WORKING
PAPER

A Workshop Template to Assess and Improve SNS Planning

SHOSHANA R. SHELTON, EDWARD W. CHAN, CHRISTOPHER NELSON, DAVID J. DAUSEY, DEBRA LOTSTEIN, JOHN A. ZAMBRANO, ANDREW M. PARKER, DAVID M. ADAMSON

WR-639-DHHS

June 2009

Prepared for the U.S. Department of Health and Human Services Office of the Assistant Secretary for Preparedness and Response

This product is part of the RAND Health working paper series. RAND working papers are intended to share researchers' latest findings and to solicit informal peer review. They have been approved for circulation by RAND Health but have not been formally edited or peer reviewed. Unless otherwise indicated, working papers can be quoted and cited without permission of the author, provided the source is clearly referred to as a working paper. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.
RAND® is a registered trademark.

HEALTH

PREFACE

This document contains a template that public health agencies can use to conduct a workshop to improve key aspects of Strategic National Stockpile (SNS) planning: pediatric dispensing, altered standards of care, and allocation of scarce resources. The template is designed to support health departments in both identifying gaps and developing concrete strategies for addressing those gaps. The template is part of a larger set of tools developed by RAND that states and localities can use to assess and improve SNS readiness. Since 2006, RAND has been working with the Centers for Disease Control and Prevention's Division of the Strategic National Stockpile (CDC DSNS) to develop assessments of jurisdictions' SNS-related capabilities.

The primary audience for this document includes public health practitioners and policy makers who have a role in planning for and/or responding to public health emergencies that would involve activation of the Strategic National Stockpile. The template works most effectively for public health agencies that have at least a draft SNS plan.

The workshop template itself may be found in Appendix A. The chapters of the report briefly describe the methods and considerations that informed development of the template (Chapters 1 and 2), provide a brief overview to the template (Chapter 3), and recommend next steps in the development and testing of the template (Chapter 4). Readers well versed in exercise methodologies and SNS planning issues might wish to proceed directly to the template in Appendix A. As noted in the report, deleting the italicized text in the template will yield a situation manual that can be distributed to workshop participants. Readers less familiar with exercise methods and SNS planning will find useful background information in Chapters 1 through 4.

This work was sponsored by the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response (HHS ASPR) and carried out between July 2008 and December 2008 within the RAND Health Center for Domestic and International Health Security. RAND Health is a division of the RAND Corporation. A profile of the center, abstracts of its publications, and ordering information can be found at www.rand.org/health/centers/healthsecurity. More information about RAND is available at our Web site at http://www.rand.org.

CONTENTS

TABLES

FIGURES

SUMMARY

This document is intended to help public health agencies improve emergency preparedness planning related to the Strategic National Stockpile (SNS). It contains a template (presented in full in the Appendix) to guide public health agencies through a workshop intended to help them identify gaps in SNS planning and developing concrete strategies for addressing those gaps. The workshop template focuses on three specific functions:

- Pediatric dispensing (addressing the special needs of children during mass dispensing)
- Altered standards of care (adjusting normal standards in response to emergency conditions), and
- Allocation of scarce resources (making difficult trade-offs about priorities when resources are stretched thin during an emergency).

To develop the workshop template, we followed the exercise design process suggested by HSEEP (U.S. Department of Homeland Security, 2007). We also reviewed documents, plans, and policies related to pediatric dispensing, altered standards of care, and allocation of scarce resources. Using the HSEEP process and guidance from these documents, we developed the exercise objectives, scenario, and discussion questions.

The workshop objectives provide the framework for the scenario and discussion questions. The scenario and discussion questions provide a storyline that drives workshop participants towards developing or improving SNS plans for pediatric dispensing, altered standards of care, and/or allocation of scarce resources. The workshop structure is loosely adapted from the "Day After" methodology, developed by RAND for use by the Department of Defense (DoD) (Mussington, 2003). This methodology helps move the discussion from response to the scenario back to implications for procedures, plans, and policies. In this workshop, participants discuss their response to a future SNS deployment scenario, and then "rewind" to present day to identify changes in procedures, plans, and policies that could have improved the response. Participants then prioritize these changes and develop initial actions plans for implementing them.

The template consists of four parts:

- **Prelude: General Scenario.** The prelude contains a general "future" scenario of an anthrax attack requiring 48-hour full-community

prophylaxis. Following the prelude, participants hear a briefing about agency plans for responding to such a scenario.

- **Round 1: Function-Specific Scenario Additions.** Round 1 presents participants with scenario additions (injects) and discussion questions specific to the functions being addressed in the workshop. The facilitator leads participants in a discussion of how they would respond to the "future" scenario given current plans, policies, and procedures.
- **Round 2: Possible Policy and Plan Changes.** In Round 2, participants "rewind" to present day to identify barriers to responding to the scenario due to gaps in SNS plans, policies, and procedures and identify possible improvements.
- **Round 3: Preliminary Action Planning.** In Round 3, participants prioritize the improvements identified in Round 2, based on feasibility, likelihood for success, and impact, and then develop initial action plans for implementing them.

The workshop is modular. Users may tailor the function-specific scenario additions in any combination to focus on one or more of the functions noted earlier – pediatric dispensing, altered standards of care, and allocation of scarce resources.

While developing the workshop template, we consulted with a number of subject-matter experts and public health practitioners. However, to validate the usefulness and applicability of the template, we recommend that it go through an initial field testing process.

ACKNOWLEDGMENTS

This project could not have been completed without the efforts of a number of individuals. We begin by thanking the staff of the Centers for Disease Control and Prevention's Division of the Strategic National Stockpile (CDC DSNS), especially Linda Neff, Stephanie Dulin, and Pamela Nonnenmacher, for helping us to understand the operational realities faced by state and local health departments and for critiquing various portions of the report and workshop. We also acknowledge the insights and assistance of RAND colleagues Michelle Horner, Karen Ricci, Neil DeWeese, and Sarah Hauer on various aspects of the project, and Nicole Lurie and Jeffrey Wasserman for providing insight, support, and encouragement at all stages of the project. We greatly appreciate the help of Jeffrey Schlegelmilch for his insights and review of the report. Finally, we thank William F. Raub, Lara Lamprecht and Matthew Minson at the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response (HHS/ASPR) for their support and guidance throughout this project. We alone, however, bear responsibility for the content of the report and the workshop template.

