

ANNEX 2 TO ATTACHMENT E
(INFECTIOUS DISEASE DATA AND INTELLIGENCE SHARING)
TO THE SOUTH CAROLINA EMERGENCY OPERATIONS PLAN

I. INTRODUCTION

- A. During an infectious disease outbreak, timely disaster intelligence is critical to coordinate and support response and recovery actions.
- B. The ability to collect, analyze, assess, and disseminate intelligence to public health and emergency management officials is essential to support response and logistical priorities.
- C. In an infectious disease event, both public health and emergency management organizations at the state and local level will have data and analysis needs. Synchronized data, analysis, and product development is necessary to reduce ambiguity and make coordinated decisions.

II. PURPOSE

- A. Provide State-level disaster intelligence support through coordinated analysis and product development highlighting potential impacts, cascading effects, and additional information necessary for decisions and resource management in an infectious disease event.
- B. Document appropriate and effective methodologies for requesting and sharing public health data with public health and emergency management officials.
- C. Describe the intent and composition of the Data and Intelligence Working Group and how the group can be implemented in infectious disease events to provide analysis and products to decision makers.

III. SCOPE

- A. This annex should be considered in all infectious disease events when data sharing is necessary for response and recovery planning purposes.
- B. This annex outlines the system and operational intent that has been developed by relevant stakeholders and rooted in best practices for requesting and sharing data, analysis, and products for public health and emergency management officials during an infectious disease event. This annex addresses government agency to government agency data sharing and does not address data sharing with the public or public or private organizations.
- C. This annex provides roles and responsibilities for the Data and Intelligence Working Group.
- D. This annex shall be consistent with applicable federal and state statutes, regulations, and policies.

IV. FACTS AND ASSUMPTIONS

- A. An infectious disease outbreak response, especially a pandemic response, requires the capability to collect, interpret, validate, organize, and analyze data to generate usable information. Information is the basis for public health action and rapid data sharing is critical during an infectious disease event. This capability can only be obtained through a planned, organized, and unified approach to data and information management.
1. For the purposes of this plan, data is defined as a single variable (i.e., age, race/ethnicity, gender) or multiple variables collected from field investigations, surveillance systems, vital statistics, or other sources.
 2. Information is defined as the product of the analysis of data collected and used to identify ways to prevent illness and/or determine the magnitude of the event.
- B. Emergency management and public health officials will request public health data and analysis during an infectious disease event for use in planning, response, and recovery operations.
- C. All infectious disease events will be unique and data sharing capabilities may vary from one event to the next or throughout an incident depending on the disease, transmissibility, and impact on the population.
- D. There are strict state and federal statutes, regulations, and policies outlining what public health data can and cannot be shared.
1. To the degree possible, aggregate data will be provided by the South Carolina Department of Health and Environmental Control (DHEC).
 2. Protected health information (PHI) and personally identifiable information (PII) will not be provided by DHEC if requested by outside agencies or organizations.
 3. Demographic data (age, gender, race/ethnicity, etc.) may be suppressed in certain data sets to prevent identification of an individual through the combination of such data with other publicly available information (e.g., obituaries, social media, news media).
- E. Data owners are held accountable by both state and federal laws that dictate the scope of data and information that can be shared. Standards may vary by event scale and activation of Emergency Health Powers or State of Emergency Declaration by the Governor. The ability to share and use data may change throughout an incident to preserve the privacy of impacted individuals.

- F. In some cases, DHEC will be restricted from sharing requested data with officials and state and federal agencies. In some instances, data use agreements (DUA) may be necessary for the sharing of some datasets.
- G. Data may be more restricted based on the timing, size, scope, and scale of the infectious disease event.
- H. In most cases, it will not be possible to share sub-county level data. (Communicable Disease Data Release Policy (7-11-2017)).
- I. Infectious disease data and information for which DHEC is responsible will be shared at a level of detail and analysis necessary to limit disease transmission and provide situational awareness to partners and decision makers to the extent permitted by federal and state statutes, regulations, and policies.
- J. DHEC will make all reasonable efforts to provide predictive modeling to emergency management; however, the accuracy, meaningfulness, and usability of the predictive modeling may be limited, especially in the early stages of an emerging infectious disease event.
- K. Any predictive models provided by DHEC will follow current best practices.
- L. A Data and Intelligence Working Group may be activated to synchronize and prioritize data and analysis needs, product development, and communication with partner agencies if the ability to share public health data widely is limited and demand for analysis and products outpaces capacity.

