HIV Cluster and Outbreak Detection and Response Plan

Louisiana

Office of Public Health STD/HIV/Hepatitis Program (SHHP)

V2. October 26, 2021

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Version History

Version #	Revision date	CDC submission date	Responsible Party	Comments
1		July 15, 2021	Samuel Burgess	
2	Oct. 26, 2021		Samuel Burgess	Updated after table top exercise
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About this Plan

Key contributors to the development of this plan **Outbreak and Response Plan, Louisiana** Date of Initial Plan: July 15, 2021	
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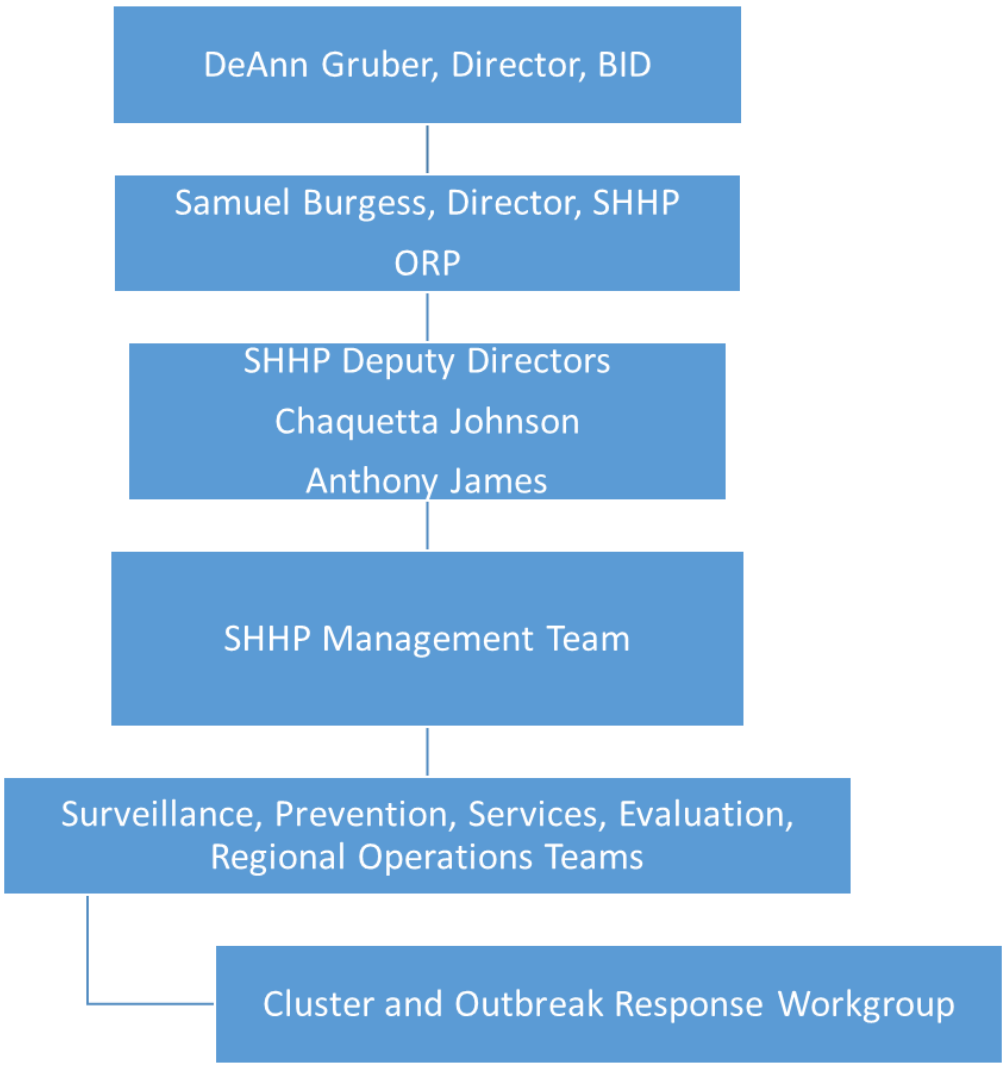
This cluster and outbreak response plan is a living document and SHHP looks forward to updating this draft annually based on community input which will be received through sharing the plan with the Get Loud Louisiana steering committee as described in Section 2 below and through a process of posting the plan on www.louisianahealthhub.org for public comment in 2021.

SECTION 1: Internal Collaboration to Support Cluster and Outbreak Detection and Response

Oversight and Management

The Louisiana STD/HIV/Hepatitis Program is situated in the Bureau of Infectious Diseases (BID), within the Louisiana Department of Health (*Appendix 1*) and the Office of Public Health (*Appendix 2*). The Director of the STD/HIV/Hepatitis Program (*Appendix 3*) serves as the Overall Responsible Party (ORP).

Oversight and Management of the Cluster and Outbreak Response Plan:



Description of SHHP Working Groups (Teams)

1. Management Team – Director of the STD/HIV/Hepatitis Program - Lead
    a. Members – Deputy Director – Operations; Deputy Director - Programs; Prevention Manager; Data Management and Analysis Manager; Services Manager; Business Manager; Surveillance Manager; Capacity Building and Community Mobilization Manager; Field Operations Manager; Evaluation and Research Manager; Health Systems Manager; CDC Assignee
    b. Roles – Approves processes, protocols, plans, staffing, and budgets; provides liaison to Community Planning Group (Get Loud Louisiana); approves community-level responses.
2. Cluster and Outbreak Response Workgroup – Surveillance Manager - Lead
    a. Members – Director of the STD/HIV/Hepatitis Program, Deputy Director – Operations, Deputy Director – Programs, Surveillance Manager, Field Operations Manager, Capacity Building and Community Mobilization Manager, Capacity Building Supervisor, Community Mobilization Supervisor, Regional Coordinator Supervisor, Harm Reduction/SSP Coordinator, Services Manager, Prevention Manager, Linkage to Care Supervisor, Outbreak Response Coordinator,

and local CDC Public Health Advisor. Based on the geographic or behavioral characteristics of a cluster, other staff members may be invited.

b. Roles – Reviews monthly cluster data; makes decisions on client-level responses; proposes community-level responses to Management Team.