ACRONYMS

Acronym	Definition
AAR	After Action Report
AHRQ	Agency for Healthcare Research and Quality
CDC	Centers for Disease Control and Prevention
CDC DSNS	Centers for Disease Control and Prevention's Division of Strategic National Stockpile
CRI	Cities Readiness Initiative
DoD	Department of Defense
EOP	Emergency Operations Plan
HHS ASPR	Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response
HSEEP	Homeland Security Exercise and Evaluation Program
HSPD-8	Homeland Security Presidential Directive 8
POD	Point of Dispensing
PHEP	Public Health Emergency Preparedness
RSS	Receipt, Stage, and Storage
SitMan	Situation Manual
SNS	Strategic National Stockpile
SOP	Standard Operating Procedure
TAR	Technical Assistance Review tool

CHAPTER 1. INTRODUCTION

The Homeland Security Exercise and Evaluation Program (HSEEP) recommends a "building block" approach for conducting training and exercise activities, focusing on specific capabilities in escalating complexity.[1] For instance, before implementing a tabletop, functional, or full-scale exercise, agencies should have plans in place. Thus, given that the purpose of a tabletop exercise is to test *existing* plans, policies, or procedures (U.S. Department of Homeland Security, 2007), it would be premature for agencies to hold a tabletop exercise if they have not yet developed plans that address the capabilities they are testing in the exercise. A 2008 state-level preparedness report published by the Centers for Disease Control and Prevention (CDC) documents nearly 3,000 public health exercises during the 2005 fiscal year . However, widespread anecdotal information from the field and CDC staff suggest that often, complex exercises are conducted before plans have been fully developed.

The planning gap appears to be particularly prevalent for certain aspects of mass countermeasure dispensing. While conducting background analysis for developing recently published standards for Points of Dispensing (PODs), RAND found great variation in the degree to which jurisdictions have dispensing plans that address key functions such as pediatric dispensing, altered standards of care, and allocation of scarce resources (Centers for Disease Control and Prevention, 2008; Nelson, et al., 2008).

Many preparedness plans assume that even in large-scale emergencies, health care will be delivered according to routine standards of care. However, the scale and rapid tempo of a mass countermeasure dispensing response may require health departments to dramatically shorten or remove many steps included in routine dispensing operations (e.g., screening for contraindications, education, requiring that medications be dispensed by licensed medical staff).[2] Similarly, plans often assume that health systems will have the resources and facilities needed to support the delivery of medical care at the required level (Agency for Healthcare Research and Quality, April 2005) and that staff and

---

[1] Exercises fall across a continuum that ranges in complexity from discussion-based exercises (i.e., seminars, workshops, tabletops, games) to operations-based exercises (i.e., drills, functional exercises, full-scale exercises) (U.S. Department of Homeland Security, 2007)

[2] See AHRQ (2005, 2007), Nelson et al. (2008), and Willis et al (2008) for more complete discussions of standards of care in the context of mass countermeasure dispensing.

volunteers will be capable of making correct dosing decisions about children and instructing parents and guardians on creating oral suspension formulations (often in short supply) out of tablets. However, the number of victims in a large-scale emergency may compromise the health care system's ability to deliver services consistent with established standards of care and quickly overwhelm the resources of the health care system. In addition, jurisdictions often do not have enough pediatricians, pharmacists and other trained personnel to adequately address the special needs of children.

Recognition of this gap led to development of a POD standard on planning.[3] However, it was also recognized that additional support would be required in helping many jurisdictions meet the standard. Thus, CDC DSNS asked RAND to create a workshop[4] template to guide public health agencies in identifying gaps in SNS planning and developing concrete strategies for addressing them. As illustrated in Figure 1.1, the workshop is a way to develop new ideas, processes, or procedures that go into creating the plan or revising an existing plan. After the plan has been improved via the workshop, staff should be trained and the plan should be tested through more demanding exercises (e.g., tabletops, functional exercises, etc.) and corrective actions taken to address gaps revealed during the exercises.

---

[3] The standard reads:

> **Standard 2.2**. Jurisdictions shall ensure that legal and liability barriers to rapid dispensing are identified, assessed, prioritized, and communicated to those with the authority to address such issues. Such issues include standards of care, licensing, documentation of care, civil liability for volunteers, compensation for health department staff, rules governing the switch between dispensing protocols, and appropriation of property needed for dispensing

[4] A workshop is a discussion-based exercise led by a facilitator, used to build or achieve a product such as Emergency Operations Plans (EOPs), Mutual Aid Agreements, or Standard Operating Procedures (SOPs) (U.S. Department of Homeland Security, 2007)