V. SITUATION

- A. Traditionally, infectious disease events have been identified, mitigated, and responded to almost exclusively within the public health and medical sector. Examples include outbreaks of influenza and measles in the last several decades.
- B. However, on March 13, 2020, the United States declared a national state of emergency, followed by South Carolina Governor Henry McMaster issuing a state of emergency based on the imminent threat to public health in the state. For the first time in almost a century, an infectious disease event spread, forcing the entire world to take precautions such as remote work and learning and social distancing.
- C. The COVID-19 Pandemic stressed systems, workers, and the provision of service in all sectors in the United States and throughout the world. The response and mitigation of the disease required a whole community effort. More than ever before, all levels of government, private industry, education, essential employees, the media, and the public demanded public health information on the spread of the disease.
- D. Due to the dynamic nature of COVID-19, public health agencies across the nation had to determine what data they could share, how they could share it and who they

could share it with to keep public health partners and the public adequately informed on precautions, risk, and severity of COVID-19.

- E. In addition to data, partners including emergency management and public health organizations were requesting analysis and disease projections to support plans and logistical operations. DHEC had to ramp up data and analysis production, far exceeding existing capacity, to attempt to meet the needs across the state.
- F. Overall, DHEC was able to build capacity as COVID-19 progressed over the first two years to meet the data and analysis needs of its partners and the public. Several lessons were learned, which should be documented and acknowledged for future disease events, including:
 - 1. Federal, state, and local government officials will request data, analysis, and projections for use as planning assumptions throughout the duration of the event from both public health and emergency management officials.
 - 2. State and local officials had expectations for sub-county level data and analysis. While not all data can be shared broadly, aggregate data is typically shareable. Smaller geographies of aggregation, such as zip code level, may not be available or useful for planning purposes during an infectious disease outbreak.
 - 3. Incorporating data sharing and storage methodologies, formats, systems, and standards into plans will help to ease the demand on government systems and organizations. As needed, DHEC will provide training and education on public health data use to increase understanding of the data and analysis that may be available in the next infectious disease event.
 - 4. The establishment of a Data and Intelligence Working Group to address information and intelligence shortfalls led to the substantial improvement in information sharing and the development of actionable intelligence.

VI. ORGANIZATIONS

- A. DHEC is the sole advisor of the State in all questions involving the protection of the public health within its limits and the primary agency responsible for managing a public health emergency. DHEC is also the data owner for public health data, including certain protected health information, in the state.
- B. The South Carolina Emergency Management Division (SCEMD) is the coordinating agency for all disaster response in the State of South Carolina. SCEMD is also responsible for organizing, integrating, and conducting disaster intelligence assessments for distribution to state and local emergency management partners.
- C. SCEMD coordinates disaster intelligence and related products through the Disaster Intelligence Group (DIG). The DIG consists of multiple agencies depending on the

hazard type and scale. The DIG is experienced in fusing a myriad of information and analysis into products to inform decision makers, to include state and local emergency management partners. Responsibilities and partner agencies of the DIG are outlined in Attachment E of the South Carolina Emergency Operations Plan.

- D. During an infectious disease event, decision makers will have different data and analytical requirements to better prepare for, respond to, and recover from incidents than South Carolina's more traditional natural hazard incidents. In addition to different information requirements, infectious disease data have different restrictions on sharing, collection, and use. As such, the Data and Intelligence Working Group (DIWG) has been established in support of the DIG to coordinate and provide data and intelligence products for emergency management and public health partners of all levels of government.
1. The DIWG is comprised of subject matter experts from DHEC, SCEMD, and SCNG. Other state agencies could be incorporated into the group as needed depending on the conditions of an infectious disease incident and requests for data and intelligence products. At a minimum, the following personnel will participate in the DIWG:
 - i. DHEC: Acute Disease Epidemiology Section Director or designated senior representative, DADE Epidemiologists (3), Intelligence Section Chief, Legal Counsel, GIS Section Manager
 - ii. SCEMD: Chief of Preparedness, Plans Team, GIS Manager
 - iii. SCNG: TAG GIS Manager, Future Operations, Current Operations, J3 (Director of Military Support), ESF-19, J2
 2. During an infectious disease event, it may become necessary for the DIWG to convene to coordinate interagency data sharing, define appropriate uses of data, and develop joint intelligence products for emergency management and public health organizations. Roles and responsibilities for each member agency are outlined in Section VIII.
 3. Steady State Operations
 - a. At least annually, the DIWG will meet to ensure this plan is up to date and that systems, procedures, and data restrictions are well understood among the partners. Activation triggers for the DIWG will also be reviewed and updated as necessary.
 - b. In addition, training, education, and collaboration will occur as needed with emergency management, public health, and decision-making partners.

