Evaluator Plan

Slippery Slope 2005
Bioagent Exercise

January 19, 2005

Co-sponsored by
New York City Department of Health and Mental Hygiene (DOHMH) and Central Brooklyn Center for Bioterrorism Planning and Preparedness (CBPP)

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ATTACHMENTS

EXECUTIVE SUMMARY EXERCISE OVERVIEW

A) Slippery Slope is a major full-scale, field, Bioagent exercise conducted in four rotations that will exercise four CBPPs and the hospitals that make up those networks. Funded by Health Resources and Services Administration (HRSA) through the New York City Department of Health and Mental Hygiene (DOHMH) for the purpose of furthering the preparation of New York City hospitals to respond to an outbreak of an infectious disease, four CBPPs will be respond to different time periods of a major bioagent event. DOHMH has chosen Severe Acute Respiratory Syndrome (SARS) as the bioagent. The exercise will be conducted in four rotations with the first rotation occurring in January (initial recognition of the event). Through cooperative planning and exercising, the City of New York hospitals and DOHMH will be better able to respond to a major public health emergency event. This exercise will allow other organizations to work with the health and medical community in responding to a bioterrorism event.

B) The purpose of this rotation of the exercise is to:

1) To exercise disaster response of CBPP member hospitals and allied organizations.

2) Practice policies and Standard Operating Guidelines (SOGs) that will be implemented in response to a Bioterrorism event or other public health emergency.

3) Orient participating hospitals and DOHMH employees to their likely roles and responsibilities during the response and recovery phases of a outbreak of a severe, respiratory infectious agent.

4) Identify policy decisions that need to be made during response activities.

5) Satisfy Joint Commission on Accreditation of Health Care (JCAHO) requirements for hospital emergency preparedness.

6) Test intra- CBPP cooperation and communication.

7) To strengthen interagency coordination, cooperation and communication.

8) To identify short and long term efforts needed to both respond and recover from this type of catastrophic disaster.

GENERAL INFORMATION

A) **PURPOSE:** The SLIPPERY SLOPE 2005 - CENTRAL BROOKLYN CBPP Evaluation Plan is a handbook that provides controller instructions and essential materials required for the successful control and conduct of the exercise. All exercise management personnel must be familiar with the information published in the Exercise Plan (EXPLAN).

B) **SECURITY CLASSIFICATION:** The Evaluation Plan well as the overall content, objectives, and participant list for SLIPPERY SLOPE 2005 - CENTRAL BROOKLYN CBPP are unclassified; however, information is restricted to use by exercise controllers, evaluators, trusted agents and other individuals who have a need to know, and will also be designated "FOR OFFICIAL USE ONLY."

C) **EXERCISE OVERVIEW:** SLIPPERY SLOPE 2005 - CENTRAL BROOKLYN CBPP is the first full-scale, field, bioagent exercise conducted in New York City and is being co-sponsored by the New York City Department of Health and Mental Hygiene (NYCDOHMH) and the hospitals that comprise the Central Brooklyn CBPP. It is a multi-phase exercise that includes all four hospitals of the Central Brooklyn CBPP and the NYCDOHMH. It is intended to be a learning opportunity. Through cooperative planning and exercising, the CBPP is better prepared to respond to a major disaster event. This exercise will allow the hospitals to work together in responding to a bioagent event.

PURPOSE

A) The purpose of this exercise is to:

1) Exercise disaster response plans of Central Brooklyn CBPP.

2) Strengthen inter-hospital coordination, cooperation and communication.

3) Identify short and long term efforts needed to respond to this type of catastrophic disaster.

4) This exercise gives participating hospitals an opportunity to:

a) Practice policies and Standard Operating Guidelines (SOGs) that will be implemented in response to a bioagent event or other public health emergency.

b) Identify policy decisions that need to be made during response activities.

c) Orient participating employees to their likely roles and responsibilities during the response phase of a bioagent event.

d) Provide field experience in response to a bioagent event or other public health emergency for hospital personnel.

e) Satisfy the exercise component of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requirements for hospital emergency management.

EXERCISE GOALS AND OBJECTIVES

A) Overarching Goals

Goal 1: Engage participant knowledge and skills, as they practice their roles using their current checklists and procedures.

Goal 2: Develop command and control, decision-making, coordination and communications skills for disaster operations, with a focus on effective resource management.

Goal 3: Increase the ability of the CBPPs to manage an intentional or unintentional biological event.

Goal 4: Develop needs assessment data to determine areas of focus for inclusion in future CBPP training and planning programs.

Goal 5: Increase the readiness of the hospital system personnel assigned to disaster response duties when there is an outbreak of an infectious respiratory disease that impacts the community.

B) Exercise Objectives:

Objective 1: Modify pre-designated areas of the hospital(s) to function as isolation units, wards or floors.

Objective 2: Monitor and provide efficient management of critical physical plants, personnel and material resources throughout the network or ad hoc hospital group

Objective 3: Integrate emergency response plans (ERP) and triage protocols for a bioagent event between hospitals and participating or associated outpatient facilities.

Objective 4: Train key staff throughout the hospital on their roles and responsibilities within bioterrorism ERP and triage protocols.

Objective 5: Enhance flexibility during emergencies or disasters to identify equipment and personnel sources, through memoranda of understanding (MOUs) with CBPP and other partners and contracts with vendors (per Appendix 9.2, "Surge Capacity Planning Requirements for CBPPS).

Objective 6: Activate the Emergency Operations Center (EOC) and the incident management (e.g., Hospital Emergency Incident Command System (HEICS) system of each participating facility).

Objective 7: Demonstrate redundant communication systems for internal and external use.

Objective 8: Use appropriate communication with DOHMH, NYSDOH, OEM, EMS, internal staff, CBPP partners and other city agencies, as warranted.

Objective 9: Perform rapid distribution of PPE to staff, fit testing.

Objective 10: Demonstrate use of pre triage screening protocols in Emergency Departments and outpatient clinics.

Objective 11: Mobilize appropriate hospital personnel via call down system.

Objective 12: Increase overall staffed bed and isolation bed capacities utilizing surge capacity plans for additional staff, beds, equipment and supplies.

Objective 13: Activate the hospital's emergency isolation protocols.

Objective 14: Perform cohorting for event-related patients, if indicated, based on the scenario.

Objective 15: Complete case finding for previously unknown event-related in-patients and identification of possible hospital contacts (i.e., patients, visitors or staff).

Objective 16: Exercise transition from emergency medicine to disaster medicine practices.

Objective 17: Exercise the ability of hospitals within Central Brooklyn CBPP to identify the bioagent event as requiring activation of disaster protocols.

Objective 18: Exercise communication and coordination between hospitals within the CBPP and the DOHMH.

Objective 19: Exercise the use of Unified Command in event management and conduct of the exercise.

EXERCISE ASSUMPTIONS

A) Organizations have in place adequate emergency response and communication plans.

B) Employees have been trained in all relevant Emergency Response Plans.

C) Employees have been educated and trained on personal risk and personal protective equipment (PPE).

D) All organizations will participate to meet both exercise and individual organizational goals.

E) Organizations will participate in all aspects of the exercise including the planning, management, and evaluation of the exercise.

F) Conflicts and communication shortfalls between hospitals and DOHMH and hospitals are likely to occur and will lead to post-exercise discussions to resolve identified issues.

G) The exercise will identify gaps and opportunities for improvement within individual agencies.

EXERCISE ARTIFICIALITIES

A) In order to conduct the exercise within the period of time established, certain events and actions will be accelerated or certain selected response elements will be pre-positioned and played at pre-determined times.

B) In order to conserve resources, patients will not be transported to hospitals by ambulance. Patients will be pre-staged at, or near, the hospitals.

C) The bioagent chosen for this exercise was chosen for organizations to exercise their policies, procedures and organizational responses to an extreme event. For this exercise, the bioagent will act as described in the exercise messages.

D) During exercises, it is tempting to solve complex problems in a short period of time. Participants are encouraged to suggest realistic solutions and solve problems in periods that are consistent with the length of time it would take to implement the solution proposed.

EXERCISE IMPLEMENTATION AND RULES

During the play, all players will adhere to the following rules:

A) Real world emergencies take priority over exercise actions. It is possible that not all parts of the exercise will be conducted as outlined.

B) Exercise players will use real world response procedures.

C) All messages made during the exercise will begin and end with the following words:

"This is a Slippery Slope 2005 Exercise message."

D) Safety in conducting the exercise is priority. Each participating hospital is responsible for ensuring safe play. If an unsafe situation is observed, the Safety Officer, Evaluator or Simulated Patients. The phrase "**Real World**" will be used to stop play. If this phrase is heard, play will be stopped until the unsafe condition is identified and corrected. Play will resume as soon as it is safe to do so. It is the responsibility of all participating organizations to ensure that all participants understand exercise safety; the safety phrase (**Real World**), how it will to be used, and that play will cease when this phrase is heard.

