

Master of Public Health
Integrative Learning Experience Report

***REPORTABLE DISEASE CASE AND CLOSE CONTACT
INVESTIGATIONS IN THE FACE OF A PANDEMIC***

by

Erin Mae Stanford Petro, DVM

MPH Candidate

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Graduate Committee:

Dr. Ellyn Mulcahy

Dr. Justin Kastner

Dr. Robert Larson

Public Health Agency Site:

Jackson County Health Department

April 2020 – December 2020

Site Preceptor:

Charles Cohlma, MPH

KANSAS STATE UNIVERSITY

Manhattan, Kansas

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ERIN MAE STANFORD PETRO

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Summary/Abstract

The Jackson County Health Department, headquartered in Independence, MO, is a multi-departmental organization that provides public health services to a population of approximately 380,000 Eastern Jackson County residents. As the Coronavirus Disease 2019 (COVID-19) pandemic became a reality in the Kansas City Metro area, the Jackson County Health Department shifted to the Incident Command Structure and sought to expand disease investigation, contact tracing, and disease containment. It was at this time that I started my Applied Practice Experience (APE) as an Epidemiology Specialist. Throughout the next nine months, I sought to learn the process of disease reporting, investigation, contact tracing, and containment at a county level, practice risk communication with both internal and external stakeholders, and apply the principles of epidemiology in specific disease scenarios. This experience, uniquely situated in the initial and sustainment phases of a novel virus pandemic, allowed me to apply didactic learning principles in a real-world atmosphere.

Subject Keywords: COVID-19, health department, disease investigation, contact tracing, risk communication

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Chapter 1 - Literature Review

For most Americans, January 2020 was not unlike any other of the previous years; it was a time for continuing New Year's resolutions, initiating new beginnings, re-commitment to past goals, and a starry-eyed view of the year to come. However, on the other side of the globe, in a city that was to become infamous, reports of a new virus causing respiratory symptoms were becoming increasingly common. The first case of what was eventually named Coronavirus Disease 2019 (COVID-19), caused by the novel coronavirus Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), was recorded in a person that first experienced symptoms on December 1, 2019.¹ Nearly a week later, on December 8, 2019, a group of patients with similar respiratory symptoms of unknown etiology were evaluated in Wuhan, Hubei Province, China,² which would become the early epicenter of the COVID-19 pandemic. Cases of COVID-19 were soon diagnosed in other countries, including the United States, which diagnosed its first COVID-19 patient on January 21, 2020 in Washington state.³ While that case patient had recent travel history to Wuhan, China, it wouldn't be long before community transmission in the United States was apparent. On February 3, 2020, the U.S. declared a Public Health Emergency, and on March 11, 2020, the World Health Organization (WHO) declared COVID-19 a pandemic.³ In the weeks that followed, case infections with COVID-19 surged as hospitals around the world struggled with having sufficient personal protective equipment (PPE) for their staff, enough space and medical equipment for their patients, and enough personnel to take care of all of those in need. At the same time, local public health agencies across the country were chronically underfunded, understaffed, and underprepared to handle a rapidly spreading pandemic.⁴ Fortunately, pandemic funding from the federal government allowed many local public health departments to increase staffing and other spending, like transitioning to electronic records,⁵ which created new opportunities for those looking to join the fight against COVID-19.

Local health departments are at the frontline of health promotion, disease prevention, and emergency preparedness for the communities they serve. In the state of Missouri, Public Health falls under the purview of the Department of Health and Senior Services (DHSS). The state is then broken down into nine reporting regions, each of which has an epidemiology staff with which the Local Public Health Agency (LPHA) can reach out to for support. My Applied Practice Experience (APE) took place at the Jackson County Health Department (JACOHD) in Independence, MO. JACOHD serves nearly 380,000 residents and provides a wide array of clinical services, performs community services for residents and Jackson County businesses,

and is the agency leading Eastern Jackson County's (EJC) response to the COVID-19 pandemic. The health department is structured under Truman Medical Center, and is led by Bridgette Shaffer, MPH. My direct supervisor for my APE was Charles (Chip) Cohlma, MPH, Communicable Disease Prevention and Public Health Preparedness Division Manager, a role he has held for the past three years. Chip completed his MPH with a concentration in Epidemiology at the University of Kansas Medical Center and has worked in various roles in public health including at the City of Kansas City, MO Health Department, the Kansas Department of Health and Environment, and the Texas Department of State Health Services. His primary professional interests are the surveillance and control of infectious diseases and emergency preparedness.

To start, my role at JACOHD was learning the process of disease investigation for all reportable diseases. The entire process hinges on the initial report of infectious diseases to either the state or local health department. Typically, reportable diseases are reported to DHSS by the laboratory performing the test, the clinician's office or hospital that receives the result, or both. The positive test results are then forwarded to the LPHA through fax or a web-based disease reporting platform. Initially, a program called Websurv was used for all reportable disease case and contact investigations, with supplemental disease investigation forms uploaded as attachments when necessary. In August 2020, DHSS switched platforms for COVID-19 reporting, case investigation, and contact tracing to a platform called EpiTrax. It is anticipated that all reportable diseases will be investigated in EpiTrax, and Websurv's use for reportable disease investigation will be phased out. After the initial disease report, the LPHA calls the person who tested positive for the reportable disease (the case patient) and conducts a disease case investigation which is tailored to the specific disease for which the case patient has tested positive. The details of specific symptoms, onset of symptoms, duration of symptoms, risk factors, potential sources of exposure, and close contacts are recorded in the case patient's record. The case patient is then given information on how to isolate (if indicated), reduce disease transmission potential to other persons, monitor for symptoms for which to seek further medical care, and any additional treatment or testing that is required per public health regulations. The case's close contacts are then called, and a contact investigation is carried out with those persons. If indicated, the close contacts are educated on quarantine measures, symptoms to monitor for, testing recommendations or requirements, and follow-up procedures. While I did conduct case investigations for other reportable diseases, the primary focus of this APE was COVID-19 disease reporting, case investigation, and contact tracing.

Chapter 2 - Learning Objectives and Project Description

I completed my Applied Practice Experience (APE) at the Jackson County Health Department (JACOHD) in Independence, MO. My role at JACOHD was as an Epidemiology Specialist. In that role, I conducted case and contact investigations for reportable communicable diseases, primarily COVID-19, supervised a team of case and contact investigators, liaised with county businesses, long-term care facilities, childcare facilities, schools, places of worship, and residents regarding all aspects of COVID-19 transmission, mitigation strategies, reporting guidelines, and follow-up protocols. Additionally, I led the implementation of a system for following up with close contacts of COVID-19 (as defined by the Centers for Disease Control and Prevention (CDC)), delivered daily updates of disease cluster and outbreak locations, provided just-in-time training for ancillary JACOHD employees during case investigation surges, and performed quality control of completed case and contact investigations which were conducted by a team of JACOHD and contract-sourced disease investigators.

Since JACOHD falls under Truman Medical Center (TMC), I was required to complete a number of trainings in order to work in a hospital system, including Security/Safety and Confrontational Behaviors Interventions, Corporate Compliance and IT Security, HIPAA training, and Infection Prevention and Control. Additionally, since I started working at a time when the health department was operating under the Incident Command Structure (ICS), I also completed Introduction to National Incident Management System, Basic ICS, Introduction to National Response Framework, and ICS-100 trainings. These trainings delivered a comprehensive overview of the Federal Emergency Management Agency (FEMA) structure for responding to acute emergencies, and also for sustainment of operations in an ongoing state of emergency, such as we have seen with the COVID-19 pandemic.

One of the primary products of my APE was developing and implementing a system for following up with close contacts (as defined by the CDC) of people who had tested positive for COVID-19. Early on in the pandemic, cases and contacts were tracked locally using an Excel spreadsheet. The case patients were on one tab, and close contacts were in another tab of the same workbook. Each close contact had a column which identified who they had been in close contact with (using the case's record number). At the outset, this system made sense on several levels; it was easy to implement, could be accessed by anyone on the epidemiology team, required almost no training for use, and provided a quick reference for the raw number of close contacts. However, as case numbers, and thus close contacts, climbed, this system quickly became cumbersome; individuals who had close contact with multiple case patients

created confusing epidemiologic links, and the increased data made the file size difficult to maintain with multiple users. In May, the health department purchased Maven, a web-based platform commonly used across many states for tracking reportable infectious diseases. This system allowed one close contact to be tied to multiple case patients, clearly showed the epidemiological link from exposure to infection, and allowed more information on the close contact to be collected and easily accessed by multiple users.

The one piece of the puzzle that was still missing was how to follow up with these close contacts without having to actually have a person call each close contact every day for the entire monitoring period, which could span as long as 24 days depending on the nature and duration of the exposure. Our concern, on the epidemiology team, was that on day 3 or 4 post-exposure, when health department communication with the close contact was originally made, the person may not be experiencing symptoms. However, if they start to experience symptoms on day seven or eight, and don't go for testing, they could be feeling better by day 14 of their original quarantine period, and go back to public life without realizing they are still infectious to others. Moreover, if there are multiple people in the family, disease transmission could propagate every five to seven days as each person is continuously exposed through new infection from other family members. What was needed was daily symptom checks of those identified as close contacts, so that if they started experiencing COVID-19 symptoms, the health department could reach out to them again and offer further education on isolation, testing, and quarantine of their close contacts.

Through weekly meetings with other area county health department epidemiologists, I learned of a new system called Sara Alert, which had been developed specifically in response to the COVID-19 pandemic. After enrolling a monitoree (close contact) in Sara Alert, the system would automatically make contact with the monitoree for the specified monitoring period, depending on the date of exposure and if exposure was continuous throughout the case patient's infectious period. The system allows the monitoree to choose the follow-up method that works best for them: automated phone call, text message, SMS-texted weblink, or an e-mailed weblink. Furthermore, details such as exposure location, test results, contact attempts, and daily symptom status are logged by the system. If a monitoree replied that they were experiencing a symptom, the disease investigator could then reach out to that person to determine if they meet the case definition for "probable" and refer them for COVID-19 testing. Sara Alert also more readily captured conversion events, which is when a close contact then becomes positive for COVID-19, thereby allowing the epidemiology team to better characterize patterns of disease transmission in the local area. Further demographic information of close

contacts, such as race, ethnicity, sex, and age can also be easily analyzed using information collected in Sara Alert. In order to get this system implemented, the next step was to initiate contact with the MITRE corporation, who owns Sara Alert, and establish a data use agreement between TMC, JACOHD, and Sara Alert.

I obtained contact information for the regional MITRE representative and began discussing using Sara Alert at JACOHD. Over the next several months, I facilitated communications among the MITRE representatives and legal team, the JACOHD Health Director, the JACOHD Quality Assurance lead, and the TMC legal team. Finally, in September 2020, the data use agreement was signed, and JACOHD could begin implementing Sara Alert. Unfortunately, a lot had changed since I initially began brainstorming how we could use Sara Alert on a local level. Most importantly, case and contact investigations were no longer being conducted using the Maven platform, but instead were completed in a system called EpiTrax, which was adopted by Missouri DHSS in August 2020 for COVID-19 lab reporting, case investigation, contact investigation, and reporting to the state. As a result of using this new platform, the workflow for case reporting and disease investigation had changed, the epidemiology team had added two new members, and the number of disease investigators had grown from only a handful to nearly 40 individuals, all working remotely. Clearly this posed major challenges from a training and implementation standpoint. What I needed to figure out was how to capitalize on the utility of Sara Alert without making the task of data input overshadow what was being gained. Through many discussions with my supervisor, we finally settled on exporting data from EpiTrax, and using the import function on Sara Alert for data entry. With this in mind, I wrote instructions for the disease investigators regarding enrolling a close contact in Sara Alert, including a script for explaining what Sara Alert is, information that must be included in the contact record for proper follow-up, and how to flag the record for easy export from EpiTrax into Sara Alert (Appendix 1). This small change in workflow for the disease investigators required very little training, virtually no additional time during the contact investigation, and perhaps most importantly, finally allowed for proper follow-up of close contacts during their quarantine period. From approximately October 1, 2020 – December 27, 2020, over 2,000 close contacts had been enrolled in and monitored using Sara Alert. Before finishing my APE, I trained another epidemiology specialist on the process of exporting data from EpiTrax, importing that information into Sara Alert, and the basics of data management in Sara Alert so that the workflow process and follow-up of close contacts would become a sustainable practice at JACOHD. Although Sara Alert is designed specifically for use with COVID-19, in the future, its functionality may be altered to include other reportable infectious diseases, which would allow

this follow-up system to be implemented across other workflows, such as with sexually transmitted infections and tuberculosis.

Chapter 3 - Team Supervision and Guidance

A large portion of my APE, especially as COVID-19 case numbers increased rapidly around the country, was building, training, supervising, and guiding a team of case investigators and contact tracers. Initially the duties of case investigation and contact tracing were split into two distinct teams. I started out by conducting case investigations, and quickly gained responsibility of overseeing case investigations and assigning close contacts for investigation. Initially, case investigations were carried out on the CDC Person Under Investigation form available as a fillable PDF. I reviewed the information collected, assigned close contacts for follow-up with contact tracers, and entered all information into the state database for communicable disease investigation, Websurv. In June, as case numbers spiked, JACOHD started adding additional case investigators and contact tracers. I trained these new investigators on the basics of what we knew so far on COVID-19, disease transmission, infectious period, and infection prevention principles. Additionally, I trained them on how to conduct a case/contact investigation and how to use our new web-based disease investigation platform, Maven.

By the end of the summer, the duties of case investigation and contact tracing were combined into one position, disease investigation; Maven was also replaced with a new web-based reporting system adopted by Missouri DHSS, EpiTrax. All of the former case investigators had to be trained on contact investigation, and the contact investigators had to be trained on conducting case investigations. Additionally, all team members hired before August 13, 2020 had to be trained on EpiTrax. Most of this was accomplished over the phone and through screen-sharing tools, however through conducting quality reviews of completed case investigations, it became apparent that at least half of the team needed additional training on the process of case investigation, what our goals were from a case investigation standpoint at this point in the pandemic, use of the EpiTrax platform, differentiating COVID-19 test types, and follow-up procedures for cases connected with schools, long-term care facilities, mass gathering events, and other jurisdictions. Another epidemiology specialist and I developed an agenda and delivered a day-long, in-person training for approximately 25 disease investigators to address all of these concerns. Following this remedial training, I conducted quality check reviews for my team of approximately 20 disease investigators every two weeks. These reviews were a systematic evaluation of case and contact investigations, documentation, follow-up procedures, and work-production. Based on my findings, I provided the disease investigator with written

feedback on case investigation documentation as well as provided suggestions on more efficient use of time, proper case classification (e.g., confirmed, probable, suspect), and tips for elucidating more contacts from case patients.

