

December 2020

Contact Tracing 101:

Key components of an effective program



Context for these materials



The ideas presented in this deck reflect the latest public health thinking and scientific evidence as of December 2020. However, the COVID-19 landscape is changing dramatically daily, and so must our recommendations over time.

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Overview



- 1 Background on contact tracing and its essential role in COVID-19 epidemic control and care delivery
- 2 Program governance and partnerships
- 3 Contact tracing process and workflow
- 4 Care resource coordination
- 5 Workforce and training
- 6 Communications and community engagement
- 7 Metrics and monitoring
- 8 Digital and technology solutions
- 9 Additional equity and systems strengthening considerations

Contact tracing is a long-standing pillar of public health responses to infectious disease outbreaks

Contact tracing has been used as a core public health response to infectious disease outbreaks throughout history, and was identified early on as a way to combat COVID 19

- Contact tracing [helped prevent Ebola from spreading](#) in other West African countries during the 2014-2016 outbreak
- Studies describe the [importance of contact tracing](#) in controlling the West African Ebola outbreak and [identify gaps that can be improved](#) for future response
- Contact tracing was one of several interventions that [helped control SARS in 2003](#)
- Contact tracing was a core component of smallpox eradication

Contact tracing is a process through which we can break chains of COVID-19 transmission and connect people to care

- A comprehensive contact tracing program includes: **conducting case investigation, identifying known exposed contacts, and providing support for both positive cases and exposed individuals.**
- Each person who is newly diagnosed with COVID-19 as a “case” is interviewed to enumerate their close contacts, e.g. those who have been within six feet for 15+ minutes. Those people who are identified as contacts are notified and entered into a care management system, so they can:
 1. Stay in safe quarantine for 14 days, supported by resources to protect themselves and their family
 2. Be tested for COVID
 3. Be monitored for symptoms
- **Contact tracing is not new for Departments of Public Health in the US.** Local health departments have historically conducted contact tracing for other diseases, such as tuberculosis and sexually transmitted infections, but additional support is essential to manage the volume of cases and contacts associated with the novel threat of COVID-19.

Contact tracing saves lives

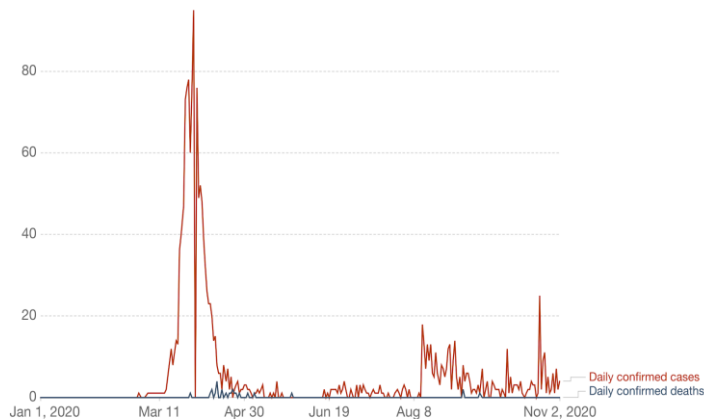
- Contact tracing should not be considered a purely epidemiological exercise to stop the spread of COVID-19, but instead as a **care exercise that connects cases and contacts to support** – ultimately, contact tracing is an entry point to care
- 80+% of COVID patients don't need hospitalization and it's this population that perpetuates community spread. Therefore, **in addition to the investments we make for the sick hospitalized patients, we must invest in breaking disease transmission**, which involves 1) community mitigation, 2) testing, 3) case investigation and contact tracing, 4) ensuring capacity and completion of safe quarantine and isolation
- With over 200,000 cases in the US per day, **reducing the reproduction number (R_t/R_0) of COVID-19 cases will save lives**. Controlling the disease spread is still essential while the US waits the 3-6 months that it'll take for mass vaccine distribution.
- Given the potential logistical, emotional, and financial difficulties of quarantining or isolating for two weeks at a time, **effective contact tracing programs must be able to connect cases and contacts to food, housing, medicine or other needs that might come up in that two-week period**, [like milk or rent](#). Without contact tracing programs that can provide social support, people will have to choose between quarantining to stop the spread or continuing with their daily lives, thus perpetuating the pandemic.

Contact tracing has proven critical to containing COVID-19 in other countries around the world

- [South Korea](#), [Singapore](#), [New Zealand](#), Taiwan and Iceland implemented contact tracing programs early on, helping to slow their epidemics
- In England, due to a data systems error, some areas implemented contact tracing for cases sooner than others. Places with more timely contact tracing had fewer cases and deaths, providing "[strong quasi-experimental evidence for the effectiveness of contact tracing](#)".
- As of yet, the United States has failed to implement a [national contact tracing response](#), and has subsequently failed to get ahold of the virus

Daily confirmed COVID-19 cases and deaths, New Zealand

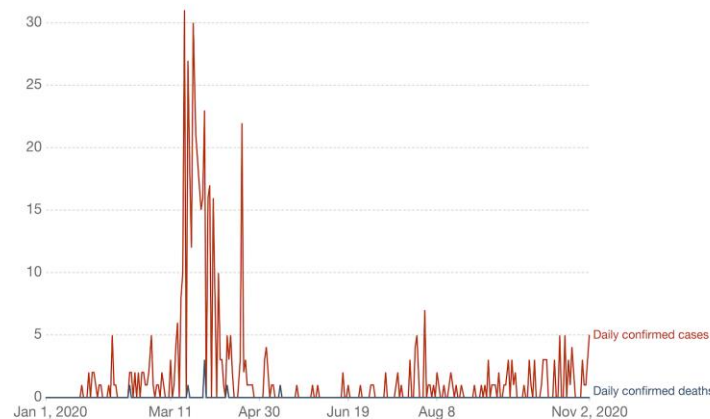
The confirmed counts shown here are lower than the total counts. The main reason for this is limited testing and challenges in the attribution of the cause of death.