3. Prevention Program Team – Prevention Program Manager - Lead
    a. Members – Deputy Director of Programs; Regional Coordinator Supervisor; Prevention Data Manager; Community Health Worker Supervisor; Testing Coordinator.
    b. Roles - Monitors statewide prevention activities; review prevention data, proposes community-level responses and partnerships.

Roles and Processes

1. Director of Bureau of Infectious Diseases – liaison to Secretary of the Louisiana Department and Assistant Secretary of the Office of Public Health, legal counsel, state chief health officer
2. Director of STD/HIV/Hepatitis Program – Supervises all SHHP program staff and processes; serves as Overall Responsible Party; reports to the BID Director; oversees management team functions
3. Data Management and Analysis Manager – oversees data analysis staff to inform STD prevention and provision of HIV service related activities
4. Surveillance Manager – oversees surveillance/epidemiology staff and functions; manages the Cluster and Outbreak Response Workgroup
5. Field Operations Manager – oversees Partner Services and DIS functions
6. Prevention Program Manager – oversees HIV, STD and hepatitis prevention activities, including integrated testing sites
7. Services Manager – oversees Ryan White Part B HIV client services, including case management and support services and the AIDS Drug Assistance Program
8. Capacity Building and Community Mobilization Manager – oversees training and capacity building for staff and partners; manages community planning and marketing initiatives

Staff, Capacity, and Training

1. Cluster and Outbreak Response Team Staffing and Roles (see leadership and coordination above):

    i. HIV Surveillance Supervisor– runs monthly cluster data; prepares data for review; uses eHARS to review cases for viral suppression and care status; uses STD, partner services, HIV negative data and Hepatitis C data to develop a comprehensive cluster profile and identify factors associated with transmission in the cluster.

    ii. Linkage/Adherence Program Supervisor - facilitates case consultations on high-priority clients who are either lost to care, or showing gaps in services.

    iii. Community Mobilization Supervisor- supports community engagement in response planning.

    iv. HIV Surveillance Supervisor – conducts a review of partner services data to help identify factors associated with transmission in the cluster.

    v. Services Program Manager/Services Data Supervisor – identifies if clients in the cluster are actively engaged in Ryan White services and/or case management, if not, determines if clients could benefit from this service; works with case managers on clients enrolled in Ryan White services.

vi. Field Operations Manager – determines whether additional investigational activities are needed; coordinates additional outreach with DIS staff.

2. Training – (Surveillance Manager - Lead)

SHHP staff and/or community partners undergo the following trainings:

i. Confidentiality and data security: SHHP staff take annual confidentiality and data security training provided by SHHP (required – all staff)
ii. *Secure HIV-TRACE* and accompanying training and SAS Programs: located on the *Secure HIV-TRACE* website https://secure.hivtrace.org / [HIV Surveillance Supervisor]
iii. CDC-provided training: Detecting HIV Transmissions Clusters Guidance [HIV Surveillance Supervisor]
iv. Training for local public health – Partnership between SHHP and EHE workgroups in New Orleans and Baton Rouge.

3. *Appendix* 4 : Cluster and Outbreak Response Workgroup members

4. Funding for cluster response activities:

a. Surveillance and Prevention Funding
    i. PS18-1802 – Integrated HIV Surveillance and Prevention Programs for Health Departments - CDC: (positions covered under this grant include: program director, deputy directors, program evaluator, prevention manager, testing coordinator, syringe services program coordinator, capacity building and community mobilization manager, community mobilization supervisor, capacity building coordinator, DIS; surveillance manager, HIV data manager); HIV surveillance activities; DIS/Partner Services; HIV testing; TelePrEP; syringe services/harm reduction
    ii. PS21-2103 – Louisiana's Integrated Viral Hepatitis Surveillance and Prevention Project – CDC: FTEs (positions covered under this grant include: Hepatitis Coordinator and Hepatitis Surveillance Supervisor, Hepatitis Field Investigator and Hepatitis Data Manager)
b. Ryan White Part B/HRSA Funding
    i. X07HA00018 – Ryan White CARE Act, Part B – Base Award – HRSA: (positions covered under this grant include: program director, deputy directors, services manager, support services supervisor, CAREWARE data manager, LDAP Coordinator); case management and support services, AIDS Drug Assistance Program
c. STD Funding
    i. PS19-1901 - Strengthening STD Prevention and Control for Health Departments (STD PCHD) – CDC: (program director, deputy director, field operations manager, DIS, health systems manager, data management and analysis program manager) STD testing and treatment, partner services

5. Data Sharing:

a. Data-Sharing Activities (DSA) within SHHP Units – DSAs not required
    i. HIV Surveillance and STD Surveillance

1. Partner Services and Co-infection

ii. HIV Surveillance and Hepatitis Surveillance
    1. Co-infection

iii. HIV Surveillance and Prevention Program
    1. Testing and linkage of people with HIV

iv. HIV Surveillance and Ryan White Part B Program
    1. Care and Services for people living with HIV

b. Data-Sharing Activities between SHHP and external entities
    i. HIV Surveillance and State Registrar – Agreement in Place
        1. Matching with birth and death registries
    ii. HIV Surveillance and Louisiana Medicaid – Agreement in Place
        1. Viral suppression among PLWH enrolled in Medicaid
    iii. HIV Surveillance and Louisiana Tumor Registry – Agreement in Place
        1. Co-morbidity