Throughout the summer and fall of 2020, the health department worked to expand case investigation and contact tracing capability, which meant hiring new disease investigators, and in some cases using existing JACOHD staff to conduct case investigations. I, along with another epidemiologist, routinely trained in between three and five new disease investigators every two weeks. This training entailed ensuring new hires completed all of the required TMC corporate training, completed a John's Hopkins course on COVID-19 case investigation and contact tracing, securing network access and troubleshooting other IT issues, conducting case investigations with the new hires, listening in while they conducted case investigations, providing feedback, and of course, training on using the EpiTrax platform. After this week-long training session, the disease investigators worked remotely. Occasionally, just-in-time training was needed, such as during the third wave of COVID-19 case surges in early November 2020, when I conducted two half-day training sessions for JACOHD employees from other departments so that they could help with case investigations. I routinely answered e-mails and phone calls from them while they were assisting with case investigations, and helped troubleshoot EpiTrax user issues. Working cross-functionally with other JACOHD employees in this way greatly increased our capacity to conduct additional case and contact investigations when it was needed the most.

Chapter 4 - Communication with Diverse Audiences

The central purpose of case and contact investigation is to break the chain of transmission so that a pathogen does not spread within a community. Essential in this process is communication. It is crucial that one learns not only communication strategies that elucidate information for a thorough case and contact investigation, but also that one can communicate with community residents, businesses, and local stakeholders the importance of disease containment from a personal health, community health, and economical standpoint.

As Stanley et al. describes, there are many challenges associated with interviewing patients as part of a communicable disease case investigation, including that the interviewer has to play many roles – gather information, empathize with the case patient, enforce strict isolation measures, and convey important educational information, all with a person who did not ask to be interviewed, is not compensated for their time, and may be feeling very unwell.⁶ As I trained new disease investigators, I helped them develop interviewing skills, conducted interviews with actual case patients and close contacts for the disease investigators to observe, and finally listened to disease investigators complete interviews and provided feedback and communication strategies for them before they began working remotely.

A challenging, and yet interesting, aspect of this APE was answering phone calls on the Epidemiology hotline, which was a number that JACOHD employees would transfer any call related to case or contact investigation for COVID-19, business concerns that did not pertain to published county compliance, case reports from long-term care facilities, schools, workplaces, childcare facilities, physicians, and other county jurisdictions, and general calls from concerned citizens. It truly was the luck of the draw regarding who was going to be on the other end of the line. While the central messaging was the same, being able to quickly adapt recommendations, deliver accurate information, and collect important details was a skill that took many months to develop. I found that my questions for employers who called to report a positive test result in an employee always included the same core set of questions:

1. When did the case patient first start having symptoms or first test positive if asymptomatic?
2. Has this employee reported having close contact with someone who tested positive for COVID-19?
3. When was the employee's last day at work?
4. Describe the working conditions at your facility (e.g., cubicles, open bay factory, split shifts, etc.)?

5. What common areas do you have in your facility (e.g., breakrooms, restrooms, smoking area, etc.)?
6. Is anyone else in the workplace feeling ill, tested positive for COVID-19, or called out in the past two weeks?
7. What kind of personal protective equipment do your employees wear? When do they wear it?
8. What type of symptom screening, if any, is conducted on employees?
9. What is your policy for when an employee calls in sick?
10. What is your policy if an employee reports being a close contact of someone who tested positive for COVID-19?

Based on the answers to the above questions, I was able to provide guidance information for the employer, collect names and phone numbers of any close contacts at the workplace, give dates for completion of isolation for the case patient and quarantine of close contacts, recommend cleaning/disinfection procedures, and answer any other questions or concerns the employer may have. I especially enjoyed interacting with childcare providers, and due to the number of childcare facilities in the area and the frequency with which I interacted with them, I created a quick reference sheet which compiled all of the guidance information locally, from the state, and from the CDC, as an easy reference tool for other epidemiologists to use when collecting information from childcare facilities, and for centers to keep as a reference for future cases (Appendix 2). This toolkit also includes sample messaging that childcare facilities can use when sending e-mails to parents notifying them of a positive case in either an employee or another child at the center.

As the JACOHD response to the COVID-19 pandemic evolved, specialized teams within the health department were created to better respond to the needs of the county. For example, in preparation for the stay-at-home orders lifting and businesses being able to re-open, a Business Compliance team was established. This team was well versed in the specific re-opening guidelines of Jackson County and was available for businesses to call when they had specific questions on capacity limits, hours of operation, masking, and other relevant topics. As part of the Epidemiology Team, I regularly communicated with the Business Compliance team when they received a complaint about a business violating county regulations, when there were suspected or confirmed outbreaks at businesses, or when businesses had questions that were more geared toward reducing disease transmission and infection prevention recommendations rather than compliance questions. Through this collaborative relationship, we were able to

better establish a rapport with and educate the businesses in our county, thus ensuring a safer work environment for employees. Ideally these relationships will continue past the COVID-19 crisis, since other reportable diseases, such as Hepatitis A, salmonella, and many others require a cooperative relationship with the workplace to ensure the health and safety of other employees and patrons.

Another team within JACOHD that was crucial to our case and contact investigations was the Community Resources team. This team was established near the end of the summer 2020, and we began collaborating with them shortly afterwards. Their team leader and I developed a process for identifying COVID-19 case patients who were in need of additional resources, such as food, financial assistance, getting paid time off from work for mandated isolation and quarantine, or any other needs that arose due to diagnosis with COVID-19 or close contact with a person positive for COVID-19. There was, and still is, a strong need for support services in EJC, and by creating this partnership we were better able to connect people with the resources available to them. By being able to offer these services to our case patients, they, in turn, were more willing to share information on their close contacts and seek testing for others in their family that were experiencing symptoms but not yet isolating. By better supporting our residents, we were better able educate those affected by COVID-19 and help curb the spread of infection within our communities. Whether it was with internal or external stakeholders, the success or failure of our interventions came down to how they were communicated with those who were affected. JACOHD was able to forge new relationships, strengthen existing partnerships, and be the guiding force that the community needed through these various communication channels and alliances built on trust and coming from a place of empathy and compassion.

Chapter 5 - Discussion and Summary

I had the unique opportunity to start and complete my APE during unprecedented times. The COVID-19 pandemic has been the most impactful infectious disease to spread across America since the HIV/AIDS epidemic of the late 1980's and 1990's. Stay-at-home orders, business closures, massive layoffs, and an uncertain course of events took its toll on our economy, personal and social relationships, and careers. What's more, public messaging across different communication platforms was, at times, deeply polarizing, politicized, and accentuated already existing partisan divides.⁷ I witnessed these challenges' impact on my APE, particularly in the public's willingness to participate in case investigations, contact tracing efforts, and communications with businesses. Case investigation and contact tracing were first employed as disease containment strategies in the 1930's in an effort to control syphilis,⁸ and are the foundation of infectious disease containment. However, as COVID-19 spread across our country, it quickly became evident that the workforce needed to conduct traditional case investigation and contact tracing was not in place, nor were other means to stop transmission, such as wide access to testing, rapid test results, and access to personal protective equipment (PPE).^{8,9} When my APE initially started, Jackson County, MO was in the containment phase of the COVID-19 pandemic, meaning that most of the effort to curb the spread of infection was focused on case investigation and contact tracing,⁸ yet mitigation strategies, such as stay-at-home orders, were already in place, partly because the above mentioned resources did not exist. Estimates by the Association of State and Territorial Health Officials state that anywhere from one disease investigator per 1,200 population (the ratio that was used to successfully "box-in" the virus in Wuhan, China) to one disease investigator per 5,553 residents (the ratio used in San Francisco in the initial stages of the pandemic) are needed to effectively control the spread of infection.⁹ Eventually, the number approved in Jackson County was approximately 15 disease investigators per 100,000 population. Across the country, the number of contact tracers relative to the population ranges from 60 per 100,000 in Washington D.C. to a mere two per 100,000 in Montana and Iowa.¹⁰

This scale up in workforce was challenging not only from the health director's standpoint of adding so many new employees, but also from an epidemiology team standpoint, as we were responsible for the training, development, and supervision of the new disease investigators. In May 2020, Johns Hopkins developed a training course for new disease investigators, which JACOHD incorporated into our training regime in July 2020. One of the significant challenges of scaling up disease investigation efforts during this time period was trying to stay up to date on

available resources. Like many public health agencies across the country, JACOHD struggled with inconsistent electronic reporting by laboratories and healthcare providers, and having the technological infrastructure in place to handle such large case numbers.⁸ However, with challenges, opportunities present themselves; our team was able to be innovative in the way we handled an ever-increasing caseload, such as incorporating Sara Alert into the workflow. Using this technology allowed us to better follow-up with close contacts and identify those that had converted to case patients. Additionally, by the close contacts having to report on their symptoms daily, they were more aware of which specific symptoms to monitor for, and based on our interviews, were more likely to begin isolation when symptoms appeared.

Communication was an overarching theme throughout my APE, and presented many challenges, especially when CDC recommendations and county health mandates were updated. A review by Gollust et al. highlights how partisan politics shaped the messaging of coronavirus information and the public's perception of its threat.⁷ Unfortunately, my colleagues and I, particularly our health department director, were the recipients of the public's dissatisfaction with coronavirus restrictions, which were fueled by misinformation and inconsistency of regulations across county, city, and state lines. Again, with this challenge came opportunity. I was able to better hone my communication skills, particularly with diverse audiences, by encountering a wide range of callers on the epidemiology hotline. I found that most people were just concerned, either misinformed or uninformed, and didn't know what a positive COVID-19 test meant for them, their family, or their business. After taking the time to explain the virus, what our health mandates were in place to accomplish, and the importance of isolation and quarantine restrictions, most people were understanding. This is where our Community Resources team really made a difference; if people were able to be supported through their isolation and quarantine period, particularly financially, they were more able and willing to comply with health orders. One area that was a particular struggle, was having disease investigators who were fluent in Spanish. Having disease investigators who can relate to the population they are serving, especially from an ethnic and language standpoint, could help improve health outcomes in those communities.⁸ This is especially important given that an accumulation of evidence has shown that communities of color are disproportionately impacted by COVID-19 infections, hospitalizations, and deaths.^{8,11}

My educational background and clinical experience as a veterinarian served me well in this APE, as I have a strong understanding of transmission dynamics of infectious diseases, clinical testing modalities and interpretation, and disease containment. Though these foundations are rooted in animal health, the same principles apply across human health as well.

Being engaged in public health from a county health department perspective built on this One Health concept that the well-being of the planet is a dynamic interplay between the environment, animals, and people. As the COVID-19 pandemic continues to unfold across our country and around the world, and change shape with the FDA-approval of three coronavirus vaccines to date, there is still much to be learned, improved upon, and studied; so that when the next novel infectious disease emerges, we as country, a community, and as individuals, will be better prepared to respond quickly and decisively.

Chapter 6 - Competencies

My APE allowed for application of many of the foundational competencies, as the workload was broad, dynamic, and touched many different departments and organizations. The five competencies I'll highlight are numbers 19, 21, 16, 22, and 1.

Competency 19: Communication is the heart of Public Health, and certainly was a major part of my APE. Not only did I manage internal communication with my team of disease investigators and other JACOHD staff and departments, but I also spoke with members of the public on a daily basis. Each of these audiences required a different set of information and communications approach. One of the products I produced on a daily basis was information regarding COVID-19 case clusters and outbreak locations. I summarized information obtained from speaking with cases, business owners and operators, and the concerned public. I then presented this information to the other members of the Epidemiology Team, disease investigators, JACOHD business compliance, and JACOHD data analysts. I also fielded calls from employees of various businesses who were concerned that COVID-19 protocols were not being followed correctly, followed-up with these businesses, coordinated with the JACOHD business compliance section, and ensured that owners and employees were aware of EJC health mandates. This information was captured in daily meeting minutes, which could then be referenced by anyone in JACOHD when additional information or cases were detected.

I also addressed this competency through near daily conversations and e-mail correspondence with childcare facilities throughout EJC. The childcare owners and managers called my direct line to report cases of COVID-19 that occurred among children at their center or among employees. I would then obtain a list of close contacts of the case patient, provide information on quarantine for those contacts, and help construct messaging for centers to send out to parents. Developing a close, trusting relationship with the leaders of childcare facilities allowed us to have confidence that one of our most vulnerable populations was being protected, give parents and employees peace of mind that mitigation and sanitization strategies were being followed, and minimize disease transmission.

Competency 21 & 22: Much of the duties that fulfilled the previous competency also fulfill Competency 21, "perform effectively on interpersonal teams." In addition to the above-described duties, I also coordinated with the COVID-19 testing team, both to set-up testing for locations that were experiencing an outbreak, especially early in the pandemic when testing was in critical undersupply, and also to notify businesses and case patients of positive test results.

Working closely with the testing team and providing quick, reliable, no-cost testing to businesses and organizations allowed us to curtail the spread of infection, quickly identify asymptomatic persons, and prevent a larger outbreak scenario.

One of the major projects that I spearheaded was developing a system for following up with those individuals who were identified as close contacts of someone with COVID-19, as defined by the CDC guidelines. Initially, JACOHD was alerted of positive COVID test results, and then called those people to conduct case investigations and obtain a list of close contacts. The close contacts were then called to notify them of quarantine restrictions and symptoms to monitor for which would be indicative of COVID-19 infection. The problem was that after that initial phone call to the close contact to let them know that they had been exposed to COVID-19, there was no further follow-up. Additionally, testing recommendations for asymptomatic close contacts were ambiguous and highly situation specific. Thus, JACOHD was in need of a way to easily follow up with close contacts, determine if they had developed symptoms consistent with COVID-19, and refer them for testing if indicated. The MITRE Corporation developed an automated system, called Sara Alert, which would follow-up with individuals through text messaging, an automated phone call, or an e-mailed weblink. Based on the individual's date of exposure, the monitoring period was adjusted, and the system would flag any accounts of individuals that reported positive symptoms. I worked with representatives with the MITRE Corporation to organize a demonstration and provide a test environment set-up, facilitate a contract between JACOHD/Truman Medical Center and the MITRE Corporation, and implement Sara Alert at JACOHD. This included training the JACOHD Epidemiology Team on the new system, designing and implementing a workflow for case investigators to flag contacts for enrollment in Sara Alert, creating a data pull of those records, importing them in Sara Alert, and notifying disease investigators when a contact reported any symptoms. The disease investigator would then reach out to the contact, determine if they met the CDC case definition of "probable", conduct a case investigation and further contact tracing if indicated, and refer the person for testing and community resources. Development of this system of follow-up for close contacts also fulfills competency #22, "apply systems thinking tools to a public health issue."