Source: European CDC – Situation Update Worldwide – Last updated 2 November, 10:06 (London time)
OurWorldInData.org/coronavirus • CC BY

Daily confirmed COVID-19 cases and deaths, Taiwan

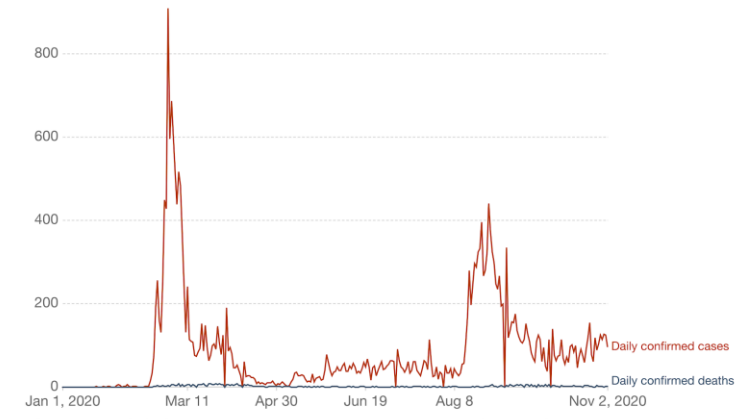
The confirmed counts shown here are lower than the total counts. The main reason for this is limited testing and challenges in the attribution of the cause of death.



Source: European CDC – Situation Update Worldwide – Last updated 2 November, 10:06 (London time)
OurWorldInData.org/coronavirus • CC BY

Daily confirmed COVID-19 cases and deaths, South Korea

The confirmed counts shown here are lower than the total counts. The main reason for this is limited testing and challenges in the attribution of the cause of death.

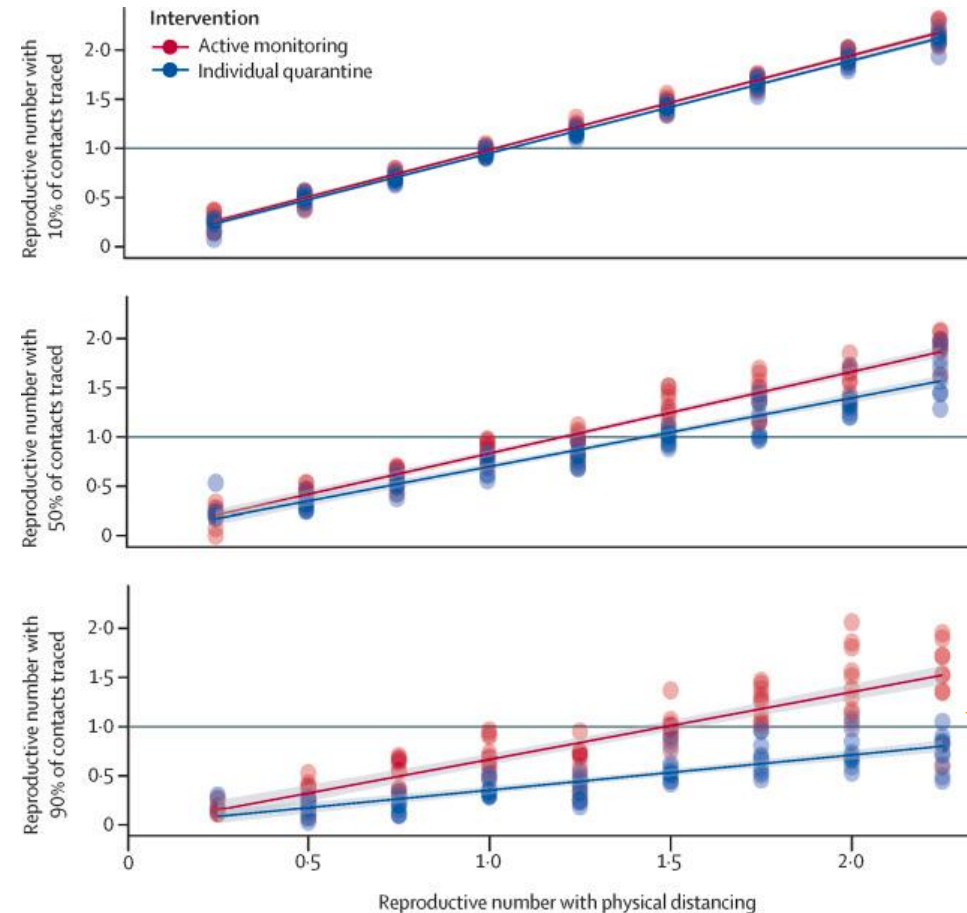


Source: European CDC – Situation Update Worldwide – Last updated 2 November, 10:06 (London time)
OurWorldInData.org/coronavirus • CC BY

Source: <https://ourworldindata.org/coronavirus>

Contact tracing can and should be deployed as part of an integrated response to COVID-19

- From a study [published in the Lancet](#) examining the efficacy of individual quarantine vs. active monitoring of contacts, this figure shows that if other interventions (e.g. physical distancing) reduce the reproductive number (x-axis), contact tracing can help reduce it further (y-axis).
- Because people can transmit before or without symptoms, contact tracing combined with quarantine (blue) is more effective than monitoring people for symptoms (red).
- The higher % of contacts traced, the more effective contact tracing is.



Example: If other measures reduce the reproductive number to 1.5, contact tracing + quarantine can further reduce it to 0.5

Contact tracing must be deployed as part of a broader public health toolkit for epidemic control and care delivery



These components should be completed in less than 3 days

Effective contact tracing programs are guided by 3 core elements: technical expertise, leadership, and a focus on equity

1. Technical expertise

Effective contact tracing programs that successfully reach cases and contacts require epidemiological knowledge, logistical capacity, clinical support guidelines, and program management expertise.

2. Leadership

In order to implement a contact tracing program at the state or local level, effective government leadership is necessary to champion and manage the program, combat misinformation, build community buy-in, and properly finance the tracing efforts.

3. Equity agenda

Equity must be built into any COVID-19 contact tracing program to combat the systemic racism that puts Black, Latinx, and Native American populations at a higher risk for contracting the virus, disproportionate death rates amongst minority groups, and a statistically higher need for social support in order to safely quarantine or isolate.

Effective contact tracing programs focus on 4 critical dimensions: scale, speed, retention, and equity



Equity:

Are we responding to all unique needs with a social justice lens, and prioritizing the most vulnerable groups?



Retention:

Where is loss-to-follow-up occurring at each stage in the cascade, assuming we aim to retain 90% of identified cases and contacts?



Scale:

Has the response built up the infrastructure to meet demand (e.g., sufficient tests, staffing capacity, social support resources)?



