Draft for Policy Discussion Purposes

# Contact Tracing Support for Boarding Schools

## Operating Model for Support of Case Investigation, Contact Tracing, and Monitoring plus interface with Testing, Isolation/Quarantine

A Discussion Document for Local Public Health Authorities and Boarding Schools
to help determine most appropriate Model for each Jurisdiction and School

August 2020

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## Executive Summary

**Critical that Commonwealth has a Plan to provide Contact Tracing support for residentials schools, Higher Ed and boarding schools**

- 46 K-12 schools with boarding components, representing 40 towns
- 106 Colleges/Universities, many with dense residential component, > 500K students

**This document provides a *Menu of Options* for Local Public Health** to offer Schools in their jurisdiction

- Options contain **clear roles for the parties**: Local Public Health, School, Community Tracing Collaborative (CTC), DPH
  - Each Option defines entity that owns **"Prime" responsibility** (for Case Investigation, Tracing, Monitoring). Under all options:
    - CTC available as backstop in the event of a surge
    - If residential, School contributes Isolation/Quarantine facilities + Support
    - Routine data sharing with DPH's MAVEN as the system of record
    - Training and technical assistance available from CTC
  - CTC Higher Ed Team cross-trained in MAVEN & CTC's CRM system to enable cluster tracking, individual monitoring

**For each School…**
**Local Public Health**
to indicate
**Model for**
**Contact Tracing**
not later than **August 21**

**Time is critical: ~2-4 weeks away from boarding schools 'move-in'**

- Individual conversations between LPH-Schools weeks of Aug 3, Aug 10 to agree on preferred Options

## **About** | Key Players in **Contact Tracing** Success

**Local Public Health authorities**

**MA Department of Public Health**

**Community Tracing Collaborative**
MA Health Connector, Partners In Health, Accenture

**Massachusetts Boarding Schools**

### Acronyms

- **LPH** – Local Public Health
- **DPH –** Mass Department of Public Health
- **School** – K-12 schools with boarding components
- **CTC –** Community Tracing Collaborative
- **CI –** Case Investigation
- **CT** – Contact Tracing
- **MAVEN** –Massachusetts Virtual Epidemiologic Network (DPH system of record)
- **CRM** – Customer Relationship Management system (Salesforce system used by CTC)

## **About** | Local Public Health (LPH), MA DPH

**Local Public Health authorities**

**MA Department of Public Health**

### 351 Local Authorities

- Routine Public Health activities
- Local leaders in epidemiological investigation, compliance, enforcement
- Experts in complex cases, vulnerable populations and local resources
- **Statutory authority**
  Determine how Contact Tracing will be done (e.g. approves option for schools)

### DPH

- Provides “rules of the road” guidance (under development) for all parties: protocols, reporting, IT interfaces

## About CTC | Created to Supplement Local Public Health Authorities, on-demand

**Baker-Polito Covid-19 Command Center**

MASSACHUSETTS HEALTH CONNECTOR

General Contractor
State Insurance Exchange
Quasi-public authority
Consistent with Federal/State funding streams

Workforce Partner
Partners In Health
Community Health Centers
MASSACHUSETTS

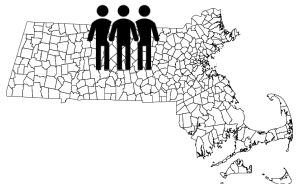
Technology Partners
accenture

Digital Automation
buoy
Exploring
Google

Call Center and IT Integration Platform
salesforce
aws

Public Health
Prevent. Promote. Protect.