6. Data protection:
    a. Mandatory disease reporting – Louisiana Administrative Code, Title 51, Public Health – Sanitary Code (*Appendix 5*). https://ldh.la.gov/assets/oph/Center-PHCH/Center-PH/tuber/LouisianaAdministrativeCodeTitle51PublicHealthSanitaryCodeJan2010.pdf
        i. Part II: The Control of Diseases
            1. Reportable Disease and Conditions (Class B: Hep B/C acute or perinatal, HIV in pregnancy or perinatal exposure, syphilis, syphilis in pregnancy, syphilis perinatal exposure; Class C: Hep C, HIV, gonorrhea, chlamydia).
            2. Laboratory and Healthcare Facility Reporting Requirements: "The director of every laboratory and the director of an applicable healthcare facility, whether public, private, hospital or other, within or out of the state shall report …. the results of all tests that are in any way clinically relevant, suggestive of indicative of an individual having active disease, past or present exposure to, past or present contact with and/or past or present association with any of the diseases" listed above. In addition, all negative test results for HIV, syphilis and HCV must be reported.
    b. Releasable information - Patient-level HIV data may only be released in accordance with La. R.S. 40:1171.4 (http://www.legis.la.gov/Legis/Law.aspx?p=y&d=964727) (*Appendix 6*) or by court order pursuant to La. R.S. 40:1171.5 (http://www.legis.la.gov/Legis/Law.aspx?d=964728) (*Appendix 7*).
    c. Medical information (diagnostic tests, partner services data, viral loads, molecular typing) may be only be shared in the following circumstances: with state or federal agencies or with employees or agents of the STD/HIV/Hepatitis Program that have a need for the information in the performance of their duties related to HIV prevention, disease surveillance, or care of persons with HIV, only as necessary to administer the program for which the information is collected. Confidential information transferred to other persons or entities under this provision shall continue to maintain it confidential status and shall not be rereleased by the receiving person or entity.

7. Data Request Procedures:

a. Aggregate or Confidential Data: Received via email, approved by Data Management Analysis Unit Manager and Surveillance Manager. Data requests completed by data management and surveillance analysts.
b. Law enforcement and the justice system: All requests are routed to the LDH Bureau of Legal Services for review and approval, prior to response.
c. Academic institutions and research requests – Coordinated and approved by SHHP's Evaluation Manager
d. Media Requests – Coordinated and approved by SHHP's Director and the LDH Bureau of Media & Communications (BMAC).

SECTION 2: External Partnerships to Support Cluster and Outbreak Detection and Response

Community Engagement:

Community engagement activities related to HIV cluster and outbreak detection and response will be conducted primarily through the existing statewide Ending the Epidemic Get Loud Louisiana steering committee. This committee is comprised of SHHP and OPH staff, community members including people living with HIV, representatives of grassroots organizations and coalitions, staff from CBOs delivering HIV/STI/HCV prevention and care services, and staff from various healthcare agencies. Review of new or continuing clusters will be presented to the steering committee at least annually during virtual meetings in order to update the group on response efforts and receive feedback. More time may be allotted to new clusters and emergency meetings may be called in the case of an outbreak.

SHHP will also engage communities across the state through trainings focused on increasing understanding of HIV surveillance and cluster and outbreak response. These workshops will be facilitated by SHHP staff and offered as a way to deepen understanding of the role of surveillance within the health department, increase trust between community members and the health department, and educate the public as to what clusters and outbreaks are and what response might be warranted for each. A minimum of 3 trainings will be offered in various locations across the state or virtually.

Collaboration with external partners

SHHP will work with funded community-based organizations to ramp up testing, PrEP referrals, and harm reduction activities as a part of cluster or outbreak response. SHHP supports testing and linkage to care, PrEP referrals, and linkage to social services for PLWH statewide, but special consideration will be given to harm reduction as there are currently harm reduction programs in 4 regions of the state: New Orleans, Baton Rouge, Alexandria, and Shreveport. Should an outbreak be identified in an area of the state with no harm reduction program, SHHP will work with the nearest harm reduction program to provide needed services in that area. Enhanced linkage to key social services will be dependent on the nature of the cluster/outbreak, and DIS and Linkage to Care Coordinators will be mobilized for these efforts. Please see the chart below for a list of stakeholders and the key SHHP staff that will be responsible for communicating with and activating these partners.

Responsible Party	**Internal/External Stakeholder**
Surveillance Manager	SHHP Director, Deputy Director(s) Regional Operations Mgr. CDC PHA & CDC Epidemiologist
Field Operations Manager CDC Lead Public Health Advisor	OPH Regional Admin/Medical Director Federally Qualified Health Care Centers

Field Operations Manager Prevention Manager Services Manager	<u>Direct Care Staff</u> Disease Intervention Specialists, Linkage to Care Coordinators, Client Services Specialists, Community Health Workers
Prevention Manager Services Manager	<u>Funded Agencies</u> CDC funded agencies and SHHP Community Health Workers Community Based Organizations covering all 9 regions provide HIV, STI, and Hepatitis testing and treatment with education and linkage to PrEP for those testing negative, SSPs in four regions of the state (New Orleans, Baton Rouge, Alexandria, and Shreveport). See *Appendix 8* for list of partner agencies
Statewide Medical Consultant Public Health Medical Consultant Congenital Syphilis Nurse Educator Regional Medical Directors, Lead Public Health Advisor	Private medical providers and hospital systems in Urban/Rural areas
Director of Bureau of Infectious Diseases Bureau of Media and Communications (BMAC) Capacity Building and Community Mobilization Unit Manager	Media Public
Capacity Building and Community Mobilization Unit Manager	Statewide EHE/Get Loud Louisiana Steering Committee Regional Task Forces

<u>Framework and Process for Engaging Community Partners</u> (to develop their role in routine cluster response activities and to prepare for effective collaboration in outbreak response).

SHHP will engage regional taskforces through the Office of Public Health, key SHHP staff, and members of EHE planning bodies to prepare for and implement cluster and outreach response. Meetings across

the state will be convened by the Outbreak Response Coordinator to prepare for clusters and outbreaks by identifying main points of contact and key stakeholders in local jurisdictions. This will also provide an opportunity to clarify roles and responsibilities at the local, regional, and state level, should an outbreak occur. Implementation meetings will be called as needed. SHHP will utilize a checklist for preparation and implementation purposes, which will remind those involved of agreed upon roles and action steps. See *Appendix 9* for example meeting checklist.