Competency 16: At the start of my APE, our team was small: only three epidemiology specialists (including myself), our supervisor, three case investigators, and three contact tracers. Both the case investigators and contact tracers were other JACOHD employees whose duties had been temporarily suspended (such as our clinical nurses since the clinic was shut down for several months), and who had little experience in disease investigation. I quickly learned the local process for disease reporting, case investigation, contact tracing, data management, and

final reporting to the state. When it became clear that the pandemic was going to be a sustained, long-term situation, JACOHD hired additional staff, of which I was the exclusive trainer for the first several rounds of employees. Eventually we added two more epidemiology specialists and approximately 40 disease investigators (doing both case and contact investigation). I led a team of about 20 disease investigators. In daily communications with my team, I would provide guidance on case investigation, particularly when there were questions of test result interpretation, requirements for isolation based on clinical history and current status of the case patient, recommendations for close contacts of the case patient, and liaising with hospital infection preventionists to obtain hospitalization documentation. I also provided my team with periodic training as CDC case and contact guidelines were updated, as investigation software platforms were changed, and as COVID-19 testing locations became more available throughout the first year of the pandemic. Finally, I conducted periodic performance feedback with each of my team members and provided them detailed notes regarding reviews of their completed case and contact investigations, areas for improvement, and expectations for efficiency and quality of work.

Competency 1: As much as our team wanted it to be, there was no perfect situation with COVID-19 transmission in public places, whether that was a workplace, school, childcare facility, healthcare facility, or long-term care facility. Each of these different places required a tailored approach to control disease transmission. Though most workplaces tried to space people six feet or more apart and required face masks be worn at all times, there were still opportunities for transmission, such as when eating and drinking, congregating during break times, and carpooling to work. It was part of my job to discuss workplace-specific concerns with managers to determine who should be deemed a close contact, when exclusion dates should start and stop, and if mass testing was indicated. Childcare facilities were a group that I took a special interest in because they presented unique challenges, such as mixing of classrooms, siblings, children not being able to wear masks, teachers whose children also attended childcare, etc. I wanted to ensure that the childcare providers were not only following county health mandates, but also that the parents who took their children to these centers could have confidence that the facility managers were doing their best to protect the health and well-being of every child in their care. Based on available information from the CDC and research articles, I was able to present sound, epidemiology-based intervention recommendations to these different workplace situations to help them control the spread of COVID-19.

Table 6.1 Summary of MPH Foundational Competencies

Number and Competency		Description
19	Communicate audience-appropriate public health content, both in writing and through oral presentation	Answering COVID-19 questions for the public and businesses through the Epi hotline, reporting on disease cluster and outbreak locations, and providing guidance for childcare facilities
21	Perform effectively on interprofessional teams	Working with other JACOHD staff (business compliance, epi team, testing team), communicating with district epidemiologist, and leading the partnership with MITRE corporation
16	Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	Train, mentor, and lead a team of case investigators and contact tracers
22	Apply systems thinking tools to a public health issue	Assess the process for case and contact investigation to come up with a solution for easily following up with close contacts
1	Apply epidemiological methods to the breadth of settings and situations in public health practice	Use epidemiologic information to make decisions regarding exclusion from work, school, childcare, etc. after infection with or close contact (as defined by the CDC) to a person with COVID-19.

Table 6.2 MPH Foundational Competencies and Course Taught In

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Evidence-based Approaches to Public Health					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		
Public Health and Health Care Systems					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					x
Planning and Management to Promote Health					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					x
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
Policy in Public Health					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			x
15. Evaluate policies for their impact on public health and health equity		x		x	
Leadership					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			x
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
Communication					
18. Select communication strategies for different audiences and sectors	DMP 815, FNDH 880 or KIN 796				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815, FNDH 880 or KIN 796				

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
20. Describe the importance of cultural competence in communicating public health content		x			x
Interprofessional Practice					
21. Perform effectively on interprofessional teams		x			x
Systems Thinking					
22. Apply systems thinking tools to a public health issue			x	x	

Student Attainment of MPH Emphasis Area Competencies

Competency #1: Establishing modes of disease transmission affected each area of my APE. When talking to an individual case patient, a close contact, business, or even a concerned citizen, discussing mode of transmission of COVID-19 was central. This was especially important to consider when providing infection prevention recommendations to institutions with vulnerable populations, such as childcare facilities and long-term care facilities.

Competency #2: Because COVID-19 is a novel virus, there is still so much we don't know about how it affects an individual. During case investigations, details as far as past medical history, substance use, smoking status, and pregnancy status were all evaluated. This data was collected and submitted to the state and eventually to the CDC so that we can aim to better understand how the host immune system impacts the severity of disease in individual patients.

Competency #3: When providing recommendations on mitigation strategies for curbing the spread of COVID-19, the environment in which the disease was present was of paramount importance. Depending on the environmental conditions of the workplace, different recommendations were given. For instance, a workplace that can support more than six feet of distancing is going to be managed differently than one where at least six feet of distance cannot be maintained.

Competency #4: This really goes hand-in-hand with competency #3. By looking at each environment as a unique place, one must assess the disease risk factors that are present and make recommendations based on that. For example, in a long-term care facility, we have a population that is at high risk for developing complications, having to be hospitalized, or dying as a result of infection with COVID-19. At the same time, since nurses and other medical caretakers were in high demand but low supply, we have a workforce with a higher risk of exposure since they are commonly working at more than one facility. Due to these factors, a high-risk resident population and a high exposure workforce, surveillance strategies were intensified. Often the staff and residents underwent weekly or even twice weekly testing after a

case of COVID-19 was confirmed. If the situation turned into an outbreak, surveillance frequency was altered based on the number of naïve individuals left in the population.

Competency #5: Based on the evidence to date, there is no indication that vectors play a role in transmission of COVID-19. One of the big unknowns is how susceptible our domestic and farm animals may be to infection with COVID-19 when exposed to an infectious human. While there have been some case reports of pets of COVID-19 positive individuals developing respiratory symptoms, it seems to be rare at this point.¹² Nevertheless, it was included as part of the disease investigation question package, and a point of education with positive case patients (avoid face-to-face contact with pets during infectious period).

Table 6.3 Summary of MPH Emphasis Area Competencies

MPH Emphasis Area:		
Number and Competency		Description
1	Pathogens/pathogenic mechanisms	Evaluate modes of disease causation of infectious agents.
2	Host response to pathogens/immunology	Investigate the host immune response to infection.
3	Environmental/ecological influences	Examine the influence of environmental and ecological forces on infectious diseases.
4	Disease surveillance	Analyze disease risk factors and select appropriate surveillance.
5	Disease vectors	Investigate the role of vectors, toxic plants and other toxins in infectious diseases.

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Appendix 1

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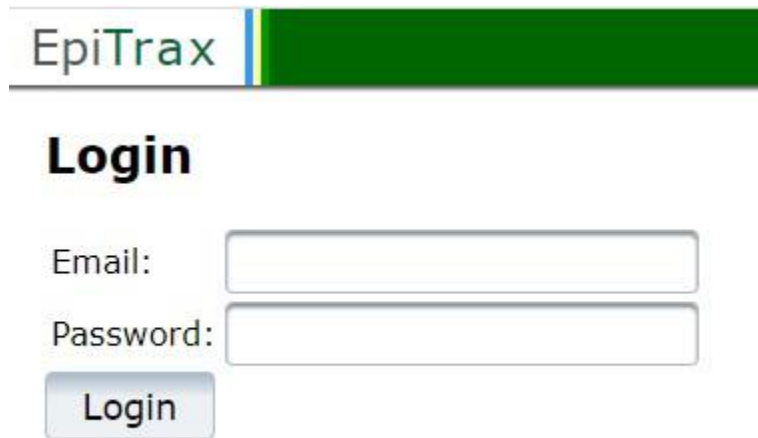
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EpiTrax Walkthrough

To access the EpiTrax system, open your web browser to the following link:

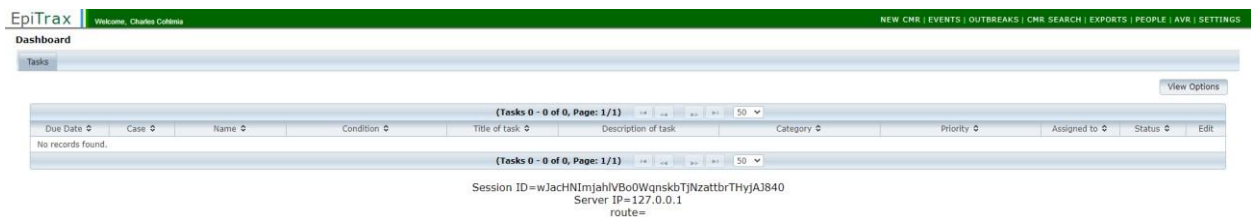
<https://epitrax.health.mo.gov/nedss/login/>.

This will give you the dialogue box asking for your email and password. Your email should be your TMC email address. The password should have been sent to you in a secure email.



The image shows the EpiTrax login interface. At the top, there is a green header with the EpiTrax logo on the left and a solid green bar on the right. Below the header, the word "Login" is displayed in a large, bold, black font. Underneath, there are two input fields: "Email:" followed by a white rectangular box, and "Password:" followed by another white rectangular box. Below the password field is a grey button with the word "Login" in white text.

This will take you to the dashboard, which will have your current tasks.



The screenshot shows the EpiTrax dashboard. At the top, there is a green navigation bar with the EpiTrax logo on the left and a menu of items on the right: "NEW CMR | EVENTS | OUTBREAKS | CMR SEARCH | EXPORTS | PEOPLE | AVR | SETTINGS". Below the navigation bar, the word "Dashboard" is visible. The main content area features a "Tasks" section with a table. The table has columns for "Due Date", "Case", "Name", "Condition", "Title of task", "Description of task", "Category", "Priority", "Assigned to", "Status", and "Edit". The table currently shows "No records found." Below the table, there is a session ID and server IP address: "Session ID=wJachNIjmjahlVBo0WqnskbTJNzattbrTHyJA3840" and "Server IP=127.0.0.1".

The top bar on the far right has the menu items which will help you navigate the system. The main point of the system you will be using is the “Events” button.

NEW CMR | EVENTS | OUTBREAKS | CMR SEARCH | EXPORTS | PEOPLE | AVR | SETTINGS

- New CMR
 - You won’t worry about this and shouldn’t be creating new records.
- **Events**
 - **This will pull up all of the files which will fit specifications set by you. This will be the new “Workflow.”**
- Outbreaks
 - This will have the outbreak in the state and will be updated periodically.
- CMR Search
 - This will let you search for a specific record by name, DOB, or Record Number
- Exports
 - Allows you to export your files into an excel sheet. This is likely something you won’t need to be doing.
- People
 - Allows you to look for a person’s record, rather than a specific event or illness. This is something we won’t be using as much for the time being
- AVR
 - This is another data export tool and something not used for disease investigation

- Settings ○ This allows you to change your personal details, like your password

Events Tab

Setting up Your Events

When you click on the events tab in the upper right corner, it will take you to this screen:

This screen will let you customize a report so that, when you open the Events tab, you can see the same report. For us, we want you to see all of the cases which are marked as ready to be investigated so complete the tabs as such:

- New View Name
 - Unassigned Investigations
- Event Investigation Status ○
 - Accepted by LHD
- Diseases ○ COVID-19
- Investigating Agency ○ Jackson
 - County Health Department

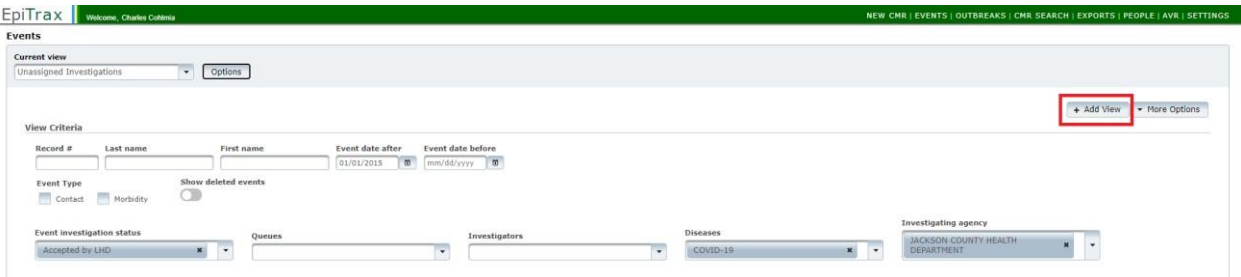
Then click “Save” next to the New View Name. This should bring up all of the cases which have been sent to us and are awaiting investigation. When you’re looking at the columns for this, the second-to-last one on the row is “Event Date.” Click “Event Date” so that it sorts them into a way so that the earliest event date is at the top. This will be how you choose the case to be investigated.

Monitoring Your Assignments

Also on this page, create another Event for just a queue of your investigations. When you first get into the Events tab after you have made your “Unassigned Investigations” report, click “Options.”

