Covid-19 Contact Tracing Playbook

Introduction

COVID-19 Contact Tracing Playbook

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As U.S. states rollout plans to gradually reopen society, there are four essential actions that governments must commit to—and invest in—now so they can reopen society as quickly and safely as possible while preventing another explosive spread of the COVID-19. (Figure 1)

Contact tracing will be a key component of any successful suppression effort to “box in” COVID-19. In contact tracing, local and state health departments quickly identify people infected with COVID-19 using widely implemented testing programs; instruct infected people to isolate; find and notify their contacts; and support these contacts so they can quarantine for 14 days. Read about "Box it in"...

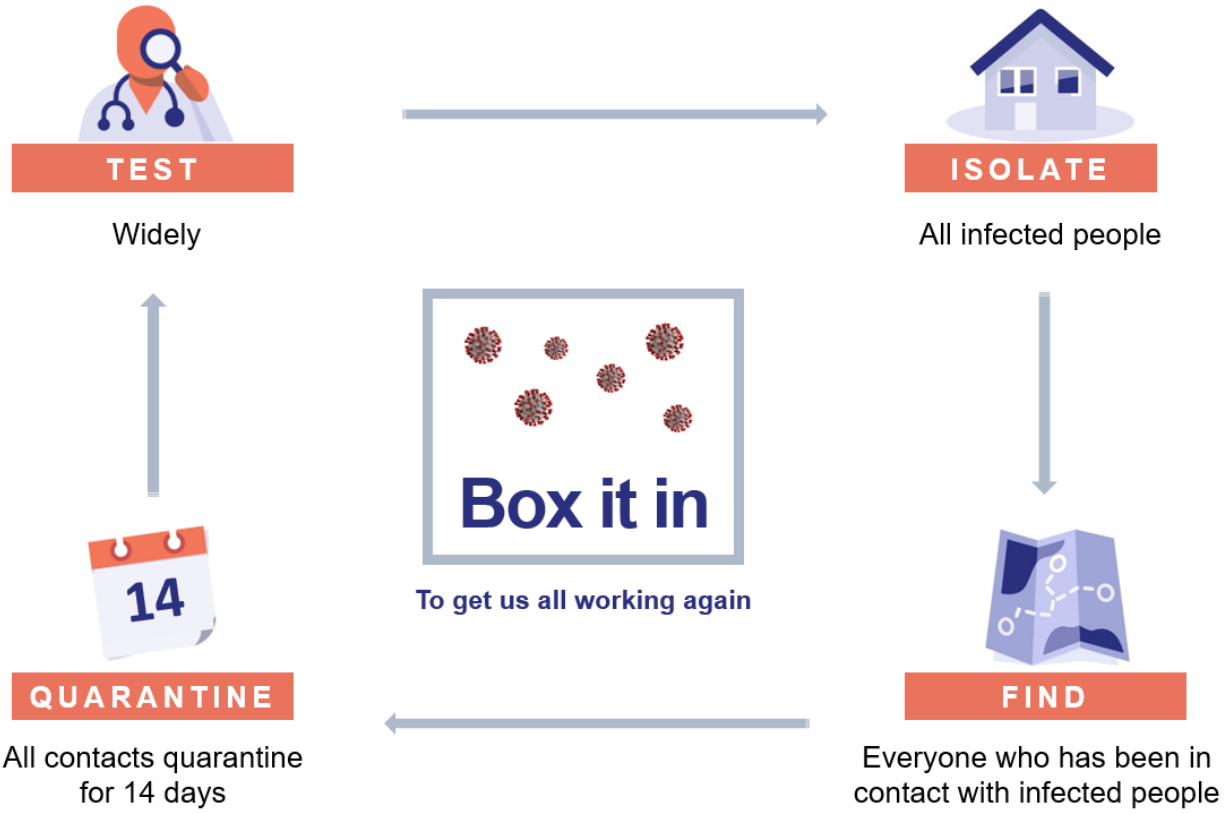

Figure 1. Box It In

Contact tracing is a tried and true public health measure that has been successfully used to contain communicable diseases, such as HIV, sexually transmitted infections, and tuberculosis. As in all public health responses, tools must be adapted to meet the challenges of each microbe. Contact tracing for COVID-19 must be executed on a significantly larger scale, adapting to unique challenges of the virus including asymptomatic spread. Countries including China, Germany, South Korea and Singapore have all done this successfully.

It is urgent for U.S. state and local health departments to quickly prepare and implement contact tracing to box in COVID-19.

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4 STEPS

Contact tracing for COVID-19 includes four key steps:

1. **Identify and notify cases** of their confirmed or probable COVID-19 status. Provide instructions on isolation and treatment.
2. **Interview cases** and help them identify the people they were in contact with during their infectious period.
3. **Locate and notify contacts** of their potential exposure, interview them to see if they have symptoms, offer testing if they do (and if they don't), and arrange for care if they are ill. Provide instructions on quarantine.
4. **Monitor contacts** and report daily on each person's symptoms and temperature for 14 days after the person's last contact with the patient while they were infectious.

This process continues until the end of any possible transmission chain has been reached.

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10 DOMAINS

A successful COVID-19 contact tracing program comprises of nine domains:

1. **Contact tracing protocols and forms.**
   Effective contact tracing protocols clearly define processes around isolation for cases and quarantine for close contacts. This includes whether isolation and quarantine are legally mandated or voluntary, priority thresholds for in-person outreach (e.g., congregate settings), definition of close contacts, determination of how to manage laboratory-confirmed and probable cases, definition of the social supports package and eligibility, and arrangement of clinical linkages for contacts. The public health workforce conducting contact tracing and case investigation will rely on clear and precise forms and scripts to guide activities and communication with cases and contacts.

2. **Public health workforce.**
   Thousands of people will be needed to properly conduct the four contact tracing steps noted above. The approach relies on rapid and efficient recruitment, training, and deployment under the management of the state, local and/or territorial health department. Workforce training should include knowledge and skill-based exercises in order to create rapport, address concerns and barriers to contact elicitation or isolation and quarantine, and appropriately assess support needs to ensure adherence with public health recommendations.

3. **Digital and technology solutions.**
   Digital applications (or apps) can facilitate the massive scale-up of contact tracing that will be needed to help to box in COVID-19. Apps can augment traditional public health activities, for example by rapidly finding cases' contact information, sharing their contacts more easily, and providing isolation and quarantine support. All digital solutions must be driven by people trained in public health response, explicitly support workflows for contact tracing, and adhere to the highest privacy standards. Governance of data systems, ownership and stewardship of all case and contact-related data collected, maintained or disseminated must remain the responsibility of the applicable local public health authority. Customer Relationship Management (CRM) solutions will provide an infrastructure by which the public health workforce functions optimally.

4. **Case reporting.**
   The success of contact tracing to interrupt disease transmission hinges on the timeliness of case identification. The sooner a case is identified, the sooner the

contacts can be elicited and notified of their exposure, thereby reducing the chances that they will further spread disease. Effective contact tracing relies on timely and complete case reporting by public and commercial laboratories and medical care providers; and linking these reports to health departments' case management systems. COVID is a nationally notifiable disease and must be reported to public health. Electronic Lab Reporting (ELR) from commercial and clinical labs when integrated with disease management systems of the health departments would reduce the time to beginning a case investigation and subsequently identifying contacts.

5. **Clinical consultation.**
   Cases and contacts may require symptom management advice and clinical consultation during isolation and quarantine periods. Some people may have telephone or video access to their regular primary care provider. For those who do not have access to a regular primary care provider, health departments should establish a pool of providers for on-call clinical consultation by telemedicine.

6. **Services to support people in isolation and quarantine.**
   Support for contacts in quarantine and cases in isolation can improve people's safety, comfort, and adherence to isolation and quarantine guidance. For many contacts, provision of basic resources, such as daily check-in phone calls, health education materials, masks or face coverings, thermometers, hand sanitizers and gloves, may be enough. For others, "wraparound services" (including food, laundry, pharmacy services, garbage removal services) may be necessary. Financial supports may be needed to help those in quarantine and isolation meet basic needs and to compensate for lost wages. When people who care for children, older adults or other dependents are put in isolation or quarantine, the people they care for could be left in untenable situations. Alternative caregiving services should be provided in these situations.

7. **Facilities for out-of-home isolation and quarantine.**
   In some situations, people with COVID-19 or their contacts may be unable to isolate safely at home. Health departments should define criteria for offering alternative housing in these instances. Out-of-home accommodation for isolation or quarantine periods may be necessary for people who live with high-risk individuals, are precariously housed, unsheltered or experiencing homelessness, live in congregate settings, or who otherwise cannot remain in their current residence. Existing facilities in the community, such as hotels, single-room dormitories, or temporary housing facilities

can be contracted with to provide this service.

8. **Public communication.**
   For contact tracing to be successful, the public must understand that their participation and adherence to public health recommendations (including isolation and quarantine) are essential to suppress the epidemic, protect the health of people in the community, and reopen society. Health departments should establish themselves as credible and trusted information sources and managers of the crisis. Best practice communication strategies include daily press briefings by a trusted source, engaging with trusted community leaders and officials to adapt messaging to the local culture and context and to reach out to their communities, leveraging media outlets, hosting a hotline (or other way for the public to ask questions), and producing and sharing educational resources (such as FAQs and fact sheets).