EXERCISE MANAGEMENT

A) Slippery Slope 2005, Central Brooklyn CBPP is divided into two sections. The first is a field exercise in which the four hospitals within the Central Brooklyn will respond as institutions and as a network to a bioagent incident. This field exercise, described in the Exercise Scenario section of this plan, will require the hospitals to identify a new outbreak of a biological agent. They will exercise the early response activities and evaluated using a tool based on the exercise goals and objectives identified in Section 3 of this plan. The second section of the exercise will be a tabletop exercise where the HEICS leadership and key players from each hospital from the field exercise and other invited participants will work through a number of CBPP issues that extend into the next two weeks of the outbreak.

B) The exercise is being managed using a unified command structure. The CBPP Exercise Director and Contracted Exercise Commander jointly act as exercise command. The Contracted Exercise Commander will assist in planning, help conduct and evaluate the exercise using the ICS structures.

C) Because of the nature and location of the activity, exercise twists will be kept to a minimum. Individuals from other hospitals who wish to observe may be included in the corps of evaluators. They must be willing to assist by completing a written evaluation of the portion of the exercise they evaluated.

D) A Visiting Important People (VIP) coordination program will be established to ensure that VIPs observe the exercise to the extent possible. The CBPP Exercise Director will be the person who approves individuals for the VIP program. The CBPP Exercise Director will determine what part or parts of the exercise the VIP will be allowed to observe. VIPs are asked not to interact with participants to ensure play is not disrupted or guided.

E) Access to the exercise sites will be restricted to the extent possible on the day of the exercise play. Participants and exercise management staff will be required to display identification to obtain access to the exercise area. Participants will wear their organizations' picture IDs. Exercise Management staff will wear one ID badge that will be recognized by all participating hospitals.

PARTICIPANTS

A) The participants for this rotation of the Slippery Slope 2005 include

1) NYCDOHMH

2) Central Brooklyn CBPP

a) SUNY Downstate Medical Center (SUNY Downstate)

b) Kings County Hospital (Kings County)

c) Kings County Hospital Psychiatric Center, “Building G” (G Building)

d) Kingsboro Psychiatric” Center (Psych Center)

e) Kingsbrook Jewish Medical Center (Jewish Medical Center)

B) Location designations

Due to the similarities among the facility names, each location will be give a unique identifier for clarity when communicating with other nodes of the exercise. This is noted in A above in the parentheses. Controllers and others are to use the designated name in all communications. For example, the controller at Kingsbrook Jewish Medical Center attempting to contact the SimCell will key the radio microphone and state “SimCell this is Kingsbrook Jewish controller.” The response should be “Kingsbrook Jewish controller- go ahead for SimCell.”

EXERCISE SCENARIO

Pre-Exercise

CDC reports an outbreak of SARS in Canada. One case of potential SARS has been identified.

NYCDOHMH puts out a warning message 1/19/04 via facsimile warning of the situation above. (This alert will be at 9:00 a.m.

CDC reports that December and January has been a higher than normal flu season. Lack of flu vaccine for most individuals and mild winter has produced a large than normal flu season in the NYC area.

Terrorism alert level continues nationally at yellow with New York City continuing at orange. NYPD has expressed concern that the background chatter has turned silent.

A group of students and adults spent between Christmas and New Years on a school sponsored ski trip in Canada. Transportation for the group was provided by bus service. By the time they got back to Brooklyn, a significant number of the students and chaperones feel sick with coughing and fever and malaise. One of the group had suffered a dislocated shoulder on first day snowboarding and brought to Canadian hospital for treatment. A substantial number of group visited injured boarder in hospital in Canada.

Field Exercise

At ***10:00 A.M***. a patient from Kingsboro Psychiatric Center is brought to the King County Medical Center main Emergency Department via Kingsboro transportation. The patient returned from a weekend pass. This was the second weekend pass in two weeks. Today Wednesday he woke up complaining of flu symptoms. The Patient stated that he was having trouble breathing, fever of 100.4 and complaining of pain in his chest when he breathes. Kingsboro Psychiatric Center policy is to bring medical patients to the Kings County Hospital Emergency Department. He is accompanied by a Kingsboro Psychiatric Center Staff Member. Patient is evaluated by an ED Resident physician and a chest film and blood test are ordered. (all blood tests are within normal limits.) PG2 Radiology Resident noted a bit of chest congestion, but thinks it is consistent with the flu. The patient is given the diagnosis of upper respiratory tract infection. The patient is upset. He requests his morning meds and says that he wants to be evaluated at "G" Building by a psychiatrist prior

to returning to Kingsboro. The Patient receives his medication which are sedating. The Patient is transferred to G Building for further evaluation. The patient sleeps in "G' Building emergency department from 12:30 pm to 3:30 pm. If the patient is asked he tells the ED staff at "G" Building that he spent Sunday January 9th with his sister in Canada. His sister became ill this last weekend. She is an RN in Toronto, assumed that she just has a bad case of the flu, and is at home in bed.

At ***3:00 P.M.*** An attending radiologists "over reads" the chest film from the patient who is still in G Building Emergency Department. The Radiologist indicates that the patient x-ray is consistent with SARS. He recommends clinical correlation.

3:10 P.M. Patients begin presenting at all of the three Emergency Departments complaining of similar illnesses. Each ED receives between ten and fifteen patients between ***3:10 P.M.*** and ***4:00 P.M.*** Patients will be fed in accordance with the MSEL. Patients will present with pneumonia like symptoms. Seven will have the exercise focus illness and three will have different but symptomatically similar illnesses. .

5:00 P.M. Field Exercise ends. Hotwash lead by the controller in each area occurs. Participants and volunteer patients complete exercise critiques. Controllers are responsible to ensure the designated people who are to attend the Tabletop Exercise travel to the tabletop location. Incident Command and General Staffs from each of the Hospital EOCs and selected other participants come to Kings County Hospital for a tabletop exercise. Refreshments will be served between ***5:15 P.M.*** and ***5:45 P.M.***

5:00 P.M. to ***5:30 P.M.*** Volunteers go to Cafeteria of UHB Hospital to get refreshments, their awards and certification/gifts event and turn in their critiques. Other players complete their critiques at their work sites. Evaluators from each site are responsible to return evaluations to the hospital exercise coordinator before they leave. Refreshments will be served at the location of the tabletop prior to the beginning of the tabletop exercise.

Tabletop Exercise

The Central Brooklyn CBPP Tabletop exercise has the following objectives

1. Develop unit cohesion and inter hospital communication and coordination.
2. Discuss how the hospitals continue to deal with the unfolding bioagent event.
3. Improve understanding of the Incident Management System
4. Get experience in using the Incident Planning Process to mange the future activity of the hospital and CBPP.

5. Prepare for the influx of patients from an infectious respiratory disease.

Timetable

5:15 P.M. to ***5:45 P.M.*** Dinner

5:45 P.M. to ***6:00 P.M.*** Introduction of Tabletop Exercise

Participants will be divided by their hospitals four tables.

6:00 P.M. to ***6:30 P.M.***

It is now 12 hours since potential SARS patients have accessed four of the CBPP hospitals. Between the four hospitals and Building G, approximately 30 patients have been admitted with lower respiratory ailments consistent with SARS. Samples have been sent to NYCDOHMH lab for conformation. Hospitals are using the presumptive diagnosis of SARS. Develop an Incident Action Plan (IAP) for the next 12 hours. In this plan describe your major objectives and activities that need to be accomplished in the next 12 hours. You have 20 minutes to develop this plan. The Planning Section Chief will act as scribe and the Operations Chief will have 5 minutes to present your IAP to the rest of the teams. You will be provided forms to assist you in this process.

6:30 P.M. to ***6:45 P.M.***

Brief out of Incident Action Plans from each hospital to the four Incident Commanders

6:45 P.M. to ***7:00 P.M.***

Break for all players, except the four Incident Commanders

The four Incident Commanders will develop a common Incident Action Plan

7:00 P.M. to ***7:30 P.M.***

Participants will be arranged by functions with all Command Staff at one table, Operations at another, etc.

The four Incident Commanders has developed a common Incident Action Plan. Each Section group will take 20 minutes and describe what they will do to help accomplish these joint tactical objectives. Prepare a report that you will give to the Four Incident Commander in front of all of the exercise players.. Operations

Section has 5 minutes to brief the four Incident Commanders. The other sections have 3 minutes to brief the four Incident Commanders.

7:30 P.M. to ***7:45 P.M.***

Sections brief the four Incident Commanders on how they will help accomplish the Incident Action Plan.

EVALUATION CONCEPT OF OPERATIONS

A) Homeland Security Exercise Observation and Evaluation Process

1) This section will describe the process employed for observing and evaluating Slippery Slope 2005. The goal of exercise evaluation is to validate strengths and best practices, and identify improvement opportunities for the participating agencies and organizations. This is accomplished by having qualified observers monitor the exercise and collect supporting data; analyzing the data to compare performance against expected outcomes; and determining what changes need to be made to the policies, procedures, plans, staffing, equipment, communications, organizations, and interagency coordination to ensure expected outcomes.