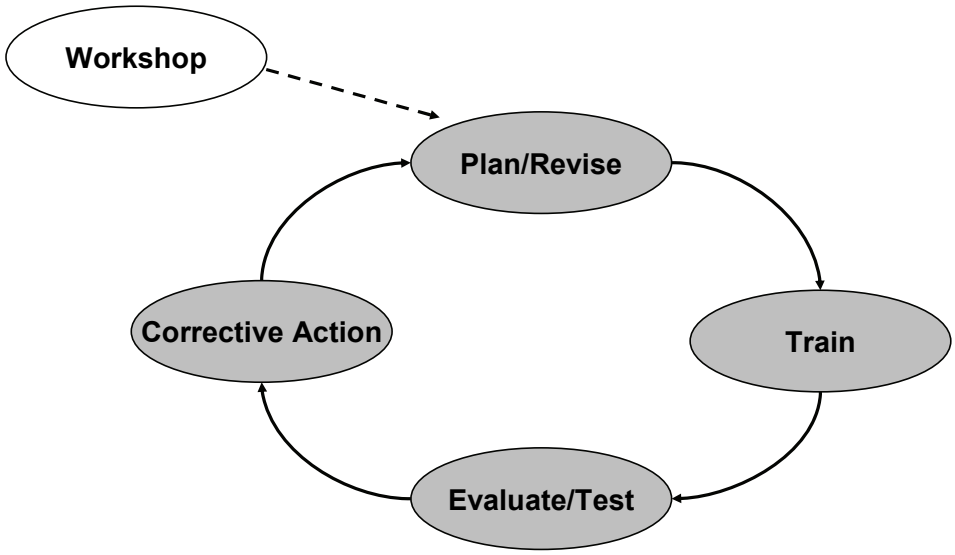

Figure 1.1
Workshop's Place in a Planning and Preparedness Cycle

The template is part of a larger set of tools developed by RAND that states and localities can use to assess and improve SNS readiness. Since 2006, RAND has been working with CDC's Division of the Strategic National Stockpile (CDC DSNS) to develop assessments of jurisdictions' SNS-related capabilities, which include the ability to *implement* and *adapt* SNS plans in real-world situations. The assessments supplement the SNS program's Technical Assistance Review tool (TAR), which provides a paper-based, non-operational assessment of SNS plans. Earlier RAND work (Chan et al., in press; Nelson, Chan, Sloss, Caldarone, & Pomeroy, 2007) proposed a capabilities-based approach to assessment:[5] instead of developing measures around specific response scenarios, the assessment approach focuses on "building block" capabilities that can be deployed, combined, and adapted in response to a broad spectrum of emergencies. We developed five capabilities-based assessment tools and field-tested them in 2007-2008. The initial phase of work focused on the operational aspects of mobilizing personnel and

[5] The assessment format is intended to complement the planning philosophy articulated in Homeland Security Presidential Directive 8 (HSPD-8) and the Homeland Security Exercise and Evaluation Program (HSEEP).

moving materiel. In this subsequent phase of work, we focus on planning and decision-making aspects of pediatric dispensing, altered standards of care, and allocation of scarce resources.

The template also augments previous RAND work on the application of quality improvement methods to PHEP. Lotstein et al. (2008; 2008) applied the plan-do-study-act framework to improve pandemic influenza plans in state and local health departments. By and large, though, quality improvement methods focus on small-scale changes at the operational level. The template presented in this report supplements this approach by providing a means for beginning to address policy-level barriers to operational performance.

The workshop template itself may be found in Appendix A. Readers well versed in exercise methodologies and SNS planning issues might wish to proceed directly to the template. Readers less familiar with exercise methods and SNS planning will find useful background information in Chapters 1 through 4. The document is organized as follows:

CHAPTER 2. METHODS USED TO DEVELOP THE WORKSHOP TEMPLATE

To develop the workshop template, we followed the exercise design process suggested by HSEEP (U.S. Department of Homeland Security, 2007). The first steps in designing an exercise are to assess needs and define the scope. Previous RAND research identified that often times dispensing plans vary in the degree to which they address pediatric dispensing, altered standards of care, and allocation of scarce resources. The work also found that many jurisdictions need additional support or technical assistance in developing plans to address these functions. Therefore, CDC DSNS asked RAND to develop an exercise template to guide public health agencies in improving SNS plans for pediatric dispensing, altered standards of care, and allocation of scarce resources. A workshop is the type of exercise best suited to address these needs because it is intended to develop new ideas, processes or procedures that go into creating a plan or revising an existing plan, as opposed to testing an existing plan.

First, we reviewed documents, plans, and policies related to pediatric dispensing, altered standards of care, and allocation of scarce resources. Our review included: the SNS Guidance, Version 10.02; Model State Emergency Health Powers Act; Public Health Emergency Legal Preparedness Checklists; POD standards; AHRQ publications on altered standards of care and examples of antibiotic dispensing; and local health department SNS plans. Based on our review, we identified specific planning issues for each function to focus on. For example, planning issues surrounding pediatric dispensing include managing and triaging children who need countermeasures, efficiently dispensing age- and weight-appropriate countermeasures to children, and monitoring and tracking children who receive drug countermeasures.

We then used these issues to develop the exercise objectives, scenario, and discussion questions. The objectives provide the framework for the scenario and discussion questions. The scenario and discussion questions provide a storyline that drives workshop participants towards developing or improving SNS plans. Because the goal of the workshop is to launch a planning discussion, not test an already existing plan, we intentionally kept the scenario general. Detailed scenarios tend to stifle discussion by

eliciting responses specific to the scenario. The scenario aligns with the scenario used by CDC DSNS in the Cities Readiness Initiative (CRI).[6]

In developing the workshop we sought to find exemplary workshops that could guide us. However, we found few examples of any kind; and discussions with practitioners and subject-matter experts suggested that workshops are underutilized and their practice remains somewhat underdeveloped. Thus, the workshop structure is loosely adapted from the "Day After" methodology, developed by RAND for use in the Department of Defense (DoD) (Mussington, 2003). This methodology helps link the discussed response with issues about procedures, plans, and policies. In this workshop, participants discuss their response to a future SNS deployment scenario, and then "rewind" to present day to identify changes in procedures, plans, and policies that could have improved the response. Participants then prioritize these changes and develop initial actions plans for implementing them.

[6] Administered by the CDC DSNS, CRI seeks to help awardees respond to a large-scale anthrax attack or other large-scale public health emergency by providing antibiotics and other life-saving medical supplies to 100% of a planning jurisdiction's population within 48 hours of the decision to do so.

