Kentucky's Public Health Emergency Preparedness Plans

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Kentucky Legislative Research Commission

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Kentucky's Public Health Emergency Preparedness Plans

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Foreword

On May 28, 2020, the Legislative Research Commission directed staff to conduct a nonpartisan study to review public health emergency preparedness plans, resources, funding, executive powers and legislative oversight, and responses. Kentucky routinely responds to large-scale public health emergencies—such as floods, tornadoes, and landslides—that require life-saving medications and medical supplies. Periodic public health response is taken to address disease outbreaks. The 2020 COVID-19 pandemic created a public health emergency that resulted in an expansive implementation of Kentucky's public health emergency plan.

This publication includes an examination of emergency declarations, operations plans, resources, funding, and responses. The focus is on public health emergencies, although general emergency preparedness provides the framework.

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Contents

Tables

Figures

Summary

All states authorize governors to declare a state of emergency during which governors may exercise powers that are normally reserved for the legislature, including suspending the effectiveness of specific statutes, spending unappropriated funds, and essentially creating temporary laws as needed to address the emergency. Some states authorize public health leaders to declare public health emergencies. The amount of legislative oversight of these powers varies by state.

Modeled on federal guidance, the emergency operations plan of each state mirrors that of all the other states, facilitating effective intergovernmental coordination within and across states. Federal guidance provides a model organization and procedure structure on which the design of the Kentucky Emergency Operations Plan is based. Incident response can be broken down into the preparedness, response, recovery, and mitigation phases.

In a public health emergency, Emergency Support Function 8 (ESF 8) Public Health and Medical Services plays the lead role. Some ESF 8 responsibilities include ensuring that systems are in place to allow for interagency and intergovernmental communication, identifying and maintaining the infrastructure necessary for responding effectively, organizing materiel transport and disbursement, and identifying and activating the necessary qualified personnel. Kentucky's public health emergency structure includes the ESF 8 Public Health and Medical Services Annex, the Disease Outbreak Support Plan, the Influenza Pandemic Plan, and the Crisis Standards of Care Guidance.

Federal financial assistance for emergency incidents is triggered by the Stafford Disaster and Emergency Assistance Act. States are required to integrate emergency plans with federal plans in order to receive funds. Public assistance grants primarily provide assistance for recovery and mitigation. The Public Health Services Act provides funds to help with responding to public health emergencies.

The Pandemic and All Hazards Preparedness Act allows states to provide grants for emergency preparedness including the Public Health Emergency Preparedness program, the Hospital Preparedness Program, and the Epidemiology and Laboratory Capacity for Infectious Diseases program. All of Kentucky's emergency preparedness funding comes from the federal government

Federal assistance is paramount for all states for developing emergency plans and accessing necessary supplies, personnel, and infrastructure. However, each state is responsible for its own emergency preparedness plans for obtaining and distributing resources. The Kentucky Department for Public Health (KDPH) has indicated that it is well positioned to respond to natural disasters but not to new and emerging public health emergency threats such as the rise in opioid abuse, the reemergence of hepatitis A, and new diseases such as Ebola, Zika, and COVID-19. KDPH has managed the response to these outbreaks and others despite several challenges such as limited epidemiologic capacity, shortages of clinical staffing and public health personnel, insufficient laboratory capacity, and inadequate technology integration.

Outbreaks of disease do not usually result in the expansive implementation of emergency procedures that has occurred during the COVID-19 pandemic. Responses to disease outbreaks such as hepatitis A, hepatitis C, acquired immunodeficiency syndrome, Ebola, avian influenza, and H1N1 influenza required actions by KDPH and other health-related entities including health care practitioners, local public health departments, emergency responders, medical researchers, and hospitals. Individuals and public and private entities must provide actions and, often, must make changes in their behaviors. Much of the public was unaffected by many disease outbreaks and possibly unaware of public health responses. The same could not be said about the COVID-19 pandemic.

The responses to the COVID-19 pandemic stand out from responses to other disease outbreaks because of the national and statewide declarations of emergency, the activation of the State Health Operations Center and the Disease Outbreak Support Plan, the numerous executive orders issued to improve critical resources and limit disease transmission, and legislative actions taken to alleviate the impacts on the public.

The extent to which public health responses were successful in controlling the spread of COVID-19 as effectively as more limited disease outbreaks will require a retrospective assessment. Challenges to the provision of critical resources and performance of necessary data management evidenced during the COVID-19 response indicate that improvements may be necessary, even if only to maintain the improved abilities achieved during the pandemic. The measures taken to limit transmission of the coronavirus have affected large numbers of people, businesses, schools, public services, health care providers, and others. Only in retrospect will a truer picture of the impacts of actions taken during the COVID-19 pandemic be possible.

A review of some of the impacts of responses and mitigation and recovery efforts during the COVID-19 pandemic may help in preparing for future pandemics. Responses to this pandemic have had impacts on the public that are unrelated to the direct transmission of the virus or contraction of the disease and have dramatically affected people other than those who have become ill or died. People have lost jobs, businesses, homes, and educational opportunities in addition to losing friends, family members, and community leaders.

Mitigation and recovery from the impacts of measures taken in response to a pandemic are not detailed in federal- or state-level emergency plans, most likely because of the infrequency and limited nature of past pandemics. Mitigation and recovery efforts to address the impacts of responding to COVID-19 have been experimental for many sectors of society. Nonetheless, numerous entities have made efforts to mitigate impacts and begin recovery. In some cases, federal and state legislation or executive branch initiatives initiated these efforts. In other cases, adaptation to circumstances caused by pandemic measures involved efforts by community leaders and other public entities.

Chapter 1

Emergency Authority And Legislative Oversight

To respond to emergency events such as tornadoes, civil disturbances, and disease outbreaks, governments grant leaders the authority to declare a state of emergency and implement emergency plans. Appropriate actions are triggered to alleviate emergencies' harmful impacts on people and property.

This chapter provides a brief history and overview of emergency authority granted in Kentucky statutes and describes legislative oversight of executive emergency authority in Kentucky and other states. Federal emergency authority that affects states and local governments is also reviewed.

History Of Kentucky Emergency Statutes

Emergency authority statutes in Kentucky date to at least 1942 and were overhauled in 1998.

KRS Chapter 39, relating to emergency powers, dates to World War II, when in 1942 Senate Bill 7 was enacted, establishing the State Defense Council. The council was composed of gubernatorial appointees charged with the coordination of actions related to state defense in cooperation with federal defense authorities.

During the 1950s, the Cold War led to the creation of the State Civil Defense Agency. The state adjutant general is the administrator of this agency, which is charged with the protection of public health and safety through preparation for enemy attack as well as preparation for fires, floods, and other disasters. SB 153 in 1952 empowered the governor to declare states of emergency to direct actions necessary to promote and secure the protection of Kentucky's population. In 1962, SB 323 established the Department of Military Affairs as the lead emergency agency.

By the 1970s, there was an increased emphasis on preparation for natural disasters relative to military defense. In 1974, SB 222 established the Division of Disaster and Emergency Services and defined *emergency response* to include any incident or situation declared by the governor. This legislation authorized the governor to declare curfews and limit the sale or consumption of goods or commodities for the duration of an emergency.

KRS Chapters 39A to 39F contain most statutory provisions for state and local responses to public emergencies and provide for the

continuation of government activities during emergencies. The title headings for these chapters are

- Chapter 39A—Statewide Emergency Management Programs,
- Chapter 39B—Local Emergency Management Programs,
- Chapter 39C—State Aid to Local Emergency Management Programs,
- Chapter 39D—Continuity of Government,
- Chapter 39E—Implementation of Federal Hazardous Materials Programs, and
- Chapter 39F—Local Rescue Programs; State and Local Search and Rescue Programs.

These chapters were enacted by the 1998 General Assembly in House Bill 453 to remove the focus on civil defense, include the state- and local-level response to emergencies, and broaden the purpose of emergency services. The governor's authority to declare emergencies was retained in this overhaul, as was the administrative authority of the adjutant general. Administrative authority was also assigned to the director of the Division of Emergency Management.

Legislative Intent

The intent of the General Assembly in regard to the emergency statutes as expressed in KRS 39A.010 was to "protect life and property" and "protect public peace, health, safety, and welfare." Although this statute does not explicitly mention an epidemic or pandemic in its list of hazards, it does list mass casualty or mass fatality emergencies, as well as biological and environmental hazards.

Governor's Emergency Authority

The General Assembly has authorized the governor to issue executive orders declaring a state of emergency and to exercise powers normally reserved for the legislature, including suspending effectiveness of certain statutes, spending unappropriated funds, and essentially creating temporary specified new laws.

KRS Chapter 39A contains the basis of the governor's authorization to issue executive orders concerning public emergencies. In KRS 39A.090, the governor is authorized to make, amend, and rescind any executive orders necessary to carry out the provisions of KRS Chapters 39A to 39F. The governor is authorized in KRS 39A.100 to declare a state of emergency in the case of any incident or situation that poses a major threat to public safety or major harm to public health. The governor has the authority during a state of emergency to

- enforce all laws and administrative regulations relating to disaster and emergency response and assume direct operational

control of all disaster and emergency response forces and activities;
- seize, take, or condemn property for the protection of the public, including means of transportation and communication, all stocks of fuel, food, clothing, equipment, medicines, and buildings;
- declare curfews and prohibit or limit the sale or consumption of goods;
- grant emergency authority to pharmacists;
- perform and exercise other functions, powers, and duties deemed necessary to promote and secure the safety and protection of the civilian population; and
- declare by executive order, upon recommendation of the secretary of state, a different time or place for holding elections under a state of emergency.

Division Of Emergency Management

When the governor declares a state of emergency, the Kentucky Emergency Operations Plan is activated as appropriate and the Division of Emergency Management coordinates the response.

An important consequence of a declaration of a state of emergency by the governor is the appropriate activation of the Kentucky Emergency Operations Plan (KYEOP) by the adjutant general and the director of Kentucky Emergency Management (KYEM). KYEM, created under the Kentucky Department of Military Affairs in KRS 39A.030, is assigned responsibility for coordinating disaster and emergency services.

The powers, responsibilities, and duties of the director of KYEM are outlined in KRS 39A.070 and include the ability to give directions to state or local boards of health for the purpose of compliance with KRS Chapters 39A through 39F. The director is permitted to enter into mutual aid agreements or compacts with other states or the federal government to provide health, medical, and related services and to provide for reimbursement of costs and expenses for the work of health units. The Centers for Disease Control and Prevention (CDC) is listed among the federal agencies with which KYEM is authorized to coordinate operations. KYEM is charged with the promulgation of administrative regulations to carry out the provisions of KRS Chapters 39A to 39F and is required to develop and maintain the KYEOP.

Emergency Administrative Regulations

State and local law enforcement are required to enforce emergency orders.

The written orders and administrative regulations promulgated by the governor, the director of KYEM, or any authorized political subdivision or other authorized agency have the effect of law. Existing law that is inconsistent with the provisions of KRS

Chapters 39A to 39F, or with any order issued under the authority of those chapters, is suspended during the emergency. Law enforcement authorities of state and local governments are required to enforce written orders and administrative regulations issued under those chapters. KRS 39A.190 provides that a police officer in uniform or displaying a badge may arrest any person violating, in the officer's presence, any order or administrative regulation made pursuant to KRS Chapters 39A to 39F.

State Government Emergency Operations

A declaration of a state of emergency by the governor triggers emergency operations procedures developed by each agency, board, or commission of state government as required by KRS 39A.220. This requirement covers all agencies listed in KRS 12.020, as well as all state bodies created by executive order of the governor, by the Legislative Research Commission, or by the Kentucky Court of Justice.

The Good Samaritan Act

The Good Samaritan Act, enacted in 2007 in KRS 39A.350 to 39A.366, is in effect during a state of emergency. Volunteer health practitioners are permitted to register to provide health services in Kentucky for a hospital or other health care provider while an emergency declaration is in effect. The Cabinet for Health and Family Services (CHFS), in coordination with KYEM and the appropriate Kentucky licensure boards, is permitted to regulate volunteer health practitioners during the course of a declared emergency. Volunteer health practitioners are required to adhere to the scope of practice for similarly licensed practitioners under Kentucky law.

Mutual Aid Arrangements

A declaration of a state of emergency activates mutual aid arrangements among Kentucky, its agencies, its political subdivisions, and units of government from other states as required in KRS 39B.040 and 39B.045. Emergency responders—including firefighters, hazardous materials personnel, specialized rescue personnel, extrication personnel, water rescue personnel, emergency medical services personnel, physicians, nurses, mental health practitioners, veterinary practitioners, public health practitioners, emergency management personnel, and public works personnel—are authorized to provide assistance across political subdivisions and across state lines during an emergency. Kentucky

also participates in the Emergency Management Assistance Compact established in KRS 39A.950, which governs cooperation between participating states during emergencies.

Local Government Emergency Authority

Local government chief executives have the authority to issue emergency declarations that mobilize local emergency operations plans.

The emergency authority of local governments is included in KRS 39B.060 and KRS 39B.070 and includes the authority of county judges/executive, mayors, or other local chief executives to declare a state of emergency, appropriate and expend funds, provide for assistance to victims of any disaster or emergency, approve emergency operations plans (EOPs), and enact orders or ordinances pertaining to emergency programs. Local governments may also appoint, employ, remove, or provide for any necessary staff or personnel during an emergency.

Unified Local Emergency Management Agency

When a local state of emergency is declared, the unified local emergency management agency is activated. The director of the agency is authorized to represent local officials on all matters pertaining to the emergency management program and is in charge of all local actions taken in regard to the program, including the development, preparation, organization, administration, operation, implementation, and maintenance of the program for all counties and urban-county governments. The director is also authorized to coordinate all local disaster and emergency response unless there is a local appointed director. The director is authorized to carry out all duties related to emergency management as required by law.

Other Statutory Emergency Powers

Statutes not included in KRS Chapters 39A to 39F are sometimes cited as authority for emergency directives issued by the Cabinet for Health and Family Services and for certain emergency powers of the governor.

CHFS' Emergency Authority

The Cabinet for Health and Family Services secretary may enforce regulations to reduce the spread of infectious diseases and may require immunization.

The secretary of the Cabinet for Health and Family Services is authorized in KRS 214.020 to enforce administrative regulations that the cabinet deems necessary to prevent the introduction or spread of infectious diseases and to establish and strictly maintain any necessary quarantine and isolation measures. Under

KRS 214.036, the cabinet may, by emergency regulation, require the immunization of all persons within a geographic or physical area where an infectious disease is present.

Emergency Pharmacy

The governor, after declaring a state of emergency under KRS 39A.100, may issue an executive order for a period of up to 30 days giving pharmacists emergency authority under KRS 315.500. This authority allows pharmacists to dispense up to a 30-day emergency supply of medication, administer immunizations to children under certain protocols, temporarily operate a pharmacy in an area not designated on a pharmacy permit, and dispense drugs as needed.

Prohibition Against Grossly Excessive Prices

When declaring a state of emergency, the governor may implement an executive order for 15 days that prohibits the sale or rental of goods (including medical supplies) or services at prices grossly in excess of the price prior to the declaration of the state of emergency, under KRS 367.374. The order may be extended for up to three additional 15-day periods.

Constitutional Authority

Gubernatorial executive orders cite the Constitution of Kentucky as a source of authority. However, unlike the references to KRS Chapter 39A contained within the executive orders, the references to the constitution do not cite specific sections. The following are a few passages of the constitution that might be cited as authority for executive orders:

- Section 69: "The supreme executive power of the Commonwealth shall be vested in a Chief Magistrate, who shall be styled the 'Governor of the Commonwealth of Kentucky.'"
- Section 75: The governor is "Commander-in-Chief of the army and navy of this Commonwealth, and of the militia thereof."
- Section 81. The governor "shall take care that the laws be faithfully executed."

State Legislative Oversight Of Executive Emergency Authority

Governor's Emergency Authority

All state legislatures authorize governors to declare states of emergency, but they differ on the amount of legislative oversight that may be exercised during a state of emergency.

All state legislatures authorize governors to declare a state of emergency during which they are able to exercise powers normally reserved for the legislature, including suspending the effectiveness of certain statutes, spending unappropriated funds, and essentially creating temporary new laws as needed to address the emergency. For example, state laws governing the licensing of medical professions may be waived in order to meet the demands of health-related emergencies, funds received from the federal government may be spent to meet medical supply needs, and nonessential businesses and schools may be ordered closed for public safety.

History Of Emergency Orders Under KRS Chapters 39A To 39F

The most frequent use of emergency powers under KRS Chapters 39A to 39F has been for weather-related emergencies such as floods, tornadoes, droughts, and fires. The price-gouging and pharmacy emergency provisions are often exercised during weather events. Emergency orders have been issued occasionally for events related to public health, such as the complete water loss for approximately 500 customers for many days in 2012 in the Green Hills and Bledsoe communities of Harlan County and the Green Hills Supply District.

Executive orders identified in the past 20 years that are specifically related to disease or disease outbreaks were in 2008, 2009, and 2010 for updating and exercising the Kentucky National Guard Influenza Plan for an immediate response to a pandemic influenza disaster. No specific influenza outbreaks are identified in these emergency orders.[1]

In 2006, the Governor issued an executive order relating to potential monkeypox vectors and diseases. This order banned the importation of at-risk animal species.[2]

Statutory Checks On Emergency Authority

Statutes defining *executive authority* cannot be amended by executive order during an emergency. The suspension of statutes and temporary creation of statutes is limited by the scope of

actions permitted by the General Assembly. In Kentucky these limits are included in KRS 39A.100.

Some state legislatures have enacted other specific statutory checks on the emergency authority of the executive branch, including

- clearly defined limits on executive branch emergency authority,
- legislative power to end a state of emergency,
- time limits on states of emergency,
- empowerment of a defined group such as the Legislative Research Commission to end a state of emergency, and
- a requirement that the governor call the legislature into a special session after declaring an emergency.[3]

Several state legislatures reserve the power to end an emergency proclaimed by their governor.

Several states reserve the power to end an emergency proclaimed by their governor at any time. This provision has more relevance if the legislature is in session during a declared emergency. A few states, including Alaska, Arizona, California, Georgia, and Montana, require that a special session be called within a defined period after an emergency is declared if the legislature is not in session. A few states, including Alabama, Iowa, Minnesota, and Washington, permit a group representing the legislature, such as the legislative council or the leaders of both chambers, to end an emergency declaration if the legislature is not in session.[4] Kentucky law does not include a provision to end a declaration of emergency.

Some states establish specific limits for the duration of a declaration of emergency. Alaska, Kansas, South Carolina, Utah, and Wisconsin set limits ranging from 15 to 60 days on an emergency declaration unless the legislature approves additional time. This restriction implies that a legislative session would need to be called. Ten states, including Kentucky, have no specific statutory provisions related to legislative time limits on emergency powers of the executive branch. The other nine are Delaware, Illinois, Massachusetts, Michigan, Mississippi, New Mexico, Ohio, Tennessee, and Wyoming.[5]

Some states, including Kentucky, had active legislative sessions at the time a COVID-19 pandemic state of emergency was declared. Special sessions were called during the COVID-19 pandemic in Arkansas, Georgia, Hawaii, Idaho, Illinois, Kansas, Louisiana, Maine, Massachusetts, Minnesota, Missouri, New Mexico, Nevada, Oklahoma, Oregon, South Dakota, Tennessee, Utah, Virginia, Wisconsin, and Wyoming.[6]

During the COVID-19 pandemic, at least 28 states have attempted to limit their governors' authority during an emergency.

Legislative chambers in at least 28 states, Guam, and the Virgin Islands have introduced bills or resolutions that would limit governors' powers or executive spending during the COVID-19 pandemic or other emergencies. Legislation imposing limits has been enacted or adopted in Arkansas, Colorado, Hawaii, Kansas, Michigan, Mississippi, Oklahoma, Pennsylvania, Utah, and Washington.[7]

Oversight Of Public Health Officials

State departments of public health are authorized by statute to exercise powers during public health emergencies, particularly in relation to measures intended to limit the spread of infectious diseases. KRS 214.020 authorizes the Cabinet for Health and Family Services to take necessary actions. The majority of states authorize the state department for public health or its equivalent to quarantine people infected with an infectious disease. Several states specifically authorize local or regional departments of health to quarantine people within their jurisdiction. Some states place limits on quarantine powers by requiring that the least restrictive means for quarantine be used or by setting a time limit on the quarantine—such as 72 hours in Michigan and Nevada, or 30 days in North Carolina—after which maintaining the quarantine would require a court order.

Various other state statutory provisions relate to quarantines. A few states, including Colorado and Montana, have quarantine provisions specific to tuberculosis. Georgia and Illinois guarantee legal representation for people who have been quarantined, and New Mexico and Texas have job protections for people who have been quarantined. Several states, not including Kentucky, have specific criminal or monetary penalties for people who violate a quarantine.

Some states, including Kentucky, have specific statutory authority for a state department for public health to require immunization and treatment for an infectious disease in emergency situations. KRS 214.036 states that "in the event of an epidemic in a given area, the Cabinet for Health and Family Services may, by emergency regulation, require the immunization of all persons within the area of epidemic, against the disease responsible for such epidemic." Iowa, Maryland, Massachusetts, and New Hampshire have similar provisions. Hawaii exempts people with religious objections or medical risk from any required

immunization. Arizona and New Mexico specifically prohibit treating people for disease against their will.[8]

Federal Public Health Emergency Authority

The US Supreme Court has found that the president's authority to declare an emergency or disaster must stem either from an act of Congress or from the US Constitution itself. The US Constitution does not grant the president general emergency authority, but Congress has provided the federal government with numerous powers during a public health emergency, involving multiple federal agencies. Federal law addresses the ability to detain people with communicable diseases, measures for the production of vaccines and treatments, liability for drug manufacturers and health care providers, quarantine and isolation, liability and licensure of workers, and mutual aid between the federal government and states.[9]

National Emergencies Act

The National Emergencies Act authorizes the president to declare a national emergency, which triggers emergency authority in other statutes.

The National Emergencies Act (NEA) allows the president to declare a national emergency, which triggers emergency authorities contained in other federal statutes. The NEA does not define *emergency* but provides Congress with oversight abilities so that an emergency does not continue into perpetuity.[10]

Stafford Disaster Relief And Emergency Assistance Act

The Stafford Disaster Relief and Emergency Assistance Act allows states to request assistance from the federal government.

The Stafford Disaster Relief and Emergency Assistance Act authorizes the president to declare an emergency in response to a request for assistance from states. States are required to implement their own emergency response plan before requesting a presidential declaration. Typically, the Stafford Act is used to declare emergencies as a response to disasters such as Hurricane Katrina and the Oklahoma City bombing. However it has been used for public health emergencies as well. Presidents have used the Stafford Act to declare an emergency during the West Nile virus outbreak in New York and New Jersey in 2000 and to declare an emergency during the COVID-19 pandemic in 2020.[11]

Public Health Service Act

The Public Health Service Act allows the Health and Human Services secretary to declare a public health emergency.

The Public Health Service Act (PHSA) authorizes the secretary of the US Department of Health and Human Services (HHS) to determine that a public health emergency exists. This

determination triggers emergency powers that permit the federal government to assist state and local governments, suspend or modify certain legal requirements, and expend available funds to address public health emergencies.

A PHSA public health emergency declaration is separate and distinct from a presidential declaration under the NEA or the Stafford Act. The secretary does not need a presidential declaration to issue a public health emergency declaration under the PHSA, but a presidential declaration is required in addition to a PHSA declaration if the secretary wants to exercise waiver authority under Social Security Act Section 1135.

Social Security Act Section 1135

Social Security Act Section 1135 authorizes the HHS secretary to temporarily waive or modify certain Medicare, Medicaid, Children's Health Insurance Program, and Health Insurance Portability and Accountability Act requirements affecting health care facilities and providers during national emergencies. Section 1135 waivers require both a presidential declaration under the NEA or the Stafford Act and a public health emergency determination by the HHS secretary under the PHSA. Once the 1135 waiver authority has been issued, individual health care providers' professional practice requirements are not automatically modified. The waivers are implemented on a case-by-case basis through the Centers for Medicare and Medicaid Services, HHS regional offices, and state agencies. Several of these waivers have been used during the COVID-19 pandemic.[12]

Additionally, Section 1135 authorizes the HHS secretary to assist with the enforcement of quarantine regulations and to extend temporary assistance for public health emergencies to assist state and local authorities in the prevention and suppression of communicable diseases.[13]

Court Challenges To Executive Emergency Authority

The executive emergency authority of governors and departments for public health has been challenged in state and federal courts. One challenge that has set precedent for over 100 years is in *Jacobson v. Massachusetts*. In 1905, the US Supreme Court upheld the Cambridge, Massachusetts, Board of Health's authority to require vaccination against smallpox during a smallpox epidemic,

or to require payment of a fine, only if necessary for the public's health and safety.[14]

Numerous states have experienced court challenges to state emergency executive orders during the COVID-19 pandemic. Several court cases have challenged the provisions of emergency executive orders issued by Kentucky's Governor, with regard to prohibitions on mass gatherings and the mandatory closing of nonessential businesses.

Summary

All states authorize governors to declare a state of emergency during which the governors may exercise powers normally reserved for the legislature, including suspending the effectiveness of specific statutes, spending unappropriated funds, and essentially creating temporary laws as needed to address the emergency. Some states authorize public health leaders to declare public health emergencies.

The amount of legislative oversight of this emergency authority varies by state. The president and the secretary of HHS may declare national public health emergencies and may declare emergencies in response to state requests for assistance.

The exercise of emergency authority by governors and state public health officials during the COVID-19 pandemic has led to many court challenges. Some state legislative bodies have enacted additional oversight provisions during the pandemic, and others have pending legislation to do so.

Chapter 2

Emergency Operations Plans

Federal and state emergency operations plans take into account different types of emergencies, including natural and environmental disasters, military threats, and disease outbreaks. Before an incident occurs, the EOPs identify the resources, personnel, and equipment necessary to respond to it, and they assign the key capabilities that must be operational in the event of an emergency in order to protect human life, health, and property. Most state and local governmental EOPs follow federal guidance concerning emergency preparedness. Uniformity among state EOPs is intended to give governmental entities clarity for requesting assistance from higher levels of government and to encourage an organized and modular emergency response that is locally executed, state managed, and federally supported.

This chapter introduces federal emergency preparedness guidance, Kentucky's emergency structure, and Kentucky's public health emergency structure, including the Disease Outbreak Support Plan, the Influenza Pandemic Plan, and the Crisis Standards of Care Guidance. An overview of some state agency emergency plans is provided.

Federal Guidance For Emergency Operations

To be eligible for federal assistance for emergency operations, states must adopt the National Incident Management System (NIMS) and the principles outlined in the National Response Framework (NRF). NIMS provides guidance on resource management, command and coordination, command systems, emergency operations centers, and communication and information management. The intent is to allow all government and private sectors to share resources and act collaboratively when responding to any emergency.

The NRF follows the guidance of NIMS to provide more direction for responding to emergencies. The goal of the NRF is to integrate capabilities of different government and private sectors that can best respond with a specific set of emergency capabilities to specific types of emergencies.[15]

Emergency Support Functions, Support Annexes, And Recovery Support Functions

Emergency support functions (ESFs) group key actors, resources, capabilities, and agencies into areas of needed support in an emergency.

The NRF classifies government and private entities according to emergency support functions (ESFs). The ESFs group the key actors, resources, capabilities, and agencies that are needed for a particular need of an emergency response. Each ESF has assigned responsibilities and procedures. Advance planning and preparation of ESF groupings is intended to allow for coordinated emergency response. For example, ESF 5, Emergency Management, coordinates and manages ESF activation and the delivery of necessary services from the command center. In an emergency requiring medical assistance, ESF 5 would direct coordination with ESF 8, Public Health and Medical Services, to supply medicines, protective equipment, medical equipment, and personnel as needed. (See Appendix A for a list of all emergency support functions.)

