systems in place, state and territorial health agencies can make informed decisions to request help and have evidence to justify those requests.

Michigan

The Michigan Department of Community Health developed the Michigan Emergency Preparedness Pharmaceutical Plan (MEPPP) as a support plan to the state's all-hazards emergency management plan. MEPPP is a comprehensive statewide plan for coordinating which pharmaceutical resources will be used in the state in the event of a large-scale emergency and when they will use them. Through use of this coordinated plan, Michigan can maintain awareness of which pharmaceutical resources are being used and can shift or request additional resources as the situation warrants.

MEPPP encompasses several components, including federal assets, such as CHEMPACK, and state assets, such as the Michigan Drug Delivery and Resource Utilization Network (MEDDRUN). Both CHEMPACK and MEDDRUN are standardized caches of medications and other supplies strategically located throughout Michigan. Part of the federal SNS program, CHEMPACK is a pre-positioned supply of nerve agent antidotes placed by CDC in locations throughout the United States to enable rapid state and local response to chemical threats.

MEDDRUN includes standardized state caches of medication and supplies geographically located with select Michigan Emergency Medical Services (EMS) agencies. These state caches can be delivered to hospitals and other sites within an hour of a request. MEPPP also includes information on antidotes held by the state's two poison control centers; medication caches purchased and maintained within healthcare settings; stockpiles built by other state agencies, such as the state police; and supplies available within other areas of the public health system, such as antibiotics used by the state's sexually transmitted diseases program and medications housed in clinics run by local public health agencies. Supplementing this information is a list of pharmaceutical companies with contact information so that the Michigan Department of Community Health can reach out to them during an incident to purchase additional medication, if needed.

MEPPP allows Michigan to bridge the gap between locally available resources and other state and federal assets, such as the SNS. This detailed plan includes timelines for activation of pharmaceutical caches in response to various incidents. For example, by glancing at a chart within MEPPP, officials can quickly determine that MEDDRUN can be deployed in less than 15 minutes following a chemical event

impacting fewer than 100 people. Knowing what resources are available within the state and how quickly they are being depleted enables Michigan to decide when, or if, it is appropriate to request outside help. Residents of the state can rapidly receive essential medication while outside resources are being mobilized and deployed, enabling continuous coverage of Michigan's pharmaceutical needs following an incident.

While only key officials from the Michigan Department of Community Health and the state's Emergency Operations Center have full, secure access to the information included in MEPPP, an edited version is available through the state's Health Alert Network. This enables partners to see non-confidential information to help improve local and regional preparedness. Though MEPPP resources have not yet been used during an actual emergency, components such as MEDDRUN are routinely deployed for special events. For example, if the President visits a certain area of the state, MEPPP enables the state health agency to advise state emergency management officials about the pre-positioning of pharmaceutical resources in that region. Access to the edited version and use of MEPPP during these special events increases familiarity with the plan among responders and will likely enhance adherence to the plan during an emergency.

Keeping MEPPP up-to-date is a labor intensive process for the Michigan Department of Community Health, but the effort is seen as very worthwhile. The state health agency continues to broaden the scope of MEPPP by trying to identify resources that might not be routinely considered. Reporting of inventory totals to the state health agency varies among partners. Some are able to provide information on a quarterly basis while information from others is only updated annually. A key to this effort's success has been to reassure partners that the

information they provide will be secure and that the state health agency is only gathering information, not trying to take resources away from participating partners. The Michigan Department of Community Health recognized early in its preparedness planning efforts that numerous caches were being established for all kinds of hazards. Being able to capture information about these caches ahead of time allows the state to be far better prepared when making decisions about when, where, and how to deploy assets.