Once the SHHP Prevention Unit is alerted to an outbreak in a specific Region, an alert will be sent out to both SHHP and CDC funded and non-funded partner agencies with whom MOUs are established along with Community Health Workers, Linkage to Care Coordinators, and Rapid Start Navigators. A collaborative community engagement plan will consist of:

1. Notifying funded and non-funded partners by email to participate on an urgent response call.
2. The Surveillance Unit will share critical information with participants as it relates to the outbreak.
3. The Prevention Unit will share information to the partners about the strategies that will be incorporated in response to the outbreak.
    a. Have all funded agencies, Community Health Workers, Linkage to Care Coordinators, and Rapid Start Navigators engage in community mapping in order to identify any and all potential testing locations and opportunities.
    b. Once identified locations and opportunities, testing events will be set up at store fronts, community centers, neighborhood centers, anywhere that is conducive for testing.
    c. Expanded integrative testing will include HIV, Hepatitis C, and Syphilis rapid testing in the Region and utilize non-traditional hours and settings to carry this out. Any person whose test is reactive will be prioritized for Linkage to Care within seven days. The Rapid Start Model will be the standard reference point to achieve viral suppression and reduce the overall community viral load.
    d. Funded partners and Community Health Workers will redirect their normal operations to focus their efforts on addressing the outbreak.
    e. At these testing events educational materials, condoms, swag items, a list of additional testing resources, access to PrEP, PEP, and Syringe Service Programs if appropriate will be distributed.
    f. There will also be a concerted effort to identify any other barriers to care such as identification of social services, community resources and necessary referrals.
    g. The length of the intensive testing period will be dependent on the severity of the outbreak in accordance with a specific percentage of the priority populations.
    h. This plan will be modified as needed to appropriately respond to the outbreak. The Statewide Testing Coordinator and Regional Coordinator will be tasked with identifying any and all other potential partnerships and capable organizations to contribute. The Prevention Unit Manager and Regional Coordinator Supervisor will drive this process specifically.
    i. This work will be informed by the four pillars of the National Ending the HIV Epidemic work plan (Diagnose, Treat, Prevent, and Respond). All community engagement efforts will address the outbreak along the four pillars until a desirable outcome is achieved.

<u>Process for identifying and addressing gaps in available services through existing or new partnerships</u>.

The same group listed above will participate in table top exercises, performed annually in different regions of the state, in order to identify gaps and challenges in the response to clusters or outbreaks. These table

top exercises will be led by the Outbreak Response Coordinator and organized by an Exercise Planning Team consisting of SHHP, OPH leadership, and key local stakeholders. It is of note that community members are a part of EHE planning bodies and will be included in these exercises. The table top exercises, along with the local response planning meetings mentioned above will inform future iterations of this response plan by identifying gaps in services, clarifying chain of communication at state and local levels, and refining role and responsibilities associated with implementing an outbreak response.

Any gaps in services needed for response will be addressed by partnerships and contracts between SHHP and local CBOs or other healthcare entities. For example, contracts that include testing could be amended to increase the amount of testing in a particular area or shift the locations where testing is provided. Enhanced PrEP detailing by SHHP academic detailers could support an increase in PrEP awareness and provision. In areas were SHHP supports local harm reduction efforts through SSPs, funding could be increased to enhance that support and TA provided to ensure saturation of services in the impacted geographic area or to support response in a neighboring region.

Data Sharing

SHHP maintains contracts with CBOs across the state for the provision of Ryan White services and HIV prevention. However, SHHP does not hold formal data sharing agreements with these entities as we only share their own data with them. SHHP does share aggregate data with funded agencies in the form of Monthly Monitoring Reports and quarterly and annual surveillance reports. If, as a part of cluster and outbreak response, it becomes necessary to share more data than what is typically shared, SHHP would develop a DSA with the relevant outside entities.

In addition, SHHP conducts data-sharing activities with Medicaid and the State Registrar for birth and death data. Finally, SHHP maintains a data-sharing agreement with its Louisiana CAREWare Access Network (LaCAN) partners to have a collaborative relationship to maintain and improve a central data repository (CAREWare) of Ryan White-funded services; and participate in the exchange of health information for the purpose of improving services to persons living with HIV, enhancing performance measurement, and increasing the quality of data.

SHHP utilizes the existing CSTE contact board to discuss case information across state lines. If any information requires discussion across state lines, HIV Surveillance staff will contact the indicated state partner. In addition, the ICCR desk can be used to request DIS follow-up for persons outside of Louisiana.

Louisiana is a participant in the PS18-1805 Blackbox project. Georgetown University is the funded entity of PS18-1805. Georgetown coordinates quarterly matches of HIV surveillance data between participating states, in order to capture current address, laboratory data, death information, and other relevant information shared between states.

SECTION 3: Detecting and describing HIV clusters and outbreaks

Time-space cluster detection:

The SHHP HIV Surveillance Supervisor performs time-space cluster analyses each month using a CDC-provided SAS program. Geographic levels of analysis include: state, public health region, and parish levels. An enhanced version of time-space analysis is conducted on a quarterly basis using an in-house developed SAS program that mirrors the CDC-provided SAS program output. The enhanced time-space analysis output includes the Baton Rouge and New Orleans MSAs and state-level data stratified by gender, race/ethnicity, reported risk, and age at HIV diagnosis in order to detect time-space clusters among various sub-populations not assessed in the CDC-provided SAS program. If needed, modifications can readily be made to the in-house developed SAS program to perform time-space analyses on a unique sub-group or geographic area.

In Louisiana, a priority cluster in time-space analysis is defined as a time-space cluster for which there has been an alert for three consecutive months which indicates a sustained increase for that geographic area. Analyzing real-time HIV surveillance data requires thorough evaluation of each alert in order to ensure an alert is due to a true increase in new diagnoses and not the result of previous positive cases newly diagnosed in the jurisdiction. For each time-space cluster with an alert, a CDC Soundex match is run on the cases with a first viral load value <200 copies/mL. DIS and eHARS notes on each case are reviewed for indications of previous diagnosis. Aggregate data on priority time-space clusters is shared with SHHP's internal Cluster and Outbreak Response Workgroup that meets quarterly. Further details of the Louisiana time-space cluster detection protocol can be found in *Appendix 10*.