CHAPTER 3. OVERVIEW OF THE WORKSHOP TEMPLATE

In this chapter, we describe the workshop's contents and sequence. Following the "Day After" methodology, we developed a prelude and three rounds for the workshop:

- **Prelude: General Scenario.** The prelude contains a general "future" scenario of an anthrax attack requiring 48-hour full-community prophylaxis. It aligns with the scenario used in CRI and sets the stage for the function-specific scenario additions presented in Round 1. The prelude can be presented to the players via PowerPoint slides or handed out in document format. Following the prelude, the facilitator or a designated person should present a briefing of the jurisdiction's SNS plan. The purpose of the briefing is to provide participants with an overview of the current status of planning for each function (i.e., pediatric dispensing, altered standards of care, and/or allocation of scarce resources) being addressed in the workshop.
- **Round 1: Function-Specific Scenario Additions.** Round 1 presents participants with scenario additions (injects) and discussion questions specific to the functions being addressed in the workshop. The facilitator leads participants in a discussion of how they would respond to the "future" scenario given current plans, policies, and procedures. It is important to note that the goal of the discussion is merely to raise planning issues, not fully test the plan.
- **Round 2: Possible Policy and Plan Changes.** In Round 2, participants "rewind" to present day to identify barriers to responding to the scenario due to gaps in SNS plans, policies, and procedures. They then brainstorm about policy and plan changes that might improve the ability to conduct mass dispensing.
- **Round 3: Preliminary Action Planning.** In Round 3, participants prioritize the improvements identified in Round 2, based on feasibility, likelihood for success, and impact, and then develop initial action plans for implementing them.

The template is intended to be modular. Users may adapt the materials as needed to address any combination of the functions noted previously: dispensing medication to pediatric populations; developing alternative standards of care; and allocating scarce

resources. Function-specific scenario additions (injects) and discussion questions are labeled in Round 1. Users can choose which scenario additions and discussion questions to include based on which SNS functions they want to address, and skip those they don't want to cover. For instance, if users want to focus on pediatric dispensing and altered standards of care, they would simply delete the scenario additions and discussion questions pertaining to allocating scarce resources.

While we have tried to keep the participant materials simple, we also recognize that facilitators might need considerable guidance in preparing for and facilitating the workshop. Facilitation guidance is shown in italics throughout the template. Information to be presented to participants (in spoken and/or written format) is shown as regular text. To generate a participant's version of the manual or a Situation Manual[7], simply delete the italicized text. In order to elicit good discussion, we recommend that the facilitator prepare for the workshop by familiarizing him/herself with the contents of this manual, as well as the status of current plans, policies, and laws related to dispensing countermeasures. We also include a list of resources that facilitators may find helpful in preparing for the workshop (see Appendix B).

Facilitators may choose to create a PowerPoint presentation using information in the manual, such as the workshop objectives, guidelines, scenario, and discussion questions. Alternatively, this information can also be handed out in document format.

[7] A Situation Manual (SitMan) is a participant handbook for discussion-based exercises. It provides background information on exercise scope, schedule, and objectives. It also presents the scenario narrative that will drive participant discussions during the exercise (U.S. Department of Homeland Security, 2007). For additional guidance on putting together a SitMan, see HSEEP.

CHAPTER 4. NEXT STEPS

In this section, we describe next steps for CDC DSNS to take in refining this template. In developing the workshop template, we consulted with a number of subject-matter experts and public health practitioners. However, to validate the usefulness and applicability of the template, we recommend that it go through an initial field testing process that would consist of practitioners using the template to conduct a workshop. Field testing could involve both direct observation of trial runs and post-hoc telephone debriefs with those who have used the template. Care should be given to include diverse sites in field testing, in order to ensure applicability across geographic regions, jurisdiction size, public health system structure, and other individuating characteristics. The field tests should focus on the following areas:

- **Extent to which the burdens of the workshop inhibit implementation.** For instance, field testing might seek to assess whether it is possible to assemble the range of decision-makers and responders needed to fully discuss and address the standards of care and other issues that require both a high-level policy and an operational perspective.
- **Extent to which the workshop helps users to identify gaps in SNS planning and develop strategies for addressing those gaps.** For instance, field testing should assess whether the scenario and discussion questions prompt participants to recognize gaps in their SNS plans and come up with recommendations for improvement.
- **Extent to which the workshop can support process improvements.** For instance, field testing should assess whether the manuals provide the appropriate amount of guidance for workshop planners, facilitators, and participants and whether their use results in clear and actionable improvement actions.

The template should be revised based on initial field testing, with additional field testing if changes are extensive. We recommend that CDC DSNS follow the roll-out of the workshop template with a data-collection strategy designed to facilitate the evaluation of its impact. At a minimum, such a strategy should track usage, collect AARs, and include self-reports on the template's feasibility, accuracy, and utility.

APPENDIX A. WORKSHOP TEMPLATE

SCOPE

The workshop[8] template described in this manual is designed to help public health agencies meet Point of Dispensing (POD) Standard 2.2[9] by providing a means to identify gaps in SNS planning related to pediatric dispensing, altered standards of care, and allocation of scarce resources, and develop concrete strategies for addressing those gaps. The workshop's scenario and discussion questions help participants ensure that policies, laws, and plans support the operations needed to dispense countermeasures under unusual circumstances, such as the need to provide antibiotics and other life-saving medical supplies to 100% of a planning jurisdiction's population within a 48-hour timeframe.

The workshop is modular. There is a general section (i.e., the prelude) that must be used in all circumstances, but users may tailor the rest of the materials in any combination to focus on one or more of the following functions:

- **Dispensing medication to pediatric populations:** Dispensing medication to children in an emergency presents special challenges. These include their varying stages of development and substantial physiologic and anatomic differences. Children also often have unique vulnerability to pathological agents, and require age- and weight- appropriate treatments. Children are not homogeneous, and in planning for pediatric dispensing, agency staff should consider planning for sub-groups by age (e.g., 0-12 months, 1-4 years, 5-12 years, 13-18 years).
- **Developing alternative standards of care:** A large-scale emergency may compromise the health care system's ability to deliver services consistent

[8] A workshop is a formal discussion-based exercise led by a facilitator, used to build or achieve a product such as Emergency Operations Plans (EOPs), Mutual Aid Agreements, or Standard Operating Procedures (SOPs) (U.S. Department of Homeland Security, 2007). It is a way to develop new ideas, processes, or procedures that go into creating a plan or revising an existing plan.