9. **Metrics and monitoring.**
   Routine monitoring and assessment of contact tracing efforts will reveal whether the process is functioning as intended, whether the program is achieving the goal of reduced disease transmission in the community, and if not, what changes should be made. A dashboard can track key performance indicators.

10. **Privacy and data sharing.**
    Privacy protection is critically important, legally required and necessary to maintain the public trust, but the complexity of privacy laws can slow adoption of a contact tracing process. To both scale the process and protect privacy, consider policy simplification, proactive assessment and resolution of specific data sharing use cases and seek to design and build in privacy and security.

The COVID-19 Contact Tracing Playbook provides actionable technical guidance, including implementation checklists and tools, for each domain of a successful contact tracing program. U.S. state and local health departments can use this playbook to rapidly set up and implement contact tracing programs for successful COVID-19 containment.

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Glossary

CASE
Refers to a person with probable or confirmed COVID-19 infection.

CONFIRMED CASE
Meets confirmatory laboratory evidence.

PROBABLE CASE

- Meets clinical criteria AND epidemiologic evidence with no confirmatory laboratory testing performed for COVID-19; or
- Meets presumptive laboratory evidence AND either clinical criteria OR epidemiologic evidence; or
- Meets vital records criteria with no confirmatory laboratory testing performed for COVID-19 (Source: CDC)

COVID-19
The name of the disease caused by the novel coronavirus, SARS-CoV-2, and is short for "Coronavirus Disease 2019." (Source: WHO)

CONTACT or **CLOSE CONTACT**
A person who may be at risk for a contagious disease because of their proximity or exposure to a known case. Exact definition of close contact differs by disease; for COVID-19, CDC defines a close contact as someone who was within 6 feet of an infected person for at least 15 minutes starting from 48 hours before illness onset until the time the patient is isolated. Data are limited to precisely define the "prolonged exposure" to determine "close contact", however 15 minutes of close exposure can be used as an operational definition for contact investigation. Factors to consider when defining close contact include proximity, the duration of exposure (e.g., longer exposure time likely increases exposure risk), whether the individual has symptoms (e.g., coughing likely increases exposure risk) and whether either the case patient or contact were wearing an N95 respirator (which can efficiently block respiratory secretions from contaminating others and the environment). At this time, differential determination of close contact for those using fabric face coverings is not recommended. (Source: CDC)

CONTAINMENT
Preventing the spread of disease in early stages of transmission through measures such as early detection and isolation of cases, and contact tracing and quarantine. (Source: WHO)

EPIDEMIOLOGIST
When disease outbreaks or other threats emerge, epidemiologists are on the scene to investigate. Often called “Disease Detectives”, epidemiologists search for the cause of disease, identify people who are at risk, determine how to control or stop the spread or prevent it from happening again. Physicians, veterinarians, scientists, and other health professionals often train to be “Disease Detectives”. (Source: CDC)

HIGH-RISK INDIVIDUALS
People at higher risk for severe illness from COVID-19. Based on the current evidence, high-risk individuals include:

- People 65 years and older
- People of all ages with underlying medical conditions, particularly if not well controlled, including: people with chronic lung disease or moderate to severe asthma; people who have serious heart conditions; people who are immunocompromised due to causes including cancer treatment, smoking, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS or prolonged use of corticosteroids or other immune weakening medications; people with severe obesity (body mass index [BMI] of 40 or higher); people with diabetes; people with chronic kidney disease undergoing dialysis; and people with liver disease (Source: CDC)

INFECTIOUS PERIOD
The onset and duration of viral shedding; not yet known for COVID-19. (Source: CDC)

ISOLATION
Used to separate people infected with the virus (those who are sick with COVID-19 and those with no symptoms) from people who are not infected. (Source: CDC)

PROXIMITY TRACING or **EXPOSURE NOTIFICATION**
Digital tools that automatically track the proximity of individuals and can notify people who were in close proximity to a positive case, using Bluetooth technology or GPS coordinates.

QUARANTINE

Used to keep someone who might have been exposed to COVID-19 away from others. Quarantine helps prevent spread of disease that can occur before a person knows they are sick or if they are infected with the virus without feeling symptoms. (Source: CDC)

SUPPRESSION

Reducing and maintaining low levels of disease transmission through intermittent loosening and tightening of public health and social measures (PHSMs); detection and isolation of cases, and contact tracing and quarantine.

TELEMEDICINE

The delivery of health care services and information via electronic information and telecommunication technologies.

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Future vision for public health

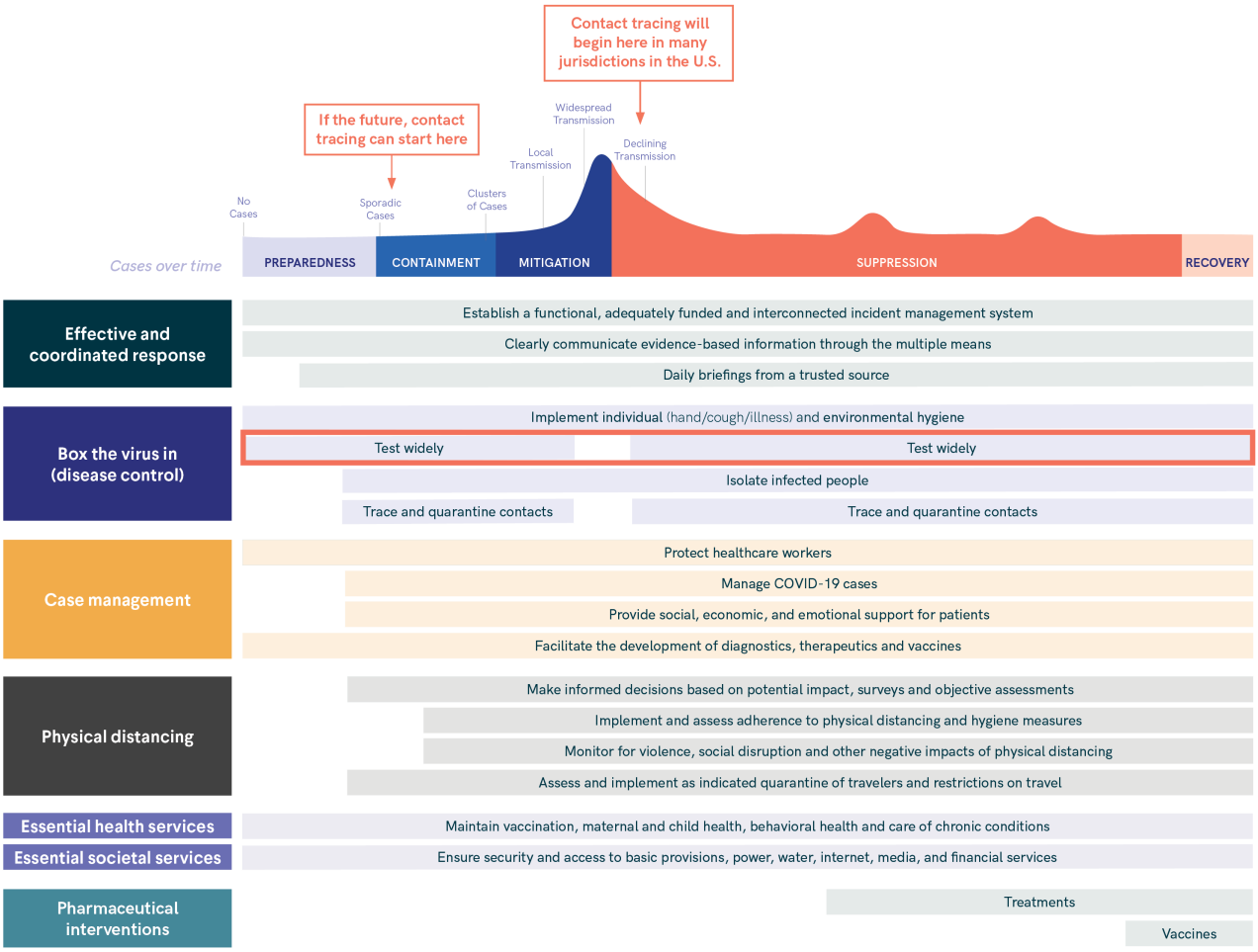
The COVID-19 pandemic has presented the United States. (and the world) with the most severe public health tragedy and challenge in over a century. While public health agencies in the U.S. are well-practiced and have systems in place for detecting and responding to infectious disease outbreaks, novel coronavirus came with unique challenges, requiring public health agencies to rapidly adapt and respond at unprecedented scale.

Effective public health epidemic response measures are implemented according to the phase of an epidemic, with contact tracing as essential measure during the containment and suppression phases. In the U.S., contact tracing is primarily being used as a suppression strategy, after wide implementation of physical distancing measures.

The contact tracing systems and practices being put into place now must be evaluated, refined to incorporate lessons learned, and institutionalized so that they can be rapidly activated during subsequent outbreaks. When the next epidemic comes, contact tracing during the early containment phase can stop the spread of disease before it becomes a large outbreak—and prevent this from ever happening again.

Adaptive response timeline for future epidemics

 Click on image to see full size



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Checklists

Contact tracing protocols & forms

Checklist

1. Governance

- [ ] Establish governance structure and relevant government agencies' and organizations' roles in contact tracing.
  - Consider federal, state, county and local agencies.
  - Consider potential roles for the private sector. To address the large number of COVID-19 cases in some areas, authorities are assembling many partners in contact tracing efforts, including from the private sector.
    - Private companies can provide specialized capabilities around the use of technology to support contact tracing.
    - Private healthcare organizations and employers can play an important role in contact tracing (and testing). For example, private health systems can commit to track patients and report positive tests.
    - Heath networks, academics and affiliates can provide technical guidance and training.
    - The private sector could also have a role in supporting people in isolation and quarantine.
  - Contact tracing efforts must always comply with local regulations and guidelines of health authorities, given privacy and transmission risk concerns.