Support annexes describe organization among the private sector, nongovernmental organizations, and other federal partners according to functions performed for each ESF. For example, the Financial Management Support Annex includes actors that administer funding agreements and interagency contracts relating to assistance under the Stafford Act, and it would provide this support for any appropriate ESF.[16]

Recovery support functions are designed to facilitate supplemental recovery resources and coordinate recovery assistance among state and local government agencies and public and private partners. The recovery support functions are grouped into six areas:

- Community Planning and Capacity Building
- Economic
- Health and Social Services
- Housing Recovery
- Infrastructure Systems
- National and Cultural Resources[17]

Phases Of An Emergency

The NRF assigns capabilities to each ESF for responding to all of the following phases of an emergency:

- Prevention: avoiding, preventing, or stopping imminent threats
- Protection: preparing for acts of terrorism and human-caused or natural disasters. For public health emergencies, this phase includes emergency preparedness as well as surveillance

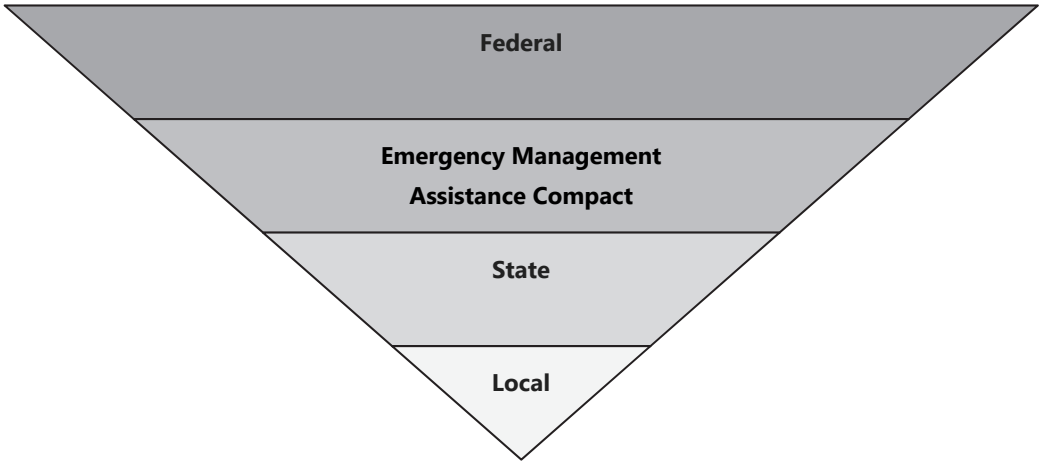
- Mitigation: lessening the impact of disasters to reduce the loss of life and property
- Response: saving lives, stabilizing community lifelines, protecting property and the environment, and meeting basic human needs after an incident has occurred
- Recovery: assisting impacted communities with restoration and revitalization[18]

These phases operate cyclically and overlap depending on the specific nature of the emergency.

Modularity: Activation Of Levels Of Government

A principal concept of the NFR that guides how state, local, tribal, and territorial governments respond to an emergency is modularity. To avoid wasting governmental resources by unnecessarily activating all levels of government in response to every incident, emergency plans operate on the principle that the response should begin at a local level and, only if necessary, escalate to the next highest level of government as illustrated in Figure 2.A. When a local government determines that effective incident response is, or will be, beyond its capabilities, it may request assistance from the state government. If the state is unable to control the incident with the resources it has available, it may reach out to other states that are part of the Emergency Management Assistance Compact (EMAC). EMAC is a mutual aid agreement among states that outlines the terms of shared resources and personnel. If these levels of escalation are determined to not be sufficient to respond to the impending emergency, federal government emergency support may be activated.

Figure 2.A
Hierarchy Of Activation Levels Based On The Principle Of Modularity



Source: LRC staff.

Kentucky has an Emergency Management Assistance Compact with all states.

As required in KRS 39A.950, Kentucky has entered into an EMAC covering all 50 states, which is managed by the National Emergency Management Association. By entering this compact, Kentucky became responsible for protecting necessary supply chains, providing resources, and developing a plan that allows for interstate coordination. This obligation to provide assistance is limited if a state needs to retain resources to provide for its own needs.

Kentucky Emergency Operations Plan

Kentucky's Emergency Operations Plan reflects the basic structure of the National Response Framework.

The Kentucky Emergency Operations Plan mirrors NRF principles such as modular activation and the general organizational structure, including ESFs. Reviews of the emergency support functions are conducted annually, and KYEM must continually update the plan.

The KYEOP is required to be presented to the governor after he or she assumes office. According to the Kentucky Governor's Journal, the last time the Governor approved the plan was in 2014, through Executive Order 2014-0692.[19]

According to KYEM, the most recent emergency operations plan is not posted publicly because of the sensitive nature of the document.[20] KYEM indicates that the plan is in current compliance for all federal funding initiatives and that the Federal Emergency Management Agency (FEMA) was notified that Kentucky was updating the plan to prepare for the Emergency Management Accreditation Program's reaccreditation process. KYEM indicates that the plan was revised as of March 6, 2020; has been fully updated, including all COVID-19 related changes; and is under review.[21] Although it is not possible to discuss the current contents of the plan, it is possible to describe the responsibilities of KYEM in developing and activating it.

Kentucky Emergency Management Program

The Kentucky Division of Emergency Management has primary responsibility for developing and updating the Kentucky Emergency Operations Plan (KYEOP).

In 1998, Kentucky established a statewide emergency management program under KYEM, which has primary jurisdiction, responsibility, and authority for the planning and execution of disaster and emergency assessment, mitigation, preparedness, response, and recovery. KYEM is also responsible for coordinating with entities from all levels of government as well as private entities during an emergency response and maintaining a response center 24 hours a day.

The director of KYEM is responsible for informing the governor of deficiencies in the existing emergency management program and taking necessary actions to ensure access to all federal relief or assistance programs.

In addition to a more general statewide plan, under KRS 39A.220, each agency, board, or commission of state government is required to develop agency emergency operations procedures and to update them at least annually, unless the requirement is waived in writing by the KYEM director.

Complementing the KYEOP, plans for continuity of government are developed, composed of the executive, legislative, and judicial branches' Continuity of Operations Plans (COOPs). These COOPs are intended to ensure that the government can continue to perform essential functions during an emergency.

KYEOP Emergency Support Functions

Kentucky's ESFs are defined in the KYEOP and include a description of the supporting agencies for each function. The ESFs presented in the publicly available 2014 KYEOP do not align with the federal ESF classification system presented in the current version of the NRF. However, the current KYEOP is in alignment with the new federal ESF structure.[22]

ESF 5, Emergency Management

KYEM, the primary agency for ESF 5, is located at the Commonwealth Emergency Operations Center (CEOC), the headquarters for direction and management of emergency response. ESF 5 determines which other ESFs need to be activated in order to respond effectively to an emergency. In addition to managing the coordination of emergency response agencies at the different levels of government, other ESF 5 responsibilities include

- activating and staffing the CEOC and ESFs among other groups,
- developing requests for federal assistance and delivering signed documents to the federal government, and
- working with the Federal Emergency Management Agency to coordinate state and federal emergency response resources.

ESF 5 directs the entire state's emergency response, acts on behalf of the governor on all matters pertaining to the emergency management program, and serves as the primary liaison with local officials to coordinate emergency operations. It is the ESF

responsible for activating ESF 8 in response to a public health emergency.

ESF 8, Public Health And Medical Services Annex Plan

ESF 8 is responsible for public health and medical services during an emergency. The Kentucky Department for Public Health is the lead agency in a public health emergency.

KDPH activates the State Health Operations Center (SHOC) as directed by KYEM when a public health emergency occurs. ESF 8, Public Health and Medical Services Annex Plan, incorporated in the KYEOP, outlines the assignments for the SHOC to coordinate state-level public health and medical support emergency response. A diagram of the Incident Command Structure for ESF 8 Operations is in Appendix B.[23]

Primary ESF 8 Agencies

KDPH is the primary ESF 8 agency and is responsible for collaborating with local, state, and federal agencies and maintaining equipment, supplies, personnel, and anything else necessary to protect the capabilities outlined in Appendix C and to meet public health needs.

In addition to KDPH, the Kentucky Community Crisis Response Board (KCCRB) and the Kentucky Board of Emergency Medical Services (KBEMS) are primary agencies involved in ESF 8 functions.

The Kentucky Community Crisis Response Board and the Kentucky Board of Emergency Medical Services have specific responsibilities during a public health emergency.

Unlike KDPH, which is involved in all aspects of an ESF 8 response, the other two primary agencies have more specific responsibilities during a public health emergency response. KBEMS assigns the personnel needed to coordinate emergency medical services and credentials of out-of-state emergency medical personnel as needed. KCCRB coordinates with behavioral health services and activates crisis intervention teams to provide counseling for disaster victims and emergency workers. All three agencies are responsible for working together to respond to an emergency as effectively as possible.

Several other agencies have responsibilities under ESF 8 when activated and responding to emergencies. The support agencies are responsible for different aspects of the preparedness, response, and recovery. The ESF 8 supporting agencies mobilize health and medical personnel, emergency medical supplies, facilities, materials, sanitation services, and anything else needed to provide care and treatment to the injured and ill. The primary ESF 8 agencies are responsible for working with local public health

departments, the National Disaster Medical System (NDMS) teams, the American Red Cross, and other qualified organizations that can provide resources or personnel. Appendix D presents a diagram of ESF 8 support agencies.

Key Assumptions

Some of the key assumptions of the ESF 8 annex plan are as follows:

- The primary agencies will coordinate with the supporting agencies to prepare for, respond to, and recover from an incident.
- Local, state, interstate, and federal resources are needed to supplement supplies and guarantee continuity of medical care and public health services. These will be requested when resources are exceeded or are expected to be exceeded.
- Countermeasures and nonpharmaceutical interventions (such as social distancing) will be implemented to avoid the spread of disease or contamination.
- Laboratory services are essential.
- The incident will require evacuations, shelter for large portions of the population, crisis intervention services, and behavioral health services.[24]

Types Of Triggering Incidents

Three broad types of incidents can trigger the activation of ESF 8:

- Manmade incidents such as industrial accidents, biological or chemical events, explosive incidents, riots, and transportation incidents
- Natural incidents such as animal/plant disease outbreaks, droughts, earthquakes, and floods
- Requests for assistance from other states or entities for manmade or natural incidents in their jurisdiction[25]

Activation Levels

There are four levels of activation in response to incidents requiring ESF 8 support:

- Level 4, Monitoring Activation, is used when KDPH is required to monitor or assess an incident for possible ESF 8 support and if required, activation to a higher level. Level 4 does not require KDPH to significantly alter its day-to-day operations.

- Level 3, Limited Activation, is used when an incident requires limited Incident Command Staff to coordinate ESF 8 operations.
- Level 2, Partial Activation, is used when an incident requires additional Incident Command System (ICS) staff to coordinate ESF 8 operations.
- Level 1, Full Activation, is used when an incident requires all Command and General ICS staff, plus applicable branches and units to coordinate ESF 8 operations. The SHOC is fully activated.[26]

Preparedness Phase Responsibilities

An important part of public health emergency preparedness is the ongoing collection of data on illnesses and analysis of this data to identify unusual incidents of illness. Data collected for surveillance purposes are used primarily at the local and state levels to guide public health actions. Data collected are also sent to the CDC to support surveillance at the national level. Local and state reports of unusual incidents can alert other local and state health departments so that preventive actions can be taken to reduce the overall number of cases of an illness. State and local public health departments can use national reports on disease to identify local disease incidents and to take preventive actions.

Data reporting and surveillance allow public health agencies to
- ensure that appropriate interventions are implemented,
- inform policies and funding decisions,
- evaluate interventions, and
- provide ongoing monitoring of the incidence of disease.

When appropriate actions are taken, there are fewer widespread outbreaks of disease and ultimately less need for declarations of state- or federal-level public health emergencies.

In addition to data collection and analysis, ESF 8's key responsibilities during the preparedness phase are as follows:
- Maintain and update the agency-specific response and/or event-specific plans, which will be submitted to KYEM, and participate in training and exercises.
- Use key health indicators to conduct health vulnerability assessments, which help determine the health of a particular area to identify areas in greater need of resources and personnel.
- Retain and maintain intrastate and interstate agreements, and ensure that they are sufficient.

- Maintain warning systems, and identify the key agency representatives who can be contacted at any time. Ensure contact by creating and maintaining a communication system with multiple methods of transmitting information.
- Update and maintain an incident management software system, and train necessary personnel. This system includes an alert network, a list of personnel, and an inventory of prepositioned resources.
- Use epidemiological methods and existing infrastructure to detect disease and possible outbreaks.

KBEMS is required to maintain a list of medical personnel, to be ready to deploy them as needed, and to create a process for credentialing out-of-state emergency personnel during a disaster. KCCRB is directed to coordinate personnel who will serve on crisis intervention teams and who will provide counseling and other behavioral health services to emergency workers and trauma victims.

Response Phase Responsibilities

The type of incident determines the role ESF 8 plays in the response. A natural disaster may require providing emergency medical services to help the injured, but an infectious disease emergency may require additional responses.

The first step required during the response to a public health emergency to develop a strategy that is specifically designed to address the current incident. The focus of this phase of emergency response is planning, collecting relevant information, and communicating among all ESF 8 agencies.

The next required step is to obtain the critical resources needed to address the emergency. ESF 8 agencies are responsible for requesting, receiving, and deploying necessary medical resources through the state. If federal assistance is needed, KDPH is required to coordinate with the Governor's Office and KYEM to make the request.

ESF 8 agencies may work with agencies assigned to other ESFs to respond effectively to a public health emergency.

Throughout a public health emergency, ESF 8 agencies are directed to work in coordination with other ESFs to effectively respond. The following are examples of situations that may require intergovernmental coordination:

- A public health emergency may require the activation of the Mass Fatality Incident Plan as well as the Mortuary Response Team. Reports concerning fatalities must be produced by the

county coroner and the Medical Examiner's Office, and these fatalities will be tracked through the Mortality Data Management System.
- Mass care support may require ESF 8 to provide work in tandem with ESF 6, Mass Care Annex, as well as to deploy personnel to local health departments.
- Medical surges may require coordination among ESF 8, ESF 6, and other health care agencies when a surge overwhelms the current medical infrastructure.
- When public health information needs to be communicated, ESF 8, through coordination with ESF 15, Public Information, disseminates new information, provides updates on the situation, and publishes public health advisories.
- ESF 8 must coordinate with applicable entities as well as the Labor Cabinet to ensure the safety and health of the personnel required in the response and to assess their exposure risk, need for personal protective equipment (PPE), and behavioral health needs.

Recovery Phase Responsibilities

After the response phase is over or as the response phase is decelerating, ESF 8's agencies are directed to focus on supporting the recovery from the public health emergency. In the early stages of recovery, ESF 8 is to provide assistance and supplies to the affected groups as long as necessary. Once the extra support is no longer required, ESF 8 is to begin the demobilization process and start the process of recovering the previously deployed resources. Once deactivated, ESF 8 agencies are responsible for the costs undertaken and must seek federal reimbursement through KYEM. After-action reporting, which examines the effectiveness of the response, is required within 120 days of an incident and identifies any necessary corrective actions.[27]

Disease Outbreak Support Plan For ESF 8

The ESF 8 Public Health and Medical Services Annex Plan is designed to be general enough to encompass several types of public health emergencies. The Disease Outbreak Support Plan for ESF 8 provides KDPH and supporting agencies with direction for the investigation, prevention, and control of outbreaks of disease. This plan is implemented with support from the SHOC when local, state, or federal agencies identify a potential disease threat.

The epidemiological capabilities in KDPH are particularly important in this type of emergency. During a disease outbreak, tracking the course of the disease with all available tools is the responsibility of KDPH. The department is required to track the spread of an infectious disease and, if possible, identify the source. KDPH is required to coordinate assistance from all available sources, such as laboratories, local health departments, and emergency personnel. Other responsibilities include organizing and dispensing medical countermeasures including antibiotics, vaccines, or antiviral drugs, as well as implementing necessary nonpharmaceutical countermeasures including isolation, quarantine, and social distancing.[28]

Public Health Influenza Pandemic Plan

The Influenza Pandemic Plan is more specific to a particular public health emergency than the general Emergency Support Function (ESF) 8 capabilities.

KDPH's Influenza Pandemic Plan provides specific guidance for responding to an influenza pandemic.[29] This plan describes the necessary preparation for communication activities, emergency response, disease surveillance, vaccine delivery, and antiviral agent delivery.[30]

Once a virus is identified as possibly developing into a pandemic, KDPH epidemiologists are directed to estimate possible numbers of people who may be infected, the number of possible hospitalizations, and the number of possible deaths. Different scenarios are required to be developed based on variables such as the extent of person-to-person transmission, the geographic spread of the virus, and population characteristics such as age distribution and health. This information must be communicated to the planning team.

The planning team is directed to develop communication plans to coordinate with stakeholders including local public health departments, private health care providers, public safety personnel, employers, media, and the general public to collect surveillance data, ensure adequate medical care, and develop a mitigation strategy. For example, the planning team may establish connections with the Kentucky Hospital Association (KHA), which in turn would consult with hospitals to plan for possibilities of a surge in the numbers of emergency beds that may be needed, how hospitals are to report cases of the virus, and procedures for limiting the spread of the virus in hospitals. Hospitals may communicate with the KHA regarding supplies needed for effective treatments, and the KHA could help facilitate acquisition.

The influenza pandemic plan specifically addresses possible mitigation strategies including "contingency plans for closing schools and large businesses and canceling community events to reduce spread if such measures are ultimately considered as cost-effective."[31]

A major portion of the Influenza Pandemic Plan describes the distribution of a vaccine by population priority, particularly to those age 65 and over, the availability of vaccines by area development district (ADD), and the estimated population in each ADD. Delivery and storage of the vaccine and communication of vaccine arrival are addressed.

Crisis Standards Of Care Guidance

Public health emergencies may require making ethical decisions on distributing scarce health care resources.

In addition to the response plans for ESF 8, KDPH (in cooperation with KBEMS, KCCRB, KYEM, and the KHA) developed Crisis Standards Of Care Guidance, a plan of ethical guidance for government leaders and health care professionals for decision making at the state, local, and facility level during a community-wide emergency. Public health emergencies may require government, medical personnel, communities, and individual citizens to make decisions about distributing scarce critical health care resources. The intent of the plan of ethical guidance is to "implement measures rapidly to minimize illness and death, as well as the adverse impact on social order and economic stability."[32]

The following are examples of situations that may lead the SHOC to activate the crisis standards of care (CSC):

- Surge capacity is fully employed within health care facilities.
- Health care coalitions (HCCs) have activated their surge plans.
- Attempts at conservation, reutilization, adaption, and substitution have been performed maximally.
- Critically limited resources (for instance, ventilators or antibiotics) have been identified.
- Infrastructure resource needs (for instance, isolation, staff, or electrical power) have been identified.
- Local and regional health officials cannot meet resource needs and/or infrastructure needs.
- Requests cannot be timely met at the state and federal levels.
- A health care facility's institutional committee has reviewed the CSC and recommends initiation.[33]

The CSC calls for all ESF 8 primary and support agencies to plan and train for the possibility of medical surge crisis. The Kentucky State Police, the Kentucky Transportation Cabinet (KYTC), and state support agencies including the American Red Cross, the Office of Inspector General, and the Kentucky Hospital Association assist in implementing the CSC plan. Local agencies providing assistance include community hospitals, county emergency management agencies, the Health Care Coalition Readiness and Readiness Response Coordinator, the 911 dispatch center, emergency medical services agencies, local law enforcement, and mental and behavioral health agencies.[34]

The response phase of CSC includes

- Directions for alerting and notifying an on-call epidemiologist,
- Activation of supporting agencies based on the level of need,
- Maintaining situational awareness of changing and developing conditions,
- Reporting of health care system resource needs,
- Management of available resources,
- Implementation of 1135 Social Security Waivers of Medicaid and Medicare rules,
- Evacuation of patients as necessary,
- Tracking of patients' health status,
- Implementation of mass care capabilities as appropriate,
- Activation of family reunification activities as appropriate,
- Provision of public information,
- Provision of behavioral health services,
- Provision for public safety and security,
- Coordination with facility management resources, and
- Deactivation and demobilization.

Surge strategies are provided for health care facilities to maintain operations and increase capacity while maintaining the health and safety of patients. Strategies for health care facility space allocations, staffing assignments, obtaining supplies, and maintaining standards of care are provided. Patient triage guidelines and recommendations are outlined. [35]

Community leaders and health care professionals are encouraged to study the information in the CSC plan before public health emergencies and to use the information as a basis for planning, tabletop exercises, preparatory drills, and educational forums.[36]

Emergency Planning: State And Local Governments

All agencies, boards, cities, and counties are required to have emergency operations plans.

KRS 39A.220 requires that, unless the director waives the requirement in writing, each agency, board, or commission of state government must develop emergency operations procedures that are consistent with KYEOP and that meet its requirements. Under KRS 39B.060, cities, counties, and joint city-counties are required to have EOPs. This section reviews some state and local agency emergency plans to illustrate their content.

Kentucky Transportation Cabinet

The KYTC EOPs and KYTC Department Guidelines govern the activation, operation, and organization of KYTC's response and recovery actions to a public emergency. The primary purpose of this plan is to establish a coordinated strategy for accelerating the delivery and application of KYTC resources and capabilities in support of a statewide public emergency. In the event of an emergency, KYTC's strategic priorities are to save lives, prevent injury, mitigate property damage, and restore the state's infrastructure. These goals are accomplished through the cabinet's response operation phases of situational awareness, activation-deployment-employment, incident response, and transition back to local authorities. These phases of response are continuous and may overlap, but they will follow that order during all emergencies.[37]

The situational awareness phase is a continuous process of collecting, analyzing, and disseminating essential information so that KYTC response operations can quickly and effectively deploy critical resources into the affected area to meet the changing needs of the emergency. The activation-deployment phase is implemented immediately upon approval of the secretary of transportation in collaboration with the director of KYEM, who is designated the state incident management coordinator for major emergencies.[38]

The Kentucky Transportation Cabinet is a support agency for most ESFs, including ESF 8.

The incident response phase involves the allocation of resources to meet the needs of the incident. The KYTC secretary has overall command and control of all KYTC personnel and field resources exercised through the ESF 1 coordinator at the CEOC. ESF 1 is the support plan within the KYEOP that pertains to transportation with the mission of providing coordination and organization to maintain the all ground, water, and air infrastructure within the state. The CEOC coordinator uses NIMS to maintain operational control and directs all incoming requests to the appropriate office to provide the most expedient response. The requests are prioritized by being

either an immediate need or a planned need, and by the ability of KYTC to meet the request with available resources. The transition phase to local authorities begins once the emergency has been stabilized, but it may still require KYTC to assist local governments with control measures such as mitigating damaged infrastructure, risk analysis, management of field operations, and assisting in safely securing dangerous areas.[39]

KYTC's Division of Incident Management is responsible for updating the plan. It has been the primary agency involved in emergency operation since 2009, when KDPH designated it as the distribution manager for the state's strategic national stockpile (SNS). The agency was involved in distributing personal protective equipment during the H1N1 response in 2009 and during the current COVID-19 pandemic.[40]

The Division of Incident Management was involved in developing the support plan for Kentucky's drive-through testing sites during the COVID-19 pandemic in conjunction with KYEM and KDPH. It is also involved in providing expertise to the KYEOP in the areas of critical infrastructure identification and protection, severe weather operations, mass evacuations, post-earthquake operations, infrastructure restoration, and communications vulnerabilities.[41]

In addition to its emergency operations plan, the Transportation Cabinet has emergency response plans including an all-hazards response plan, an earthquake response plan, and a continuity of operations plan. The cabinet is revising its emergency operation to better incorporate technological advances and intergovernmental relationships. KYTC is relied upon to quickly restore Kentucky's transportation infrastructure during a public emergency by providing assessment and technical analysis of the state's transportation system through route identification, emergency routing, route clearance, and traffic control.[42]

Kentucky Energy And Environment Cabinet

The Energy and Environment Cabinet has a Continuity of Operations Plan that prioritizes services important to public health.

The Kentucky Energy and Environment Cabinet (KY EEC) has four critical components that make up its Continuity of Operations Plan in the advent of an event such as a public health crisis. The four components that that plan focuses on are the reassessment of essential services and service prioritization, an assessment of telecommuting capabilities, a projected 30 percent reduction in staffing levels, and social distancing techniques and capabilities. KY EEC selected these components because of the importance to public health, the specific need to evaluate individual departments,

and their applicability to future events that may result in high levels of prolonged absenteeism. It is important to note that KY EEC assumed that there would be a prolonged projected 30 percent reduction in staffing levels and that a possible public health crisis could last up to 18 months. KY EEC has stated that future plans will address the importance of the procurement of personal protective equipment, flexibility in leave policy, and other recovery issues that may need to be addressed. KY EEC is drafting an update to its Continuity of Operations Plan. The information provided here is from a draft of the cabinet's plan and may be updated upon final approval.[43]

Local Governments

Local governments, in coordination with their appointed emergency managers, assume the responsibility for managing "the processes necessary for preparing for, responding to, and recovering from a major incident within their communities or providing mutual aid to surrounding communities."[44] When a disaster or emergency is declared, the county emergency manager is authorized to appropriate and expend funds, make contracts based on need, enact cost-recovery ordinances, provide for the health and safety of persons and property, provide emergency assistance, review and approve EOPs, and enact orders pertaining to local emergency management.[45] Local governments also have the ability to

- activate their local emergency operations center to coordinate multiple emergency service operations,
- manage the delivery of emergency goods and services to citizens,
- activate and monitor the use of outside assistance, and
- implement local emergency information broadcasts to citizens as necessary.[46]

Local government emergency operations plans are modeled on the KYEOP but place more emphasis on local support entities.

Emergency operations plans for local areas mirror the KYEOP except that there are more details about local partners and specific contacts. For example, the Lexington-Fayette Emergency Operations Plan lists specific entities such as the Fayette County Coroner to coordinate with the emergency operations for ESF 8.[47] The Louisville Jefferson County Metro Government Emergency Operations Plan assigns the Louisville Metro Department of Health and Wellness as the lead agency responsible for ESF 8 plan maintenance.[48] The Kenton County Operations Plan names specific bridges as being vulnerable in an emergency, including the Brent Spence Bridge and the Cincinnati Southern Bridge.[49]

Kentucky Department For Local Government

The Department for Local Government (DLG) is administratively part of the Office of the Governor. DLG provides financial help in the way of grant and loan assistance, and it advises local governments in matters of budget, personnel, and other issues relevant to those entities.[50] Within the Kentucky KYEOP, DLG is a support agency for ESF 5, Emergency Management, and is the primary agency for ESF 14, Community Recovery.[51] DLG is not named as a primary or support agency for ESF 8, Health and Medical Services. However, the Cabinet for Health and Family Services is listed as a support agency for DLG recovery responsibilities.

The stated mission of ESF 14 is to "coordinate the development and implementation of community recovery strategies and plans relating to state, county, and local recovery from major and catastrophic disasters."[52] The functions include addressing the recovery needs of people and communities, from disaster to full recovery.

Kentucky Department Of Education

School districts and the Kentucky Department of Education have emergency operations plans.

KRS 158.162 requires all public school buildings and districts to develop an emergency management plan to address procedures for fire, severe weather, earthquakes, and building lockdowns and to provide associated drills and training. KRS 158.445 requires districts to adopt school safety plans based on school safety and discipline assessments. These plans focus on behavior and include suicide prevention and bullying. Although statute does not specifically require inclusion of plans related to pandemic flu, some districts have flu-related provisions in their safety plans.

For example, Jefferson County's Safety and Emergency Procedures Manual includes a Pandemic Influence Response Plan that requires the district to take actions based on six levels of urgency. These actions range from implementation of staff and student hygiene training to internal and external communication about spread, provision of PPE and sanitation supplies, active illness surveillance, processes for transmittal of infection information to the district and the local health department, cooperation with contact tracing efforts, and grief counseling for those who lose family members. The plan also includes provisions for possible alternative sites to allow for continued instruction if particular school locations become infected and for closure of the

entire district after input from the Kentucky Department of Education (KDE), local public health entities, and the district.

KDE is in the process of requiring that continuation of learning plans be included as part of the Comprehensive District Improvement Plans (CDIPs) that districts are required to complete annually for KDE approval.[53] CDIPs are required by 703 KAR 5:225. KDE's guidance to school districts on completing CDIPs now includes the requirement that plans for continuing operation be included and, therefore, integrated with the district's comprehensive goals to include instructional improvement, achievement gaps, professional development, and school culture. The CDIP regulation has not yet been updated to include this requirement.

To assist districts in continuing operations during the pandemic, KDE has produced at least 16 guidance documents on issues such as academic learning loss, personnel leave, flexible staffing, compensatory education, food service delivery, targeted services, ventilation, and transportation.

KRS 158.070 requires Kentucky public school buildings and districts to develop emergency plans that address health and safety. These plans focus primarily on weather, natural disasters, and school violence prevention and response. Districts are required to plan for missing some school days because of health emergencies or safety emergencies, to ensure that instructional days are made up, and to ensure that students receive the statutorily required minimum of 1,062 instructional hours on at least 170 school days. In extreme emergencies, districts may seek waivers for some required attendance days. Although districts play legally defined roles in managing seasonal flu, no policies address the attendance, continuing operation and personnel issues raised by the sustained closure of school buildings during the COVID-19 pandemic.

Various district policies require that school personnel have healthy workplaces and that schools assist in preventing the spread of contagious diseases by ensuring proper sanitation, promoting good hygiene, providing appropriate PPE, and communicating information about contagious disease to school communities. Superintendents have the authority under KRS 158.160 to exclude a contagious child from attending school. This statute also gives local boards the authority to close schools in response to dangerous epidemics.

Existing policies have assisted districts in managing the seasonal flu outbreaks with which they are familiar but do not address the many challenges related to continuing operations during the sustained epidemic of the COVID-19 crisis and to opening schools during such a crisis.[54] These include legal, attendance-related issues described above and the need for sustained continuity of operations when buildings are closed for in-person discussion.

Kentucky law does not require that school emergency planning include planning for continuity of operations, though many districts have had such plans in place, under provisions for nontraditional instruction. These plans are designed, however, for shorter-term emergencies lasting no longer than 10 days and do not apply to continuing operations in a sustained pandemic.

