Guidelines

for the

Public Health Laboratory

Continuity of Operations Plan

(COOP)

Acknowledgement

The Emergency Preparedness and Response Committee of the Association of Public Health Laboratories was charged by the Association's Board of Directors to develop guidelines to assist state public health laboratories in developing a Continuity of Operations Plan (COOP) to ensure continuation of their essential public health activities during events that may disrupt normal operations.

Members of the Emergency Preparedness and Response Committee

Norman Crouch, PhD, Chair
Sally Beatrice, PhD
Sanjib Bhattacharyya, PhD
Andrew Cannons, PhD
Kevin Cavanaugh, PhD
Nick Cirino, PhD
Rich Harris, PhD, Policy Liaison
Susan Neill, PhD, MBA, Board Liaison
Chris Peter, PhD
Denise Pettit, PhD
Bonnie Rubin, MBA, MHA, Knowledge Management Liaison
Tony Sambol, MA, SV/SM (ASCP)
Michael Smith
Maureen Sullivan, MPH
CAPT Ralph O'Connor, PhD, CDC/COTPER Liaison
Lena Lago, MPH, Staff Liaison
Chris Mangal, MPH, Staff Liaison

Table of Contents

I. Introduction

II. Definition

III. Purpose

IV. Applicability and Scope

V. Vulnerability Assessment

VI. Incident Assessment

VII. Activation of Plan

VIII. Notifications

IX. Incident Command

X. Identification of Core Functions

XI. Identification of Alternate Laboratories

XII. Arrangements for Assistance

XIII. Pre-Positioned Supplies and Workstations

XIV. Preparation and Storage of “Go-Pack

XV. Training and Exercises

XVI. Annual Updates and Review

I. Introduction

Public health laboratories play an essential role in public health and safety. They function to generate critical data used to make informed decisions regarding the implementation of preventative measures and development of effective policies that protect the public from unforeseen conditions, hazards, and threats. Data provided by these laboratories include those related to screening newborn infants, detecting infectious outbreaks, identifying hazardous chemicals, responding to emergencies, and monitoring significant public health trends. While laboratories in the private sector may also provide analytical services in some of these areas, the core activities of public health laboratories are uniquely focused on population health rather than individual health. This focus requires public health laboratories to have special analytical expertise, instrumentation, methods, and response capability not available in the private sector. Consequently, it is imperative that public health laboratories be able to continue their core population-based activities when events occur that disrupt their normal operation. To ensure continuation of these essential activities, public health laboratories must have in place an effective Continuity of Operations Plan (COOP).

II. Definition

The public health laboratory COOP is a comprehensive, pre-event plan that describes the procedures, policies, and arrangements necessary for the laboratory to respond quickly and effectively to a wide variety of possible disruptions or threats. It describes what is in place, what the laboratory does to respond, and what is required to maintain the COOP.

III. Purpose

The purpose of a well designed COOP is to minimize interruption of the public health laboratory's operation if some internal or external disruptive event were to occur. Having an effective COOP in place ensures that the laboratory's core activities can be resumed within an acceptable period of time following such an incident. It allows the laboratory to shift efficiently from its normal structure and organization to a structure and organization that facilitates rapid recovery and continuation of services. The ability to make this shift without delay is critical for the public health laboratory to continue as a viable and stable governmental entity during a crisis. The objectives of the COOP are to:

- Establish policies and procedures to assure continuous performance of critical laboratory testing and support activities;

- Define the requirements, then identify and pre-arrange for assistance from alternate laboratories, if needed;

- Assure safety of all laboratory employees and visitors;

- Provide communication and direction to stakeholders;

- Minimize the loss of assets, resources, critical records, and data;

- Reduce or mitigate disruptions to the laboratory's operation;

- Build infrastructure to support a timely recovery;

- Manage effectively the immediate response to the emergency;

- Provide prospective information and education for employees and stakeholders regarding roles and responsibilities during an emergency; and

- Maintain, exercise, and audit the COOP at least annually.

Because public health laboratories vary considerably within and between states in terms of their organization, structure, and operation, each laboratory must develop its own specific COOP. The purpose of this document is to provide guidance to assist in that developmental process.