2. Legal authority over isolation and quarantine

- [ ] Determine whether and how isolation/quarantine orders can be mandated by law or remain voluntary:
  - Work with lawyers to understand which officials have the legal authority to impose mandatory quarantine or isolation and under what conditions. States and cities may have different approaches. Confirm which authority has jurisdiction to issue an order depending on where the case or contact is found, resides, or need to be isolated/quarantined.
  - If contact tracers lack authority to issue mandatory quarantine or isolation orders, there should be provisions to refer appropriate civil authorities to issue formal

orders to cases and contacts who refuse voluntary requests.
    - Where isolation or quarantine guidelines can be mandated by law, establish protocols with processes and consequences if someone refuses to comply.
        - Jurisdictions should use supportive techniques that encourage people to stay at home and comply with isolation and quarantine.
            - If a person is found violating voluntary requests or mandatory orders, a step wise procedure can be used that escalates social support to the person (for example: escalating from an SMS message, to a phone call from health department staff to understand and troubleshoot issues that may be preventing that person from complying).
        - Forceful and punitive enforcement measures are not advised. If jurisdictions do use more coercive enforcement measures:
            - Measures should be applied equally across all sub-groups in the population and ensure that they are not biased or overused.
            - There should be clear communications about how measures are monitored and enforced.
            - Measures should be proportionate to the offense and the least restrictive necessary to ensure compliance.
        - Include processes for people to appeal mandatory quarantine and isolation orders.

3. Cases for interview and contact elicitation

- [ ] **3.a** Interview and elicit contacts on all confirmed and probable cases. If public health resources are limited, prioritize confirmed cases.
    - See **CDC guidance** on Case Investigation Hierarchy
    - See CDC's **Key Information to Collect During a Case Interview**
    - See CDC's **Talking with the Patient – A Case Investigator's Guide to COVID-19**
    - See **Draft case interview and contact elicitation worksheet**

- [ ] **3.b** Define how cases will be reported to the health department for contact tracing in a manner that minimizes time from diagnosis to identification; set targets for timeliness, e.g. percent reported within 24 hours: (See **Case Reporting** for more information)
    - Positive laboratory test result (hospital clinical laboratory, commercial laboratory, public health laboratory)
    - Medical care provider referral of probable case pending laboratory confirmation
    - Home testing (pending confirmation by public or commercial laboratory)

4. Staffing and workforce strategy

- [ ] Identify staffing/workforce strategy, within public health department or outsourced and managed by public health department. (See **CDC COVID-19 Sample Training Plans, Guidance, and Resources**; See **Public Health Workforce** for more information.)

5. Technology-enabled processes

- [ ] **5.a** Determine if contact tracing processes will be supported by a digital app; integrate the app into the disease surveillance system workflow. (See **Technology** checklist for more information.)
    - Data security and data privacy protections need to be built into all technologies and processes.

- [ ] **5.b** Identify which points in the contact tracing workflow can be efficiently automated and which workflows will be conducted by staff:
    - Identification of case and notification to public health department
    - Searching online databases for address, phone number, and other information for case when not available with case report
    - Notifying case of diagnosis
    - Eliciting contacts from case (including importing contact information via app)
    - Notifying contacts of potential exposure
    - Daily symptom monitoring of cases and contacts
    - Preferred method of daily monitoring (SMS, phone, e-mail)
    - Method contacts and cases can use to alert health department of social service needs

6. Contact tracing protocols

- [ ] **6.a** Develop contact tracing protocols.
    - Determine if contacts will be prioritized for follow-up, including when outreach will be automated vs. done in-person.
        - Ideally, health departments should collect information on all close contacts. Those that do not have the capacity to monitor and test all contacts promptly can use a risk prioritization guide. (See **CDC guidance** on Close Contact Evaluation and Monitoring Hierarchy)

- Determine if contacts will be notified by contact tracers or if cases will be asked to notify their own contacts directly.
- Determine structure for reaching household contacts; for example, in some jurisdictions it may be allowable to have one point of contact per household vs treating each household member as a separate contact.
- Identify whether and how contacts will be monitored for quarantine compliance.
- Determine how and when to test contacts for COVID-19 infection.
  - As testing availability permits, test all contacts immediately after notification, and again two to three days before release from quarantine (or if/when symptoms begin).
  - Determine how and when testing will be supported, including transportation or escort if needed.
  - Determine how to guarantee contact received test.
- Testing is recommended for all close contacts. Determine when to trigger clinical consultation if contacts develop symptoms.
  - Monitor contacts for symptoms for 14 days after exposure.
  - Determine if contacts will be actively monitored or will be asked to self-monitor.
  - If contact develops symptoms, instruct them to immediately seek clinical consultation (from regular provider or telemedicine services, as relevant)
  - See **CDC guidance** on when to seek medical attention.

☐ **6.b** Define contact tracing procedure by setting.
- Include information on translation, language lines and contacts with communication impairments

☐ **6.b.1** For mass gatherings, e.g. public transportation, concerts, worship services, weddings, funerals:
  - Develop health department protocols that trigger epidemiology field investigation.
  - Trigger broadcasting/public messaging to reach all potentially exposed contacts.

☐ **6.b.2** For congregate settings, e.g. schools, homeless shelters, jails, prisons, group homes, workplaces, crowded multi-generational housing:
  - Develop health department protocols that trigger epidemiology field investigation.

        - Work with field epidemiology team and specialty staff to assess facilities' infection control policies and procedures in collaboration with occupational health.
        - Elevate to enhanced in-person contact tracing procedures.
        - Collaborate with setting leadership to identify and notify all potentially exposed contacts.

- [ ] **6.b.3** For facilities that deliver health care, e.g. hospitals, nursing homes, long-term care facilities, rehabilitation facilities, assisted living facilities, personal care homes, memory care, inpatient hospice facilities, methadone clinics, inpatient drug treatment facilities:
    - Develop public health department protocols that trigger epidemiology field investigation.
        - Work with field epidemiology team and specialty staff to assess facilities' infection control policies and procedures in collaboration with occupational health.
    - Assume all facility residents and staff are contacts.
    - Sort and separate populations by: probable and confirmed cases; infected and contagious but asymptomatic or pre-symptomatic; not infected but at-risk.
    - Identify outside visitors and refer to routine contact tracing.

- [ ] **6.c** Determine criteria for other triggers to refer to public health department protocols, e.g. disease clusters, cases and contacts with complex or extraordinary needs.

7. Confidentiality protocols

- [ ] Identify and document protocols for maintaining confidentiality during contact tracing, e.g., any requirements for storage of notes and data, and special considerations when conducting contact tracing from home. Follow HIPAA regulations.

8. Notification and communication protocols

- [ ] Identify which communication with contacts can be passive only (e.g. by web, email, text, or app interface), or, if resources allow, if all contacts will receive a phone call.

- Determine protocols for cases and contacts who do not respond to texts or phone calls (by risk level).
- Consider campaigns to ask people to answer their phones and to engage honestly with contact tracers.
- Establish expected number of contact attempts and if/when in-person outreach to cases and contacts will be attempted, with safety protocols in place (**CDC guidance**).
- Identify any other situations in which an in-person home visit may be required.
- Determine protocol for in-person visits and incorporate PPE considerations for in-person communications (**CDC guidance**).

9. Cross-jurisdictional protocol

- [ ] Determine protocol for locating and notifying contacts outside of the jurisdiction in cooperation with the jurisdiction where the contact resides.

10. Ports of entry protocol

- [ ] Determine protocol for testing and tracing cases at ports of entry.
  - If border agents identify a case, identify which jurisdiction will be responsible for care and tracing.

11. Social support protocol

- [ ] Define wrap-around services to support individuals in isolation and quarantine and determine eligibility criteria for the provision of wrap-around services. (See **Social Supports** for more information)
  - What criteria are used to determine eligibility?
  - Who assesses for eligibility, e.g. link to Department of Human Services to conduct?
  - What is the process for applying, approving, and connecting person to services?
  - Warmline for post-quarantine issues

12. Out-of-home isolation

- [ ] **12.a** Determine which cases will be offered isolation out-of-home, and if any will be

mandated.

- [ ] **12.b** Determine which contacts will be offered quarantine out of home, and if any will be mandated.