Kentucky Public Protection Cabinet

The Public Protection Cabinet has individual COOPs for the agencies that it comprises. Each COOP is tailored to meet the individual essential functions for each agency to continue to fulfill its mission. All of the agencies' COOPs specify that if situations warrant, each agency will deploy its staff to alternative locations, where they will establish operational capabilities and continue to perform essential functions within a designated recovery time objective—or amount of time needed to complete the function—until normal operations can be resumed. Each plan outlines each agency's essential functions and the recovery time needed to perform that function, the Public Protection Cabinet resources needed, the personnel responsible for the essential function, the supporting activities, the other agencies or interdependencies that may aid in performing the essential function, and the alternative work location.

One example is the COOP of the cabinet's Office of Claims and Appeals. It lists the essential functions for each division with the office. The essential functions for the Board of Tax Appeals, a division within the Office of Claims and Appeals, are processing incoming mail and creating a paper file and a scanned file for the database, sending an acknowledgment letter, setting prehearing conferences with the full board of the corresponding entity, assigning individual appeals to hearing officers, scheduling the prehearing conferences and hearings for each case, hearing the various cases and ruling on each claim, and submitting recommended orders based on the rulings. The COOP states that the time objective is 24 hours for phone response and 90 days for hearing the claim dispositions. The executive directors,

administrative specialists, board members, hearing officers, and legal review experts are the staff responsible for performing the office's essential functions. The work location specifies that staff will work from home with occasional visits for mail collection and technological functions. The resources required are email, internal computer drives, tax databases, and Courtnet to e-file certified records for tax appeals.[55]

Summary

Modeled on federal guidance, the EOPs of all states mirror each other, facilitating effective intergovernmental coordination within and across states. Federal guidance provides a model organizational and procedural structure on which KYEOP is based. Incident response can be broken down into the preparedness, response, recovery, and mitigation phases. Implementing the principle of modularity, incident response begins at the lowest level of government. If the emergency plan at that level is implemented to the best of the government's ability but the response is not sufficient, that level of government is required to request assistance from the next highest level, and so forth, until the federal government is activated.

In the response specifically to a public health emergency, ESF 8, Public Health and Medical Services, plays the lead role. Some ESF 8 responsibilities include ensuring that systems are in place to allow for interagency and intergovernmental communication, identifying and maintaining the infrastructure necessary for responding effectively, organizing materiel transport and disbursement, and identifying and activating the necessary qualified personnel.

Kentucky's emergency structure and public health emergency structure includes the ESF 8 Public Health and Medical Services Annex, the Disease Outbreak Support Plan, the Influenza Pandemic Plan, and the Crisis Standards of Care Guidance. Some state and local agency emergency plans are described in this chapter.

Chapter 3

Emergency Financial Assistance

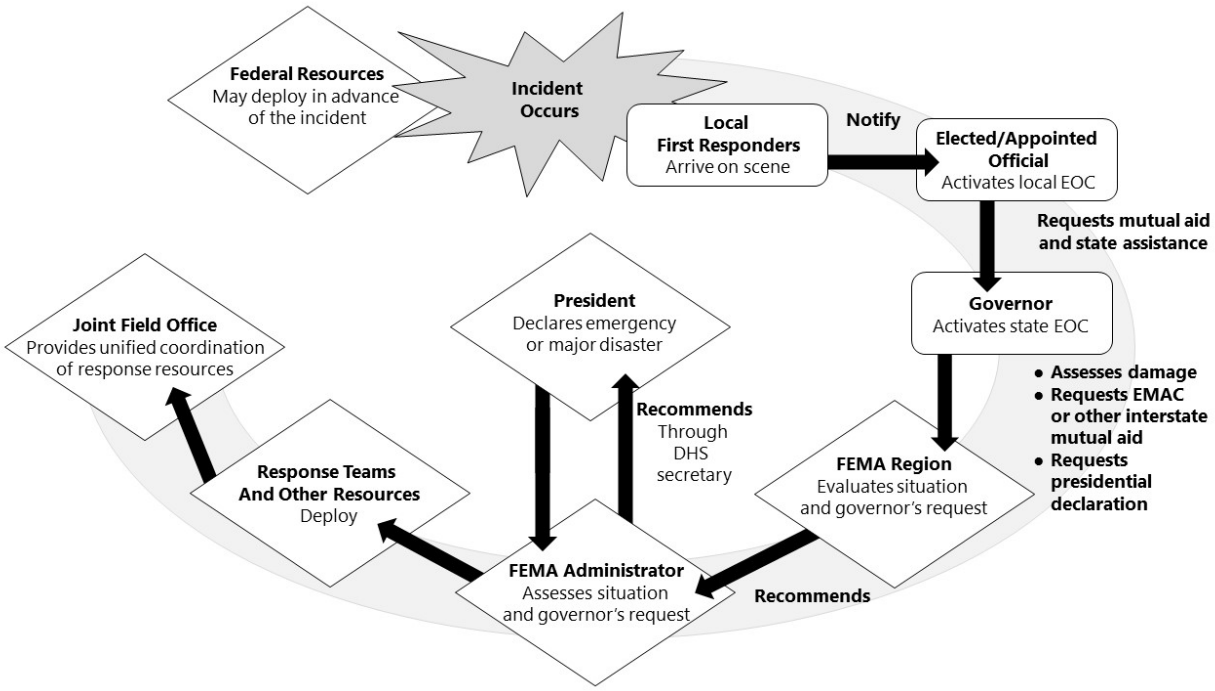
The Stafford Act

Implemented in 1988, the Stafford Disaster and Emergency Assistance Act creates a system that allows states to receive both direct aid and financial assistance from the federal government when a presidential declaration has been issued. The president authorizes the disaster preparedness program, which is reviewed annually. The Stafford Act mandates that the president provide technical assistance to the states in developing emergency response and recovery plans.

The governor must execute the state's emergency plan and take appropriate actions before requesting federal assistance under the Stafford Act.

To trigger the implementation of the Stafford Act's provisions for federal assistance, the governor is required to request aid from the president when the state has determined that it cannot address an incident with available resources. A condition of receiving aid under the Stafford Act is that the governor take the appropriate response actions and execute the state's emergency plan. When requesting assistance, the state provides information about the resources it has used and what resources are still available. After this request, the president can declare a state of emergency and provide the necessary funding, personnel, and resources. Figure 3.A illustrates the steps associated with implementing the Stafford Act.[56]

Figure 3.A
The Process Of Implementing The Stafford Act



Note: EOC = Emergency Operations Center; EMAC = Emergency Management Assistance Compact; FEMA = Federal Emergency Management Agency.
Source: National Association of State Procurement Officials. The Process Of Implementing The Stafford Act. November 2019. Web.

Requirements For Federal Assistance

The Stafford Act requires any state or local government that desires financial assistance to have a designated agency to plan and administer an emergency preparedness program. The plans must include a detailed program for the preparation against the emergency and the assistance following the emergency, including provisions for assistance to individuals, businesses, and local governments. Some portions of state emergency plans, such as an annual evaluation of a state's level of preparedness, must be submitted and approved periodically by various federal agencies to be eligible for certain types of funding. In addition, state or local governments must create a provision for appointment and training of staff and create the necessary regulations and procedures for the required training exercises. Table 3.2 provides other examples of different requirements for various types of federal funding.

Table 3.1
Examples Of Requirements For Various Types Of Federal Funding

Condition Necessary In Order To Receive Federal Aid	Explanation
Administrative plan	State must have a plan in place concerning the administration of the public assistance funds that has been approved by the Federal Emergency Management Agency. These plans must be submitted annually and incorporated into the state emergency operations plan.
Hazard mitigation plan	State submits a standard mitigation plan every 5 years for approval by the Federal Emergency Management Agency in order to be eligible for permanent work funding or other nonemergency Stafford Act assistance. Enhanced state mitigation plans are necessary to receive increased federal cost share. This plan must be in place in order to administer the hazard mitigation grant.
Emergency management agency	Must have a designated agency responsible for creating and updating the state's emergency plan as well as administering the program. The existence of this agency is necessary to secure disaster preparedness and mitigation assistance.
Compliance with insurance coverage regulations	For repairs or replacement of facilities, the applicant must agree to obtain and maintain insurance that fulfills federal regulations in order to adequately protect the facility from loss. No flood disaster aid can be granted to residential or commercial property owners who do not have the required flood insurance.
Implementation of hazard mitigation measures	An entity must implement the appropriate mitigation measures to address hazards that have occurred multiple times. If it does not, federal cost share is reduced from 75 percent to 25 percent.

Source: Compiled by LRC staff; US. Federal Emergency Management Agency. *Public Assistance Program And Policy Guide Version 4*. 2020; US. Federal Emergency Management Agency. *Stafford Act, As Amended, And Related Authorities*. FEMA P-592. 2019.

States must annually submit an administrative plan to the FEMA regional administrator detailing how they will manage emergency funds. In accordance with 44 CFR sec. 206.207, this administrative plan must be incorporated into the state emergency plan approved by FEMA before funding is provided for any project. The administrative plan must

- outline the procedures in place to notify eligible applicants of public assistance fund availability as well as brief them concerning application procedures and eligibility;
- identify the agencies responsible for the administration of the public assistance funds as well as potential staffing sources and responsibilities;
- assist FEMA in determining eligibility, conducting damage surveys, and establishing insurance and hazard mitigation requirements;
- determine the budgetary and staffing requirements needed for the management of the program;
- comply with all audit and administrative requirements; and
- process requests for advanced reimbursements.

In order to assist states with the costs of updating their plans, the Stafford Act authorizes the president to cover 50 percent of these state plan improvement costs, not to exceed $50,000 per year.

Examples Of Federal Emergency Assistance

The federal government can provide direct aid, such as supplies or personnel, or financial assistance during a declared emergency. The major source of federal emergency funding for governmental entities is money distributed through the Public Assistance Grant Program by FEMA, while the CDC and other agencies in HHS provide funds specifically for public health incidents through the PHSA. The Pandemic and All Hazards Preparedness Act (PAHPA) provides funding for emergency preparedness.

Public Assistance Grant Program

FEMA may disallow all or part of funding assistance to a state if federal guidance is not followed.

The funding distributed by FEMA through the Public Assistance Grant Program is intended to help governments as well as some private nonprofit organizations to recover from disasters or emergencies declared under the Stafford Act. Used during and after an emergency, funds are also distributed to help fund hazard mitigation measures. To receive these funds, governments must comply with all requirements outlined in the applicable statutes. If the government does not comply with federal guidance including NIMS and the NFR, FEMA can take actions including disallowing part or all of the funding requested for projects.

The funds from the Public Assistance Grant Program are subject to cost share, and the federal share cannot be less than 75 percent of the eligible cost. If necessary because of the circumstances surrounding the emergency, FEMA can recommend increasing the federal portion to up to 90 percent. To help a state's emergency response, if necessary, the president can lend the nonfederal share to a state that is unable to cover its portion of the cost share. This loan must be repaid at an interest rate determined by the US Treasury. The timing concerning the usage of these funds is dictated by the type of work being undertaken and the type of presidential declaration. Examples of federal cost share requirements appear in Table 3.2.

Table 3.2
Examples Of Federal Cost Share Requirements By Purpose And Fund Type
2019

Examples Of FEMA Public Assistance	
Purpose	**Cost Share**
General public assistance rule: funding for SLTT and some nonprofit entities to be used to respond and recover from emergencies or disasters	Federal share must be at least 75 percent of eligible costs. Must have a FEMA-approved administrative plan before funds can be received. Must have a FEMA-approved hazard mitigation plan for public assistance funds to be used for permanent work.
Repair, restoration, or replacement of public facilities	In general, at least 75 percent of eligible cost but may be reduced to 25 percent if the facility has previously been damaged by the same type of disaster and mitigation measures have not been adopted to address hazard and/or there is inadequate insurance coverage.
Debris removal	Federal share must be at least 75 percent of eligible cost.

Examples Of FEMA Individual Assistance		
Program	**Purpose**	**Cost Share**
Household assistance	Example of direct assistance: Temporary units may be provided to disaster victims for up to 18 months for no charge unless the president extends this period. At the end of this 18-month period, rent may be changed at a fair market value.	Federal assistance is 100 percent up to $35,500.
Disaster unemployment assistance	Provided to people who cannot work due to a disaster that interfered with their ability to perform their work.	Federal cost share is 100 percent.
Other needs assistance	Coverage for people and households that can include transportation, funeral, and uninsured medical or dental costs as well as funds for personal properties.	Federal assistance covers 75 percent of costs; the SLTT covers the remaining 25 percent. Cannot exceed $35,500 for individual or household assistance.

Hazard Mitigation Grant Program
Federal share is typically 75 percent of eligible costs. However, if there is repetitive loss, the federal portion can increase to 90 percent to 100 percent of eligible cost.

Note: SLTT = State, local, tribal, and territorial entities; FEMA = Federal Emergency Management Agency.
Sources: Compiled by LRC staff; US. Federal Emergency Management Agency. *Individual Assistance Program And Policy Manual*. 2019; US. Federal Emergency Management Agency. "Notice Of Maximum Amount Of Assistance Under The Individuals And Households Program." 84 Federal Register 55323. Oct. 16, 2019.

Public Health Services Act

Created in 1944, the PHSA was designed to expand state and federal health programs' ability to address diseases.[57] The PHSA requires HHS to work with states and localities to stop the spread of disease, and it allows effective response to public health emergencies by giving the HHS secretary the ability to issue a Public Health Emergency Determination. Under Section 319 of the PHSA, the HHS secretary can issue a determination that there is a public health emergency, which remains in effect for 90 days with the option of renewal. Issued during both the H1N1 and COVID-19 pandemics as well as the Zika virus outbreak in Puerto Rico, this determination allows the secretary to award grants and to provide supplies or required personnel in response to the public health emergency. When made in conjunction with a presidential declaration under the Stafford Act, a public health emergency determination also allows the HHS secretary to waive or modify some Medicare, Medicaid, and Health Insurance Portability and Accountability Act Privacy Rule requirements, among other powers, in order to ensure that adequate health care treatment is available.

CDC Assistance Program

In 2017, the CDC created a method of funding through the Public Health Notice of Funding Opportunity, which allows the CDC to quickly provide funding in response to public health crises by creating an "approved but unfunded" jurisdiction list. Eligible jurisdictions are states, territories, tribal governments, freely associated states, and some large metro areas. These jurisdictions can receive funds from the CDC through this program in order to quickly respond to a public health emergency. In an "approved but unfunded" jurisdiction, projects necessary to respond to a public health emergency are already preapproved and are allocated funding only when necessary. This method allows the CDC to streamline the administrative process and respond quickly to public health emergencies.

The CDC sets aside funds for the list. Because the fund was created to be disbursed only when needed, however, it is not possible to accurately approximate the amount of funding that will actually be needed during any given fiscal year. Kentucky is on the CDC's list, which is managed through KDPH.

Pandemic And All Hazards Preparedness Act

The PAHPA, passed in 2013, provides funds for the Public Health Emergency Preparedness (PHEP) program, the Hospital Preparedness Program (HPP), and the Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases Cooperative Agreement (ELC). The PAHPA addresses the organization of public health emergency preparedness and response activities and authorizes the building of new programs concerning medical surge capacity, the capacity of states and localities to prepare for and respond to public health emergencies, and the development of countermeasures to biological threats.

Kentucky received approximately $8 million in public health preparedness funding in FY 2020.

The CDC administers PHEP and distributes funding to states to be awarded through grants, primarily to local health departments, for preparedness activities for public health emergencies with no cost sharing requirement. (See Appendix E for a list of grants in Kentucky.) These funds are used to strengthen the public health response and support public health ESF 8 functions detailed by the NRF. The CDC provides annual guidance and technical assistance to public health departments to develop public health preparedness capabilities. Technical assistance includes CDC public health expertise, standards for developing priority preparedness capabilities, and expertise for conducting exercises and meeting performance goals. The amounts of PHEP funding received by Kentucky from 2007 to 2020 are shown in Table 3.3.

Table 3.3
Emergency Preparedness Funding, Kentucky Department For Public Health
FY 2007 To FY 2020

Federal Grant	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PHEP	$11,080,268	$11,188,189	$10,797,167	$10,231,624	$7,676,335	$8,157,252	$8,831,262
HPP	7,237,299	4,098,388	9,110,257	4,786,442	4,786,442	4,868,111	5,004,219
Total	$21,025,273	$16,726,268	$22,204,794	$29,385,640	$16,967,551	$13,943,270	$13,773,379

Federal Grant	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
PHEP	$9,171,039	$8,695,267	$7,170,711	$7,648,738	$8,797,418	$8,356,442	$7,811,091
HPP	4,235,204	3,086,810	2,818,980	2,307,146	3,013,661	2,851,534	2,203,003
Total	$13,566,896	$11,841,395	$10,313,451	$10,674,491	$12,576,499	$12,886,895	$14,479,220

Note: PHEP = Public Health Emergency Preparedness; HPP = Hospital Preparedness Program. Figures do not sum to totals shown because total federal grants also include some that are neither PHEP or HPP.
Source: Sarah Cooper, staff assistant, Kentucky Cabinet for Health and Family Services, Office of Legislative and Regulatory Affairs. Email to Miriam Fordham, Dec. 8, 2020.

The major preparedness investments that Kentucky has made with the PHEP funds are in community recovery, public health laboratory testing, community preparedness, emergency operations coordination, and medical countermeasure dispensing and distribution.[58]

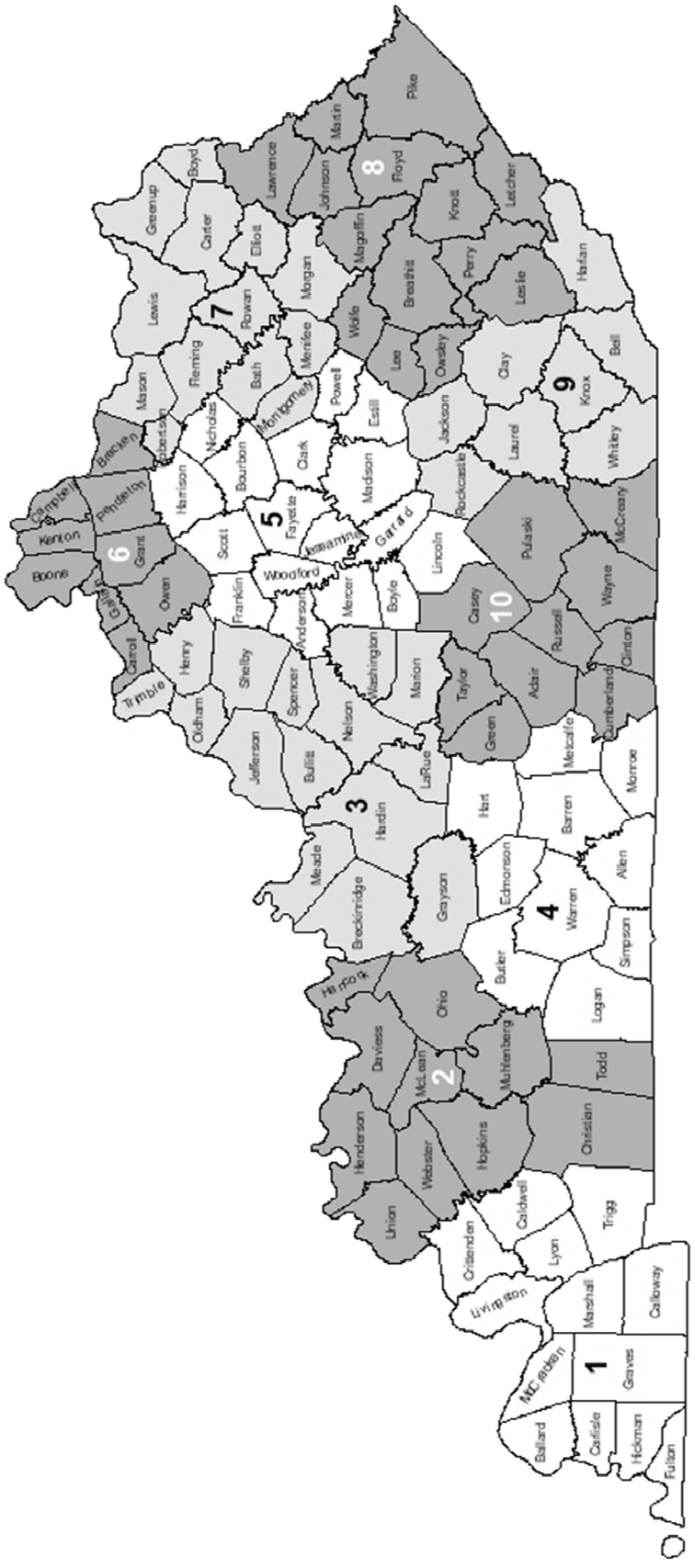
The HPP is administered by HHS and provides funding to help regional health care systems prepare for emergencies. HPP funds are used to develop the regional health care coalitions that can be activated during a public health emergency to provide medical services and resources and to improve health care system preparedness and response. Funds may be used to develop

- the ability to track available hospital beds and medical resources,
- communication among emergency responders, and
- preparedness plans through regional exercises.

Table 3.3 shows the amounts of HPP funding that Kentucky received from FY 2007 to FY 2020.

There are 10 regional health care coalitions in Kentucky. HCC members include regional and local emergency managers, hospital management, health planners, as well as representatives from mental health, long term care, Emergency Medical Services, Veterans Administration, Fire Service, and schools of public health and social work, among others. The 10 regional health care coalitions receive approximately 75 percent of HPP funding from the Pandemic and All Hazards Preparedness Act. Figure 3.B shows the hospital preparedness program coalition regions.

Figure 3.B
Kentucky Regional Preparedness Program Coalitions



Source: Compiled by LRC staff; Kentucky Emergency Preparedness for Aging and Long-Term Care. 2021. Web.

The CDC also administers the ELC, which provides funding for general capacity building relating to epidemiology, laboratory, and health information systems as well as funding for specific public health emergencies such as disease outbreaks. Funds may be used for epidemiologist positions, modernization and improvements to systems, and response abilities. The CDC reports that Kentucky received the following amounts of funding for the ELC from 2016 to 2020:

- 2016: $2,413,607 (related to Zika: $757,803)
- 2017: $2,565,923 (related to Zika: $397,889)
- 2018: $2,927,220
- 2019: $2,949,602
- 2020: $3,371,323 (related to COVID-19: $107,386,636)[59]

Federal 2020 Coronavirus Aid, Relief, and Economic Stimulus (CARES) Act funding for the CDC was $4.3 billion for preparedness and response. Kentucky was awarded nearly $115 million from the CDC, with the majority allocated to the ELC.[60] These funds are targeted for COVID-19 response, but the improvements made in technology and laboratory capabilities will be of general value over the long term.

National Funding Decline

All states have experienced declines in federal funding for emergency preparedness.

The decline in public health preparedness funding to Kentucky is shown in Table 3.3. All states have experienced declines in federal funding for emergency preparedness. Federal funding for the CDC declined from $858 million in 2019 to $850 million in 2020. PHEP funding declined from $940 million in 2002 to $675 million in 2020. Funding for HPP has declined from $515 million in 2004 to $275 million in 2020.[61]

State Emergency Preparedness Funding

Since KDPH is the lead agency for ESF 8, Public Health and Medical Services, and is responsible for coordinating with local, state, and federal agencies and organizations to maintain and enhance public health and medical preparedness throughout the state, it is the state's recipient of federal funds provided for PHEP, HPP, the ELC, and other specific grants such as those related to Ebola and H1N1. KDPH's preparedness programs, including all branch and field personnel, are 100 percent federally funded.

Kentucky's 61 local health department jurisdictions receive or benefit from approximately 60 percent of the PHEP funding. Some

state-level staff, such as regional preparedness coordinators and a portion of regional epidemiologists, are funded through PHEP.

The 10 regional health care coalitions receive approximately 75 percent of HPP funding from the Pandemic and All Hazards Preparedness Act.

Kentucky's regional health care coalitions receive approximately 75 percent of the available HPP funding.[62]

Disaster Relief Funding Program

The Disaster Relief Funding Program trust fund established in KRS 39A.300 provides funds for cities, counties, urban-counties, charter counties, and consolidated local governments, as well as for people with disaster-related needs not met by any other relief agency. KYEM administers the fund.

Summary

Federal financial assistance for emergency incidents is triggered by the Stafford Act. States are required to integrate emergency plans with federal plans in order to receive funds. The Public Assistance Grants primarily provide assistance for recovery and mitigation. The Public Health Services Act provides funds to help with responding to public health emergencies. The CDC assists states in responding to infectious disease incidents.

The Pandemic and All Hazards Preparedness Act allows states to provide grants for emergency preparedness including the Public Health Emergency Preparedness program, the Hospital Preparedness Program, and the ELC, all of which have declined. All of Kentucky's emergency preparedness funding comes from the federal government.

Chapter 4

Public Health Emergency Preparedness

Federal assistance is paramount for all states for the development of public health emergency plans and assistance. However, each state is responsible its own preparedness capabilities and resources. This chapter reviews emergency preparedness resources including epidemiological capacity, clinical staff, laboratory capacity, technology integration, medical supplies, health care providers, and medical volunteers. A brief comparison of Kentucky's level of preparedness with that of other states and a review of Kentucky strengths and challenges are provided.

Most descriptions in this chapter refer to the conditions before the onset of COVID-19. More resources and capabilities have been elevated and modified during the pandemic. It will be possible to develop a more up-to-date overview of these capabilities once the recovery from the pandemic is more complete.

Epidemiological Capacity

Disease Reporting

All states have disease reporting requirements.

All states require hospitals, health care providers, and laboratories to report data on diseases, including infectious diseases, to state and local health departments so that they can quickly identify outbreaks and stop the spread of the disease. In Kentucky, KRS Chapter 214 and 902 KAR 2:020 provide the reporting requirements for public health professionals concerning the timing and types of communicable diseases that must be reported.

Reports of positive tests are entered by the laboratory or health care provider into the Kentucky Health Information Exchange (KHIE). Administered by the Cabinet for Health and Family Services, KHIE is a health information exchange with more than 100 hospitals and over 2,600 ambulatory health care locations connected to a common framework for the exchange of patient information. KHIE also serves as a public health reporting system. Laboratories are required by 902 KAR 2:020 to submit specific disease test results to KHIE.

From KHIE, test results are then reported to the CDC to help local, state, and territorial public health officials identify and track cases of disease over time.

Positive cases of at least 22 diseases must be reported to the Kentucky Department for Public Health within 24 hours.

Positive cases of at least 22 diseases must be reported within 24 hours to KDPH including hepatitis A acute, Middle East respiratory syndrome-associated coronavirus (MERS-CoV) disease, novel influenza A virus infections, Ebola virus hemorrhagic fevers, measles, severe acute respiratory syndrome-associated coronavirus (SARS-CoV) disease, and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2 or COVID-19). Required reporting for other diseases may occur within 1 to 5 business days. Reporting of positive and negative test results is required for COVID-19 as of June 15, 2020, to allow for the determination of positivity rates.

KDPH may also issue a public health advisory for the required reporting of positive tests for a disease not listed in 902 KAR 2:020 if it is determined to cause a public health threat.

The data systems of KHIE and the CDC are incompatible and require manual combination of data. Some laboratories in Kentucky are not connected to either KHIE or the CDC data system, so reports must be submitted and entered manually. Additionally, laboratories are not always aware that reporting of test results is required.[63] These complications create inconsistencies and delay in the publication of test results.

KDHP's Division of Vital Statistics receives reports of the number of deaths from reportable diseases, derived from the reported cause of death on submitted death certificates. A committee of experts reviews the death certificates and associated information to rule out any deaths in which a disease may have been present but not the cause of death.

The Division of Laboratory Services is responsible for the collection of testing data used in case surveillance in Kentucky.[64] The CDC provides the division with data reporting requirements such as who must report, what data needs to be reported, and how the data must be reported. The CDC also provides requirements on what is needed before a testing site can be established. All sites must comply with Clinical Laboratory Improvement Amendments, perform tests using a test authorized by the Food and Drug Administration, and report diagnostic data to the appropriate state or local health department. Clinical Laboratory Improvement Amendments are the federal requirements that regulate clinical

laboratories before they can begin to accept human samples for diagnostic testing. It is the responsibility of the Food and Drug Administration to ensure the quality assurance of testing laboratories.

The KDPH Division of Laboratory Services is challenged in its capability to do large quantities of updated genetic subtyping tests. At the height of the hepatitis A outbreak, the CDC ceased genetic subtyping of Kentucky specimens because of the vast number of specimens that the CDC was receiving from other states subsequent to the spread in Kentucky. This development limited Kentucky's ability to detect unique or emergent strains of hepatitis A that might have given rise to subclusters of disease in specific populations. Without this information, prevention measures could not be deployed. Updated subtyping tests require more complicated software to analyze the data for more accurate characterization of human pathogens. The Division of Laboratory Services is working to move toward this ability, but that step will take time and equipment for which funding is limited.