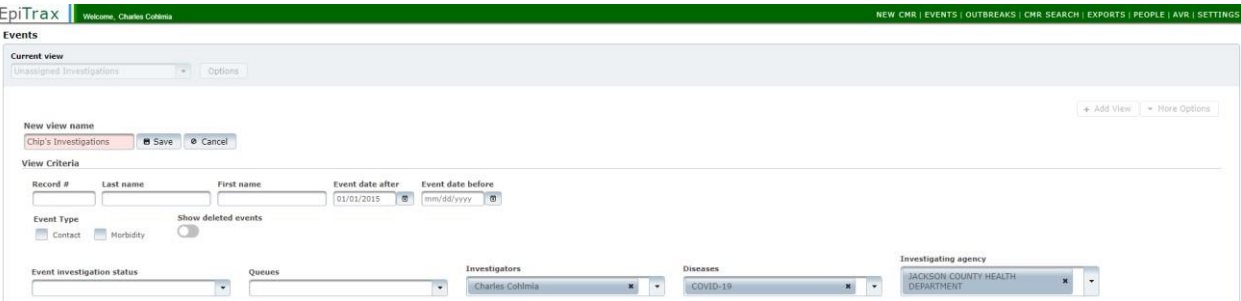


Then “Add New”



Complete the new Event section as such:

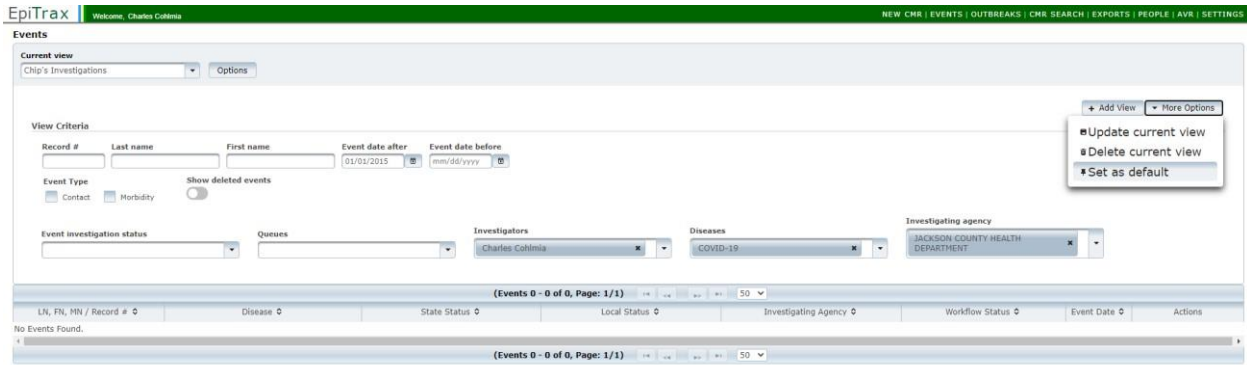
- New View Name ○
(YOUR NAME)
Investigations
- Investigators ○ Your
Name
- Diseases ○ COVID-19
- Investigating Agency ○
Jackson County Health
Department



Then click “Save”

Default Events Tab

If you have more than one events tab section, you can set your default between your reports. To set the default Event report, select the “Current View” in the top left corner, then click on “More Options” on the right side of the screen. Click on “Set as Default”

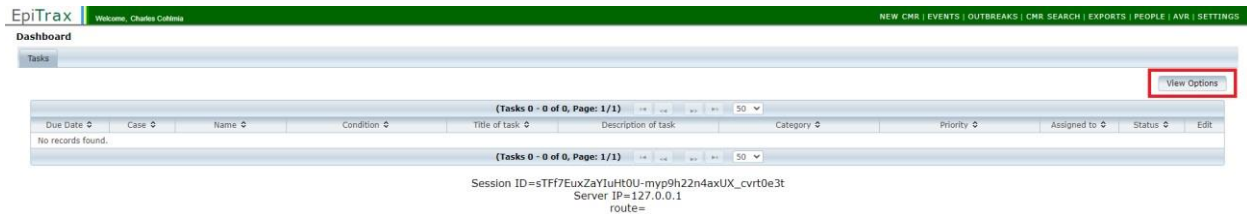


Monitoring Your Tasks

As you go through your investigations, you'll have some things tasked to you. In order to keep track of the things which have been assigned to you, you can set your dashboard page to show the tasks which have been assigned to you. In order to do this, log into EpiTrax and it should take you to your Dashboard page. If you are already logged into the system, click on the “EpiTrax” logo in the top-right of the screen, seen below.



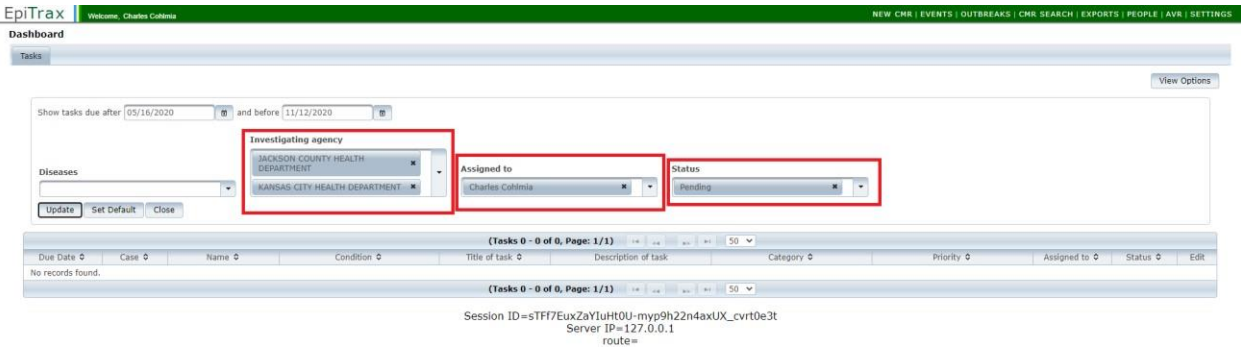
From there, click on “View Options” on the far right side.



Complete the fields as below:

- Investigating Agency:
 - Jackson County Health Department
 - Kansas City Health Department
- Assigned To: ○ Select your name Status:
 - Pending

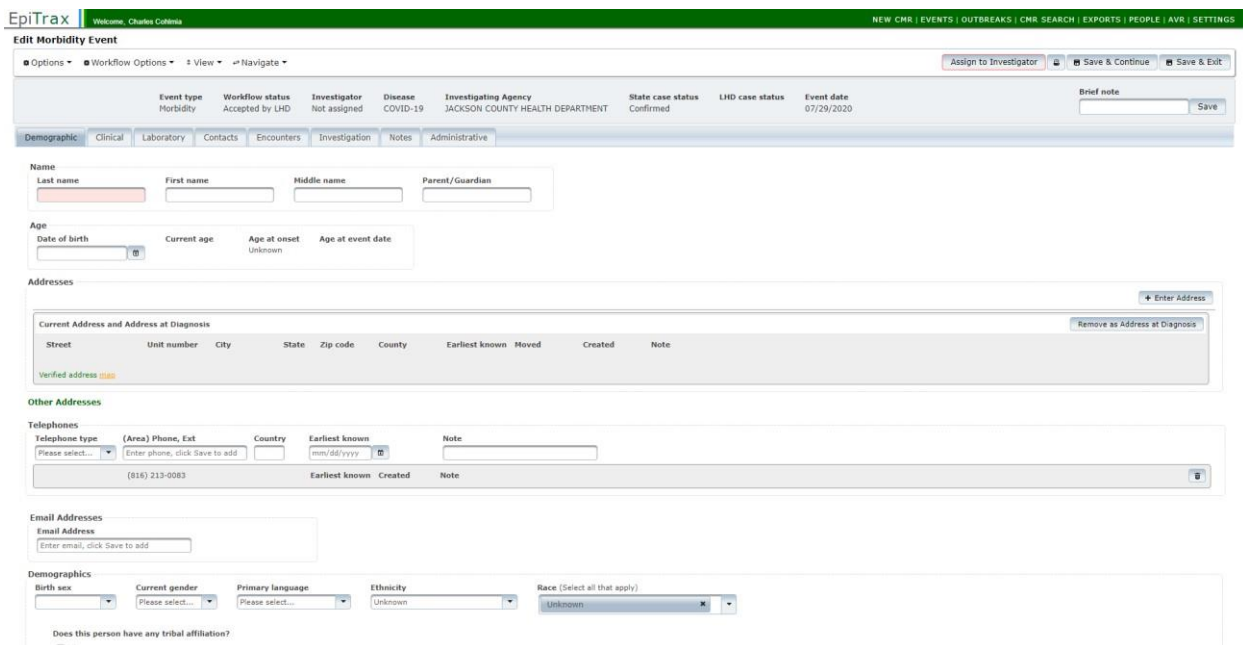
Then click “Update.” This will make your task page include all of the tasks which have been assigned to you.



Assigning Yourself an Investigation

When you are assigning a case for yourself, make sure you are sorting the files in the queue by “Event Date” so that we can pull the events which have been on the queue the longest.

When you are looking at your events tab and all of the cases on the queue, click the top Record Number. For EpiTrax, the record number is a 9-digit number starting with “2020” (the year on which the record was made). Click on the number in the far left column to bring up the case file.

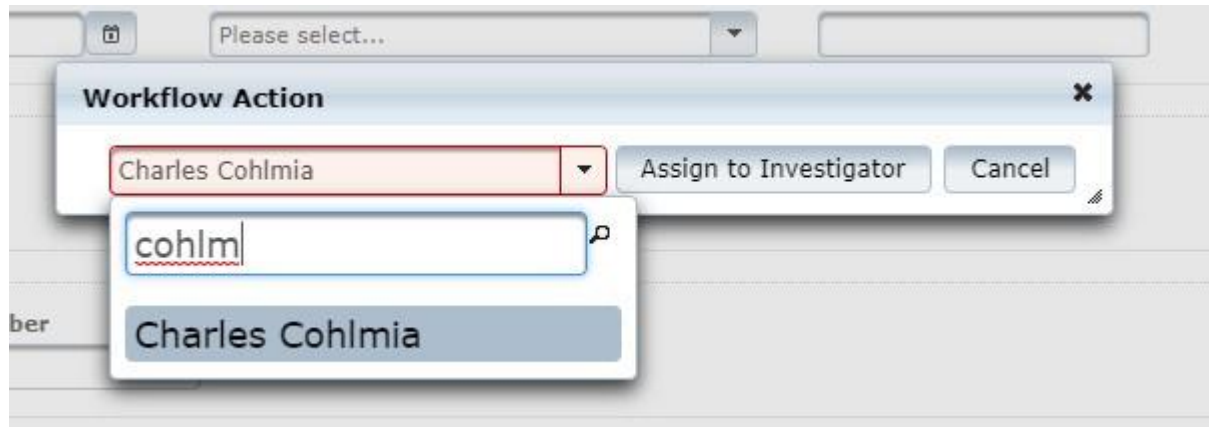


On the top right of the screen, you should see a little box highlighted in red.

Assign to Investigator

If this box is not there, the case might be locked by someone else. If that event is locked or if the event does not have the “Assign to Investigator” box there, just skip over it and find another record to investigate.

By clicking on this, you are able to assign the record to yourself. It will pull up a list of ALL of the investigators. For now, that includes everyone in the state. I would use the type box to enter your last name and find your investigator credentials that way. Then click Assign to Investigator.



This will bring up a new menu item for you. Note that where the “Assign to Investigator” button was is now a new button for “Accept Investigation.” If you are assigning it to yourself, it should come up IMMEDIATELY with the prompt asking if you want to accept the investigation.

The tabs along the top are decently self-explanatory and similar to those you would find in Maven.

- Demographic
 - Information regarding the case-patient, including address and contact information
- Clinical
 - Information regarding the patient’s hospitalization, mortality, and pregnancy statuses
- Laboratory
 - Provides the laboratory result for the individual in question. It is important to note that, with the addition of EpiTrax, we are now seeing some labs come through electronically which means that information on these specific results might be a bit different
- Contacts
 - Location where you can put in the names and information regarding those individuals who were close contacts to a COVID-19 case-patient
- Encounters
 - This is a tab where you log your conversations or contact attempts with that person
- Investigation
 - This is where you will find the prompts for your investigation for each COVID-19 case. Please note that, when you open the Investigation Tab, there will be a new set of tabs going through the entire investigation

- Case Info and Resolution Status
 - This is a section which can be completed before the interview takes place
- Interviewer Information
- Ignore
 - I have absolutely NO idea why this tab is here, but it literally is called “Ignore” and I would not touch it.
- SARS-CoV-2 Testing
- Symptoms and Clinical Course
- Past Medical and Social History
- Exposure History
- Hospitalization and Death
 - Notes
 - This is a spot to add ANY notes you want into the system regarding this individual casepatient. A word of caution, though. These notes can neither be deleted nor edited.
 - Administrative
 - The administrative tab is for any closing comments, linking to outbreaks, and any other information needed.
- LHD Investigation/Intervention Started
 - Date on which you first attempted a call of the case-patient
- LHD Investigation Completed
 - Date on which you completed the interview or the date on which the lost to follow-up letter was sent
- Investigation Outcome
 - Completed
 - Unable to Locate
 - Surveillance
 - Out of Jurisdiction
 - Other
 - Lost to Follow Up
- Event Name
 - Leave blank unless we need to add anything else
- Results Reported to LHD
 - Enter the date on which this case record was sent to the LPHA. This information can be retrieved from the Workflow History section. Check for when the case was routed to JACOHD or, if it is a contact who became a case-patient, the date on which it was promoted to a casepatient record ▪ Date of Interview:

- Respondent was:
- Follow-up Status:

Auditing / Investigation				
Jurisdiction of residence JACKSON COUNTY HEALTH DEPARTMENT	LHD investigation/intervention started mm/dd/yyyy	LHD investigation completed mm/dd/yyyy	Investigation outcome Please select...	Event name

Conducting an Investigation

As a general note about conducting investigations, please make sure you are saving your work periodically, using the “Save and Continue” button in the top left of the screen. If you are in the system for too long without saving your work, you may get kicked out and lose everything that hasn’t been saved yet.

The investigation of a COVID-19 case will be conducted through all of the tabs in the system. With current data management flow, we will be adding a few new steps to the investigation.

- Check the Labs
- PCR+
 - i. Confirmed
- Antigen+
 - i. Probable
- IgM+
 - i. Suspect
- IgG+ only
 - i. Not a Case State Case Status
- Check to see if the labs match the state case status. If not, let an epi know and they can notify the state health department.
- If the lab results note a confirmed or probable case by the list above, investigate Confirmed and Probable cases.
- Check the Jurisdiction
- If the address is not in EJC, we will route it to the appropriate health department. To find the instructions for routing it to another department, [click here](#).
 - i. There may be some times where the “Current Address” and the “Address at Diagnosis” are different. Please check on these as they will determine where the case will go.
- If there is an Out of State case, you would change LHD Case Status to the “Out of State” mark on the Administrative tab, enter the new address in the Demographics tab, and close out the case.
- If the individual attends a college out of jurisdiction and is a permanent resident at that college, [click here](#) to reach the section on handling college and university cases.