[9] Standard 2.2. Jurisdictions shall ensure that legal and liability barriers to rapid dispensing are identified, assessed, prioritized, and communicated to those with the authority to address such issues. Such issues include standards of care, licensing, documentation of care, civil liability for volunteers, compensation for health department staff, rules governing the switch between dispensing protocols, and appropriation of property needed for dispensing.

with established standards of care. For example, to dispense antibiotics to a metropolitan area's population within 48 hours, it will be necessary to relax current standards of care. Therefore, it is important to identify, plan, and prepare to make necessary adjustments in current health and medical standards to ensure that as many lives are saved as possible (Agency for Healthcare Research and Quality, April 2005).

- **Allocating scarce resources:** In the event of a large-scale emergency, the number of victims may overwhelm the resources of the health care system. Therefore, it may be necessary to allocate resources differently from normal circumstances, but appropriate for the needs of the situation in order for the health care system to remain functioning and save as many lives as possible (Agency for Healthcare Research and Quality, February 2007).

OBJECTIVES

Workshop objectives for each function are:

1. **Pediatric dispensing.** Develop recommendations for policies and plans to manage and triage children needing countermeasures, efficiently dispense age- and weight-appropriate countermeasures to children, and, as circumstances allow, monitor and track children receiving countermeasures.
2. **Altered standards of care.** Develop recommendations for policies and plans to manage and triage a large number of clients presenting to receive countermeasures, expedite the process for dispensing countermeasures, and, as circumstances allow, monitor and track patients receiving countermeasures.
3. **Allocation of scarce resources.** Develop recommendations for policies and plans to establish priority groups for receiving countermeasures, triage patients based on severity of illness/disease or other factors, and dispense countermeasures based on these considerations.

PARTICIPANTS

The individuals who should be invited to attend the workshop will depend on the structure of the health department and its relationship with the state health department. At a minimum, workshop participants should include a combination of local health department staff with knowledge of dispensing operations (e.g., health director, medical director, SNS/CRI coordinator, bioterrorism coordinator, exercise/training coordinator, planners, public health nurses, public information officer, etc.) and policymakers (e.g.,

legislative staff, advisors to political executives, etc.). Furthermore, if health departments choose to address allocation of scarce resources, it may be helpful to include a broader group of players such as state health department staff with knowledge of distribution from the Receipt, Stage, and Store (RSS) warehouse to the Points of Dispensing (PODs).

Participants in the workshop include the following:

- **Players**. Players are the personnel who respond to the situation presented by the facilitator based on expert knowledge of response procedures, current plans and procedures, and insights derived from training. They also identify and prioritize improvement strategies likely to support better responses to the scenario and situations like it.
- **Facilitator**. The facilitator leads the discussion by presenting the scenario and discussion questions. He/she also provides additional information, resolves questions as required, helps forge consensus, and synthesizes ideas presented. It is advisable that the facilitator have some content expertise, as well as familiarity with the status of current plans, policies, and laws related to dispensing countermeasures.

WORKSHOP STRUCTURE

The structure of the workshop is adapted from the "Day After" methodology (Mussington, 2003). Specifically, participants talk through their response to a future SNS deployment scenario and then look back at what could have been done to improve response. The workshop contains a prelude and three rounds:

- **Prelude: General Scenario.** The prelude contains a general "future" scenario. It aligns with the scenario used in CRI and sets the stage for the function-specific scenario additions presented in Round 1. Following the presentation of the prelude, the facilitator or a designated person should present a briefing of the jurisdiction's SNS plan.
- **Round 1: Function-Specific Scenario Additions.** Round 1 presents participants with scenario additions (injects) and discussion questions specific to the functions being addressed in the workshop (e.g., pediatric dispensing, altered standards of care, and/or allocating scarce resources). The facilitator leads participants in a discussion of how they would respond to the "future" scenario given current plans, policies, and procedures. It is

important to note that the goal of the discussion is to merely raise planning issues, not fully test the plan.

- **Round 2: Possible Policy and Plan Changes.** In Round 2, participants "rewind" to present day to identify barriers to responding to the scenario due to gaps in SNS plans, policies, and procedures. They then brainstorm about policy and plan changes that might improve the ability to conduct mass dispensing.
- **Round 3: Preliminary action planning.** In Round 3, participants will prioritize the improvements based on feasibility, likelihood for success, and impact, and develop action plans for implementing them.

FACILITATION

Facilitation guidance is shown in italics throughout the template. Information to be presented to participants (in spoken and/or written format) is shown as regular text. To generate a participant's version of the manual or Situation Manual[10], simply delete the italicized text.

A trained, experienced facilitator should lead the workshop. It may be helpful to also have a co-facilitator to help moderate discussion and keep track of issues brought up by participants. Facilitation requires considerable preparation. Prior to the workshop, the facilitator(s) should become familiar with the contents of this manual, as well as the status of current plans, policies, and laws related to dispensing countermeasures. Responsibilities of the facilitator(s) include the following:

- *Introduce participants to the workshop by presenting objectives, structure, and guidelines*
- *Go around the room and allow participants to introduce themselves*
- *Present prelude and discussion rounds*
- *Guide participants in discussion by using questions and probes provided in this manual*

[10] A Situation Manual (SitMan) is a participant handbook for discussion-based exercises. It provides background information on exercise scope, schedule, and objectives. It also presents the scenario narrative that will drive participant discussions during the exercise (U.S. Department of Homeland Security, 2007). For additional guidance on putting together a SitMan, see HSEEP.

- *Answer participants' questions*
- *Ensure that all players actively take part in the workshop*
- *Keep the discussion moving at a reasonable pace*

Too little — or too much — facilitation can result in an unsuccessful workshop. The facilitator should keep the discussion moving forward on track, without over-leading the participants. Table A.1 compares balanced facilitation (center) with too little facilitation (left) or too much facilitation (right).