B) Levels of Analysis

1) Analysis will be conducted at three levels for Slippery Slope 2005:

a) **Mission-level:** This assessment is intended to evaluate overall community and multi-agency readiness to respond effectively and in a coordinated manner to a bioterrorism event.

b) **Function-level:** Assessment of the performance of individual agencies or groups managing discrete incident events (functions). Functional area assessment analyzes the actions of agencies or disciplines relative to their performance instructions, accepted "best practice" policies and procedures, applicable safety or risk practices, and the extent to which they contributed effectively to the overall operation.

c) **Task-level:** The appraisal of the ability of individual players or teams to perform a required task correctly, safely, in logical sequence, in a timely manner, consistent with directions, coordinated with the activities of other individuals or groups, and contributing effectively to the overall operation.

C) Evaluation Process

1) Global evaluation of Slippery Slope 2005 will be conducted using a four-phase process.

a) **Concurrent evaluation,** this phase, begins with the final preparations for the exercise, and continues concurrently with exercise play until the final operational component of play has concluded. The objective of concurrent observation and evaluation is to actually see what activities are being carried out, how, by whom, using which tools, procedures, and methodology. Actual performance is compared to the policy and procedural requirements analyzed during the prospective evaluation process. During this session, evaluators will be oriented to the exercise and its features, and familiarized with the evaluation tools and techniques to be employed. Additional components of the concurrent evaluation phase include use of the Exercise Evaluation Guides and evaluation tools, evaluator deployments to key functions or areas, and a concurrent documentation process. This documentation process employs observation and inquiry, freehand note taking. Photographs and any video must be cleared with the Exercise Director and the Senior Hospital Management. of the hospital involved. Much of the crucial evaluation information should develop through this process.

b) **Retrospective evaluation,** the second phase, will begin upon completion of all exercise play and will continue until the evaluation objectives are completed. During this process, the evaluation team will collaborate on developing an incident timeline. Data gathered during the concurrent phase will be compiled into an issue/discussion/recommendation format, for the final after-action report. Additional documentation will be incorporated from the feedback forms returned by participants, exercise staff, and agency leadership, who have been asked to provide clear, written appraisals of activities from their perspectives. Exercise leadership, evaluators, and subject matter experts will review the information and develop a comprehensive analysis of the event.

c) The third phase of evaluation is preparation of the **After-Action Report (AAR)**. The consulting team, based upon the information gathered and reported, as well as knowledge of community resources and capabilities,

develops the AAR. The AAR will be compiled as a draft document, forwarded to the participating agencies for review, feedback, and validation, and then revised as needed for final delivery. The completed AAR will serve to document excellent performance and best practices, as well as a compelling guide to the measures needed to upgrade the community infrastructure and emergency readiness.

EVALUATOR'S ROLE AND RESPONSIBILITIES

A) Evaluator Selection and Training

1) Evaluators have been selected from the hospitals within the CBPP and other subject matter experts. They are individuals who have considerable familiarity with agency, discipline, and/or community polices, plans, and procedures, often with background as trainers for their agencies. In some cases the evaluators participate in developing and deploying the exercise and are intimately familiar with the planned exercise flow.

B) The Role of an Evaluator

1) The role of an exercise evaluator is to observe, understand, document, and report exercise activities and the performance of participants in an assigned area or function/discipline. An evaluator is NOT a plan reviewer, a trainer, or a judge. The evaluator must be prepared to observe and record all events, exact times and personnel performance. The evaluator must be familiar with the scenario and applicable objectives for their assigned location or position.

C) Controller/Evaluator Interface

1) Evaluators will typically be assigned in teams with exercise controllers. The controller's role is to monitor and guide the progress of the exercise, and interface with the players. The evaluator's role is to observe and document the performance and progress of the players. This is best done by working in partnership with the function/discipline/area controller(s) to share information, maintain situational awareness and a common perspective as to events underway or anticipated, and ensure that all key events and issues worthy of documentation are recorded. By working together, as controllers observe issues for evaluation, they can bring these to the evaluator's attention for the record. As evaluators observe issues requiring controller intervention or awareness, they can alert the controller to the situation. In this manner, while

each assignment has distinct tasks and responsibilities, they can work synergistically to improve the activities of both, as well as the overall exercise.

D) Prompting and Player Interface

1) Evaluators should limit their interface with the players to clarify observations or inquire about activities. Evaluators must avoid interfering with player activities or providing suggestions or "prompts" that result in altering participant actions.

E) Documentation and Recording

1) Because numerous events may be occurring simultaneously, evaluators may not be able to record all the action. Knowing which events are important makes recording the action manageable, eliminates superfluous information, and provides the kind of data most useful for exercise evaluation. Important events evaluators should record include the following:

F) Communication and Coordination

1) Other elements to look for and note include the following:

a) Initiating scenario events (including when players first detect abnormal conditions),

b) Timeliness of critical actions,

c) Information gathering activities

d) Monitoring and assessing scenario events,

e) Use of Unified Command at the scene,

f) Creative player problem solving beyond current plans and implementation procedures,

g) Plans or procedures that affect player efforts,

h) Equipment issues that affect player efforts,

i) Securing the scene, establishing a perimeter.

Much of the above information will be obtained through watching and listening to the exercise players. However, the evaluators may also interact with players during the exercise if they have a question about something they observed. This may be especially important for those evaluators observing play in EOCs, Joint Information Centers, or similar locations where much of the activity is conducted over the phone. Because evaluators cannot hear what is happening on the other

end of the line, they may have to ask whom the player was talking to and what was discussed. Evaluators should not interrupt play to ask such questions but should wait until there is a break in activity.

G) Evaluator Effects on the Exercise

Evaluators may have an inadvertent effect on the exercise based on factors that may be intentional or unintentional. With good selection methods and proper training, most of the factors can be reduced or eliminated. Evaluators should be aware of these potential effects, and work to avoid them.

H) After the Exercise

1) Following exercise play a brief hot wash will be held at each exercise venue. An exercise controller will lead the hot wash. The purpose of this review is to briefly recap the events of the day by participants/players, establish a broad overall assessment of performance by the hospitals and identify major element of performance that went well or needs improvement.

2) Evaluators are expected to attend the hot-washes in the areas they evaluated, giving them the opportunity to clarify issues or obtain missing information from the players before they depart the area. At the hot wash, evaluators will distribute participant feedback forms to all players and participants, soliciting their feedback on the exercise process and their participation. These forms are brief, and **must** be returned immediately to the evaluator, or submitted later as directed on the form.

3) At the conclusion of the field and tabletop exercise a debriefing with the consultant will be held at the SimCell. This will be the opportunity for the senior exercise management team from each of the hospitals and NYCDHMH to recap the day's events, identify critical issues and opportunities for improvement, and ensure cross-hospital coordination. This will also be the opportunity for the entire team to re-acquire overall situational awareness based on the day's events throughout the exercise venues. Persons required to attend this meeting will be notified in advance.

4) Finally, evaluators will be required to complete the Exercise Evaluation Tool forms (as many pages as needed) for each portion of the exercise that they are evaluating, and submit them as instructed. A formal debrief will be held the following afternoon with selected representatives from the CBPP and DOHMH.

ROLES OF OTHER EXERCISE STAFF

A) Simulators

1) In order to create a real-life environment, simulators act as, and on behalf of, the involved agencies and services not participating in the exercise. Simulators insert messages into the exercise that are representative of these agencies and services. Some of the inputs are scripted in advance, while others will be introduced based on the reaction of the players, verbally or in written form. A Simulation Cell (SimCell) is used to provide remote stimulate for exercise play at the Emergency Operations Center and Department Operations Center. Simulators must be prepared to reply to participant questions based on their expertise or collective wisdom of the simulation team. They also must "play the role" as an actor to the script, in communicating with players.

B) Controllers

1) Controllers manage the flow of the exercise through execution of control procedures, directing the pace and intensity of exercise play and maintaining safety and security. They provide key data to players and may prompt or initiate certain player actions to ensure exercise continuity. Controllers are the only non-players who will provide information or direction to the players. All controllers will be accountable to the lead controller and will partner with the Exercise Evaluators for their location for all control and simulation activities performed.

C) Observers

1) Exercise observers may represent participating and non-participating agencies, members of the media, members of the public, or other interested parties. An identification tag noting "observer" will identify authorized observers. They will generally be confined to designated observer areas. Observers are strictly prohibited from participating in exercise play, or assisting exercise players in any way.