13. Telemedicine protocols

- [ ] Arrange clinical linkage including telemedicine support. (See **Clinical Consult** for more information)

Implementation Tools

- CDC: **Health Departments: Interim Guidance on Developing a COVID-19 Case Investigation & Contact Tracing Plan**
- **COVID-19 contact tracing steps**
- Draft contact tracing protocols for mass gatherings
  - **Restaurants**
  - **Bars, pubs and clubs**
  - **Club and organization meetings**
  - **Funerals**
  - **Weddings**
  - **Performance group meetings and rehearsals**
  - **Public meetings**
  - **Private events**
  - **Worship services**
- **Self-Isolation and Self-Quarantine Enforcement and Compliance: Principles and Considerations for U.S. Contact Tracing Programs**
- Samples forms
  - CDC: **Human Infection with 2019 Novel Coronavirus - Case Report Form**
  - CDC: **Key Information to Collect During a Case Interview**
  - CDC: **Talking with the Patient – A Case Investigator's Guide to COVID-19**
  - **Draft case interview and contact elicitation worksheet**
  - CDC: **Notification of Exposure: A Contact Tracer's Guide for COVID-19**
  - CDC: **Self-Isolation and Self-Quarantine Home Assessment Checklist**
  - CDC: **Sample Daily Temperature/Symptom Log for Close Contacts**

    - **Draft contact monitoring form**
- Sample scripts
    - Massachusetts Community Tracing Collaborative**: Contact tracing scripts**
    - New York State Department of Health: **Case interview script**
    - New York State Department of Health: **Contact interview script**
    - New York State Department of Health: **Contact monitoring script**

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Public health workforce

Checklist

1. Staffing needs and resources

- [ ] Estimate staffing needs and resources for scaled contact tracing.

- [ ] **1.a** Core contact tracing staff
  - Case Investigators
  - Contact Tracers
  - Contact Tracing Team Leads

> **Important parameters to consider:**
>
> - Number of staff needed for case investigation. This includes: locating and interviewing cases; determining infectious period; eliciting contacts; providing instructions for isolation; referring to social/medical services.
> - Number of staff needed for contact notification. This includes: notifying contacts about exposure; providing instructions about quarantine; referral for testing; referral for social/medical/human services.
> - Number of staff needed for case and contact follow-up. This includes: daily check-in; responding to questions; referral to services.
> - Number of staff needed to supervise/manage the contact tracing staff.
> - Consider current and projected needs; to ensure staffing will meet needs throughout the local epidemic, use upper estimates.

- [ ] **1.b** Additional workforce needs
  - Program Director
  - Cluster Outbreak Investigators/Field Epidemiologists
  - Care Resource Managers
  - Data Managers
  - Self-Isolation and Self-Quarantine Monitors

- Clinical Consultants
- “Runners” to deliver care package materials

Cluster and outbreak investigation workforce estimation:

- Estimate number of clusters or outbreaks that may need to be investigated and controlled simultaneously.
  - Consider current and projected needs; to ensure staffing will meet needs throughout the local epidemic, use upper estimates.
- Estimate the number of staff needed to investigate and control clusters and outbreaks.
  - Multiply the expected number of clusters or outbreaks needing simultaneous investigation and control by the number of investigators per team (for example, three people per investigation team).
  - Consider redirecting existing Field Epidemiologists, or other contact tracing and outbreak investigation and response staff, to fill this role.

Workforce estimation calculators:

- CDC: **COVIDTracer 1.0**
- Resolve to Save Lives: **Contact tracing staffing calculator**
- George Washington Mullan Institute: **Contact tracing workforce estimator**

2. Current workforce assessment

- [ ] **2.a** Assess the current workforce available to fill contact tracing roles.
  - Understanding the human resources already available to support the surge contact tracing workforce will inform hiring needs.
  - The workforce can come from a variety of existing sources and will depend on available budget and hiring authority. Consider:
    - Public health professionals working in other areas of the health department or in other private or organizations or public agencies may be available to support

        - Local, state and federal employees may be available for redirection
        - National guard or other volunteers may be interested in willing to support contact tracing
    - Integrating contact tracing staff into existing public health infrastructure will support a sustainable contact tracing program. Consider filling staffing needs with existing public health staff that already perform contact tracing activities.
    - Existing staff (or new, if needed) can support program administration, including Finance personnel, and information system management, including Information Technology/Systems Managers and Informaticians
    - Match knowledge and skills of individuals with key contact tracing roles and provide training can support workforce expansion. In addition to specific health public experience and expertise, look also at transferable skills when recruiting to scale up contact tracing workforce.

☐ **2.b** Describe gaps in the available workforce.

Existing public health staff that can fill contact tracing roles:

- **Case Investigators:** Disease Intervention Specialists (DIS), Public Health Associate Program (PHAP) Assignees, Public Health Nurses, Epidemiologists
- **Contact Tracers:** Disease Intervention Specialists (DIS), Public Health Investigators, Public Health Associate Program (PHAP) Assignees, Public Health Nurses, Epidemiologists
- **Contact Tracing Team Leads:** Supervisory Public Health Nurses, Senior Epidemiologists
- **Cluster Outbreak Investigators/Field Epidemiologists:** Infection Control Practitioners (Nurses or Physicians), Hospital Acquired Infection Practitioners (Nurses or Physicians), Hospital Epidemiologists, Occupational Health Liaisons, Field Epidemiologists
- **Care Resource Coordinators:** Patient Navigators, Linkage to Care Specialists, Disease Intervention Specialists (DIS)
- **Data Managers:** Epidemiologists, Data Managers, Public Health Informatics Specialists
- **Self-Isolation and Self-Quarantine Monitors:** Community Health Outreach Workers

> - **Clinical Consultants:** Practicing Registered Nurses, Public Health Nurses, Nurse Practitioners, Physician Assistants, Physicians

3. Organizational chart

- [ ] Determine who will be responsible for supervising staff by job title, and organize core contact tracing staff into teams, as appropriate.
  - A maximum of eight team members plus a team leader is suggested.
  - Include epidemiologists (or staff responsible for complex investigations) in each unit.
  - Size of team recommendation is based on best practices for productive work group sizes and to enable necessary oversight and support for contact tracing team members.

4. Recruitment

- [ ] **4.a** Identify the best personnel mechanism and recruitment processes to use for filling each type of position (e.g., permanent employee, part-time employee, contractor, volunteer).
  - Partnering with a private organization, such as a local university or non-profit organization, to manage hiring and/or workforce operations may be quicker and easier than doing this through health department mechanisms.
  - Consider communities and populations disproportionately impacted by COVID-19 and hiring from within these communities. Consult with community-based organizations and community leaders who have earned local community trust.
  - If working with a network of volunteers, ascertain their commitment to ensure a reliable workforce; if reliable, consider leveraging their existing infrastructure for personnel onboarding and management.
  - Consider how to handle staffing when contact tracing needs change, for example using hourly wages and reserving the right to reduce or scale hours as needed.
  - See **CDC staffing guidance for health departments**.

- [ ] **4.b** Identify or develop descriptions and qualifications for each position; write job descriptions.
  - Sample job descriptions

        - **Program Director**
        - **Contact Tracing Team Lead**
        - **Case Investigator**
        - **Contact Tracer**
        - **Self-Isolation and Self-Quarantine Monitor**
        - **Care Resource Coordinator**
        - **Clinical Consultant**

- [ ] **4.c.** Identify or develop processes and tools for assessing applicant qualifications and rating applicants. (See **Sample Contact Tracing Staff Supervision Tool**)
    - Where available, adapt existing processes and tools.

- [ ] **4.d.** Work with human resources to develop mechanism(s) for processing applications.

- [ ] **4.e.** Implement recruitment processes.

5. Workforce onboarding and training

- [ ] **5.a** Identify or develop materials and processes for contact tracing staff orientation.
    - Include orientation to the organization, contact tracing in general, and to the contact tracing program.
    - Consider different training needs for existing staff and new hires. For example, existing staff may need a refresher on the Incident Command System (ICS) or preparedness activities within their agency.
    - See **CDC COVID-19 Sample Training Plans, Guidance, and Resources**

- [ ] **5.b** Identify training needs to develop knowledge and skills required for each type of contact tracing position.
    - Training should explicitly include:
        - Privacy protection training
        - Cultural competency – especially related to low SES and the challenges related to complying with orders for isolation and quarantine
        - Importance of data collection and entry for data quality and timeliness

- [ ] **5.c** Identify or develop training methods, curricula, tools and materials for each type of contact tracing position.

- Collaborate with public health partners to communicate additional training needs and leverage existing training materials.
- Consider how completed training activities will be documented to ensure workforce competency and qualifications (e.g., post-test scores, role plays, supervised calls).

> Adapt existing training resources:
>
> - ASTHO/NCSD: **Making Contact: A Training for COVID-19 Contact Tracers**
> - CDC: **COVID-19 Sample Training Plans, Guidance, and Resources**
> - Johns Hopkins University: **COVID-19 Contact Tracing (Coursera course)**
> - Public Health Foundation's TRAIN Learning Network: **Catalog of COVID-19 contact tracing courses**

6. Workforce management system

- [ ] Establish management system for contact tracing staff.

- [ ] **6.a.** Identify or develop protocols for each type of contact tracing position.

- [ ] **6.b.** Identify or establish criteria, measures and expectations for evaluation of workers in each type of contact tracing position.
  - Virtual coaching and mentoring are suggested to provide opportunities for continuous quality improvement.

- [ ] **6.c.** Identify or develop methods and systems for collecting data and producing reports for worker evaluation. Develop a set of performance metrics to monitor the contact tracing team as a whole in addition to individual workers.
  - Consider setting targets to encourage transparency of expectations among staff. Ensure the selected metrics are available for export and reporting in the tools adopted for the contact tracing workflow.
  - Include a system for tracking completed trainings.

7. Ongoing staff development

- [ ] **7.a.** Plan ways in which contact tracing staff can grow, improve their knowledge, and refine their skillset. (See **Key considerations for ongoing staff development**)
    - Possible modes on ongoing staff development include:
        - Educational/training components of a daily or weekly team meeting
        - Online trainings and tutorials
        - Clinical supervision or case review sessions with a clinical supervisor
        - Staff evaluation/assessments

- [ ] **7.b.** Identify processes to put in place for contact tracing staff who under-perform, including extra training and/or supervision, buddy system or mentoring, probation, and conditions and situations that call for termination.