**Mass. Dept Public Health + Local Public Health**



State EPI Database
system of record

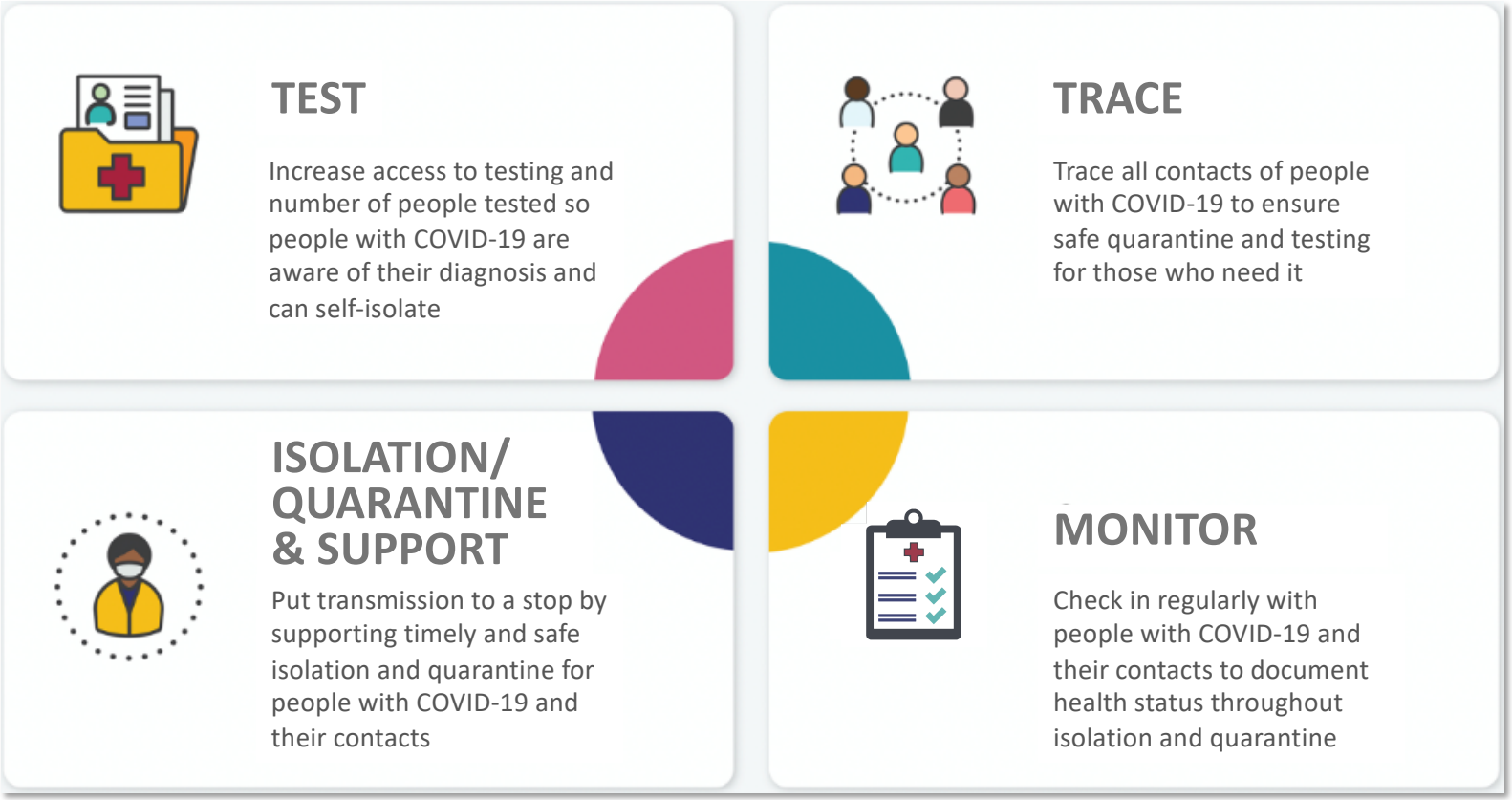
maven
MASSACHUSETTS VIRTUAL EPIDEMIOLOGIC NETWORK

CDC

- Announced: April 3
- Operational: April 12
- Since inception:
  48,000 Cases & Contacts
  370,000 outbound calls
- 81% of Cases interviewed within 24 hours
- 90% of Case and Contact Outreach is successful, supporting residents through Isolation / Quarantine