Table A.1. Balanced Workshop Facilitation[11]

Too Little Facilitation	***Just Enough Facilitation***	***Too Much Facilitation***
• *Long or awkward pauses in the discussion* • *Some participants don't take part in the discussion* • *Facilitator lets the discussion regularly get off track without attempting to refocus it* • *Participants look bored* • *Participants must continually query the facilitator for guidance* • *Participants are confused and don't know what is expected of them* • *Facilitator is too rehearsed and does not improvise* • *Facilitator reads directly from the discussion guide* • *Participants are not challenged by the facilitator to make concrete decisions*	• *Discussion moves smoothly at a pace that is comfortable for all participants* • *All participants are able to contribute to the discussion* • *Transitions go unnoticed* • *Facilitator asks insightful questions* • *Participants understand the situation and what is expected of them* • *Facilitator appears experienced and confident* • *Facilitator encourages participants to consider all options and challenge one another's assumptions* • *Facilitator encourages participants to make decisions*	• *Discussion moves too quickly for participants to follow* • *Facilitator interrupts or cuts participants off while they are talking* • *Facilitator talks more than participants* • *Participants feel rushed* • *Participants feel patronized or intimidated* • *Participants look exasperated or frustrated* • *Participants feel facilitation was too "classroom" like* • *Facilitator makes decisions for participants* • *Facilitator interjects tangential comments at inappropriate times*

[11] (Dausey, et al., 2005)

WORKSHOP GUIDELINES

Prior to presenting the scenario, the facilitator should go over the following guidelines for participation in the workshop.

- Participate actively and openly
- Listen to the thoughts and opinions of others
- Share your thoughts during the workshop
- Recognize that there are no "right" or "wrong" answers, rather that discussion is aimed at identifying solutions
- Try to be brief in responding
- Fight the disease, not the scenario
    - In other words, do not get hung up on the details of the scenario. Instead, focus on the policies, laws, and plans needed to support countermeasure dispensing under unusual circumstances, such as those presented in the scenario.

PRELUDE

The text below provides the background to the scenario presented in Round 1. Following the presentation of the prelude, the facilitator or a designated person should present a briefing that describes the jurisdiction's SNS plan.

Over the past 24 hours, your jurisdiction has seen nearly 50 confirmed cases of inhalational anthrax. Other metro areas in different parts of the country are experiencing similar outbreaks. The media has been reporting on the cases in your metro area as well as those in the others.

The patients live and work in different parts of the metro area. No common pattern has been detected thus far, so the precise nature of and location of the suspected release cannot be confirmed. In response to widespread public concern, designated officials have decided to request antibiotics from the CDC Strategic National Stockpile (SNS) and begin mass prophylaxis for the entire metro area.

Given what is known about the nature of the agent, the goal is to dispense antibiotics to <u>everyone</u> in the metro area within 48 hours of this decision point. With the transport of the CDC push package to the Receiving, Staging, Storing (RSS) warehouse expected to take up to 12 hours, and the further sorting and distribution of materiel from the RSS warehouse to the Points of Dispensing (PODs) expected to take another 12 hours, **this leaves approximately 24 hours for actual mass antibiotic dispensing to take place**.

While materiel from the CDC is in transit, the public is being notified via a media campaign that includes news conferences, notices on the Emergency Alert System, and general news coverage. They are being told that a mass dispensing operation will be taking place, and that they should arrive at PODs starting 12 hours from now. Meanwhile, you have begun notifying employees and volunteers to staff the RSS warehouse and the many PODs in your metro area.

BRIEFING OF CURRENT SNS PLAN

Following the presentation of the Prelude, the facilitator or a designated person should provide participants with a briefing of the current status of planning for each element (i.e., pediatric dispensing, altered standards of care, and/or allocation of scarce resources) being addressed in the workshop. Some questions to consider addressing in the briefing include:

- *Does the SNS plan address [insert planning element(s)]? If so, provide participants with a quick summary of the plan.*
- *Has it been exercised or used in an actual response?*
- *What did the exercise or response reveal about the plan?*
- *What policies currently exist to support the plan?*

ROUND 1: FUNCTION-SPECIFIC SCENARIO ADDITIONS

The goal of this round is to build an understanding of how public health jurisdictions might respond to an SNS deployment scenario given current plans, policies, and procedures. Participants will be asked to provide guidance and recommendations to RSS inventory managers and/or POD managers.

The following SNS functions will be discussed: *(choose those covered in the workshop; delete those not being addressed from the participant version).*

Allocation of Scarce Resources

An initial shipment of materiel arrived at the RSS. However, some workers involved in supplying materiel to the PODs did not show up for work, and several cities requested medication from the SNS at the same time. As a result, there are inventory delays and shortages.

The antibiotics come in unit-of-use bottles, with a 10-day supply of medication for one person in each bottle. Rather than having enough inventory to supply each POD with 6 hours worth of stock, as originally planned, you only have one-quarter that amount on hand. The state is unable to give an estimate of when additional supplies will be coming.

The RSS inventory manager in your community requests guidance on how to allocate the limited amount of inventory among the PODs. There is not enough inventory to give each POD their desired allotment.

Altered Standards of Care

Staff availability at PODs is [*also*] less than expected. Many of your staff and volunteers are unreachable. Some, out of concern for the safety of themselves or their families, refuse to report to duty. The shortages include a lack of medically trained staff, including few pediatric doctors or nurses, as well as limited numbers of mental health staff to provide counseling. POD managers request guidance on how to proceed with dispensing in light of staff shortages.

Pediatric Dispensing

POD managers request guidance on determining the appropriate dose and medication for children, since many parents do not know the weight of their children. Some PODs report they are running low on the primary drug. Furthermore, dispensing

staff at several PODs are concerned that parents do not understand the instructions they are being given for crushing the tablets.

KEY ISSUES

The following issues can either be provided to participants following presentation of the scenario or identified through discussion. If using the latter approach, ask participants "What are the key issues at this point?" and write them down for the group to see.

Key issues include the following *(delete issues not chosen to be covered in workshop)*:

- Delays and shortages in medication
- Shortage of medically trained staff at PODs, including pediatric staff
- Shortage of mental health staff
- Long lines of people at PODs
- Difficulty determining pediatric dosages and form

Task

(45 minutes)

Participants should respond to the following questions based on their expertise and any plans, policies, or procedures that may exist. It is not critical for the group to come to consensus at this point, as the goal of this round is to develop options for how to address the key issues. In the next round, participants will discuss barriers to response and identify gaps in plans, policies, and procedures.

Facilitators should keep track of policy-related questions that come up as participants discuss the operations questions below so that they can be revisited in the next round.