Case Surveillance

The data collected for case surveillance differs from that collected during clinical trials.[65] In clinical trials, scientists measure and follow patients' health statistics to try to treat a known disease, but in case surveillance, the focus shifts to demographic and risk factors to better learn how to prevent and confront a new public health crisis. In case surveillance, the data collection process and the data collected may change as the crisis progresses and as understanding of the disease and outbreak increases.[66]

According to the CDC, despite the best efforts of public health professionals, there are limitations to case surveillance. First, case surveillance does not present the complete picture of a potential disease outbreak because some people are infected but do not seek medical attention. As a result, data is not collected from these people, leaving an inaccurate picture of the outbreak in the impacted community.

Another limitation is the type of information that laboratories provide to public health professionals. Because of the volume of reported cases or staff limitations, some laboratories may not be able to provide the type of detailed information needed or to provide it in a timely manner.

Finally, because of differing collection methodologies, data collected by one entity may not be comparable to data collected by other states, localities, or jurisdictions, or even by the federal government.[67]

Contract Tracing

The goal of contact tracing is to help stop the spread of infectious diseases.

The goal of contact tracing is to help stop the spread of infectious diseases such as acquired immunodeficiency syndrome (AIDS), tuberculosis, H1N1 influenza, and COVID-19. When an incidence of an infectious disease is reported to public health departments, a disease investigator contacts the infected person to confirm test results, inquire about isolation needs if isolation is necessary, and ask about other people who may have been infected. Contact tracers follow up with potentially exposed people, help assess the risk of exposure to the disease, and provide advice on precautions to minimize the possibility of infection. Social support connectors follow up with people who may need social supports for daily needs. Contract tracing involves a partnership of the state, KDPH, local health departments, and the public.

Prior to the COVID-19 pandemic, KDPH had 431 people involved in contract tracing across the state and local health departments. An additional 206 people were hired and trained in temporary positions to assist with contract tracing as of August 24, 2020. CARES funding allowed for up to 700 total tracers to be hired.

KDPH has been able to improve the electronic system of contract tracing with CARES funding. The tracing system includes a statewide database and virtual communication, which allows for efficient information gathering on positive cases and the maintenance of social distancing while conducting tracing.

In the case of disease outbreaks, KDPH reaches out to community partners such as county judge/executives, mayors, school superintendents, the Kentucky League of Cities, the Kentucky Chamber of Commerce, and university presidents, to provide posters, talking points, social media posts, and educational materials. The law protects the privacy of infected people and those potentially exposed, but KDPH has the authority to contact and require isolation of people in order to contain the spread of disease.[68]

Clinical Staff

Local health departments have reduced clinical nursing work because of economic necessity. Clinical nursing staff are needed when there is a public health emergency, such as the hepatitis A outbreak, to do clinical work such as vaccination administration and outreach. The public health staff members, at both state and local health departments, perform multiple duties and cover work that multiple people covered previously, leading to difficulty in disease detection, case investigation, outbreak detection, and response.[69]

The specific challenges relating to epidemiological capacity in Kentucky include limited numbers of epidemiologists at the state public health department, a lack of clinical nursing staff, insufficient laboratory capabilities, and a need for increased technology integration, such as electronic case reporting.[70]

Sufficient numbers of epidemiologists are necessary to analyze data to determine the source of disease outbreak.

Prior to the COVID-19 pandemic, KDPH reported five vacant regional epidemiologist positions, most of which were in Eastern Kentucky, where hepatitis A hit the hardest, and most of these positions were vacant throughout the hepatitis A outbreak. Regional epidemiologist positions are located across the state. Each epidemiologist maintains disease surveillance, reporting, and outbreak investigation capabilities for multiple counties, among many other primary duties. Regional epidemiologists are important to analyzing data on emerging infectious diseases across the state.[71]

KDPH has the capability to detect and collect information on cases of reportable diseases, such as hepatitis A and influenza, even though the manual submission of cases can slow the process. KDPH regularly detects outbreaks and cases of emergent infectious diseases that would not be found without a good surveillance process. However, that is just the first step in infectious disease preparedness. Of the 10 states affected by a recent *E. coli* outbreak, Kentucky was the first to detect it and had much more data available. However, KDPH did not have sufficient epidemiologists available to analyze the data to quickly identify the probable source. Other states with fewer cases, such as Tennessee, were able to identify possible sources and follow up with raw food specimen collection before KDPH could analyze the data.[72]

Medical Supplies

KYEOP outlines the responsibilities that are essential for each agency to successfully respond to emergencies, disasters, or technological incidents that may affect the citizens of the commonwealth. One of the critical responsibilities that the plan outlines is guidance for state and local governments on how to provide, request, receive, and deploy medical supplies during an emergency.

Kentucky maintains a strategic stockpile of medical supplies and resources, which KDPH administers in coordination with KYEM and other state agencies.[73] There are numerous rationales for stockpiling medical resources for an emergency, including the possibility of an insufficient commercial market to ensure production and the lack of commercial supply chains to provide the correct product in the amount needed. For example, a pharmaceutical company may not produce a required quantity of a particular antiviral medication because market conditions indicate that it would not be profitable. The purpose of a stockpile is to ensure that the desired quantity of that drug is available in times of an emergency.

The US strategic national stockpile can provide assistance to states with medical supplies and resources upon request in emergencies.

When states do not have a sufficient stockpile to address an emergency, they may request assistance from the federal strategic national stockpile maintained by HHS. The SNS is the national supply of medicine and medical equipment that the federal government maintains in the event that states or localities need supplemental assistance to respond to a public health threat. Requests for supplies are generally made by a governor. The goal is for supplies from the SNS to be distributed to any state in the nation within 12 hours of a request.

The SNS contains large quantities of medicine and medical supplies to protect the public in the event of a public health emergency such as a terrorist attack, flu outbreak, or natural disaster. The SNS is designed to supplement and resupply hospitals and state or local public health agencies whenever an emergency overwhelms local resources anywhere within the United States or its territories.

There are a several channels by which SNS requests can occur. A presidential disaster declaration for a public health emergency automatically establishes the federal ESF 8 through FEMA. There is automatic provision of supplemental assistance to state, tribal, and local governments in the core functional areas of public health

and medical needs, medical care personnel, patient care, health and medical equipment supplies, and safety and security of drugs and medical devices.

Absent a presidential disaster declaration, states or their designated representatives can request assistance from the federal SNS. Once the request has been made and approved, the requested supplies are delivered to the secured designated state SNS. States are required to have a federally approved dispensing plan in order to receive federal SNS assistance.[74]

Factors that determine whether federal SNS assistance is needed include population vulnerability to a biological or chemical threat, the availability (or lack thereof) of medical supplies, and the ability to rapidly disburse the medical supplies or equipment in a coordinated manner. During the 2009 H1N1 epidemic, the federal SNS provided more than 12 million courses of antiviral medications, 85 million N95 respirators, and 14 million masks to states and US territories.[75]

The federal SNS is designed to supplement state and local governments' medical supplies and equipment during times of crisis, not to replace a state's own emergency stockpiles. The same supplies from the federal SNS are not normally distributed to all states and territories at the same time. The federal SNS was not able to provide medical supplies and personal protective equipment to all states and territories at the onset of the COVID-19 pandemic. Kentucky and many other states turned to additional sources, including private companies such as Ford and Toyota, for supplies and sought donations from other entities that had medical supplies, particularly personal protective equipment, that they were not using.

ESF 7 Resource Support

ESF 7 primary functions include coordination of transportation and delivery of requested resources.

The list of primary and supporting agencies is outlined in KYEOP Emergency Support Function 7. ESF 7 includes agencies that will assist with alerting, mobilizing, deploying, and demobilizing supplies for responses during an emergency.[76]

The Commonwealth Resource Management Group (CRMG) is the primary agency responsible for the activation and operation of ESF 7, Resource Support. CRMG comprises members from both KYEM and the Kentucky National Guard. One of the primary functions within ESF 7 is to coordinate the transportation and

delivery of requested resources to counties and cities. This is accomplished through

- establishment of resource supply points and timetables,
- determination of transportation modes and special transportation requirements,
- provision of estimated time of delivery to parties requesting resources, and
- tracking the deployment of resources through the Kentucky Emergency Management Information System.[77]

Assisting CRMG in its responsibilities are supporting agencies including the American Red Cross, KDPH, the Department for Environmental Protection, and private sector and nongovernmental groups such as retail, wholesale, and other industries associated with sharing, planning, and exercising logistics. The support agencies primarily provide information and support, such as technological, logistic, and personnel assistance, to CRMG, and they ensure that people are properly trained on plans and procedures related to their work.[78]

For example, a Transportation Cabinet representative will work with CRMG to select resource delivery routes; identify issues potentially affecting these routes; and provide recommendations, briefings, and maps on identified resource delivery routes.[79]

Health Care Providers And Medical Volunteers

Kentucky has a chronic shortage of health care providers, making public health emergencies a challenge.

Kentucky has a chronic shortage of physicians, nurses, and mental health providers, particularly in rural areas. Kentucky meets only 57.6 percent of the need for primary care providers, 22.5 percent of the need for dentists, and 24 percent of the need for mental health providers.[80] During the COVID-19 pandemic, when Kentucky had to mobilize scarce health care provider resources, the state took advantage of strategies used by many states, including relicensing retired providers, waiving out-of-state licensing laws, and temporarily expanding scope of practice requirements. These provisions allowed health care providers to deliver services to victims of COVID-19, as well as people with more routine illnesses, when they normally would have been prohibited from doing so.

Other sources of health care providers include the Medical Reserve Corps, the Kentucky Community Crisis Response Board, the National Disaster Medical System, the Commissioned Corps of the US Public Health Service, and the National Health Services Corps.

In many cases, providers participating in these organizations are already practicing in Kentucky.

Medical Reserve Corps

The Medical Reserve Corps program is housed in HHS. Its goal is to meet surge capacity needs by providing access to a variety of volunteers, including physicians, nurses, pharmacists, social workers, radiological technologists, respiratory therapists, and clinical laboratory technologists and technicians.

Kentucky has approximately 2,650 volunteers, including 1,615 medical and public health professionals. In 2019, 3,315 hours of volunteer service were reported, responding to 394 activities.[81]

Kentucky Community Crisis Response Board

The KCCRB is created in KRS 36.250 to 36.270 and is a primary partner with KDPH in meeting the capabilities of the ESF 8 requirements. KCCRB also partners with the Kentucky Department for Behavioral Health, Developmental and Intellectual Disabilities to provide emergency mental health services.

KCCRB members provide critical incident stress management services in preincident training, acute crisis response, and postincident support to emergency services personnel who have encountered a traumatic event. Traumatic events include deaths in the line of duty, multicasualty incidents, use of deadly force, suicide of a first responder, events involving children, prolonged incidents, terrorism, and any other overwhelming event.[82]

National Disaster Medical System

HHS is responsible for leading the National Disaster Medical System for the public health and medical response to emergencies. Providers in NDMS, such as doctors and nurses, generally work outside the federal government and are federal employees used intermittently. HHS sends responders to areas that are experiencing a public health emergency.[83] NDMS participants are similar to military reservists; they leave their current jobs to assist in areas across the county during an emergency.

Commissioned Corps

The US Public Health Service, HHS, comprises Commissioned Corps officers who are available to assist with emergencies and disasters. Commissioned Corps officers may be deployed to respond to an urgent or emergency public health care need arising from a national emergency declared by the president under the NEA; an emergency or major disaster declared by the president under the Stafford Act; a public health emergency declared by the HHS secretary under the PHSA; or any emergency that is appropriate for deployment, as determined by HHS.[84]

National Health Services Corps

The National Health Services Corps is an AmeriCorps program that locates people training in health-focused careers in communities that need additional health services. The trainees serve roughly 1,700 hours over 42 to 46 weeks. The PAHPA established a demonstration loan repayment program for eligible National Health Service Corps participants who agree to complete their service in a state, local, or tribal health department in a health professional shortage area or an area at risk for public health emergencies. Kentucky participates in this program through KDPH.

Kentucky's Emergency Preparedness Challenges

KDPH has indicated that it has sufficient ability to respond to natural disasters but not to new and emerging public health emergency threats such as the rise in opioid abuse, the reemergence of hepatitis A, and new diseases such as Ebola, Zika, and COVID-19. KDPH indicates that it has managed the response to these outbreaks and others despite experiencing several challenges such as limited epidemiologic capacity, shortages of clinical staffing and public health personnel, insufficient laboratory capacity, and inadequate technology integration.

A strength of Kentucky emergency preparedness is its health care-related capabilities.

Capabilities related to health care are a strength of Kentucky's public health emergency preparedness. Coordination with regional health care coalitions and emergency medical services agencies and the implementation of a comprehensive HCC-based planning, training, and exercising program helps preparation for an emergency. This coordination has improved Kentucky's HPP, which has helped to build capabilities to respond to and recover from threats of highly infectious disease. Additionally,

coordination helps maintain six designated assessment hospitals for highly infectious diseases.[85]

In addition to the need to improve its epidemiological capacity, access to medical resources and supplies, and numbers of health care providers, KDPH has noted the following infrastructure challenges related to preparedness for public health emergencies:

- Elimination and decrease of staff on the state, regional, and local levels, especially regional epidemiologists and local preparedness coordinators
- Reduced funding to sustain preparedness partnerships via contractual agreements
- Outdated IT/software/communications, including equipment, technologies, and capabilities
- Reduced resources for conducting full-scale exercises that are more meaningful than tabletop exercises
- Loss of funding support for recruitment, training, management, and retention of volunteers
- Decreased travel to local jurisdictions by state employees, limiting local preparedness activities and diminishing baseline capabilities
- Decreased training resources, limiting training opportunities and readiness and restricting growth and implementation of certification programs
- Decreased funding for ongoing PPE stock management, with no funding in support of stock rotation, product replacement, or tracking and inventory solutions, although this has been temporarily addressed as part of the COVID-19 response
- Increased demands on capabilities, capacity, staffing, and equipment, with decreased resources for warehouse support, operations, and equipment
- Lack of funding for regional distribution site locations, support, and personnel, making the backbone of the SNS distribution system 100 percent dependent on community support in terms of site and volunteer support
- Lack of funding for staff to provide needed support in many areas such as
    - Integrating all the permitted facilities in the emergency notification system or similar program to communicate public health messages, especially during water emergencies or communicable disease outbreaks
    - Kentucky Outreach and Information Network program to provide outreach messaging to vulnerable populations
    - Website and information sharing

  - Functional Assessment Service Teams program to assess functional and access needs in a sheltering scenario and help match resources to needs
  - Training and credentialing of new preparedness staff
  - Ability to assess local programs and activities for quality assurance
- Funding decreases for preparedness efforts affect the support capabilities of the state laboratory, epidemiologists, long-term care, behavioral health, health care and pharmacy preparedness, and other preparedness partners[86]

Comparisons To Public Health Emergency Preparedness In Other States

While it is important to have an EOP that is appropriate and thorough, lacking access to the necessary resources can influence the level of emergency preparedness and ultimately the effectiveness of responding to the emergency.

Kentucky appears to face many of the same public health emergency preparedness challenges as other states.

Kentucky appears to face many of the same public health emergency preparedness challenges as other states. A 2018 US Government Accountability Office report noted that in the area of protection, which measures activities related to safety and coordination for emergency responders, most states are strong. However the majority of states were found lacking in the areas of electronic laboratory reporting, epidemiological capacity, and laboratory capacity.[87]

The National Health Security Preparedness Index shows that, since 2013, Kentucky has become more prepared overall for a public health emergency, moving from an index score of 6.3 in 2013 to 6.7 in 2019. The national average score was 6.1 in 2013 and 6.8 in 2019. The index includes six domains and uses 130 preparedness measures. Table 4.1 shows that Kentucky experienced improvements in four of the six domains and slight declines in two domains, Health Security Surveillance and Healthcare Delivery.[88]

Table 4.1
National Health Security Preparedness Index Domain Kentucky And National Scores
2013 And 2019

	Kentucky		National Average	
Domain	**2013**	**2019**	**2013**	**2019**
Health Security Surveillance	8.0	7.9	7.5	8.4
Community Planning and Engagement Coordination	4.3	4.7	4.5	5.3
Incident and Information Management	8.4	9.7	8.1	8.9
Healthcare Delivery	4.7	4.5	4.7	5.0
Countermeasure Management	5.8	6.2	5.7	6.1
Environmental and Occupational Health	6.5	7.1	6.3	6.9
Total score	6.3	6.7	6.1	6.8

Source: Robert Wood Johnson Foundation. National Health Security Preparedness Index. June 2020. Web.

The decline in the Health Security Surveillance domain was due primarily to a lower capability in the ability to identify, discover, locate, and monitor threats, disease agents, incidents and outbreaks because of a decline in the number of epidemiologists. The decline in the Healthcare Delivery domain was due to a lower number of home health and personal care aides per 1,000 population in the state aged 65 and older from a high of 24 per 1,000 in 2016 to 21 per 1,000 in 2019.[89]

Kentucky could further increase its score in the Community Planning and Engagement Coordination domain by improving the proportion of the population served by a comprehensive public health system—37 percent in 2019—and by obtaining state public health department accreditation.[90]

A report from Trust for America's Health, using measures other than the National Health Security Preparedness Index, shows Kentucky moving from the lowest of three tiers to the middle tier on state public health and emergency preparedness readiness. The report ranked states on 12 priority indicators. In 2018, Kentucky's lowest scores were for flu vaccination rates, the number of local public health departments with national accreditation, the percentage of grade A acute care hospitals, and laboratory surge capacity.[91]

Kentucky improved on its vaccination rate and laboratory surge capacity in 2019. The report also noted improvement in state funding for initiatives relating to communicable disease control, chronic disease prevention, injury prevention, environmental health, and maternal and child care. Positive indicators in both years for Kentucky include emergency management accreditation, nursing compacts, and hospital coalitions.[92]

Kentucky's rankings on access to care in nonemergency times are low compared to rankings for other states. America's Health Rankings placed Kentucky 46th in the number of geriatricians, 47th in the number of home health care workers, 35th in preventive clinical services, 49th in preventable hospitalizations for persons ages 65 to 74, and 47th in access to clinical care.[93]

Summary

Federal assistance is paramount for all states for the development of emergency plans and sources for necessary supplies, personnel, and infrastructure. However, each state is responsible for the preparedness and plans for obtaining and distributing resources.

KDPH has indicated that it is well positioned to respond to natural disasters but not to new and emerging public health emergency threats such as the rise in opioid abuse, the reemergence of hepatitis A, and new diseases such as Ebola, Zika, and COVID-19. KDPH has managed the response to these outbreaks and others despite experiencing several challenges such as limited epidemiologic capacity, shortages of clinical staffing and public health personnel, insufficient laboratory capacity, and inadequate technology integration.

This chapter reviewed these challenges to Kentucky's emergency preparedness, reviews sources for emergency health care providers and medical supplies, and reviews some comparisons of Kentucky's level of preparedness with that of other states.

Much of this chapter referred to preparedness as it existed before the COVID-19 pandemic. Many more resources and capabilities have been elevated during the pandemic. It will be possible to develop a more up-to-date overview of these capabilities once the recovery from the pandemic is more complete.

Chapter 5

Public Health Emergency Responses

Kentucky frequently responds to large-scale public health emergencies that require lifesaving medications or other health care responses. On average, two federally declared disasters strike Kentucky each year. The SHOC is activated multiple times a year to coordinate response efforts. (See Appendix F for a history of SHOC activations.) During these activations, KDPH provides ESF 8 support for events involving elements such as suspicious packages, severe weather, flooding, power outages, wildland fires, contaminated medications, train derailments, disease outbreaks, chemical spills, water shortages, and the opioid crisis, as well as emerging infectious diseases such as Ebola, Zika, hepatitis A, and currently COVID-19.

During these activations, KDPH may be required
- to enforce its legal authority to perform communicable disease control, public health surveillance, and risk reduction;
- to provide public health education; and
- to maintain disaster preparedness.

The KYEOP may be immediately activated to respond to these emergencies, and KYEM may direct operations plans for an appropriate ESF.

Responding to potential, new, and continuing disease outbreaks requires continuous surveillance, preventive actions, and mitigation measures as well as immediate response. The extent to which ESF 8 operations are implemented to respond to disease outbreaks depends on the level of risk to public health, the number of people who may be affected, and the geographic area of the population that may be affected. When there is a lower likelihood of a widespread outbreak of a disease, there is less need for a declaration of a public health emergency; for executive orders that trigger the activation of the SHOC; and for implementation of the KYEOP, the Disease Outbreak Support Plan, and ESF 8 capabilities.

In many cases, the public may be unaware of actions being taken to address an outbreak.

Outbreaks of disease do not usually result in the expansive implementation of emergency procedures that has been experienced during the COVID-19 pandemic. Most responses to disease outbreaks result in actions by KDPH and other entities related to health care, including health care practitioners, local public health departments, emergency responders, medical

researchers, and hospitals; the responses also results in actions by individuals and public and private entities and, often, changes in their behavior. The public may be encouraged to be tested for disease, obtain vaccinations to prevent disease, limit exposure to others with disease, access treatment for disease, and maintain personal hygiene to prevent the spread of disease. Public and private entities may be required to take measures to protect employees and the public from disease transmission. However, much of the public may be unaffected and possibly unaware of public health responses to most disease outbreaks. The same could not be said about the COVID-19 pandemic.

The first section of this chapter presents examples of public health responses to disease outbreaks in Kentucky including hepatitis A, hepatitis C, AIDS, Ebola, avian influenza, and H1N1 influenza. The second section provides an overview of some major responses to the COVID-19 pandemic including the declaration of a public health emergency, implementation of measures to limit the transmission of the disease, and mobilization of critical resources to treat the disease. A complete analysis of responses during the COVID-19 pandemic may be made only after the pandemic is controlled. However, a review of responses may provide information for preparedness plans for future disease outbreaks and pandemics. Response phase actions outlined by the Kentucky Department for Public Health's Disease Outbreak Support Plan are included in Appendix G for reference.

Responses To Disease Outbreaks

Hepatitis A

From August 2017 to December 2019, Kentucky had a hepatitis A incidence rate of 112 people testing positive per 100,000. The majority of the cases were in Eastern Kentucky.

Hepatitis A is a disease that affects the liver and is transmitted through close personal contact with a person who is infected, in situations such as sex, caring for someone ill, or shared use of drugs. Before a vaccine was developed, the primary methods used for preventing transmission of the hepatitis A virus were hygienic measures. Widespread vaccination for hepatitis A began in 1995 and has kept transmission limited. KDPH continues to track cases of hepatitis A. A positive diagnosis of acute hepatitis A is required to be reported within 24 hours to KDPH by 902 KAR 2:020.

Despite the containment of hepatitis A for several years, in August 2017 a man who was homeless in Louisville was diagnosed with the first case of what would become the largest hepatitis A outbreak in the United States since the vaccine became available.

KDPH, the Louisville Metro Department of Public Health and Wellness, and the University of Louisville's Division of Infectious Diseases partnered to address the issue in the region by providing the vaccine to at-risk people and tracing the source of the infection.[94]

Initially, KDPH focused only on the need for vaccination of people in high-risk categories, such as homeless people, incarcerated people, and intravenous drug users.[95] These actions appeared to be effective, but in December 2017 a food service worker was diagnosed with hepatitis A. Local public health departments widened the population to be vaccinated and immunized over 66 restaurant and food truck employees to reduce the spread through food handling. Some restaurants were shut down for decontamination. KDPH began recommending that everyone receive the vaccination. The delay in more widespread action may have caused confusion among health providers and individuals about who should be receiving the vaccine.

The hepatitis A vaccines were offered at reduced rates or free of charge. However, outbreaks in Eastern Kentucky were more difficult to contain. There were reports of an insufficient number of public health nurses to administer the vaccine and a lack of funds to purchase the vaccine. From August 2017 to December 2019, Kentucky had a hepatitis A incidence rate of 112 people testing positive per 100,000, with the majority of the cases in Eastern Kentucky. The outbreak appeared to have diminished as of February 8, 2020. In Kentucky, a total of 5,001 cases, approximately 2,400 hospitalizations, and an estimated 62 deaths were related to the hepatitis A outbreak.

Several other states experienced hepatitis A outbreaks during this period. More aggressive actions, such as immediate and targeted response to vaccinate, may have helped to contain the spread across the country.[96]

Hepatitis C

Hepatitis C is a continuing epidemic in the United States, particularly Kentucky. In 2015 the CDC reported that rates of hepatitis C virus infections had risen rapidly in Kentucky, Tennessee, Virginia, and West Virginia from 2006 to 2012. Transmission of the hepatitis C virus occurs primarily through blood contact and has accelerated due to injection drug use. Today, Kentucky leads the country in both acute and chronic cases of hepatitis C with an estimated 43,000 cases. Although the rate of

acute cases declined from 4.0 per 100,000 population in 2014 to 1.9 in 2017, the rate increased to 3.7 in 2018.[97]

Measures taken to control the spread of hepatitis C include opening needle exchange sites and increasing testing.

Several measures have been taken to respond to the spread of hepatitis C. In addition to authorizing the establishment of needle exchange sites, in 2018 the Kentucky General Assembly passed legislation requiring health care providers attending pregnant women to test for the hepatitis C virus to address the increase in the number of babies born infected and requiring KDPH to develop a statewide hepatitis C education, awareness, and information program.

There is a cure for hepatitis C, but it is expensive. In 2017, the Kentucky Medicaid Program spent $69.7 million on pharmacy claims to treat 833 beneficiaries, or $83,735 per person.[98] There is no vaccine, so even if people receive treatment, they may be reinfected. Public health officials have developed education about the importance of taking preventive measures and testing for the hepatitis C virus, and they have worked to provide it to the public as well as to agencies that could have contact with drug users, including local health departments, substance abuse treatment providers, and jails.

Acquired Immunodeficiency Syndrome

AIDS was first reported in the United States in 1981, and new cases continue to appear. AIDS is caused by the human immunodeficiency virus (HIV) and is transmitted primarily through body fluids. HIV increasingly kills or damages cells in the immune system, decreasing the ability to fight infections and certain cancers. Contract tracing, medical research, and surveillance were essential in identifying the modes of transmission for this previously unknown disease. Behavior changes for individuals included stopping risky sexual behaviors and ending repeated use of needles for intravenous drug use. Hospitals and medical professionals were encouraged—and in some cases required—to test patients for HIV/AIDS. For a period, travel of HIV-infected individuals into the United States was banned.

Reporting of HIV infection or AIDS diagnosis to KDPH is required by 902 KAR 2:020. Confidential AIDS reporting started in 1982 in Kentucky, whereas legislation requiring confidential HIV name-based reporting was not enacted until July 2004. A total of 11,239 HIV infections have been diagnosed and reported in

Kentucky since the beginning of the epidemic. Of these, approximately 62 percent progressed to AIDS.

The transmission of HIV continues but has been declining worldwide. As of 2018, Kentucky ranked 23rd among states in the diagnosis rate of HIV, at 8.1 per 100,000, compared to the US diagnosis rate of 11.4 per 100,000. There is no vaccine, but antiretroviral treatment reduces the chances of spreading the virus and the severity of the disease.[99]

Ebola

Ebola did not become a pandemic before a vaccine was developed, but KDPH was prepared to respond.

Ebola is a highly infectious virus spread via contact with blood, body fluids, and tissues of infected people, living or dead. Prompt identification of cases, contact tracing, and monitoring of high-risk people are essential to stopping the Ebola virus from spreading. On September 30, 2014, the CDC confirmed the first travel-associated case of Ebola diagnosed in the United States in a man who traveled from western Africa to Dallas, Texas. Overall, 11 people were treated for Ebola in the United States during the 2014–2016 epidemic.

In response to the 2014 Ebola outbreak, KDPH partnered with the Kentucky Region 7 Health Care Coalition and the HHS Public Health Emergency Division to conduct an Ebola response exercise. Region 7 includes Bath, Boyd, Carter, Elliott, Fleming, Greenup, Lewis, Mason, Menifee, Montgomery, Morgan, Robertson, and Rowan Counties. The exercise took place in St. Elizabeth Edgewood Hospital in 2016. The goal was to determine hospital readiness and the ability to implement the Ebola Response Plan, given a suspected or positive Ebola patient. By conducting this exercise, KDPH and the Region 7 Health Care Coalition were able to identify any defect in the response plan. New training was adopted in preparation for a second-wave Ebola outbreak.

Kentucky did not have any known positive cases, and there has not been a second outbreak in the United States, although outbreaks continue to occur in other parts of the world. In December 2019, the US Food and Drug Administration approved a vaccine for Ebola.[100]

Avian Influenza

The Department of Agriculture takes action to control the spread of influenza viruses that originate in animals.

According to the KYEOP, the Kentucky Department of Agriculture (KDA) is a support agency for ESF 8. Normally involved in assisting and regulating the agricultural sector as well

as ensuring safe food distribution, KDA can play a major role in responding to particular public health emergencies when the public health emergency is caused by zoonotic diseases—those that originate in the agricultural sector and can be transmitted between humans and animals. Examples of zoonotic diseases include avian influenza, salmonella, *E. coli*, bovine spongiform encephalopathy ("mad cow disease"), swine flu, Lyme disease, Zika, and West Nile fever. From 2010 to 2015, there were reports of approximately 100 infectious diseases that involved animal exposure. The state entomologist can restrict the movement of plant material, and the state veterinarian can restrict the movement of animals. To limit the spread of the zoonotic health threat, animals are routinely inspected before being moved into or out of states.