Colorado

Other states, like Colorado, are also able to assess available governmental and private resources. The Colorado Department of Public Health and Environment created COpharm to gain an operational picture of supply availability in the state and to help determine when to make a request for SNS assets. Prior to the creation of COpharm, it was very difficult for the state health agency to gauge what private pharmaceutical resources were available. COpharm was developed as a health alert network for pharmacy partners within the state. Registered pharmacies, pharmacists, manufacturers, distributors, and wholesalers can be reached by the state health agency through email, telephone, cell phone, fax, and pager. COpharm may be used to send urgent messages regarding an incident to registered users as well as to receive information from these partners about available pharmaceutical and other medical supplies. Collecting this data enables the Colorado Department of Public Health and Environment to identify areas with pharmaceutical resource shortages, make decisions about redistribution of pharmaceutical resources, and justify requests for assistance from external partners, such as the SNS program.

Development of the COpharm program is ongoing, with outreach still needed to about half of the pharmacy partners eligible for

participation. The Colorado Department of Public Health and Environment has exercised COpharm and will continue to engage participants through future small-scale exercises. The state health agency is developing training for participants to help them better understand their role in the program. Future objectives include ensuring that the program meets Homeland Security Exercise and Evaluation Program (HSEEP) standards and developing the ability to map pharmacy resources by region, county, or city using Geographic Information Systems (GIS).

The key to Colorado's success in implementing COpharm is that the program is simple and inclusive. The Colorado Department of Public Health and Environment has framed COpharm as a system that will benefit the community at large and has reached out to both big chain pharmacies and small independents. While outreach to pharmacy partners has been difficult, the response of participants has been positive, with nearly 65 percent participating in the latest exercise. The state health agency will continue to engage pharmacy partners throughout Colorado through training and exercising opportunities and ongoing improvements to the COpharm program.

What is important to note about MEPPP and COpharm is that they demonstrate the importance of not only planning for what to do before and after requesting SNS assets, but also recognizing that efficient utilization of resources available within a state may make such a request unnecessary. Through development of these programs, Michigan and Colorado maximize statewide resources and put themselves in position to make evidence-based decisions about requesting outside assistance.

Inventory Management – Minnesota and Texas

As part of their SNS planning, all states must identify facilities to receive, stage, and store (RSS) SNS assets delivered by the federal government. In addition to the state's RSS site, additional distribution sites may exist at the regional or local level, depending on the organizational structure of the state. Much planning is required to ensure that the RSS facility is prepared to handle SNS assets, appropriately manage them, and serve as an intermediary point before further distribution to treatment centers and local points of dispensing (PODs)¹.

CDC's Division of Strategic National Stockpile developed the RSS Inventory Tracking System (RITS) to assist state health agencies in managing SNS inventory once the Stockpile is deployed. Several states, including Minnesota and Texas, created their own SNS inventory management systems while RITS was in development or because they desired a system customized to their specific needs. Regardless of which inventory management system is used, state health agencies continue to adapt these systems as opportunities and challenges emerge.

Minnesota

The Minnesota Department of Health began developing its SNS Asset Management System (SAMS) several years ago and worked with a contractor to complete the project. The intent was to create a web-based system to manage inventory at the state's RSS site which also had the capacity to order more supplies. SAMS was beta-tested in January 2007 and has been used in two exercises.

¹ PODs are locations where an impacted population is instructed to go to receive mass prophylaxis. They are usually managed by local health agencies, often in public locations such as schools and arenas. Each health agency plans its PODs based on the resources available and the needs of the community.

Through its testing and exercises, the state health agency discovered that while SAMS is a very useful tool for inventory management, it is not ideal for ordering. Exercising revealed concerns that inventory requests to the RSS might bypass available local and regional resources. It also raised questions about how to maintain the paper trail needed for disaster reimbursement while using an electronic ordering system. Additionally, the state health agency has been challenged to find the best way to integrate hospitals.