VII. CONCEPT OF OPERATIONS

- A. Activation of the Infectious Disease Data and Intelligence Sharing Annex
1. An activation for an infectious disease will generate the need to share data. While some of these data needs can be pre-identified and planned for, additional unforeseen data needs may come up as the response develops.
 2. Activation of the Disaster Intelligence Attachment does not automatically activate the Infectious Disease Data and Intelligence Sharing Annex. There will be incidents where the DIG is activated but the DIWG is not.
 3. During an ongoing infectious disease event, the following are considerations for activating the Annex:
 - a. Upon activation of the Infectious Disease Plan;
 - b. At the request of either the SCEMD or DHEC director, the Adjutant General, or as requested by the Unified Command Group; or
 - c. At the request of an agency of the Data and Intelligence Working Group upon reaching capacity of the agency to perform their own analysis.
 4. Process
 - a. Upon activation of the Annex, regular coordination meetings will begin among members of the DIWG.
 - i. Initially, coordination meetings will occur two times per week and will adjust to match the needs and cadence of the incident response.
 - ii. The preferred method for meeting is to utilize Microsoft Teams.
 - iii. As demands for information and analysis increase, up to three DHEC epidemiologists will report in-person to the SEOC to support the DIWG.
 - b. The DIWG is composed of DHEC, SCEMD, and SC National Guard members.
- B. Requesting infectious disease data and intelligence products
1. State and local emergency management and public health/health care organizations can request data, analysis, and products from the DIWG through the State's traditional request process, Palmetto's Resource Request application.

- a. Palmetto is the State’s Common Operating Picture. The Resource Request application in Palmetto is the preferred way to request personnel, equipment, and geospatial products in any disaster.
- b. Emergency management and health agencies across the state have access to Palmetto and utilize the system frequently for information sharing and resource requests.
2. The Palmetto Resource Request application allows all agencies that have disaster duties to be tasked with resource requests. The application allows users to document, track, and provide feedback to entities that submit information requests to the State. All requests are tracked until completion and/or demobilization.
3. There are several best practices for using the Resource Request application for the purpose of obtaining data, analysis, and products during an infectious disease event.
 - a. Within the Resource Request form in Palmetto, requestors should indicate “Data” as the Resource Category.
 - b. A detailed description of the types of data and their intended use(s), analysis, or products requested is required. See section VI. H. for more information.
 - c. Requestors should include a point of contact for the request with an email address and a cell phone number where the individual can be reached for further questions.
4. The Supply Unit at SCEMD receives all submitted resource requests and will task all infectious disease event data and analysis requests to the DIG. Resource requests must be filled out completely, including the Data Request Form, prior to submittal to the DIG.
5. The DIG will intake and coordinate all requests.
 - a. As the infectious disease lead for the state, DHEC will have the ultimate responsibility to determine if a request can be fulfilled.
 - b. DHEC will have the opportunity to task SCEMD and the SC National Guard with fulfilling appropriate requests.
 - c. DHEC will approve all analysis and products requested through Palmetto before the final versions are provided to the requestor.
6. The DIG will be able to update the status of each request until closure.

7. As the DIWG observes trends in data and analysis requests, the DIWG will determine if any additional products or analysis should be created for statewide consumption. Additional analysis or products may be included in SCEMD's Summary Risk Assessment (SRA) or become stand-alone products as determined by the DIWG.
8. Requests for data and analysis from DIWG partners will be addressed in regular coordination meetings during infectious disease events.

C. Vetting and Prioritization Process for Requests

1. All DHEC data requests must be accompanied by a completed Data Request Form from DHEC. The form will be completed by the requestor following provided instructions and submitted to DHEC for review before any data may be provided. Upon receipt of the request DHEC will review the request to determine if the request can be granted and if a data use agreement (DUA) is required.
2. If the request is approved, and a data use agreement (DUA) is not required (see section VII. E for more information about DUAs), the data will be provided to the requestor, along with any appropriate instructions or interpretations.
3. The resource request in Palmetto will be marked as "complete" once the data has been provided to the requestor.
4. All products will be regarded as For Official Use Only.