AFTER-ACTION REPORT

A) The After Action Report is composed of the following elements:

1) Executive Summary
2) Exercise Overview
3) Exercise Goals and Objectives
4) Synopsis of Events
5) Analysis of Mission Outcomes
6) Analysis of Critical Task Performances
7) Conclusion
8) Improvement Plan Matrix

EXERCISE EVALUATION PROGRAM

A) The overall exercise is being evaluated using the Department of Homeland Security Terrorism Exercise Evaluation Program, October 2003.

B) Evaluators and Controllers will be assigned to each major exercise site. Hospital participants will be providing their own controllers and evaluators. Each evaluator will provide input into the exercise evaluation program.

C) Each exercise participant will be invited to provide input through written comments regarding the exercise on the day of the exercise. Forms will be provided at exercise sites. The format for that input is provided on the next page. Hospitals can submit further comments by filling out an evaluation form manually and turning it in to the facilitator. Each organization is invited to be part of the hot wash conference to be conducted after each sub-exercise.

D) A draft After Action Report (AAR) will be submitted to the CBPP Exercise Director and DOHMH by February 10, 2004. Comment from the CBPP will be returned to the consultant by February 20, 2005. The final draft of the AAR will be submitted to the CBPP and NYCDOHMH by March 5, 2005

E) Exercise Evaluations

1) Attachment 8 contains a series of Exercise Evaluation Guides (EEGs) for operations-based exercises, developed for the major activity venues of the exercise. Each guide provides the following information:

a) General Information identifies the mission outcome being addressed, the members of the response team, the observation location, jurisdiction, and evaluator contact information.

b) What To Look For describes what the evaluator should expect to observe, including the inputs that trigger an action or decision, conditions that might affect the action or decision, expected outcomes, steps that the players will generally take, and the consequences of the effective completion of the task. These elements may be modified in accordance with jurisdictional plans and procedures.

c) Observation Record provides a log to record observations that include the time, the action or decision, who took the action, what triggered it, and the result.

d) Data Analysis Questions provides performance criteria and a series of questions to help the evaluator assess whether or not the expected activities occurred, how well they were performed, and why activities did or did not occur as expected. The evaluator should review the criteria and address the questions immediately following the exercise or during a lull in activity. The questions are also used throughout the analysis process to assess task performance, decision-making, and interactions.

e) Exercise evaluation is designed around the Department of Homeland Security Exercise Evaluation Guide. The evaluation is focused on the objectives of this exercise. Exercise evaluation tools include:

1. Hospitals
2. Infection Control Personnel
3. Individual Participant Evaluation

EXERCISE EVALUATION AIDS FOR NEW EVALUATORS

A) Follow all exercise safety procedures. You are always a Safety Officer first.

B) Wear your evaluator identification prominently at all times.

C) Be unobtrusive to the players and don't draw attention to yourself.

D) Be familiar with key events, plans, procedures, and resources of the functional area.

E) If unable to document necessary data, contact the evaluation team leader.

F) Avoid making evaluations and judgments during the exercise, including remarks and body language.

G) Avoid conversations with other exercise staff or players.

H) Record the time of observations.

I) Be familiar with the evaluation checklists and report forms.

J) Minimize your effect on the exercise by being as low-key as possible.

K) Be aware of the potential impact of the evaluator on exercise play.

L) Evaluation

1) The evaluation phase of an exercise is as critical, if not more so, than creating the scenario, writing the scripts, and arranging the exercise logistics. The evaluation phase provides important guidance to decision makers at all levels of the organization, allowing them an opportunity to make adjustments in emergency response and management policies and procedures.

2) Evaluation is about information — gathering it, sorting it, organizing it, and analyzing it. Questioning and observation can be done in a haphazard way or systematically using specific techniques. The level of skill and attention given to using the tools in a correct and skillful way is usually evident in the quality, value, and usefulness of the final product.

M) Evaluation Tools

1) Direct observation, done in an organized, systematic way, are important evaluation tools. Like all tools, they require training and information on the correct way to use them to provide effective use and overall value.

2) The following information provides some guidelines for direct observation. Applied to your evaluator's task of gathering information on the exercise activities, following these tips should make your work easier, save time,

reduce anxiety, and provide valuable information for the evaluation team and decision makers.

a) **Work safely.** Place yourself in a position that is free from hidden hazards, out of traffic zones, and in low noise areas if possible. Since you will be focused on observing others performing their work, your mind may not be tuned into other sights and sounds around you. Your safety is your responsibility. If in doubt about where it is safe to position yourself, consider asking the exercise controller or a member of the simulation team before the exercise begins. Also, bear in mind that every evaluator is also a Safety Officer. In your position as observer, you may detect a hazard or unsafe practice that those engaged in activity may not realize. You are expected to take actions necessary to prevent hazards or harm to others, which may include resolving the hazard yourself, notifying the controller in the area, alerting the officer or team leader working in the area, or requesting assistance through the chain of command.

b) **Choose a good location for observation.** Position yourself where you can clearly observe multiple activities from one location. If that is not possible, minimize the number of times you have to move.

c) **Blend into the woodwork.** Observations are best done when your presence is not obvious to the person being observed. Individuals tend to perform differently when they are reminded they are being observed, which skews the quality of the information gathered. It is okay, and can actually be a good thing, to let them know why you are present and what you're doing, but your presence should not be obvious.

d) **Document your observations.** Document your observations in writing, photographically, on audiotape (if approved), or using a combination of these. We forget, or filter what we have observed based on other actions or things we hear from others, which can change the quality, quantity, and reliability of the information gathered. Therefore it's important as an evaluator to document activity as soon as it happens.

e) **Know the difference between observations and opinions.** Do not mix observations and opinions together. It is natural for evaluators to have opinions about what is observed. However, observations are facts and opinions are not. Keep the two separate.

f) **Jot down ideas and suggestions.** It is commonplace to have ideas and suggestions for improvement or additional activity come to mind as you

observe the exercise. Do not chance that you'll remember to document or ask someone about it at a later date. You can label ideas as ID and suggestions as SUG on your paperwork.

g) Write legibly.

N) Guidelines for Effective Evaluation: Judging Exercise Performance

1) There are a number of performance elements required for an individual or a group of people to perform in the best possible manner. Evaluators can provide valuable information about performance by looking for these elements and documenting their presence or absence. Some of these elements may be apparent through the evaluator's observations, and others by specifically asking about them. In some cases, an evaluator may witness (observe) something but not be able to determine whether the item is helpful or hurtful to the overall performance.

a) The following questions may guide your thinking in appraising performance:

b) Does the performer (individual and/or organization) have the required skills to:

(i) Do what is required?

(ii) Perform correctly?

(iii) Perform effectively?

APPENDIX A

Controller Assignments

Location	Controller	Evaluators	Observers	Safety
Sim Cell				
NYCDOHMH				
EOC				
"SUNY Downstate" Medical Center				
EOC/ICC				
ED				
"Kings County" Hospital				
EOC/ICC				
ED				
Kingsboro "Psychiatric Center"				
EOC/ICC				
Ward				
Kingsbrook "Jewish Medical Center"				
EOC/ICC				
ED				
Kings County Psychiatric Emergency Department "Building G"				
EOC/ICC				
ED				

APPENDIX B

SLIPPERY SLOPE 2005 EXERCISE
PARTICIPANT HEALTH AND SAFETY PLAN

The following Health and Safety guidelines will be incorporated into all aspects of the Slippery Slope 2005 Bioagent Exercise.

Site Security and Safety are paramount!! Do not violate security or safety rules for the sake of exercise play!

None of the scenarios calls for testing security or safety procedures through unauthorized, illegal, or intentionally unsafe actions.

Since this is not an actual event, do not compromise safety at any time for the sake of exercise play. No shortcuts or modifications to safety procedures are authorized.

There will be an Exercise Safety Controller appointed and on-site at all exercise venues who shall report directly to the Exercise Director.

Safety Controllers will ensure all activity occurs within a safe environment.

There will be a Safety Orientation given to all exercise participants prior to conducting any exercise activity.

Weather may play a part in the safety of the exercise participants. Precautions will be taken to address cold, physical exertion, slip/trip/fall hazards, and other related factors in the planning process and in the conduct of the exercises.

Consideration will made to ensure any of the general public that is not involved in the exercise but may observe the activities will be informed of the exercise to help prevent any undue concern on their part.

All exercise participants, staff, and observers are responsible for ensuring the exercise is conducted safely. All activities must be accomplished in accordance with standard, commonly used safety practices.

Real world emergencies take priority over exercise actions. It is possible that not all parts of the exercise will be conducted as outlined.

In the event that someone suffers a real-time medical emergency, contact the nearest Exercise Staff member and let him or her know you have a "Real-World" emergency. There will be emergency medical responders staged nearby.

Safety in conducting the exercise is priority. Each participating hospital is responsible for ensuring safe play in their venue.

Each participating hospital will ensure that a trained Safety Officer is available for all exercise activities. This Safety Officer will be responsible for the safety of all players within his or her venue.