The cities that correspond to Eastern Jackson County are as follows:

- Blue Springs
- Buckner
- Grain Valley
- Grandview
- Greenwood
- Independence
- Lake Lotawana
- Lake Tapawingo
- Lee's Summit
- Levasy
- Lone Jack
- Oak Grove
- Raytown
- River Bend
- Sibley
- Sugar Creek
- Unity Village

In the beginning as we make the move into the EpiTrax system, we will need to check if the record is already existing in Maven. Before you start calling, check the name and DOB in Maven to see if the record exists. If it does, route the investigation to Amanda and we will coordinate for the Public Health Office Assistant team to enter those into the system.

Also, as we go forward, we have found several duplicates in the EpiTrax system. Check to see if the name pops up in the EpiTrax system already. If you have a record that matches on name and DOB, notify the epi staff so it can be reported up to the state. If you see someone who POTENTIALLY matches (i.e. the last name and DOB are the same but the first name is slightly different), check with the provider or ordering physician to see if they are duplicates first. If the other record is in the system and is being investigated by another disease investigator, check with that disease investigator on the process and work together in order to determine if the person is the same person.

As we will be assisting Kansas City Health Department with their case investigation, please click [here](#) to go to the section with some additional information on conducting KCMO case investigations.

If you need to see the copy of the lab report, one might be attached in the Notes section.

If the record you have picked is for a resident of a long-term care facility, assign the record to Anna Glorioso. Mark in the notes section that this person is linked to a LTCF and link to the outbreak in the administrative tab if the outbreak has been created there yet.

EpiTrax | Welcome, Chelsea Collins | NEW CRM | EVENTS | OUTBREAKS | CRM SEARCH | EXPORTS | PEOPLE | AVR | SETTINGS

Edit Morbidity Event

Options | Workflow Options | View | Navigate | Assign to Investigator | Save & Continue | Save & Exit

Record #: 202006859 | Event type: Morbidity | Workflow status: Accepted by LHD | Investigator: Not assigned | Disease: COVID-19 | Investigating Agency: JACKSON COUNTY HEALTH DEPARTMENT | State case status: **Confirmed** | LHD case status: | Event date: 07/29/2020 | Brief note: | Save

Demographic | Clinical | Laboratory | Contacts | Encounters | Investigation | Notes | Administrative

Name: Last name, First name, Middle name, Parent/Guardian

Age: Date of birth, Current age, Age at onset, Age at event date

Addresses: Enter Address

Current Address and Address at Diagnosis: Remove as Address at Diagnosis

Street	Unit number	City	State	Zip code	County	Earliest known	Moved	Created	Note
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Jackson	08/06/2020	[Redacted]	08/08/2020	[Redacted]

Verified address [copy](#)

Other Addresses

Telephones: Telephone type, (Area) Phone, Ext, Country, Earliest known, Note

Email Addresses: Email Address

Demographics: Birth sex, Current gender, Primary language, Ethnicity, Race (Select all that apply)

Does this person have any tribal affiliation?

If either of these do not fit those criteria, we will take other steps.

For each investigation, we will be completing as many metrics as we can based on the available information. Before you start investigations, I would recommend looking through all of the tabs and getting a feel for what information is on all of them. Some of the information, like the “Case Info and Resolution Status” under the “Investigation” tab may be filled out in advance. Specimen information and lab information is something which can be pulled from the “Laboratory” tab.

When calling an individual, verify the name and DOB of the case-patient and then verify the address provided on the record. If the address is different from that which is listed on the record, make sure you change it. Remember, if the current address of the individual is not in the EJC jurisdiction, that case record will need to be sent to the correct health department.

Additionally, at the very bottom of the Investigation tab (on every sub-tab) is a series of questions asking about other encounters, including asking about whether or not the person is a food handler, health care worker, is involved with a group living scenario, or is involved with a daycare. Please make sure you complete these questions as well.

Contact Oriented

Food handler
Please select... ▼

Health care worker
Please select... ▼

Group living
Please select... ▼

Day care association
Please select... ▼

Occupation

Exposures

No exposures found.

Other

Imported from
Please select... ▼

Binational reporting criteria ⓘ
 ▼

Transmission mode
Please select... ▼

Risk factors

Risk factors notes

Other data 1

Other data 2

Contacts

During the investigation, you will identify contacts to the case-patient and have them entered into the system in the “Contacts” tab. For individuals who end up testing positive, we can promote the contact to their own case record and have it entered that way. This will be the case until there is an approved treatment for COVID-19 infection. Once you have the names and information for contact tracing use the following procedure:

1. Using the “Contacts” tab on the EpiTrax record, use “Person” search bar to see if they are already in the system.

- a. If the person already exists and you're certain they're the same (same phone number listed, DOB, etc.), select them
 - b. Review the information available including any cases they are linked to
 - c. If they are in the system for an unrelated case, proceed to step 4 below
 - d. If they are in the system for the same case, make sure they are linked to your case as well and make a note that contact was not attempted due to prior contact tracing
2. Enter all the information you have regarding the person but be sure to get the following:
 - a. First name
 - b. Last name
 - c. DOB (if exact date is unknown, age in years can be substituted in the box below)
 - d. Phone number
 - e. Contact Disposition
 - i. Should be listed as "Other" for all contacts
 - f. Disposition Date
 - i. Date of last exposure to the case-patient
 - g. "Link to an orphan contact with a record number" is used when a contact of the case you are working on already has a morbidity event in Epi Trax. You type the CMR of the morbidity record into the orphan contact field and press enter. There has been some confusion over this, so I think adding this in will clarify some that. This will prevent us from creating multiple contact records that don't actually link the morbidity event of the contact to the case patient.
3. Contact the case and follow standard protocol for contact tracing if they answer
4. If contact is not made, leave a voicemail that states the following:

"Hi this is (v) with the Jackson County Health Department calling for (w). The reason why I'm calling is due to a recent exposure you had with someone who tested positive for COVID-19 on (x date). Due to this exposure you are required to quarantine for 14 days from the date of exposure. This means your last day of quarantine is (y date). If you experience any symptoms at any point during this time we encourage you to seek testing and contact your doctor. If you have any questions regarding the exposure or quarantine please call me at (z phone number). Again my name is (v) with the Jackson County Health Department. Thank you."
5. After making contact or leaving the voicemail be sure to leave a note on the main page of the person in EpiTrax stating what action you did (spoke with vs voicemail) and information about the exposure. For example: "Left voicemail on 8/3 at 9am. Exposure at Sao graduation party on 7/25."
6. Repeat as necessary for all linked contacts

Sara Alerts

When completing the contact investigation, ask if the individual would like to be enrolled in Sara Alerts: “We use a program called Sara Alerts to monitor symptoms in those determined to be close contacts to a positive COVID-19 case so that we can quickly follow-up with testing resources and answer any questions. It is an automated program that will either text, call, or email you a link asking about common COVID-19 symptoms. Which would you prefer?”

If a contact wants to be enrolled in Sara Alerts, confirm the method they would like to receive updates and either the best phone number or email address for the method chosen. Then check the corresponding box in the “How would you prefer to be contacted?” section in the investigation tab. If a contact has multiple phone numbers listed in their record, you will need to add the phone number chosen to receive Sara Alerts in the investigation tab. To do this, hit “Save and Continue” and when the page reloads a new box will appear at the bottom of the screen: “What is the best number where you can receive a text/phone call?”

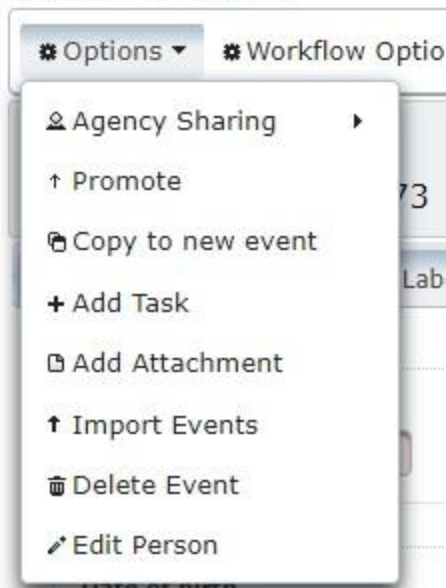
Make sure the date of last exposure and last day of quarantine are both answered in the investigation tab. If a contact is out of jurisdiction, we will not be enrolling them in Sara Alerts.

If a contact reports symptoms through Sara Alerts, you will receive a task to follow-up. Please complete the task and add a note in the notes section with the outcome of the follow-up (i.e. contact was misreporting symptoms for _____, contact has been promoted to a probable case, etc.).

Promoting Contacts

If a contact is experiencing symptoms and needs to become their own case, you can promote the contact’s record to a morbidity (case) record by hovering over the “Options” and then go to “Promote”

Edit Contact Event

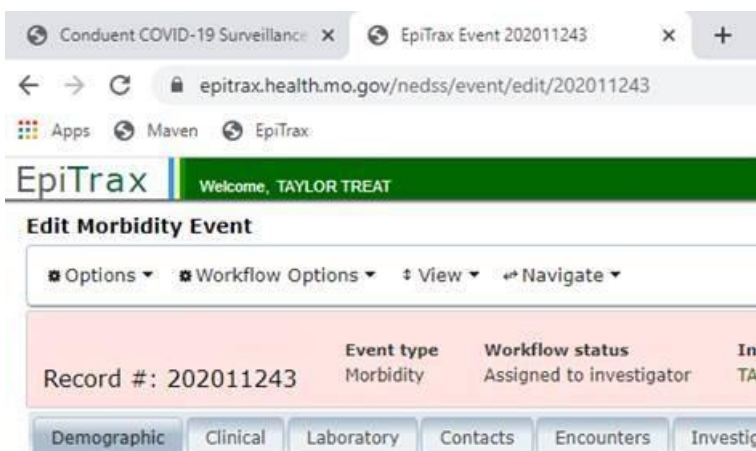


Identifying Potential Outbreak Scenarios

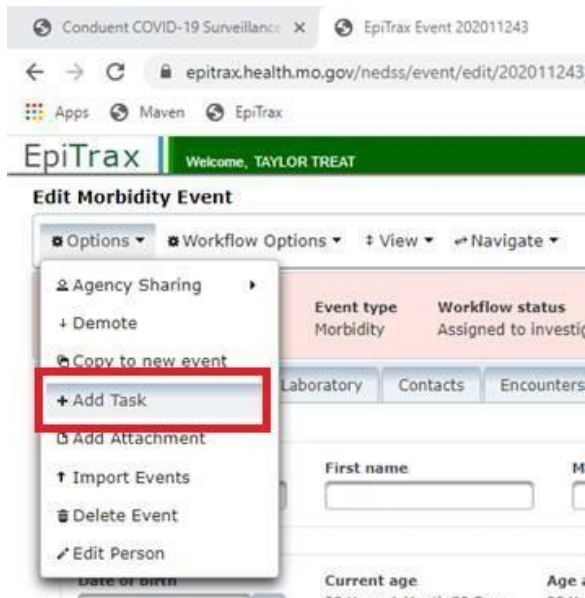
During the course of an interview, the person might divulge that there are multiple cases known in their close proximity, including their place of work. In the event that there are reports of additional cases or symptomatic people who would need to be investigated, let your epi supervisor know. Obtain as much information regarding the cases as possible as well as the location involving all of these individuals.

Business Follow-up

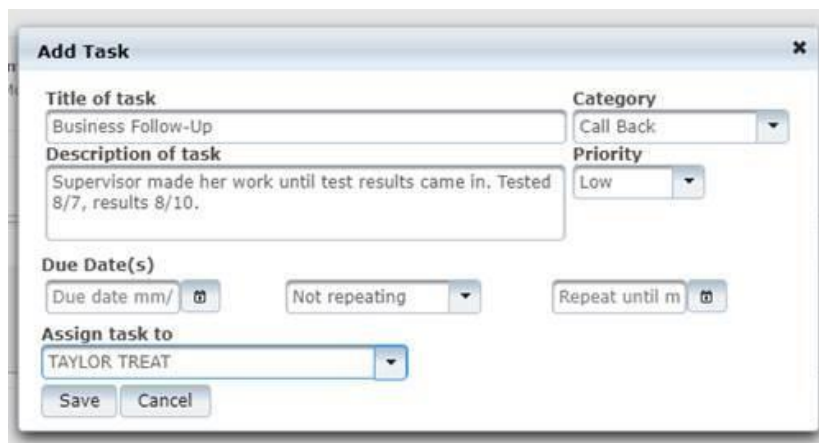
In the event that a case needs a follow-up (such as business), assign a task to your supervisor. This is done by selecting “Options” as seen below:



Once you open the drop down list click “+ Add Task” as seen below:



There’s not a task that really fits so we have decided to have “Call Back” as the category. Here’s an example:



This process will still list you as the investigator and allow you to complete anything you still need to work on while your supervisor can do a follow-up.

Notes during an Investigation

Encounters Tab

This tab is something which can be done to chart the exact times when there was an encounter for the case-patient. If you’re calling someone and charting a conversation, it very well can be

put into this section and I would recommend doing this so it would timestamp that exact conversation.

Especially in the event that you are trying to mark specific items which came up in a conversation, this would allow for you to note the times at which the calls went through.

Notes Tab

The notes tab is a more “general notes” section where we can mark items of which the state should be aware while reviewing the investigation progress.

Traveling while Symptomatic

If your case-patient has traveled while symptomatic and the travel was out of jurisdiction while either infectious or potentially exposed, create a task for your supervisor to complete an out of state report for the state of MO.

If the case-patient flew while symptomatic, make sure you collect information regarding the airline, date(s) of travel, time of departure/arrival, and seat number (if known)

Schools

If you are investigating an individual who is of school age, please work to verify the address of the individual. We will carry out specific metrics for associating cases in schools with specific facilities in order to best keep track of the individuals in each scenario. Below are the layouts for colleges and universities and another for primary school.

Colleges and Universities

Individuals who attend college or universities will be considered in the jurisdiction of the place in which their current address is located. If someone lives in Lee’s Summit, but goes to school at a college at Missouri in Columbia, then it would be the jurisdiction of Boone County. You may also encounter casepatients who attend university out of state, like someone whose family lives in Independence, but attends the University of Kansas. Both of these would be routed to the proper jurisdiction.