D. Data Use Agreements

1. A Data Use Agreement (DUA) is a written agreement between two or more parties that governs the sharing of data from one party to others. The DUA should identify what information is to be shared and for what purpose. It should highlight the legal authority allowing for the sharing of data, and it should explain what the recipient of the data can and cannot do with the data once received. It should also set forth the timeframe by which the recipient can keep and utilize the data, and it should set out procedures for the return of the data at the expiration of the DUA.
2. DHEC may determine that a DUA is necessary for completing a data request received. If so, DHEC will provide the Data Request Form that includes required questions that the requestor must answer about the desired data elements to determine if a DUA is necessary, and what it will cover so that DHEC can determine under which authorities it will operate.
3. DUAs can be amended as needed, but they are specific and will expire.

4. It may be determined that a DUA is not needed to share certain data elements.
 5. The timeline from submission to approval will vary depending on the completeness of the responses submitted by the requestor.
- E. Statutes, regulations, and policies in South Carolina impact the scope and ability to share public health data.
1. These statutes, regulations, and policies cover reportable information, privacy, restriction of access, protected health information confidentially, and immunization registry restrictions, among other things.
 2. Public Health is a States Rights issue with regards to statutes, regulations and polices. States may differ in both the data elements collected along with the manner and form in which they are provided to governmental agencies and the public. For these reasons, data collected and distributed to official partners or the public may vary from state to state.
 3. Appendix A of this plan contains a list of statutes, regulations, and policies pertinent to this annex and public health data sharing in South Carolina.
- F. Data request fulfillment considerations include availability of information, availability of personnel to complete the request, preexisting data use agreement(s), legal, statutory, privacy, and intellectual property considerations, volume of requests, the request's impact to decisionmakers, the benefit to the public, and resource management.
- G. Minimum considerations for data sharing include when data should be shared, who is authorized to receive data, who is authorized to share data, what type of data can be shared, what type of data cannot be shared (e.g., SIMON data, STD, HIV, vital records, etc.), data use and re-release parameters, what data protections are sufficient, and legal, statutory, privacy, and intellectual property considerations.
- H. Known Data Needs
1. An example of known data needs that may be requested is included in the following table. Additional data points could be eliminated or added depending on the nature of the infectious disease event.

South Carolina Infectious Disease Event (as of Date)													
All numbers are 7-day averages													
Daily Tests			% change			New Cases		% change		% Positive		% change	
Today	###	-	Today	###	-	Today	###	-					
1 week ago	###	###	1 week ago	###	###	1 week ago	###	###					
2 weeks ago	###	###	2 weeks ago	###	###	2 weeks ago	###	###					
1 month ago	###	###	1 month ago	###	###	1 month ago	###	###					
2 months ago	###	###	2 months ago	###	###	2 months ago	###	###					
Peak (Date)	###	###	Peak (Date)	###	###	Peak (Date)	###	###					
In Hospital			% change			In ICU		% change		On Ventilators		% change	
Today	###	-	Today	###	-	Today	###	-					
1 week ago	###	###	1 week ago	###	###	1 week ago	###	###					
2 weeks ago	###	###	2 weeks ago	###	###	2 weeks ago	###	###					
1 month ago	###	###	1 month ago	###	###	1 month ago	###	###					
2 months ago	###	###	2 months ago	###	###	2 months ago	###	###					
Peak (Date)	###	###	Peak (Date)	###	###	Peak (Date)	###	###					

I. Frequency of Data Sharing

The processes and frequency for data sharing in incident-specific settings, including requirements for data sharing with CDC, will be at a frequency as determined by the type of incident and phase of the incident, as well as jurisdictional standards.

J. Data sharing methods will vary depending on the type of data or analysis being shared.

1. Data Sharing Formats

a. The preferred format for data sharing amongst the DIWG agencies is GIS REST services.

i. A REST service is a type of map service that allows for greater sharing of data. With a REST service, GIS data can be shared securely among stakeholders in a consistent, structured format.

ii. Maps, tables, and analysis created using REST service data will automatically sync with updated REST service data.

iii. The GIS members of the DIWG are able to create and share REST services quickly and efficiently.

b. Depending on the nature of the incident and data sharing restrictions, DHEC may provide a few agency accounts to the DIWG on their systems to ensure data is not shared inappropriately outside of the agency.

