

**DRAFT** INCIDENT ANNEX: Infectious Disease Annex

Version 1.0

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## Record of Changes

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| **Revision Date** | **Name or Recorder** | **Sections Changed** | **Summary of Change** |
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## ACRONYM LIST

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| **Acronym** | **Definition** |
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## Emergency Contacts

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| --- | --- | --- | --- | --- |
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# Introduction

In today’s globalized society, emerging and acute infectious diseases are easily transported and transmitted globally. Maryland remains a hub for international travel, commerce, and tourism. The state also has proximity to the Nation’s Capital, a region with high amounts of international travelers.

Maryland has a comprehensive health care system serving rural and metropolitan areas. Patient care is provided through an interconnected delivery system of pre-hospital, hospitals/specialty hospitals, home care, long term care and ambulatory care.

During the Ebola Virus Disease outbreak of 2014, Maryland established a tiered approach to infectious disease health care facilities with Ebola Treatment Centers, Assessment Hospitals and Front-Line Hospitals. One hospital – The Johns Hopkins Hospital is designated as one of ten, National Ebola Regional Treatment Centers. This initial infrastructure provided the foundation for delivering patient care to patients with an infectious disease.

Previous infectious disease incidents including H5N1, H1N1 and the outbreak of COVID-19 have provided lessons learned for the development of this Annex. This plan is intended to provide a framework for the Maryland Region V Emergency Preparedness Coalition response to a communicable disease.

## 1.1Purpose

The purpose of this plan is to provide regional stakeholders with planning guidelines for responding to the spread of a communicable disease, in a coordinated means. This plan also provides a concept of operations and planning guidelines for a coordinated regional response.

Specifically, the purpose of the plan is to:

* Support the Region V Emergency Preparedness Coalition Medical Surge and Response Plans by providing regional guidance to protect and provide appropriate infectious disease medical care during an outbreak.
* Describe the decision-making structure to be used to determine healthcare and coordination of local health department response actions and priorities.
* Describe procedures for creating or updating protocols for patient placement, movement, and care.
* Describe procedures for sharing and/or prioritizing scarce resources.
* Define roles and responsibilities for healthcare, the Maryland Region V Health Care Coalition, local health departments, local response agencies, emergency management, community, non-governmental, and local, state, federal partners in an acute infectious disease response in the region.
* Describe procedures for communications and coordination among public health, healthcare agencies and other local partners during a response.
* Describe procedures for the coordination of local healthcare system planning and response efforts to respond to an acute infectious disease outbreak.

## 1.2 Scope

This Region V Infectious Disease plan is an Annex to the Medical Surge and Response Plans and is applicable for any incident in which an

individual or population with confirmed or suspected acute infectious disease is present. This plan outlines the concept of coordination and operations for incidents wherein the complexity or duration requires regional coordination of information, resources and/or response activities. This plan is not applicable for the routine management of infectious diseases such as tuberculosis, foodborne illness, and other sexually transmitted diseases (STDs) within our community, unless the situation requires urgent regional coordination.

The information in this plan applies to the roles and responsibilities of healthcare organizations (including but not limited to hospitals, ambulatory care, long-term care, home health/home care, and support services) and the relationship of healthcare organizations with other emergency preparedness partners. It includes a general concept of operations for the response to acute infectious disease patients. During an infectious disease outbreak, the Maryland Department of Health will serve as the Emergency Support Function 8 lead, while the Region V Emergency Preparedness Coalition serves to support health care agency operations within their jurisdictional region.

This plan is compatible with federal, state, and local emergency response plans, promotes the coordination of an efficient and effective response by utilizing the concepts outlined in the National Incident Management System (NIMS) and it establishes common goals, strategies and terminology with other regional and local plans (See References). This annex is intended to supplement, not supplant, any individual health care, public health, or emergency management agency’s existing plans/policies or standard operating procedures, including health care facility infectious disease emergency plans.

This plan applies to:

• Acute infectious disease response to any new, emerging, or severe infectious disease situation that goes above and beyond routine infectious disease investigation, coordination, and response; and likely requires significant multi-agency response.

• Healthcare organizations, Maryland Region V Health Care Coalition, local health departments, and all partner agencies with whom there are established memoranda of agreement, procedures, or protocols for acute infectious disease incidents.

• Acute infectious disease incident within or impacting Maryland Region V.

## 1.3 Overview/Background of HCC and Situation

The threat of a widespread infectious disease outbreak in Region V Emergency Preparedness Coalition is high. This is evident through previous outbreaks such as H5N1 and H1N1 and through the COVID-19 pandemic that continues to severely impact every region in the state of Maryland and the United States. The Region V Emergency Preparedness Coalition encompasses Prince George’s, Montgomery, Charles, Calvert and St. Mary’s counties and constitutes 2,329,307 people and is situated in Southern Maryland and neighbors Washington D.C. and the National Captiol Region (NCR). Maryland Region V Emergency Preparedness Coalition is positioned near 3 international airports. The Region V Emergency Preparedness Coalition is comprised of many healthcare agencies that all have a stake in infectious disease preparedness and response planning.

The type of response required from Healthcare Coalitions is dependent upon the type of infectious disease or special pathogen in question. An infectious disease that is novel, like COVID-19, may require a rapid and coordinated public health response while a known infectious pathogen may have existing countermeasures that pose their own set of response and treatment challenges. While there are many ways that an infectious disease may be introduced to a population, the method of transmission and communicability shapes the nature of the public health response. Respiratory diseases, such as influenza and COVID-19, spread quickly via respiratory droplets requiring airborne and/or droplet precautions while hemorrhagic fevers such as Ebola Virus Disease (EVD) are spread through bodily fluids and necessitate strict guidelines for patient care. Other diseases may be transmitted through sexual contact or may be vector-borne. Disease transmission and communicability, containment, treatment, and even public and political concern all prompt various planning considerations by healthcare agencies in Maryland. Regardless of the infectious disease emergency event, the Region V Emergency Preparedness Coalition acts as a regional supporting body that may congregate a forum of healthcare partners to share incident information and distribute and manage resources that may be required to support an active infectious disease response. The aforementioned roles have been especially critical during the COVID-19 pandemic. The Region V Emergency Preparedness Coalition maintains a cache of personal protective equipment (PPE) that may be used to aid partner agencies in an infectious disease response. Those resources are outlined in the table below:

Table 1. Insert Coalition Name Here PPE Cache

|  |
| --- |
| PPE Material |
| Will update once all COVID Supplemental PPE is received |
|  |
|  |

During an infectious disease response, the Healthcare Coalitions in Maryland function within an established state and federal special pathogen infrastructure. The Maryland Department of Health (MDH) and the Office of the Assistant Secretary for Preparedness and Response (ASPR) created a novel pathogen treatment structure within the state of Maryland as a method to designate frontline, assessment, and treatment facilities for care of patients infected with Ebola Virus Disease (EVD) or other special pathogens (i.e., emerging and/or highly infectious disease such as Lassa Fever, MERS, category A agents, BSL 4 pathogens, etc.). There are two Ebola/special pathogen treatment hospitals in the state of Maryland, and they are: Johns Hopkins Hospital and University of Maryland Medical Center. There are five Ebola/special pathogen assessments hospitals in Maryland, one in each designated region in the state. Those assessment hospitals are Anne Arundel Medical Center (Region III), Frederick Health Hospital (Regions I & II), Holy Cross Hospital and MedStar Southern Maryland Hospital Center (Region V) and TidalHealth Peninsula Regional Medical Center (Region IV). The remaining hospitals in Maryland are considered frontline Ebola/special pathogen facilities. All hospitals in Maryland are expected to be able to identify the signs and symptoms of a patient infected with a special pathogen, isolate the patient, and utilize appropriate ~~personal protective equipment~~ (PPE), and inform the local health department and MDH. All hospitals should also have systems in place to properly manage waste disposal, cleaning, and disinfection. Each hospital designation comes with its own set of specific criteria and responsibilities as outlined in the Table Two below.