It is the responsibility of all participating organizations to ensure that all participants understand exercise safety; the safety phrase (Real World), how it will to be used, that play will cease when this phrase is heard, and that play will only resume once permission is received from their Area Controller.

The phrase "Real World" will be used to stop play. If an unsafe situation is observed, the Safety Officer, Controller, Evaluator or Simulated Patients shall state the phrase "**Real World**" in a loud and clear voice followed by the location of the situation. If this phrase is heard, play will be stopped immediately in that area until the unsafe condition is identified and corrected. Play will resume as soon as it is safe to do so.

Exercise Controllers in each area will have the responsibility to communicate the stoppage of play to the Lead Controller who will discuss the problem with the Exercise Director who will provide direction on how to proceed.

The Exercise Controllers will also assess and be responsible for determining the extent of the unsafe situation and an exercise site-wide transmission of a stop play order if that required. This will usually be done only after consultation with the Lead Controller but may be ordered by any Exercise Controller or Safety Officer if the situation is seen to have the potential to escalate to a site-wide emergency. If a security violation or an unsafe condition exists at this level, an announcement will be made using the words "Terminate, Terminate, Terminate".

In order to maintain accountability and ensure their security and safety, observers and media shall register with each individual hospital's Media Relation's Department and with the CBPP Exercise Director.. In addition, an Exercise Staff escort must accompany observers and media when they enter the play area.

The Sim Cell will have final authority over the full termination of the exercise or the resumption of play in any area of the venue.

EXSTAFF Controller Corrective Actions

Take the following actions when:

- An unsafe condition exists or you see an impending or potential safety hazard, stop the activity immediately and correct the situation. If possible, resolve the situation without interfering with play.

- You must stop play in a given area, transmit or loudly announce, "Real World," followed by your call sign, location, and reason for halting play, e.g., "safety" or "security." Report the unsafe or unsecured condition to the Master Controller and work to resolve the hazard or issue. When the situation is corrected, the Controller will announce "resume play" followed by his/her call sign and location.

- You hear the cry, "**Real World**", stop what you are doing and hold your position until the security breach or hazardous condition has been identified and you are instructed to take action or resume play.

- Someone is injured, report it immediately to the Master Controller and take appropriate protective and first aid actions.

Possible situations and appropriate corrective actions are described below.

- **SITUATION: Someone is injured.**

  ACTION: Report it immediately and take appropriate protective and first aid actions. You may need to delay or terminate play if the severity of the situation or injury warrants.

APPENDIX C

Exercise Phone Numbers

These are numbers for during the exercise only.

To be completed prior to exercise

Organizations	Point of Contact	Phone	Cell	Pager

APPENDIX D

Evaluation Tools

Hospital Evaluation Form

Name:_____ **E-mail address:**_____

Evaluation Location:_____

Target Areas:

1 Incident Recognition and Response
2 Communication
3 Patient Care
4 Incident Command
5 Post-Incident Activity
6 Fatality Management

Evaluation Aspects:

7 Use of resources.
8 Staff practices.
9 Procedural conflicts.
10 Division of areas of responsibility.
11 Triage and treatment.
12 Patient tracking.
13 Safety management of emergency workers.

Evaluation of Target Areas

Incident Recognition and Response
How did the staff recognize the situation and activate the appropriate response plan? Address measures that could be taken to improve this.
Observations:
Recommendations:
Was the response plan correctly implemented?
Observations:
Recommendations:

Incident Recognition and Response
Was the staff/facility protected by the initial action taken?
Observations:
Recommendations:
What actions were taken to provide security to the medical facility? Discuss internal capabilities, dependency, and availability on outside support.
Observations:
Recommendations:
How were nonincident related patients isolated and relocated? Discuss the decision process, external coordination, and support required.
Observations:
Recommendations:
Communication
How did the staff initiate proper notifications (e.g., emergency department (ED) staff, hospital administration, public relations)?
Observations:
Recommendations:

Communication
What means were used to conduct external communication and coordination (e.g., HazMat, Emergency Operations Center [EOC], poison control)? Discuss how the procedures affect the response effort.
Observations:
Recommendations:
Discuss the adequacy of communications link with key external agencies (e.g., EOC, health department, Centers for Disease Control and Prevention [CDC]).
Observations:
Recommendations:
How was information disseminated within the medical facility?
Observations:
Recommendations:
How are interhospital communications anticipated to occur? Is this type of coordination anticipated to ensure critical technical and medical information is shared between providers?
Observations:
Recommendations:

Communication
What information did the EOC and other external policymakers require from the hospital on a recurring basis? Discuss the capability of the hospital to provide this in a timely manner.
Observations:
Recommendations:

Patient Care
Was a proper diagnosis developed early in the treatment of the victims? What could have been done to expedite these efforts?
Observations:
Recommendations:
Was operational data requested and obtained in a timely manner (e.g., beds, ventilators, pharmaceuticals)?
Observations:
Recommendations:
Were proper interventions/medications administered? Were enough available?
Observations:
Recommendations:

Patient Care
What plans are in place for the acquisition of additional pharmaceuticals on an emergency basis?
Observations:
Recommendations:
How were patient records maintained? Were patients effectively tracked through the system?
Observations:
Recommendations:
Incident Command
Does the hospital use a formal incident management system?
Observations:
Recommendations:
Are command officers physically identified?
Observations:
Recommendations:
Were personnel familiar with their assigned areas of responsibility?
Observations:

Recommendations:

Incident Command

Did the Incident Command System (ICS) work effectively?

Observations:

Recommendations:

Was staff used effectively in each operational area?

Observations:

Recommendations:

Were long-term operational issues addressed?

Observations:

Recommendations:

Was the hospital staff cognizant of requirements to support crime scene evidence recovery? ?

Observations:

Recommendations:

Were actions taken to alter the staff rotation policy to meet the demands of the incident?
Observations:
Recommendations:

Incident Command
Does the hospital have a published Infectious Disease emergency preparedness plan? Is it regularly exercised? What adjustments could be made to improve procedures?
Observations:
Recommendations:
Are there evacuation plans for the relocation of patients who were already admitted? How is the evacuation coordinated?
Observations:
Recommendations:
Post-Incident Activity
What procedures were followed to ensure the hospital's status and appropriate victim data was shared with outside agencies? Discuss the efficiency of the system and recommended systematic and equipment improvements.
Observations:
Recommendations:

Post-Incident Activity
What criteria were used to demobilize? Did the hospital have a recovery plan? Was the plan used effectively?
Observations:
Recommendations:

Fatality Management
How were the deceased to be managed?
Observations:
Recommendations:

Was the medical examiner's office notified?
Observations:
Recommendations:

Fatality Management
Did the fatality management practice include law enforcement notification, law enforcement coming to the hospital, and documentation requirements?
Observations:
Recommendations:

Were there any innovative or noteworthy processes or procedures used? If yes, describe.

Additional Observations

Please list any additional comments, concerns, or observations you have concerning this area of evaluation:

Public Health Investigation Function

Evaluator's Name	*Title*	*Home Agency*	***Page ____ of ____ Pages***

Telephone	*Email Address*	*Best Time/Method of Contact*

Date/Time of Observation	*Evaluation Assignment*

Interaction with patients

Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome. If not observed, indicate same.

1. Were suspect patients easily identified and available for interview?
2. Were discharged patients who were also suspect easily identified and tracked?
3. Was staff oriented to specific PPE?
4. Was PPE readily available? Were you questioned about fit testing for masks? Were you offered any education on the use of the PPE?
5. Were you oriented to the proper disposal of the PPE?

6. Were family and friends of confirmed or suspect patients easily identified for contact tracing?	
7. Were staff who may have been exposed easily identified? Were these staff currently at work? Had employee health been active in their evaluation or tracking?	