8. Liability protections

- [ ] Confirm that contact tracing staff have protections of civil servants including liability protections, insurance and/or indemnity clauses.
    - Confirm staff have completed sufficient training to be competent and qualified for job responsibilities

9. Incentives and retention strategies.

- [ ] Develop a strategy for staff retention.
    - Consider financial incentives for completing so many months of service, provision of extra paid time off, process for rotating off the response for breaks.
    - Consider strategies to prevent burn out and promote mental health.
    - Consider developing opportunities or career paths for contact tracers to stay on at the health agency long-term, as available, to maintain capabilities as funding allows.

Implementation Tools

- Workforce calculators
    - CDC: **COVIDTracer 1.0**
    - Resolve to Save Lives: **Contact tracing staffing calculator**

    - George Washington Mullan Institute: **Contact tracing workforce estimator**
- CDC: **COVID-19 Staffing Guidance for State, Tribal, Local, and Territorial Health Departments**
- Training resources
    - ASTHO/NCSD: **Making Contact: A Training for COVID-19 Contact Tracers**
    - CDC: **COVID-19 Sample Training Plans, Guidance, and Resources**
    - Johns Hopkins University: **COVID-19 Contact Tracing (Coursera course)**
    - Public Health Foundation's TRAIN Learning Network: **Catalog of COVID-19 contact tracing courses**
- Sample job descriptions
    - **Program Director**
    - **Contact Tracing Team Lead**
    - **Case Investigator**
    - **Contact Tracer**
    - **Self-Isolation and Self-Quarantine Monitor**
    - **Care Resource Coordinator**
    - **Clinical Consultant**
- **Sample Contact Tracing Staff Supervision Tool**
- **Key considerations for ongoing staff development**
- **Sample scope of work for service provider contract**
- Sample contact tracing staff orientation and professional development materials *(under development)*
- Sample contact tracing staff evaluation criteria, measures and expectations *(under development)*

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Technology solutions

Checklist

1. Existing workflows and infrastructure

- [ ] Review existing workflows and infrastructure to identify where investments in new technologies will be needed (versus where your current solution will be sufficient).
    - Workforce management
    - Case management
    - Automated alerts
    - Call center and triage
    - Symptom reporting for isolated cases and contacts

2. Case management system and case reporting

- [ ] Establish (or adapt an existing) case management system and case reporting with the following features:

- [ ] **2.a:** Automatic flagging and correcting of common errors in case reports
    - Technologies that enable patients to register electronically during or before their visit to the lab will help ensure that data seen by contact tracers is accurate

- [ ] **2.b:** Integration and processes to get data from providers directly
    - Probable cases, such as patients diagnosed based on clinical/epi criteria and who were never tested or whose test results are pending, will enter the case management system through this mechanism

- [ ] **2.c:** Integration with state lab database
    - Ingest lab reports from the state-level database automatically to speed efficiency of creating index cases
    - Auto-clean the data for duplicates and other criteria

- [ ] **2.d:** Automatic flagging of what cases should be interviewed

- Database and processes will need to handle patients getting tested more than once, with multiple types of tests that mean different things, at many different locations

- [ ] **2.e:** Prioritize cases
  - Data helps guide prioritization among positive patients. Examples of data useful (beyond “test results negative vs positive) include:
    - Date of test
    - Type of test
    - Date of symptom onset (might not be available in lab data, but is helpful for determining infectious period & original date of infection)
    - Other test results for the same patient
    - Other risk factors

- [ ] **2.f:** Contact tracers have necessary access for outreach
  - Contact tracers need access to the database of cases to know who to reach out to. This does not need to be the same database the health department uses.
    - If using separate systems, figure out how to get data from the department database of cases into any database/technology being used by contact tracers
    - Identify which of these databases is the “source of truth” on COVID-19 cases.
      - If it is the department database: develop a process or integration that allows contact tracers to flag things that are “off” about COVID-19 patient information, such as a disconnected phone number or an email that bounces back, and ensure that information can be corrected in both the database that contact tracers are using and the database being used by the department for the tracking and management of COVID-19 cases.
  - Contact tracers need access to data for cases that allow them to perform their functions.
    - Consider what other functions contact tracers are responsible for (such as, assessing needs for social and clinical supports, delivering test results, daily monitoring of symptoms), and ensure relevant data are accessible
  - Other risk factors

- [ ] **2.g:** Budget
  - Plan for short-term setup costs
  - Plan for long-term contract costs for maintaining system

- Consider choosing open-source tools to reduce long-term costs

3. Case interviews, contact elicitation and contact investigation

- [ ] Consider using technology solutions to facilitate the process of case interviews, contact elicitation and contact investigation.
  - Technology can deliver of COVID-19 test results and instruct positive patients on which contacts to notify and how to notify them.
  - Technology to notify patients that an official person will contact them by phone soon, to increase acceptance of calls.
  - Technology can facilitate case interviews and contact elicitation, by having cases fill out an online form about their close contacts and recent activities and prompting them to remember contacts or possible exposures.
    - Resolve to Save Lives is developing digital tools to facilitate rapidly finding and sharing such contact information. More information on these products and how to connect soon.

4. Contact prioritization and notification

- [ ] Consider using technology solutions to facilitate the process of prioritizing and notifying contacts.
  - Technology can help sort through and prioritize contacts based on risk. For example:
    - Contacts with high risk of being infected
    - Contacts with high risk of infecting others
    - Contacts with high risk of developing serious illness
  - Technology can provide contact tracers with templates for outreach that they can use for manual emailing or texting of contacts.
    - This can also be done by automatically alerting contacts using pre-set templates (e.g. the software sends the text message rather than the contact tracer using their own phone), or with automated (IVR) calls to contacts.
    - These interactions can be tracked or automated in a CRM (customer relationship software such as Salesforce or Amazon Connect) or in your case management platform, enabling contact tracers to easily see that status of outreach to contacts.

- Technology can help with connecting the contact to testing and/or care, by linking to COVID-19 testing location finders or telemedicine services.

5. Contact follow-up

- [ ] Consider using technology solutions for daily follow-up and monitoring of cases and contacts during isolation or quarantine.
  - This could include the automation of follow-up activities through SMS or email notifications.
    An increasing number of technologies are being developed to support this, such as CommCare or Sara Alert.

6. Peer-to-peer contact notification

- [ ] Consider using technology solutions for enabling patients to notify their own contacts (if they know their identities).
  - Anonymous and confidential peer-to-peer mass partner notification systems already exist for STDs and are beginning to be adapted to support COVID-19 peer-to-peer notification (e.g., **Tell Your Contacts**).
  - Templates could make it easier to figure out what to say and automated suggestions based on timing of test results and symptom onset could make it easier to decide who to notify.
  - Technology could enable automated information distribution to contacts about where/whether to get tested, symptom education and monitoring, guidance on isolation/quarantine, and available support and services.

7. Recruiting and training of contact tracers

- [ ] Consider using technology solutions for supporting rapid scaling up of the contact tracing workforce, including for:

  - [ ] **7.a** Recruiting and selection
    - **GC Talent Reserve** (open source code) is one example of how governments can use technology to recruit contact tracers who are already government employees to fill emergency roles.

- [ ] **7.b** Workforce training
    - Online learning platforms will help train the workforce
    - ASTHO/NCSD: **Making Contact: A Training for COVID-19 Contact Tracers** is an example of how technology can be used to rapidly train entry-level COVID-19 contact tracers.

8. Support people in isolation

- [ ] Consider digital tools to help cases and contacts to isolate successfully and access social services.
    - Websites and apps that connect to social services and support
        - Resolve to Save Lives is developing digital tools to provide isolation and quarantine support. More information on these products and how to connect soon.

9. Emerging Bluetooth technology solutions

- [ ] Consider using Bluetooth technology solutions (i.e. "exposure notification" or "proximity tracing") to automate portions of contact tracing, by notifying others who were in proximity to the case during the infectious period.
    - For privacy purposes, this technology relies on a “double opt-in”, meaning that both diagnosed and contacts would have to opt in to be traced or notified.
    - ***This technology has potential yet it is in its early stages. It is not recommended that Bluetooth technology solutions replace traditional contact tracing work for several reasons:***
        - Coverage is limited to those who choose to participate.
        - Coverage will be biased, with lower adoption in vulnerable populations due to language barriers and limited technology access.
        - Accurate proximity algorithms are still under development, and issues of false positives and margins of error are unknown.
        - Ensuring privacy in practice (vs in theory) is unknown.

Implementation Tools

- CDC: **Digital Contact Tracing Tools for COVID-19**
- Resolve to Save Lives tool for finding and sharing contact information *(under development)*
- Resolve to Save Lives tool for providing isolation and quarantine support *(under development)*

US Digital Response (USDR)
The content in this checklist was adapted from the U.S. Digital Response (USDR) Contact Tracing Playbook.

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Case reporting

Checklist

1. Case reporting

- [ ] Ensure timely and accurate reporting of all laboratory-confirmed and probable COVID-19 cases. (See **Technology solutions** for more information.)
  - See CDC guidance on **Reporting COVID-19 Laboratory Data**
  - See CDC **Case Report Form**

- [ ] **1.a** Ensure reporting system from public health laboratories is operational and meeting timeliness standards.