While the Minnesota Department of Health is convinced that SAMS is the best solution to meet its inventory management needs, it has halted production on the ordering component of SAMS. Instead, the state health agency is looking at other systems already used in the state, such as the vaccine ordering system used by hospitals and MNtrac, a state system used to track hospital bed capacity, hospital diversion status, available pharmaceuticals and other resources. The state health agency hopes that one of these existing systems will complement the inventory management features that work so well in SAMS. By using an existing system for the ordering component, the state will gain an edge by introducing a new facet of a familiar system, enabling the Minnesota Department of Health to focus training it provides to users. It will also provide another opportunity for the state health agency to leverage its resources.

The Minnesota Department of Health stresses the importance of fully understanding business needs before undertaking the development of complex systems. The state health agency is currently revising its business plan for SAMS to ensure that it adequately reflects the state's needs and future goals. A key component of future planning efforts will be determining how to effectively include treatment centers

in the process. The state health agency is also looking forward to being able to provide additional guidance to local health agency counterparts regarding SNS and CRIⁱⁱ inventory management. Until SAMS was established, the state was limited in its ability to provide advice to local planners about how to manage inventory without having undertaken the task itself. Continued use of SAMS should make this information sharing easier.

Texas

Some states have overcome the challenges related to ordering. The Texas Inventory Management System (TIMS) has been operational since the summer of 2005. Developed by the Texas Department of State Health Services specifically for an SNS response, the web-based system supports multiple users and can track inventory from the RSS to the PODs based on orders for supplies.

TIMS is triggered upon receipt of SNS materials in the state. Approximately thirty state and regional public health information network administrators and SNS coordinators have access to TIMS and the ability to activate it during an emergency. The system will also support hundreds of additional users at the local level. First, an incident file is created by one of the administrators in TIMS. Then, an inventory list of the supplies available to respond to that incident is generated. As much information as possible is preloaded using

ⁱⁱ CRI stands for the Cities Readiness Initiative, a federal program to improve preparedness in major metropolitan areas. A component of the SNS, jurisdictions participating in CRI are engaged in mass prophylaxis planning efforts to reach 100 percent of the jurisdiction's population within 48 hours of a decision to do so. Originally funded in 21 metropolitan areas, the program expanded to 36 and, more recently, 72 jurisdictions. Currently, every state has at least one CRI jurisdiction, requiring considerable cooperative planning efforts among state and local public health agencies, their federal partners, and other response agencies.

the push pack contents list provided by CDC. Information about other pharmaceutical supplies that become available can be entered into TIMS separately. Finally, the RSS warehouse, command and control sites, and PODs are all linked.

Multiple users may access TIMS via the Internet. This trait is a key to the system's success. It allows synchronization of inventory totals among all of the linked entities. The entire inventory management process is automated, allowing access to real time data. Local PODs can log in to TIMS to place orders as supplies are running low. These orders go directly to the command center to be reviewed and approved or modified by medical directors before being sent to warehouses to be immediately pulled and shipped. TIMS helps the command center staff see inventory being drawn down and determine when to reorder supplies.

The Texas Department of State Health Services has found that TIMS reduces the confusion often associated with stressful emergencies by eliminating unnecessary interaction and duplication and offering accountability. While TIMS has not yet been used in a real-life incident, it has been tested during two exercises. This has allowed the Texas Department of State Health Services to enhance awareness of TIMS and provide training opportunities for key staff who would be involved in an actual incident. Additionally, while TIMS was created specifically for SNS, the program does allow for ad hoc input and can potentially be used for purposes other than an SNS response.

These examples from Minnesota and Texas demonstrate the importance of ongoing exercising and adapting to recognize and address challenges. State and territorial health agencies understand that customized tools developed for response to emergencies will never be truly tested until a real-life

incident happens. To prepare for those emergencies, health agencies continually test their systems, ensure appropriate personnel are trained, alter plans and systems as needed, and seek opportunities to leverage resources by linking these systems to other state and local resources.