## Contact Tracing | Basics

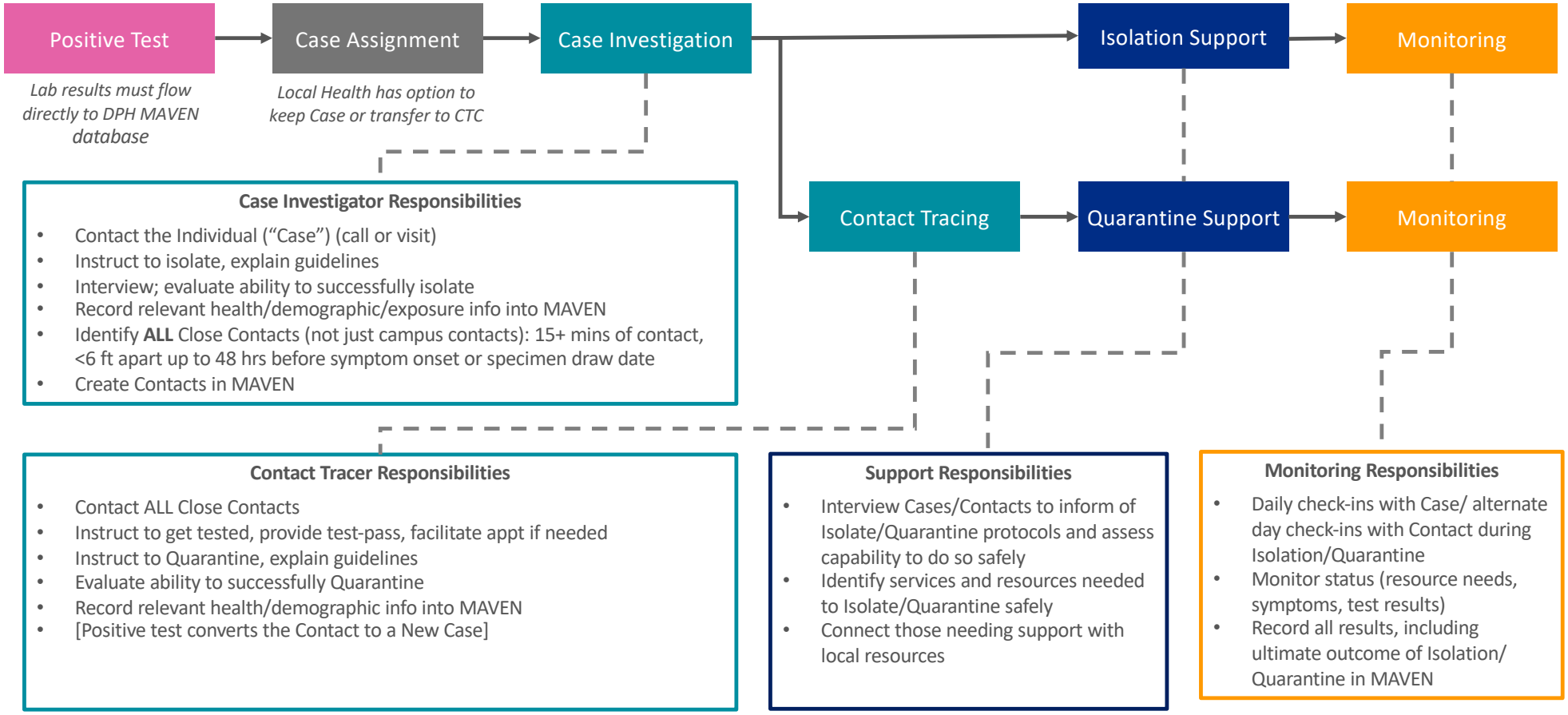
Tracing is an essential leg of four-legged stool



# **Test-Trace-Isolate-Monitor** | Legal and Regulatory Framework

| Test | Trace | Isolation/Quarantine & Support | Monitor |
|---|---|---|---|
| • Regulated: Guidance from DPH. Results must be **reported to DPH (MAVEN) by Testing labs**<br>• Higher Ed can define its own test protocols, contract with a vendor, self-administer, etc. **All results must be reported to DPH (MAVEN)** for access by Local Public Health<br>• For sake of speed and accuracy, DPH recommends use of labs that transmit results **electronically via HL7 format** | • Regulated: **Local Public Health maintains legal authority to conduct.** Includes **Case Investigation and Contact Tracing**<br>• Local Health may **delegate** to CTC or certain others as long as information is captured and reported in a manner approved by DPH<br>• **Potential approaches to tracing on further slides** | • Regulated: **DPH provides Isolation & Quarantine protocols. Local Public Health** maintains the **legal authority to issue Isolation or Quarantine orders** in cases of non-compliance<br>• Local Public Health may **delegate** to CTC or certain others as long as information is captured and reported in a manner approved by DPH<br>• As available, state and local health authorities and their designees may refer and/or coordinate supports to maintain Isolation/Quarantine, matching individuals' needs with local and/or state resources<br>• **School can/should provide resources** to residential individuals in Isolation/Quarantine, and ideally to non-resident students as necessary/possible | • Regulated: **Local Health maintains legal authority to Monitor** confirmed Cases and their close Contacts through applicable Isolation/Quarantine period<br>• Local Health may **delegate** to CTC or certain others as long as information is captured and reported in a manner approved by DPH<br>• It is recommended that, in the interest of continuity, Monitoring be conducted by the same entity that conducted Case Investigation or Contact Tracing for a given Case or Contact |