- [ ] **1.b** Ensure reporting from commercial laboratories and point-of-care testing is operational and meeting timeliness standards.

- [ ] **1.c.** Ensure reporting from providers is operational and meeting timeliness standards. Consider connecting with health information exchanges to set up system for reporting from providers.

- [ ] **1.d** Ensure that case reports have complete data elements required for case surveillance purposes, including follow-up with clinical providers where necessary to obtain required information.

- [ ] **1.e.** Ensure cases identified in other settings, e.g., at ports of entry, are fed into the case management system.

2. Case management lab integration

- [ ] **2.a** Describe the data flow from case reporting by creating a data map.

- [ ] **2.b** Ensure case management system can accept all relevant laboratory results and including contact information for the case, name of provider who ordered the test, and name of facility that submitted the specimen.

Implementation Tools

- CDC: **Reporting COVID-19 Laboratory Data**
- CDC: **Human Infection with 2019 Novel Coronavirus - Case Report Form**

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Clinical consultation

Checklist

1. Policies for telemedicine

- [ ] **1.a** Provide a telemedicine safety net for cases and contacts who do not already have access to virtual health care for the duration of isolation and quarantine.
    - Cases and contacts will receive basic resources to support symptom monitoring, such as a digital thermometer. Some people may require symptom management advice and clinical consultation services during the isolation and quarantine periods.

- [ ] **1.b** Determine eligibility for telemedicine services.
    - The telemedicine service should be available to cases and contacts without medical insurance or who do not have a regular primary care provider offering telephone or video access during the time of isolation or quarantine. Public health should not pay for telemedicine services for individuals who already have access to this type of service through their health insurance (e.g., Medicaid, Veteran's, commercial insurance).

2. Telemedicine service provider

- [ ] Contract with a local medical care provider to provide telemedicine services for eligible COVID-19 cases and contacts.
    - Depending on the number of individuals needing and qualifying for this service, contracts with multiple medical care providers may be needed.
    - Some jurisdictions may have infrastructure already in place to provide telemedicine consult via a nurse triage line, for example using public health nurses with health assistants and others doing contact elicitation.

- [ ] **2.a** Map medical service providers that already offer robust telemedicine services.
    - For potential service providers, assess the capacity for number of "visits," qualifications of medical providers, costs of services, mode of services (telephone,

video, mobile application chat, etc.), and language capabilities.

- [ ] **2.b** Select and contract with a provider that can rapidly and effectively provide telemedicine services.

3. Linkage for cases and contacts

- [ ] Ensure the link to telemedicine services is made for contacts and cases, as appropriate.
  - Train contact tracing staff to assess a person's eligibility for telemedicine services.
  - Contact tracing staff should provide instructions to people on accessing telemedicine based on their eligibility.
  - Consider how to make clinical services available to those without telephonic or video access (e.g., homeless population).
  - Consider including a referral process for medically complicated patients that goes beyond provision of telemedicine services.
  - For cases with potential exposures in group settings, facilities or mass gatherings, Epidemiologists (or other investigators) should make the linkage to clinical consultation services during investigations.
  - Forms and protocols used by contact tracing staff should include questions and prompts to guide this process.

Implementation Tools

- **Template scope of work for telemedicine service provider**
- **Sample eligibility criteria for telemedicine services**
- Massachusetts Medical Society: **Telemedicine Vendor Option**s
- University of Arizona: **Telemedicine & Telehealth Service Provider Directory**
- American Medical Association (AMA): **AMA quick guide to telemedicine in practice**
- AMA: **Selecting a vendor guide** (except from **AMA Telehealth Implementation Playbook**)
- Massachusetts Medical Society: **Telehealth and virtual care resource library**

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Services to support people in isolation and quarantine

Checklist

1. Budget

- [ ] Determine available budget for provision of wrap-around services and social support; prioritize resources and services that can be provided accordingly. Services and resources should be prioritized based on the needs of cases and contacts.
    - Collaborate with Medicaid to identify potential funding sources for provision of supports.
    - People with fewer resources historically should be prioritized to receive these supports.

2. Support services

- [ ] Determine the set of support services and resources that will be made available to cases in isolation and contacts in quarantine.
    - The goal of providing support services and resources is to make it safe, comfortable and easy for people to comply with isolation and quarantine orders. Using escalating social support is the recommended approach to promote compliance (vs. a more coercive enforcement approach that uses punitive measures).
    - Supporting cases in isolation and contacts in quarantine also contributes to alleviate the burden placed on them for the benefit of society as a whole.

- [ ] **2.a Core resources**
    - For many cases and contacts, a brief interaction may be sufficient, including core resources and hotline support for follow-up. The core resources for all cases and contacts entering isolation and quarantine should include:
        - Daily check-in phone calls
        - Instructions on keeping space clean for those sharing space
        - A hotline for counseling, information, social services, and medical support

- Health education materials
- Other (as locally relevant)

- [ ] **2.b Care package**

  Cases and contacts in isolation and quarantine may require social supports for daily living. The care package offered could include:
  - Access to essentials, such as food, medications, laundry, and garbage removal services
  - Access to telehealth and care if ill (See **Clinical Consultation** for more information.)
  - Transportation and/or access to routine medical care or emergency care
  - Materials, such as a reliable thermometer, masks or face coverings, gloves, hand sanitizers
  - Incentives, such as access to high-speed internet, passwords for on-demand movies, e-books and learning channels, an encouraging note from the mayor
  - Other (as locally relevant):

- [ ] **2.c Financial support**

  Financial support may be needed to help those in quarantine and isolation to meet basic needs:
  - Stipend from government to those without sick leave or who need to take care of children or other vulnerable dependents
  - For people who are employed, work with their employers to provide support, with possible tax credits

- [ ] **2.d Other supports**

  Other supports. Consider the provision of other supports that may be necessary to enable people to adhere to isolation and quarantine requirements, including:
  - Health insurance navigation
  - Medicare/Medicaid assistance
  - Mental health services
  - Substance use services
  - Child care services
  - Transportation services
  - Housing assistance
  - Substitute caregivers (to fill in for the case/contact if they are acting as the primary caregiver for anyone else)

- Unemployment assistance
- Legal assistance
- Negotiation with employers and landlords
- Small business support (for cases/contacts who are small business owners)

3. Eligibility criteria

- [ ] Determine eligibility criteria for the provision of social supports to cases.
  - Support should be available to all people regardless of what language they speak, if they have disabilities including blind or deaf, or if they have adequate immigration papers.

- [ ] **3a. Eligibility for core resources**
  The core resources should be made available to all cases and contacts entering isolation and quarantine.

- [ ] **3.b Eligibility for care package**
  The care package should be offered to cases and contacts entering isolation and quarantine based on need.
  - Cases and contacts are eligible to receive the care package if they do not otherwise have access to the goods or services offered (either they do not have the financial means or cannot safely obtain the goods and services without putting themselves or others at risk).
  - Jurisdictions with available resources may choose to offer the care package to all cases and contacts.

- [ ] **3.c Eligibility for financial support.**
  Financial supports should be offered to cases and contacts who:
  - Cannot perform their jobs while in isolation or quarantine and whose employers will not provide adequate paid sick leave
  - Are caregivers (for example, of children or elderly) and cannot provide their caregiving services and do not have access to fill-in support while in isolation or quarantine
  - Other (as locally relevant):

- [ ] **3.d Eligibility for other supports**
  Other supports should be offered on an as-needed basis to ensure that cases and

contacts can meet their basic needs and to minimize harm and suffering.

4. Support service providers

- [ ] Contract with a local care coordination provider or other community-based organization to facilitate social supports for contacts in quarantine and cases in isolation. (See **Template scope of work**)
    - Depending on the wraparound services and social support that will be provided along with the landscape of potential service providers in the community, it may be necessary to contract with more than one agency.
    - Funding must cover staffing and resource needs, where these cannot be delivered directly by the jurisdiction.

- [ ] **4.a** Identify landscape of agencies or organizations that already work in the community providing similar services. This may include health care providers or social services providers, religious groups, food banks, etc.

- [ ] **4.b** Select and contract with agencies or organizations that can rapidly and effectively provide the needed wraparound services and social support.

5. Private sector engagement

- [ ] Consider engaging the private sector to support provision of social support. For example: discounted/free internet, or food deliver services with waived fees.

6. Linkage for cases and contacts

- [ ] Ensure the link to social support is made for contacts and cases, as appropriate.
    - Train contact tracing staff to assess an individual's ability to isolate or quarantine in a safe environment that provides the necessary support (private room and bathroom, adequate food and water, and access to medication) and keeps them away from high-risk individuals.
    - Contact tracing staff should link people with social support and wraparound services based on their eligibility and interest receiving the supports.
    - During daily monitoring of cases and contacts, contact tracing staff should reassess social support needs throughout quarantine and isolation periods.

- Forms and protocols used by contact tracing staff should include questions and prompts to guide this process.

Implementation Tools

- CDC: **Self-Isolation and Self-Quarantine Home Assessment Checklist**
- **Template scope of work**
- **Sample eligibility criteria**
- **Sample resource directory**

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Facilities for out-of-home isolation and quarantine

Checklist

1. Budget

- [ ] Determine available budget and existing resources.
    - Cases and contacts who are at highest risk for not meeting basic needs in a way that is safe for themselves or others should be prioritized to receive housing support.