Distribution and Dispensing – Ohio, Virginia and Kansas City

One of the most significant challenges to state, territorial, and local health agencies is determining the best way to distribute SNS assets within a state and dispense them to large numbers of individuals in a short timeframe with limited personnel resources. To address staffing issues, state and local health agencies are establishing partnerships with diverse stakeholders; engaging in volunteer recruitment efforts and partnering with existing volunteer organizations, such as the Medical Reserve Corps. They are also developing alternate dispensing methods, such as drive-through PODs. Additionally, pilot projects are underway in several jurisdictions to test delivery of medication by the United States Postal Service and the feasibility of providing supplies of antibiotics to individual households pre-event. Many of these innovative ideas are discussed in further detail in *CRI Alternative Dispensing Guide: A Collection of Model Practices and Pilot Projects*, which was sponsored by the Kansas City, Missouri Health Department and published by the National Association of County and City Health Officials.⁶

Examples of alternative dispensing methods include efforts in the state of Virginia and the Kansas City metropolitan area to collaborate with private sector businesses to dispense medication. While these strategies alone will not cover their entire population, they will assist the agencies by targeting specific segments of the population in order to relieve the burden on traditional PODs. In addition, states are exploring new ways to

use traditional PODs more efficiently. States such as Ohio have developed systems to optimize POD placement in order to maximize population coverage.

Ohio

The Ohio Department of Health developed an SNS module for its existing Ohio Public Health Analysis Network (OPHAN). Originally created for rabies tracking, multiple modules have been added to OPHAN, allowing for crossover benefits. Besides the SNS module, these additions include modules for cancer, biological event, CRI, and potassium iodide distribution, among others. These varied functions illustrate the diverse uses of the system.

OPHAN is a web-based, GIS-integrated system with role-based access. The system pools data, such as the state's disease reports or census information, from multiple sources. Local health agencies have complete access to OPHAN for their own jurisdiction and read-only access to data from contiguous jurisdictions. On top of the pooled data, local users are able to enter, geocode, and analyze data from all of their POD locations. The mapping feature allows them to visualize coverage rings showing total population served by a POD as well as important characteristics of the population such as poverty levels and locations of individuals with special needs. This information allows local health agencies to make informed decisions about the placement of their PODs and the distribution of other resources.

At the state level, the Ohio Department of Health determines roles and access for OPHAN, but mostly has read-only access to locally-entered data. Other key emergency response partners such as the National Guard and state emergency management agency also have read-only access to OPHAN data to enhance their own logistical decision making. The Ohio Department of

Health is finalizing arrangements to connect the Indiana Department of Health with OPHAN. This recognizes the importance of sharing information with neighboring jurisdictions, including those that may be across borders.

OPHAN offers several advantages to the Ohio Department of Health and its state, local and federal response partners. Because all users are working from a common operational picture, they are able to make transparent, informed decisions about resource allocation. Local health agencies do not have to build independent systems and they know what their neighbors are doing without having to contact them directly. The state can see what is going on at the local level without requiring local health agencies to submit frequent reports. With data being collected statewide, the Ohio Department of Health can confidently determine how SNS assets are distributed throughout the state.

Virginia

In Virginia, health agencies are reaching out to retail pharmacies for assistance in dispensing SNS assets. Henrico County, which serves the area on the western side of Virginia's capital city of Richmond, is the most advanced in this activity. Health agency representatives from Henrico County have been meeting with the district management of retail pharmacies located within the county. Approximately 30 to 40 retail pharmacies have already agreed to assist the county with its SNS dispensing operations. The Virginia Department of Health is encouraging all counties to follow Henrico's example and move forward in securing memorandums of understanding with retail pharmacies in their own jurisdictions.

The Virginia Department of Health sees the value of involving pharmacies in preparedness plans beyond those for SNS dispensing. The commonwealth is also working to incorporate pharmacies in its

antiviral distribution plan in the event of pandemic influenza. The Virginia Department of Health designated a private distributor to work directly with pharmacies to fill daily orders based on the maximum allotment of antivirals in a particular health district. The health agency is working with the Virginia Pharmacy Association to solicit participation from its membership. The commonwealth's plan would allow individuals to bring to a participating pharmacy a form indicating what should be dispensed. The treatment course would be provided to the patient at no cost. The Virginia Department of Health would coordinate recordkeeping to track patients receiving medication. The planning efforts for SNS dispensing and pandemic influenza antiviral distribution are examples of how the health agency is maximizing relationships in individual health districts to strengthen overall public health preparedness throughout the commonwealth.