# Test-Trace-Isolate-Monitor | Workflow & Responsibilities



## **Working Together** | Guiding Principles

**Collaboration is essential for successful containment**

- **Explicit roles and responsibilities** among Commonwealth + Local Health + Schools
- **Consistent deployment of public health protocols**, regardless of approach or campus
  - "Rules of the road", enforcement/compliance rules, role of MAVEN, standard reporting formats and content specifications, expected performance metrics from test to outreach
- **Public health authorities have visibility** into all Cases, ability to conduct state and local surveillance
- **Menu approach** accommodates diverse set of School settings, capabilities, needs, resources
- **Individuals have the support needed** to successfully Isolate / Quarantine, + **Protect confidentiality** with clear "firewall" as appropriate
- **Need for Speed**: Collaboration Model designed to **respond immediately to clusters and outbreaks**
  - Minimize time from Test to Trace to Quarantine/Isolate
  - Flexible/scalable workforce and technical capabilities as backstop

## **Working Together** | Menu of Options

- **Local Public Health** selects which Models to make available to Schools in its jurisdiction
- **School + LPH** select Model that best fits
- **Multiple operating Models/Options**
  - Each Option defines entity that owns "Prime" responsibility (for Case Investigation, Tracing, Monitoring)
  - Under all Options:
    - CTC available as backstop in the event of a surge
    - School contributes Isolation/Quarantine facilities + Support for all residential students & employees
    - Routine data sharing
    - Training and technical assistance available from CTC
- **Models support range of DIY appetite**
  - **"Routine"** – Traditional School-Local cooperation
  - "**Integrated"** – Lots of information sharing, operational coordination, role-sharing
  - "**Delegated"** – Local Public Health delegates extensive authority to operate (extensive reqs here)

## **Working Together** | Menu Options at-a-glance

### **Responsibility Matrix** – Case Investigation, Contact Tracing, Isolation/Quarantine, Monitoring

Under all Options:
(a) CTC available as backstop in the event of a surge
(b) If residential, School contributes Isolation/Quarantine facilities coordination + Support
(c) Routine data sharing
(d) Training and technical assistance available from CTC

| | |
|---|---|
| **MODEL A**<br>LPH PRIME | • **LPH** performs all<br>Case Investigation, Contact Tracing, Monitoring |
| **MODEL B**<br>CTC PRIME | • **CTC** performs all<br>Case Investigation, Contact Tracing, Monitoring |

Routine

## **Working Together** | Menu Options at-a-glance

### **Responsibility Matrix** – Case Investigation, Contact Tracing, Isolation/Quarantine, Monitoring

Under all Options:
(a) CTC available as backstop in the event of a surge
(b) If residential, School contributes Isolation/Quarantine facilities coordination + Support
(c) Routine data sharing
(d) Training and technical assistance available from CTC

| | | | |
|---|---|---|---|
| | | | **MODEL C**<br>INTEGRATED COLLABORATION<br>(ADD TO MODELS A AND B) |
| Public Health<br>Prevent. Promote. Protect. | **MODEL A**<br>LPH PRIME | • **LPH** performs all<br>Case Investigation, Contact Tracing, Monitoring | • School formally shares information as available, including initial CI and CT<br>• Enhanced data integration<br>• Potential School use of MAVEN |
| | **MODEL B**<br>CTC PRIME | • **CTC** performs all<br>Case Investigation, Contact Tracing, Monitoring | |

Integrated

## **Working Together** | Menu Options at-a-glance

### **Responsibility Matrix** – Case Investigation, Contact Tracing, Isolation/Quarantine, Monitoring

Under all Options:
(a) CTC available as backstop in the event of a surge
(b) If residential, School contributes Isolation/Quarantine facilities coordination + Support
(c) Routine data sharing
(d) Training and technical assistance available from CTC

**MODEL A**
LPH PRIME

- **LPH** performs all Case Investigation, Contact Tracing, Monitoring

**MODEL B**
CTC PRIME

- **CTC** performs all Case Investigation, Contact Tracing, Monitoring

**MODEL D**
SCHOOL PRIME

- **School** performs all Case Investigation, Contact Tracing, Monitoring
- Delegated authority from LPH
- Must meet LPH and DPH criteria
- Required use of MAVEN