*Table 2. Maryland Tiered Hospital System for Patients with Symptoms of Highly Infectious Special Pathogens*

|  |  |  |
| --- | --- | --- |
| Novel Pathogen Designation | Hospital Facilities | Roles & Responsibilities |
| Treatment | * Johns Hopkins Hospital * University of Maryland Medical Center | * Safely receive and isolate a patient with confirmed EVD; * Care for a EVD patient for the duration of illness; * Have enough PPE for at least 7 days of care; * Have a sustainable staffing plan in order to manage several weeks of care; and * House CDC experts if needed. |
| Assessment | * Anne Arundel Medical Center * Frederick Health Hospital * Holy Cross Hospital * MedStar Southern Maryland Hospital Center * TidalHealth Peninsula Regional Medical Center | * Safely receive and isolate a patient with possible EVD; * Provide quick laboratory evaluation and coordinate EVD testing; * Care for a patient with possible EVD for up to 96 hours until an EVD diagnosis is confirmed or ruled out; * Have enough PPE for up to 96 hours; and * Transport a patient with confirmed EVD to an EVD treatment center. |
| Frontline | * All other acute-care hospitals in Maryland | * Quickly identify and isolate a potential special pathogen patient; * Inform the appropriate public health officials; * Have enough PPE for at least 12-24 hours of care; and * Prepare a patient for transfer if needed. |

The Maryland Institute for Emergency Medical Services Systems (MIEMSS) also follows a careful patient transport plan for patients suspected to be infected with a special pathogen. The potential transport of a patient with a special pathogen should be coordinated with assistance from the local health department, MDH, and MIEMSS. When a patient with a special pathogen is identified, the first external point of contact should be the local health department. If unable to reach the local health department, MDH Infectious Disease Epidemiology and Outbreak Response Bureau (IDEORB) should be notified utilizing the daytime telephone number, **(410) 767-6700** or the after-hours telephone number, **(410) 795-7365**. Transport protocol of a special pathogen patient is coordinated by state agencies in conjunction with the sending and receiving acute-care facilities.

## 1.4 Assumptions

This section is to outline assumptions that an HCC will consider when activating this annex of a HCC EOP. The HCC may play a role in facility and jurisdictional situational awareness and preparedness.

* Understanding of the pathogen, infection control, risk factors, clinical care, and patient outcomes will be in rapid evolution.
* The response will be longer than, and require the most integration of, any incident that coalition partners may face and may require virtual coordination mechanisms.
* A brief description of state public health emergency powers and when and why some events may trigger a public health emergency / disaster declaration and others may not.
* Required essential elements of information for healthcare facility submission (e.g., bed availability, ICU availability, ventilator availability, current capacity, etc.) relevant to infectious disease – this may refer to the coalition base plan.
* Planning for integration of or increase use of telemedicine/ telehealth consultations.
* Planning for potential limitations with EMS and transportation.
* Depending on the infectious agent and the scale of the outbreak, it may be necessary to transport some patients to higher levels of clinical care.
* Public health agencies have an overall responsibility for epidemiologic investigations, contact tracing, and the issue of any social distancing, isolation, and quarantine orders according to state laws as well as for issuing overall guidance on infection prevention and control precautions.
* Staffing at coalition healthcare facilities may be challenged by illness, fear of illness, or family obligations (e.g. child/family care if schools are out). Healthcare workers are a high-risk population during most infectious disease incidents; the implementation of effective infection prevention measures and associated training are necessary for workforce protection across the coalition.
* Healthcare facilities and vendors may become overwhelmed with the treatment and disposal of biohazard material; waste management guidance may be modified, as necessary, to support the health and medical system while maintaining safe handling and transport.
* Supply chain and delivery issues will occur and may have dramatic effects on clinical care.
* The coalition should plan to request, receive, and distribute Strategic National Stockpile (SNS) assets in accord with jurisdictional public health and emergency management processes, including personal protective equipment (PPE), ventilators, and medical treatment (e.g., antitoxin for anthrax).
* There is, at present, no known cure or vaccine for most emerging infectious diseases; treatment for patients consists mainly of supportive care. If vaccines or treatments are available, their allocation and distribution may involve significant logistics operations.
* Comprehensive and well-coordinated public health control and community mitigation strategies (e.g., mask-wearing, contact tracing, individual vaccination, quarantine and/or isolation, community-wide cancellation of events, visitation policies) remain the primary methods for controlling and stopping the spread of infectious diseases.
* Roles and responsibilities of agencies and organizations will change depending on the severity and spread of the infectious disease incident and the respective level of activation by impacted jurisdictions.

# 2. Concept of Operations

## 2.1 Activation

The decision to activate this Annex will be based on coordination and approval of the Coalition Chair/Co-Chair and/or Coalition Emergency Management Staff. Activation may be based on a tiered approach focusing on situational awareness, alerts and notifications, and/or deployment of resources and active management of personnel.

Sample Activation Status

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Code** | **Health care facility Status** | **Health care facility capacity/resources** | **Level of Media Attention** | **Impact on hospitalizations** |
| Green | Usual day-to-day | Normal | Low-Medium | None in continental U.S. |
| Yellow | Local resources/existing agreements | Heightened/local coordination | Medium-High | Present in U.S. |
| Orange | Assistance from HCC | Coordination required | High | * 1 or more Ebola-like cases * 1 or more SARS/Pandemic Influenza cases |
| Red | Requires assistance beyond HCC resources | HCC coordination required | High | * 5 or more Ebola-like cases * 10 or more SARS/Pandemic Influenza cases |
| Black | Significant assistance from outside agencies | Significant State/National Coordination (may witness lack of HCC resources due to members returning to respective agencies) | High | * 10 or more Ebola-like cases * 100 or more SARS/Pandemic Influenza cases |

## 2.2 Notifications

The Region V Emergency Preparedness Coalition may notify their Coalition through a variety of tools including phone, email or internet-based message boards such as WebEOC. Primary alert notification will be through Everbridge – a mass notification alert system. The Coalition maintains an up-to-date listing of Coalition members and supporting agencies within Everbridge so that all members can be contacted instantaneously.

Everbridge can be utilized to provide initial information and subsequent situational awareness or resource requests based on Coalition needs. *\*See Everbridge operational manual in the Coalition Emergency Operations Plan.*

## 2.3 Roles and Responsibilities/Concept of Coordination

The Region V Emergency Preparedness Coalition primary responsibility is to provide communication and support resource request needs through Coalition assets, or via requests to Coalition members. The Coalition is a volunteer-based organization with [insert number] fulltime staff members. *\*See Coalition EOP for general roles and responsibilities during a disaster.*

During an infectious disease outbreak, the following Coalition positions may be filled [insert description of role/responsibility for staff and agency]:

* Coalition Chair: Activate Infectious Disease/Response Plans
* Coal Co-Chair: Activate Infectious Disease/Response Plans
* Coalition Coordinator: Provide situational awareness to coalition members
* Coalition Medical Advisor
* Maryland Hospital Association Support Staff (Director, Planner, Educator, Logistician):

Local Health Department:

State Health Department: Provide guidance on policies and procedures

MIEMSS:

Local/State Emergency Management Agency:

State Laboratory:

Hospital/Health System:

Testing Center:

## 2.4 Operational Mission Areas

The Region V Emergency Preparedness Coalition actions are ordered into mission areas with aligned objectives and strategies to guide the Coalition during an infectious disease response. Based on the complexity of an infectious disease outbreak and available resources, these guidelines may be revised to meet Coalition member needs, or those of local, state or federal agencies.

**Mission areas include**:

Epidemiology and Surveillance

* Collect, analyze, and interpret critical information and inform Coalition members decision making, and resource needs. Public Health will provide contact tracing as a public health measure.