Activation of EOC

Evaluator's Name	*Title*	*Home Agency*	*Page ____ of ____ Pages*
Telephone	*Email Address*	*Best Time/Method of Contact*	
Date/Time of Observation		*Evaluation Assignment*	
Task Information: ***Activation of EOC***		**Notes**	

Note: These are "typical" steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction's plans and procedures for actual requirements. Typical Steps: 1. Activation of EOC 2. Set up of EOC a. Physical location b. Brief staffing c. Is the space safe an secure d. Establishment of ICS structure e. Use of HEISC 3. Establishment of Strategic Goals a. Development of Incident Action Plan 4. Evaluation of situation a. Initial b. Ongoing 5. Development of initial actions a. Declaration of Public Health Emergency b. Relationship between EOC and response elements c. What actions are being taken to get ahead of the event? 6. Reaching out to partner agencies a. Identifying technical experts 7. Establishment of leadership a. Definition of policy issues to be discussed b. Establishment of ICP as subject matter expert in this event	*Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome. If not observed, indicate same.*

8. Planning Process a. Use of Incident Action Plan b. Planning meetings, including scheduled meetings with ICS staff c. Needed staff d. Identify staff and resources needed e. Response locations f. Protective actions g. Use of partners…private, regional, state and federal h. Provisions for special needs populations 9. Keeping EOC staff informed of current situation and future plan 10. Support (food and rest) of EOC staff a. Identify operational period 11. Use Internal staff 12. Interaction with Law Enforcement 13. Interaction with NYCDOHMH 14. Communication with hospitals and other providers 15. Communication with state and federal partners 16. Communication with public through media a. Development of Communication Plan b. Rumor control c. Use of JIC d. Coordination with hospitals and other agencies 17. Plan for command and control over multiple operational periods	

APPENDIX E

THE CITY OF NEW YORK

DEPARTMENT OF HEALTH & MENTAL HYGIENE

Michael R. Bloomberg — Mayor

Thomas R. Frieden, M.D., M.P.H. — Commissioner

2003 Health Alert #8 – Update Alert Regarding the Outbreaks of Severe Acute Respiratory Syndrome in Asia

Please Share With Colleagues in Critical Care, Emergency Medicine, Family Practice, Internal Medicine, Laboratory Medicine, Pediatrics and Pulmonary Medicine

TO: Physicians, Laboratory Directors, Infection Control Practitioners and other Healthcare Providers

FROM: XXXX, Medical Epidemiologist

XXXX, Assistant Commissioner

Bureau of Communicable Diseases

DATE: March 15, 2003

RE: Surveillance for Severe Acute Respiratory Syndromes in Patients with Recent Travel to Asia or Their Close Contacts

1 – Patients with recent travel to Asia who develop fever and acute respiratory disease syndromes should be rapidly isolated in an airborne infection isolation room with airborne and contact precautions

2 – All patients who meet the CDC case definition (see below) should be immediately reported to the New York City Department of Health and Mental Hygiene

3 - Information on the suspect case-patient from Singapore who visited New York City is provided at the end of this alert

The New York City Department of Health and Mental Hygiene (NYC DOHMH), in conjunction with the federal Centers for Disease Control and Prevention (CDC), is requesting heightened surveillance for persons presenting with:

A severe acute respiratory syndrome or an atypical pneumonia who either (a) traveled in Asia within the 7-day period prior to the onset of symptoms or (b) have had direct contact with an ill person who meets the CDC case definition below.

Since mid-February, the World Health Organization (WHO) has been actively investigating outbreaks of severe acute respiratory disease in Viet Nam, Hong Kong, and the Guangdong province in China, as well as recent reports of suspect cases from other parts of Asia, including Singapore, Thailand, Indonesia, the Philippines and Taiwan. In addition, there are six cases in Toronto, Canada among one family, in which one family member had recently traveled to Hong Kong. Two family members have died, including the index case. To date, the WHO reports more than 150 suspect cases of what has been termed severe acute respiratory syndrome (SARS). It is as yet unclear if all of these outbreaks are related and the etiology of this disease remains unknown.

No link so far has been established between these outbreaks of acute respiratory illness in Hanoi and Hong Kong and the outbreaks of 'bird flu' A (H5N1) reported previously from Hong Kong; initial laboratory testing for H5N1 among the recent SARS cases is reported to have been negative. Currently the outbreaks appear to be mostly confined to the hospital environment. Those at highest risk appear to be family members and health care workers who have had direct contact with these patients.

The first reported cluster began in Viet Nam with a single initial case hospitalized for treatment of severe acute respiratory syndrome of unknown origin. The index patient felt unwell during travel and became ill shortly after arriving in Hanoi from Hong Kong and Shanghai, China. According to WHO, following his admission to the hospital, approximately 20 hospital staff became sick with similar symptoms. The index patient has died, and the results from the autopsy investigation are pending.

In Hong Kong, an outbreak of respiratory illness has been reported in a public hospital. According to WHO, after admission of the index patient, 26 health care workers developed a febrile illness and 10 have evidence of pneumonia.

In February, the Chinese government reported an outbreak of atypical pneumonia in the Guangdong Province. To date, 305 cases have been reported, including 5 deaths. Although there were reports that this outbreak may be due to *Chlamydia pneumoniae*, this has not yet been confirmed. Chlamydia has not been identified as the etiology in the recent cases from Viet Nam, Hong Kong and Singapore according to preliminary reports. It is unclear if this outbreak in Guangdong is related to the more recent outbreaks in Asia.

Clinical Presentation

Early disease manifestations include an initial flu-like illness with high fever followed by muscle aches, headache, dry cough, sore throat and shortness of breath or difficulty breathing. Early laboratory findings may include thrombocytopenia and leukopenia. In some, but not all, cases this is followed by hypoxia and pneumonia (often interstitial) and may progress to acute respiratory distress requiring mechanical ventilation. Some patients are recovering but some have died and others remain critically ill.

The incubation period has been reported to be as short as 1-2 days or as long as 7 days (mean of 4 days). Most secondary cases have been either healthcare workers or family members who have had direct contact with case-patients.

Reporting of Suspect Cases to the New York City Department of Health and Mental Hygiene:

In order to enhance surveillance for this illness and to detect its possible importation into New York City, we are requesting immediate reporting of any suspect or probable cases. The CDC has developed the following case definition for severe acute respiratory syndrome (SARS).

A person presenting with a history of illness onset since February 1, 2003 that includes:

(a) high fever (> 38 °C or 101.4 °F) AND
(b) one or more respiratory signs or symptoms, including cough, shortness of breath, difficulty breathing, hypoxia, or radiographic findings of pneumonia or respiratory distress syndrome AND
(c) either recent travel to areas reporting cases of SARS (including Hong Kong, Guangdong Province in the People's Republic of China, and Hanoi, Viet Nam) within 7 days prior to illness onset OR close contact[1] with a person who has been diagnosed with SARS.

Any suspected or probable cases should be reported immediately to the Bureau of Communicable Disease at 212-788-9830. After hours and on weekends, cases should be reported to Poison Control at 212-POISONS (212-764-7667) or 1-800-222-1222.

[1] Close contact is defined as caring for, having lived with, or having had direct contact with respiratory secretions and body fluids of a patient with suspect or probable SARS.

Isolation Precautions for Any Suspect or Probable Cases:

If the patient is first seen in an emergency department or clinic, a surgical mask should be placed immediately on the patient and s/he should be escorted directly to the airborne infection isolation room.[2] Ensure that the airflow is negative pressure. Infection control personnel should be immediately notified regarding the suspect case. If not already involved, consultations should be requested from an infectious disease specialist.

As secondary spread to healthcare workers has occurred in the outbreaks in Asia, all suspect case-patients should be isolated in an airborne infection isolation room.[2] All staff and visitors entering the room should adhere to both airborne and contact precautions.

Standardized isolation signs noting the need for airborne and contact precautions should be displayed outside the case-patient's room. Ensure that all staff and visitors entering the room are instructed in the meaning of contact, airborne and standard precautions. All hospital staff (including transport personnel) and visitors must don contact and airborne personal protection equipment prior to entering a suspected patient's room (i.e., disposable gloves and gowns and an N-95 or higher respirator). When caring for patients, health care providers should wear eye protection for all patient contact. Standard precautions include careful attention to hand hygiene.

These precautions should be maintained until the etiology and route of transmission for this illness are known.

Laboratory Testing:

Clinicians should evaluate any patient suspected of meeting the above CDC case definition for SARS. The initial diagnostic testing should include chest radiograph, pulse oximetry, complete blood counts, blood cultures, sputum Gram's stain and bacterial culture, and nasopharyngeal, throat swabs, sputum, or other respiratory specimens for testing for viral respiratory pathogens (including influenza A and B and respiratory syncytial virus). If bronchoscopy, transtracheal and/or lung biopsy are performed, both fresh, frozen tissue and formalinized specimens should

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[2] Airborne infection isolation rooms are defined as negative pressure isolation rooms with a minimum of 6-12 air exchanges per hour and direct exhaust to the outside which is located more than 25 feet from an air intake and from where people may pass (if air cannot be exhausted directly to the outside more than 25 feet from an air intake and from where people may pass, then air should be filtered through an appropriately installed and maintained HEPA filter).

be obtained for testing at CDC and other reference laboratories.

Clinicians should save any available clinical specimens (respiratory, blood and serum) for additional testing until a specific diagnosis is made.

NYC DOHMH will provide additional information on appropriate specimen collection at the time of consultation. We will also arrange rapid transport of these specimens to the NYC DOHMH Public Health Laboratory for shipment to the CDC and other reference laboratories.

Any fatal cases meeting the WHO case definitions must be reported immediately to the Office of the Chief Medical Examiner at 212-447-2030. An autopsy to obtain tissues for diagnostic examination will be arranged.

Treatment:

Because the etiology of these illnesses has not yet been determined, no specific treatment recommendations can be made at this time. Empiric therapy should include coverage for organisms associated with any community-acquired pneumonia of unclear etiology, including agents with activity against both typical and atypical respiratory pathogens (*See Bartlett, et al reference below*). Treatment choices may be influenced by severity of the illness and an infectious disease consultation is recommended.