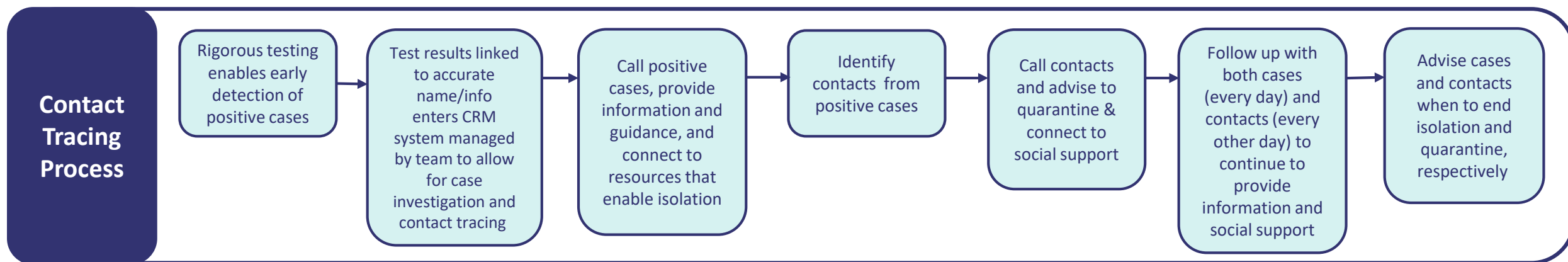
Speed:

Is the response happening quickly enough to drive the rate of infection below 1: < 3 days for the full cascade?

Program governance & partnerships: key considerations

- Building a robust COVID-19 contact tracing programs requires **high-level political support and significant resources**
- **COVID-19 contact tracing programs should be integrated within or in service to public health departments** who know the context of a region and have been doing this work for years. CT programs should amplify the work of what local public health departments already do rather than center themselves as the primary source of knowledge.
- **Strong leadership and buy-in at both the senior policymaker and programmatic level is necessary** to a successful contact tracing program. Without buy-in and political will at the highest level, contact tracing programs will often fail to achieve public buy-in or meet funding needs. Strong technical and operational leadership at the program level is needed to guide rapid decision-making about the evolving demands on CT programs.
- Contact tracing programs should be **well integrated within a state or local jurisdiction's larger public health response to COVID-19**, with strong operational integration and strategic alignment with testing, mitigation policy, supported isolation and vaccine rollout efforts
- **Clear definition of roles, responsibilities and decision rights** are essential within complex partnership structures supporting contact tracing; a regular review and adaptation of governance arrangements is essential to keep up with rapidly evolving epidemic dynamics and partner ecosystems

Contact tracing process: key elements & workstreams



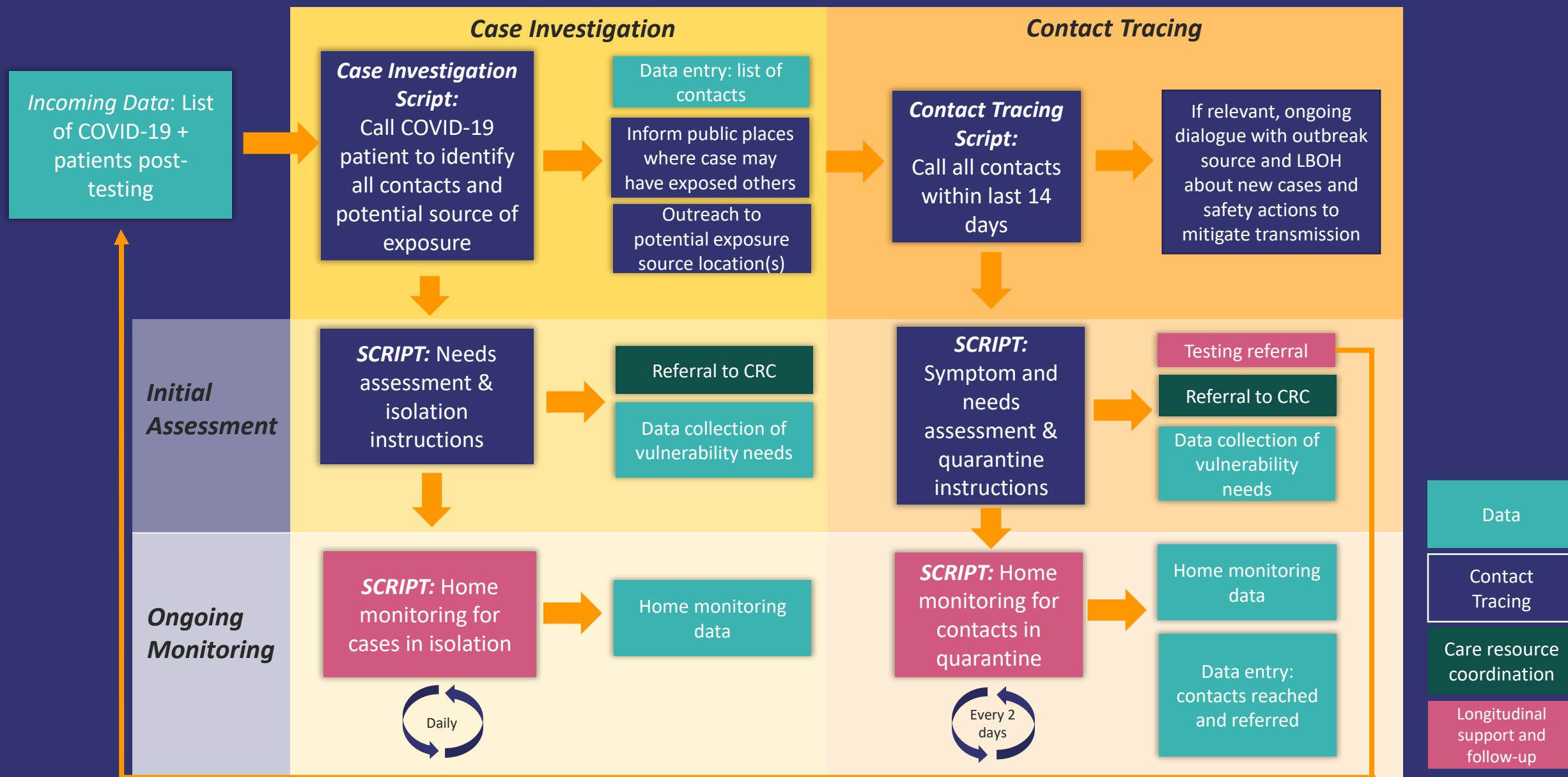
Elements of a contact tracing program:

1. **Testing** – Testing should be widespread and decentralized. A successful and timely contact tracing program relies on tight coordination with testing in order to quickly contact anyone who has tested positive for COVID-19.
2. **Case Investigation** – Case investigation involves interviewing a newly diagnosed person with COVID-19 in order to enumerate their contacts, monitor their symptoms over time, and ensure ability to safely isolate throughout their illness and provide connections to social support.
3. **Contact Tracing** – Contact tracing involves the same components as case investigation, but some patients will be COVID-19 negative.
4. **Safe Quarantine and Care Coordination** – In order to successfully isolate, CT programs need a coordinated approach to care and social support. Contacts of positive cases should first be referred to testing and care, while others will require specific needs to successfully quarantine, demanding the mobilization of different social resources including food, housing, transportation, economic support, and mental health and addiction resources.