IV. Applicability and Scope

A COOP for the public health laboratory has two basic features. It provides a comprehensive, pre-identified list of all core testing and support activities that must be continued if the laboratory experiences a partial or complete operational disruption. In addition, it provides a pre-arranged plan of action to assure that all these core activities are continued without delay. The COOP applies to all of the operations, infrastructure, and resources necessary to continue the laboratory activities deemed essential to fulfill its governmental responsibilities. If the laboratory facility, or portions of it, are involved in a crisis or emergency, or declared unusable for its normal operation, the COOP is activated immediately.

The nature of the work done in the public health laboratory requires that its COOP be developed as a special part of the business continuity plan of the

agency within which it operates. While most, if not all, public health jurisdictions have an overall continuation plan, the laboratory operation has unique features that require distinctive consideration. Unlike operation of the rest of an agency, the laboratory requires extensive instrumentation, dedicated space, and special air handling. Consequently, the laboratory's operation cannot be quickly moved to another location and accommodation of its core activities is a complex matter.

The scope of the laboratory COOP should include all time-sensitive core activities of the public health laboratory, including technology and required support. Time-sensitivity refers to activities that must be recovered within a pre-determined, relatively short period of time, for example, 24 hours or less. The COOP should be developed to address "worst case scenarios", with the capability to scale down to accommodate lesser disruptions. Specific plans of action should be developed and groups of personnel should be identified and trained to implement these pre-defined actions to ensure timely recovery.

V. Vulnerability Assessment

The probability that a public health laboratory will experience an event disruptive to its operation is related to its vulnerability. Because the COOP is designed to respond to any significant disruption, it is important to assess the laboratory's vulnerability to determine what can happen, what is the likelihood of it happening, and what measures can be taken beforehand to mitigate the possibility. To identify vulnerabilities and address them through effective mitigation before they become a disruptive event, will reduce the need for costly activation and implementation of the laboratory COOP.

Possible internal measures for mitigation of some vulnerabilities include building security systems, backup power supplies, fire suppression systems, and redundant data systems, to name a few. Examples of external mitigation measures include effective public safety services, protective building construction, and the absence of hazardous environmental conditions, among others.

A thorough analysis of site vulnerability provides a comprehensive list of potential threats that may disrupt normal laboratory operations, both within the facility itself and within the community where the laboratory is located. Such threats fall into several general categories: extreme weather conditions, major equipment failure, protracted personnel matters, extensive building damage, compromised building utilities, failed communication systems, civil disturbance, or acts of terrorism. The following Table is an example of a form that may be used to list potential vulnerabilities, the measures in place for mitigation, and the level of risk that the vulnerability may lead to a disruption of the laboratory operation. The Table lists a few possible vulnerabilities. Each public health laboratory should develop a comprehensive list specific for its own facility.

Site Vulnerability Analysis

Site Vulnerability Analysis		
Threat	**Mitigation**	**Risk**
Electrical power failure	Backup power generator	Low
Flooding	Location	Low
Personnel strike	None	Medium
Other		

Among possible threats, the vulnerability assessment should take into account the potential impact of criminal activity on laboratory operations. Considering the laboratory's location, the analysis should include an evaluation of the potential risk posed by civil demonstrations, acts of terrorism, or other kinds of criminal behavior. In determining the level of this risk, it is important to review the effectiveness of any crime mitigation methods currently being used at the laboratory facility, such as surveillance cameras, security guards, access control, locking systems, screening/detection equipment, and digital tracking systems.

When assessing vulnerability, it is also important to consider threats from secondary sources. These would include non-laboratory facilities located nearby or physically connected to the public health laboratory. Such facilities might have vulnerabilities that could impact the laboratory without the laboratory having any direct control over their mitigation.

After developing a comprehensive list of potential threats and evaluating the effectiveness of any mitigating measures, each threat should be scored in terms of the risk or probability of it happening. This may be done using a simple ranking of high, medium, or low. It also may be done using a numeric scale, e.g., ranking the threats from 1 to 5, with those at level 1 having the highest risk.

VI. Incident Assessment

As soon as possible following an event that either does or has the potential to significantly disrupt all or part of the public health laboratory's normal operation, the situation must be assessed and a decision made whether or not to activate the COOP. Timeliness is critical in this process to prevent any compromise of the laboratory's essential activities. The timeliness of this assessment and decision process is particularly critical if the disruption is, or will be, caused by a local threat or disaster that requires the public health laboratory to provide a robust emergency response.