Suspect Case in a Traveler to New York City:

The NYC DOHMH was notified this morning of a potential case in a traveler from Singapore who was visiting New York City and was hospitalized this morning in Frankfurt, Germany on his return home. This patient is a physician and prior to departing for the United States on March 11th, he had cared for two suspect cases who had unexplained respiratory illness in Singapore. To date, 16 cases of SARS have been reported in Singapore.

The visiting Singapore physician developed a febrile illness with severe myalgias and a maculopapular rash prior to leaving for the United States. The rash resolved within 2-3 days. He did not report any respiratory symptoms. He sought medical care from an outpatient provider in New York City and was noted to have a left lower lobe pneumonia on chest x-ray, and his blood counts were all normal. He was treated with oral antibiotics and was not hospitalized.

He left New York City on March 14th, and en route back to Singapore was hospitalized in Frankfurt, Germany due to concern that his illness may be related to the outbreak in Singapore. His admission laboratory tests revealed a normal blood count and his oxygen levels were normal on room air. He is clinically stable and remains in isolation pending further evaluation. This patient was traveling with two family members, one of whom developed fever and myalgias this morning and is also in isolation pending further evaluation.

During the 3 days this patient was in New York City, he had minimal direct contact with anyone outside of the two family members who were traveling with him. He attended a medical conference for only 2 hours and reports that he did not sit near any other attendees and had minimal contact with anyone else during his stay in New York City. The NYC DOHMH has notified the physician who treated this patient in New York City, the hotel where he stayed, as well as the conference organizers.

Travel Advisory:

The CDC will be issuing health alerts to travelers returning from Asia. Any patient traveling to an area where SARS has been reported should be instructed to seek medical attention if they develop fever and respiratory symptoms.

As always, the NYC DOHMH appreciates the ongoing collaboration with the medical and laboratory community in responding to emerging infectious diseases issues in New York City and worldwide.

REFERENCES

For additional information on this evolving outbreak, check the following websites:

Centers for Disease Control and Prevention: http://www.cdc.gov

World Health Organization http://www.who.int/en/

References on infection control precautions include:

1. Garner JS, Hospital Infection Control Practices Advisory Committee. Guideline for isolation precautions in hospitals. Infect Control Hosp Epidemiol 1996;17:53-80, and Am J Infect Control 1996;24:24-52. http://www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm
2. Bartlett JG, Dowell SF, Mandell LA, File Jr, TM, Musher DM, and Fine MJ. Practice Guidelines for the Management of Community-Acquired Pneumonia in Adults. Clin Infect Dis 2000;31:347-82. http://www.journals.uchicago.edu/CID/journal/issues/v31n2/000441/000441.web.pdf

THE CITY OF NEW YORK

DEPARTMENT OF HEALTH & MENTAL HYGIENE

Michael R. Bloomberg, Mayor

Thomas R. Frieden, M.D., M.P.H., Commissioner

nyc.gov/health

2003 Health Alert #12- Severe Acute Respiratory Syndrome (SARS) Update

Please Share With Colleagues in Critical Care, Emergency Medicine, Family Practice, Internal Medicine, Laboratory Medicine, Pediatrics and Pulmonary Medicine

TO: Physicians, Laboratory Directors, Infection Control Practitioners and other Healthcare Providers

FROM: XXXX, Medical Epidemiologist

XXXX, Assistant Commissioner

Bureau of Communicable Disease

DATE: April 3, 2003

1 – Seven New York City residents have been identified as meeting the CDC's case definition for SARS after travel to endemic regions in S.E. Asia. There is no evidence for local acquisition of infection among healthcare workers or family contacts in New York City.

2 – CDC SARS case definition changed to include all of mainland China (the People's Republic of China)

3 – Due to the concern that there may be unrecognized cases of SARS in New York City, we request that providers also report any patients with pneumonia or acute respiratory distress without an identifiable etiology occurring in the following hospitalized persons:

- **A health care worker who is employed in an acute or primary medical care setting**

- **A cluster of two or more members of a family or group of people who have close contact with each other**

4 – Important steps in the management of a suspect SARS case

5 – Biosafety Level 3 laboratory facilities are required when attempting viral culture from a patient meeting the suspect SARS case definition

6 – Interim guidelines for management of exposures to SARS in healthcare settings

7 – Upcoming CDC Broadcast and Webcast on preventing the spread of SARS on April 4, 2003

As of April 2, 2003, a cumulative total of 2,223 cases Severe Acute Respiratory Syndrome (SARS) and 78 deaths (case fatality rate of 3.5%) have been reported from 16 countries, including the United States. Outside of the most severely affected areas in the People's Republic of China (including Hong Kong), the majority of cases reported to date involve direct contact, especially among health care providers caring for patients with SARS. Although the international outbreak investigation has made great strides towards identifying the cause of this illness, the definitive etiologic agent and a full understanding of the epidemiology (especially regarding the modes of transmission and the period of contagiousness) of this illness are not yet known.

The CDC has issued a travel advisory recommending that individuals who are planning nonessential travel to the People's Republic of China (including Hong Kong); Hanoi, Vietnam or Singapore may wish to postpone their trip until further notice.

In the United States, 94 of the 100 suspected SARS cases reported as of April 2, 2003 involved persons who had returned from affected areas within the 10 days before illness onset. Of the remaining six, four were household contacts and two were health care workers with exposure to a suspect SARS patient. An updated clinical and epidemiologic summary of the cases in the United States has been published in this week's *Morbidity and Mortality Weekly Report,* which is available at www.cdc.gov/mmwr/.

1 - Seven Possible SARS Cases in New York City

Seven New York City residents have been identified as meeting the Centers for Disease Control and Prevention's (CDC) case definition for SARS. These individuals, ranging in age from 1 to 91 years old, had onset of symptoms during travel or shortly after return

from a region in S.E. Asia with known community transmission of SARS. All seven New York City suspect cases have mild symptoms (typically just fever and cough) and are recovering. Laboratory specimens have been sent to the CDC for testing; all results are still pending and it is possible, given the broad spectrum of illness that is currently included in the surveillance case definition that some of these patients may not have SARS. The New York City Department of Health and Mental Hygiene (NYC DOHMH) is posting updated information on SARS surveillance data in New York City on our Website at: http://www.nyc.gov/html/doh/html/cd/cdsars.html

The NYC DOHMH has been monitoring cases and their household contacts until 10 days after the SARS patient has recovered. There has been no evidence to date of secondary cases among health care workers or household members, nor evidence of community transmission of SARS in New York City.

In addition to traditional disease reporting, the NYC DOHMH continues to monitor for unusual increases or geographic clustering of disease syndromes (including fever and respiratory syndromes) through our syndromic surveillance systems. Current systems include daily monitoring of electronic data from 911 ambulance calls, emergency department chief complaint logs, absenteeism records and pharmacy sales. Based on this data, there has been no recent evidence of a fever or respiratory outbreak in the City.

2 - Updated CDC SARS Case Definition

The CDC SARS case definition has been updated to include individuals who traveled to mainland China (the People's Republic of China), as there is now evidence of community transmission beyond Guangdong Province.

The current case definition is:

A person presenting with a respiratory illness of unknown etiology with an onset since February 1, 2003 that includes:

- A measured temperature > 38ºC (100.4ºF)

AND

- One or more respiratory signs or symptoms, including cough, shortness of breath, difficulty breathing, hypoxia, or radiographic findings of pneumonia or respiratory distress syndrome

AND

- Either travel to areas reporting community transmission of SARS (see below) within 10 days of symptom onset or close contact within 10 days of symptom

onset with a person with respiratory illness after travel to an area reporting community transmission of SARS

Areas with suspected or documented community transmission of SARS currently include: the People's Republic of China (including Hong Kong); Hanoi, Vietnam and Singapore. As this international outbreak is evolving, please check the CDC website at www.cdc.gov/ncidod/sars/ to get the most up-to-date information on countries with suspected or documented community transmission. [NOTE: Canada is NOT currently included in this list since there has been no evidence of community transmission. All SARS cases in Canada are travel related or have been linked directly to the index family cluster that occurred after two family members returned from travel to Hong Kong].

3 – Reporting Suspect Cases to the NYC DOHMH

Although the SARS outbreak in the United States has remained mild compared to other affected countries, the NYC DOHMH recognizes the need to remain vigilant for evidence of both imported SARS cases and community transmission. To ensure our ability to detect both imported cases, and persons who may represent the first evidence of community transmission, we ask providers to be alert to and report any of the following to the NYC DOHMH:

- Any individual meeting the CDC SARS case definition (See #2 above). Providers should take a travel history from all patients presenting with fever and respiratory illnesses to ensure that potential cases are recognized as soon as possible.