In order to quickly respond to a zoonotic disease outbreak, KDA prepares an emergency plan in conjunction with local government and industry stakeholders. KDA and the CDC work closely to monitor diseases or flu variants that begin in the agricultural industry, allowing them to quickly respond to health threats.

A surveillance program identified an avian influenza outbreak in Kentucky, Alabama, and Georgia in 2017. The virus exposure in Kentucky was initially detected by the Murray State University Breathitt Veterinary Center in Hopkinsville during a routine test of poultry before slaughter. Further surveillance focused on poultry flocks within a 6-mile radius of the source farm and on other commercial facilities within that area. A flock of approximately 22,000 hens was eliminated as a precautionary measure.[101]

To prevent the spread of avian flu, poultry producers and other bird owners are encouraged to follow biosecurity recommendations including keeping distance from birds; keeping shoes, tools and equipment clean; avoiding sharing tools with neighbors; and reporting sick birds to the state veterinarian. Risk to the general public of infection from the avian virus is low, but human transmission has occurred after close and prolonged contact with infected birds.[102]

H1N1 Influenza

Swine flu was originally a zoonotic disease. People who caught it had had direct contact with pigs. However, a new strain of the virus, H1N1, began spreading rapidly from human to human in 2009. This virus was unusual in that there were higher infection rates in young and middle-aged adults than in older adults. A

challenge with the arrival of H1N1 was to try to control the transmission of the virus until a vaccine was developed. The vaccine for the 2009 seasonal influenza vaccine was already under development, so the H1N1 strain could not be added.

The KDPH commissioner and the state epidemiologist provided weekly media briefings to communicate with the public about the spread of the disease, preventive measures, and the development of the vaccine.

The Department for Public Health worked to distribute the vaccine for the H1N1 virus that had been rapidly developed before transmission became widespread.

Despite limited resources, KDPH was able to work with public health partners to limit the spread of H1N1. For example, it partnered with Norton Healthcare to provide public information hotlines. The Kentucky Pharmacy Association helped with the distribution and storage of antiviral medication. The Kentucky Department of Education assisted with collecting surveillance data on the occurrence, severity, and spread of H1N1 among schoolchildren and school personnel. In October 2009, a total of 776 schools were closed because of the virus. The University of Kentucky provided laboratory assistance needed to verify and confirm H1N1 cases.

There was a shortage of personal protective equipment for health care providers, particularly N95 masks. Kentucky activated its SNS for the first time to provide equipment to providers. With the help of the Transportation Cabinet, the emergency transportation plan was activated to distribute the PPE as well as the vaccine when it became available.

Fortunately, manufacturers were able to rapidly produce a vaccine. KDPH and local health departments worked with health care providers to distribute 1.2 million doses of the vaccine. By May 2010, approximately 25 percent of Kentucky's population was vaccinated.

H1N1 did not develop into a major worldwide pandemic as initially feared. It caused approximately 18,000 deaths worldwide, including 41 in Kentucky. The rapid development of the vaccine and public health efforts were able to contain this virus.[103]

COVID-19 Pandemic

SARS-CoV-2, the coronavirus that causes COVID-19, was first identified in Wuhan, China, in December 2019. On January 31, 2020, the US Secretary of Health and Human Services declared a

public health emergency for the United States. Although most people who have COVID-19 have mild symptoms, the disease can also cause severe illness and even death. Some groups, including older adults and people who have certain underlying medical conditions, are at increased risk of severe illness.

The public health emergencies described in this chapter have not involved activation of public health response capabilities to the same extent as the COVID-19 pandemic. This section provides an overview of the activation of the KYEOP, the SHOC, the Disease Outbreak Support Plan, and ESF 8 to respond to the COVID-19 pandemic. Response phase actions by ESF 8 under the Disease Outbreak Support Plan supporting agencies are reviewed.

Declaration Of A Public Health Emergency

When it became clear that COVID-19 had the potential to spread rapidly in the United States, public health departments warned local and state governments that a serious threat could exist. On March 6, 2020 the Governor of Kentucky declared a state of emergency, which activated the Emergency Management Operations Center, KYEM, KDPH, and the Kentucky National Guard. The Governor also directed KYEM to coordinate the response and relief activities of all state agencies and private relief organizations. KYEM was asked to execute the KYEOP in order to coordinate the response and relief measures effectively and to activate the State Emergency Operation Center, also known as the Commonwealth Emergency Operation Center, which serves as the main hub for the state's response to a disaster, incident, or event and is responsible for coordinating the state's response in support of local jurisdictions and its citizens. The CEOC was moved to Level 1, Full Activation, in order to utilize all ESF 8 agencies.[104]

The state's Adjutant General was authorized to issue active duty orders for the mobilization of Kentucky National Guard personnel and equipment to protect life and provide safety. The Finance and Administration Cabinet was directed to provide assistance to KYEM with incident resource management, procurements, and contracting to fund urgent unbudgeted operational expenditures. The Kentucky Office of Homeland Security was directed to provide information to individuals and private organizations, such as volunteers and religious organizations, on how best to prepare for and respond to the COVID-19 emergency.

State Health Operations Center Activated

On March 7, 2020, KDPH, the lead agency for public health and medical capabilities, fully activated the SHOC. An incident response strategy was developed involving all ESF 8 agencies to address public health and medical capabilities. The agencies were directed to work together to request needed resources and deploy them as needed.

KDPH coordinated with the Division of Emergency Management and the Governor's Office to request needed medical resources. Epidemiological functions were coordinated with regional epidemiologists, local health departments, laboratories, clinical providers, and necessary strike teams, particularly for long-term care facilities. State medical examiner support and coordination was obtained to assist in monitoring and tracking mortality data. Medical surge capabilities were assessed in cooperation with the Kentucky Hospital Association, university hospitals, and other supporting agencies.

Local areas began declaring a state of emergency, and several indicated that they had begun communications and preparations with local emergency partners. At this time there was one confirmed positive case of COVID-19 in Kentucky. The state lab in Frankfort had been conducting COVID-19 testing since March 2, 2020.

The KDPH commissioner and other emergency officials were involved with the Governor's daily press conferences, which included updates on the number of COVID-19 cases, medical and protective equipment supplies, and public education on disease spread and transmission. The Governor's Office also coordinated requests to the federal government for emergency financial assistance and resources.

Additional Executive Orders

The Governor issued several additional executive orders exercising statutory authority under KRS Chapters 39A to 39F relating to limiting price gouging, permitting emergency prescription medications, and issuing waivers of copays, deductibles, cost-sharing and diagnostic testing fees for private insurance and state employees. Guidance was issued for limiting visitation to nursing homes, staying home when sick, and taking other illness prevention measures. Changes to Medicaid were initiated, including eliminating prior authorization and any type of fees

associated with testing or treatment for the coronavirus. The county judges/executive were contacted to update them and discuss the emergency management network.

On March 25, 2020, the Governor signed an executive order that closed restaurants and directed the Department of Insurance to order insurance companies to allow personal automobile insurance to cover vehicles used for commercial purposes until the executive order was lifted. This order was intended to help, most notably, food services businesses while indoor dining options were suspended. The order allowed businesses to expand dining-out services without having the appropriate insurance on the vehicles used to perform the service.[105]

The state expanded the number of workers who would be eligible to receive workers' compensation if forced to leave work to quarantine. Military service members, people active in the National Guard, child care workers, grocery workers, corrections officers, domestic violence shelter workers, child advocacy workers, rape crisis center workers, postal workers and Department of Community Based Services workers were made eligible for workers' compensation if quarantined.

On March 31, 2020, the Governor issued an executive order that allowed previously retired state, county, and city workers within critical workforce sectors, such as firefighters, law enforcement officers, or emergency medical services workers, to be rehired during the duration of the state of emergency.[106]

Limiting Transmission

By March 31, 2020, there had been approximately 600 positive COVID-19 cases and 18 deaths due to COVID-19 in Kentucky. Knowledge of the virus indicated that there was rapid and easy transmission from person to person. The KYEOP requires that nonpharmaceutical intervention strategies be coordinated by KDPH in collaboration with local, state, and federal public health and medical agencies; the strategies may include isolation and quarantine, travel restrictions, hygiene measures, and social distancing. The Governor's Office and KDPH implemented recommendations from the CDC for limiting the transmission of the coronavirus that required unprecedented changes in the behaviors of individuals and public and private entities.

By the end of March 2020, the Governor had ordered

- all elective medical procedures and services to cease,

- telehealth services to increase,
- child care centers to close,
- public schools to close,
- all in-person retail and nonessential businesses to close,
- all restaurants and bars to be closed to in-person traffic,
- the State Capitol and all state government buildings to be closed to in-person services,
- unemployment insurance (UI) eligibility to expand,
- mass gatherings to be banned, and
- social distancing recommendations and requirements to be followed.

On July 9, 2020, the Governor issued an executive order requiring Kentucky residents to wear a face covering for the next 30 days under circumstances including while indoors, waiting in lines, while at any indoor public place in which social distancing from nonfamily members is limited, while using public transit or ride-shares, and when outdoors if social distancing is limited. The requirement under this executive order was waived for children age 5 and younger. The requirement was also waived for those who

- had a physical or mental disability that prevents them from safely wearing a face covering,
- were seated and actively consuming a food or beverage,
- needed to remove the face covering to identify themselves,
- were swimming or exercising and able to maintain social distance,
- were participating in an athletic event or competition permitted under the state's "Healthy at Work" requirements, or
- were engaged in lawful activity for which federal or state law prevents wearing a face covering.

People who witnessed dangerous noncompliance with state mandates were encouraged to report it to the state COVID-19 reporting hotline. The executive order was repeatedly extended.[107]

On July 20, 2020, the state issued a new travel advisory that recommended a 14-day quarantine for travelers who had gone to states or US territories that had a positive coronavirus testing rate of 15 percent or greater. This advisory was updated on August 12, 2020, to include and remove states according to updated state COVID-19 positivity rates.[108]

Legislative Action

On March 26, 2020, the Kentucky General Assembly passed SB 150 to help businesses and the economy in response to COVID-19. The bill

- waived licensing, renewal, and applications fees and administrative requirements for businesses;
- waived some traditional unemployment insurance requirements, such as the work search requirement and the waiting period, and expanded eligibility to those not traditionally covered by unemployment insurance, such as those who are self-employed or underemployed because of COVID-19;
- extended state tax filing and payment deadlines;
- allowed remote telemedicine by health care providers with active and unencumbered licenses, and required insurers to cover and reimburse these services as though they were in-person;
- allowed restaurants to sell food and grocery items to the public without a permit;
- allowed bars and restaurants to sell alcoholic drinks to-go, for take-out, or by delivery;
- provided protection for businesses that shifted their operations to provide PPE or hygiene supplies in good faith; and
- provided budgetary support of the Kentucky COVID-19 hotline.

SB 150 also delayed the tax filing deadline for individuals by 3 months from April 15 to July 15 to mirror federal government actions. The Kentucky Department of Revenue was directed to adhere to any declarations or changes given by the US Treasury Department or the Internal Revenue Service. The federal changes would also apply to comparable tax filing and payment requirements for Kentucky taxes, including an extension of the time to file a return or report and an extension for penalty-free payment of any tax due with the return or report. The changes affected corporations, limited liability entities, and individuals who made annual estimated payments.

Critical Resources

In addition to limiting the spread of infectious disease, the KYEOP and Disease Outbreak Support Plan included provisions for managing critical resources for medical support and nonpharmaceutical interventions to limit transmission and to

address the needs of those who contract the disease. This section addresses some, but by no means all, of the actions taken by KDPH, ESF 8 partners, and others to manage critical resources during the COVID-19 pandemic.

Hospital Bed Capacity

At the beginning of the COVID-19 pandemic, hospitals responded to models predicting a surge in COVID-19 cases by increasing bed capacity in intensive care units from 1,350 to 3,228. An additional 10,000 staffed hospital beds were added to a total of 9,959 staffed hospital beds. Hospitals made many modifications to care for COVID-19 patients, including creating special units for treatment, establishing separate entrances and facilities for patients experiencing respiratory symptoms, and increasing bed capacity in areas not previously used for that purpose.[109]

On April 15, 2020, the state announced that the Kentucky National Guard, in collaboration with KYEM, KDPH, the Kentucky Office of Homeland Security, and numerous local and state-level organizations, had completed the fully operational field hospital at the Kentucky Exposition Center. The field hospital had 250 beds with the intent to serve as an acute-care facility in the event of a need or an overflow at hospitals in the Louisville area.[110] This field hospital was not used and was ultimately dismantled, but the capability to reestablish the hospital was retained. Construction of a 400-bed field hospital in Lexington at the University of Kentucky's Nutter Field House was completed on April 20, 2020. The Nutter Field House facility was taken down on May 20, 2020, without having seen any patients.

On April 16, 2020, two state-owned facilities, Lake Barkley and Lake Cumberland State Parks, were opened to house people who had COVID-19 or may have been exposed to it. This program was a partnership of KDPH and local health departments, the Kentucky Department of Parks, Kentucky Fish and Wildlife, the Kentucky National Guard, and volunteer medical staff.

Personal Protective Equipment

The SNS, maintained under the HHS, is charged with supplementing state and local supplies during public health emergencies. The supplies are delivered to the National Guard and distributed across the state by population. For instance, the Lexington-Fayette County Health Department reported receiving approximately 7.5 percent of supplies distributed to Kentucky,

including surgical masks, N95 respirators, face shields, gowns and gloves, on March 18, 2020 to distribute to health care providers.[111]

The Kentucky National Guard is the largest distributor of emergency resources, personnel, and equipment. Under COVID-19, PPE was initially in short supply. The state stockpile was reported by some to be "insufficient," and in some cases equipment was reported to be "dry rotted."[112] Challenges in obtaining medical equipment, testing supplies, and treatments during the COVID-19 pandemic were common across all states. Hospitals had difficulty obtaining sufficient numbers of ventilators and PPE.[113]

By August 26, 2020, it was reported that the National Guard had an approximately 120-day supply of PPE in storage sufficient to provide hospitals and emergency responders in case of a surge in the number of cases of COVID-19.[114]

In addition, community groups and businesses became actively involved in obtaining and distributing supplies. State and local agencies cited donations of sanitizer and PPE from distilleries and religious organizations.[115]

The Kentucky League of Cities compiled a list of safety resources and PPE suppliers. Equipment that would be necessary for local governments includes disposable masks, thermometers, rubber gloves, disinfecting sprayers, and hand sanitizer.[116]

Distilleries produced hand sanitizer in response to shortages. As of early May, Kentucky distilleries had donated over 150,000 gallons of hand sanitizer and had sold hand sanitizer to the public.[117] This activity helped health care workers and the public gain access to hand sanitizer, and it provided distilleries with income during closures.[118]

For reasons of efficiency, hospitals tend not to stockpile excess PPE. The normal required hospital supply of PPE is 14 days' worth. Specialized PPE, such as N95 surgical masks that are not normally used routinely, was needed for universal use by hospital workers. Hospitals experienced difficulty obtaining a sufficient supply because of overwhelming demand and costs that were higher than normal. Additional PPE and other medical supplies were requested, and many were received, but procurement became an ongoing struggle.[119]

Other agencies, such as those with firefighters and emergency responders, also store a certain amount of PPE, but they keep supplies closer to levels suitable for immediate needs.[120]

Independent health care centers, federally qualified health care centers, and other primary care sites received PPE from KDPH early in the pandemic and from the emergency stockpile kept at the Division of Emergency Management. Later, the Primary Care Association, which represents these providers, created a network supply chain for its providers to create their own stockpile. Many of these providers were following CDC guidelines for COVID-19 prior to the Governor's executive order. [121]

Initially, a lack of access to sufficient and accurate testing was widespread. For most infectious diseases, sufficient tests and testing do not appear to be a problem. Containment of diseases to a defined population or geographic area has made access to tests and testing manageable. The delay in the development of accurate tests and testing and the highly contagious nature of COVID-19 created some backlogs and confusion. For example, the turnaround time for test results ranged from 2 days to 2 weeks. If a person were exposed and quarantined for 2 weeks, the test results might not be reported until after quarantine, so if firefighters in a small department had one or two people in quarantine, the department's staff might be reduced by 50 percent.[122]

Health Care Providers

The Governor requested that health care providers expand their networks to patients to allow for out-of-network care. Changes to Medicaid eliminated prior authorization and any form of fees associated with testing and treatment of the virus.

National Guard

The Kentucky National Guard and additional law enforcement were stationed at hospitals with the intent of maintaining public safety at hospitals in the advent of a surge in new patients. The National Guard also assisted in delivery of PPE, the establishment of the field hospitals, and delivery of food assistance.

Telehealth Services

The expanded use of telehealth services served as a means to maintain the provision of health care services when medical offices were limited in the ability to provide in-person care. Provider

services using telehealth during the COVID-19 pandemic totaled over $31 million in services annually, compared to approximately $1 million annually before the pandemic. Medicaid telehealth claims that were fee-for-service in the 3 months before the pandemic totaled $95,686; during the first 3 months of the pandemic, such claims totaled $6,953,575.[123]

In April 2020, the Kentucky Medical Association conducted a survey of approximately 300 providers that showed a dramatic increase in patient visits conducted by telehealth. Community mental health centers could not open because of lack of PPE and went from no patient usage of telehealth services to 70 percent to 85 percent of patients using telehealth services. Telehealth has helped to address mental health needs that were not being met because people could not get to their services. One health insurance provider reported that before the pandemic, approximately 1,000 of its doctors were using telehealth services; that number increased to 14,000 doctors. Virtual visits in the United States are expected to surpass 1 billion in 2021.[124]

Health Insurance

Access to health care services was also aided by modifications to health care insurance coverage rules. The Kentucky Department of Insurance was authorized by executive order to waive, suspend, or modify insurance laws. Insurers were required to waive copays, deductibles, cost-sharing, and diagnostic fees for private health insurance holders as well as for state employees for costs related to COVID-19, which may include the cost of the test or treatment.[125]

Rehiring Essential Workers

Providing for additional essential workers was critical as the need for intensive medical care providers increased. Kentucky waived any statute or regulation that restricted rehiring of a participating member of the Kentucky Retirement Systems, the Kentucky Employees Retirement System, the County Employees Retirement System, or the State Police Retirement System, regardless of whether they were volunteering or getting paid. The positions included were

- state, county, and city law enforcement;
- state, county, and city emergency medical personnel;
- state, county, and city firefighters, including volunteer firefighters;
- Kentucky Department of Parks rangers; and
- Kentucky Department of Corrections officers.

Case Reporting

Reporting of COVID-19 has required several modifications to the epidemiological process. COVID-19 was added to the list of diseases requiring the reporting of positive cases within 24 hours. To determine the number of COVID-19 cases, the state developed a case definition. Kentucky's case definition is similar to that of the CDC, but with some modifications. Case definitions can change as public health officials learn more about a disease. Kentucky modified the CDC's definition of COVID-19 by specifying the type of test results included in the case count. Kentucky also records whether infected individuals had connections to others who have tested positive.

Unlike with other diseases, reporting of both positive and negative test results is required for COVID-19, to allow for determination of positivity rates. The positivity rate measures cases or the incidence of COVID-19 and does not count individuals. The positivity rate is determined by dividing the total number of positive test results by the total number of tests administered.[126]

KDPH requested that clinicians fill out a CDC COVID-19 case investigation form to provide additional information about the individual that is not found on the reportable disease form normally used by KDPH. The additional information allows for more accurate case surveillance.[127]

Ideally, laboratories electronically report results to the Kentucky Health Information Exchange. The exchange allows for data sharing among connected clinicians. Many newly established laboratories, such as drive-through testing sites, are not connected to KHIE, and some were not aware of the KHIE reporting requirement. Other reporting channels include fax, electronic file submission, and the National Electronic Disease Surveillance System, the federal reporting database that allows local and state health departments to report to the CDC.[128]

According to KDPH, approximately 60 percent of all COVID-19 test results in Kentucky are reported through the National Electronic Disease Surveillance System or KHIE. KDPH has reported that as much as 70 percent of laboratories have reported via KHIE.[129] Since not all testing facilities report directly through these two preferred systems, reporting lags persist. For example, when the daily figures are reported, that day's count includes test results from previous days. To account for the lag in results

reporting, the state reports a 7-day average when reporting the daily COVID-19 positivity rate.[130]

When determining deaths due to COVID-19, KDPH considers four criteria. The clinical criterion is that there is no likely alternative cause of death other than COVID-19. The laboratory criterion is that there is a confirmed reverse transcription polymerase chain reaction test. The epidemiological criterion is that there was close contact with a confirmed case or member of a risk cohort. The vital records criterion is that COVID-19 is listed on the death certificate as the cause of death. Cases are categorized as confirmed, probable, or suspect. A confirmed COVID-19 cause of death case would meet all four criteria. A probable COVID-19 cause of death case may meet just three of the criteria. Only confirmed and probable cases are included in the number of deaths due to COVID-19.[131]

Kentucky would not count an individual's death in its COVID-19 death count if the death occurred from a car crash, even if the individual tested positive for coronavirus at the time of death. The death of an individual in whom COVID-19 is determined to be a comorbidity to a condition such as diabetes or heart disease may be included in the COVID-19 death count if other criteria, such as epidemiological criteria, are present. KDPH has a team of experts who determine whether a questionable death should be included in the COVID-19 death count.[132]

Summary

Modification in the epidemiological process during the COVID-19 pandemic included changes in reporting requirements, data collection, and disease testing.

Kentucky routinely responds to large-scale public health emergencies—such as floods, tornadoes, and landslides—that require life-saving medications and medical supplies. The KYEOP may be immediately activated to respond to these emergencies, and KYEM may direct operations plans for an appropriate ESF.

Outbreaks of disease do not usually result in the expansive implementation of emergency procedures that have been experienced during the COVID-19 pandemic. Responses to disease outbreaks such hepatitis A, hepatitis C, AIDS, Ebola, avian influenza, and H1N1 influenza required actions by KDPH and other entities related to health care, including health care practitioners, local public health departments, emergency responders, medical researchers, and hospitals; the responses also required actions by individuals and public and private entities and, often, changes in their behavior. Much of the public was unaffected and possibly unaware of public health responses to

these disease outbreaks. The same could not be said about the COVID-19 pandemic.

The responses to the COVID-19 pandemic stand out from responses to other disease outbreaks because of the national and statewide declarations of emergency, the activation of the SHOC and the Disease Outbreak Support Plan, numerous executive orders issued to improve critical resources and limit the disease transmission, and legislative actions taken to alleviate the impacts on the public.

The extent to which public health responses were successful in controlling the spread of COVID-19 as effectively as more limited disease outbreaks will require retrospective assessment. Challenges to the provision of critical resources and the performance of necessary data management evidenced during the COVID-19 response indicate that improvements may be necessary in the future, if only to maintain the improved abilities achieved during the pandemic. The measures taken to limit the transmission of COVID-19 have affected large number of individuals, businesses, schools, public services, health care providers, and others. Some of these impacts and adaptive responses are reviewed in the following chapter. Only in retrospect will a truer picture of the impacts of actions taken during the COVID-19 pandemic be possible.

Chapter 6

Public Health Emergency Mitigation And Recovery

The impacts of measures taken to address most public health emergencies are not as wide reaching as those of measures to address the COVID-19 pandemic. Responses to this pandemic have had effects on the public that are unrelated to the direct transmission or contraction of the disease and have dramatically affected people beyond just those who have become ill or died. People have lost jobs, businesses, homes, and educational opportunities in addition to losing friends, family members, and community leaders.

The Disease Outbreak Support Plan includes measures for the recovery phase of an outbreak. The focus is on deactivating and decelerating activities such as contract tracing, nonpharmaceutical interventions, and testing as well as providing for continued monitoring of disease incidence. An after-action review and improvement plan is required after the outbreak is under control. (See Appendix H.)

Preparedness for recovery from measures taken in response to a pandemic is not detailed in federal- or state-level emergency plans, most likely because of the infrequency and limited nature of past pandemics. In the KYEOP, the Department for Local Government is the primary agency for ESF 14, Community Recovery. The actions to be taken for a recovery from measures taken in response to a disease outbreak are not detailed.[133] The recovery phase in the federal emergency plan states that the focus is on restoring the communities to preemergency levels including restoring services, repairing infrastructure, and requesting funding for other needs.

Recovery responses to the impacts of COVID-19 have been experimental for many sectors of society.

Although some aspects of these plans apply to mitigation and recovery needs as a result of the pandemic, responding to COVID-19 has been an experiment for many sectors of society. Numerous entities have made efforts to mitigate impacts and begin recovery. In some cases, these efforts were facilitated by federal and state legislation or by executive branch initiatives. In other cases, adaptation to circumstances involved efforts by community leaders and other public entities.

This first section of this chapter reviews some, but by no means all, of the impacts on Kentuckians of emergency measures taken in

response to the COVID-19 pandemic and responses to needs created. The second section reviews some mitigation efforts taken to begin to restore Kentucky's communities. Further assessment of the impacts and recovery efforts will be possible after the pandemic is under control. However, this review may provide some insight into possible preparedness measures for minimizing the impacts of responses and facilitating mitigation and recovery from future pandemics.

Impacts Of Emergency Measures

Health Care Impacts

Health Care Providers. On March 14, 2020, the Governor recommended that hospitals halt elective procedures in order to reserve resources for treating COVID-19 patients and to reduce the transmission of disease. On March 23, all elective health care procedures were ordered to cease.

These restrictions resulted in large declines in patient visits at primary care facilities and the closing of all school-based health sites. All independent medical offices were closed except for emergency procedures including dentists, ophthalmologists, chiropractors, and mental health providers.

The waiver of requirements for telehealth services was advantageous for many health care providers.

The waiver of requirements for providing telehealth services was advantageous for some of these professionals. The Kentucky Medical Association indicated an increase from use of telehealth by 10 percent of providers before the pandemic to use by 74 percent during the pandemic. Mental health providers also increased use. Community Mental Health Centers did not receive PPE, and they moved immediately to telehealth, increasing from no use of telehealth to use by 75 percent to 80 percent of patients.[134]

Hospitals. Hospitals were dramatically affected by the restriction. Elective procedures, such as knee surgery and other necessary procedures that can be delayed, provide substantial income, accounting for the largest portion of hospital revenues. Between the beginning of the pandemic and June 25, 2020, inpatient admissions for these procedures decreased by approximately 40 percent on average and outpatient procedures dropped by approximately 60 percent on average. Some patients stopped coming to the hospital for emergency services for fear of contracting COVID-19, inpatient volume in hospitals dropped by

40 percent, and the outpatient drop ranged from 60 percent to 90 percent.[135]

The CDC required hospitals to meet additional standards for disinfection and decontamination of buildings, meaning that more money had to be spent on cleaning supplies and cleaning personnel. Barriers had to be purchased and erected, and space in common areas of buildings had to be adjusted to maintain social distancing requirements.

COVID-19 patients tend to have longer stays and treatment costs for drugs and PPE, and their room care costs are higher than costs for average inpatients. For example, remdesivir, a medication approved for emergency use, costs $3,120 for a 5-day dose.

Prior to the COVID-19 pandemic, several hospitals in Kentucky were already facing fiscal challenges. The increased financial losses led to furloughs of staff at many hospitals. Approximately 20 hospitals are now in vulnerable financial situations. Federal relief funds have covered many losses, and additional funding has been proposed, particularly for rural hospitals. However, federal assistance has covered less than half of the total financial impact of COVID-19.[136]

Long-Term Care. There are more than 34,000 frail adults and staff in 285 long-term care facilities, personal care homes, assisted living communities, and immediate care facilities in Kentucky. Once COVID-19 is introduced to a facility, it can spread rapidly. Individuals with underlying health conditions and/or advanced age are at greater risk for contracting the virus. Facilities were required to implement protocols to mitigate the transmission of the virus, including halting visitors from entering. As of August 26, 2020, 63.5 percent of all Kentucky deaths from COVID-19 were in long-term care facilities.[137]

The Kentucky Association of Health Care Facilities and the Kentucky Center for Assisted Living reported that facilities had difficulty in obtaining PPE and getting test results. They also experienced difficulty in retaining staff, because of contraction of the virus, child care needs, caring for high-risk individuals, or fear of contracting the virus. The overall decline in staffing was 50.79 percent. Additionally, the cost of treating residents who contracted the virus was not being covered by the normal reimbursement for care.[138]

Emergency Responders. The Kentucky Board of Emergency Medical Services certifies and licenses emergency medical personnel, licenses ambulance services, and sets standards for education and training. There are over 13,000 responders, technicians, and paramedics. Emergency responders are made up of a local workforce that is largely part time. Responding to COVID-19 put additional pressure on small departments. If one person tested positive for COVID-19, the entire department might need to be quarantined. In addition to responding to COVID-19 calls, emergency responders continued to respond to other emergencies, including an increase in drug overdoses. One study of emergency medical services data showed a 17 percent increase in the number of overdose calls from January to April 2020.[139] Emergency responders also continued to respond to other health care emergencies and weather-related emergencies.[140]

K-12 Schools Impacts

Although not required to do so, most Kentucky schools closed to in-person instruction by the end of school year 2020.