**MODEL C**
INTEGRATED COLLABORATION
(ADD TO MODELS A AND B)

- School formally shares Information as available, including initial CI and CT
- Enhanced data integration
- Potential School use of MAVEN

Delegated

# Working Together | Summary of Responsibilities

Key: LPH CTC School

| | Model A LPH Prime | Model B CTC Prime | Model C | | Model D School Prime |
|---|---|---|---|---|---|
| | | | LPH Prime | CTC Prime | |
| Case Investigation | Public Health | | Public Health | | |
| Case Assignment | Public Health | | Public Health | | |
| Case Monitoring | Public Health | | Public Health | | |
| Contact Tracing | Public Health | | Public Health | | |
| Contact Monitoring | Public Health | | Public Health | | |
| Isolate/ Quarantine Support | | | | | |

## **Working Together** | Which Model Is Most Appropriate For Your School?

We expect that most Schools will operate under Model A, B, or C. Model D will be infrequently used as it requires LPH to delegate to School full statutory requirements of Case Investigation, Contract Tracing, Monitoring for all School populations.

| | Responsibilities | Best fit for Schools with… | |
|---|---|---|---|
| **MODEL A / MODEL B**<br>LPH OR CTC PRIME | ▪ **LPH or CTC** performs all Case Investigation, Contact Tracing, Monitoring | • Small student populations<br>• Limited resources<br>• Minimal/no residential students<br>• No planned school-administered testing<br>• No/limited on-campus health operations | ***~75% of Schools*** |
| **MODEL C**<br>INTEGRATED COLLABORATION<br>(ADD TO MODELS A & B) | ▪ School formally shares Information as available, incl initial CI and CT<br>▪ Enhanced data integration<br>▪ Potential School use of MAVEN | • Residential students, though may be very limited for Fall<br>• School-administered testing–surveillance and/or symptomatic<br>• Systematic collection of data on Close Contacts of student/faculty/staff who test positive<br>• Identified resources who can participate in required CTC training and manage scope of responsibilities | ***~25 of Schools*** |
| **MODEL D**<br>SCHOOL PRIME | ▪ School performs all Case Investigation, Contact Tracing, Monitoring<br>▪ Delegated authority from LPH<br>▪ Must meet LPH and DPH criteria<br>▪ Required use of/or integration with MAVEN | All elements from Model C above, plus:<br>• Willingness to commit significant resources for duration of the pandemic<br>• On-campus health expertise – e.g., public health, medical facilities<br>• Willingness to undertake all DPH required training on MAVEN and public health protocols<br>• Desire for active engagement in managing school population **and** in public health response to pandemic | ***Likely not used for K-12*** |

# **Working Together** | Population Definitions for Consideration

**Recommended definition of School population Under Model A/B**

- ❑ Residential students attending class on campus
- ❑ Residential students attending remote classes only
- ❑ Non-residential students attending class/visiting/using other services on campus
- ❑ Employees living in school housing

*All other populations covered under existing contact tracing protocols based on jurisdiction of residence.*

**Recommended definition of School population Under Model C**

- ❑ Residential students attending class on campus
- ❑ Residential students attending remote classes only
- ❑ Non-residential students attending class/visiting/using other services on campus
- ❑ Employees living in school housing

*All other populations covered under existing contact tracing protocols based on jurisdiction of residence.*

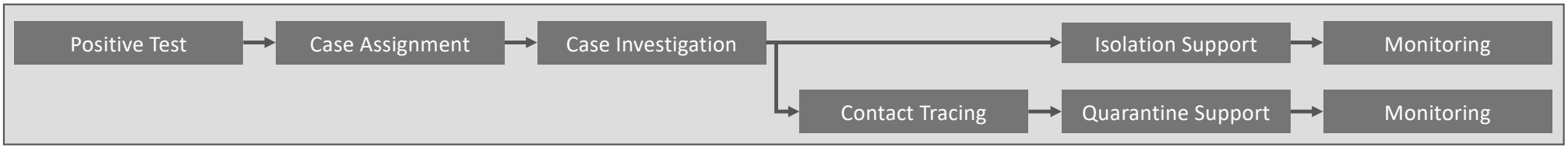
**Recommended definition of School population Under Model D**