Supply Chain, Supplies, Personal Protective Equipment

* Communicate and support resource needs for Coalition members including deployment of Coalition PPE and assets

Patient Care and Patient Surge Management

* Maintain support for patient care throughout the duration of the infectious disease outbreak to include planning for surge management.

Community-based Testing

* Provide information and resource support to community-based testing

Patient Transport

* Coordinate the safe movement of Persons under Investigation or infected persons
* Ensure transport staff are protected while transporting patients

Mass Fatality

* Support the proper recovery, handling, transportation, tracking, storage and disposal of human remains

### 2.4.1 Surveillance and Monitoring

Goal: To facilitate the collection, analysis, and interpretation of critical information and inform Coalition members.

Objectives:

1. Public Health will rapidly identify and investigate cases including number, geography, and severity of impacted populations and communities via multiple modalities such as contact tracing.
   1. Send out health alert: what to report, how to test for pathogen, how to communicate with MDH
   2. Synthesize info, input epidemiological information into database
   3. Geographic Information System (GIS) mapping
   4. Identify severity of illness; hospitalizations, ICU admissions, ED visits
   5. Determine scope of problem (how far-reaching, geographic area, age group, rate of transmission, projected impact of disease)
   6. Implement active surveillance if necessary
   7. Rapidly investigate unusual occurrences/anomaly
   8. Coordinate with public health lab
      * Establish testing criteria
      * Educating providers/laboratories on testing criteria
      * Enter positive testing results into database
   9. Active case investigation (EVD, SARS)
   10. Analyze complementary surveillance systems, e.g. syndromic surveillance, coroner database
2. Obtain, analyze, and interpret essential elements of information
   1. Identify risk factors (e,g, behavior, age, demographics)
   2. Identify populations at risk
   3. Synthesize info, input epi information into database
   4. GIS mapping
   5. Healthcare resource data risk assessment: hospital beds, ventilators, ICU cases, ED diversion, EMS counts – 911, ambulance runs
3. Monitor and evaluate emergent disease response outcomes
   1. Establish disease prevention/control efforts
      * Establish need to develop non-pharmaceutical intervention
      * Establish personal/behavioral interventions if necessary
   2. Provide community/provider health information
   3. Monitor case counts to determine effectiveness of intervention e.g. NPI, isolation, quarantine
   4. If necessary, reassess intervention based on data

Key Assumptions

* Contact tracing will be possible in low and moderate health care burden scenarios
* Maryland Department of Health will not have testing capability for most new diseases
* Prior to emergency activation, the Maryland Department of Health will oversee all epidemiological and surveillance activities

### 2.4.2 Safety and Infection Control and Prevention

Goal: To identify and recommend appropriate infection control strategies, guidance and standards for an infectious disease outbreak to be utilized by the Coalition members.

Objectives:

1. Define appropriate infection control guidance for the healthcare system
   1. Develop, deconflict, and disseminate guidance on restricted access to healthcare facilities/emergency departments
   2. Develop, deconflict, and disseminate information on patient visitation
   3. Ensure “One Voice” messaging is active
   4. Provide specific information on disinfecting/safety procedures, including type and level of disinfectant; deconflict State and Federal Guidance as necessary
   5. Provide tools/resources to support hospital admin decision making
   6. Provide deconflicted, cohesive, tiered guidance on:
      * PPE
      * Workplace practices
      * Facility infrastructure
      * Waste Management
      * Standardization of care
      * Precaution options (tiered for facilities and capacity)
   7. Provide guidance on healthcare vendors
      * Waste vendors
      * Linen care
      * Delivery
      * Points of access
      * Approved PPE Vendors
2. Distribute infection control guidance to all applicable entities
   1. Utilize Health Alert Network (HAN)
   2. Distribute information broadly to healthcare Infection Preventionists; ensure information is consistent and implemented by “One Voice” messaging
   3. Provide editable templates for epidemiological surveillance
   4. Provide regular Clinician Outreach and Communication Activity (COCA) and MDH conference calls to discuss any changes in guidelines and state of outbreak
   5. Ensure guidance documentation is out before conference calls/discussions so hospital staff has time to review, discuss, and ask questions
   6. Direct messaging to multiple healthcare provider groups, including Emergency Managers, Infection Preventionists, Safety Officer, Occupational Health, etc.
3. Work with facilities to train staff in appropriate infection control measures
   1. Define clinical concern levels – categorize risk
   2. Send teams/resources/supplies for training as needed
   3. Define minimal training expectations for healthcare facilities (frequency, staffing groups, and delineate by healthcare facility – clinics, hospitals, etc.)
4. Develop guidance for appropriate engineering controls and surge modification of facility infrastructure (e.g. Patient Care Areas, Alternate Care Sites, and Waste Treatment areas)
   1. Analyze facility needs according to EID event and surge type
   2. Deconflict and distribute guidance based on risk assessment & regulatory agencies, specifically for space/size and waste management, including MDH, fire marshal
   3. Develop guidance for isolation areas (EVD)
   4. Develop guidance for utilization of all purifying respirator & negative pressure isolation (SARS)
   5. Manage overwhelmed ED capacity for large influx of worried well (Pandemic Influenza)
   6. Provide guidance for utilization of offices and operating rooms for isolation rooms (Pandemic Influenza)
   7. Triage patients outside (Pandemic Influenza)
5. Provide guidance for facility workflow, safe patient care, and healthcare worker safety
   1. Develop and disseminate guidance/protocols on movement of patients in/out of healthcare treatment areas
   2. Assist with Business Continuity Planning at healthcare facilities
   3. Define MDH roles for providing quarantine and isolation guidance
   4. Veterans Affairs (VA) has VA specific Federal Medical Station; leverage VA information
   5. Coordinate Risk Management and Health Facilities Inspection Division
   6. Facilitate bed limit waiver with federal/ state regulatory agencies

Key Assumptions

* Infection control guidance will be available from federal and state authorities
* Guidance from state and federal regulatory agencies may not be consistent
* No quarantine space will be available within outpatient facilities
* Facilities have practical surge modifications of their facilities established
* Pandemic Influenza would result in rapid breaking point for healthcare facilities
* Early inclusion and involvement of MDH will improve Infection Control Practices and ultimately lead to improved disease control outcomes and health consequences
* A delay in approval of alternate systems or sites of care by regulatory agencies will negatively impact ability of healthcare facilities to provide care to infected individuals

### 2.4.3 Non-Pharmaceutical Interventions

Goal: To control the spread and limit the effects of disease

Objectives:

1. Recommend personal protective actions (i.e. hand washing, cover coughing, or avoidance of crowds) as appropriate
   1. Community protective actions (i.e. closures of schools, churches, special events, and other congregate settings) as necessary
      1. Public transport guidance
      2. Special events/mass gathering (sporting events)
      3. Public space (schools, churches)
      4. Disseminate travel advisories based on existing federal/state guidance
2. Support activation of quarantine operations (EVD, SARS)
   1. Health Officer order for restriction of movement if necessary
   2. If necessary, quarantine Case Contacts
   3. Evaluate effectiveness and feasibility of interventions
3. Isolate confirmed cases and identify and quarantine contacts
   1. Issue Health Officer order for restriction of movement if necessary
   2. If necessary, coordinate with affected hospital/healthcare facility(ies) to ensure clear understanding of responsibilities and steps needed for isolation of infected case(s).
      1. Ensure close coordination between:
      2. Attending physician
      3. Hospital Outreach Unit (HOU) member
      4. Facility administrator
      5. Public Health Investigation (PHI)
   3. Ensure healthcare facilities have capability and resources in place to follow/execute isolation protocols
      1. If concerns regarding facility capability, alternative actions should be considered, including transfer of patient(s) to alternative facilities
   4. Evaluate effectiveness and feasibility of interventions
4. Monitor health status of persons in isolation and quarantine
5. Coordinate internal and external communications for a unified message.