The following task can either be conducted in breakout groups or as a full group, depending on the number of participants.

Instructions for breakout groups: Each team (as appropriate) will appoint its own recorder, and if desired, team leader. Discuss each of the following questions. Come up with a decision from the team and be prepared to report your team's answer, and the thinking behind it, when the full group reconvenes.

Instructions for full group discussion: Facilitate discussion of each of the following questions. Facilitator probes appear in italics. The facilitator should feel free to adapt or replace these based on group discussion.

Questions on Resource Allocation:

1. What effects will the following key issues have on POD operations *(delete issues not chosen to be covered in workshop)*?
    a. Delays and shortages in medication
    b. Shortage of medically trained staff at PODs, including pediatric staff
    c. Shortage of mental health staff
    d. Long lines of people at PODs
    e. Difficulty determining pediatric dosages and form

2. What methods may be used to allocate limited inventory?
    a. Will certain PODs be given priority?
    b. Will certain populations be given priority?
    c. What effect will this decision have on the overall mass prophylaxis operations?

If participants have difficulty coming up with options, probe with the following questions:

- *Could you trim every POD's allotment evenly? How would this affect the re-supply process?*
- *Could you delay the opening of some PODs? If so, which areas would be served first? How would you communicate this with the media and public?*
- *Could you prioritize people based on who should receive prophylaxis first? How would you set priorities? How would you communicate the priority list with the media and public?*

Questions on Standards of Care:

3. How much of an effect will the shortage of medically trained staff have on POD operations and throughput?
    a. What factors might limit the number of pediatric trained staff?
    b. If increasing the number of pediatric trained staff is impossible, what other strategies might increase throughput?
4. List the steps in your rapid dispensing POD. Given shortage of staff, especially medically trained staff, who is allowed (i.e., what training or licensing is required) to carry out these steps? For example,
    a. Who may perform interviewing or screening or patients?

b. Who may dispense?
c. Who may dispense to pediatric population?
d. Can non-medical personnel perform these tasks? What rules and laws govern this? Are there processes for waivers and/or exceptions to these?

5. What steps can you shorten or skip in the POD to enhance throughput?
    a. Can you eliminate or reduce the filling out of forms? What info needs to be collected from the patient and can data collection be done in other ways?
    b. What drug tracking will you still do? How will you deal with medications that might require follow-up?
    c. Can the patient screening process be shortened?
    d. Who has the authority to make adjustments to POD operations?
    e. What adjustments can be made to mental health counseling? What are the potential consequences of these adjustments?

Questions on Pediatric Dispensing:

6. How will you determine the appropriate medication dose and form for children? Who can make that decision?
    a. How will you assess children's age, size, and health history information?
    b. How will you determine the appropriate medication dose and form for children with special needs (e.g., children with gastrostomy tubes, or on multiple medications)?
    c. What guidance will you give to parents regarding home preparation (if applicable) and administration of medication?
7. For the PODs that are running low on the primary drug,
    a. What are the potential benefits and consequences of changing the primary drug?
    b. Do all of the PODs make the switch, or only the PODs who are running low on the primary drug?
    c. Who has the authority to make this decision?
8. With default pediatric drug in short supply, what will be the new prescribed drug for and dosing instructions for children?

ROUND 2: POLICY AND PLAN CHANGES THAT MIGHT IMPROVE THE ABILITY TO CONDUCT MASS DISPENSING

The goal of this round is to identify changes in plans, policies, laws, or other improvements that might improve the agency's ability to respond to the scenario described in Round 1 and other similar scenarios.

In the next [*fill in amount of time*] minutes [*as a full group or in small groups*] discuss and be prepared to provide answers to the following questions:

1. What were the barriers or problems that limited your community's ability to respond to the hypothetical scenario?

The facilitator or a designated person should write down the barriers/problems as they are reported to the full group. The goal is to link the barriers to recommendations for possible changes in operational processes (i.e., plans) or policies. Begin the discussion with procedures and plans that are more directly under the control of public health jurisdictions; move next to policies that, while perhaps outside of public health's direct control, shape public health's ability to engage in rapid dispensing operations.

2. What are some changes in procedures or plans that might address these barriers/problems (e.g., modifying the number of forms completed and reviewed in order to increase POD throughput)?
3. What are some changes in policies that might address these barriers/problems (e.g., documentation of care standards can be temporarily relaxed to increase POD throughput)? For each policy change suggested, is this a federal, state, or local policy?

Don't worry about prioritizing the options at this point, as participants will have an opportunity to do that in the next round. For now the task is to brainstorm about options.

ROUND 3: PRELIMINARY ACTION PLANNING

Up to this point in the workshop we have identified:

- Potential barriers to success in dispensing processes, based on a brief simulation (Round 1) in which you wrestled with dispensing challenges related to [*fill in elements*]
- Policy/plan changes and other activities that might address those barriers and improve the ability to conduct dispensing activities (Round 2)

In this part of the workshop you will prioritize improvements and begin preliminary action planning for high priority actions.

IDENTIFYING HIGH-PRIORITY IMPROVEMENTS

In order to keep the action planning process manageable, it is usually helpful to focus on a small number of high-priority improvements. Generally, priority should be given to recommendations according to the following criteria:

- *Feasibility.* How possible is it to implement the recommendation?
- *Likelihood for Success*. Given that the recommendation is feasible, how likely is it to have the intended effect?
- *Impact*. Given the intended effect, what is the potential magnitude of the effect of the recommendation?

However, participants should not avoid needed changes just because they are difficult; these are often the ones with the most potential to improve performance. Moreover, participants should consider generating a mix of short- and long-term improvements.

In some cases high-priority items will be readily apparent and require little effort to identify. In other instances it might be useful to take a systematic approach to weighing priorities. Participants are encouraged to use the table below to list and rate some or all of the improvement actions identified in Round 2. Potential improvements should be listed in the left-hand column. In the remaining columns participants can rate each potential improvement as "high," "medium," or "low" on the criteria listed above (feasibility, likelihood for success, and impact).