2. Alternative housing services

- [ ] Determine alternative housing to support people in isolation or quarantine. See **Sample eligibility criteria for out-of-home isolation or quarantine**.

- [ ] **2.a** For non-hospitalized cases. On a voluntary basis, alternative and safe housing, with wraparound and social services, should be offered to all cases who:
    - live with elderly or other high-risk individual
    - are precariously housed
    - are unsheltered or homeless
    - live in group settings and are unable to maintain physical distance from others
    - otherwise cannot remain in their current residence
    - prefer to stay out-of-home
    - have fewer resources historically

- [ ] **2.b** Relocation for contacts in quarantine. Consider offering alternative housing to contacts entering quarantine who:
    - live with elderly or other high-risk individuals and are unable to maintain physical distance from others
    - are precariously housed
    - are unsheltered or homeless
    - live in group settings and are unable to maintain physical distance from others

- otherwise cannot remain in their current residence
- have fewer resources historically

3. Accommodation service provider

- [ ] Contract with existing facilities, such as hotels, dormitories, or temporary housing facilities (converted convention centers, schools, arenas, etc.) to provide safe accommodation. Depending on need and size of available facilities, multiple contracts may be required. See **Template scope of work (facilities).**
  - In some situations, there may be cultural norms around inter-generational living that will preclude individuals from moving outside of their homes despite not being able to isolate or quarantine safely. If relevant, consider instituting "cultural brokers" that can work with those populations to develop plans that works for them, such as video chats while living out-of-the-home.

- [ ] **3.a** Develop protocols to prevent spread of infection within facilities.
  - Single-room occupancy for residents only
  - OSHA consultation and environmental control assessment
  - Cleaning protocols for common areas, including bathrooms
  - Separate exits/entrances for staff and residents; maintain a "safe" area for staff to take breaks where residents cannot access
  - Keep confirmed cases, presumptive cases, and quarantined contacts separate from each other.
  - Adequate personal protective equipment for staff and residents, including sanitizers, masks or face coverings, gloves, alcohol-based disinfectants
  - Meals, clean bedding, and other essentials should be left outside of residents' rooms; no group meals; no housecleaning services for individual rooms

4. Infection control

- [ ] Contract with a company to manage infection control or hire infection control personnel. See **Template scope of work (infection prevention and control).**
  - With numerous cases and potential cases residing in common facilities, infection control is of the utmost importance to ensure infection does not spread within the facilities (including to other residents or staff).

- Consider contracting with a health care provider in the community or other organization familiar with infection prevention and control protocols. If not available, explore existing or hire new infection control personnel.
- See relevant guidance in CDC's **Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Healthcare Settings**.
- See CDC's **Guidance for Cleaning and Disinfecting**.

5. Linkage for cases and contacts

- [ ] Ensure the link to alternative housing is made for cases and contacts, as appropriate.
  - Train contact tracing staff to assess an individual's ability to isolate or quarantine at home in a way that is safe for them and others.
  - Contact tracing staff should link people with alternative housing services based on their eligibility and interest.
  - People in alternative housing must also be linked to wraparound services and other social supports, as appropriate.
  - Forms and protocols used by contact tracing staff should include questions and prompts to guide this process.

Implementation Tools

- **Template scope of work (facilities)**
- **Template scope of work (infection prevention and control)**
- CDC: **Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Healthcare Settings**
- CDC: **Guidance for Cleaning and Disinfecting**
- **Sample eligibility criteria for out-of-home isolation or quarantine**

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Public communication

Checklist

1. Risk communication and community engagement

- [ ] Develop a strategy for risk communication and community engagement to support a successful contact tracing initiative.
    - Contact tracing can only succeed if people accept it as an effective measure and participate when appropriate.
    - The SECURE framework, outlined below, offers an effective risk communication and community engagement strategy. (See **Vital Strategies** **Draft Communication Guidance for COVID-19 Contact Tracing** for more information)

- [ ] **1.a Support** contact tracing corps and skilled contact tracers with training and other needs.
    - Contact tracers need to be skilled, experienced, and well-trained for the risk communication issues specific to COVID-19.
    - This will ensure that people who engage with contact tracers feel supported and protected and receive empathetic, culturally appropriate engagement in an accessible language.

- [ ] **1.b Engage** community leaders.
    - Identify people that communities trust, build relationships with them, and enlist them as validators of your contact tracing messages.
    - This may include faith and ethnic group leaders, community leaders, business leaders, leaders within vulnerable populations, teachers, or public officials, among others.
    - Jurisdictions should engage community leaders by:
        - Establishing a mechanism for feedback to refine messaging and tactics
        - Sharing communication plans and approaches
        - Sharing official fact sheets and other communication tools
        - Encouraging them to participate in press briefings
        - Encouraging and supporting them to share official public health notifications, recommendations and other messages with their communities. Community

leaders can use existing communication channels (such as social media and email newsletters); new channels can be established as appropriate

- [ ] **1.c Communicate widely** via public information campaigns, using mass media, web sites and digital media to explain contact tracing and its impact..
    - Engage journalists and consider journalist trainings to ensure journalists understand the program and are reporting factual and timely information.
    - Use mass media and digital communication campaigns to build awareness on how contact tracing is helping us all get to a better tomorrow.
    - Official health department social media handles, such as on Facebook, Twitter, LinkedIn, among others, should be used to amplify messaging.
    - Consider communications campaigns that explain the contact tracing and testing process and how personal information is protected.
    - Consider running an “answer your phone” campaign that shows the importance of answering calls and engaging honestly with contact tracing staff.

- [ ] **1.d Understand** risk communication principles and apply them.
    - Express empathy often. COVID-19 is scary, and spokespeople should acknowledge that. People may find it invasive to consider sharing information about who they’ve been in contact with. Be sure to empathize with the public about the downsides of contact tracing, while reminding people of the benefits to their family, neighbors, friends and communities.
    - Communication that expresses empathy, is credible, provides anticipatory guidance, promotes action, and shows respect will help build trust.

- [ ] **1.e Respect** confidentiality.
    - Communication on every level needs to address and allay public concerns about privacy and confidentiality.

- [ ] **1.f Evaluate** and improve communication efforts
    - Assess what’s working and what’s not working to improve communication messages and strategies.

2. Communications and notifications

- [ ] **2.a** Determine messages and channels for relaying messages to cases, contacts and health care providers.

- Support cases and contacts while in isolation and quarantine to ensure they have the information needed to stay safe and adhere to public health recommendations.
  - Share new information on the COVID-19 situation in the area.
  - Reiterate and update on health and safety recommendations.
  - Link to information sources, including official websites, press briefings and hotline.
  - Consider using email or text messages for sharing messages (or digital apps as relevant).
  - Provide fact sheets, FAQs and other educational resources
- Target messages to specific audiences, including COVID-19 cases and contacts, high-risk communities such as long-term care facilities and group homes, and health care providers and hospitals.
- Make materials available in multiple languages according to local needs.
- Send notifications to health care providers when there are changes to procedures or policies relating to provision of health care, laboratory testing, treatments, or vaccines.

- [ ] **2.b** Consider establishing messages and procedures for community notifications of exposure.
  - Notifications should include messaging in line with **CDC public health recommendations for community-related exposure**:
    - Be alert for symptoms
    - Watch for fever, cough, or shortness of breath
    - Take temperature if symptoms develop
    - Practice social distancing
    - Maintain 6 feet of distance from others
    - Stay out of crowded places
    - Follow CDC or local health department guidance if symptoms develop

3. Communication coordination

- [ ] Establish a centralized mechanism to manage communication.
  - Depending on the size of the jurisdiction and communication needs, a small team may be needed to support the various activities and coordinate with external stakeholders (e.g., community leaders, media outlets).

- The centralized mechanism should be linked with health department staff responsible for monitoring and analyzing the epidemic science and situation. This will ensure communications are accurate and up-to-date.

4. Policymaker advocacy

- [ ] Develop a plan and materials for advocating for the necessary resources for a contact tracing program.
  - Prepare materials that make the case, and advocate for funding with policymakers to support contact tracing activities.

Implementation tools:

- Vital Strategies: **Draft Communication Guidance for COVID-19 Contact Tracing**
- CDC: **Interim COVID-19 Contact Tracing Communications Toolkit for Health Departments**
- **Key messages**
- Talking points when speaking with the media *(under development)*
- **Sample discussion guide on contact tracing for health care providers**
- **Template fact sheet: Guidance while in self-isolation**
- **Template fact sheet: Guidance while in self-quarantine**
- How to conduct community engagement *(under development)*
- How to conduct mass/social media campaign and sample memes *(under development)*
- CDC: **Public health recommendations for community-related exposure**
- **Sample advocacy briefing for policymakers**

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Metrics & monitoring

Checklist

1. Process indicators

- [ ] Identify key process indicators: **(*key indicators)**
    - Speed of contact tracing
        - ***Percentage of new cases reported within 24 hours of specimen collection**
        - ***Percentage of cases interviewed and isolated within 24 hours of case report**
        - ***Percentage of contacts notified and quarantined within 24 hours of elicitation**
        - Proportion of contacts with symptoms evaluated within 24 hours of onset of symptoms
    - Completeness of case investigation
        - Daily proportion of cases whose status has been evaluated
        - Proportion of cases with no contacts elicited
    - Completeness of contact tracing
        - Percentage of cases reached out of cases identified
        - Percentage of contacts reached out of contacts elicited from cases
        - Daily proportion of contacts whose status is evaluated
    - Completeness of testing
        - ***Of new symptomatic cases, number tested and interviewed within 3 days of onset of symptoms**
        - Percentage of contacts connected to clinical care and/or testing out of those who develop symptoms

2. Outcome indicators

- [ ] Identify key outcome indicators: **(*key indicators)**
    - Overall
        - ***Percentage of new cases arising among contacts identified by program and under quarantine at the time of onset of their symptoms or, if asymptomatic, at first positive test with immediate initiation of isolation.** i.e., as proportion

increases, it means we're getting better at capturing and containing exposure before it spreads further
        - ***Percentage of new cases unlinked to a source of infection**
        - Number needed to interview: number of cases interviewed in order to result in one contact quarantined
    - Adherence to isolation or quarantine
        - Percentage of contacts who complete their full quarantine period
        - Percentage of cases who complete their full isolation period

> **MONITORING FOR IMPROVING ADHERENCE**
>
> - By tracking noncompliance rates and reasons, health departments can address challenges and improve compliance.
> - Data collection should not have a negative impact on cases or contacts in isolation or quarantine. Their personal information should not be disseminated or published, except when imperative for public health purposes. This privacy also helps avoid stigmatizing individuals or groups.