The collaborative activity with pharmacies is just one element of Virginia's continuous effort to engage the private sector in public health preparedness activities. The commonwealth also has an SNS distribution contract with a global distribution company. This partnership provides for RSS to POD, treatment site and/or institutional recipient distribution, proof of delivery, e-signature and inventory management. This commercial strategy is backed by state resources. The Virginia Department of Health also involved the private sector in its pandemic influenza antiviral distribution plan. Virginia purchased the state's full allotment of antivirals made available under the federal subsidy program, which are being stored in a private pharmaceutical warehouse until they are needed for pandemic influenza response.

Another way the Virginia Department of Health has engaged the private sector is with its public education and communication efforts. In the event that the commonwealth

needs to dispense medication, it will be essential that the public is aware of what is being done and what they need to do. Virginia is coordinating with print media organizations in major markets for just-in-time publishing and distribution. Mass printing will be a challenge during any emergency event and print media outlets serving the commonwealth have excess capacity to print materials and to physically distribute them or other material. One of these newspapers has offered to serve as a back-up for distribution of SNS assets. All of these activities fit into the Virginia Department of Health's constant theme of engaging with the private sector.

Kansas City

In the Kansas City area, the planning focus extends to all private businesses. The Mid-America Regional Council (MARC) is a bi-state organization representing the local health departments of the counties in the greater Kansas City region. MARC created a closed dispensing siteⁱⁱⁱ workbook for businesses, *Protecting Your Employees in Public Health Emergencies: CLOSED Dispensing Site Workbook for Businesses*, which all 17 health agencies within the Kansas City CRI Metropolitan Statistical Area (MSA) can use when seeking partnerships with local businesses. Launched in January 2007, the workbook resulted from an interest in recruiting businesses to operate dispensing sites to serve their own employees and their families, thereby reducing the total population for which health agencies would need to provide SNS assets through other means.

ⁱⁱⁱ Health agencies traditionally plan to operate open dispensing sites, which are accessible to anyone in the affected community. Closed dispensing sites are intended for a specific subset of the population. In the case of a business which chooses to operate a closed dispensing site, access would likely be limited to the business's employees and their families.

The workbook describes the role of public health agencies in emergencies involving an SNS response, differentiates closed from open dispensing sites, and explains what would be expected of businesses willing to host a closed dispensing site. It also includes a planning checklist for businesses, an acknowledgement that liability questions remain, and answers to frequently asked questions. Supplemental documents, including disease fact sheets, sample health assessment and closed POD site flow diagrams, and a suggested site supply list are also included. The workbook contents are consistent so that it can be distributed throughout the entire region, but a pocket inside the back cover enables individual health agencies to include personalized information specific to their jurisdictions when sharing the document with business partners. All health agencies in the region had the opportunity to review the workbook while it was in development to ensure that it would meet the needs of their local private sector partners.

After two and a half months of planning and development, MARC printed 5,000 copies of the workbook for distribution throughout the Kansas City region based on survey data. While tailored for use to recruit businesses to participate, health agencies have also found the workbook useful in discussions with other potential closed POD partners, such as hospitals and nursing homes. Complementing the workbook, MARC also created a Web site (www.marc.org/cri) which includes a printable version of the workbook and its supplementary material, a capability questionnaire to assist businesses in determining whether to operate a closed POD, sample memorandums of understanding between health agencies and partners, and contact information for the participating local health agencies. Challenges remain, including addressing the liability issue and developing an educational component. However, the Kansas City region has made great strides in improving

its SNS preparedness by creating an appealing way to engage potential dispensing partners. Most importantly, MARC's development of the workbook demonstrates the value of regional preparedness and the application of a uniform concept to multiple jurisdictions in unique ways.