To assess the incident's impact on laboratory operations, a specific "incident assessment team" should be pre-identified in the COOP. This team should

include senior personnel that represent the laboratory operation, personnel safety, and facilities management. It should be made up of persons with the knowledge to make an appropriate assessment and the authority to make necessary decisions. Because the laboratory itself may not be available as a place for this team to meet, a pre-determined, alternate meeting site should be identified as part of the planning. The charge of this team should be to assess the nature of the disruption and estimate the expected time that normal laboratory operations will be disrupted. This assessment should include input from members of the laboratory's managers regarding the areas of the operation for which they are responsible.

To facilitate assessment of the laboratory's operational capability following an incident, it is helpful to have a pre-formed list of items to consider. Such a list can be used to guide and document the assessment process. Because the assessment team may have to conduct their work at an alternate site, it is essential that the list of items be readily available to them at that alternate location. As a guide, a partial list of assessment questions to consider is shown in the following Table. Response Teams Assessment Documentation

Laboratory Assessment Report Date _____ Time _____ Nature of Incident _____		
Assessment	**Response**	**Comment**
What laboratory functions have been affected?		
Have the local fire and/or police departments been contacted (if appropriate)?	Yes No Unknown	
Has the agency declared an emergency? If yes:	Yes No Unknown	
Has the alternate location been activated?	Yes No Unknown	
Has the emergency management department been notified for the activation of the emergency operation center?	Yes No Unknown	
Has the agency real estate management been notified?	Yes No Unknown	
Other		

VII. Activation of Plan

Assessment of the incident and its impact on the laboratory operation will lead to a decision about activation of the COOP (Plan). If all of the pre-determined core activities of the laboratory are found to be still intact, activation of the Plan may be unnecessary. If only some of the core activities are affected, the Plan may be activated only partially to accommodate the compromised activities. If the entire laboratory operation is lost, the complete Plan will be activated in response to a "worst case scenario". The level of activation dictates who needs to be involved, who needs to be notified, what needs to be done, and where the required activities will take place.

If assessment of the laboratory's operational capability results in a decision to activate the COOP, pre-determined incident response teams should be activated. These teams are essential to coordinate the various pre-planned actions required when the COOP is implemented. The teams carry out their respective activities either within the laboratory facility itself or at some other pre-determined, appropriately equipped, alternate site, depending on the needs dictated by the event. The teams should function as part of the agency's overall Incident Command System (ICS), as described below in the Incident Command section of these guidelines. For each team, a specific Job Action Sheet should be developed to describe its role and responsibility. Members of each team should be pre-assigned, trained, and their activities thoroughly exercised, at least on an annual basis. Which teams to activate, and the number of members to engage in each, should be scalable to fit the magnitude of the laboratory disruption. These teams should report to the organizational chiefs pre-established within the agency's ICS, as describe in the Incident Command section of these guidelines.

The structural and operational needs of each specific laboratory will determine what incident response teams to establish for the COOP. Examples of response teams are shown in the following Table.

Incident Response Teams	
Team[1]	**Responsibilities**
Assessment	Assess laboratory operational capability and make decisions regarding COOP activation
Notification	Notify laboratory staff and other key individuals and groups with information and guidance
Sample Recovery	Determine status of samples stored in the laboratory facility, what testing is in progress, and what actions to take
Sample Receiving/Send Out	Determine what actions are required regarding samples to be received and samples to be sent out to alternative laboratories
Laboratory Support	Assure appropriate levels of clerical, purchasing, and materials preparation support for core laboratory functions
Information Technology	Assure availability of the Laboratory Information System to manage all necessary laboratory data, including accessioning and reporting

[1] Other teams may be added as determined by those developing the COOP for a particular public health laboratory.