Kentucky's 171 public school districts serve more than 650,000 students in prekindergarten through 12th grade. During March 2020, public schools in Kentucky and across the nation closed their buildings to in-person instruction. Kentucky schools completed the school year through nontraditional instruction programs that provided remote learning. The majority of Kentucky districts also remained closed for in-person instruction through the first month of school year 2021. All extracurricular activities, including sports, were also canceled for the remainder of school year 2020, as were school-related in-person gatherings, including planned in-person graduation ceremonies. In keeping with guidance from local health officials and KDE, schools arranged for virtual or socially distanced in-person graduation events.

Although not required to do so, most private and parochial schools in Kentucky also closed their doors to in-person instruction at the end of school year 2020.

Costs Of School Closure To Students. In legislative testimony, the academic, social, and public health costs to students of closing schools for in-person instruction were widely acknowledged by cabinet officials, legislators, and representatives of education groups including the Kentucky Association of School Superintendents, the Kentucky School Boards Association, the Kentucky High School Athletics Association, and the Prichard Committee for Academic Excellence. Testimony also acknowledged the difficulty of knowing at any given time whether public health benefits in closing schools outweigh costs.[141]

Student Internet Access. Student access to the internet is limited by family income, internet availability, and internet quality. In general, these three factors are more likely to affect minority students, students in poverty, and students in rural areas. During the school closures and nontraditional learning caused by COVID-19, internet access was an obstacle for many Kentucky students.[142]

During a typical school year, Kentucky's K-12 public schools are well equipped with education technology. According to the Kentucky Department of Education's Digital Readiness report from school year 2019, the year before COVID-19 began, 97.6 percent of districts had Wi-Fi networks capable of supporting one device for every student and 90.2 percent of districts offered online or blended classes. However, these statistics reflect devices available to students at schools and include desktop computers.[143]

However, access to technology and internet quality can be strained by supporting multiple devices as parents work from home and children access schoolwork online. In addition, a lack of familiarity with technology by parents or teachers can affect students' virtual learning.[144]

According to the Student Voices survey, students experienced difficulties using Wi-Fi during COVID-19, particularly students in poverty and in rural areas. Unreliable access to Wi-Fi affected students' ability to complete schoolwork, which affected their motivation. Overall, the reaction to online learning was negative (47 percent) or neutral (38 percent).[145]

"Healthy At School" Guidance For Reopening Schools. KDE (in collaboration with its Education Continuation Task Force, state agencies, public health officials, and the Governor's Office) developed guidance intended to support schools in reopening for in-person instruction while mitigating public health risks for the spread of the coronavirus.[a] This guidance was associated with the Governor's May 11 executive order establishing industry-specific

[a] As noted on p. 3 of "Guidance On Safety Expectations And Best Practices For Kentucky Schools (K-12)," which was updated August 31, 2020, "The task force is chaired by Lieutenant Governor Jacqueline Coleman, who also serves as Secretary of the Education and Workforce Development Cabinet. The group consists of representatives from Kentucky's educational cooperatives, educational partner organizations such as the Kentucky Association of School Superintendents, Kentucky School Board [sic] Association, Kentucky Parent Teacher Association, Kentucky Education Association and Kentucky High School Athletic Association, as well as Kentucky Educational Television, the Southern Regional Education Board and a group of four bipartisan legislators."

guidelines that must be met to support a phased reopening of Kentucky's economy.

KDE's *Guidance On Safety Expectations And Best Practices For Kentucky Schools (K-12)* addressed

- expectations related to social distancing in classrooms, hallways, and buses;
- PPE, including mask coverings;
- health screening and exclusion of symptomatic individuals;
- sanitation and hygiene;
- reporting of infections; and
- cooperation with contact tracers.

The document distinguishes between expectations that are required and those that are best practice guidelines. The document was first issued on June 24 and was updated on August 31. Among other changes, the updated version required that masks be worn at all times, not only when social distancing is not possible.

To comply with guidance and prepare for in-person instruction, districts invested in personal protective equipment, sanitation products, and warehouse space to remove furniture and allow for social distancing.

To comply with guidance and prepare for in-person instruction, districts invested substantial resources in PPE, sanitation products, and, in some cases, warehouse space to remove furniture and allow for social distancing. For example, Floyd County reported spending $100,000 preparing for in-person instruction in virus mitigation efforts, including expenditure on supplies such as hand sanitizer and disinfectant sprayers.[146] KDE provided districts with technical assistance in meeting the requirements as well as assistance in locating vendors and procuring PPE.

Child Care Impacts

Before the pandemic, there were 2,172 regulated child care providers in Kentucky with a total of over 165,000 child care slots. The majority (77 percent) of these providers were child care centers; 11 percent were in-home providers. Since 2013, the number of providers has dropped by more than half. Even before the COVID-19 crisis, the number of providers was considered insufficient to meet the demand for full-day coverage.[147]

The closure of child care centers caused extreme financial hardship for child care providers, more than three-quarters of which are small businesses with 20 or fewer employees.[148] Ninety percent of child care centers are owned by women, and the centers often represent their entire life savings.[149]

When centers closed, they initially lost revenue but continued to pay fixed costs such as insurance and mortgages. Centers operate

on slim profit margins, and many were forced to lay off staff. Financial assistance was helpful but insufficient to cover lost revenue. Whereas liability insurance may have helped to cover some of the financial losses, centers were unable to claim insurance because of stipulations that required proof that cases existed before centers were shut down.[150]

Limited Duration Centers. Limited duration centers (LDCs) were established to provide child care to health care and medical personnel, first responders, and many essential services employees. The Cabinet for Health and Family Services authorized health care providers to partner with YMCAs and child care centers to open LDCs.[151] Cabinet officials reported 101 partner centers as of June 11, 2020. In some counties, however, no YMCA or child care center was available.[152]

LDCs are required to follow child care guidance for group size, meet several safety requirements, and apply for a child care license within 60 days. Once approved, LDCs are required to transition to become fully licensed child care centers or to close. CHFS offered $2,500 grants to assist LDCs with start-up costs in transition to become fully licensed centers.[153]

Financial Assistance. Several federal and state programs provided financial assistance to child care centers during the COVID-19 pandemic. Although the assistance was welcome, many child care centers considered these sources inadequate or impractical because of time or usage requirements, insufficient amounts, or debt that would be incurred. The Child Care Council of Kentucky noted that CARES Act funding, described below, amounted to 1 week's worth of tuition for most centers, whereas centers were closed for 14 to 16 weeks.[154]

The CARES Act provided $67.7 million for child care in Kentucky. The funding could support all child care programs, which was important because child care centers with primarily private-pay slots needed financial support during the pandemic.[155]

The Department for Community Based Services used CARES Act funding to create a one-time sustainment stipend that provided $225 per child, based on each center's maximum enrollment, to provide financial help with fixed costs such as mortgages, insurance, and utilities. LDCs received a one-time stipend of $250 per child, and all LDC employees received a $1,500 "Hero Bonus."[156]

All child care providers received an additional one-time cleaning and PPE stipend ranging from $1,500 to $6,000 depending on the type of center. These funds could also be used to create temporary walls to help centers conform to requirements for maximum class size.[157]

Additionally, the Division of Child Care subsidized tuition for children in LDC programs. The Child Care Assistance Program funding provided a one-time stipend of $225 per child based on enrollment, although child care providers noted that this was of limited help.[158]

Child care centers could pursue other financial assistance, such as loans with the Paycheck Protection Program or the Economic Injury Disaster Loan Program. However, many child care centers operators did not want to take out loans and incur debt; loss of revenue from closures was the primary reason that centers were unable to pay their bills.[159]

Most child care centers did not apply for these programs. According to a survey conducted by United Way and community partners, 57 percent of child care centers did not apply for the Paycheck Protection Program and 70 percent did not apply for an economic injury disaster loan. The survey also found that 31 percent of respondents reported being unable to cover the costs of being closed, even with existing federal and state assistance. Most reported needing financial assistance in the form of additional grants, to cover reopening costs (64.7 percent), changes to licensing requirements (60.7 percent), grants to pay for fixed costs (56.1 percent), grants to pay staff (51.1 percent), and changes to the Child Care Assistance Program's attendance requirements (50.2 percent).[160]

Child Welfare Impacts

KRS 620.030 requires that any person who reasonably suspects that child abuse is occurring has a duty to report it. During the COVID-19 pandemic, the Kentucky Department for Community Based Services worked to spread information about support for families, available resources for families, and prevention of child abuse.[161]

School closings and stay-at-home orders led to fewer official reports of child abuse to the Cabinet for Health and Family Services and law enforcement. Sources of child abuse reports, particularly teachers and child care centers, were closed or limited

during the pandemic and were unable to physically see children and report suspected abuse. During the pandemic, reports of child abuse and neglect declined. Between February and June 2020, there were 19 percent fewer calls to the Kentucky Child Abuse Reporting Hotline and 50 percent fewer reports from schools compared to February through June 2019.[162]

Norton Children's Pediatric Protection Team saw a 30 percent drop in the child abuse cases it treated.

Doctors and other child advocates also received fewer child abuse cases during the pandemic. For example, the Norton Children's Pediatric Protection Team treated 30 percent fewer child abuse cases.[163] However, when doctors did see cases—such as broken bones—they were more serious and required extensive medical attention.[164]

Decreased child abuse reporting does not mean a decrease in child abuse. Because child abuse usually happens within the child's home, reporting child abuse depends on people outside of the home who either notice that something is wrong or are available for children to confide in.[165]

During the pandemic, schools and day care centers were unable to see the children in their care, and reports dropped while they were closed.[166] Doctors, social clubs, sports, and visits with friends and families where abuse can be noticed and reported were also limited during the pandemic.[167] Compounding the issue, COVID-19 increased stressors on families.[168]

Before the onset of COVID-19, child abuse reports typically declined beginning in June until children returned to their teachers' supervision in August. However, reports may continue to be lower than usual during school year 2021 as schools make decisions about students returning to school, such as virtual learning and the closure or limitation of other activities that result in students not returning to school.[169]

Child advocates and Kentucky's child welfare system operated virtually during the pandemic. Family court abuse and neglect cases were held virtually, social workers conducted virtual visits, outside child advocacy groups were limited, and family visits with children placed in foster care occurred either virtually or outdoors. However, in-person investigations when children were in danger continued, with social distancing and the use of PPE.[170]

Business Impacts

Executive orders were issued in March closing all nonessential businesses, including restaurants and bars. The Kentucky Chamber of Commerce surveyed 443 Kentucky businesses on how COVID-19 affected the business community. More than 65 percent of respondents were small businesses with fewer than 50 employees.[171]

Results of the survey appear in Table 6.1. The majority of businesses lost revenue and faced cash flow issues; one-third laid off employees, suspended operations, or faced other challenges. Only 4 percent reported no impact from COVID-19.[172]

Table 6.1
Reported Impact Of COVID-19 On Businesses
2020

Impact	% Of Businesses Reporting
Lost revenue	79%
Cash flow issues	55
Employee layoffs	33
Suspension of operations	28
Other challenges, such as customer base loss, changed office operations with remote working	31
No impact	4

Source: Kentucky Chamber of Commerce. *The Impact Of COVID-19 On Businesses And What Comes Next.* Web. Aug. 20, 2020.

Retail in Kentucky supports 556,000 jobs paying $9.3 billion, with $2.8 billion annually in state sales tax.[173] Retail businesses are customer- and public-facing businesses such as traditional retail, grocery and convenience stores, pharmacies, and restaurants.

The Kentucky Retail Federation (KRF) reported to the legislature that retail was initially unprepared to manage business closures, health concerns, product shortages, executive orders, local orders, and health department rules. However, area retailers adjusted and reopened during the pandemic with altered shopping experiences, financial assistance for employees, and safety measures such as

- plastic guards to protect staff;
- limits on numbers of customers;
- bonuses, hardship funds, increased wages, bonuses, and additional leave for staff;
- health and safety signage;
- PPE for staff;

- reserved hours for vulnerable populations or front-line workers;
- extended return policies;
- expanded drive-through services;
- curbside service;
- hand sanitizer stations;
- widened aisles; and
- requirements that masks be worn.[174]

Many safety measures were more feasible in larger stores whose size allowed large numbers of people and products while still following capacity limits.[175] Retail also self-implemented product limits on certain items.[176] Curbside service and delivery helped nonessential businesses continue to operate during the initial phase of the COVID-19 pandemic.

Restaurants continued carry-out, delivery, and drive-through purchases while retail curbside service and delivery continued. After SB 150 passed in March 2020, restaurants sold alcohol by the package, to-go alcohol by the drink, and raw foods and grocery items, allowing employees to return to work and businesses to bring in revenue.[177]

During the pandemic, the KRF had the flexibility to determine which businesses were essential and reported difficulties making some determinations. Appliance centers, for instance, were not allowed to operate but would be needed if a family's refrigerator needed repair.[178]

Tourism Impacts

The travel ban and closure of nonessential businesses resulted in a decline in tourism. In 2019, visitors to Kentucky spent nearly $8.0 billion on food and beverages ($2.0 billion), lodging ($1.8 billion), retail ($1.6 billion), transportation ($1.6 billion), and recreation ($1.0 billion), with an additional $3.8 billion in total direct and indirect business sales, generating $1.5 billion in state and local tax revenues. Tourism supported nearly 96,000 jobs with a combined income of $3.1 billion.[179] Local events, experiences, and quality-of-life aspects of tourism help attract new businesses to Kentucky and contribute to the state's economic and workforce development.[180]

The Tourism, Arts, and Heritage Cabinet estimated a loss of approximately $130 million in state and local tax revenue.

According to the Tourism, Arts, and Heritage Cabinet, visitors to Kentucky spent $195 million per week in early March before COVID-19 caused extensive closures. Spending decreased to

$19 million per week by late April. By mid-August, spending had increased to $126 million per week, but the average weekly spending loss during the pandemic was $85 million. The cabinet estimates that Kentucky lost approximately $130 million overall in state and local tax revenue.[181]

Several examples of Kentucky attractions demonstrate how COVID-19 affected Kentucky's tourism industry. The Kentucky Horse Park lost $2.5 million in revenue from canceled events.[182] The Lexington Center Corporation anticipated losses of over $1 million from canceled events.[183] Fourteen canceled events in Louisville led to a loss of over 122,000 visitors and nearly 69,000 hotel room stays.[184]

The Kentucky State Fair was anticipated to have a 50 percent drop in attendance as officials followed guidelines of the CDC and the state's "Healthy at Work" effort. The Kentucky State Fair is required by KRS 247.140 but has been canceled in the past, during World War II.[185]

Hotels bring tourists into communities, and their lodging capacity affects how many tourists can visit a community.[186] Travel restrictions, canceled events and conventions, restrictions against mass gatherings, and health and safety concerns affected Kentucky's hotel industry during the pandemic.[187] Canceled or postponed events reduced local hotel tax revenue.[188] The loss of events affected local restaurants and small businesses that would have received business from visitors.[189] Convention and visitors bureaus also receive funding from hotel taxes, which decreased during the pandemic.[190]

COVID-19 had a greater impact on hotels with large meeting space, hotels located away from interstates, and non-extended-stay hotels, but hotels located within airports had access to CARES Act funding.[191] The Kentucky Travel Industry Association anticipated that, without the need for hospitality staff and cleaning staff, nearly half of Kentucky's 16,000 direct hotel jobs would be lost.[192]

Local Government Impacts

According to research conducted by the Pegasus Institute, the fiscal situation for Kentucky has been better at the local level than at the state level. The tax structure at the local level has held up reasonably well, and revenue from property taxes and insurance premium taxes continues to grow. Many local governments have been able to utilize rainy day funds, and Louisville received

approximately $130 million in CARES Act funds. In reviewing the budgets of several cities, the Pegasus Institute estimated that most of them would be able to come up with funding to get through FY 2020, but much is still to be determined for FY 2021.[193] With the passage of the CARES Act in March 2020, the federal government made $300 million available to city and county governments through the Coronavirus Relief Fund, which was established to reimburse local governments for expenses incurred in response to the public health emergency.[194]

One issue facing local governments is compliance with Kentucky's Open Meetings Laws. Initially the Governor issued Executive Order 2020-257 suspending in-person government activities unless necessary to protect or sustain life. SB 150 of the 2020 session, which the Governor signed into law, provided a temporary exception to Kentucky's Open Meetings Law. It allowed for meetings to be conducted via video teleconference and provided exemptions for public agencies that did not have the capacity to conduct meetings via video teleconferencing. Agencies without the capacity for video teleconferencing are allowed to conduct meetings by audio teleconferencing. In order to use video teleconferencing, a public agency must provide a notice that states that the meeting will be held by teleconference and detail the mechanism by which the teleconference can be accessed. The notice must still conform to the 24-hour time frame and follow the other aspects of Kentucky's Open Meetings Law.[195]

Mitigation Efforts

This section provides an overview of some, but by no means all, of the responses to community needs during the COVID-19 pandemic.

Food Programs

With many people out of work and children not in school, food assistance was needed. The US Department of Agriculture (USDA) responded by changing some of the requirements for participation in its food programs as well as increasing the amount of available funding. The Kentucky Department of Agriculture was not directly involved in these changes, which mostly involve programs Kentucky does not place under its own jurisdiction.

Waivers of requirements increased the flexibility of the Child Nutrition Programs.

On March 20, 2020, the USDA began issuing nationwide waivers of administrative requirements in order to increase the flexibility of

the Child Nutrition Programs. Examples of the changes requested were the noncongregant feeding exception, giving parents or guardians the authority to pick up meals provided by the school, and allowing multiple meals to be retrieved at a time.[196]

At the request of the Cabinet for Health and Family Services, the USDA approved an emergency allotment to the Kentucky Supplemental Nutrition Assistance Program (SNAP) on March 26, 2020. The number of households in Kentucky that qualify for SNAP increased, in part because of changes in economic circumstances. The supplemental funds were used to implement the maximum SNAP allotment for all participating households for 2 months, with additional months being approved on a rolling basis. In addition to the increased funding, the USDA extended the certification period and waived the periodic reporting and face-to-face interview requirements.

On March 17, 2020, the KDA changed regulations for both the Temporary Emergency Food Assistance Program (TEFAP) and the Commodity Supplemental Food Program (CSFP). TEFAP is a federal program that provides food to low-income individuals; CSFP supplies food to low-income individuals who are at least 60 years old. These changes allowed food banks to use alternative food distribution methods such as drive-throughs, while also removing certain paperwork requirements. Previously, participants had been required to physically enter the food bank to receive service; this requirement was suspended.[197] In addition to this action, the KDA requested and received a waiver from the USDA on March 31 that allowed it to increase the income guidelines from 130 percent to 185 percent of the poverty level to receive supplemental food assistance through TEFAP.[198]

The KDA also supported the waiver request of the Kentucky Department of Education for increased flexibility in the National Food Lunch Program.[199]

Access to food is important to children's ability to learn and was especially important during the pandemic, when families faced unexpected unemployment.[200] Families received help in accessing food through several food assistance programs, including Pandemic Electronic Benefit Transfer (P-EBT), summer feeding sites, the Seamless Summer Option, the Summer Food Service Program, and school-provided take-home meals.

The Federal Food and Nutrition Service approved Kentucky's participation in the P-EBT program on May 19, 2020. This

program supplements a household's EBT funds in order to assist families with the increased cost of food when meal programs are suspended because schools are closed.[201]

P-EBT program retroactively provided funds for families receiving free or reduced-price lunch to help provide food for children during school closures.[202] In Kentucky, 70 percent of public school students received free or reduced-price lunch in school year 2018.[203] Children at both public and private schools were eligible for P-EBT benefits.[204]

P-EBT funds followed the National School Lunch Program and School Breakfast Program daily reimbursement rate of $5.70 per student and totaled $313.50 per student between March 13 and May 30 in Kentucky.[205] These funds were automatically added to families' EBT cards and could be used for food items covered by SNAP, such as fruit, vegetables, meat, dairy products, snacks, and food-producing seeds and plants.[206]

The USDA's P-EBT program was part of the Families First Coronavirus Response Act and could be used when public health emergencies caused school closures on at least 5 consecutive school days.[207] All states, the District of Columbia, and the US Virgin Islands received P-EBT benefits during the pandemic.[208]

In early March, the USDA granted KDE a waiver that allowed schools to serve meals to children during school closures. The waiver allowed families to take home meals when schools were closed, and meals were provided following the health and safety guidance of the Summer Food Service Program and the Seamless Summer Option.[209]

Over 15 million meals and snacks were provided to Kentucky students during March and April.

KDE gave an update on the program during a meeting of the Interim Joint Committee on Education in June 2020. According to KDE, over 15 million meals and snacks were provided to Kentucky students during March and April. On average, schools were able to provide food to nearly 239,000 students in March and nearly 304,000 students in April through the waiver. [210]

Typical summer meal programs continued during the pandemic. KDE's website offers a resource for parents to locate a "Feeding Site" by county, with information such as the days and times when breakfasts and lunches are provided and the dates the program begins and ends.[211]

The Seamless Summer Option allows schools to serve free meals to children under 18.[212] The Summer Food Service Program helps feed students during summer by providing reimbursements for program operators providing meals and snacks.[213] Both programs are offered through the USDA and continued during the pandemic.[214]

Unemployment Insurance

Unemployment insurance is a federal-state program that provides financial assistance to eligible unemployed persons. States have flexibility to set up their unemployment insurance programs following federal guidance. Thousands of applications were filed because of unemployment caused by the closure of businesses.[215]

Kentucky's UI Trust Fund paid only traditional unemployment insurance benefits and was depleted in July 2020. In June 2020, Kentucky received an $865 million zero-interest loan through the CARES Act to continue providing traditional unemployment insurance benefits.[216]

On March 25, 2020, the Governor expanded UI eligibility to cover "good cause" unemployment when an employee chose to self-quarantine or care for a family member with COVID-19, to cover self-employed persons affected by COVID-19; and to cover underemployment caused by COVID-19.

The CARES Act established the Federal Pandemic Unemployment Compensation Fund and three new UI programs: Pandemic Unemployment Assistance (PUA), Pandemic Emergency Unemployment Compensation, and Pandemic Unemployment Compensation (PUC). These programs were not paid from Kentucky's UI Trust Fund but were funded by the federal government. Each increased access to unemployment insurance benefits, provided additional coverage time and funds to UI recipients, and increased the stress on the unemployment system.[217]

The PUA program expanded unemployment eligibility to those affected by COVID-19. This included those who were self-employed, independent contractors, 1099 filers, those with limited wages, and those in scenarios where COVID-19 disrupted work or family, such as an individual or a family member being diagnosed with COVID-19, a workplace that closed because of COVID-19, or lack of access to child care because of COVID-19 closures. PUA did not extend eligibility to those who could telework,

received other leave benefits, lost their job voluntarily, or were fired. Before becoming eligible for PUA, claimants had to apply for traditional UI and be denied, which was time consuming.

Pandemic Emergency Unemployment Compensation provided an additional 13 weeks of benefits to claimants already receiving unemployment insurance benefits.

PUC provided an additional $600 per week to claimants already receiving unemployment benefits.[218] PUC expired after July 26, 2020. The $600 PUC supplement was replaced by the Lost Wages Assistance (LWA) program to provide $400 per week through December 27, 2020, or until the LWA program's funds were depleted, until the Disaster Relief Fund decreased to $25 billion, or until additional federal supplemental unemployment compensation was passed.

The Federal Emergency Management Administration's Disaster Relief Fund contributed $300 per claimant per week, and states could add $100 through CARES Act funding or the state budget. Kentucky was approved for the LWA program in mid-August and used CARES Act funding. At the time of this writing, the LWA program was still in process and Kentuckians had not received payments.[219]

Medicaid Program

Health care coverage was available through the Kentucky Department for Medicaid Services (DMS) for many people who lost employment or were otherwise financially harmed by emergency actions. The second and third quarters of 2020 saw significant increases in Medicaid enrollment and a heightened reliance on telehealth as a safe alternative to face-to-face patient/practitioner encounters. In an effort to ensure continued access to health care for the most vulnerable citizens and to assist health care providers in meeting the financial burdens imposed by the crisis, DMS implemented a number of policy changes.

Approximately 77,000 people enrolled in Medicaid under expanded presumptive eligibility during the first 3 months of the pandemic.

For nearly 2 years before February 2020, the number of Kentuckians enrolled in the state's Medicaid program had been slowly declining. Between February and June 2020, Medicaid enrollment increased by more than 10 percent, from 1,316,089 enrollees in February to over 1,450,000 in June.[220] The increase was due in part to an expansion of presumptive eligibility, which allows qualified entities such as hospitals to temporarily enroll certain people who appear to meet Medicaid eligibility

requirements while the people completed a traditional application for Medicaid benefits.[221] Approximately 77,000 people enrolled in Medicaid under expanded presumptive eligibility during the first 3 months of the pandemic.[222]

Immediately following the declaration of a state of emergency, DMS filled an 1135 waiver application with the federal Centers for Medicare and Medicaid Services. Under this waiver, DMS was authorized to suspend prior authorizations and streamline the approval process for providers in telehealth and alternative settings, and it was granted flexibility in payment and reimbursement requirements. Appearing before the Medicaid Oversight and Advisory Committee on June 25, 2020, the commissioner of DMS testified to the effects of these changes. Based on claims data for January and May 2020, DMS observed a significant increase in the use of telehealth services among both the fee-for-service and managed care populations. In January 2020, claims for telehealth services processed by DMS and contracted managed care organizations totaled approximately $400,000. By May 2020, those claims had increased to nearly $23 million.

Waiving prior authorization requirements quickly became an area of concern for DMS as it saw an exponential increase in usage of the semiprivate room and board claims code. Before the pandemic, semiprivate room and board claims averaged approximately $150,000 per month, but with prior authorization requirements relaxed, these claims increased by more than 40 times to more than $6 million per month. As a result, in June DMS ordered all managed care organizations contracted by the state to reinstitute prior authorization requirements for substance abuse treatment centers, long-term care centers, and rehabilitation centers. According to the commissioner, DMS also authorized an additional administrative day to cover longer than average hospital stays for Medicaid beneficiaries and established a $200-per-day add-on bonus for long-term care facilities to assist these facilities in meeting the financial burden of acquiring personal protective equipment and other pandemic-related expenses.[223]

In addition to the policy changes authorized by the 1135 waiver, DMS also promulgated a new administrative regulation to clarify the department's response to the pandemic, and it amended existing regulations related to copayment requirements for Medicaid beneficiaries. 907 KAR 3:300 was promulgated to allow the department to quickly respond to local, state, and federal public health emergencies, both presently and in the future. This new administrative regulation permits DMS to temporarily enhance,

expand, or suspend certain Medicaid services and requirements if there is a declared state of emergency. 907 KAR 1:640 was amended to eliminate previously established copayment requirements for Medicaid beneficiaries.[224]

The significant increases in Medicaid enrollment and the numerous policy changes discussed above have the potential to pose serious challenges to the state's Medicaid budget in the very near term. In March 2020, fortunately, Congress temporarily instituted a 6.2 percent increase in the Medicaid matching rates that the federal government pays to states, and DMS was able to close out FY 2020 (which ended on June 30, 2020) on budget; however, in testimony to the Medicaid Oversight and Advisory Committee in June, the commissioner acknowledged that there is concern that the same may not be true for FY 2021.[225]

Utilities

The Department for Local Government used a survey to assess the needs during the COVID-19 pandemic in the communities it serves. DLG reported that the two greatest areas of need were assistance with unpaid utility bills and the need for public services. Public services that were identified included Meals on Wheels, recovery centers, community action agencies, and workforce development. Difficulties were noted in ensuring that there was not duplication of benefits from other federal and state resources. DLG is following its previously established application submission process to allow for the greatest amount of flexibility in deploying resources to local agencies throughout the commonwealth.

The Kentucky Public Service Commission suspended utility disconnections and late fees for nonpayment for the duration of the state of emergency.[226] Other states—including Connecticut, Louisiana, New Jersey, New York, Ohio, and Wisconsin—adopted a similar policy. The commission indicated that the decision to suspend disconnections was intended to decrease in-person traffic that posed a significant health risk for the transmission of the coronavirus.[227]

On October 19, 2020, the Governor issued Executive Order 2020-881 after the Public Service Commission announced an end to its moratorium on public utility disconnections for nonpayment. The executive order ended the statewide moratorium on disconnections for nonpayment on November 6 and established the Healthy at Home Utility Relief Fund using $15 million in federal CARES Act 2020 COVID-19 funds to provide relief for

Kentuckians at risk of disconnection of natural gas, water, wastewater, or electric utility service. The executive order did not prohibit assistance to utility service customers by nonprofits such as United Way, Team Kentucky Fund, or the Salvation Army, and it did not prohibit such assistance via federal CARES Act funds distributed to local governments.[228] Municipal utility companies reported that they were facing revenue shortfalls due to the executive order.[229]

The order also required that utility companies create payment plans for affected residential customers on or after May 8, 2020, and before October 25, 2020 to the extent that past due balances exist. The payment plan periods could not be shorter than 6 months and were required to provide a fixed, equal installment plan over the payment period. Customers who did not maintain on-time status with the agreed-upon plan would possibly be subject to disconnection beginning on November 6, 2020.[230]

Housing Assistance

The Governor pledged $15 million in federal money for the Healthy at Home Eviction Relief Fund.