Key Assumptions

* The isolation of infected individuals within healthcare settings is part of standard disease control practice and will continue throughout the response phases as beds are and become available
* The expansion of isolation activities to streamline available healthcare resources is a viable operational course of action
* Following activation, non-pharmaceutical intervention will be coordinated and executed by respective County and/or city Operation Centers to meet approved objectives
* As the situation potentially escalates, a range of potential courses of action and contingencies will be considered and ordered by the Incident Commander in order to meet the operational objectives
* The first case(s) will be identified by private medical provider(s)
* Private provider will notify and consult with Department in decision to treat and isolate early case(s)
* Symptoms and travel history will be the primary metric in determination of isolation
* Orders of Isolation and Orders of Quarantine:
  + Most hospitals have infection control plans in place and are expected to willingly cooperate and comply with MDH isolation instructions
  + Most affected cases and contacts will voluntarily comply
  + Issuance of orders will include close coordination between attending physicians, hospital administrators and MDH
  + The decision to implement isolation, quarantine, or other legally enforceable control measures is a medical decision of the Health Officer, or his/her physician designee(s). The Health Officer must base this decision upon medical or scientific evidence that a threat to the public’s health exists.

### 2.4.4 Surge Staffing/Emergency Staffing

Goal: Ensure adequate health care staff are available to meet surging demand during an Infectious Disease outbreak.

Objectives:

1. Support readiness plans in place at all healthcare agencies and facilities, including both clinical and non-clinical staff that last throughout course of EID event
   1. Assess healthcare system staff needs
   2. Deconflict, develop and disseminate information to healthcare system regarding staff risks; set realistic expectations of MDH role
   3. Provide timely, accurate, regular updates to healthcare system regarding biosurveillance reporting. Ensure healthcare facilities have up to date outbreak info.
   4. Pre-designate staff in charge of making ethical decisions while providing care
   5. Facilitate credentialing of healthcare staff as appropriate (SARS/Pandemic Influenza)
2. Coordinate the fulfillment of critical staffing resources throughout the course of an EID event
   1. Activate EOCs to assist with surveillance of staffing ratios
   2. Deconflict, develop, disseminate staffing guidelines to healthcare facilities
   3. Establish communication with healthcare facilities regarding staffing needs and facility status
   4. Leverage mutual aid
   5. Coordinate using alert system (SARS, Pandemic Influenza)
   6. Deconflict, develop, disseminate unified Crisis Standards of Care (Pandemic Influenza)
   7. Provide cross-training and/or JIT training to providers as necessary
3. Facilitate the request for relaxation of staffing ratios as necessary
   1. Communicate healthcare system challenges proactively with regulatory agencies
   2. Assist in credentialing and vetting of surge staff
   3. LVNs as RNS (Pandemic Influenza)
   4. Staff to patient ratios (Pandemic Influenza)

Key Assumptions

* EVD-like outbreak scenario will result in more psycho-social impact on healthcare system and staff than actual health impact
* Healthcare system staff may not be able to physically present to facilities
* Crisis Standards of Care may not be available, defined and/or applicable to the EID event
* Exposure to outbreak does not necessarily require quarantine
* Facilities will conduct a self-assessment of critical staffing shortages
* National Disaster Medical System (NDMS) will take up to 72 hours to respond

### 2.4.5 Supply Chain, Supplies, Personal Protective Equipment (PPE)

Goal: Minimize healthcare worker exposure to EIDs through provision of guidance and resources to staff and healthcare facilities.

Objectives:

1. Develop, disseminate and update PPE guidance for healthcare and other appropriate organizations
   1. Conduct risk assessment and analyze risk to healthcare system staff, including non-traditional responders
   2. Formulate best practices: consult guidance from IP group, key departments, and various regulatory agencies based off of existing and anticipated PPE caches
   3. Deconflict delayed/inconsistent guidance disseminated by other organizations: proactively consult with MDH
   4. Disseminate information to healthcare system through redundant systems (Disaster Resource Centers (DRCs), Veterans Administration (VA))
   5. Formulate and disseminate updates to PPE guidance on a timely basis
2. Identify and maintain PPE surge supplies for healthcare organizations
   1. Identify PPE cache, employ inventory management
   2. Identify burn rate of PPE; track system capabilities through communications with healthcare system
   3. Maintain PPE for healthcare staff
   4. Identify PPE sources: Mutual Aid; MOUs with vendors; SNS Stockpiles, EMS suppliers
   5. Coordinate PPE supplies with DRCs
3. Support the training and exercise of PPE, including donning and doffing practices
   1. Identify training needs/resources at facilities via coordination with healthcare system Safety Officers
   2. Match available training resources to available and anticipate PPE caches
   3. Develop Just In Time trainings
   4. Recommend standard respiratory precautions (SARs/Pandemic Influenza)

Key Assumptions

* PPE resources will be catalogued at each facility
* Local healthcare facilities have some stockpiles of PPE and training capabilities.
* Caches of PPE will be available from the SNS
* There will be a central point of communication established for distribution of PPE guidance
* Expectations on PPE training frequency depends on the institution and EID scenario
* Skilled Nursing Facilities/Long Term Care will have a critical shortage of PPE and training capability
* Coalitions will establish ongoing communication with local health departments on PPE availability
* Involvement with healthcare system staff labor unions is essential;
  + encourage facilities to work with labor unions from the beginning of the process and facilitate discussion and resolution to ensure acceptable and sustainable worker protections are in place for duration of EID event
* Staff will be given training (e.g. donning and doffing) by their respective employer during an Ebola-like scenario

## 2.4.6 Support Services

Support services which support direct patient care providers, must remain an important consideration. Some considerations include laboratory and waste management/decontamination services.

### 2.4.6.1 Laboratory (Public Health Only)

Goals:

* To facilitate rapid detection and confirmation of EID outbreak cases
* To promote safe handling of EID specimens

Objectives:

1. Develop specimen collection guidance and/or protocols
   1. Establish procedures and processes to expedite laboratory testing, confirmation, and reporting.
      1. Include triggers for and provision of surge staffing for specimen testing, tracking and reporting and additional materials for PHL
      2. Establish protocols, procedures, and processes for sample collections
      3. If field testing is necessary at base-camp or door to door: coordinate obtaining, storing, and transporting data entry and bar coding equipment, mobile link connection to Sunquest
2. Communicate confirmatory testing requirements and standards to local laboratories and healthcare organizations
   1. Revise communications protocol
3. Coordinate specimen collection, transport, and data sharing with laboratories and other health agencies
   1. Develop and deconflict federal, state, local guidance
4. Establish specimen prioritization, testing, and rule-out protocols
   1. Develop and deconflict federal, state, local guidance
5. Conduct lab testing and quickly share results with response partners
   1. Develop and deconflict federal, state, local guidance
6. Coordinate with other laboratories to increase lab surge capacity

Key Assumptions:

* MDH is the lead agency for directing and managing public health laboratory operations for the County
* The Lab will work closely with Community Health Services (CHS), hospitals, clinics and other community-based healthcare facilities to identify, collect and safely transport samples
* The Lab will be the primary liaison to State and CDC labs
* The Lab will have ongoing resource needs and requirements, particularly during the early phases of the outbreak and response, and will require resource support to maintain operational capacity and function

2.4.6.2 Waste Management, Decontamination (Resources not listed)

Goals:

* Support healthcare system in decontamination and environmental safety guidance of facilities and equipment
* Develop plans for waste management

Objectives:

1. Establish appropriate waste management policies and procedures
   1. Develop guidance on proper packaging, handling, treatment and storage of waste generated
   2. Develop agreements with waste-management vendors who have established that they have appropriate containers and procedures for safe handling, transport, and treatment
   3. Identify contingency plans if vendors/facility capabilities are overwhelmed
   4. Identify guidance for reprocessing and reusing PPE, if necessary
2. Identify contingency plans if facility capabilities are overwhelmed
   1. Assess current treatment sites and locations
   2. Identify treatment options for waste
   3. Identify alternate vendors
   4. Identifying locations for sequestering waste (EVD)
   5. Requests to “relaxing” some of the waste storage requirements
   6. Facilitate provision of resources for waste management to healthcare providers
3. Coordinate with state and federal agencies to conduct environmental investigations, sampling and assessments
   1. Plan for treatment of patients at home (Pandemic Influenza)
4. Provide disinfection and decontamination guidance and services to healthcare facilities and transport organizations
   1. Identify appropriate methods/protocols for decontamination and disinfection for treatment areas
   2. Identify appropriate strategies for equipment disinfection
   3. Identify potential third party vendors for disinfection and decontamination
   4. Train and exercise appropriate public health inspection staff

Key Assumptions:

1. "Normal" biohazard waste will increase for all scenarios
2. The disease may not have established infection control practices for potentially several weeks into the disease event
3. MDH and/or local public health agencies will provide guidance regarding safe processing and storage of waste
4. Additional storage space for will be limited at healthcare facilities
5. There will/may not be treatment options and protocols for all potential waste
6. MDH need to develop contingency plans for treated waste
7. During a pandemic flu outbreak, local public health agencies will provide prophylactic influenza vaccine community via Medical Points of Dispensing (MPODS), if vaccine is available
8. Waste management is critical to Ebola-like scenario response
9. Environmental waste surge plans are developed in advance at individual healthcare facilities

### 2.4.7 Patient Care/ Management

Goal: Maintain support for patient care throughout duration of EID event

Objectives:

1. Develop and disseminate strategies to maintain safe patient care when system is overwhelmed
   1. Contact DHHS
   2. Leverage Hospital Transfer plan
   3. Develop messaging to public in alignment with messaging to providers
   4. Mobile response teams
2. Provide guidance on triage care to healthcare providers
   1. Develop, deconflict, disseminate guidance on activating negative isolation rooms, cohorting guidelines (SARS, Pandemic Influenza)
   2. Disseminate epidemiological information to healthcare facilities
3. Assess healthcare system resource needs for patient care
   1. Survey facilities for PPE caches
   2. Disseminate protocol on resource requests, including categories of resource types available for request
   3. Develop, deconflict, and disseminate protocol on decontamination and disinfection procedures for various types of facilities – acute care, ED, clinics, skilled nursing
4. Request and deploy additional healthcare resources to support patient care and management needs
   1. Develop, deconflict, disseminate guidance on Emergency Department closures, containment of disease, and re-opening ED if necessary
   2. Hazardous materials guidance
   3. Guidance on intra-hospital transfer of EID patients, particularly if facilities holding ebola-like patients > 12 hours
5. Facilitate the development and standardization of Crisis Standards of Care
   1. Identify Alternate Care Sites
   2. Facilitate faster approval from MDH for local credentialing and tent setup
   3. Cohort care by activity

Key Assumptions:

* Healthcare surge and response activities will be based upon the Coalitions’ Healthcare Surge Planning Guide
* Frontline receiving hospitals have a three day patient plan for Ebola-like diseases
* Many healthcare workers are not required by their facilities to don specialized high risk PPE or care for severe infectious disease cases
* Specialized decontamination/special pathogen response resources are not available at every healthcare facility. For healthcare facilities where they are available, they are usually voluntarily staffed.
* PPE/Disinfection and decontamination requirements are constantly changing; failure by public health agencies to deconflict and provide consistent information will cause confusion and negatively affect care
* Clinics will not likely have specialized PPE

#### Alternate Care Sites

#### Coordination with Skilled Nursing Facilities

### 2.4.8 Medical Countermeasures [MDH/LHD]

#### Vaccine distribution

### 2.4.9 Community-based Testing [Needs LHD Input]

### 2.4.10 Patient Transport [Needs MIEMSS Input]

Goals:

* Coordinate the safe movement of Persons Under Investigation (PUIs) or infected persons
* Ensure transport staff are protected while transporting PUIs or infected persons

Objectives:

1. Develop transport policies, plans, and procedures for PUIs
   1. Review established PPE policies
   2. Coordinate plans through Coalitions and State/Local Agencies as needed by EID event
   3. Utilize established EMS algorithm
   4. High-Risk Ambulances (EVD)
   5. High-Risk response team (EVD, SARS)
   6. Facilitate the training of all transport staff in PPE and patient management protocols (EVD, SARS)
2. Identify and establish transport providers for high severity cases
   1. Exclusive Operating Area (EOA)volunteers/protocols
   2. Pre-positioned vehicles
   3. Dispatch algorithm
   4. High risk patients (Ebola-Like scenario) inbound (from outside jurisdictions) are to be coordinated through respective plans and procedures
3. Coordinate between local, state, federal agencies and EMS
   1. Utilize pre-established communication protocols
   2. Utilize pre-existing Transport Plans
      1. Field 9-1-1 response (unknown traveler)
      2. Healthcare facility (Non-ETC or EVD assessment facility)
      3. PUI in home (Known traveler)
      4. Region I /CA transfer
      5. ASPR Region transfer
      6. In-bound BWI CDC Quarantine Station response
   3. Coordinate VA through REOC, VISN
4. Maintain supplies/resources utilized for safe transport of patients
   1. Identify and inventory scarce equipment
   2. Store 30 day supply inventory masks/flu supplies (SARS/Pandemic Influenza)
   3. MOU with Oxygen vendors (SARS/Pandemic Influenza)
   4. Fuel - Use appropriate protocols as necessary and appropriate (Pandemic Influenza)
5. Develop strategies for patient transport when identified EMS providers are overwhelmed/unavailable
   1. High Risk Ambulance crew (EVD)
   2. ED ambulance relief (EVD/SARS)
   3. Utilize transport via unconventional methods (Peer-to Peer ride sharing, taxis, Metro buses, school buses, etc.) (Pandemic Influenza)

Key Assumptions

* Existing emergency supply caches will be available
* MIEMSS will be using established plans, policies, and procedures to transport high-risk patients
* MIEMSS has developed algorithm based patient transportation protocols for Ebola-like diseases
* MIEMSS has developed algorithm-based protocol for transferring a patient from BWI

### 2.4.11 Mass Fatality (Resources not listed)

Goal: Support the proper recovery, handling, identification, transportation, tracking, storage and disposal of human remains

Objectives:

1. Develop and deconflict decedent handling information in cooperation with the Medical Examiners Office
   1. Develop generic templates for death registration processing for healthcare facilities
   2. Develop guidelines for surge processing of decedents
      1. Refrigeration trucks – purchase
      2. Burial at sea
      3. EMS guidelines for all applicable scenarios
      4. Storage guidance – stacking, refrigeration, etc.
      5. Disinfection and decontamination guidance
      6. Vendor list
      7. Procedures for unknown/”John/Jane Does”
   3. Coordinating and communicating with healthcare facilities, including clinics
   4. Communicating data regarding fatalities to public
2. Disseminate, and coordinate decedent handling guidance to healthcare agencies, funeral homes, law enforcement, Emergency Medical Services (EMS), fire agencies and the community
   1. Set up communication with facilities through HAM radio, Everbridge (as applicable/needed)
      1. Hospitals
      2. Clinics
      3. LTC/SNFs
   2. Establish Electronic Death Registry System (EDRS) and single collection point for data within LAC
      1. Develop cause of death forms
   3. Provide JIT training to facilities as to resource request protocols
3. Facilitate mental/behavioral health support for family members, responders, and survivors
   1. Coordinate with MDH to ensure cultural respect for bodies as much as possible
   2. Provide mental health for elderly, pediatric family members as well as adults
   3. Utilize hospital mental/behavioral health teams as available
   4. Supplement facility teams with MDH staff
   5. Utilize Family Information Center for facility
   6. Include clinics in assessments
4. Provide support for Family Assistance Centers (FAC)

Key Assumptions:

* The State Medical Examiner is the lead agency for directing and managing fatality operations
* For some EID events, the Medical Examiner will be overwhelmed
* If a disease is diagnosed (including by “case definition”), Coroner engagement is not necessary to determine the cause of death and/or transport the decedent to a mortuary location
* While mutual aid agreements with other coroner/medical-examiner offices exist, there will be few resources available through these mutual aid agreements
* Rental of refrigeration vehicles for excess storage will not be possible; facilities will be required to purchase them

## 2.5 Special Considerations

### 2.5.1 Behavioral Health

The stress that patients, caregivers, and providers may experience during an infectious disease outbreak may be extensive dependent upon the nature of the outbreak as well as the amount of time and resources dedicated to the infectious disease response. As seen during the COVID-19 pandemic, the extended amount of response time for an infectious disease event can have serious emotional and psychological tolls on healthcare workers, patients, and the community at large. The availability of mental health services for the aforementioned groups should be considered when planning for an infectious disease event and should be available during and after the infectious disease emergency event.