If you have an individual who is college-aged (18-24 years of age), please follow this guidance:

1. Ask if the address on file is their permanent address or temporary (e.g. dorm or campus apartment)
 - a. If the address is not where they currently live, such as their parent’s address, update the address in EpiTrax by adding the new address in the Demographics tab.
2. If the address is changed to a new address, add a note stating original address was permanent and that the case-patient is a student at ____.
3. Assign case investigation record to appropriate jurisdiction
 - a. If the school is located within Missouri:
 - i. University of Missouri (Mizzou, MU): Columbia/Boone County Health Department, City of Columbia, MO
 - ii. Missouri State University (MSU): Greene County Health Department, city of Springfield, MO
 - iii. Northwest Missouri State: Nodaway County Health Department, city of Maryville
 - iv. Missouri University of Science and Technology (MST, Rolla): Phelps County, city of Rolla
 - b. If the school is located out of state:
 - i. Change LHD Case Status in the Administrative Tab to “Out of State”
 - ii. Email ETCaseReassign@health.mo.gov and ask them to re-assign the case investigation to the appropriate state
 1. University of Kansas (KU): Douglas County Health Department, city of Lawrence, KS
 2. Kansas State University (K-State, Kansas State): Riley County Health Department, city of Manhattan, KS

K-12 School

If you are investigating an individual who is of K-12 age (4-18), please make sure you’re asking about any schools with possible exposures. Make sure they are marked as having a school exposure in the exposures tab. This is to not only document where they could have possibly picked it up, but also where they could have spread it.

The list of all of the schools in EJC and their accompanying district can be found here: [Eastern Jackson County Schools.xlsx](#). If the child says they do not attend any of these schools or the school is not found on the list, let the Epi Staff know and we can have it added in. I don’t think private schools are on this list yet. Make sure you use the school name AS IT IS LISTED IN THE EXCEL SHEET in order to avoid confusion. In order to fully note the school for our data

analysis purposes, there are TWO places where the information regarding the school should be noted and one place for the district.

1. The space to enter the school name can be found in the investigation tab under “Exposure History.”

The screenshot displays a software interface with a top navigation bar containing tabs: Demographic, Clinical, Laboratory, Contacts, Encounters, Investigation, Notes, and Administrative. The 'Investigation' tab is selected and highlighted with a red box. Below the navigation bar, the 'Investigative Information' section is visible, including 'Associated Forms' and a 'Manage' button. The main content area is titled '2019-nCoV, Version: 1' and contains several sub-sections: 'Case Info and Resolution Status', 'Interviewer Information', 'Ignore', 'SARS-CoV-2 Testing', 'Symptoms and Clinical Course', 'Past Medical and Social History', and 'Exposure History'. The 'Exposure History' tab is highlighted with a red box. Under 'Exposure History', there is a section titled 'General and Group Settings Exposure History' with the instruction: 'In the 14 DAYS BEFORE onset of illness, did the patient have any of the following exposures (select all that apply)?'. This section includes several questions with radio button options: 'Contact with a known COVID-19 case (probable or confirmed)', 'Workplace', 'Adult congregate living facility (e.g., group home, homeless shelter)', 'School, university, or childcare center', and 'Long-term care facility (e.g., skilled nursing, assisted living)'. The 'School, university, or childcare center' question is highlighted with a red box.

2. In the Administrative tab, there will need to be two points of entry for data regarding the school.

- a. Event Name

- i. Enter the name of the school

1. If there is a specific exposure event, put an exposure indicator with this. So if there is a specific exposure, like on a specific team or a classroom where we would need to track exposures, we can follow them there.

- b. Outbreak Name

- i. This will be for the name of the school district. We are entering school districts as generic outbreaks (e.g. Jackson – Independence School District)

1. This designation will NOT be used if there is a specific outbreak within that school district (e.g. Jackson – Truman High School Football Team).

For those, you would use the specific outbreak metric

EpiTrax NEW CMR | EVENTS | OUTBREAKS | CMR SEARCH | EXPORTS | PEOPLE | AVR | SETTINGS

Welcome, Charles Collins

Edit Morbidity Event

Options | Workflow Options | View | Navigate

Assign to Investigator | Save & Continue | Save & Exit

Record #:	Event type	Workflow status	Investigator	Disease	Investigating Agency	State case status	LHD case status	Event date	Brief note
	Morbidity	Accepted by LHD	Not assigned	COVID-19	JACKSON COUNTY HEALTH DEPARTMENT				<input type="text"/> Save

Demographic | Clinical | Laboratory | Contacts | Encounters | Investigation | Notes | Administrative

Event Information

Event id	Record number	MMWR year	MMWR week	Date record created
----------	---------------	-----------	-----------	---------------------

Case / Outbreak

LHD case status	State case status	Outbreak associated	Outbreak name	Queue
<input type="text"/>	Pending	<input type="text"/>	No associated outbreak	Not assigned to queue

Auditing / Investigation

Jurisdiction of residence	LHD investigation/intervention started	LHD investigation completed	Investigation outcome	Event name
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Reporting Agency

Facility	Type	Address / Phone
<input type="text"/>		

Reporter

Last name	First name	Middle name	Phone number
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Reported Dates

Date first reported to public health	Results reported to LHD	Date CDC was first verbally notified
<input type="text"/>	<input type="text"/>	<input type="text"/>

Call Log

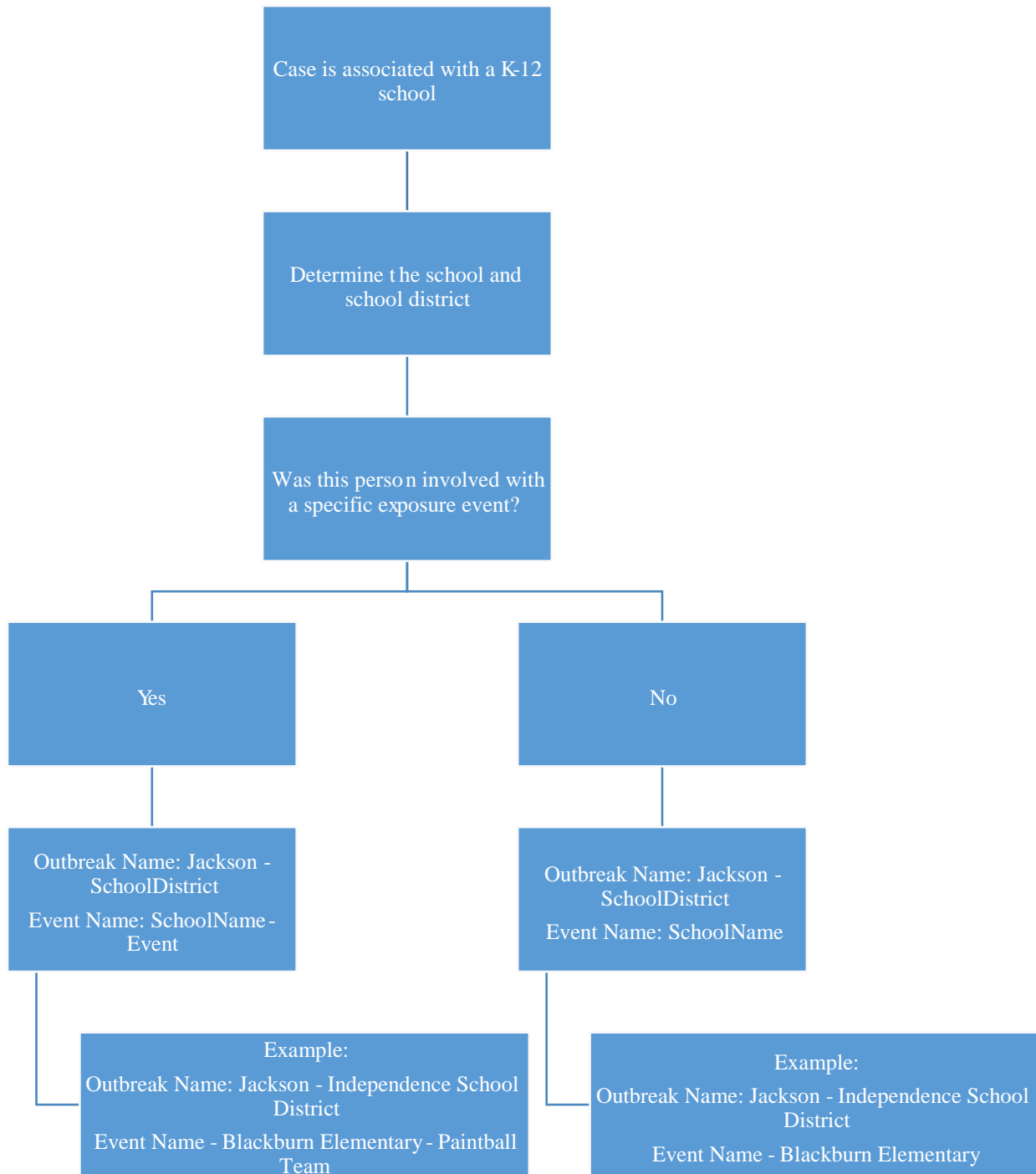
Call Attempt 1

Date:
<input type="text"/>
Time:
<input type="text"/>
Outcome:
<input type="text"/>

So if you're investigating a case and the child goes to Blackburn, go into the excel file and check on the school location. Then fill out the following as such:

- Outbreak Name: Jackson – Independence School District
- Event Name: Blackburn Elementary

Remember, if there is a more specific outbreak associated with that, like there is an outbreak on the Blackburn Elementary Paintball Team, then the more specific outbreak would be used to associate it.



Determining Case Status

CSTE produces a case definition for each reportable disease and we follow the case definitions provided.

The case definition for COVID-19 can be found here:

<https://www.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case->

[definition/2020/08/05/](#). As this is a changing definition as more information is discovered regarding COVID-19, I will try an update this link as a new one is provided.

Case Classification

Confirmed

- Meets confirmatory laboratory evidence.

Probable

- Meets clinical criteria AND epidemiologic linkage with no confirmatory laboratory testing performed for SARS-CoV-2.
- Meets presumptive laboratory evidence.
- Meets vital records criteria with no confirmatory laboratory evidence for SARS-CoV-2.

Suspect

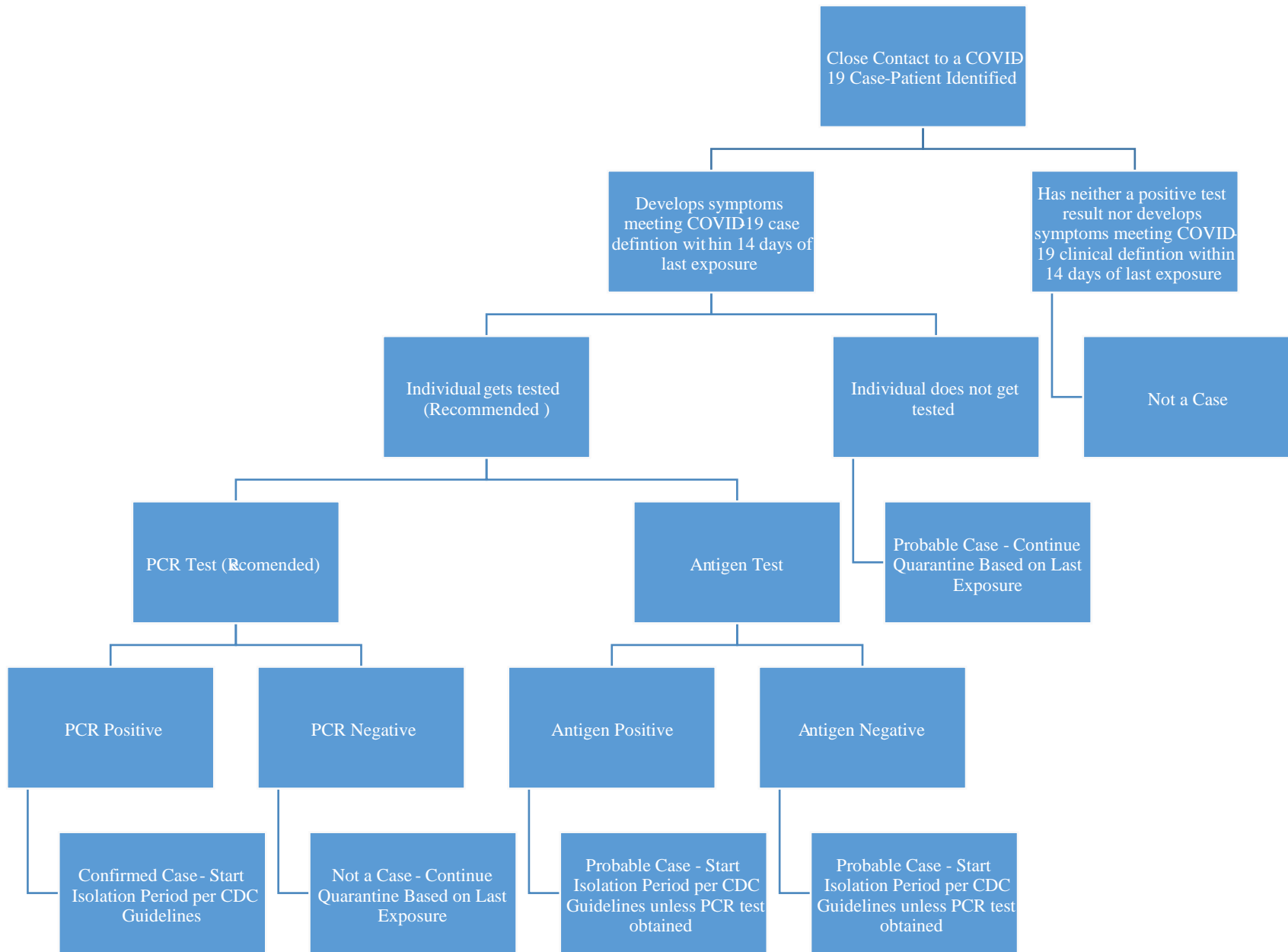
- Meets supportive laboratory evidence*** with no prior history of being a confirmed or probable case.

Remember that there is a difference between “confirmatory laboratory testing” (PCR, LAMP), “presumptive laboratory testing” (antigen), and “supportive laboratory testing” (antibody).