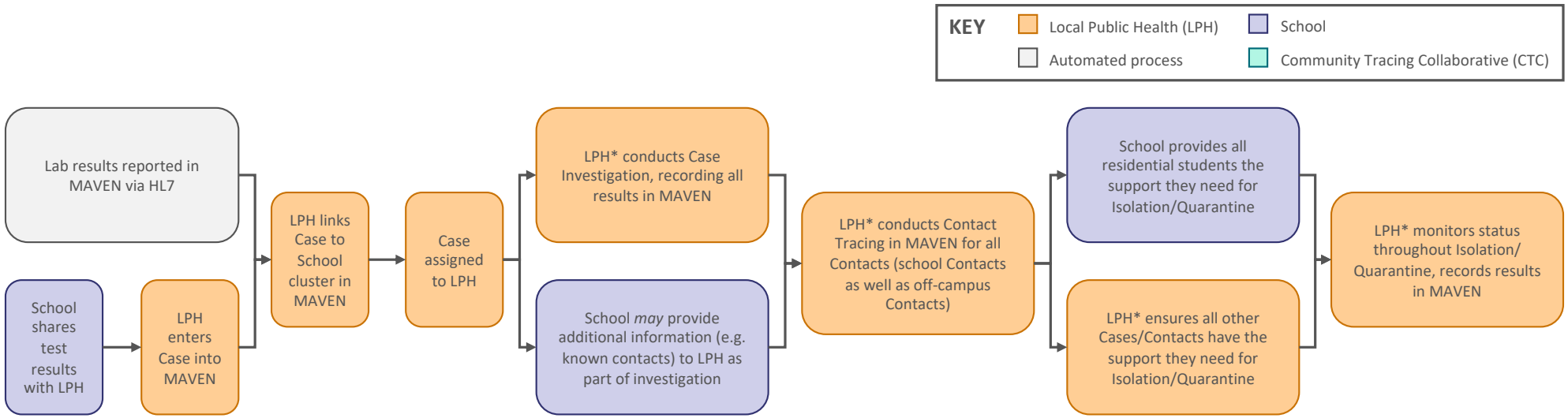
**Inclusive of all who participate in the school's surveillance / symptomatic testing program, likely:**

- ❑ Residential students attending class on campus
- ❑ Residential students attending remote classes only
- ❑ Non-residential students attending class/visiting/using other services on campus
- ❑ Employees living in school housing
- ❑ Full-time faculty teaching on campus
- ❑ Part time faculty teaching on campus
- ❑ Full-time staff working on campus
- ❑ Part time staff working on campus
- ❑ Vendors/contractors working on campus

*All other populations covered under existing contact tracing protocols based on jurisdiction of residence.*

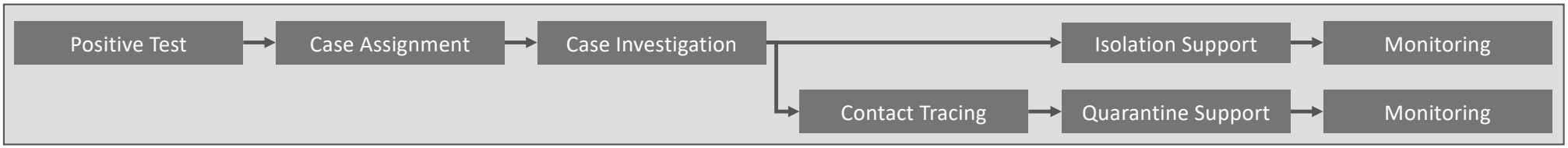
# **Working Together** | Model A Workflow