Potential psychological impacts of an infectious disease outbreak on staff, those seeking information or services, and members of the public may include:

* 211 hotlines, hospitals, clinics, and mental health facilities will experience a surge of concerned people calling in and arriving at facilities seeking information and services;
* Some people will experience physical symptoms of the circulating infectious disease who were not exposed and who are not ill. After medical screening to rule out the disease, people may continue to demand medical treatment;
* The healthcare sector will need to manage widespread fear of rumors, and lack of understanding of cause, source, treatment, outcome, available medical countermeasures, etc.;
* Those exposed or ill from the infectious disease may not comply with medical recommendations, putting others at risk;
* Healthcare workers may experience difficulties explaining the allocation of scarce medical resources to ill and/or expectant patients and their families;
* Stigmatization of healthcare workers and their families who were a part of the infectious disease response;
* Fear of long term health consequences of those exposed and ill;
* Grief of family members of those who are expectant or died as a result of the infectious pathogen;
* Parents concerned about the short and long term impact of the infectious disease in children;
* Impact of the infectious disease on vulnerable populations, diverse language/cultural groups, those with existing health concerns, children, older adults; and
* Increased ongoing need for mental health- related public information, reassurance, and mental health services.

Individuals with behavioral health needs often need a significant number of hands on care, and some have behaviors and comorbidities that make normal infection control measures more difficult. Behaviors may include spitting and tactile exploration of their surroundings, and comorbidities may include cognitive or motor impairment, which can impair physical distancing and hand washing. Additionally, many adults with behavioral health problems live in congregate care settings, where they share common spaces with other residents. An infectious outbreak may also exacerbate behavioral problems due to changes to daily routine and home environment. All of these factors may intensify experiences of stigma and discrimination during a pandemic. Inpatient and outpatient settings where these patients may seek care may not be equipped for an infectious outbreak in terms of space (particularly negative pressure rooms), staff (specifically training), and supplies (PPE). These factors make it difficult to provide in-person care and services to patients with behavioral health needs during an infectious outbreak, particularly a prolonged pandemic.

The following may be considered as adaptions for patient care during an infectious disease outbreak:

* Quickly mobilize on-demand training for proper PPE use and strategies for caring for behavioral patients in the setting of an infectious disease outbreak;
* Use technology to maintain and improve communication/relationships;
* Visitors may not be allowed in healthcare facilities during an infectious outbreak, so regularly scheduled video calls are especially important for family bonding and provider-family communication; and
* For outpatients who may not have access to the in-person resources due to infectious outbreak, it is important to be prepared to convert as many services as possible from in-person to virtual. Services such as tele-medicine, tele-rehabilitation, tele-counseling, tele-consultation, and remote social support have become increasingly important in the COVID-19 pandemic.

The following behavioral health adaptations may be considered for healthcare workers during an infectious disease outbreak:

* Provide mental health counseling services for healthcare workers responding to an infectious disease event. These services may be offered by the healthcare facility directly, privately contracted, or available through state agencies;
* Ensure healthcare workers receive a full and accurate assessment of shortages in key equipment and resources such as medicines, ventilators, and ICU beds, so that they do not feel blindsided;
* Institute specific guidelines for triaging use of medical equipment and ensure ethical oversight of the implementation of guidelines so that healthcare workers are not subjected to additional emotional burdens while treating patients;
* Where possible, provide healthcare workers adequate testing to mitigate asymptomatic transmission and mitigate anxiety regarding risk of transmission to patients or family members;
* Offer self-reporting mechanisms, such as screening questionnaires, so leadership can facilitate appropriate evaluation and/or care for at-risk workers;
* Implement peer support programs such as end-of-shift formal debriefing exercises, virtual support groups where healthcare workers can freely share their emotional burdens; and
* Link healthcare workers to chaplains or other pastoral support available via the healthcare system;
* Encourage a personal stress management plan to address exercise, nutrition, sleep mindfulness, and relaxation;
* Consider boarding on or near the work site for staff unable to commute, have a long commute, or concerned about infecting family members or friends; and
* Pre-identify behavioral health providers in the healthcare system that may be available to healthcare workers during an infectious disease response.

[Preventing and Addressing Moral Injury Affecting Healthcare Workers During the COVID-19 Pandemic (hhs.gov)](https://files.asprtracie.hhs.gov/documents/bh-addressing-moral-injury-for-healthcare-workers.pdf#:~:text=Healthcare%20Workers%20During%20the%20COVID%20-19%20Pandemic%20Behavioral,risk%20for%20moral%20injury%20during%20the%20COVID%20-19)

[Mitigate Absenteeism by Protecting Healthcare Workers’ Psychological Health and Well-being during the COVID-19 Pandemic (hhs.gov)](https://files.asprtracie.hhs.gov/documents/strategy-to-mitigate-healthcare-workforce-absenteeism-final.pdf)

The following behavioral health adaptations may be considered for the community during an infectious disease outbreak:

* Stand-up and monitor 211 and 24/7 facility lines so that accurate and timely information is shared with callers;
* Healthcare agencies should work closely with their local public health agencies and office of emergency management to manage rumors, misinformation, and decrease anxiety. Coordination of public health messages with input from MDH and the County Joint Information Center (JIC) will be essential;
* Launch public information campaigns to remind the community of the importance of caring for mental health, including the importance of sleep, proper nutrition, and taking breaks from media outlets;
* Promote free and well-vetted mental health resources that are available to the general public. Consider the Substance Abuse and Mental Health Services Administration (SAMHSA) Disaster Distress Helpline, available by calling 1-800-985-5990, and the National Institute of Mental Health (NIMH) resource;
* Develop testing sites for the community in order to prevent transmission and reduce fear and anxiety; and
* Develop treatment and/or vaccination sites (if warranted and available) for the community to prevent/treat the infectious disease and reduce fear and anxiety.

### 2.5.2 At-Risk Populations

In the event of a wide scale pandemic certain populations may be at more risk than others. This will be dependent on the nature of the disease and the clinical manifestations for those specific populations. A solid understanding of the implications of the disease process and transmission is imperative. The following populations may require special considerations.

#### Pediatrics

Pediatrics remain a special population as their bodies are not fully developed and may be more at risk for certain diseases. Pediatrics patients also require different equipment than adult patients. Many hospitals do not have pediatric specialty, so considerations around pediatric equipment is important. Considerations of which adult equipment could be used on pediatrics may become considerations, in the event of supply shortage.

#### Geriatric

Geriatric populations may be more susceptible to certain diseases due to the advanced aging process. In addition, challenges may arise around limited mobility issues.

#### Congregate Housing Settings

Congregate housing settings remain a challenge in the event of pandemics and epidemics. Examples of these settings include homeless shelters, long term care facilities, skilled nursing facilities, group homes, domestic abuse shelters, jails, and prisons. The ability to provide social distancing, constant cleaning, and sanitary procedures may be limited. Due to these close living quarters, the potential for spread of infectious disease may be exacerbated. Consideration of these challenges should be incorporated into operational planning depending on the methods of spread of the disease (ie. Droplet, airborne, contact methods).