Bullet point #1 under probable cases has a very important caveat to it at the end. If someone is epilinked and symptomatic, but they have gotten PCR tested and it’s negative, then they are considered “Not a Case” but they are still needing to complete out their quarantine period. So if someone is a close contact to a case-patient, the contact is symptomatic, gets PCR tested, and that test is negative, then the full requirements of bullet point 1 are not met since confirmatory laboratory testing WAS performed. They would be considered to be “Not a Case” but would still need to finish out the quarantine period.

In the interest of covering all bases, let’s say that someone is a close contact to a case-patient, this person is symptomatic, this person gets tested, and that test is negative. So not a case. Then, let’s say that 2 days later (but still within the 14 days quarantine window), the symptoms change. This person starts coughing. If there is a change in symptoms, then the person would go back to being a probable case. This would continue until they get tested, so they would follow that flow chart again.

I recommend that the person get a PCR test if there is the suspicion of a positive. Especially for future quarantine purposes, it's important to have that PCR result. If someone has a PCR positive COVID-19 lab result and are exposed to another COVID-19 case-patient within three months of their infection, there is no quarantine for that person. If the person was a probable case (through a symptomatic contact or an antigen positive), that person would need to quarantine again.



Closing an Investigation

The screenshot shows the 'Edit Morbidity Event' form in the 'Administrative' tab. The form is for record # 202018280, a COVID-19 case under investigation. Key fields highlighted with red boxes include: 'Complete Investigation' button, 'LHD case status' (Please select...), 'State case status' (Confirmed), 'Outbreak associated' (Please select...), 'Outbreak name' (No associated outbreak), 'LHD investigation/intervention started' (mm/dd/yyyy), 'LHD investigation completed' (mm/dd/yyyy), and 'Investigation outcome' (Please select...). Other visible fields include 'Event id', 'Record number', 'HMWR year', 'HMWR week', 'Date record created', 'Jurisdiction of residence', 'Reporting Agency', 'Reporter', and 'Reported Dates'.

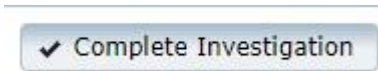
Closing an investigation will take place in the “Administrative” tab. There are a few elements which would need to be filled out before the investigation can be closed. Below are some notes about the records:

- LHD case status ○ For the most part, we are going to go through and mark them as the same as the “State case status next to it. Unless we find out something specific with health results to LHD for the case which would nullify the lab result, it would be marked in the same way.
- Outbreak associated ○ Pretty self-explanatory, but in the event that we have outbreaks which we are investigating, we will create an outbreak record, then link them as needed
- Queue
 - Don’t worry about this
- LHD investigation/intervention started ○ Mark this as the date on which you first made an attempt to contact the person
- LHD investigation completed ○ Mark this as the date on which you are closing the investigation
- Investigation outcome ○ Pretty self-explanatory. Just mark the means by which you’re closing the investigation

Pretty much everything else is an option on this tab. I would recommend using the “Call Log” at the bottom to note the times you needed to call. This will be especially useful if we are closing someone as lost to follow up.

If the individual is being closed as Lost to Follow-Up, please follow the [directions below](#) to route the case to our Public Health Office Assistants to send letters.

If the case record has been completed and all of the investigation metrics have been filed in, click the “Complete Investigation” button.



If the case that you are investigating is a KCMO case, this is where you stop. If the case is a JACOHD case, once the investigation has been completed and the record is ready to be routed to the state for approval. Click “Approve Event.”

Lost to Follow-up Cases

In the event that a phone number is not available and cannot be retrieved (i.e., you’ve reached out to the testing facility and/or IP and no number is available, the number is disconnected, the number is wrong, etc.), assign a task to Anna Glorioso. This is done by going to the “Notes” tab, scrolling to the very bottom, and clicking the button on the right side that says “Add Task”. In the pop-up window enter the necessary information so it looks like this:

A screenshot of a web-based "Add Task" pop-up window. The window has a title bar "Add Task" with a close button (X) on the right. The form contains several fields: "Title of task" with the text "Lost to Follow-Up Letter"; "Description of task" with the text "Phone Disconnected"; "Category" dropdown menu set to "Call Back"; "Priority" dropdown menu set to "Low"; "Due Date(s)" section with a date field "11/18/2020", a calendar icon, a "Not repeating" dropdown, and a "Repeat until m" field with a calendar icon; "Assign task to" dropdown menu set to "Anna Glorioso"; and "Save" and "Cancel" buttons at the bottom.

Be sure you add a due date! When you add in a due date, make it 48 hours from the date on which you make the task. Once the task has been assigned to Anna you can complete the investigation. If they call back you can always modify their case and add investigation info.

Closing a Lost to Follow-Up Case

Before closing a case as Lost to Follow-Up, complete the minimal metrics for the case, seen below:

- Demographics Tab
 - Name
 - DOB
 - Address at Diagnosis
 - Address must be marked as a “Verified address” in EpiTrax. This might require you to re-enter the address. Start with the Street and enter the ZIP. If the system can recognize the address, the other elements should auto-fill.

Current Address and Address at Diagnosis

Street	Unit number	City	State	Zip code	County
Verified address map					

- Phone
- Sex
- Race
- Ethnicity
- Clinical Tab
 - Date Diagnosed
 - The finalized date on the first positive lab result of the current infection
 - Hospitalization info if the H&P is on there
 - Otherwise mark “unknown”
 - Death
 - Assume no unless the case is marked otherwise
- Investigation Tab
 - Case Info and Resolution Status
 - Date of specimen collection
- Administrative Tab
 - LHD Case Status
 - Mark according to test type and status
- PCR and LAMP = confirmed; Antigen

and/or symptomatic
contact to a case-
patient = probable

- Outbreak associated
 - Yes if part of a known outbreak (e.g. LTCF, tested through a school or workplace, etc.)
- Investigation Outcome
 - Mark as “Lost to Follow-Up”

Surveillance Cases

Per CDC guidance on case investigation, case-patients which have their initial test results of the current infection at least 14 days before the current date may be closed out as surveillance cases. These cases are pulled from the listing of cases which have been accepted by LHD in the queue for investigations, but have an older specimen collection date for the positive test result.

The list of case records which should be closed out can be found here: [JACOHD Out of Date Surveillance Cases.xlsx](#). The CMR record numbers are on the left of the spreadsheet. There is no particular order for accepting these cases so feel free to grab a few at a time. I’ve found that having 5 windows open at once will allow me to make the changes to one record while the others are saving. These cases will go through a similar process to disease investigation as you assign it to yourself as an investigation, complete the requirements (see below), then Complete/Approve Investigation.

Not all of the information will be available. These are the fields which need to be filled out. In the event that the lab report, patient record, or H&P does not contain the information to close the case as surveillance, mark that specific section as “Unknown.” In order to close a case record as a surveillance case, please follow the instructions below:

- Demographics Tab
 - Name
 - DOB
 - Address at Diagnosis
 - Address must be marked as a “Verified address” in EpiTrax. This might require you to re-enter the address. Start with the Street and enter the ZIP. If the system can recognize the address, the other elements should auto-fill.

Current Address and Address at Diagnosis

Street	Unit number	City	State	Zip code	County
Verified address map					

- Phone Sex Race
 - Ethnicity
- Clinical Tab Date Diagnosed
 - The finalized date on the first positive lab result of the current infection Hospitalization info if the H&P is on there
 - Otherwise mark “unknown” Death
 - Assume no unless the case is marked otherwise
- Investigation Tab Case Info and Resolution Status
 - Date of specimen collection
- Administrative Tab LHD Case Status
 - Mark according to test type and status
- PCR and LAMP = confirmed; Antigen and/or symptomatic contact to a case-patient = probable
 - Outbreak associated
 - Yes if part of a known outbreak (e.g. LTCF, tested through a school or workplace, etc.)
 - Investigation Outcome
 - Mark as “Surveillance”

Routing to another Health Department

If you has assigned yourself a case and the address is in another jurisdiction, you will just go ahead and reroute it to the appropriate jurisdiction. This can be done by opening the individual record, clicking on “Workflow Options” and going down to “Route to LHD.” Then fill in the appropriate jurisdiction for the record and click to route.

The screenshot shows the EpiTrax interface for editing a morbidity event. The top navigation bar includes 'NEW CMR | EVENTS | OUTBREAKS | CMR SEARCH | EXPORTS | PEOPLE | AVR | SETTINGS'. The main header is 'Edit Morbidity Event'. Below this is a toolbar with 'Options', 'Workflow Options', 'View', and 'Navigate'. The 'Workflow Options' dropdown is highlighted with a red box, showing three options: 'Assign to Investigator', 'Route to LHD', and 'Workflow History'. The form itself is divided into several sections: 'Record' (with fields for Type, Workflow status, Investigator, Disease, Investigating Agency, State case status, LHD case status, Event date, and Brief note), 'Demographics' (with tabs for Demographics, Contacts, Encounters, Investigation, Notes, and Administrative), 'Name' (Last name, First name, Middle name, Parent/Guardian), 'Age' (Date of birth, Current age, Age at onset, Age at event date), 'Addresses' (Current Address and Address at Diagnosis table), 'Other Addresses', 'Telephones', 'Email Addresses', and 'Demographics' (Birth sex, Current gender, Primary language, Ethnicity, Race, and a checkbox for tribal affiliation).

Routing Out of State

If there is an Out of State case, you would change LHD Case Status to the “Out of State” mark on the Administrative tab, enter the new address in the Demographics tab, and close out the case. Alert the Epi Team so they may inform the state to route the case to the appropriate jurisdiction.

Out of Jurisdiction Isolation

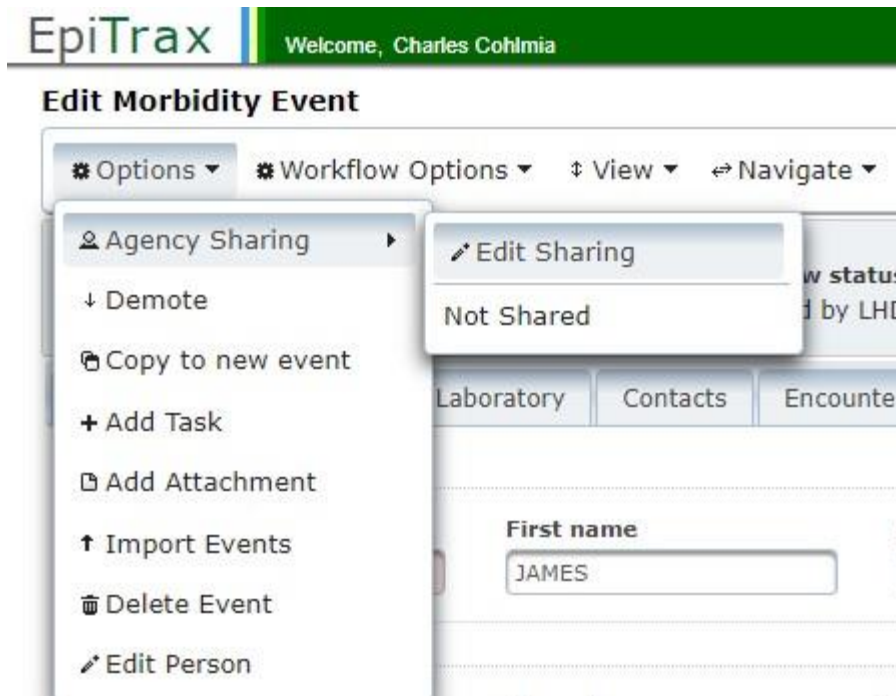
Sometimes, an individual who lives in our jurisdiction will test positive and will isolate out of our jurisdiction. For these individuals, we will still complete the investigation (if they are our case) and then do a jurisdiction share so the other LPHA may see the file. This will only happen if they are isolating in the state of MO, though.

In-state Isolation

First, go to the notes section and make a note there that the person is isolating in a different jurisdiction.

On the demographic tab, change the “Current Address” to the address at which the individual is isolating

Go to the “Options” tab in the top-left of the case record, go to “Agency Sharing,” then “Edit Sharing.”

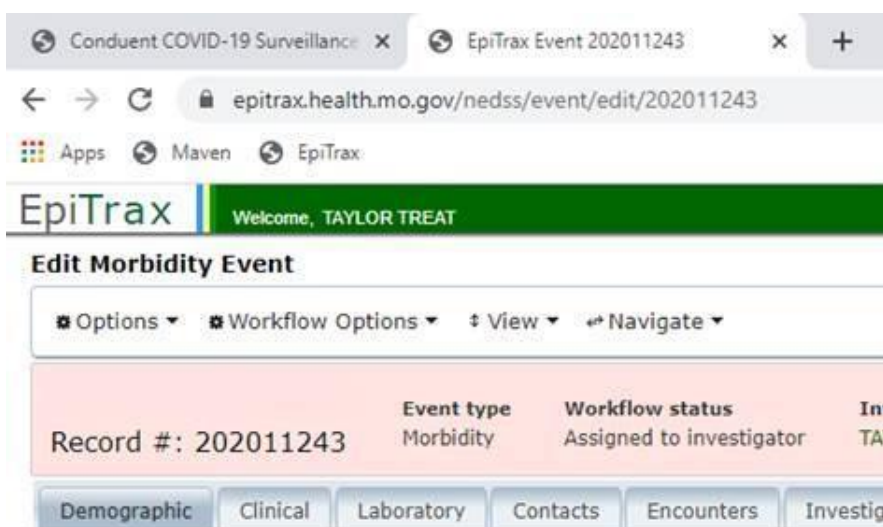


From there, select the jurisdictions which should also be receiving this record, then click save.

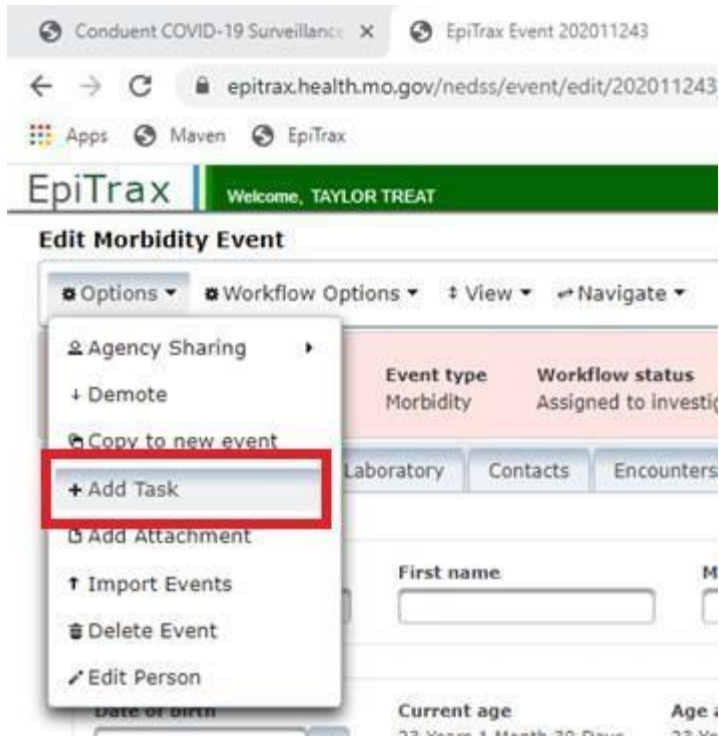
Out-of-State Isolation

If an EJC case-patient is isolating out of state, create a task for your supervisor to conduct the OOS notification to the state of Missouri.