VIII. Notifications

Implementation of the COOP occurs if some or all of the laboratory's critical core activities are, or will be, compromised by some disruptive event. Such implementation requires immediate activation of the COOP "notification team" to contact all key individuals and groups to provide them with essential information and guidance. Among those that need to be contacted by the notification team are the following:

- All required response teams
- Agency's Health Officer
- State Epidemiologist
- All impacted agency leaders
- All laboratory staff
- All impacted submitters of samples and specimens
- All alternative laboratories that may required to assume core functions

In addition to the individuals and groups that have been listed here, there may be others both within and outside the agency that need to be notified. Initial notification of the entire laboratory staff is important to give instructions about reporting to work, whether they should report to the laboratory or to some other pre-determined alternative site, and where they can expect to get reliable additional information and updates on a regular basis as the incident and the laboratory's response to it evolve.

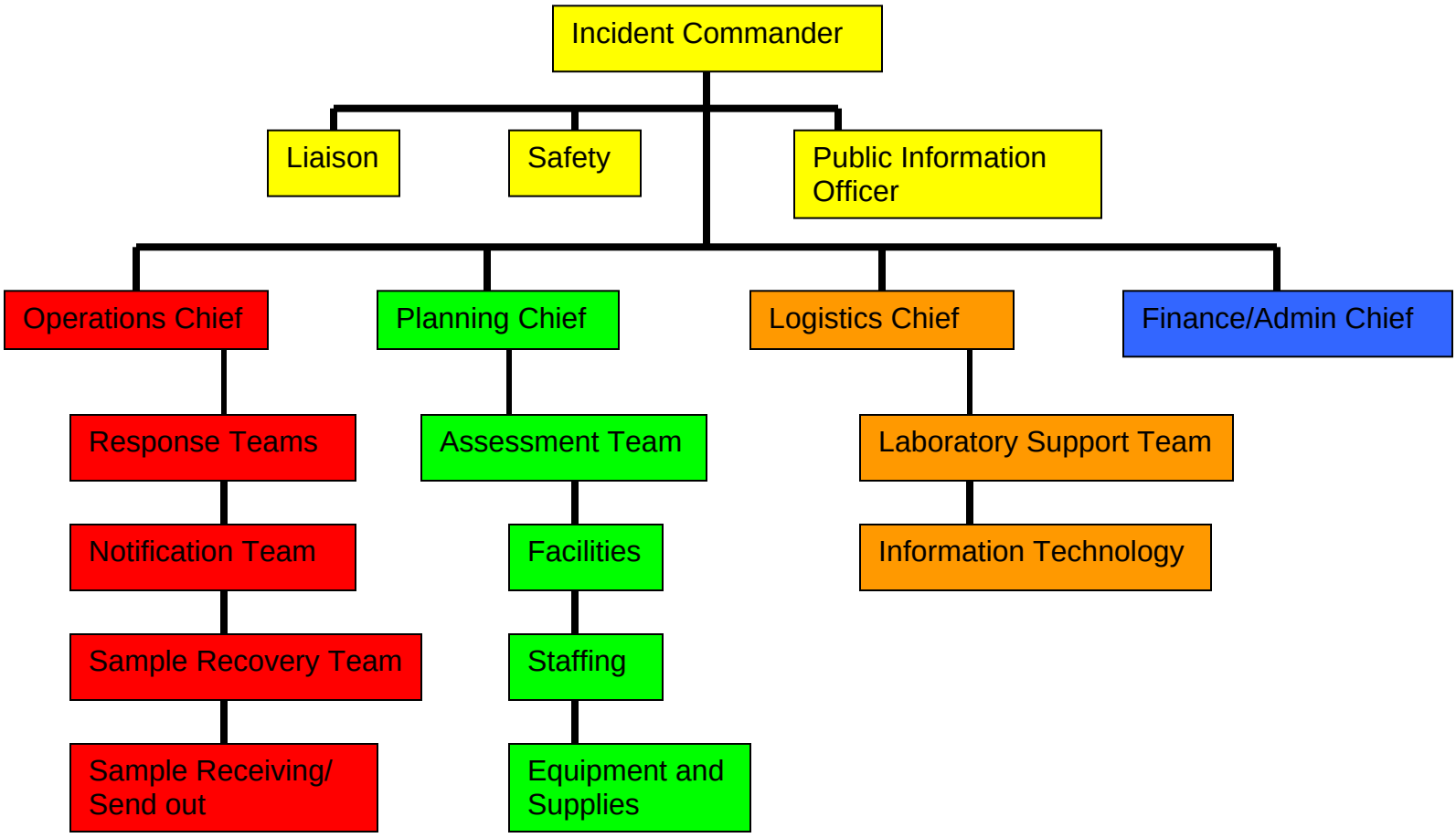
To ensure rapid, efficient notification, the COOP should include the pre-development of a comprehensive contact database with periodically updated telephone numbers and email addresses. This database should be accessible, both electronically and by hard copy, from the laboratory or from any alternative site pre-established for the COOP response. In addition, whenever possible, the messages to be conveyed during the notification process should be pre-determined to avoid delay during an incident. Different individuals on the notification team should be trained to notify specific individuals or groups, using pre-established call down lists or pre-arranged vehicles for mass communication. Training and exercising of the team for this notification process should be done at least annually. Contact Spreadsheets