Contact tracer workstreams:

- **Education** – What is COVID-19? How is it spread? What are the symptoms? How can I keep myself and my community safe and healthy?
- **Epidemiological Data Collection** – Demographic information; case information (symptoms, hospitalizations, etc.); exposure information (to identify clusters/multiple exposures); contacts; resource assessment
- **Advising on Isolation/Quarantine** – importance of isolation for positive cases; importance of testing/quarantine for contacts; regular follow up and monitoring of symptoms; eventual clearing of people from isolation/quarantine
- **Assessment for and Connection to Health-Related Social Needs** – resource assessment during initial intake; continued assessment during follow up calls; liaise with community partners/care resource coordinators to arrange for resource delivery

Contact tracing workflow



Care resource coordination (CRC): ensuring all who need to are able to isolate/quarantine safely

Why is CRC work needed?

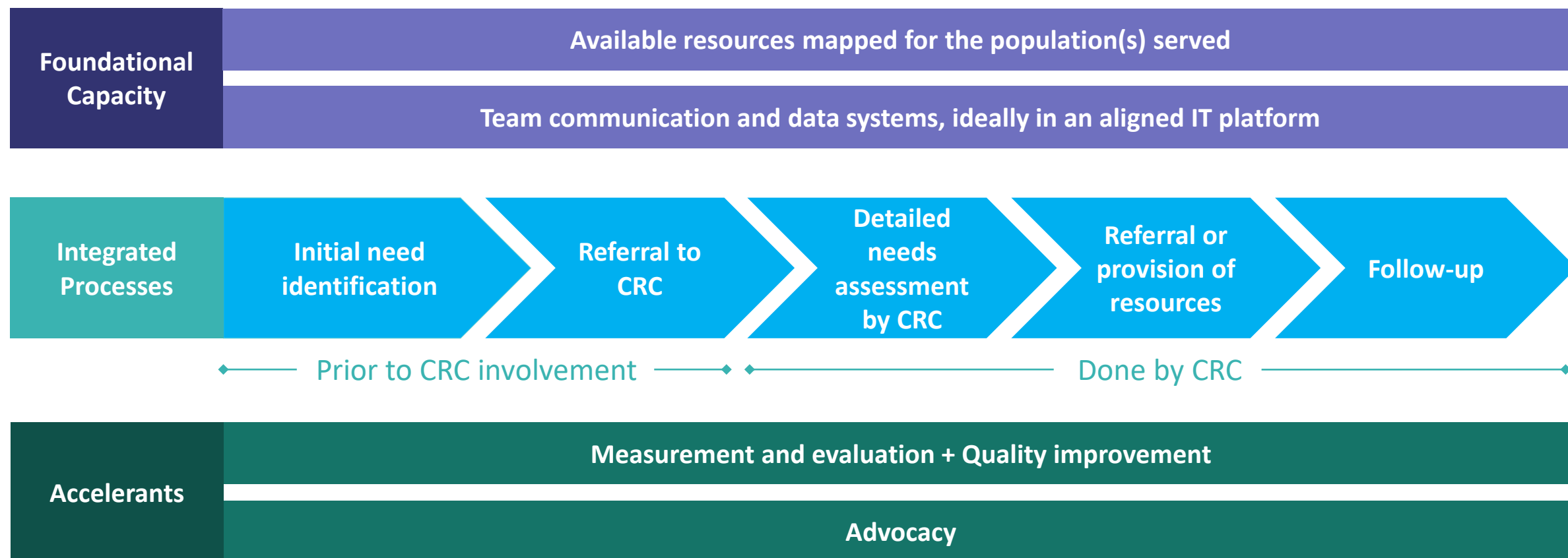
- **Isolation (cases) and quarantine (contacts) breaks the chain of COVID-19 transmission.**
- For cases and contacts to isolate and quarantine for 10-14+ days, **support systems need to be in place to allow for everyone to quarantine and isolate safely and effectively.** Without ensuring everyone can quarantine and isolate safely, people may be forced to choose between meeting basic needs and quarantining, thereby perpetuating the pandemic.
- CRC work is **essential to address health-related social needs and social determinants of health that directly impact individual health outcomes and public.**

CRC integration within contact tracing program

- Case investigators and contact tracers should complete an **initial needs identification** for all cases and contacts.
- Anyone with support needs are then **referred to a care resource coordinator** and a more **detailed needs assessment** is conducted.
- They are then **referred to or provided resources** in order to isolate/quarantine safely
- **Regular follow-up** is required to assure additional resources are provided when necessary and symptoms are monitored