Molecular cluster detection:

The SHHP HIV Surveillance Supervisor performs molecular cluster analyses each month. A CDC-provided SAS program extracts the HIV genotypes stored in eHARS. Sequence data are uploaded and analyzed in Secure HIV-TRACE (*Appendix 11*), a bioinformatics tool developed by the CDC, University of California – San Diego, and Temple University. Molecular clusters that meet national priority criteria are reviewed. National priority criteria is defined as a cluster with at least 5 cases diagnosed within the most recent 12-month period at the 0.5% genetic distance threshold. Demographic data, most recent laboratory values, DIS interviews, and any other relevant details of cluster cases are collected and tracked in an Excel spreadsheet for each cluster. Aggregate data on priority time-space clusters is shared with SHHP's internal Cluster and Outbreak Response Workgroup that meets quarterly. Further details of the Louisiana molecular cluster detection protocol can be found in *Appendix 12.*

According to the CDC Evaluation of HIV Surveillance System report, 67% of new HIV diagnoses in 2019 had analyzable genotypes uploaded to eHARS, an increase from 61% of 2018 diagnoses and 50% of 2017 diagnoses. The health department receives some genotype sequences from laboratories through electronic laboratory reporting (ELR) while other laboratories send HIV sequences in a separate file on a monthly basis and many times the batch file contains a backlog of data. Because of this, genotypes take the longest of any test type to enter eHARS. Among 2019 diagnoses, it took an average of 48 days from date of specimen collection to date genotype uploaded to eHARS.

In order to enhance the utility and effectiveness of molecular HIV surveillance activities, increased efforts have been made to assess gaps in genotype reporting. Annually, an assessment of the facilities linking newly diagnosed persons to HIV care is compared to the facilities sending genotypes to the health department. Where there are gaps in the number of people linked to care and little to no genotype reporting, SHHP works with the facility to determine if an HIV drug resistance test was ordered and which reference laboratory was used. In most instances, a drug resistance test was ordered and the health department was able to obtain the genotype backlog from the reference laboratory.

Other cluster detection methods:

If a regional Disease Intervention Specialist (DIS) identifies a cluster of cases, the information is shared with the Field Operations Manager. The Field Operations Manager will share the findings with the Surveillance Manager to determine if the surveillance data supports what DIS feel they are seeing in their region. A Cluster and Outbreak Response Workgroup meeting will be scheduled to review the cluster if DIS findings are corroborated with surveillance data.

If a healthcare provider or agency identifies a cluster of cases, the information is shared with their main contact at SHHP which would be the Field Operations Manager, Prevention Manager or Surveillance Manager. The information would ultimately end up with the Surveillance Manager to determine if the surveillance data supports what the provider/agency feels they are seeing locally. A Cluster and Outbreak Response Workgroup meeting will be scheduled to review the cluster if findings are corroborated with surveillance data.

Reviewing relevant cluster data:

Outside of HIV surveillance data, partner services and STI data stored in PRISM are the primary data sources used when conducting a cluster investigation. The HIV Surveillance Supervisor can view all PRISM profiles. DIS interview notes, previous STI diagnoses, named partners, and risk information are all housed within a person's PRISM profile. Manual review of each person's profile is the most efficient method to extract information from PRISM with relevant cluster case information compiled into an Excel spreadsheet for cluster analyses.

Type of data	Database name	Who has access?	How readily available is it?	Variables included	Notes
Partner Services/STI data	ASD PRISM	Field Operations (DIS) & Surveillance Staff	Access at any time. Easy to view profiles. Difficult to work with backend tables.	DIS interviews, risk data, named partners, STI diagnoses	Working to make extracting data more efficient.
HCV	HIV-HCV Coinfection SAS dataset	Surveillance Staff	Access at any time.	HCV diagnosis date, demographic information	HepC Supervisor provides a dataset of HIV-HCV coinfection. Updated annually or upon request.

				from the HepC database.	
Ryan White Services	CAREWare	Services Staff	Need to request data from Services staff. Surveillance does not have access to database.	RW services utilized.	Could work on getting surveillance staff permissions to access CAREWare.

SECTION 4: Review and prioritization of HIV clusters and outbreaks

Process for review and prioritization:

Each quarter SHHP convenes an internal Cluster and Outbreak Response Workgroup meeting to review cluster activity across the state. If new time-space or molecular cluster exhibiting concerning levels of growth or characteristics that might result in exceptionally rapid transmission (e.g. high proportion PWID, low viral suppression, etc.), a meeting is scheduled as soon as possible to review the data. Meetings are organized and led by the HIV Surveillance Supervisor. Presentations of newly identified clusters include a thorough review of epidemiologic data, a summary of partner services interviews, and other characteristics of the cluster that may lead to stabilization or growth of the cluster. Updates are provided on active clusters with a focus on changes in cluster size, linkage to care, and achievement of viral suppression among cluster cases. For molecular clusters, data is presented on cases who have been diagnosed in the past 36 months and who are related at the 0.5% genetic distance threshold. Molecular clusters are referred to by the numerical ID assigned by Secure HIV-TRACE. For time-space clusters, data on all cases identified in the most recent 12-month alert is presented. Time-space clusters are named after the geographic area in which the alert is located.

Meeting attendees include: Director of the STD/HIV/Hepatitis Program, Deputy Director – Operations, Deputy Director – Programs, Surveillance Manager, Field Operations Manager, Capacity Building and Community Mobilization Manager, Capacity Building Supervisor, Community Mobilization Supervisor, Regional Coordinator Supervisor, Harm Reduction/SSP Coordinator, Outbreak Response Coordinator, Services Manager, and local CDC Public Health Advisor. Based on the geographic or behavioral characteristics of a cluster, other staff members may be invited. The presence of individuals from across SHHP aims to foster collaboration and generate meaningful response strategies. Notes, slide deck, and next steps are shared via email after each meeting to ensure all individuals in the Cluster and Outbreak Response Workgroup are kept informed.

Prioritization of clusters:

Cluster prioritization is conducted on a case by case basis. Highest priority clusters typically exhibit many of the following characteristics: young GBM of color, transgender women, persons who inject drugs in areas of the state without SSPs or areas with known high rates of injection drug use, number of new diagnoses far exceeds the previous 5-year trends, linkage to HIV care greater than 30 days, and low rates of viral suppression among cluster cases.

Prioritization Chart

Level of Concern	Action Item
LEVEL 0	Most of the time we are here – monitoring exiting clusters and time-space clusters. Use DIS and LCCs as needed. Exclusive use of internal SHHP staff • Use molecular data, time space alerts, reports from CBOs/DIS that have been reviewed • Sudden increase in diagnoses brought to SHHP by external agency. Validate observation with surveillance data. If increase is validated with surveillance data, escalate to Level 1.