2. Analysis and Intelligence Product Sharing

- a. Analysis and products created by the DIWG for distribution to emergency management partners will not include raw data.
 - b. The primary method for sharing analysis and products within the DIWG will be through email or SharePoint.
 - c. Products vetted and approved by the DIWfG may be distributed to the agencies' respective partners that have an operational or planning need for the information.
3. The DIWG will utilize standard practices for data collection, management, and maintenance, to include the utilization of version control. Version control and data organization practices will be standardized by the data owner. Standards will be shared broadly with any partners who may be storing or updating related datasets.

VIII. ROLES AND RESPONSIBILITIES

A. SC Department of Health and Environmental Control

1. Per statute, serve as the data owner, steward, and responsible agency for protected health information in the state.
2. Serve as the lead agency of the DIWG.
3. Provide up to three epidemiologists to the State Emergency Operations Center (SEOC) to interpret infectious disease data, collaborate on intelligence products, and provide predictive analysis as needed.
4. Develop, coordinate, and distribute data and information, REST services, and analysis products.
5. Compile, analyze, and store data based on routine program-specific functions and will identify those systems and programs critical to providing data for a response to an infectious disease event.
6. Review requests for data and fulfill as able based on statutes, regulations, and policies regarding public health data collection and distribution.
7. Build GIS products and dashboards as requested by the DIWG.
8. Coordinate data and intelligence calls. Distribute call notes to attendees.
9. Provide EMD LNOs with Office 365 accounts to increase data and information sharing efforts.

B. SC Emergency Management Division

1. Coordinate disaster intelligence for the state with the appropriate agencies and subject matter experts for use by decision makers and emergency management partners.
2. Develop, coordinate, and distribute disaster intelligence products, such as the SRA, for state and local emergency management partners.
3. Provide an LNO to DHEC in support of an infectious disease response and to assist with data sharing.
4. Serve as a member of the DIWG. Lead the coordination of the group, ensuring meetings are conducted and all partners are engaged as needed.
5. Manage and train emergency managers on the information request process and use of Palmetto.
6. Develop GIS products and dashboards as requested by the DIWG.

C. South Carolina National Guard

1. Serve as a member of the Data and Intelligence Working Group.
2. Assist with disaster intelligence and product development.
3. Support SC National Guard unit requests for data and analysis.
4. Build GIS products and dashboards as requested by the DIWG.
5. Provide an LNO to DHEC in support of an infectious disease response and to assist with data sharing.

IX. PLAN MAINTENANCE

A formal review of this Annex is conducted annually to ensure the plan elements are valid, current, and comply with current guidance and policies. The review, facilitated by DHEC Bureau of Emergency Preparedness and Response (BEPR), provides a more formal opportunity for all DHEC divisions and supporting agencies to analyze the plan and provide comments and/or suggested revisions.

X. AUTHORITIES AND POLICIES

The following list represents generally applicable authorities and policies impacting data sharing and this plan; however, this is not an exhaustive list. Additional authorities and policies may apply in certain circumstances.

S.C. Code Ann. § 44-1-80, Duties and powers of board as to communicable or epidemic diseases.

S.C. Code Ann. § 44-1-110, Duties of department in regard to public health, in general.

S.C. Code Ann. § 44-4-560, Access to protected health information; disclosure.

S.C. Code Ann. § 30-2-10, *et seq.*, Family Privacy Protection Act of 2002.

S.C. Reg. 61-20, *Communicable Diseases*. S.C. Reg. 61-120, *South Carolina Immunization Registry*.

DHEC's Communicable Disease Data Releases Policy.

DHEC's Data Collection and Use Policy.

DHEC's Data Sharing and Release Policy.

DHEC's Electronic Data Security Policy.

DHEC's Overall Responsible Party Policy.

5 USC 552A

Health Insurance Portability and Accountability Act. Pub. L. No. 104-191, § 264, 110 Stat.1936.

Centers for Disease Control and Prevention, Data Security and Confidentiality Guidelines for HIV, Viral Hepatitis, Sexually Transmitted Disease, and Tuberculosis Programs: Standards to Facilitate Sharing and Use of Surveillance Data for Public Health Action, US Department of Health and Human Services, Centers for Disease Control and Prevention (2011).