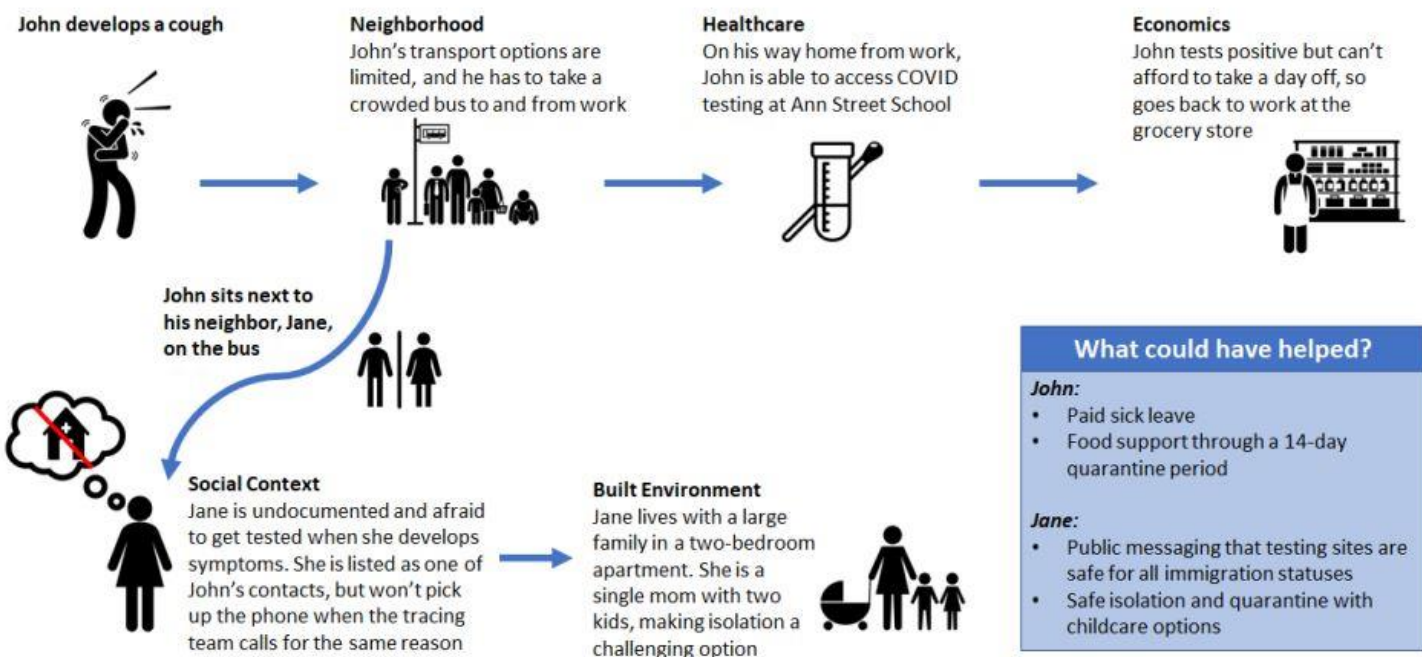
Framed through a social justice lens, care resource coordination is a critical step to right historical injustices and stop the COVID-19 pandemic

Components of an effective care resource coordination program



Care resource coordination: breaking down barriers to care

Care coordination can address the social determinants of health that present a formidable barrier to individuals across the care cascade



Best practices & key considerations

- **Screening for social support should be done early and often.** We recommend that screening should start at testing sites and support should be offered throughout quarantine and isolation at regular intervals
- **CRCs should ideally have local experience** in order to properly connect cases and contacts with the necessary resources. Diverse language abilities are necessary to reach everyone who may be infected
- **Establish clear referral protocols and lists of social support resources.** Incorporate screening questions into contact tracing scripts. Ensure CTs/CIs are trained on requirements for isolation, common social needs, specific needs assessment scripts, and how to refer patients to a CRC
- The overarching goal of care resource coordination is linkage to care, but linkage assumes supply. This is often not the case in a chronically underfunded US social service landscape in which contact tracing is sure to expose unmet demand. **Creative solutions are required to ensure sufficient referral pathways**

Workforce & training: key roles and management structures

There are three primary roles within a contact tracing program:



Case Investigators

Engage with newly diagnosed COVID-19 patients, explain diagnosis and facilitate safe isolation; offer assistance; identify people they may have exposed to the virus (contacts)



Contact Tracers

Engage with the contacts of people diagnosed with COVID-19; explain their risk of infection and of transmitting the disease; assess symptoms; explain and facilitate safe quarantine; assess support needs



Care Resource Coordinators

Engage with COVID-19 patients and their contacts to understand their resource needs to safely quarantine and isolate; connect them to essential material, financial and social supports

Note: programs should strive to combine the case investigator and contact tracer roles into one cross-trained role in order to build a nimble workforce that can withstand large fluctuations in cases and contacts as the pandemic ebbs and flows.

Workforce & training: key roles and management structures

Support structures are necessary to keep the CIs/CTs/CRCs running and improve program metrics and design:

Management and Leadership Team

Responsible for oversight and accountability of the program, as well as troubleshooting and enablement. Consists of program leadership, responsible for implementation & design, data, strategy, policy, communications, HR, clinical, and coordination with government and DPH. Should continuously track program metrics to improve program efficacy.

Training Team

Responsible for training all new CIs/CTs/CRCs and offering continued education for all employees. Training programs should be nimble and tightly connected to new implementation updates.

Mentors and Peer Support

Given the numerous changing protocols needed in a functioning CT program, mentors should be continuously available for questions and training of all employees. Peer support programs should be created to offer emotional assistance to employees given the taxing nature of the work.



For a contact tracing program to properly respond to an evolving pandemic and manage ongoing programmatic issues, a strong workforce management team must lead the program. A nimble response must be led from the top-down and unfortunately this is often neglected.

Workforce & training: planning and adapting for evolving epidemic conditions

Workforce quantification

- A nimble workforce that can fluctuate depending on the course of the pandemic is necessary for a program to be effective. The number of contact tracers and case investigators needed will vary, depending on:
 - The number of new positive tests (cases)
 - The number of contacts per case
 - The average duration for each initial case investigation and contact tracing call
 - The number of follow up calls per case and contact, and their average duration
- Workforce estimation tools, like the sensitivity analysis shown below, can be useful to estimate how many CTs/CIs/CRCs are needed at a given time

Sample PIH contact tracing workforce estimator tool output:

		Number of New Daily Positive Cases									
Average number of contacts per case		Cases reduced by 60%		Cases reduced by 30%		Base-case number of cases		Cases increased by 30%		Cases increased by 60%	
	Sensitivity input value	40 daily new cases		70 daily new cases		100 daily new cases		130 daily new cases		160 daily new cases	
Contacts reduced by 60%	2.0 contacts per case	6.8	7.0	11.9	12.3	17.1	17.6	22.2	22.8	27.3	28.1
Contacts reduced by 30%	3.5 contacts per case	6.8	12.3	11.9	21.5	17.1	30.7	22.2	39.9	27.3	49.2
Base-case number of contacts	5.0 contacts per case	6.8	17.6	11.9	30.7	17.1	43.9	22.2	57.1	27.3	70.2
Contacts increased by 30%	6.5 contacts per case	6.8	22.8	11.9	39.9	17.1	57.1	22.2	74.2	27.3	91.3
Contacts increased by 60%	8.0 contacts per case	6.8	28.1	11.9	49.2	17.1	70.2	22.2	91.3	27.3	112.4