IX. Incident Command

If an incident causing disruption of the public health laboratory's operation is such that it requires activation of the agency or state emergency operations centers, with implementation of the Incident Command System (ICS), the various COOP response teams should function within that ICS. This is essential to coordinate the overall public health response with the responses of other local, state, and federal agencies. As part of the National Incident Management System (NIMS), the ICS was developed to assist different agencies, jurisdictions and disciplines when necessarily working together to respond effectively to all-hazard emergencies. The benefit of using an ICS is the availability of standardized language and the use of common command and management structures. Since most, if not all, state agencies already have an ICS in place, it should be utilized for responses to incidents that require activation of laboratory COOP.

The various incident response teams recommended for the laboratory COOP must be integrated into the National Incident Management System (NIMS)-compliant ICS of the laboratory's agency. The following chart shows where the COOP response teams would be located. It is not meant to represent all of the additional functions necessary for NIMS compliance.

Sample ICS Chart for the Laboratory



For each of the various incident response teams established for the laboratory COOP, a coordinator should be identified in the planning process. As shown in the chart, each response team, through this coordinator, should report to a specific chief within the ICS structure, i.e., operations, planning, logistics, or finance. During the planning process for the COOP, the laboratory should also identify COOP activation manager and a general command staff, as shown in the above chart, with appropriate Job Action Sheets to describe respective roles and responsibilities. A template for a job action sheet is available at this link (Job Action Sheet Template). These various COOP implementation positions should be filled at least three to four deep to accommodate unforeseen absences and the possible need for activation on a 24/7 schedule. All of the laboratory staff with responsibilities within this ICS structure should receive extensive training with periodic exercising. When an incident occurs that may disrupt the laboratory's operation, this ICS should be activated as soon as possible. Additionally, the ICS should be set up to be expanded or contracted, depending on the scope of the incident and its impact on the laboratory's operation, as determined by the COOP assessment team. Different public health laboratories may have more or fewer positional boxes than those illustrated in the ICS chart shown in these

guidelines. Whatever they are, the various positions should interact according to ICS standards.

X. Identification of Essential Laboratory Activities

A fundamental part of the COOP is identification of the laboratory's core essential activities. These are the public health-related activities that must be continued if the laboratory's operation is disrupted by some unusual incident. Once identified, these essential activities must be prioritized according to their public health importance and time sensitivity. Time sensitivity refers to how long an activity can be delayed without negatively impacting public health. The process of identifying and prioritizing these core activities is important for the following reasons. First, if normal laboratory operations are disrupted by an incident and continuation of some or all of its usual activities becomes impossible, it is essential to know in advance which activities can be suspended and which must be continued, perhaps at an alternative location. Second, in considering which core activities to continue, it is critical to know which ones have the highest priority based on time sensitivity. Third, if an alternate laboratory is required to ensure continuation, the requirements for all the activities to be transferred must be clearly defined in terms of tests, methods, volumes, and resources. This requirement-based information is fundamental to the process of pre-identifying potential alternate laboratory facilities. Identification of the core activities and selection of these alternative laboratories are directly related in the COOP.