The Governor established the Healthy at Home Eviction Relief Fund; in addition to helping prevent disconnection of utility service, it assisted renters and landlords against undue financial hardship. The Governor pledged $15 million in federal CARES Act money for the fund. Eligible landlords could be reimbursed for missed rent payments and receive some advance rent payments to keep tenants in their homes. The program also may pay up to 90 percent of past-due rent and cover up to 2 months of future rent. The Governor issued an executive order to stop residential evictions through December 31, 2020.[231]

Other programs to help Kentuckians pay rent include the Team Kentucky Fund and the Louisville/Jefferson County Eviction Prevention COVID-19 Relief Fund.[232]

Banking And Insurance

In terms of financial directives, on March 18, 2020, the Kentucky Department of Financial Institutions (DFI) recommended that Kentucky-chartered financial institutions take the following actions to stop the spread of the virus: Follow common-sense safety precautions recommended by health professionals, encourage customers to use mobile apps and online, and work with customers affected by the virus to meet their financial needs. Actions included waiving overdraft or minimum balance fees, restructuring existing loans, extending loan payment terms, and easing the terms

required to take out a new loan. The DFI also requested that financial institutions manage staffing issues related to the virus and make sure that all financial institutions' continuity plans include pandemic planning as requested by the Federal Financial Institutions Examination Council.[233]

Updated guidance from the DFI directed nondepository institutions—such as mortgage companies, mortgage brokers, consumer loan companies, money transmitters, check cashers, and deferred deposit companies—to continue providing financial services while complying with social distancing guidelines and following the state's "Healthy at Work" guidelines. The DFI provided relief for broker-dealers, state-registered investment advisers, and federal covered investment advisers to have documents signed electronically, and it exempted them from document delivery requirements.[234]

Another policy response for the financial sector was the successful qualification for the federal Small Business Administration (SBA) disaster certification. The SBA, through the CARES Act, expanded financial assistance qualifying events to include COVID-19. The SBA disaster certification allowed small businesses, for-profit contractors, and private nonprofits within the state to apply for low-interest Economic Injury Disaster Loans. These loans were designed to provide economic relief to businesses experiencing temporary loss of revenue by providing funds to cover capital and operating expenses such as the continuation of health care benefits, rent, utilities, and fixed debt payments. Applicants were eligible to receive an advance for funds before a loan approval, but the amount of the advance was deducted from the total loan eligibility.[235]

The Kentucky Department of Insurance suspended pharmacy audits to help pharmacies conduct business during the pandemic.[236] Some large retailers, including Kroger, Walmart, and Walgreens, provided supplies and staff for drive-through testing, which was free to the public, while the state paid the laboratory fees. Challenges for pharmacies included reimbursements, coordination with health care providers, and procurement of PPE supplies.[237]

Corrections

The transmission of the virus in institutional settings could be rapid. To address this issue, on April 2, 2020, the Governor issued Executive Order 2020-267, in which he commuted the sentences of 186 inmates identified as being medically vulnerable to COVID-19

per CDC guidelines. He also announced the plan to commute the sentences of another 743 inmates in state custody who were due to complete their sentences within 6 months. All who received commutations were being held for Class C or D nonviolent, nonsexual offenses and had less than 5 years to serve. The commutations were conditional and could be revoked if, before release, the offender tested positive for COVID-19 or was experiencing symptoms associated with it. The offender was required to have a verifiable home address or residence to be released to, had to self-quarantine at this address for at least 14 days, and had to continue to self-quarantine until asymptomatic. Finally, the offender was required to not commit any additional offenses during the period of early release. Any offenders who did commit a new felony offense would have to serve the remainder of their sentence prior to their early release in addition to their new sentence as determined by the Department of Corrections.[238]

On April 24, 2020, the Governor issued Executive Order 2020-293, which commuted the sentence of an additional 352 people who were serving for nonviolent, nonsexual offenses and who had 5 years or less remaining on their sentences. This executive order contained the same criteria for commuted inmates as Executive Order 2020-267.[239]

Finally, on August 25, 2020, the Governor signed Executive Order 2020-699, which commuted the sentence of 646 medically vulnerable inmates or inmates who were nearing the end of their sentence, in an effort to reduce the spread of COVID-19 to other inmates or corrections staff. This executive order contained the same criteria for commuted sentences as the two prior ones.[240]

Other Mitigation Efforts

The Cabinet for Economic Development helped existing businesses with operations, acted as a source for PPE, and helped businesses access resources for CARES Act funds and other funding. The cabinet also provided staff for the Emergency Management Center, the PPE Donation hotline, and unemployment insurance processing, while the secretary joined the Governor's Task Force on "Healthy at Work."

On March 13, 2020, Kentucky Employers' Mutual Insurance announced that, effective immediately, it would provide wage replacement benefits for first responders and medical personnel who had been forced to quarantine as a result of exposure to the coronavirus.

KDA worked with the farm credit organizations to allow for debt restructuring and extension of loan repayments. It also provided guidance concerning participation in the Paycheck Protection Program and other CARES Act initiatives.

KDA also made many changes to the regulatory requirements for programs under its jurisdiction. Examples include extending deadlines for pesticide licenses and its essay and poster contest, suspending certain grant requirements, implementing new promotional tools to support Kentucky farmers, writing best-practice guidelines, advocating for Kentucky farmers to help them secure funding and grants, and creating targeted educational opportunities.[241] These educational opportunities include providing remote online training for private pesticide applicator licenses and releasing an online series of videos of lessons about agriculture for children who are learning from home.[242]

The Kentucky Retail Federation represents retailers throughout the state and acted on behalf of them during the pandemic. The KRF provided resources for its members, determined which businesses were essential, communicated with the commissioner of agriculture on meat price increases, and created the "Healthy at Work" Proposal For Reopening Retail.

Resources for retailers included a jobs website, sources for PPE and cleaning supplies, a daily COVID-19 newsletter, a Small Business Administration conference call on the Paycheck Protection Program, and the development of the Shop Healthy Ky campaign.[243]

The KRF reported to the legislature that during the pandemic the business community worked on reopening schools, legal liability, co-immunity, hospitality reopening plans, CARES funding for small business grants, child care, safely reopening businesses, and opposing unnecessary obstacles to reopening businesses. The business community was concerned with privacy and propriety information when the state required submission of plans for reopening.[244]

The Cabinet for Economic Development's website provided employer resources such as detailed information about

- the Paycheck Protection Program;
- SBA Disaster Loans;
- an Emergency Economic Injury Grant;
- extended payroll tax credits from the Internal Revenue Service;

- programs through the US Treasury Department, the Federal Deposit Insurance Corporation, and financial institutions; and
- CDC resources.

Resources for employees were also available, including information about the Families First Coronavirus Response Act and unemployment benefits through the Education and Workforce Development Cabinet.[245]

On March 14, 2020, Kentucky followed the emergency declaration of the US Federal Motor Carrier and Safety Administration (FMCA). Following the President's emergency declaration under 42 USC 5121, the FMCA declared an emergency under 49 CFR 390.23(a)(1)(i), which exempted Parts 390 through 399 of the Federal Motor Carrier Safety Regulations, unless restricted by the emergency declaration. These safety requirements provide the minimum safety requirements applicable to all employees, employers, and commercial vehicles that transport property or passengers involved in interstate commerce unless exempt under statute. This emergency declaration provides regulatory relief; for instance, commercial drivers who are providing direct assistance to efforts to combat COVID-19 would benefit from a suspension of the regulation for required hours of service for drivers. *Direct assistance* includes delivering medical supplies for testing and treatment of the virus, delivering supplies for the assistance of temporary housing or isolation facilities for suspected virus exposure, and transportation of individuals necessary to provide medical or emergency services to affected individuals. The direct assistance terminates when a driver or commercial motor vehicle is used in interstate commerce to transport cargo or provide services that are not in support of emergency relief related to the COVID-19 outbreak or when the carrier dispatches a driver or commercial motor vehicle to another location to begin operations in unrelated commerce.

Throughout the pandemic, some outdoor recreational activities were available, such as fishing, hunting, agritourism, and virtual bourbon events.[246] There was an increase in issuance of hunting and fishing licenses.[247]

Tourism related to the bourbon industry is an experience unique to Kentucky that brought over 1.4 million visitors to the state's distilleries in 2018. The distilleries also supported over 20,100 jobs and contributed $23 million in barrel taxes.[248] During the pandemic, the bourbon industry continued to contribute to Kentucky's economy and tourism industry.

During closures, distilleries provided bourbon experiences such as interviews with Master Distillers and virtual tastings, before reopening with smaller tour groups and fewer attractions. Reopening plans were made after consultation with health professionals. One Kentucky distillery reported continued interest from visitors, a good sign for the industry.[249]

A hotel owner in Kentucky described the hotel business as seasonal, with increased business in spring, summer, and early fall accumulating cash reserves for slower winter months. Because COVID-19 appeared at the end of the slow season and the beginning of the busy season, closures and decreases in the numbers of travelers weakened hotels' ability to build financial strength at a time when reserves were already low.[250] Hotels responded to COVID-19 by recognizing that travelers need to feel safe, requiring employees to wear masks, providing hand sanitizers, and encouraging visitors to social distance and wear masks.[251]

Recovery Efforts

The COVID-19 pandemic continues to affect the Kentucky population, but some measures to begin recovery are being implemented. This section describes some, but by no means all, of the recovery actions under way.

K-12 Schools Recovery

Districts' Reopening Plans. Districts began preparing to reopen schools in school year 2021, often with the help of a specially formed reopening task force that included district and school staff, board members, local health department officials, parents, and community members. Most districts developed hybrid models that combined part- or full-time in-person instruction with options for virtual learning for families that chose it. Part-time instructional models were designed to rotate student groups for in-person instruction in order to reduce class sizes and facilitate social distancing in hallways, buses, and other spaces.[b] Models were informed by feedback from parent and teacher surveys. According to the Kentucky School Boards Association, while teachers' and

[b] Some part-time instruction models included rotating schedules for all students, allowing for reduced class sizes, while schedules in at least one district varied by grade. Kenton County elected to provide full-time instruction for K-3 students and rotating schedules for older grades. Fayette County created an all-virtual option for families that chose solely virtual classes.

parents' preference for in-person instruction was strong (as high as 98 percent) in some districts, results varied across the state and changed as coronavirus infection rates changed.[252] In addition, the Kentucky Education Association released a statement advocating against in-person instruction until state and local COVID-19 positivity rates fell and remained below 4 percent.[253]

The Kentucky School Boards Association and the Kentucky Association of School Superintendents cited strong preferences for allowing local decision makers to schedule reopening of buildings and school-associated activities.

Preference For Local Decision Making. In testimony to the Interim Joint Committee on Education, representatives from the Kentucky School Boards Association and the Kentucky Association of School Superintendents cited strong preferences for allowing local decision makers, in keeping with guidance and in consultation with public health officials, to determine whether and when to reopen buildings and school-associated activities. They also stressed the need for valid and reliable local-level data on COVID-19 to inform their decisions. Local conditions, such as COVID-19 infection rates, building square footage, or community concerns, vary widely. The groups emphasized that, although safety concerns remain the top priority, in-person instruction should be the default option if possible, because of its benefits to students.[254]

The Governor's request to close schools to in-person instruction through September 28, though not a mandate, had a great impact on public sentiment and on local boards' decisions to close schools to in-person instruction.[255] In some cases, district officials felt that the wording of the Governor's request and subsequent communications from KDE amounted to a mandate.[256] During an August 18, 2020, meeting with superintendents, Interim Commissioner Kevin Brown stressed that, although the department wished to support the Governor's recommendation to delay in-person instruction, KDE would continue to provide technical support to districts regardless of their decisions about when to reopen schools to in-person instruction.[257]

As of October 12, 2020, a total of 147 school districts had resumed some type of in-person instruction, with another 12 scheduled to begin before the end of the month. Since that time, some with in-person instruction have moved to virtual learning, in response to rising coronavirus rates. Several districts in "red zones" (areas with the highest rates of cases) have elected to continue in-person instruction.[258]

Child Care Recovery

As part of the Governor's phased reopening of Kentucky's economy, in-home child care centers were permitted to reopen on June 8 and center-based child care centers were permitted to open on June 15, as long as they were compliant with state-issued guidance.

Child care programs were permitted to reopen only if they followed the "Healthy at Work" Requirements for Child Care Programs, which were released on May 21, 2020.

Child care center operators expressed frustration that guidance on reopening had been developed without input from the industry.

During legislative testimony, child care center operators expressed frustration that guidance had been developed without input from the industry.[259] The guidance has been financially devastating, particularly to centers that were ineligible for continuing revenue because they are operating as LDCs or enrolling Child Care Assistance Program children (most small and private centers are in this category).[260] Requirements relating to group size, in particular, threatened the financial solvency of many centers, as described below. In addition, some centers were frustrated by inconsistent messages from local public health officials as to how guidance should be interpreted on quarantines and other issues. This inconsistency led to confusion among some families when the practices in centers appeared to differ among counties.[261]

When centers were permitted to open, the "Healthy at Work" Requirements—especially the 10-child limitation on group size—led to drastically reduced revenue compared with normal operations. Centers were able to offer fewer slots and often had to hire additional staff to meet group size requirements. Some child care centers increased tuition to bring in more revenue. Prohibitive costs, along with the inability of prospective patrons to tour facilities, affected some centers' ability to attract new patrons and restore business. Some operators questioned the basis of the 10-child limit, noting that some LDCs had been permitted to operate with higher numbers.[262]

According to data from a survey administered by the Child Care Council of Kentucky, almost half of child care centers experienced weekly income loss after centers reopened under guidance. Weekly loss averaged about $3,600 per center, or a total of approximately $1.14 million for those responding.[263] Actual income loss per week for centers across the commonwealth was likely greater, as the survey included 640 respondents—less than one-third of all licensed centers. Some providers expressed frustration that child

care centers in Kentucky were subject to shutting down more than those in most other states and that centers will not be compensated for the losses they sustain as a result of the guidance.[264]

The survey's data indicated that as much as 45 percent of centers might have been obliged to close their doors by November if current conditions were to continue.[265] This estimate is comparable to national survey data indicating that approximately 40 percent of centers were in immediate danger of closure.[266] According to the Kentucky Chamber of Commerce, center closures represent a loss to small businesses in Kentucky and affect the broader economy by reducing available child care, hindering parents' ability to return to work, and worsening child care deserts throughout Kentucky.[267]

In legislative testimony, child care providers, legislators, and cabinet officials acknowledged the economic and social costs of "Healthy at Work" guidance. Some questioned whether data justified the guidance, noting the low morbidity rates of COVID-19 compared to those of seasonal flu. Others noted the role that child care centers may play in spreading the disease to more vulnerable populations.

In early August 2020, the Governor reported that 110 child care facilities in Kentucky had an employee or child with a coronavirus infection. According to the commissioner of KDPH, contact tracing had identified, as of August 14, a total of 13 cluster outbreaks associated with child care centers. Most of the spread occurred among staff, although there have been rare instances of transmission among children.[268]

Economic Development Recovery Programs

The Cabinet for Economic Development continued to support Kentucky entrepreneurs through KY Innovation's existing Regional Innovation for Startups and Entrepreneurs (RISE) program and by creating Kentucky Commercialization Ventures (KCV). Other economic development assistance included the Kentucky Economic Recovery and Resilience Project and CARES Act funds for Kentucky's area development districts. In July 2020, the Cabinet for Economic Development's office for entrepreneurial and small business support, KY Innovation, invested an additional $2.6 million in the RISE program.[269]

The RISE program is a public-private partnership of the cabinet, Kentucky's public higher education, and local community leaders

in investment, business, government, and services. The program helps entrepreneurs and start-ups find resources such as research at local universities, incubators, investment, intellectual property assistance, scaling, mentors, and the local entrepreneurial community.[270] Entrepreneurs can access any resource in Kentucky from any of the state's six regional offices, often using digital technology.[271]

The additional funds will help these offices support small businesses and start-ups that contribute to Kentucky's economy and help Kentucky attract other entrepreneurs.[272]

KCV is a public-private partnership to turn academic research, development, and intellectual property from Kentucky higher education institutions into start-ups and commercial businesses with a product or service.[273]

KCV consists of the state's KY Innovation office, the Kentucky Science and Technology Corporation, the Kentucky Community and Technical College System, and eight state universities, including the University of Kentucky and the University of Louisville.[274] Kentucky's higher education institutions are major sources of innovation, and KCV will help these entrepreneurs find industry partners.[275] KCV will also assist with licensing, marketing, and access to attorneys and legal clinics.[276]

Economic Benefits Of KCV

Like RISE, KCV should make Kentucky more attractive to innovative researchers, students, and companies in other states, while also keeping existing entrepreneurs in Kentucky by supporting them through KCV's extensive resources. The program's goal is to lead to more professional and scientific jobs in Kentucky's tech sector.[277]

Kentucky Economic Recovery And Resilience Project

The Kentucky Association for Economic Development and the Community and Economic Development Initiative of Kentucky at the University of Kentucky created the Kentucky Economic Recovery and Resilience Project to support the state's businesses and economic developers and to help the economy recover from COVID-19. The project will provide businesses with access to market research and customized business intelligence and help Kentucky's economic development organizations to build, expand, and keep businesses in the commonwealth with data on supply

chains, industry data and profiles, and potential location and expansion projects.[278]

Federal funding will help area development districts create regional recovery and disaster resiliency economic advancement plans, along with technical assistance and other organization support for local communities.

Through the US Economic Development Administration, the CARES Act provided $6 million to the Department for Local Government to reimburse Kentucky's area development districts for local response to COVID-19. These funds will help ADDs create regional recovery and disaster resiliency economic advancement plans, along with technical assistance and other organization support for local communities to respond to COVID-19.[279]

Challenges To Reopening Businesses

Respondents reported challenges to restarting their businesses, as shown in Table 6.2. Half of respondents were concerned about their financial ability to operate and retaining customers. One-third were concerned about their ability to bring employees back to the workplace and resource availability. Only 7 percent did not expect any challenges when reopening.[280]

Table 6.2
Reported Challenges To Reopening Business
2020

Challenge	% Of Businesses Reporting
Having money needed to operate	52%
Retaining customers	41
Ability to bring employees back to workplace	31
Resource availability	30
Ability to meet new demands	16
Expect no impact on returning to normal	7
Other challenges, such as people confident enough to return to work or patronize business, clients' financial ability, health and safety resources, demand and supply chains, and staffing	22

Source: Kentucky Chamber of Commerce. *The Impact Of COVID-19 On Businesses And What Comes Next.* Web. Aug. 20, 2020.

Businesses reported reducing hours and pay, furloughing employees, providing working employees with PPE, physically separating their workforce, and suspending some operations.[281]

Extended Closures. When asked about extending the shutdown past April 30, 2020, nearly all businesses anticipated financial hardships such as layoffs, salary changes, inability to pay for facilities, and challenges in maintaining production, although only 4 percent expected to close permanently. When asked what businesses would need in order to reopen, 60 percent of

respondents said that government restrictions need to be lifted and communicated clearly.[282]

Future Issues Facing The Business Community. Future issues reported by the Kentucky Retail Federation include legal liability for businesses and schools, child care availability and access, long-term educational impacts and effects on the future workforce, and tax changes.[283] More so than in past emergencies such as the 2008 financial crisis, businesses were uncertain about their supply chain and the production workforce. Hairstylists, hotels, manufacturers, recreational facilities, restaurants, souvenir shops, travel agencies, and wholesalers were greatly affected by COVID-19, judging from the volume of calls to the Small Business Association.[284]

The Kentucky Retail Federation's "Healthy at Work" Proposal for Reopening Retail featured four key principles: protecting the community, safety, clear expectations for employees and customers, and support for Team Kentucky.

"Healthy At Work" Proposal For Reopening Retail. The Kentucky Retail Federation's "Healthy at Work" Proposal for Reopening Retail, submitted to Governor on May 1, featured four key principles: protection of the community, safe opening of retail, clear expectations for employees and customers, and support for Team Kentucky. The proposal called for continued e-commerce, curbside, delivery, and warehouse operations, with appropriate safety measures.[285]

Some reopening requirements specific to retail businesses involved fitting rooms, ready-to-eat foods at retail stores, returned merchandise, vendor visits, malls and shopping centers, fragrance counters, and beauty bars. For each of these areas, the KRF suggested heightened cleaning and sanitizing, minimizing person-to-person contact, and social distancing.[286]

Retail reopened on May 20, 2020.[287] "Healthy at Work" requirements addressed four aspects of reopening retail businesses: social distancing, cleaning and disinfecting, personal protective equipment, and training and safety requirements.[288] Table 6.3 summarizes the requirements.

Table 6.3
"Healthy At Work" Requirements For Retail Businesses
2020

Requirement	Details
Social distancing	• Limit patrons to 50 percent of capacity, while controlling entry and tracking capacity • Use digital files instead of paper formats • Maintain 6 feet distance when possible • Use contactless payment, pickup, and delivery • Maintain social distancing during in-home deliveries and installations • Extend return period • Use floor decals for proper social distancing
Cleaning and disinfecting	• Frequently disinfect and sanitize work stations and equipment • Sanitize shopping carts and baskets between uses • Clean and disinfect surfaces during in-home deliveries and installations
Personal protective equipment	• Require all customers, vendors, and contractors to wear face coverings or deny entry • Ensure that all employees use face coverings and appropriate PPE, and provide training on the proper use of PPE • Provide gloves, and ensure that employees use them during high-touch activity, during shipping and receiving, and during in-home delivery
Training and safety	• Post signs about occupancy limits, social distancing, and face coverings • Establish procedures for safety processing returns • Reserve hours for vulnerable populations

Source: Kentucky. Cabinet for Health and Family Services. "Healthy At Work: Requirements For Retail Businesses." July 22, 2020. Web. Aug. 25, 2020.

Barriers to businesses reopening include difficulty in acquiring masks and thermometers, lack of child care, unemployment benefits, and requirements of small business loans.

Barriers To Reopening Business And Retail. Barriers to reopening include

- difficulty in acquiring masks for employees and thermometers to check employees' temperature,
- lack of child care for employees,
- state and local regulations,
- unemployment benefits, and
- the requirements of small business loans, such as spending 75 percent of funds on payroll during reduced staffing.[289]

The Kentucky Chamber of Commerce reported that, because of the different phases of reopening different types of businesses, it was difficult to understand whether unemployment insurance benefits affected employees' decisions.[290]

Plans to reopen retail were complicated by multiple sources of regulations, guidance, and enforcement. For the future, the KRF encouraged preemption of city and county ordinances, an appeals process, clear lines of communication with public health officials,

and development of a committee within state government that includes members of the KRF to review guidelines.[291]

Businesses faced several challenges during reopening. The criterion of allowing only one shopper per family could often be difficult to determine and enforce. Small businesses with locations in neighboring states experienced conflicting state guidance. Other challenges included social distancing and capacity limits, loss of customers, limited access to PPE, confusing guidance, and issues with the Paycheck Protection Program.[292]

A restaurant owner reported that, as a small business trying to keep up with guidance and regulations, his company had fewer resources than larger chain restaurants.[293] Another restaurant owner reported unprecedented uncertainty regarding weekly sales and whether the restaurant would be able to stay in business, particularly because the upcoming fall and winter months would affect available outdoor seating and further reduce the restaurant's ability to host customers.[294]

Restart Kentucky. The Kentucky Chamber of Commerce partnered with the Kentucky Community and Technical College System to launch Restart Kentucky, an informational resource for the business and economic community that included

- a question-and-answer webpage for business leaders, citizens, and policy makers;
- assistance in procuring PPE;
- coordination in manufacturing PPE;
- webinars such as "Addressing COVID-19 Legal Liability Risks For Employers" and "Reopening Requirements";
- the Who's Hiring campaign, a job information hub;
- the We See You campaign, highlighting local chambers;
- a task force on recommendations for reopening, including business leaders from all sectors;
- help with providing masks and hand sanitizer;
- a partnership with the Kentucky Department of Education to virtually connect students to businesses; and
- policy recommendations for 2020 and 2021, still in development.[295]

Kentucky State Parks. State parks closed indoor activities, accommodations, and many outdoor activities in April 2020 but began to reopen during the summer of 2020, as seen in Table 6.4.

Table 6.4
Tourism Reopening Timeline
2020

Reopening Date	Facility
May 22	• Kentucky Artisan Center Retail and Café
June 1	• Kentucky State Parks: lodging and cottages • Fishing tournaments
June 8	• Salato Wildlife Education Center • Kentucky Historical Society • Kentucky State Parks: museums and historical sites • Lodging at Blue Licks Buckhorn Lake, Lake Barkley, and Lake Cumberland State Resort Parks
June 11	• Kentucky Horse Park and campgrounds • Otter Creek Outdoor Recreation Area • Kentucky State Parks: campgrounds
June 17	• Kentucky Horse Park horse shows

Source: Kentucky. Tourism, Arts, and Heritage Cabinet. COVID-19 Updates. Web. July 30, 2020.

The Kentucky Arts Council received $1 million through the CARES Act and helped 93 nonprofit arts organizations and 85 other organizations through the Kentucky Humanities Council. Tourism organizations and festivals that were not nonprofits were ineligible for CARES Act funding.[296]

Kentucky tourism gradually increased in the summer and fall of 2020, primarily because of the state's many outdoor attractions and recreational activities that tourists believed to be safe, such as state parks, lakes, and camping. At the time of this writing, it is uncertain whether tourism will decline during winter.[297]

The Kentucky Tourism, Arts, and Heritage Cabinet reported findings from research firm Longwoods International about tourism preferences during the pandemic. Two-thirds of respondents (67 percent) had travel plans, and nearly one-third (27 percent) of those preferred to drive to their destination, with an increased willingness to drive up to 12 hours. Additionally, nearly two-thirds (61 percent) preferred destinations that required masks in public.[298]

Kentucky could benefit from these preferences, as the state is within driving distance of two-thirds of the US population and it offers safe outdoor recreational activities, smaller communities, and health and safety guidelines that appeal to many travelers.[299]

The Kentucky Travel Industry Association anticipated that tourism would shift from out-of-state visitors to Kentuckians traveling within the state.[300] The Tourism, Arts, and Heritage Cabinet

responded to COVID-19 through a "Stay Close. Go Far." marketing campaign encouraging travel within Kentucky to experience the scenery, outdoor recreation, and adventures while staying healthy.[301] To avoid risking the safety of cabinet personnel, the campaign used existing material featuring socially distanced small groups or families.[302]

Local Governments

While exempted from certain requirements, local governments were encouraged to adopt the same requirements for safely opening agencies during the pandemic. The guidance is based on recommendations from health departments and the CDC.[303] The Kentucky League of Cities created a sample policy for local governments. This sample policy does not include guidance for opening to the general public, but it does include policies for employees. Issues addressed by the guidelines include

- naming a "Healthy at Work" officer who is responsible for ensuring compliance with the guidelines,
- social distancing,
- employee self-health screenings,
- times when employees should quarantine or self-isolate,
- use of face coverings for employees,
- scheduling of employees for telework,
- employee travel for work purposes; and
- compensation policies.[304]

The Kentucky League of Cities is offering assistance to local governments in creating plans for cities to implement once the public health emergency has abated. KLC is assisting mayors, council members, and commission members to create plans that address individual cities' concerns for when the public health emergency is over.[305]

Voting Provisions

Executive Order 2020-688 expanded voter options to include expanded absentee voting by mail (returned by mail or drop box), early voting, and election day voting.

On August 14, 2020, the Governor issued Executive Order 2020-688 in response to a letter of recommendation from the Secretary of State concerning the state's general election to be held on November 3. The order expanded voter options to include expanded absentee voting by mail (returned by mail or drop box), early voting, and election day voting. Any eligible Kentucky voter concerned with contracting the coronavirus could request an absentee ballot by mail. Ballot requests were accepted via an online portal through October 9. After that date, qualified voters could continue to request a ballot by traditional methods. Mail-in

ballots were required to be postmarked by November 3 and received no later than November 6. Early voting began on October 13 and was available every working day, plus 4 hours on Saturdays, until the general election. Anyone could vote early for any reason. On election day, every county would provide at least one large voting center where anyone could vote regardless of the precinct in which they live. Other voting sites were decided by election day. Finally, anyone who was unable to receive a Kentucky driver's license—one of the accepted forms of identification required for voting—due to the pandemic-related closures of their county clerk's office could sign a document attesting to their identity and cast a ballot.[306]

Transportation Cabinet

In Executive Order 2020-323, the Governor ordered executive branch state government offices to begin to reopen on May 18, 2020, for limited in-person services pursuant to the state's "Healthy at Work" requirements.[307] As a result, to limit the increased traffic in regional driver's licenses and credentialing offices, Circuit Court clerks began to offer certain licensing renewal services by remote application. On July 2, the state Administrative Office of the Courts extended remote services that Circuit Court clerks statewide can provide under the guidance issued by the Transportation Cabinet. This guidance stated that any individual whose credentials expired, including those lost or stolen, between March 1 and September 30, 2020, may apply for renewal remotely at full cost through their Circuit Court clerk in their county of residence as long as no driving test is required. Driver's license services resumed on June 1 under the judicial branch's safety requirements. The federal enforcement date for the Real ID requirement was extended to October 1.[308]

Summary

The impacts of measures taken to address most public health emergencies are not as wide reaching as those of measures related to the COVID-19 pandemic. Responses to this pandemic have had impacts on the public that are unrelated to the direct transmission or contraction of the disease and have dramatically affected people beyond just those who have become ill or died. People have lost jobs, businesses, homes, and educational opportunities in addition to losing friends, family members, and community leaders.