	After Cluster and Outbreak Response Workgroup reviews a cluster, decision to keep cluster at Level 0 or move to Level 1.
LEVEL 1	Bring in medical director, potential use of regional task force – could do provider alert letter and provider education. • Bureau of Media and Communications (BMAC) brought in at this level to approve any public communications. • Meet with local leadership, including city or parish government representatives, to review roles and responsibilities, discuss alert letter dissemination, and local media messaging. *After review with Medical Director and additional regional staff – decide to keep at level 1 or move to level 2.*
LEVEL 2	Level 1 PLUS restructuring CBO contracts or identifying emergency use funds, more MOUs with agencies to do testing, additional harm reduction activities, targeted screening based on data related to neighborhood level analyses, screening events, extra DIS going to the area, provide alert letter and enhanced provider education.
LEVEL 3	Level 2 PLUS Outbreak requiring surge response. • Notify Governor, CDC • Request federal resources

Tracking and managing clusters:

For time-space and molecular clusters that meet national priority criteria (see definitions above), person-level line lists are created and managed in Excel. Only surveillance staff persons whose job duties include HIV cluster data management and/or analysis have access to datasets. Each month data are reviewed and updated on active clusters. For more details on cluster data management and tracking refer to *Appendices 10 and 12*. A cluster remains in open status if there is an active time-space alert or if a molecular cluster meets national priority criteria. If a molecular cluster no longer meets the national priority definition, it will continue to be monitored each month when Secure HIV-TRACE is run. Time-space cluster will continue to be monitored if there is no longer an alert for the parish.

Closing out clusters

Time-space clusters will be closed out once there has been six consecutive months without an alert. Molecular clusters are closed out if there have been no new cases added to the cluster at the 0.5% genetic distance threshold for 12 consecutive months. Data collected and stored on clusters will remain available in the event a cluster re-emerges meeting priority criteria.

SECTION 5: Designing and implementing outbreak response plans

When a potential outbreak is detected, the Surveillance Unit Manager, or designee, will schedule a meeting with the Cluster and Outbreak Response Workgroup to share data regarding STD and/or HIV or Hepatitis case increases identified by predetermined case increase thresholds. Increases in HCV with dual HIV infections will also be addressed when identified. The Cluster and Outbreak Response Workgroup should include SHHP's Program Director, Deputy Director(s), Surveillance Manager, Regional Operations Manager, CDC Public Health Advisor, Outbreak Response Coordinator and CDC Epidemiologist to determine which components, if any, of the Outbreak Response Plan should be activated. The initial meeting should be scheduled within 1 week of outbreak detection in order for a "rapid response" to be initiated.

The internal team meeting should include: a review of all relevant data (current & historical data); assurance that the team understands the definition and scope of the outbreak; selection of roles of each group member; development of an initial strategy and plan of action; and scheduling of regular meetings and/or updates.

The primary objective of the Cluster and Outbreak Response Workgroup is to generate hypotheses regarding why increases in cases are occurring. The following should be accomplished during the initial meeting:

- Decisions regarding which components of the Cluster and Outbreak Response Plan, if any, are to be activated; or if case increases will continue to be monitored;
- Review the Security and Confidentiality Policy to prepare for data sharing and or data dissemination;
- Review of Communications Plan and discuss information should be disseminated to other Program Managers and/or key SHHP staff;
- Review internal and external stakeholders to include in follow-up plans/meetings;
- Creation of an initial "Work Plan or Plan of Action" that includes dates, assigned persons, and responsibilities for follow-up;
- Discuss any potential sensitivities pertaining to the outbreak or investigation.
- Designate an Outbreak Team Leader; and
- Select follow up date of next meeting.

Follow up meetings are expanded to include Linkage to Care Coordinators (LCCs), Regional DIS (DIS), Regional Coordinators, Community Outreach Workers, Regional Medical Directors, Client Support Specialists (CSSs), local leadership including local emergency preparedness staff, and funded partners from Community Based Organizations and Ryan White agencies. The purpose of follow up meetings with the expanded group is to review available information, discuss initial hypothesis regarding clusters and/or outbreaks that are occurring, identify gaps that may be missing from available data, and brainstorm solutions and next steps. Regional and community team members also help with identification of other medical, community, and social support service representatives who should be included in further meetings. Community Based Organizations can also offer further community scanning through their outreach and support teams. Regional and community teams often serve as leads with introductions and

facilitation of meetings with community groups, local medical centers, substance abuse facilities, housing and food programs, and mental health facilities.

Cases may be sent back to DIS or LCC for re-interview, or re-engagement if further information is needed to fully analyze key factors within the cluster or outbreak. Cases may also be sent to field epidemiologists for chart abstractions or re-abstractions to obtain more detailed information from patient medical record. Strategies and stakeholders may expand or shift as new cases are added to the cluster or more information is found regarding existing cluster.

Communication Plan

Outbreak Response Communication planning will allow flexibility when addressing HIV, STDs and Hepatitis outbreaks in Louisiana. Key communication structure, roles and responsibilities of staff during outbreaks are described below and also mirrored in the Prioritization Chart above. The exact flow of specific interactions and information exchange will vary based on the circumstances of the outbreak. Before finalizing a communications plan SHHP will engage community partners and local leadership to discuss health and systems disparities, gaps, and needs.

Communication planning will also take into account unintended consequences, such as stigmatization of a community or population. Information approved for release should be non-identifying, sensitive to geographic, racial/ethnic, and socio-economic communities, and include person first language. It is also helpful to discuss health and systems disparities while reviewing relevant data related to HIV, STD and Hep C outbreaks and HIV clusters. To this end, one-pagers may be created in advance with key points related to sexual health and harm reduction, for example, to assist media contacts with appropriate and respectful messaging.

Who does What?