Categorization of laboratory activities. To identify the core activities, it is initially helpful to group all of the laboratory's analytical and support functions into overarching categories. Depending on the particular laboratory's operation, these broad categories may include the following, among others:

- Infectious disease
- Environmental health
- Newborn screening
- Food safety
- Laboratory support

Subdivision of categories. The next step in identifying core laboratory activities is to create subdivisions within the overarching categories. These subdivisions are used to group the laboratory's activities into those that are essential, and therefore must be continued, and those that are nonessential, which may be suspended. The nature of these subdivisions, or whether they are even necessary, depends upon the particular overarching category. For example, if all of the laboratory activities in the newborn screening category are considered essential, then subdividing this overarching category into smaller units to reveal essential and nonessential activities is unnecessary. The same may be true for an overarching category like environmental health. If all the routine testing of

environmental samples is essential but readily outsourced to laboratories with comparable analytical capabilities and capacities in the private sector, then subdivision of this broad category may be helpful only to determine which alternate laboratory to use for particular kinds of analytical methods. In contrast, within a broad overarching category such as infectious disease, there may be both essential and nonessential activities that need to be identified. For example, while activities related to the subtyping of microbial isolates for early detection of infectious disease outbreaks may be essential to public health, some of the routine reference testing done in the public health laboratory may be nonessential. By effectively subdividing an overarching category like infectious disease, the process of differentiating between essential and nonessential activities becomes more manageable.

Prioritization of essential activities. Once the laboratory's essential activities have been identified, they must be prioritized. Depending on the nature of the incident causing a disruption of the laboratory's operation, it is possible that only some of the essential activities can be continued. It is therefore critical to know which have the highest priority. This prioritization should be based on time sensitivity and the public health impact if the activity is NOT continued during the disruptive event. Each essential laboratory activity should be rated as follows:

- Tier 1 – Highest priority = most time sensitive
- Tier 2 – Medium priority = less time sensitive
- Tier 3 – Lowest priority = least time sensitive

Procedure to identify and prioritize core activities. The overarching category of infectious disease can be examined as a model to identify and prioritize the core activities of the public health laboratory. While other approaches, or variations of this approach, can be used, the outcome should be the same. The laboratory's essential core activities should become clearly identified and appropriately prioritized to guide COOP action.

For the infectious disease category, various subdivisions are possible. These may include the kind of microbial agent, the kind of analytical tests, or the nature of the laboratory program, i.e., enteric diseases, sexually transmitted diseases, or invasive diseases. Other subdivisions may also be used. As a guide, one approach for subdividing the infectious disease category would be as follows:

- First, subdivide the overarching category into the kinds of microbial agent
- Second, divide each kind of agent into specific pathogenic conditions
- Third, divide each condition into specific tests or general methods
- Fourth, evaluate the activities listed to identify essential and nonessential
- Fifth, prioritize each essential activity as tier 1, 2, or 3.

The data required to compose a comprehensive list of all the laboratory's activities may be acquired from the laboratory's Guide to Services, if available, or from its Manual of Standard Operating Procedures. A guide to subdividing the infectious disease category using this scheme is described in the following Table:

Identification of Essential and Nonessential Laboratory Activities				
Overarching Category	**Kind of Agent**	**Pathogenic Condition**	**Specific Test or Method**	**Essential (E) or Nonessential (NE)**
Infectious Disease	Bacterial	Tuberculosis	Drug sensitivity testing	E
			Diagnosis	E
			Gen-Probe	E
			Biochemicals	NE
			HPLC	NE
			Confirmation	E
		Enteric Diseases	Diagnosis	NE
			Outbreak Detection	E
		Sexually Transmitted Disease	HIV diagnosis	NE
			HIV molecular subtyping	E
			Syphilis confirmation	E
	Viral	Influenza	Routine diagnosis	NE
			Subtype surveillance	E
			H5N1 identification	E
		Encephalitis	West Nile	NE
			Herpes	NE
		Rabies	All activities	E
	Fungus		All activities	NE
	Parasitology		All activities	NE
	Environmental Samples		All activities	E
	Weapons of Mass Destruction		LRN Assays	E

Description of required tasks and resources. For each essential laboratory activity identified and prioritized in the COOP, the specific tasks required to conduct the activity and the resources needed to do so must be clearly described. This description should include specific testing protocols, laboratory support, numbers of samples or specimens, and accessioning/reporting requirements. Such information is critical in determining whether or not the laboratory's core public health activities can be continued within the facility that is being threatened or impacted. This information about specific requirements is also of critical value if an essential activity has to be transferred to an alternate

laboratory site. This information defines what requirements have to be met for an alternate site to be considered during the process of COOP activation.