Conclusion

These examples focus on a small sample of what are actually very robust planning efforts across the country. While the examples may appear to suggest that a disproportionate effort is required to prepare for incidents that occur rarely, when an emergency does happen there is no question that many of the resources developed for an SNS response can be applied to all hazards. The influence of SNS planning on overall public health agency preparedness and response has already been seen in events such as Hurricane Katrina, the 2004-05 influenza vaccine shortage, and the set-up of mass dispensing clinics following localized disease outbreaks.

As with all public health preparedness planning, there is no one solution that will work in all jurisdictions. However, these illustrations represent several lessons that can be applied to SNS and other preparedness activities.

- *Expect to continually modify and adapt plans.* Preparedness and response needs constantly change and so should the plans to address them. Products and activities that are continually tested and updated will lead to a more robust SNS preparedness plan and a more effective SNS response.
- *Tie your activities to already existing resources.* Leveraging existing resources reduces training needs, increases the acceptability of new ideas, and creates a comprehensive, integrated preparedness and overall public health system.

- *Be inclusive.* Anyone can be helpful in assisting a health agency meet its SNS objectives. Be open to all opportunities for engagement and input in planning and response activities.
- *Make it easy for your partners.* Target your message so it is clear what advantage your partners will gain so that they will want to work with you.
- *Know what you are trying to accomplish.* Develop resources based on objectives you want to meet rather than simply based on a requirement. Take time to fully consider what your needs are and how best to meet them.
- *Develop products with the end user in mind.* Even the best-designed plan will not be effective if it is not accepted by those who will implement it. Consider new ideas from the perspective of the end user and ensure they have the training and support required to follow through.
- *Embrace challenges.* While SNS planning can be difficult, these challenges frequently inspire innovative, creative solutions. They also reveal learning opportunities and chances to seek advice from those who have already tackled the same challenge.

¹¹ CDC. "Strategic National Stockpile (SNS) Program: General Questions and Answers." September 2003.

² ASTHO. "Mississippi Goes Green: The State's SNS Response to Katrina." Available at <http://www.astho.org/pubs/MSKatrinaResponse-Final.pdf>. Accessed July 23, 2007.

³ Lam C, Franco C, Schuler A. "Billions for Biodefense: Federal Agency Biodefense Spending, FY2006-FY2007." *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*. 2006. 2:113-127.

⁴ CDC. "State Technical Assistance Review Tool." September 2006.

⁵ CDC. "Local Technical Assistance Review Tool." February 2007.

⁶ Lindner PJ. "CRI Alternative Dispensing Guide: A Collection of Model Practices and Pilot Projects."

Acknowledgements

ASTHO expresses its sincere appreciation to the state and local health agency staff who provided valuable information, insights and recommendations for this document.

Patrick Barnett & Barbara Beiser,
Colorado Department of Public Health &
Environment

Jacquelyn Scott & Linda Scott, Michigan
Department of Community Health

Patrick Lindner, Mid-America Regional
Council

Michelle Larson, Minnesota Department of
Health

Ken Plunkett & Steve Wagner, Ohio
Department of Health

Glen Bason & Mariah Ramon, Texas
Department of State Health Services

**Steve Harrison, Bob Mauskapf & Chuck
Baker,** Virginia Department of Health

This brief was made possible through funding from the Centers for Disease Control and Prevention Cooperative Agreement to Improve the Nation's Public Health Infrastructure with State Public Health Agencies/Systems (Cooperative Agreement #U50/C Cu313903-05). ASTHO is grateful for their support.

The Association of State and Territorial Health Officials is the national nonprofit organization representing the state and territorial public health agencies of the United States, the U.S. territories, and the District of Columbia. ASTHO's members, the chief health officials in these jurisdictions, are dedicated to formulating and influencing sound public health policy, and assuring excellence in state-based public health practice.

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