#### Chronic Tracheostomy/Ventilator Dependence

Caring for patients with chronic tracheostomy and/or ventilator dependence is particularly challenging during infectious outbreaks with respiratory/droplet spread. These patients may require frequent suctioning and must remain in a private room on airborne precautions throughout their entire hospital stay. Due to complex medical needs, some patients may be presenting for specialty care from out-of-state, and many may require long hospital stays, further utilizing the limited PPE supply. In addition, certain ventilator adaptors or specialty tracheostomy tubes may be temporarily unavailable due to increased demand for medical equipment elsewhere. In the outpatient setting, staff and therapists may not be familiar with PPE donning/doffing procedures and may feel apprehensive about treating patients in the setting of a novel respiratory virus.

#### Hemodialysis Dependence

Hemodialysis patients are particularly vulnerable to disruption of care during infectious outbreaks. Hemodialysis is a life-saving treatment that is typically done three times per week at a dialysis center for patients with chronic kidney failure. Many hemodialysis patients are unable to pursue other forms of dialysis, such as home peritoneal dialysis due to social and home factors. Many live at skilled nursing facilities and other group living arrangements, where disease may spread quickly among high risk individuals. Patients traveling to dialysis centers from home may rely on public transportation or other transportation services, and access may be limited due to changes in public transportation schedules or policies preventing transport of infected individuals. Coordination of transportation may also be challenging for high-risk or infected patients coming from nursing homes. Regardless of their infectious status, these patients need regular hemodialysis, so transportation and appropriate isolation from other patients is imperative.

As in many disasters, closing of dialysis centers and increased demand for dialysis in the acute setting (eg for organ failure) can lead to a shortage of dialysate and dialysis machines. In addition challenges may arise around the par levels of PPE at dialysis centers, as some facilities do not keep a cache of PPE available for emergency situations.

Hemodialysis patients are educated on a “3-day diet” to use in the event of an emergency that prevents them from attending one of their dialysis sessions. Though this is less than ideal, it can help bridge them to their next dialysis session by reducing the toxic buildup in their bodies. Food insecurity in the setting of a pandemic can make it difficult for them to access the foods for this diet. In addition, many patients with chronic kidney failure are diabetic, and food insecurity can exacerbate their disease by limiting access to diabetes-friendly food options.

#### School-Based Health

School-based health services and school-based health clinics in Maryland provide important services for vulnerable and marginalized students, including those with transportation or insurance barriers, undocumented families, chronic disease with poor follow-up, and special healthcare needs requiring skilled nursing at school. Common chronic diseases managed at school-based health clinics includes asthma, obesity, and ADHD. The high prevalence of asthma in Baltimore City children poses a particular challenge in the setting of a respiratory viral pandemic, as these patients are more vulnerable to complications of viral infection and viral symptoms may be difficult to distinguish from asthma exacerbation due to other trigger. Additional challenges for school based-health centers may stem from redeployed staff and inadequate allocation of PPE resources for school-based health centers.

Based on the needs of children who receive care through the schools, the following recommendations are suggested for preparing and responding to infectious outbreaks:

* + Telemedicine services and phone follow up are important for providing continuity of care for this population, as many do not regularly follow with their community primary care provider, so efforts should be made to ensure staffing/ mobilization of telemedicine services and phone follow up.
  + In anticipation of school reopening after an outbreak, coordination with community PCP to provide routine physicals and vaccinations is important. Methods for social distancing, screening, testing, and quarantining/cohorting is also a significant consideration, as well as thorough examination of the social justice and equity issues that accompany school reopening.
  + A more detailed list of recommendations for school based health centers can be found at <https://health.maryland.gov/mchrc/Pages/home.aspx>.

#### Socio-Economic Disadvantage

Socio-economically disadvantaged populations may be at higher risk due to the inability to financially provide for medical treatment or preventative care. In addition, this population may have comorbidities that have been left untreated which may complicate an infectious disease process.

#### Minority Populations

Special considerations should be made around the education and access to treatment within minority populations. Cultural differences, language barriers, and cultural beliefs may present as challenges when managing an infectious disease outbreak. Cultural considerations and equity of care should be a strong factor to ensure minority populations have the same access to care as majority populations.

### 2.5.3 Situational Awareness

Throughout an Infectious disease surge incident, the health care coalition should maintain and support a multi-agency situational awareness. Situational awareness can be maintained via the following methods:

* Coalition collaboration meetings
* Collecting Essential Elements of Information (EEI)
* CRISP Public Health Dashboard (ability to track beds, potential scarce resources, etc.)
* CRISP Reunification Portal
* WebEOC (ability to track concurrent incidents)
* MEMRAD bed tracking

The coalition should promote and help facilitate the disbursement of information consistent with the operating picture of the lead ESF-8 agency.

#### Critical Infrastructure

In conjunction with the lead ESF-8 agency the health care coalition should have awareness of critical infrastructure including utilities, public transportation, waste management, food services/factories and delivery, and other critical services. This information can be observed via WebEOC for real-time information.

### 2.5.4 Communications

#### Communication Platforms / streamlining information

* HCCs employ a litany of communication platforms to disseminate information to partners and stakeholders. These are based on a tiered level system.
  + Tier 1 communication mechanisms are the **first** line of communication during normal and emergency operations because they are the most familiar, frequently used, systems. Tier 1 systems are not “hardened” to withstand catastrophic events, and most of them rely on commercially available communications networks, protocols, and devices. While reliable enough for day-to-day use, these systems are simply not designed to operate in extreme conditions like those that can follow a large-scale emergency event. Even when Tier 1 systems do not fail it may be necessary to switch to second or third tier systems to reduce congestion or overloading.
    - Examples include: Landline/cellular devices, email, Everbridge mass notification system(s), WebEx and/or Zoom platforms, WebEOC, Maryland Emergency Medical Resources Alert Database (MEMRAD), Maryland Health Alert Network (MDHAN),
  + Tier 2 communications are day-to-day commercial communication systems like those in Tier 1 can fail during emergency events. Power outages, network congestion, and other issues can result in a loss of Tier 1 system connectivity. Tier 2 systems are a **second** line of communications during normal and/or emergency operations. These systems are day-to-day communication systems that have been hardened to operate when and where normal systems might fail or become unreliable.
    - Examples include: Digital Emergency Medical Services Telephone (DEMSTEL), Land Mobile Emergency Communication Radios (700-800MHz),
  + Tier 3 communications systems are a **third** line of communications to use if Tier 1 and Tier 2 systems have failed. Tier 1 and Tier 2 failure is unlikely to occur, but is possible, and would probably result from widespread and prolonged power outages (as exhaustion of generator fuel supplies results in loss of backup power) and/or the loss of terrestrial communications infrastructure needed to support those systems such as towers, lines, and data centers.
    - Examples include: Satellite telephones
  + Tier 4 communications system are the line of communications of **last resort**. These systems are operated independently by dedicated and highly-skilled amateurs, hobbyists, and radio enthusiasts who are able to provide communications capabilities with limited power over long distances.
    - Amateur radio (ARES/RACES)

#### Public health education and information

* Coalitions should work with their ESF-8 partners to ensure they have the most up-to-date information to pass on to their stakeholders. These partnerships will ensure hospitals and other agencies within the coalition have appropriate information to disseminate to their patients and the public.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **County Health Department** | **Point of Contact** | **Physical Address** | **Email Address** | **Phone Number** |
| Calvert County Health Department | Sarah Goddard | 975 Solomons Island Road North Prince Frederick, MD 20678 | sarah.goddard@maryland.gov |  |
| Prince George's County Health Department | Richard Goddard | 1701 McCormick Drive Largo, MD 20774 | rpgoddard@co.pg.md.us | 301-883-7699 |
| Charles County Public Health | Ranston Harvey | 4545 Crain Highway PO Box 1050 White Plains, MD 20695 | ranston.harvey@maryland.gov |  |
| St. Mary's County Health Department | Katherine Wells | 21580 Peabody Street PO Box 316 Leonardtown, MD 20659 | katherine.wells@maryland.gov | 301-475-6701 |
| Montgomery County DHHS, PHEP Program | Sean O'Donnell | 2000 Dennis Avenue, Suite 16, Silver Spring, MD 20902 | sean.odonnell@montgomerycountymd.gov |  |

### 2.5.5 Jurisdictional-Specific Considerations

MD Health Care Coalitions will be jurisdictional specific based off the five individual regions in the State of Maryland with considerations on density, whether rural or urban. From the mountains to the beach these specifics may involve geographical, tribal, population, hospital density, and PPE demand among others. More rural areas, the staff and resources may be readily available, however, space between facilities may be further apart, whereas urban areas may have more hospitals in a closer proximity with the possibility of a thinner staff.