3. Quality improvement and quality assurance indicators

- [ ] Identify key QI and QA indicators:
    - Data validity and completeness
    - Workforce recruitment, training and retention

4. Equity considerations in reporting

- [ ] Collect data for tracking and reporting on program equity. Ensure data is collected from cases and contacts in the contact tracing system to be able to stratify by relevant variables, such as:
    - Geography (county, city, neighborhood, ZIP code, or other meaningful geographic category)
    - Race/ethnicity
    - Age
    - Language preference

5. Dashboard

- [ ] Develop a dashboard aligned with IT system and consider how to align the dashboard with case reporting and case surveillance systems:
    - Key outcome and process indicators
    - Total and current cases by status (awaiting outreach; outreach underway; monitoring and support; closed)
        - By gender, age group, race/ethnicity
        - By county, neighborhood, ZIP code, or other meaningful geographic category
    - Reasons for closure of case (isolation completed; lost to follow-up; referred to local health department; hospitalized; declined; was never reached; died)
    - Median number of contacts per case (for cases with at least one contact)
        - Percentage by risk category (if risk categories are being used)
        - Percentage by type (individual case; mass gathering; group setting; facility with healthcare delivery)
    - Number/percentage of cases with no identifying information
    - Total and current contacts by status (awaiting outreach; outreach underway; monitoring and support; closed)
    - Reasons for closure of contacts (quarantine completed; lost to follow-up; referred to local health department; hospitalized; diagnosed with COVID-19; declined; was never reached; died)
    - Percentage of total and current contacts by risk level (if risk levels are being used)
    - Staffing indicators
        - Percentage of positions currently recruited, hired, onboarded, trained by title
        - Any performance standards, i.e. monitoring calls, etc.
    - Technology/digital app indicators and data flow indicators, depending on if and how technology is used
    - Telemedicine and connections to social support indicators
    - Communication and marketing indicators

6. Targets

- [ ] Set targets for key indicators, including timeliness of case and contact notification and quarantine, in order to guide adjustments to policies and protocols. (See **COVID-19 Contact Tracing indicator list for consideration**)

Implementation tools

- **COVID-19 Contact Tracing indicator list for consideration**

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Privacy and data sharing

Checklist

1. Assess the overall process

- [ ] **1.a** Consider conducting an initial privacy assessment by asking, for example:
  - who are the people/roles involved in the process,
  - who are the entities,
  - what is the technology,
  - what information will be collected,
  - what privacy and security policies and controls are in place,
  - when and how will private information be deleted or de-identified, and
  - what are the key data flows and data sharing use cases.

- [ ] **1.b** With appropriate advice, consider documenting or amending existing policies, in light of the program maturity and the needs of the local jurisdiction.

- See **CDC Data Security & Confidentiality Guidelines**

2. Assess policy simplification

- [ ] Assess policy simplification. Consider the costs and benefits of policies that default to treating information as sensitive, even if not legally required.
  - Sample: Your information is confidential and will be used only for public health purposes. We will collect, use and share the minimum necessary information appropriate for these purposes and we will not release the name of someone who tests positive to anyone with whom that person has been in contact.
  - See **MA Privacy Policy**

3. Privacy / Communications to contacts

- [ ] In the tracing process, Contacts, who are informed that they may have been exposed, are not told the names or identities of the Cases who may have exposed them.

4. Notification

- [ ] Publish a privacy policy that explains how information is collected, used, shared and retained in connection with the contact tracing process. Even in the absence of a legal requirement for such a policy, publishing one improves the transparency of the process.

5. Data sharing plan / framework

- [ ] It is important to proactively define data sharing use cases and rules. Consider, with appropriate advice, creating a data sharing plan for your state and local jurisdiction that specifically addresses what data can be shared and with whom. Consider the following questions:
    - **What is the data that's being considered for sharing?** Define and map data flows and explain what happens to the data in the privacy notice.
    - **How sensitive is the data?** Classify data sets into categories, such as: Protected Health Information (PHI), Personally Identifiable Information (PII), Public Health data and Public data.
    - **What is the purpose for sharing a particular data set?** For example, is the data set:
        - for the Public Health Department's contact tracing process?
        - for medical treatment?
        - for medical research?
        - for other public purposes?
    - **Are data sharing agreements in place and who (what entities) are receiving data?**
        - Determine what data sharing, confidentiality and business associates agreements (BAAs) are needed and in place. With legal assistance, proactively prepare standard contract terms.
        - Entities may include for example: Public Health agencies within the jurisdiction, Public Health agencies outside the jurisdiction, clinical providers (such as labs), medical providers, medical researchers, data clearinghouses, other state and local agencies, the media and technology providers
    - **Is individual consent required?**
        - Determine if individual consent is required to share sensitive data.
        - Assess consent issues, which are fact specific, proactively and with appropriate advice. In general, the rules reflect a balancing of patient and

public interests. For example, data can be more freely shared within a public health process for surveillance or for medical treatment, potentially without individual consent or authorization. In other contexts, the data that can be shared may need to be less sensitive and/or individual consent to disclose may be required.

- See **HHS Emergency Data Disclosures Decision Tool**, **HHS (OCR) Guidance & Notifications**, **Network for Public Health FAQs**

6. Technology

- [ ] When considering technology to enhance a contact tracing process, ensure privacy and security standards, including under HIPAA, are met.
  - The 2 general categories of tracing technologies are (i) “case management” tools to automate the efficiency of case investigation, management and communications within a human-based tracing process and (ii) “proximity tracking” (by cell phones) which can help automate the identification and follow up communications with contacts.
  - Consider communicating privacy policies to your technology teams to promote cross-functional discussion.
  - See **CDC Criteria for Evaluating Contact Tracing Tools**

7. Assess and ensure proper data security policies, standards and controls are in place

- [ ] Such policies should reflect applicable legal standards and the public trust.

8. Assess and document data retention, access, deletion, & de-identification policies

- [ ] Such data policies should reflect at least the “minimum necessary” and other applicable legal standards, respect for individuals and the reasonable capabilities of the technology.

9. Train staff

- [ ]

Train employees on privacy and security policies, as well as the reasons for the policies (including to build public trust in a process that relies on voluntary community cooperation).
    - Consider written privacy agreements and certifications.
    - Enforce the policy, including with transparent investigations of data breaches and appropriate consequences for policy violations.
    - See **CDC Core Training Recommendations for Protecting Health Information**

10. Remote working rules

- [ ] If employees work from home, consider implementing controls such as prohibitions on saving information to personal devices and steps to ensure that private conversations are not overheard.

11. Agility

- [ ] Review, revise, iterate and simplify policies and the process framework based on experience, best practices and technology developments.

HIPAA and privacy compliance are highly fact specific. This checklist is not intended as, and should not be treated as, legal advice concerning any particular course of action.

Implementation tools

- Criteria for evaluating contact tracing apps to ensure privacy
    - CDC: **Preliminary Criteria for the Evaluation of Digital Contact Tracing Tools for COVID-19**
    - Access Now: **Privacy and public health: the dos and don'ts for COVID-19 contact tracing apps**
- Data security and privacy guidelines
    - CDC: **Data Security and Confidentiality Guidelines**
    - Sample privacy policy: **Massachusetts Privacy Policy**
- Consent guidance
    - **HHS Emergency Data Disclosures Decision Tool**

    - **HHS (OCR) Guidance & Notifications**
    - **Network for Public Health FAQs**
- CDC: **Core Training Recommendations for Protecting Health Information**

About

About & contact us

Resolve to Save Lives is an initiative of **Vital Strategies**, a leading global public health organization and a trusted partner of governments and civil society organizations around the world.

We help governments strengthen their public health systems to contend with the most important and difficult health challenges. We bring the best of public health thinking to design solutions that can scale rapidly and improve lives.

The **Prevent Epidemics** team from Resolve to Save Lives is committed to making the world safer from epidemics.

As COVID-19 spreads around the world, the Prevent Epidemics and Vital Strategies teams serve as timely experts and honest brokers in supporting governments and civil society organizations around the world in responding to the COVID-19 pandemic

Contact us

covid19-ct@vitalstrategies.org

Privacy Policy

See our privacy policy at: https://resolvetosavelives.org/privacy

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