In the event that a case needs a follow-up (such as business), assign a task to your supervisor. This is done by selecting “Options” as seen below:



Once you open the drop down list click “+ Add Task” as seen below:



There's not a task that really fits so we have decided to have "Call Back" as the category. Here's an example:

Add Task ✕

Title of task Out of State Isolation	Category Call Back	
Description of task Notify MO that this person is isolating in KS	Priority Low	
Due Date(s) Due date mm/ <input type="text"/> <input type="text"/>	Not repeating <input type="text"/>	Repeat until m <input type="text"/>
Assign task to ERIN PETRO		
Save Cancel		

This process will still list you as the investigator and allow you to complete anything you still need to work on while your supervisor can do a follow-up.

Routing to another Investigator

In the event that you are assigning yourself a case and you need to send the investigation to another person in the health department, you can assign the record to another individual by following these steps. Go to “Workflow Options” in the top bar, then “Assign to Investigator.” Type in the name of the investigator and the system.

The screenshot shows the EpiTrax interface for editing a morbidity event. The 'Workflow Options' menu is open, highlighting 'Assign to Investigator'. The form includes fields for 'Record #', 'Investigator' (Charles Colombia), 'Disease' (COVID-19), 'Investigating Agency' (JACKSON COUNTY HEALTH DEPARTMENT), 'State case status' (Confirmed), 'LHD case status', 'Event date' (08/07/2020), 'Event Info' (Event id: 18190), 'Case / Outbreak' (LHD case status, State case status, Outbreak associated, Outbreak name, Queue), 'Auditing / Investigation' (Jurisdiction of residence, LHD investigation/intervention started, LHD investigation completed, Investigation outcome, Event name), 'Reporting Agency' (Facility: QUEST DIAGNOSTICS LENEXA), 'Reporter' (Last name, First name, Middle name, Phone number), and 'Reported Dates' (Date first reported to public health, Results reported to LHD, Date CDC was first verbally notified). A 'Call Log' section is also visible with fields for Date, Time, and Outcome.

Kansas City Health Department Investigations

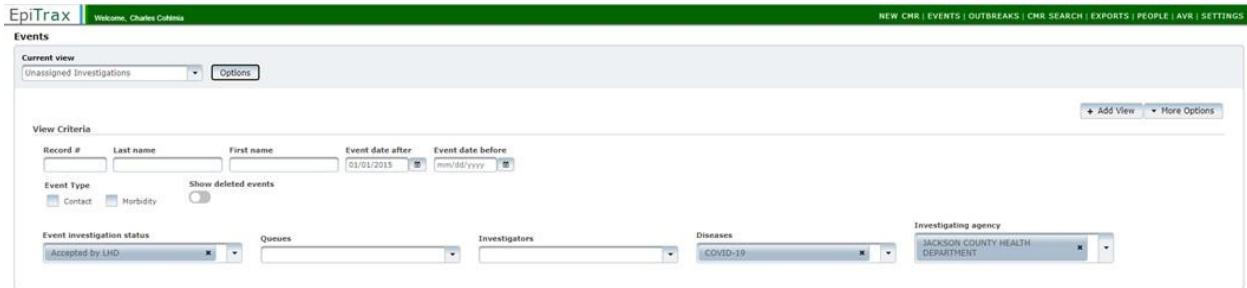
As we are going to be assisting in case investigation, helping the Kansas City Health Department, Disease Investigators will need to set up their events so they will have quick access to those case files. Below are the additional instructions to follow for setting up additional rounds of events and investigation notes for KCMO cases.

For Disease Investigators:

Go to your Events tab in EpiTrax:

The screenshot shows the EpiTrax 'Events' page. The 'Current view' dropdown is set to 'Unassigned Investigations'. The page shows a list of events with a pagination bar at the bottom indicating '(Events 1 - 50 of 62, Page: 1/2)'. There is an 'Options' button next to the dropdown.

Click on “Options”



Click “Add View”

- New View Name: Unassigned Investigations – KCMO
- Event Investigation Status: Accepted by LHD
- Diseases: COVID-19
- Investigating Agency: Kansas City Health Department

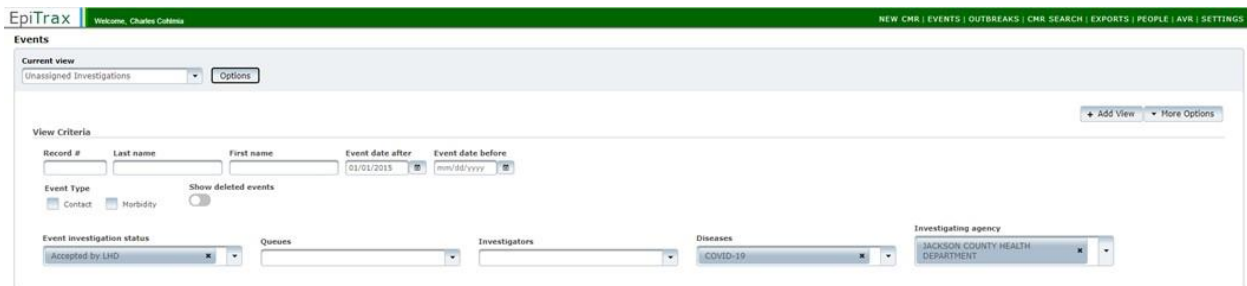
Then Click “Save”

For Public Health Office Assistants:

Go to your Events tab in EpiTrax:



Click on “Options”



Click “Add View”

- New View Name: Routed to KCMOHD
- Event Investigation Status: Assigned to LHD
- Diseases: COVID-19
- Investigating Agency: Kansas City Health Department

Then Click “Save”

Per Kansas City Health Department’s request, when we go through and take the cases for investigation, we will tackle the ones with the **NEWEST** “Event Date” first. The investigations

will happen as normal and, if anything comes up regarding those cases or anything that you feel that KCMO would need to know, feel free to mark it in the case and bring it up on epi calls as well as email us. We will be sending KCMO updates on their cases as things become more involved and if any outbreak situations are identified. I am asking that KCMO provide us updates on any evolving situations which would need to be made as well as information on any COVID-19 testing clinics they have.

For the time being, all follow-ups for businesses and LTFU letters would be routed through normal channels (your epi supervisor and public health office assistants, respectively). I will ask them how they are managing long term care facilities and, as I find out more information, I will let you know.

Public Health Office Assistants will go through and assist in the accepting the investigations into the queue.

Investigations

In the end, all KCMO cases must be routed to the KCMO jurisdiction. Now that all of the JACOHD investigators have read/write access to the KCMO jurisdiction, the routing of these cases can happen at any time. If you know in advance that the person lives in KCMO, we can go ahead and route them to the other LPHA. If you find out at some point in the investigation process, you can wait until the very end and then route the case to KCMO.

Please note that, if you do assign the case to yourself at the very end of the investigation, follow these steps:

1. Assign the case to KCMOHD jurisdiction
2. Accept the event
3. Assign the case to yourself
4. Complete investigation
5. Mark in the "Brief Note" section – Investigated by JACOHD
6. Approve investigation

This way, it will be counted in the listing for KCMO cases and KCMO will know that, if there are questions on the case record, they can reach out to JACOHD for additional information.

Kansas City, Missouri Long Term Care Facilities

For a time when you come across a case and the person is a resident in a long-term care facility, the case will be assigned to Hallie Sutton with the Kansas City Health Department. Please include in the Notes section of the case the name of the facility at which the person resides and update the address in the demographics tab.

Kansas City, Missouri Isolation and Quarantine Letters

- Assign task to Dawn Black
- Title task “Exposure/Case Notification”
- Mark task as “High” priority
- Name of the business/organization
- Date of exposure
- Date of interview and end of quarantine period
- Return to work or exempt from work
- Method for letter being sent (e-mail, fax, mailed letter)

Support and Help:

EpiTrax Resources:

For EpiTrax user questions (“how do I...”)

- Phone: 573-526-9533
- Email: epitrax@health.mo.gov
- Help Desk office hours: 8:00 am– 8:00 pm, Monday- Sunday

To request the re-assigning of cases or OOJ contacts

- ETCaseReassign@health.mo.gov

To request the de-duplication of cases (where both records are in EpiTrax, not Websurv)

- DHSS.BRDIEpiTraxSupport@health.mo.gov
 - If unable to send to this address, send to epitrax@health.mo.gov and they will forward

For EpiTrax updates, upcoming trainings, user guides, demos, FAQs, etc.

- <https://clphs.health.mo.gov/lphs/diseaseprevention/epitrax/>

Updated COVID-19 Info:

Updated CSTE COVID-19 case classifications:

<https://wwwn.cdc.gov/nndss/conditions/coronavirusdisease-2019-covid-19/case-definition/2020/08/05/>

Updated antigen testing guidance: <https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigentests-guidelines.html>

Appendix 2

COVID-19 TALKING POINTS FOR CHILDCARE CENTERS

- Be open and transparent with what is happening in your facility
 - o Cleaning and disinfection protocols
 - o Social distancing measures
 - o Procedure for a COVID-19 positive employee
 - o Procedure for a COVID-19 positive child
- Do NOT release identifying information on the person who has tested positive
- Communicate with employees and parents when you have a COVID-19 positive in the building (employee or child) WITHOUT releasing identifying information
 - o Use “person” not “child” or “employee”, as this may be enough detail to determine who the positive person is.
 - o You can state which specific room the positive person is associated with; everyone in the room will be on quarantine, so there is no concern with not being able to protect the person’s identity.
- Create an atmosphere of trust with your employees so that they do not come to work sick or after having been exposed to a close contact of someone with COVID-19.
- Because of the nature of children and personal hygiene, in rooms with children five years of age and younger, all persons in the room of the person who tested positive are considered close contacts.
- If possible, wait at least 24 hours before disinfecting the room the positive case was in. Wipe down all surfaces, disinfect all toys, play stations and materials, and restrooms.

“BEST PRACTICES”

- Cohort children as much as possible. Do not mix rooms at the beginning and end of the day or have a large, common area where children wait. This increases potential contacts that one person has and therefore the possibility of spread of infection.
- Curbside drop-off of children is ideal. Have one designated person get the child from the car, escort them to their room, and ensure they wash their hands upon entering the classroom. Follow a similar procedure at the end of the day, ensuring the child washes their hands before leaving the facility.
- Do not serve meals “family style”.
- Do not allow children to share cots, bedding, blankets, or personal toys.
- Try to keep children spaced out, especially at meal times; do not allow children to sit across from each other, instead seat all children on the same side of the table.
- Wash hands upon arriving at facility, before eating, after using the restroom, after playing outside or in a group activity, and before going home.

SAMPLE MESSAGING

COVID-19 Positive (employee or child)

“Good Morning/Afternoon/Evening,

The health and safety of our employees and the children in our care is our priority, and as such, we have taken numerous measures to prevent any child or employee from being exposed to COVID-19 in our facility.

Unfortunately, since people are infectious two days before they first have symptoms, or may not even have symptoms, there is a possibility of exposure to COVID-19.

We have recently had a person in the (infant/toddler/preschool/pre-k) room who tested positive for COVID-19. Based on that person’s (symptom onset/test date), we have identified and notified all close contacts as defined by the CDC and local health department. If you have not been personally contacted, your child was not exposed to COVID-19 and may continue coming to (facility name).

Thank you for entrusting us with the care of your child. If you have any questions or concerns, please do not hesitate to call (name of person taking calls) at (number) or the Jackson County Health Department at 816-404-6416.”

REFERENCES AND ADDITIONAL RESOURCES

<https://www.cdc.gov/coronavirus/2019-ncov/communication/toolkits/childcare.html>

<https://health.mo.gov/safety/childcare/pdf/covid-19-scenarios-with-action-steps.pdf>

<http://kidswinmissouri.org/wp-content/uploads/2020/05/Preparedness-and-Planning-for-Child-Care-Programs-FINAL.pdf?x97712>

Glossary of Terms

- **Case Investigation** – investigative process which involves calling a person diagnosed with a reportable disease, asking specific questions pertinent to that disease, compiling information, and reporting data.
- **Case Patient** – a person who is diagnosed with or tests positive for a reportable disease.
- **Close Contact (COVID-19)** – a person who is within six feet of a case patient for 15 minutes or more within a 24-hour timeframe.
- **Contact Investigation** – investigative process which involves calling persons who have been contacts of a person diagnosed with a reportable disease. Determining contact status is dependent on the reportable disease and transmission dynamics.
- **Disease transmission reduction** – measures that can be taken by the infected person to reduce the chances of transmitted an infectious disease to another person; e.g., hand-washing, isolation, not sharing meals, etc.
- **Isolation** – maintaining physical separation after diagnosis with an infectious disease; separation of a positive individual from people who are not positive.
- **Quarantine** – maintaining physical separation after being exposed to an infectious disease; separation of an exposed individual from those who have not been exposed.
- **Reportable Disease** – a specific disease that is reportable to the given state or local health department within a specified timeframe.
- **Risk Factors** – conditions which are present that may increase the likelihood of disease transmission or increase severity of disease in an affected person; e.g., chronic lung disease, diabetes, heart disease, etc.
- **Sources of Exposure** – locations or events in which a case patient may have been exposed to and acquired an infectious disease.
- **Symptom** – a physical condition that a person experiences as a result of a disease; e.g., cough, fever, shortness of breath, etc.
- **Symptom duration** – the amount of time that symptoms of the specific disease last.
- **Symptom onset** – the day and time that symptoms of the specific disease first start.