The Surveillance Manager follows the standard surveillance formula for determining an outbreak. If an area is above the average increase in disease, based on the formula(s), the SHHP Director should be notified immediately. This starts the process to address a possible outbreak.
SHHP Director and Deputy Directors oversee the management and resources during the outbreak, even when the levels of the incident are large or small. They may share their responsibilities with OPH Regional Administration or local government officials.
SHHP Program Managers are to support each program's response efforts. The success of outbreak efforts depends on a common, interoperable approach to sharing resources, coordinating and managing incidents, and communicating information.
Communications and Information Management falls under the responsibilities of the **Capacity Building and Community Mobilization Unit**. This unit includes: Community and Provider Training, Marketing, and Community Engagement. The unit staff will serve as the liaison between SHHP and the Louisiana Department of Health, Bureau of Media and Communications. Depending on the scope or impact of a particular outbreak, CBCM Unit will work with BMAC when more widespread media engagement is needed. This staff will also assist in developing informational materials and alerts for distribution via LaHHub.org, social media, and person to person delivery to specific community leaders.

The OPH Regional leadership who will be involved in responding to outbreaks vary in their authorities, management structures, communication capabilities and protocols. Specific communication approaches will be developed in accordance with the relevant region's needs and management structures.

Finally, all parties above will work together to ensure communication to community stakeholders and partners is consistent throughout and after an outbreak, so that outcomes are shared amongst all parties involved. This will be done by reporting to the Ending the Epidemic Steering Committee, partner organizations, and Regional and local Task Forces when an outbreak is closed and any evaluation data available pertaining to the outbreak.

CLIENT FOLLOW-UP

The client follow-up Response Plan may only include plans for Disease Intervention Specialist (DIS), Linkage to Care Coordinator (LCC), or Client Service Specialist (CSS) follow-up in certain circumstances. Whereas, some Outbreak Response activities may not include any additional functions for persons who serve in these roles. The Internal Outbreak Response Team, which consists of the Surveillance Manager, Regional Operations Manager, Deputy Director of Operations, CDC Public Health Advisor, and CDC Epidemiologist, will assess STD, HIV and HCV increases and determine whether or not to initiate a client follow-up plan.

The primary role of the DIS in cluster and outbreak response is Partner Services, contact tracing, and making referrals to appropriate agencies and staff for medical and social service needs. The primary role of the LCC in cluster and outbreak response is linkage and adherence into HIV medical care and assistance with navigating obstacles that often prevent individuals from entering and remaining in care. The LCC role also includes linkage to medical and social services. Individuals identified as part of a cluster is of highest priority for DIS and LCC follow up. Cluster cases should be initiated for follow-up within one business day for DIS and/or LCC follow up.

HIV Molecular Clusters

Identification of molecular clusters provides a tool to identify Transmission Clusters. A Transmission Cluster represents a subset of an underlying risk network. HIV molecular clusters should be carefully reviewed to determine whether or not persons in the cluster have been referred to care, are virally suppressed, and have had a Partner Services interview. DIS should follow standard interview and re-interview procedures on identified cluster cases. Clients should not be informed that they are being contacted because they are part of a "Molecular Cluster". Partner Services interview data is important to help understand and assess underlying risk networks that should be targeted with Prevention efforts.

Clients identified as being not in care and part of a molecular cluster should be referred immediately to Linkage to Care Coordinator for follow up.

Clients identified as not having a Partner Services Interview should be referred to Field Operations Manager for review, pending DIS follow-up. Field Operations Manager will review case to see why client has not yet had a Partner Services interview. Some molecular cluster cases may have refused Partner Services interview in the past, or may have been lost to follow-up. Field Operations Manager will review molecular cluster cases with DIS Supervisor and create plan for follow-up and interview.

Granted that molecular clusters can signal underlying high transmission and risk clusters, Partner Service interviews should focus on client risk factors, partners who are in need of testing, and other persons in client's network who are not sex partners but would benefit from testing. Any sex partner who tests negative for HIV should be counseled and referred to a local PrEP program. Any sex partner who tests positive should have HIV status checked through eHARS or LMS. If positive named partner or cluster is not in care, DIS will follow-up with them using regularly established guidelines to offer them assistance with enrolling into medical care and/or case management. Index patients should also be assessed for need for social service referrals such as housing, food assistance, substance abuse assistance, and harm reduction programs.

DIS are to document client follow-up, partner follow-up, risk factors, and linkage efforts into PRISM *system.*

HIV Time-Space Clusters

A time-space cluster occurs when the number of diagnosis of HIV infection in a particular geographic area is elevated above levels expected given previous patterns. Time-space clusters may represent recent and on-going HIV transmissions, and can help with prioritization and targeting of HIV prevention efforts. SHP should assess the possibility of a rapid transmission cluster when there is an increase in time-space HIV diagnosis. Important things to consider when evaluating client follow-up plans during a Time-Space Cluster include:

- How many diagnosis are at Stage 0 infection?
- How many diagnosis are acute?
- How many cases have a self-reported history of a negative HIV test?
- Are there co-infections with other STDs?
- How many had a high initial viral load?

In the event that a time-space cluster has been identified with new ongoing diagnoses, local DIS will refer clients directly to LCCs for linkage to care. LCCs will work with CSSs if any insurance or housing needs are identified. Index patients and partners in time/space clusters should also be assessed for need for social service referrals such as food assistance, substance abuse assistance, and harm reduction programs.

DIS are to document client follow-up, partner follow-up, risk factors, and linkage efforts into PRISM system**.**

Syphilis Outbreak

In the event that a syphilis outbreak is confirmed or suspected, the STD Epidemiologist, Field Operations Manager, and DIS Supervisor will review reported cases to verify that case definitions meet CSTE case definitions. A crucial component of effective Disease Intervention is timely follow-up on clients and their infected, exposed, or at-risk partners. Furthermore, prompt reporting helps the STD Epidemiologist monitor and assess outbreak trends. Therefore, the Field Operations Manager and DIS Supervisor will assess DIS caseload to determine capacity to follow up promptly on cases. If DIS resources are limited or overburdened during an outbreak, SHP will consider reallocating DIS from other Public Health Regions to assist.

SECTION 6: Implementing an escalated response

DIS Reallocation/Surge Response

If cases needing HIV and syphilis Partner Services exceed local area DIS resources, DIS from other Public Health Regions may be temporarily reallocated. Case backlogs are first assessed by the Field Operations Manager with the assistance of the STD Epidemiologist and Evaluation Supervisor. A workload analysis may be run to determine current caseload thresholds for DIS across the State. The Field Operations Manager will also estimate how many additional staff are needed, and the number of weeks of assistance needed.