XI. Identification of Alternative Laboratories

The COOP must include a pre-arranged plan to ensure continuation of the laboratory's highest priority, core public health activities. This requires identifying and engaging alternative sites where these functions could be carried out if the public health laboratory is unavailable following a major disruptive event. While the laboratory activities considered nonessential can be suspended in this situation, all of the essential activities must be accommodated. This accommodation involves either outsourcing these essential activities to some other qualified laboratory, or relocating the public health laboratory staff and the essential activities to another appropriate facility. Where to outsource such essential activities, depends on the kind of activity and its associated requirements. If the essential activities involve routine diagnostic testing of specimens for microbial agents, or analysis of environmental samples for hazardous chemicals, they may be outsourced to laboratories that already carry out these activities. In comparison, if the essential activities are those done only in public health laboratories, such as subtyping microbial isolates to detect outbreaks or responding to emergencies as part of the nation's Laboratory Response Network (LRN), then outsourcing has to be directed to a qualified public health laboratory. Regarding the relocation of both public health laboratory staff and essential activities to another facility, this would require the availability of adequate space, in terms of dimension and safety, as well as the availability of usable equipment. Such laboratory facilities may be found within universities or state and local public health laboratories.

To identify alternative laboratories, either for outsourcing or relocating, many questions need to be considered. Examples include the following:

- What core functions need to be transferred to the alternate laboratory?
- What are the test volumes that will need to be accommodated?
- Is the alternative laboratory's capacity for the function sufficient?
- What resources are needed to conduct the core functions transferred?
- Will the alternative laboratory receive specimens/samples directly?
- Will the alternative laboratory retain or return the tested specimens?
- What test methods will the alternative laboratory be using?
- How will the test results be reported, electronically/telephone/paper?
- What will be expected turn-around times for acquiring laboratory results?
- How will the specimens/samples be transported to the laboratory?
- Does the alternative laboratory have the required certifications?
- Does the alternative laboratory have the necessary security?
- Is the alternative laboratory LRN and Select Agent approved?

- Can chain-of-custody of samples/specimens be maintained?
- Are there liability issues to address?
- Are there any risks to using a particular alternative laboratory?
- What are the advantages/disadvantages of using a particular laboratory?
- What financial arrangements will be necessary?
- Is the availability of the alternative laboratory limited by length of time?

The COOP should identify alternative laboratories that are both geographically close and distant. While the proximity of alternative laboratories is logistically advantageous, an event causing disruption of the public health laboratory may be community-wide or even regional in scope. Consequently, pre-planning should include identification and engagement of alternative laboratories distant from public health laboratory's location.

For each identified alternative facility, a robust database should be developed to include all the information needed to assist the COOP notification team in making emergency contact and beginning the process of transferring essential core public health laboratory activities. This database should include frequently updated names, telephone numbers, and email addresses of all the key persons to be contacted at each alternative laboratory. In addition, the database should include detailed information regarding each alternative laboratory's analytical capability and capacity, as well as information regarding all pre-arrangements established for the process of outsourcing or relocation.

XII. Arrangements for Assistance

An effective COOP requires that clearly defined, well documented arrangements be made with each alternative laboratory agreeing to assist if the public health laboratory becomes threatened or disrupted. Such arrangements may include different types of formal agreements. The agreement used will depend on the nature and duration of the assistance requested and the legal and policy issues that must be considered by the institutions involved. While such formal agreements are difficult to construct, because they have to accommodate the statutory and policy requirements of differing jurisdictions and institutions, they are nevertheless essential to ensure the timeliness of assistance in the face of an unexpected emergency. The following are examples of assistance agreements.

Memoranda of Understanding (MOU). This may be used for short term assistance for defined services. No funds may be involved in this type of assistance.

Memoranda of Agreement (MOA). This may be used for long term assistance for defined services and set funding.

Contracts. These often involve routine assistance for long term timeframes. Funding is established.

Purchase Orders (PO). These documents constitute a legal offer to buy products or services with agreed on prices. POs are issued by a buyer to a seller and constitute a once-off contract once accepted by the seller.