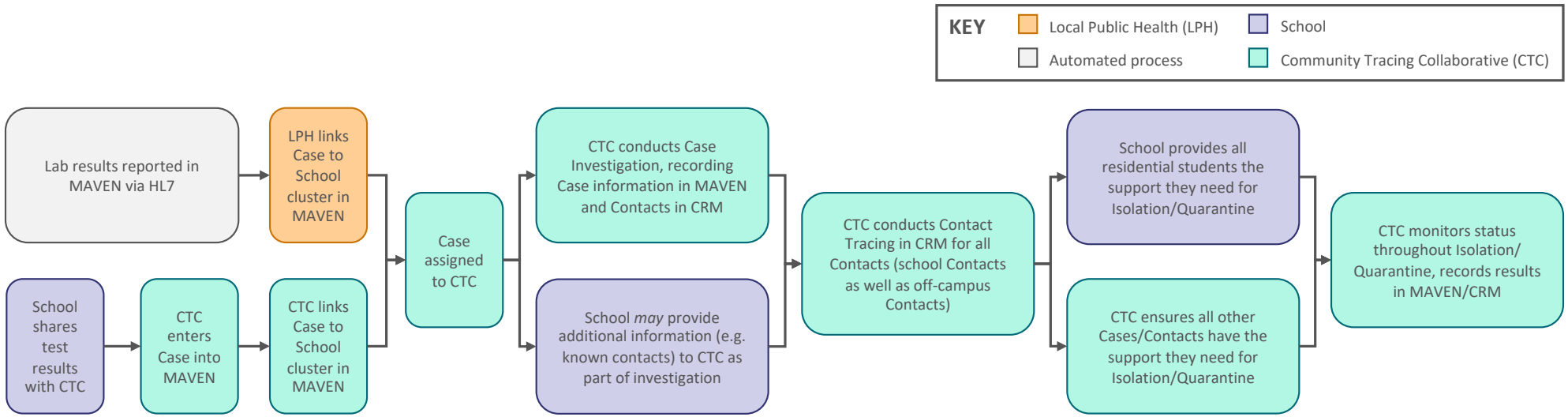


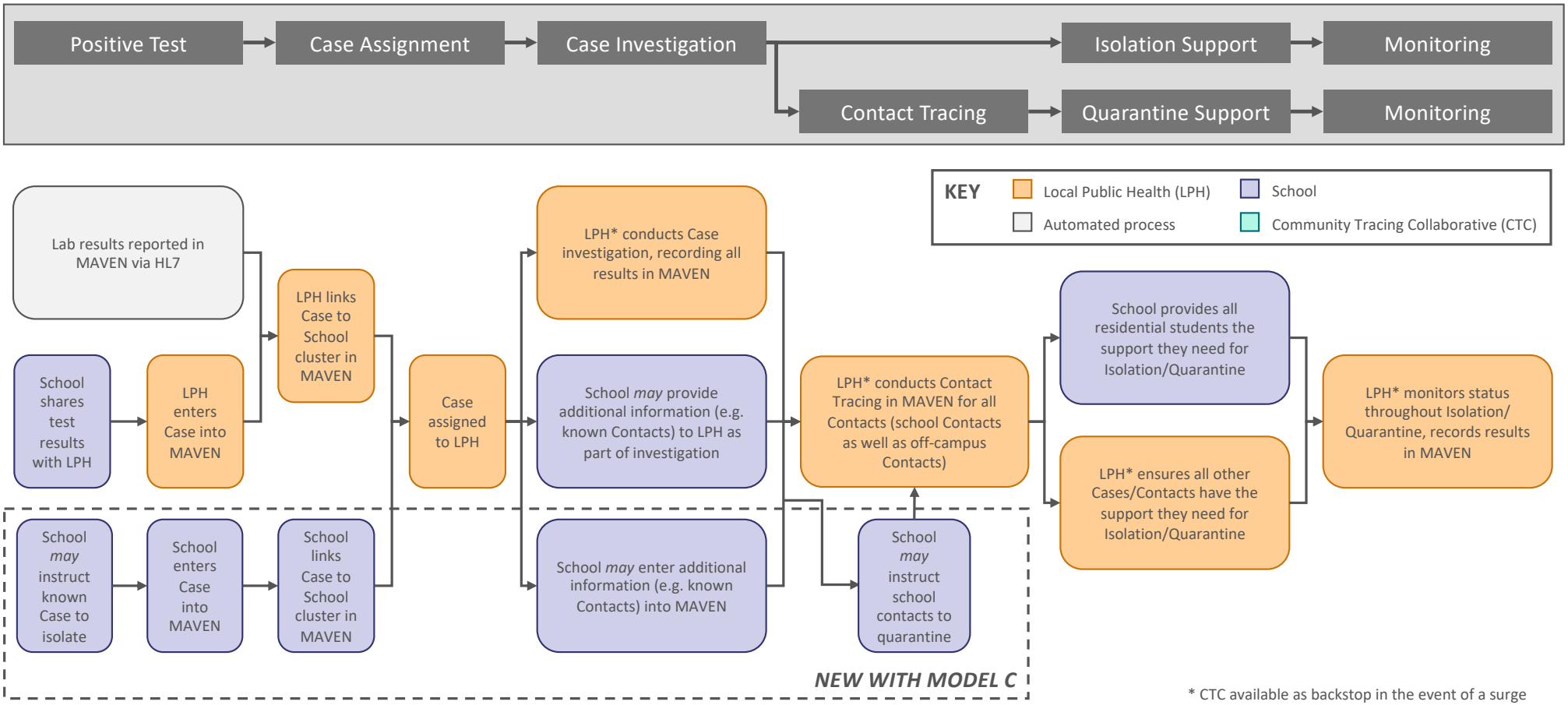

*CTC available as backstop in the event of a surge