SHHP Director or Deputy Director will send Statewide notification to Regional Administrators and Medical Directors that an STD and/or HIV Outbreak or Case Increase is occurring in a Louisiana Public Health region or jurisdiction. DIS and DIS Supervisors may volunteer to participate in Outbreak Response activities. Some DIS and/or DIS Supervisors may also be identified based on each region's capacity to send supporting DIS staff. In circumstances of large case volumes, symptomatic syphilis infections, and/or newly diagnosed cases of HIV, a "blitz" may be best course of action. During a blitz, a large team is deployed to carry out specified activities during a specified timeframe. A blitz is beneficial for maximizing and expediting Disease Intervention efforts.

The Regional DIS Manager/Supervisor will lead DIS Outbreak Response activities in their perspective regions, in coordination with the Field Operations Manager. The DIS Supervisor and Field Operations Manager will lead a daily morning debriefing outlining duties and responsibilities for each DIS and supportive staff member. The DIS and/or DIS Supervisor temporarily assigned for Outbreak Response will report to the local Regional DIS Manager or Supervisor for all case related questions or concerns. Administrative issues should be directed to their local area supervisor or manager. The DIS will be assigned a list of cases in PRISM for follow-up marked "Outbreak-Yes".

The Field Operations Manager and Regional DIS Manager/Supervisor will review available resources for DIS being temporarily re-domiciled to affected area. Resources that should be reviewed before DIS are reallocated to affected area include:

- Availability of working space including desk, computer, internet, phone, and fax
- Local Parish Health Unit protocols, and days and hours of availability
- List and protocols for external referral agencies including FQHCs, CBOs, HIV medical care agencies, social service support agencies

Computer equipment can be requested from SHHP, if not available on site.

Open and completed investigations are to be monitored weekly by Regional DIS Supervisor and Field Operations Manager to determine if predetermined timeline for DIS assistance is still sufficient, or if timeline should be shortened or extended.

Surge Support of Other SHHP Staff

Linkage to Care Coordinators, Client Support Specialists, and Community Health Workers may also be deployed as surge support in the event of a cluster or outbreak. Linkage to Care Coordinators often serve as rapid responders with clients in need of rapid linkage into care. If the need exceeds the local DIS

resources the Linkage and Adherence Supervisor will coordinate and asses the gap in services with the Field Operations Manager to determine response level. The local Regional Linkage to Care Coordinator would be employed as a first line response. If it is identified that the outbreak requires more staff the Linkage and Adherence Supervisor will determine if the Linkage to Care Coordinators in closer proximity could be deployed to the area. The Linkage and Adherence Supervisor along with the Linkage to Care Coordinators would continue to case conference monthly and the Linkage and Adherence Supervisor would assess case load volume and acuity to determine capacity to increase or decrease staff on a weekly basis. Linkage to Care Coordinators would continue to document activities in the LA Links database and provide updates in the database determined by the Surveillance team and the Regional Operations Manager. If necessary for Linkage to Care Coordinators to relocate the Linkage and Adherence Supervisor would discuss available resources with the Field Operations Manager and Regional DIS Manager/Supervisor.

Regional DIS and Linkage to Care Coordinators will participate in table top exercises mentioned in Section 2 of Louisiana Outbreak Response Plan. The table top exercise will prepare staff for outbreak response roles and functions.

SECTION 7: Monitoring and evaluation of cluster and outbreak response activities

All outbreak response efforts will begin with set goals, objectives and activities to accomplish desired outcomes and to strategically track progress. Quantitative approaches are defined to determine what an outbreak is; routine data collection tools are in place to track and compare data, using same time period from as early as one quarter to another. Data shared with outside entities shall be limited to the minimum necessary to achieve the purpose of client linkage or re-engagement, and data shall be shared with the minimum number of individuals necessary. Additionally, as needed, outside entities may share client details with SHHP to assist with linkage or re-engagement activities and to confirm details regarding patients' medical statuses.

The STD/HIV/Hepatitis Program is fortunate to have a longstanding Research and Evaluation Unit that works across all units and is available to assist in evaluating outbreak efforts. Cluster Detection evaluation efforts are described in their *SHHP-Wide Evaluation Plan*. This plan outlines monitoring timelines as well as the following specific evaluation questions 1) How timely are data regarding new HIV diagnoses and laboratory results entered into the surveillance system? 2) How often is surveillance data reviewed, specifically for the purpose of identifying clusters or outbreaks? 3) To what extent is the Outbreak Response Plan adhered to and utilized? Additional specific evaluation plans will be tailored to the incident.

Monitoring a cluster or outbreak response:

Detailed tracking of key cluster outcomes are tracked in an Excel spreadsheet as described in Sections 3 & 4. Upon identification of a priority cluster, linkage to care and viral suppression are evaluated among all cluster cases. DIS interview notes and field records are reviewed for details on partner testing and referral to PrEP. Partner services activities are documented in an Excel spreadsheet.

The CDC cluster report form is completed for clusters that have initiated or have active cluster response activities underway. Only aggregate statistics are provided in the CDC cluster report form. Updates to the cluster report form for active clusters are submitted to the CDC on a quarterly basis.

A summary of all of the statistical tools being used by SHHP toward outbreak detection and response can be found in *Appendices 10-12*.

Evaluation of cluster and outbreak response:

a. Post-Response Debrief - After each response activity, the Outbreak Response Group, including local leadership, will meet to discuss the process and outcomes of the response activity. Relevant data will be reviewed by the team. Debrief findings will be documented and referenced when developing future response activities.
b. Annual Evaluation – In November of each year, the Outbreak Response Group will meet to evaluate the overall process and outcomes from cluster and outbreak response activities. The HIV Cluster and Outbreak Detection and Response Plan will be updated as needed.
c. Identifying Opportunities for Improvement - During post-response debrief meetings and annual evaluation meetings, the Outbreak Response Group will review outcome data to evaluate the

program for effectiveness, identify needs, and identify opportunities for improvement. In addition, continued coordination with community groups will occur to elicit feedback.

d. Revising Processes - The HIV Cluster and Outbreak Detection and Response Plan will be updated as needed after each annual evaluation meeting.