Emergency Management Assistance Compact (EMAC). This is an interstate mutual aid agreement for use during emergencies and disasters that provides a mechanism for sharing personnel, resources, equipment and assets.

XIII. Pre-Positioned Supplies and Workstations

The COOP should prepare for the possibility that the public health laboratory facility may be unavailable for any work-related use during an incident. If that occurs, there needs to be a pre-determined, off-site location from which the response teams can assess the situation, make notifications, and conduct other business related to the laboratory's displacement. Such a pre-determined workstation should have on-hand all the necessary basic office supplies and equipment to conduct the work that may be required. In addition, since it may be necessary to send laboratory samples and specimens out to alternative laboratories from this location, the workstation should include an inventory of all the materials needed for their proper packaging and shipping. In developing the COOP, the number, type and location of the workstations needed should be determined. An inventory of equipment and supplies for each location and workstation should be readily accessible at any time. An example of an inventory sheet is shown in the following Table (Workstation Inventory). Once the inventory is complete, the indicated supplies and equipment should be pre-positioned, when feasible. If this cannot be done, a plan should be in place to rapidly deploy whatever items are necessary.

If the public health laboratory has another-site location within its jurisdiction, which can be used as an alternative laboratory, it will be necessary to pre-deploy all the required equipment, supplies and reagents to that location.

Description	Quantity	Type	Time Needed
SUPPLIES FOR LABORATORY RECOVERY TEAM MEMBERS			
Computer			
Printer			
8-1/2” x 11” paper			
Fax machine			
Photocopier			
SUPPLIES FOR CLINICAL ACCESSIONING (SAMPLE RECEIVING)			
Computer			
Internet			
Barcode reader			
UN 3373 boxes			

XIV. Preparation and Storage of “Go-Pack”

In the event of an emergency that requires the implementation of the COOP, access to the public health laboratory building may be impossible. Important data located on the laboratory’s servers may not be available for hours or days. Therefore, it is essential that any critical data needed for activation of the COOP be stored at an off-site location for ready access. To store these data, a “go-pack” should be prepared and kept in an easily accessible location. This pack should contain all of the necessary documents to activate and implement the COOP. In addition to a hard copy of the COOP, it should contain an electronic copy on a jump drive. In addition to the Plan, the pack should contain the necessary contact information for all of the staff, clients, couriers, alternate laboratories, vendors, and emergency management personnel, among others. It should also have key contact information for APHL and CDC, as well as any relevant standard operating procedures needed to carry out COOP activities. To ensure availability, this information may also be stored on an external website.

XV. Training and Exercises

Training and exercising the public health laboratory COOP is an essential part of its development. It is critically important to familiarize staff with the roles and responsibilities they have been assigned to activate and implement the COOP. This will enable them to act quickly and efficiently during any unexpected disruption of normal laboratory operations. To ensure that laboratory personnel are familiar with and prepared for implementation of the laboratory COOP, as an integral part of the agency COOP, an appropriate laboratory education and training component should be incorporated into the existing agency-wide COOP training program. Employees of the laboratory, as well as those in other parts of the agency, should receive training about agency COOP implementation as part of their new employee orientation and then, at a minimum, annually, or as needed if significant changes are made in policies or procedures.

Exercise plans for the laboratory COOP should include drills that focus on specific aspects of the plan, such as assessment, activation, and notification. Real events serve as real exercises. When real events or exercises are over, complete After Action Reports should be developed and analyzed to identify procedural gaps and problems that need to be addressed to improve the COOP. Because the laboratory and agency COOP should to be integrated, exercising of both should also be integrated.

XVI. Annual Updates and Review

The public health laboratory COOP should be viewed as a living, changing document. To be most effective, it must contain up-to-date information. It, therefore, should be updated on a regular basis or at least annually. Contact information should be updated immediately, whenever there is any change. When changes are made in the COOP, it is imperative that all the distributed copies reflect all of the same changes with appropriate dates and signatures.

The COOP should be reviewed during the annual exercise and in conjunction with each After Action Report. As a result of a well designed review process, all significant issues and problems that are identified should be subjected to a rigorous remedial action process to make all the necessary revisions.