The Disease Outbreak Support Plan includes measures for the recovery phase of an outbreak. The focus is on deactivating and decelerating activities such as contract tracing, nonpharmaceutical interventions, and testing as well as providing for continued monitoring of disease incidence. An after-action review and improvement plan is required after the outbreak is under control.

Preparedness for recovery from measures taken in response to a pandemic is not detailed at the federal or state level, most likely because of the infrequency and limited nature of past pandemics. In the KYEOP, the Department for Local Government is the primary agency for ESF 14, Community Recovery. The actions to be taken for recovery from measures taken in response to a disease outbreak are not detailed.[309] The recovery phase in the federal emergency plan states that the focus is on restoring the communities to preemergency levels including restoring services, repairing infrastructure, and requesting funding for other needs.

Although some aspects of these plans apply to mitigation and recovery needs as a result of the pandemic, responding to COVID-19 has been an experiment for many sectors of society. Numerous entities have made efforts to mitigate impacts and begin recovery. In some cases, these efforts were facilitated by federal and state legislation or by executive branch initiatives. In other cases, adaptation to circumstances involved efforts by community leaders and other public entities.

This first section of this chapter reviewed some, but by no means all, of the impacts on Kentuckians from emergency measures taken in response to the COVID-19 pandemic and responses to needs created. The second section reviewed some mitigation efforts taken to begin to restore Kentucky's communities. Further assessment of the impacts and recovery efforts will be possible after the pandemic is under control. However, this review may provide some insight into possible preparedness measures that could be taken to minimize the impacts of responses and to facilitate mitigation and recovery from future pandemics.

Appendix A

Emergency Support Functions

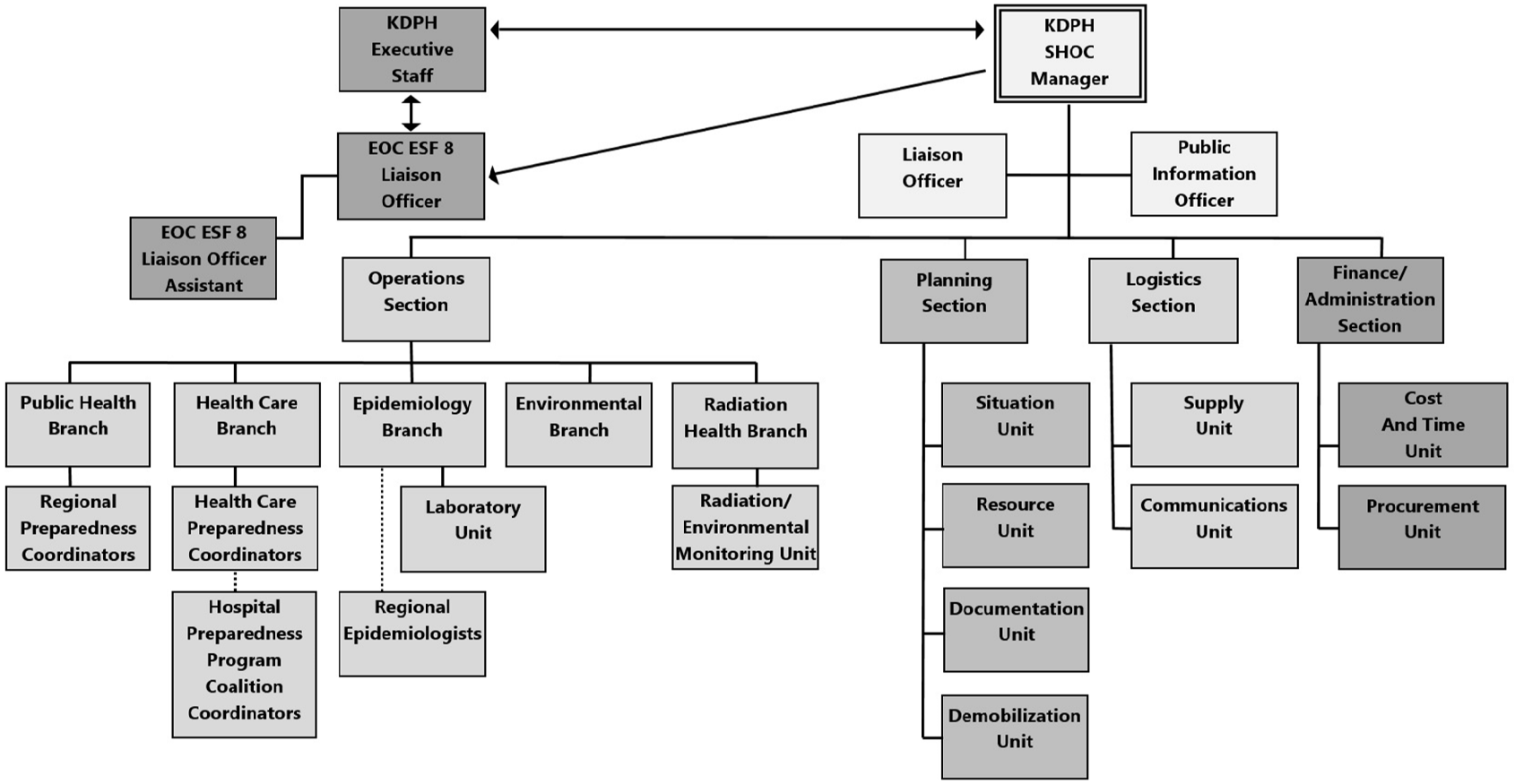
Emergency support functions (ESFs) provide the structure for coordinating federal interagency support for a federal response to an incident. They are a way to group functions that provide federal support to states and federal-to-federal support, both for Stafford Act-declared disasters and emergencies and for non-Stafford Act incidents. Following is a list of the ESFs.

- ESF 1, Transportation
- ESF 2, Communications
- ESF 3, Public Works and Engineering
- ESF 4, Firefighting
- ESF 5, Information and Planning
- ESF 6, Mass Care, Emergency Assistance, Temporary Housing, and Human Services
- ESF 7, Logistics
- ESF 8, Public Health and Medical Services
- ESF 9, Search and Rescue
- ESF 10, Oil and Hazardous Materials Response
- ESF 11, Agriculture and Natural Resources Annex
- ESF 12, Energy
- ESF 13, Public Safety and Security
- ESF 14, Cross-Sector Business and Infrastructure
- ESF 15, External Affairs

Source: US. Department of Homeland Security. Federal Emergency Management Agency. National Response Framework. Oct. 29, 2020. Web.

Appendix B

Kentucky Department For Public Health, State Health Operations Center Incident Command Structure For ESF 8 Operations



Note: KDPH = Kentucky Department of Public Health; SHOC = State Health Operations Center; EOC = Emergency Operations Center; ESF = Emergency Support Function.

Source: Kentucky Department of Public Health. State Health Operations Center Support Plan. Jan. 9, 2018.

Appendix C

Public Health Emergency Preparedness And Response Capabilities

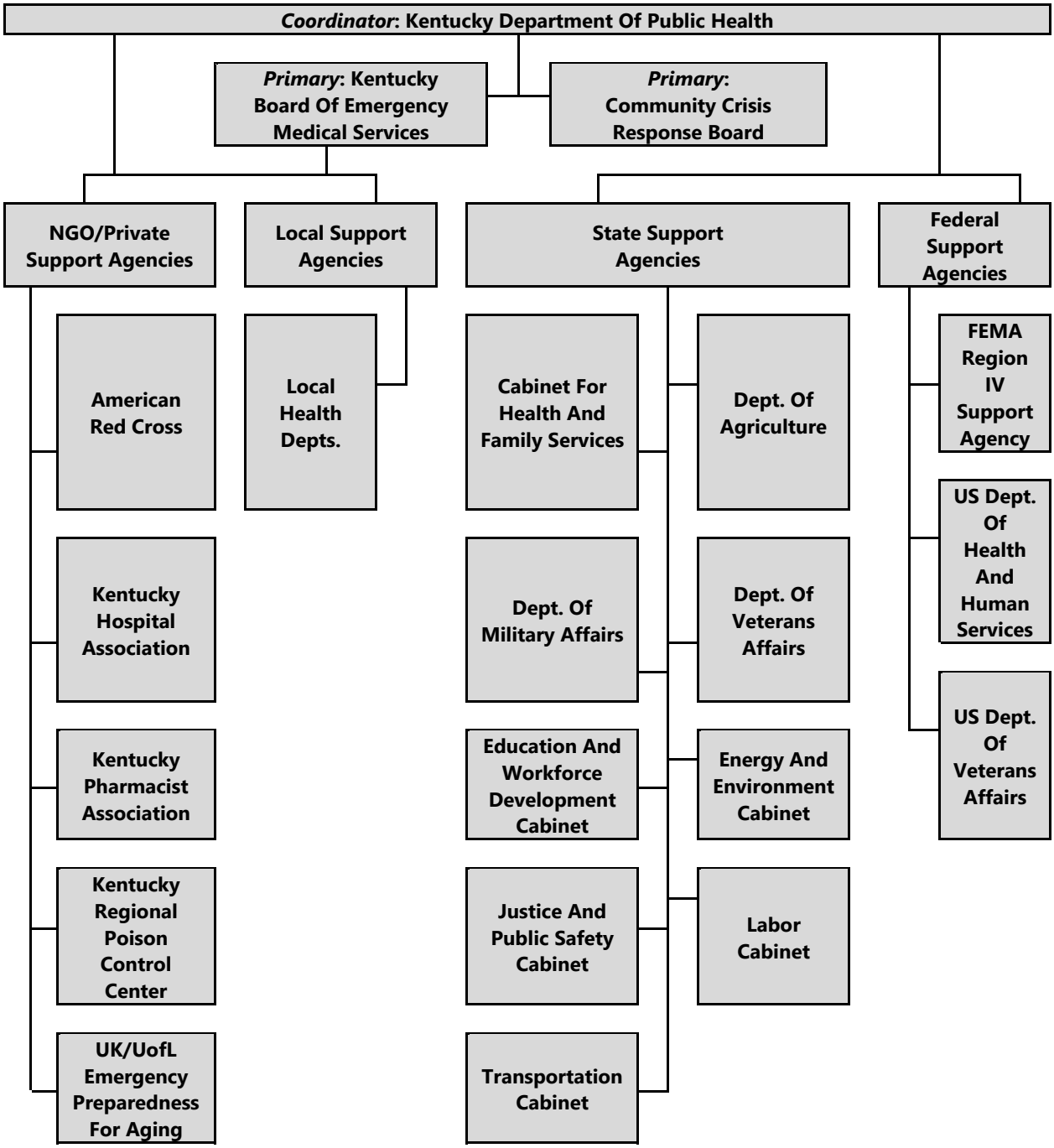
Capability standards provide a framework for state, local, tribal, and territorial preparedness programs to plan, operationalize, and evaluate their ability to prepare for, respond to, and recover from public health emergencies. Following is a list of the capabilities.

- Community Preparedness
- Community Recovery
- Emergency Operations Coordination
- Emergency Public Information and Warning
- Fatality Management
- Information Sharing
- Mass Care
- Medical Countermeasure Dispensing and Administration
- Medical Materiel Management and Distribution
- Medical Surge
- Nonpharmaceutical Interventions
- Public Health Laboratory Testing
- Public Health Surveillance and Epidemiological Investigation
- Responder Safety and Health
- Volunteer Management

Source: US. Centers for Disease Control and Prevention. *Public Health Emergency Preparedness And Response Capabilities: National Standards For State, Local, Tribal, And Territorial Public Health. 2018 Update Initiative.* Oct. 6, 2020.

Appendix D

Organizational Chart Of Kentucky ESF 8 Support Agencies



Note: NGO = nongovernmental organization; FEMA = Federal Emergency Management Agency; Dept. = Department; UK = University of Kentucky; UofL = University of Louisville.
Source: Staff compilation, which includes only the highest overseeing cabinets or departments listed in the KYEOP. To see a list of all state support agencies for ESF 8, see Kentucky. Department of Military Affairs. Emergency Management. *Kentucky Emergency Operations Plan*. 2014, p. 171.

Appendix E

Emergency Preparedness Contracts, 2016 To 2020

Vendor	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Adecco (IT) (DLC) (Admin)					
HPP	$64,500	$64,500	$64,500	$59,500	$59,500
PHEP	60,000	60,000	65,000	53,050	53,050
PHEP Crisis Response COVID-19	0	0	0	0	184,288
Public Health Emergency Response H1N1	0	0	0	0	0
Adecco (temp services)					
HPP COVID-19	0	0	0	0	142,069
COT (technology service charges)					
PHEP	26,080	26,080	3,100	3,100	3,100
Crown Services					
PHEP Crisis Response COVID 19	0	0	0	0	979,701
DAIL					
PHEP	25,000	25,000	49,000	22,000	22,000
Public Health Emergency Response H1N1					
GoHire (medical consultant)					
HPP	0	0	0	0	447,915
HPP COVID-19	0	0	0	0	215,000
PHEP	0	0	0	0	2,176
PHEP Crisis Response COVID-19	0	0	0	0	156,000
KBEMS					
HPP	18,000	18,000	18,000	18,000	10,000
HPP Ebola	0	0	0	0	0
KCCRB					
HPP	130,582	130,582	130,582	130,582	65,295
PHEP	0	0	0	0	65,291
KHREF					
HPP	439,994	439,994	1,060,276	1,197,036	1,152,862
HPP COVID 19	0	0	0	0	1,535,834
HPP Ebola	0	0	0	0	0
PHEP	105,490	105,490	63,025	114,470	100,000
Public Health Emergency Response H1N1	0	0	0	0	0
KPHA					
PHEP	159,804	159,804	159,804	149,804	149,804
PHEP Crisis Response COVID-19	0	0	0	0	35,000
PHEP Crisis Response Opioid	0	0	0	852,653	0
Public Health Emergency Response H1N1	0	0	0	0	0
Lab					
PHEP	84,950	88,950	72,950	52,950	106,500
Lexington Center Contracts					
Zika			10,000		
Lexington-Fayette (warehouse)					
PHEP	84,199	84,199	84,000	0	0
Local Health Departments					
HPP	880,111	596,223	551,720	551,720	564,220
PHEP	4,417,605	3,326,471	3,465,310	3,194,109	3,233,327
PHEP Crisis Response COVID-19	0	0	0	0	3,201,869
PHEP Crisis Response Opioid	0	0	0	2,100,000	0

Vendor	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
PHEP Pandemic Flu I	0	0	0	0	0
Public Health Emergency Response H1N1	0	0	0	0	0
Zika	0	0	825,000	0	0
Medical Examiner's Office					
PHEP Crisis Response Opioid	0	0	0	723,750	0
Norton Poison Control					
PHEP	16,675	16,675	16,675	16,675	27,215
PHEP Crisis Response COVID-19					700,000
PHEP Crisis Response Opioid				720,850	
Public Health Emergency Response H1N1					
NTT Data (IT)					
PHEP	23,920	23,920	23,920		
Pomeroy (IT)					
HPP					
PHEP					
Radiant (information management)					
PHEP Crisis Response Opioid				100,000	
Technical Youth (epidemiologists)					
PHEP					110,749
PHEP Crisis Response COVID 19					403,260
HPP	780	780	780	780	780
UK (pediatric medical surge)					
HPP					3,000
UofL					
HPP COVID-20					10,000
Total contracts by vendor	$6,537,690	$5,166,668	$6,678,642	$10,061,029	$13,739,805
Total HPP	$1,533,967	$1,250,079	$1,825,858	$1,957,618	$2,303,572
HPP COVID-19 and COVID-20	$0	$0	$0	$0	$1,902,903
Total PHEP	$5,003,723	$3,916,589	$4,002,784	$3,606,158	$3,873,212
Total PHEP Crisis Response COVID-19	$0	$0	$0	$0	$5,660,118
Total PHEP Crisis Response Opioid	$0	$0	$0	$4,497,253	$0
Total Zika	$0	$0	$850,000	$0	$0
Total contracts by grant award	$6,537,690	$5,166,668	$6,678,642	$10,061,029	$13,739,805

Note: PHEP = Public Health Emergency Preparedness; HPP = Hospital Preparedness Program; IT = information technology; DLC = Distance Learning Center; COT = Commonwealth Office of Technology; KPHA = Kentucky Public Health Association; DAIL = Department for Aging and Independent Living; KHREF = Kentucky Hospital Research and Education Foundation; KCCRB = Kentucky Community Crisis Response Board; KBEMS = Kentucky Board of Emergency Medical Services; UK = University of Kentucky; UofL = University of Louisville.
Source: Sarah Cooper, staff assistant, Kentucky Cabinet for Health and Family Services, Office of Legislative and Regulatory Affairs. Email to Miriam Fordham, Dec. 8, 2020.

Appendix F

State Health Operations Center Activations

Date	Event
August 2005	Hurricane Katrina
August 2006	Hurricane Ernesto
December 2006	White powder event
January 2007	Train derailment, Bullitt County
July 2008	White powder event, McCreary County
August 26, 2008	White powder event, McCreary County
August 27–September 7, 2008	Hurricane Gustav/Hanna
September 18, 2008	High winds from Hurricane Ike, Louisville
January 27–February 11, 2009	Severe winter/ice storm
April 24–May 14, 2009	H1N1 flu response
May 8-10, 2009	Flooding, eastern Kentucky
July 22, 2009	White powder event, Franklin County
August 5, 2009	Flooding, Louisville
September 8–October 21, 2009	H1N1 flu response
December 14-17, 2009	Winter storm notification
January 14–February 3, 2010	Haitian earthquake (monitoring)
January 29-30, 2010	Severe winter storm
March 3-5, 2010	White powder event, La Grange
May 12-14, 2010	Flooding, 76 Kentucky counties
July 21-23, 2010	Flooding, eastern Kentucky
September–October 10, 2010	World Equestrian Games
October 27-29, 2010	White powder event, Whitley County
December 2010	Winter storm
April 28-May 8, 2011	Flooding throughout Kentucky (declared counties: 39 written/8 verbal)
April 22-23, 2011	Thunder Over Louisville
May 6-7, 2011	Kentucky Oaks/Derby
May 16-20, 2011	National level exercise
May 26-29, 2011	White powder event, Whitley County
June 20, 2011	Flooding, southeastern Kentucky
August 25, 2011	Hurricane Irene (monitoring)
October 17, 2011	I Heard It Through the Grapevine
December 5-9, 2011	Foodborne illness outbreak, Bullitt County
February 7-28, 2012	Kentucky Basketball Academy gastrointestinal illness outbreak
February 21, 2012	Power outage, eastern Kentucky
February 29, 2012	Tornado/severe weather
March 1-29, 2012	Tornado, eastern Kentucky
March 23, 2012	White powder event, Franklin County
July 4-14, 2012	World Choir Games, Cincinnati, OH
July 25-30, 2012	Pertussis (eventually moved into multi-epi event), Estill County
July 31–September 2012	Multi-epi event (pertussis, lymphocytic choriomeningitis virus, bat exposure × 2, salmonella, H3N2, tuberculosis, *E. coli*
October 10-13, 2012	Vice presidential debate, Danville
October 19-21, 2012	Tough Mudder, Maysville
October 24-31, 2012	Multistate fungal meningitis outbreak
October 29-31, 2012	Train derailment, Louisville
October 29, 2012	Hurricane Sandy (monitoring)
October 30, 2012	Winter weather due to Hurricane Sandy, eastern Kentucky
January 11-14, 2013	Possible flooding, western Kentucky

Date	Event
January 11, 2013	Influenza activity
2013	Shortage of INH (isoniazid) and doxycycline
March 11-12, 2013	Nitric acid chemical spill (monitoring), Jessamine County
March 14-25, 2013	Cluster of illnesses, Cumberland Valley
April 9, 2013	Kentucky/Tennessee Community Assessment for Public Health Emergency Response
April 15, 2013	Shooter incident at hospital, Livingston
April 19-20, 2013	Thunder Over Louisville
May 3-4, 2013	Kentucky Oaks/Derby
June 14, 2013	Indiana/Kentucky/Ohio cross-border exercise
June 24–July 2, 2013	Kentucky Speedway for Three Rivers Districts Health Department
December 5-9, 2013	Winter weather outbreak
December 16, 2013	White powder event, Laurel County
January 9-17, 2014	Water shortages and West Virginia monitoring
January 10–February 10, 2014	Multiple incidents (water shortages throughout Kentucky, West Virginia chemical leak, propane shortages, cold weather sheltering, saline shortages, planning for transfer of residents of long-term care facilities)
January 23, 2014	Propane shortages throughout Kentucky
January 23-24, 2014	White powder event, Nelson County
February 12-14, 2014	Emergency Management Assistance Compact request for generators, Georgia
February 20, 2014	Severe weather
March 2, 2014	Winter storm Titus
April 16-17, 2014	Ohio Mutual Aid full-scale exercise, Indiana, Kentucky, Ohio
April 18-19, 2014	Thunder Over Louisville
April 28, 2014	Severe weather/tornado/thunderstorms, western Kentucky
May 2-5, 2014	Kentucky Oaks/Derby
2014	Sinkhole under a nursing home, Christian County
August 23, 2014	Flooding, eastern Kentucky
September 2, 2014	Ebola virus disease, shock activation
February 16-21, 2015	Winter storm Octavia and extreme cold
February 23-25, 2015	Measles exposure (two children), Trigg County
March 3-5, 2015	Winter storm Thor
July 14-15, 2015	Severe storms and flooding, eastern Kentucky
August 1, 2015	Ephraim McDowell Regional Medical Center response, Boyle County
September 2015	Chemical Stockpile Emergency Preparedness Program exercise
September 1, 2015	Old Grand Hotel fire, Perry County
September 14, 2015	White powder event, McCracken County
October 14, 2015	Emergency Management Assistance Compact request for nurses, South Carolina
December 3, 2015	White powder event, Jefferson County
December 10, 2015	White powder event, Whitley County
January 20, 2016	White powder event, Boone County
January 21-22, 2016	Winter storm Jonas
February 9, 2016	Zika activation
February 23–March 2, 2016	Mumps exposure in child care facility and University of Kentucky, Lexington
March 30, 2016	White powder event, Madison County
April 22-23, 2016	Thunder Over Louisville
May 6-7, 2016	Kentucky Oaks/Derby
June 16, 2016	Ebola virtual tabletop exercise series, Federal Emergency Management Agency Region IV
July 7-11, 2016	Severe weather
July 9, 2016	Kentucky Speedway
July 20, 2016	Ebola cache functional exercise

Date	Event
May 5-6, 2017	Kentucky Oaks/Derby
June 23-July 14, 2017	Bat exposure, Camp Blanton
August 17-22, 2017	Eclipse
August 28–September 10, 2017	Hurricane Harvey
September 11–October 4, 2017	Hurricane Irma
November 22, 2017	Hepatitis A outbreak
December 13-15, 2017	Miracle at St. E's Ebola exercise
January 5-27, 2018	Water shortages, eastern Kentucky
January 5–December 12, 2018	HIV cluster, northern Kentucky
January 22-31, 2018	High school active shooter, Marshall County
March 10-May 23, 2018	Synthetic cannabinoids
April 28-July 2, 2018	Tularemia, Butler County
July 9-12, 2018	Water main break, Daviess County
September 11-26, 2018	Hurricane Florence
December 4, 2018–April 3, 2019	Vaccine administration, adverse reaction
April 3–May 1, 2019	Statewide/multistate *E. coli* O103 outbreak
April 3–May 1, 2019	Statewide/multistate *Salmonella* Carrau outbreak

Source: Source: Sarah Cooper, staff assistant, Kentucky Cabinet for Health and Family Services, Office of Legislative and Regulatory Affairs. Email to Miriam Fordham, Dec. 8, 2020.

Appendix G

Response Phase Actions

1. **Warning Point:** Local jurisdictions; state ESF 8, Public Health and Medical partners; neighboring states; or federal partners shall notify KDPH of a public health threat that may require KDPH support.

2. **SHOC Activation:** Upon receipt of a warning, the principal program(s) engaged in the investigation in conjunction with the Division of Epidemiology and Health Planning will determine the appropriate level of SHOC activation. Coordination of state support to a disease outbreak response shall be accomplished through the KDPH SHOC. The SHOC Support Plan outlines how it will coordinate public health preparedness response operations. Attachment 5, KDPH's Expanded Operations Section Incident Command System (ICS) Structure [not included in this report], describes how ICS shall be expanded or contracted upon depending on the need of the public health incident.

3. **Alert And Notification:** Upon receipt of a warning, the principal program(s) engaged in the investigation in conjunction with the Division of Epidemiology and Health Planning shall determine the appropriate local, state, and federal public health partners to notify given the scope of the incident.

4. **Public Health Surveillance:** Morbidity and mortality surveillance systems shall continue to be used and assessed during the incident. New surveillance systems or procedures may be established given the scope of the incident. Guidance shall be provided by KDPH Subject Matter Experts and/or federal partners.

5. **Epidemiological Investigation:** KDPH shall investigate, collect data, analyze results, and communicate findings following the systematic approach to investigating an outbreak. The steps listed below are KDPH's approach. Additional guidance is provided in the Foodborne and Waterborne Outbreak Investigation Manual.
   a. Prepare for an outbreak investigation and field work.
   b. Confirm the existence of an epidemic or an outbreak.
   c. Verify the diagnosis.
   d. Define a case and identify and count cases.
   e. Describe the data in terms of person, place, and time.
   f. Develop hypotheses.
   g. Evaluate hypotheses (analyze and interpret the data).
   h. Refine hypotheses, and carry out additional studies.
   i. Implement control and prevention measures.
   j. Communicate findings, and enter into appropriate reporting system.

6. **Laboratory Testing:** Laboratory testing, analysis, and reporting shall be conducted by local, state, and federal certified laboratories. Results shall be communicated to KDPH. The following may be coordinated for specimens through the Division of Laboratory Services:
   a. Collection
   b. Analysis
   c. Reporting of results

7. **Data Collection, Management, And Analysis:**
   a. KDPH shall coordinate the collection, management, and analysis of data in collaboration with response partners, as applicable.
   b. All information collected throughout the response shall be processed and managed under KDPH outbreak investigation confidentiality and state and federal privacy laws.

8. **Prevention And Control Measures:** KDPH shall coordinate the following prevention and control measures through the SHOC in accordance with state policies and regulations:
   a. Community Health Education
   b. Environmental Controls
   c. Medical Countermeasures (MCM)
   d. Nonpharmaceutical Interventions (NPI)

9. **Critical Resources:**
   a. Critical resources that shall be managed to support a disease outbreak response include, but are not limited to, the following:
      1. Volunteer Management
      2. Response Teams
      3. Medical Countermeasures
      4. Medical Materiel
      5. Nonpharmaceutical Interventions
   b. Critical resources shall be managed through the SHOC in accordance with the SHOC Support Plan. Attachment 6, Medical Countermeasure Resources [not included in this report], lists MCMs and medical materiel that are available to KDPH. Attachment 7, Nonpharmaceutical Interventions [not included in this report], lists NPIs that shall be implemented by KDPH, if needed.

10. **Public Health Information And Warning:**
    a. Public health information shall be developed in collaboration with the State Epidemiologist, Public Health Commissioner, CHFS Office of Communication and federal partners.
    b. Public health information shall be reviewed and approved by an established medical review and policy team prior to providing the documents to the CHFS Office of Communication for distribution.
    c. The development and release of public information is further detailed in the SHOC Support Plan and the CHFS Emergency Communications Plan.

Note: ESF = Emergency Support Function; KDPH = Kentucky Department of Public Health; SHOC = State Health Operations Center; CHFS = Cabinet for Health and Family Services.
Source: Kentucky Department for Public Health. *Disease Outbreak Support Plan*. August 2015.

Appendix H

Disease Outbreak Support Plan, Recovery Phase

1. **Deactivation:**
   a. Deactivation of the DOSP shall occur in coordination with the Division of Epidemiology and Health Planning and the principal program(s) engaged in the investigation.
   b. The KDPH SHOC shall deactivate as determined by the SHOC manager and as outlined in the SHOC Support Plan.

2. **Continued KDPH Support:** Following the deactivation of the DOSP, short/long term monitoring may be required to determine impact of the response and disease exposure. Short/long term monitoring shall be coordinated by the principal program(s) engaged in the investigation in conjunction with the response partners and the Division of Epidemiology and Health Planning**.**

3. **After Action Report (AAR):** An After Action Review shall be coordinated following the completion of major state response operations to document response and recovery activities in an After Action Report/Improvement Plan (AAR/IP) and completed within 60 days of an exercise or within 120 days of an incident or planned event**.**

4. **Corrective Actions:** Corrective actions listed in the AAR/IP shall be tracked and implemented by assigned personnel.

Note: DOSP = Disease Outbreak support Plan; KDPH = Kentucky Department of Public Health; SHOC = State Health Operations Center.
Source: Kentucky Department for Public Health. *Disease Outbreak Support Plan*. August 2015.

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