Workforce & training: planning and adapting for evolving epidemic conditions

Recruitment

- Engage and reinforce **existing community health workforce members and cadres**, including Community Health Workers, and engage FQHCs as key staffing partners where possible
- **Prioritize hiring from hardest-hit and most vulnerable communities**; ensure recruiting and workforce partners have clear accountability for equity and diversity in hiring
- Prioritize **hiring of staff with diverse language capacities** to address the diverse language needs of your constituency

Surge Staffing

- Essential to rapidly respond to hot spots and outbreaks
- Depending on local financing and governance (home-rules vs. more centralized approach to public health), options for how to ramp up surge staffing vary; approaches include:
 - Hire a **centralized surge workforce** to be deployed upon request to local departments, or are operating **virtual call centers** with full statewide coverage
 - Provide **grant funding to local health departments** to hire and manage surge staff locally
 - **Contract local CBOs** to accompany local health department staff with surge support

Communications & community engagement: communications campaign goals and strategies

Best practices for contact tracing communications



Approach

- Contact tracing communications campaigns should be **hyperlocal with connections to local leaders** and influencers
- Building trust and sharing knowledge are the most important goals of any communications program
- Information **should be accessible to everyone in a community** – extensive multi-media campaigns, broad coalitions of community organizations, and engagement in representative languages are needed



Goals

- **Generate awareness** about contact tracing
- **Dispel misinformation** by pointing the public to official and comprehensive sources of verified facts
- **Rebuild trust** in the public healthcare system among communities that have been historically marginalized
- **Destigmatize COVID-19** by ensuring cases and contacts feel safe when they are contacted and are comfortable sharing their contacts
- **Communicate** that contact tracers are calling to help, connect people to medical services and social supports; they are not authority figures seeking to get them in trouble or affecting their immigration status



Strategies

- All community engagement and education should be **available in local languages**
- Communicate with **faith-based organizations** and work with religious leaders to educate communities and build trust
- Partner with community organizations and support public events (e.g. food distributions, education sessions, etc.)
- Coordinate with the DOH for events and campaigns around health promotion (e.g. mobile testing, flu vaccination)

Communications & community engagement: example messaging

- Public-facing communications for contact tracing programs should include **multi-channel media campaigns** in order to reach the highest number of people (i.e. TV, radio, Facebook/Instagram, Google Ads, and town halls), as seen by these ads created by the Massachusetts CTC
- Programs should **develop partnerships at the community level** (i.e. mayors/local councils, health centers, community centers, faith groups, immigrant groups, school superintendents, food pantries, etc.) in order to build trust and combat disinformation
- All media should be **developed in local languages and delivered at a hyper-local level** (i.e. grocery stores, churches, etc.)

Solisyon an kòmanse avèk nou tout.
Reponn apèl la.

Pi gwo zak lanmou ou ka fè se reponn apèl la. Si ou te teste pozitif pou COVID-19, ekip MA COVID la pral kontakte w pa telefòn pou konekte w avèk sipò ou bezwen pandan w an karantèn lan epi pou nou idantifye moun ki te gen kontak sere avè w yon fason pou nou kwape pwopagasyon an.

Nimewo Idantifikatè w la pral montre ke apèl la soti nan

MA COVID TEAM
 (833) oswa (857)

Reponn apèl la.
 Kwape viris la.
 #COVID19MA

Community Tracing Collaborative

Partners In Health

Nou pa pral devwale non w.

Greatest act of love is answering the call.

Look for area code (833) or (857)

Community Tracing Collaborative

Partners In Health

If you tested positive, the MA COVID team will call to make sure you are okay and to trace your contacts so we can stop the spread

Words spread faster than the virus. Answer the call, **stop** the spread of Coronavirus.

Community Tracing Collaborative

Partners In Health

mass.gov/covid19

Spread the word. Stop the virus.

LEARN MORE

Metrics & monitoring: defining and tracking success for contact tracing programs

Metrics should guide every contact tracing program in improving quality and ensuring program effectiveness

- Collecting comprehensive data and ensuring quality reporting and dashboards are essential to monitor delivery across 4 key dimensions of an effective program: **Scale, Speed, Retention, and Equity**
- Demographic metrics provide an epidemiological profile of COVID-19, and more specifically a profile of heavily impacted communities – all KPIs should be disaggregated by key demographic variables (i.e. gender, race, ethnicity) and analyzed for differences
- All metrics should have defined targets and progress tracked against these targets; leadership should actively manage progress**

Example metrics to monitor 4 key dimensions:

- COVID-19 response metrics:** # of cases reached, # of cases identified and supported to isolate, # of contacts identified and supported to quarantine, # of educational materials provided
- Social support metrics:** % of individuals identified with resource need, referred, and received resource
- Clinical support metrics:** % of individuals identified with pre-existing conditions in need of healthcare, referred, and connected to clinical care
- Timing metrics:** show how long the entire cascade takes (from time of test to isolation/quarantine) with the goal of <3 days to drive $R_0 < 1$. Aging cases to show the speed of case investigation can identify lags in the system



Equity:

Are we responding to all unique needs with a social justice lens, and prioritizing the most vulnerable groups?



Retention:

Where is loss-to-follow-up occurring at each stage in the cascade, assuming we aim to retain 90% of identified cases and contacts?



Scale:

Has the response built up the infrastructure to meet demand (e.g., sufficient tests, staffing capacity, social support resources)?



Speed:

Is the response happening quickly enough to drive the rate of infection below 1: < 3 days for the full cascade?

Metrics & monitoring: Example priority metrics and targets

Priority Metric	Breakdown of Metric	Six-Month Target
% of cases referred with resource need and confirmed receiving resource to enable isolation	<ul style="list-style-type: none"> # of cases identified during household visits # of cases identified and unable to isolate # of cases referred to support # of cases confirmed receiving support 	90% of cases with resource need confirmed as receiving resource to enable isolation.
% of contacts referred with resource need and confirmed receiving resource to enable quarantine	<ul style="list-style-type: none"> # of contacts identified # of contacts identified and unable to quarantine # of contacts referred to support # of contacts confirmed receiving support 	90% of contacts with resource need confirmed as receiving resource to enable quarantine.
% of individuals affected by COVID with resource need referred and confirmed receiving resource	<ul style="list-style-type: none"> # of individuals identified with resource need (e.g. food, rent, utilities, etc.) # of individuals referred to resource by Health Promoter # of individuals confirmed receiving support 	90% of individuals affected by COVID with resource need confirmed as receiving resource.
% of individuals with pre-existing condition or clinical need caused by COVID referred and confirmed receiving healthcare	<ul style="list-style-type: none"> # of individuals identified with underlying/chronic condition; # of individuals lacking regular healthcare; # of individuals referred to HCN for healthcare; # of individuals referred and received healthcare and services from HCN 	90% of individuals identified with clinical need confirmed as receiving healthcare.