Table A.2. Template for Prioritizing Potential Improvements

Potential Improvement	Feasibility	Likelihood for Success	Impact
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High
	Low Med High	Low Med High	Low Med High

DEVELOPING PRELIMINARY ACTION PLANS FOR HIGH-PRIORITY IMPROVEMENTS

Next, participants should develop preliminary action plans for high priority improvements (perhaps the top 2-4, as identified using the template above). While it is not necessary to walk away from the workshop with a comprehensive improvement plan, it is important that the group come to consensus on some fairly concrete actions and on who should be taking those actions.

Participants should try to address the following issues in their preliminary action plans:

- *Potential challenges*. Effective action plans are designed to address (or at least acknowledge) barriers and challenges. For instance, some improvements to POD staff recruiting might require changes in legislation regarding legal liability for volunteers. Finding adequate resources is another common challenge. While perhaps daunting, these challenges are best acknowledged at the outset.
- *Concrete initial actions.* While the ideal action plan might fully specify all the steps necessary to implement a change, often it is sufficient to specify only the initial steps. In either case, however, it is important to be as concrete as possible.
- *Assign specific roles, responsibilities, and timelines.* Finally, initial action plans should be specific about (a) who is responsible for what and (b) in what time frame? Participants should take care to note whether improvements will require cooperation by outside actors and entities (e.g., elected officials, other agencies and departments). In such cases responsibilities and milestones can focus on those actions for which agency officials can readily be held accountable, such as contacting and providing materials to those whose cooperation will be required.

The table below provides a template that participants can use to specify action plans for their top priority improvements.

Table A.3. Template for Preliminary Action Planning

Improvement:		
Potential challenges:		
Concrete initial actions (i.e., what)	**Responsibility (i.e., who)**	**Timeline (i.e., by when)**

APPENDIX B. FACILITATOR RESOURCES

Below are several resources that the facilitator may find useful in preparing for the workshop.

Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities, Public Health Emergency Legal Preparedness Checklist, www.publichealthlaw.net/Resources/BTlaw.htm (as of January 29, 2009).

These checklists are tools to help public health agencies review and assess their legal preparedness for public health emergencies. Three checklists are available to assess the following components of legal preparedness:

1. Interjurisdictional legal coordination for public health emergency preparedness;
2. Local government public health emergency legal preparedness and response; and
3. Civil legal liability issues and public health emergencies.

Agency for Healthcare Research and Quality (April 2005). Altered Standards of Care in Mass Casualty Events Prepared, AHRQ Publication No. 05-0043.

In August 2004, AHRQ convened an expert panel to discuss altering standards of care in response to mass casualty events. This report summarizes the deliberations and recommendations of the expert panel.

Agency for Healthcare Research and Quality (February 2007). Mass Medical Care with Scarce Resources: A Community Planning Guide, AHRQ Publication No. 07-0001.

This guide provides community, State, and Federal planners with approaches and strategies to allocate scarce resources during a mass casualty event in a manner that is different from usual circumstances, but appropriate to the needs of the situation.

Nelson, C., Chan, E. W., Chandra, A., Sorensen, P., Willis, H. H., Comanor, K., et al. (2008). Recommended infrastructure standards for mass antibiotic dispensing. Santa Monica, CA: RAND Corporation, TR-553.

This report presents recommended standards for points of dispensing (or PODs), locations where the public would receive life-saving antibiotics or other medical

countermeasures during a large-scale public health emergency. The standards, which are designed to apply to widely divergent jurisdictions, rely on expert panel evaluations, current POD planning practices, and computer-modeled scenarios.

REFERENCES

Agency for Healthcare Research and Quality (April 2005). Altered Standards of Care in Mass Casualty Events Prepared, AHRQ Publication No. 05-0043.

Agency for Healthcare Research and Quality (February 2007). Mass Medical Care with Scarce Resources: A Community Planning Guide, AHRQ Publication No. 07-0001.

Centers for Disease Control and Prevention (2008). Public Health Preparedness: Mobilizing State by State: A CDC Report on the Public Health Emergency Preparedness Cooperative Agreement. Atlanta, GA: CDC.

Chan, E. W., Fan, C., Lotstein, D., Nelson, C., Shelton, S., Maletic, A., et al. (in press). New Tools for Assessing State and Local SNS Readiness: Results from Field Testing. Santa Monica, CA: RAND Corporation, Working Paper WR-576-DHHS.

Dausey, D. J., Lurie, N., Diamond, A., Meade, B., Molander, R., Ricci, K., et al. (2005). Bioterrorism Preparedness Training and Assessment Exercises for Local Public Health Agencies (No. TR-261-DHHS). Santa Monica: RAND Corporation.

Lotstein, D., Leuschner, K. J., Ricci, K. A., Ringel, J. S., & Lurie, N. (2008). PREPARE For Pandemic Influenza: A Quality Improvement Toolkit. Santa Monica, CA: RAND Corporation, TR-598-RWJ.

Lotstein, D., Seid, M., Ricci, K., Leuschner, K. J., Margolis, P., & Lurie, N. (2008). Using Quality Improvement Methods To Improve Public Health Emergency Preparedness: PREPARE For Pandemic Influenza. Health Aff, 27(5), w328-339.

Mussington, D. (2003). The 'Day After' Methodology and National Security Analysis. In S. E. Johnson, M. C. Libicki & G. F. Treverton (Eds.), New Challenges, New Tools for Defense Decisionmaking (pp. 323-338). Santa Monica: RAND Corporation, MR-1576-RC.

Nelson, C., Chan, E. W., Chandra, A., Sorensen, P., Willis, H. H., Comanor, K., et al. (2008). Recommended infrastructure standards for mass antibiotic dispensing. Santa Monica, CA: RAND Corporation, TR-553.

Nelson, C., Chan, E. W., Sloss, E. M., Caldarone, L. B., & Pomeroy, A. (2007). New Tools for Assessing State and Local SNS Readiness. Santa Monica, CA: RAND Corporation, WR-455-DHHS.

U.S. Department of Homeland Security (2007). Homeland Security Exercise and Evaluation Program (HSEEP). Volume 1.