- Pneumonia or acute respiratory distress without an identifiable etiology after a standard workup occurring in the following hospitalized people:

    - Health care workers who are employed in acute or primary medical care settings (due to the potential that, during the 10 days prior to their illness onset, he/she may have had an unrecognized exposure to a patient with SARS).
    - Two or more members of a family or other group of people who have close contact with each other.

Please be advised that we consider the conditions listed above to be unusual manifestations of disease and are, therefore, reportable to the Department pursuant to Section 11.03(b) of the New York City Health Code. All suspect cases of SARS should

be reported immediately to the Bureau of Communicable Disease at 212-788-9830. After hours and on weekends, cases should be reported to the NYC Poison Control Center at 212-764-7667 or 1-800-222-1222.

4 - Important Points in the Management of a Suspect SARS Patient

All clinicians are encouraged to review infection control guidelines published in previous DOHMH Health Alerts and the CDC website at www.cdc.gov/ncidod/sars/ic.htm. In addition to these guidelines, these important points should be emphasized:

- If you are transferring or referring a patient who could have SARS to another facility:
  a) Place a surgical mask on the patient prior to transfer.
  b) Inform the transport personnel that the patient is a suspect SARS case; they should observe appropriate infection control practices including the use of an N-95 respirator, eye protection, gloves and gowns.
  c) Call the receiving facility (Emergency Department, Infection Control and/or receiving physician) prior to transport to ensure appropriate infection control measures are implemented on arrival.

- Certain health care procedures, such as the use of nebulized medication, may potentiate the risk of SARS in health care workers. All health care workers performing aerosol-generating procedures in a suspect SARS patient should observe strict airborne and contact precautions; see the CDC website at www.cdc.gov/ncidod/sars/ for complete guidelines.

- Due to concern that SARS may also be transmitted by direct contact with infected secretions or body fluids, all health care workers should wash their hands promptly in soap and water after they remove their gloves when they are finished taking care of a suspect SARS patient.

- Close contacts (e.g., family members) of SARS patients are at risk for infection. Close contacts with either fever or respiratory symptoms should not be permitted to enter the health care facility as visitors and should be educated about this policy. A system for screening close contacts of SARS patients who are visitors to the facility for fever or respiratory symptoms should be in place. Health care facilities should educate all visitors about the need for infection control precautions when visiting SARS patients and their responsibility for adherence to them.

- The NYC DOHMH will provide instruction sheets for both patients and their contacts to advise them of the steps that need to be taken on discharge to prevent any transmission to household members (*Copies are attached)*. These fact sheets are being translated into both Chinese and Vietnamese, and will be available on our website at http://www.nyc.gov/html/doh/html/cd/sars1.html.

5 - Biosafety Level 3 Laboratory Facilities Required when Attempting Viral Culture

According to the CDC's Interim Biosafety Guidelines for Handling and Processing Specimens Associated with SARS (www.cdc.gov/ncidod/sars/sarslabguide.htm), the following activities require biosafety level 3 (BSL 3) facilities and practices:

- Culture-based attempts to isolate the agent, including inoculation onto cell culture, bacteriological or mycological media, and eggs.

Until the agent causing SARS is fully characterized, attempts to isolate routine viral respiratory pathogens by cell culture in a patient meeting the SARS case definition should only be attempted in BSL-3 facilities. If a BSL-3 facility is not available, contact the Bureau of Communicable Disease during regular business hours at 212-788-9830 to arrange shipment to the New York State Wadsworth Laboratories. The Wadsworth Laboratories will only accept samples from patients meeting the CDC SARS case definition after clearance by the NYC DOHMH Bureau of Communicable Disease.

6 - Interim Guidelines for Management of Exposures to SARS in Healthcare Settings

Several health care workers in Asia have been reported to develop SARS after caring for patients with SARS. Transmission to health care workers appears to have occurred after close contact with symptomatic individuals (e.g., persons with fever or respiratory symptoms) before recommended infection control precautions for SARS were implemented (i.e., unprotected exposures). Personal protective equipment appropriate for contact and airborne precautions (e.g., hand hygiene, gown,

gloves, N95 respirator and eye protection) have been recommended for healthcare workers to prevent transmission of SARS in health care settings.

The CDC has proposed the following interim guidelines for management of employees with unprotected exposures to SARS in a health care facility:

a) Exclusion from duty is recommended for a health care worker if fever or respiratory symptoms develop during the 10 days following an unprotected

exposure to a SARS patient. Exclusion from duty should be continued for 10 days after the resolution of fever and respiratory symptoms. During this period, infected workers should avoid contact with persons both in the facility and in the community. Guidance for the management of a suspect SARS patient as an outpatient is available from NYC DOHMH Health Alert #10 on our website (**http://www.nyc.gov/html/doh/html/cd/03md10.html**) and the CDC website: **www.cdc.gov/ncidod/sars/infectioncontrol.htm**

b) Exclusion from duty is **not** recommended for an exposed health care worker if they do not have either fever or respiratory symptoms; however, the worker should report immediately any unprotected exposure to a SARS patient to the infection control or employee health department at the facility.

c) Hospitals should conduct daily monitoring of any health care workers with unprotected exposure for fever and respiratory symptoms . Workers with unprotected exposure developing such symptoms should not report for duty, but should stay home and report symptoms to the appropriate facility point of contact immediately.

d) Hospitals should consider conducting passive surveillance (e.g., review of occupational health or other sick leave records) among all health care workers in a facility with a SARS patient, and all health care facility workers should be educated concerning the symptoms of SARS.

7 - CDC SARS Broadcast and Webcast

CDC will be presenting a lecture entitled “Preventing the Spread of Severe Acute Respiratory Syndrome (SARS)” on the Public Health Training Network Satellite Broadcast & Webcast (http://www.phppo.cdc.gov/phtn/sars/) network on April 4, 2003 at 10:00 AM - 11:30 AM ET. The program will be rebroadcast on April 4, 2003 at 2:00 PM - 3:30 PM ET.

The NYCDOHMH will be posting all SARS-related medical materials (such as Health Alerts, fact sheets, and discharge instructions for patients) on the SARS Provider page on our website at http://www.nyc.gov/html/doh/html/cd/sars1.html.

THE CITY OF NEW YORK

DEPARTMENT OF HEALTH & MENTAL HYGIENE

Michael R. Bloomberg, Mayor

Thomas R. Frieden, M.D., M.P.H., Commissioner

nyc.gov/health

2003 Health Alert #13-Unexplained Viral Illness in Patients in Staten Island

Please share with colleagues in Critical Care, Emergency Medicine, Family Practice, Internal Medicine, Infectious Disease, Neurology Laboratory Medicine, Pediatrics and Pulmonary Medicine

TO: Physicians, Laboratory Directors, Infection Control Practitioners and other Healthcare Providers

FROM: XXXX, Medical Epidemiologist

XXXX, Medical Epidemiologist

Bureau of Communicable Disease

DATE: October 10, 2003

RE: New York City Department of Health and Mental Hygiene (NYCDOHMH) is currently investigating 5 cases of severe, unexplained illness in Staten Island

NYCDOHMH requests immediate reporting of all critically ill patients presenting with nonspecific, viral-like prodrome, central nervous system (CNS) changes, abnormal CSF including high protein, mild increase WBCs and negative gram stain and culture. Other symptoms may include seizures and pulmonary infiltrates.

The NYCDOHMH is currently investigating 7 cases of severe unexplained illness in Staten Island. The patients are all critically ill and intubated; 1 patient died. All had onset between 9/17/03 and 10/8/03 and reportedly had non-specific prodrome including fever, headache, fatigue, and malaise. Some have had mental status changes and seizures or are obtunded. Common laboratory findings include high normal or elevated peripheral WBC counts with left

shifts, CSF with elevated protein and/or mildly increased WBC (0-7). Some patients have abnormal chest x-rays. One patient had a rash consistent with erythema multiforme. The median age of the patients is 39 (range 22-54); 5 are male. All live in Staten Island.

Two of the six patients have tested negative for West Nile Virus. The illness these patients have is NOT consistent with SARS which presents primarily as a pulmonary syndrome. It remains unclear whether or not these cases are related. In order to determine whether or not there are similarly ill patients elsewhere in New York City and to further our investigation, the NYCDOHMH requests immediate reporting of all:

Critically ill patients with nonspecific viral with nonspecific, viral-like prodrome, central nervous system (CNS) changes and abnormal CSF including high protein, mildly elevated WBCs and negative gram stain and culture. Other symptoms may include seizures and pulmonary infiltrates.

Any suspected or probable cases should be reported immediately to the NYCDOHMH Bureau of Communicable Disease at 212-788-9830. After hours and on weekends, cases should be reported to Poison Control at 212-POISONS (212-764-7667) or 1-800-222-1222.

After consultation with a NYCDOHMH medical epidemiologist, providers will be advised on specimens to be collected for further testing. There are no specific isolation precautions currently recommended beyond standard precautions.