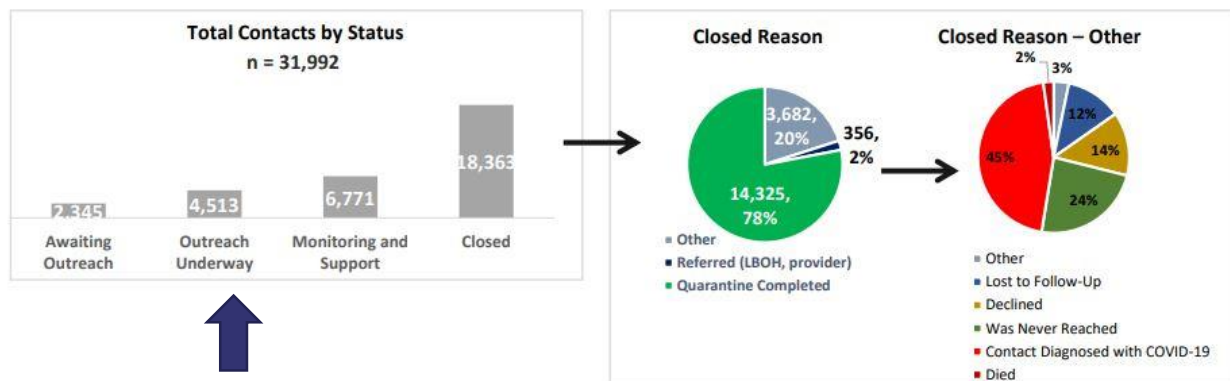
Metric breakdown from Immokalee, FL: outlines the priority metrics and targets that the program seeks to track and influence

KPI Category / Metric	Type	Frequency	Source	Calculation/Notes
CONTACT TRACING				
Tracing - Personnel & Time				
Disease investigators on duty (FTEs)	#	Daily	?	
Hours of disease investigations completed	#	Daily	?	
Median hours per case investigation	#	Daily	✓	
Contact tracers on duty (FTEs)	#	Daily	✓	
Hours of tracing calls completed	#	Daily	✓	
Median hours per successful contact tracing call	#	Daily	✓	Only calls that resulted in full tracing conversation [agreed_to_participate] (no voicemail, callback, declined etc)
Tracing - Productivity				
Total investigations completed	#	Cumulative	✓	
Total outstanding investigations (not yet called)	#	Cumulative	✓	Total positive cases - Total investigations completed
Daily cases assigned to disease investigators	#	Daily	✓	
Daily disease investigations attempted	#	Daily	✓	
Daily disease investigations completed	#	Daily	✓	
Daily investigation completion rate	%	Daily	✓	Daily investigations completed/attempted
Daily disease investigations pending	#	Daily	✓	
Daily cases identified with no contact number	#	Daily	✓	
Daily cases unreachable (including wrong number/won't pickup, unwilling to provide info)	#	Daily	✓	
Daily contacts identified by disease investigators	#	Daily	✓	
Daily contacts assigned to contact tracers				From Commcare "opened" date
Total contacts assigned to contact tracers	#	Cumulative	✓	Total contacts with statuses added, by date
Total contacts who have received first call and case is still open	#	Cumulative	✓	
Total outstanding contacts (yet to receive first call)	#	Cumulative	✓	Status "pending first contact"
Total tracing cases closed (after 14 days)	#	Cumulative	✓	Status "monitoring complete"

KPI dashboard from the Massachusetts CTC: used to track the scale, speed, retention and equity of the program

Metrics & monitoring: Example monitoring dashboards

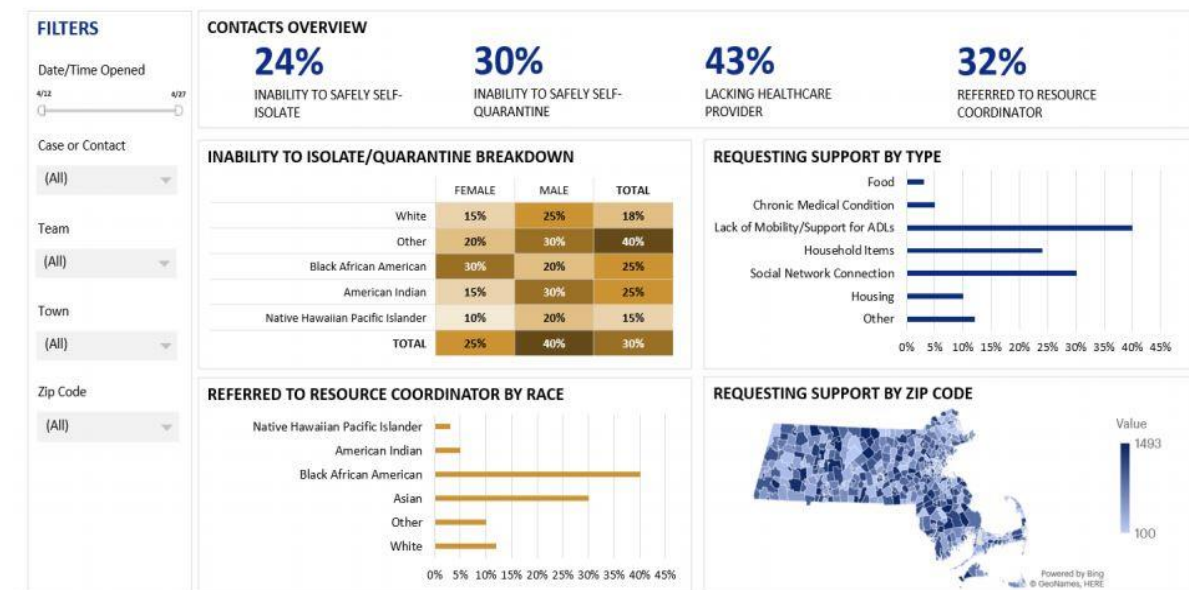
Objective: Retention and Scale
Audience: Quality and Program Management