Urban areas must think about their population overall. Although there are more hospitals in a smaller geographical area, this is typically because the population is much greater than other areas. This higher population has its own specific considerations that must be carefully navigated. These include, but are not limited to the following:

\*Extra staff to help in all levels for clinician to patient ratio in surge situations

\*Morgue capacity and logistics with hospital resources involving storage in mass fatality situations

\*Mobile hospitals or tent resources for patient surge capacity

\*Transportation or regional MOU’s regarding transferring patients to other facilities during times of surge

\*PPE Cache and storage to have closer to facilities that are experiencing an influx of patients

\*Logistics regarding PPE distribution between HHC warehouse or from hospital to hospital

\*Pre plans of transportation routes may need to be completed due to higher volumes of traffic in and around the hospitals

Rural areas do not have the high population as seen in the more dominantly urban areas, however, due to the fewer number of hospitals, and probable patients being spread out across a greater geographical area, considerations need to be prepared for as well, which include:

\*Longer transportation times for EMS patients to further medical facilities; may need outside transport companies during surge

\*Mobile hospitals, tents or extra capacity space may need to be preplanned for surge operations due to less facilities available for transfer

\*PPE distribution may need to be spread to hospitals prior to a surge since transportation time may be delayed due to distance between hospitals and/or distribution point (warehouse/storing location)

\*Extra staff to help in all levels for clinician to patient ration in surge situations

## 2.6 Training and Exercises

Health Care Coalitions should develop coalition-wide training based on all clinician levels for response in infectious disease in not only the healthcare facilities, but involving local health departments, county emergency management, and EMS. Trainings should include scenarios of donning and doffing PPE, and different levels of individual PPE. Training and planning should also be considered for bed capacity in times of surge (regarding other areas turned into patient rooms or treatment areas), and interventions for communities regarding family communications in the instances of patient isolation. HCC’s should plan and train on patient management when critically ill infected patients cannot be transferred to higher level care facilities.

All trainings should be ongoing and should be evaluated during and after each training to identify gaps or problems that are encountered through after-action reports and evaluators notes so all prior trainings and exercises can be compared to ensure proper adjustments can be/are made for improvement. HCC’s should also include infection prevention personnel whether they are individuals within the HCC or outside to provide input and assist in training and exercises, to determine gaps and provide expertise from that subject matter expert.

## 2.7 Deactivation and Recovery

Health Care Coalitions and all partners must carefully plan deactivation measures after an infectious disease situation. This could include any assets that were put in place specifically for the event, including surge tents, positive/negative ventilation systems, or any upgraded security measures, testing or vaccination sites. Deactivation and recovery measures also need to have a focus on any replenishment of items that may have been used during an infectious disease incident. This could include PPE, medication, overused equipment, or staffing.

If any plans, including an infectious disease plan were activated, they would also need to be assessed and be deactivated when an event is deemed complete. Also, with the deactivation of any plan that was set in place at the beginning, an after-action report needs to be completed. An AAR will assess any gaps that were identified during an infectious disease event and will need to be used to update any plans, and SOPs that are already in place regionally, or within a specific facility. Coalition contributions should include helping in any PPE requests that may not be met at the county or state level, helping in infectious disease trainings, and helping with a coalition assets and resources that hospitals or other agencies may need during the event.

# 3. Appendices

## 3.1 Legal Authorities

* For a list of infectious disease control legal authorities in Maryland and their descriptions, please reference the **Maryland Department of Health Infectious Disease Response Plan**, Table 4: General Legal Authorities.
* The **National Disaster Medical System (NDMS)** consists of a partnership between the Department of Health and Human Services (HHS), the Department of Defense (DoD), the Department of Homeland Security (DHS), the Department of Veterans Affairs (VA) and state public and private entities. NDMS ensures that the United States is prepared to medically respond to mass casualty emergency situations in the United States or to military health emergencies by facilitating a coordinated response of Federal and civilian NDMS healthcare facilities. NDMS, as a federal and state collaborative system, is addressed under Section 2812 of the Public Health Service Act, 42 U.S.C. 300hh-11 which outlines activation of the NDMS by the HHS secretary as well as the scope and purpose of the NDMS. Maryland hospitals that have signed agreements with NDMS are authorized under the aforementioned section of the Public Health Service Act.
* The **Maryland Responds Medical Reserve Corps (MRC)** is a community-based, civilian, volunteer program that helps to build the public health infrastructure and response capabilities within communities in Maryland. Volunteers may commit their time, skills, and expertise to support ongoing public health initiatives or any emergency in Maryland, including an infectious disease emergency. The MRC program is administered by the MDH Office of Preparedness and Response (OP&R). Need legal perspective from OP&R.
* The **Community Emergency Response Team (CERT)** program educates volunteers from communities across the country about basic disaster preparedness and for hazards that may impact their area. CERT team’s function under the direction of local emergency responders and do not possess legal authority in an emergency response. CERT team members are considered “Good Samaritans” and are covered under the federal Volunteer Protection Act (VPA) which provides protection to volunteers for harm caused by their acts or omissions on behalf of the organization or entity. The act does not require that an emergency declaration be in place for its protections to apply. Maryland CERT team members are also covered under the Maryland Volunteer Service Act (MVSA). It is important to note that the VPA and MVSA do not provide legal protections for the organization sponsoring the volunteers. First responder agencies in Maryland seeking assistance from local CERT team’s during infectious disease responses should follow their agency precautions and practices for volunteer management.

## 3.2 Additional Resources/References (General Guidance for HCW)

**Maryland Department of Health Plans**

* Maryland COVID-19 Vaccination Plan (Oct. 2020)
* Maryland Infectious Disease Response Plan (June 2019)
* Maryland Influenza Plan (2019-2020 Influenza Season)
* Maryland Ebola Virus Disease Response Plan (June 2016)
* COVID-19 Vaccination Plan Template for Hospitals (November 2020)

**MIEMSS Plans**

* Ebola/Highly Infectious Disease Transportation Team Concept of Operation Plan DRAFT?

**Local Plans**

[Insert any local health dept or OEM plan titles which fall within your region]

**HHS Region III Regional Ebola Treatment Center (Johns Hopkins Hospital)**

* + - IFU103, Biocontainment Unit Protocol, Revision 06/27/2018
    - CVBCP002, Novel Respiratory Illness Patient Placement and Staffing Plan for Patients Requiring Airborne and Contact Precautions with Eye Protection, Revision 03/06/2020
    - CVBCP001, Coronavirus Surge Plan for JHH ED, Revision 03/06/2020

**Maryland Ebola Treatment Center (University of Maryland Medical Center)**

* University of Maryland Medical Center Incident Annex: Novel Pathogen Plan (2019)
* University of Maryland Medical Center Incident Annex: Ebola Response Plan (2019)