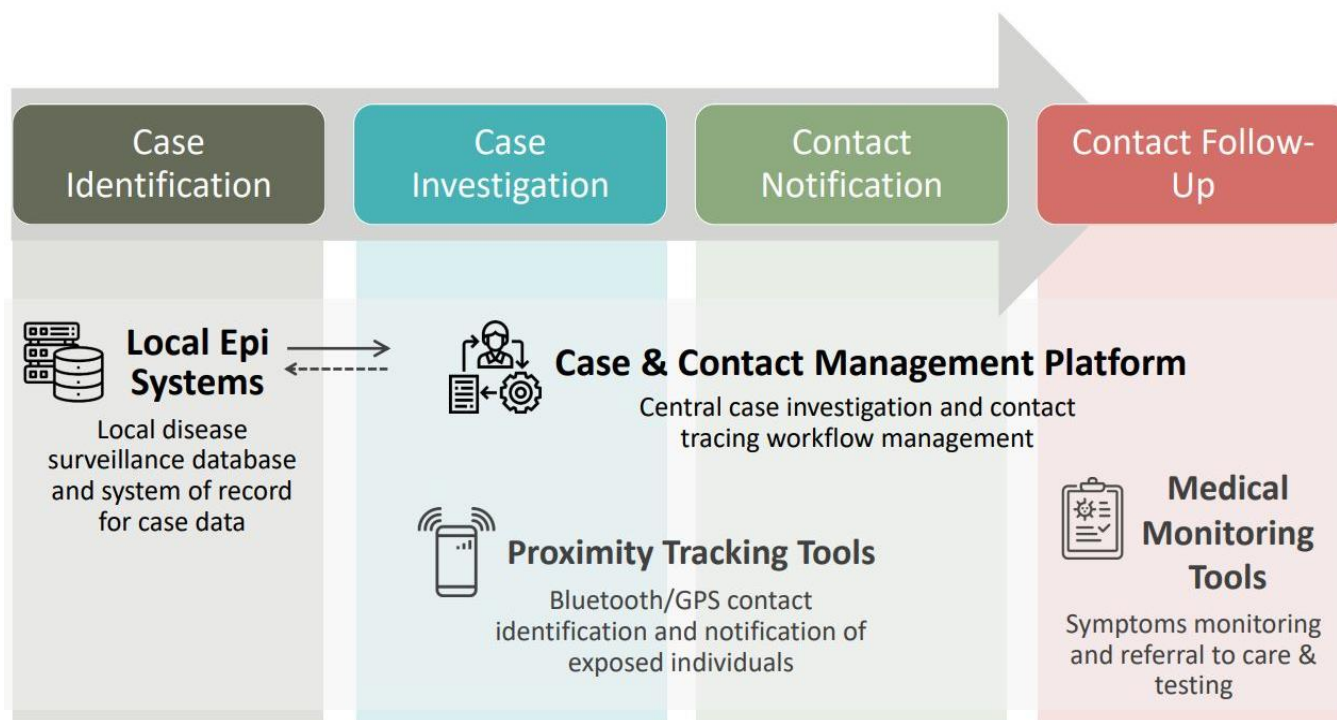
Case investigation metrics track case status and help identify problems in retention and scale

Care Resource Coordination metrics map vulnerability and equity among contacts, particularly demonstrating those who need support to quarantine

Illustrative – Dummy Data
VULNERABILITY AND EQUITY



Digital & technology solutions



Technology can be deployed at multiple points during the contact tracing process

Key tech decisions within contact tracing programs:

1. Will the local disease surveillance database be used for the system of record for case data (i.e. MAVEN in MA, NEDSS elsewhere) or will a new system be deployed?
2. What case and contact management platform (CRM) will be used to centralize case investigation and contact tracing workflow (i.e. Salesforce, CommCare)?
3. What will the intersection be between the CRM and the epidemiological surveillance system? How will the CRM or epi system be updated to reflect the unique COVID-19 needs and considerations?
4. Will Bluetooth/GPS proximity tracking or symptom monitoring tools be used widely? If so, how will the contact tracing program interact with those tools?

Digital & technology solutions

Local Epi Surveillance Systems

These are the system of record for all communicable diseases. Positive lab tests are received here. COVID cases can then be transferred to the case & contact management platform. Local epi systems are often old, outdated and fragmented, and usually cannot support the scale of COVID-19 contact tracing.

Case & Contact Management Platforms (CRMs)

CRMs should be able to execute case investigation and contact tracing workflows at scale while collecting and storing data from calls. Data integrity and synchronization between the local epi system and CRM is of utmost importance, as duplicate cases and contacts must be avoided, cases and contacts must be linked to capture the chain of transmission, and case data must be synced rapidly from the epi system to the CRM to ensure rapid follow up.

Proximity Tracking Tools

Digital tracking systems, often on mobile devices, are used to determine contact between an infected patient and a user. These programs often use Bluetooth or GPS. In the US, adoption of proximity tracking tools has been slow due to privacy concerns, while variability in design and implementation have led to a lack of interoperability. Notably, these automated tools cannot provide for care resource coordination.

Medical Monitoring Tools

These tools enable remote symptoms monitoring and referral to care and testing. Public health departments can enroll at-risk individuals in the app and monitor symptoms based on patient report. Thus far, there has been limited data on adoption rates and effectiveness. These tools also lack functionality for referral to social support services and must be integrated into the CRM platform to connect patients to care.

Privacy

Ensuring the privacy of a case and contact data is of the utmost importance. Contact tracing programs will not work if people don't trust contact tracers to guard their information correctly and safely. Protected health information should only be used in reference to COVID-19 public health and individual care needs.

Technology requires humans to make it work. Contact tracing is not just an epidemiological exercise, it is an exercise in care that cannot be effective through technology alone.

Additional equity and systems strengthening considerations

Build community health programs that can also contribute to long-term healthcare system strengthening efforts

- Contact tracing programs can build upon existing community health worker programs or become the foundation of a new one
- Train contact tracers and community health workers to refer and accompany people to clinical care to improve access to healthcare even outside of the COVID-19 pandemic

Combine COVID-19 response strategies with other health promotion activities to increase trust in the healthcare system

- Flu vaccination, basic primary care services, mobile COVID-19 testing, and eventual COVID-19 vaccination

US Public Health Accompaniment Unit



For more information please contact LearningCollab@pih.org



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