# **Working Together** | Model B Workflow



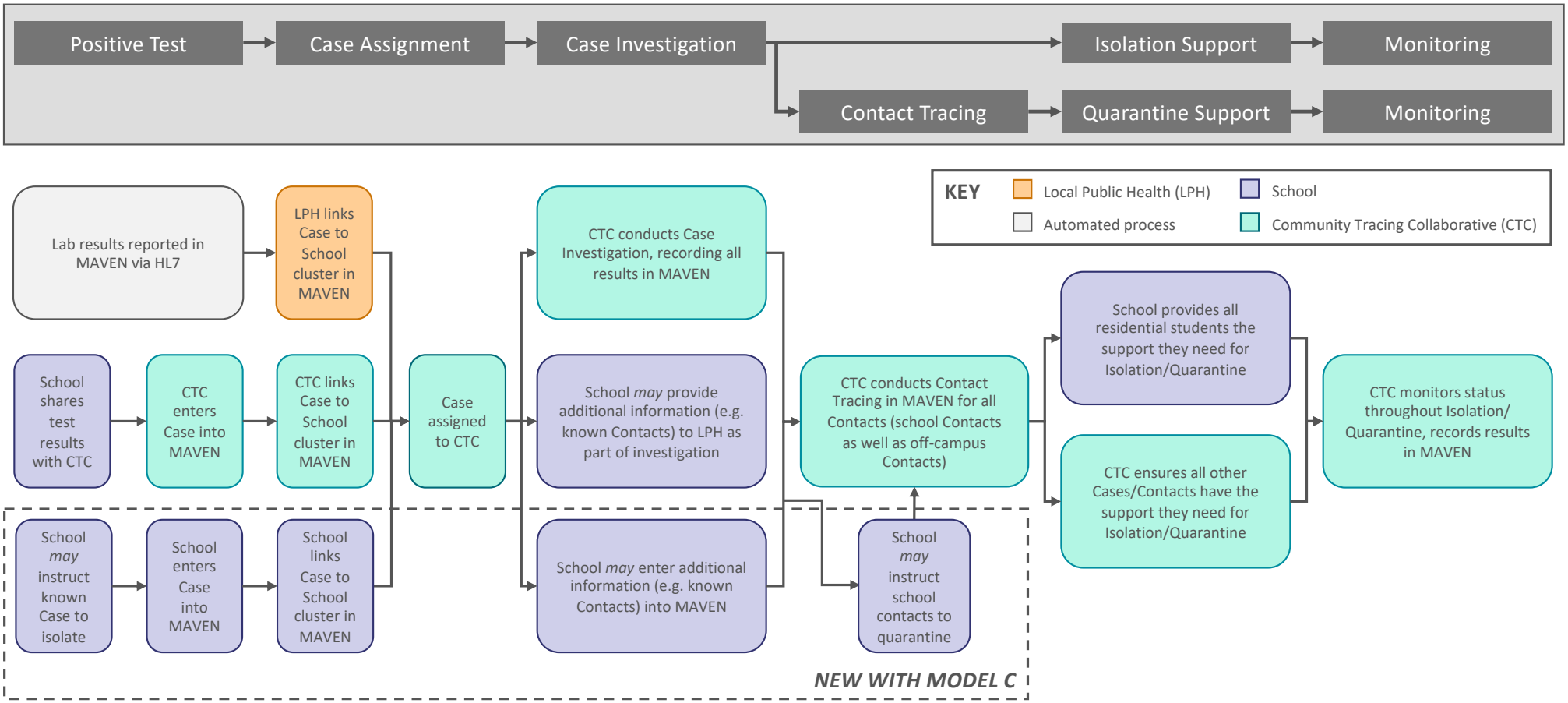



# **Working Together** | Model C Workflow (LPH Prime)

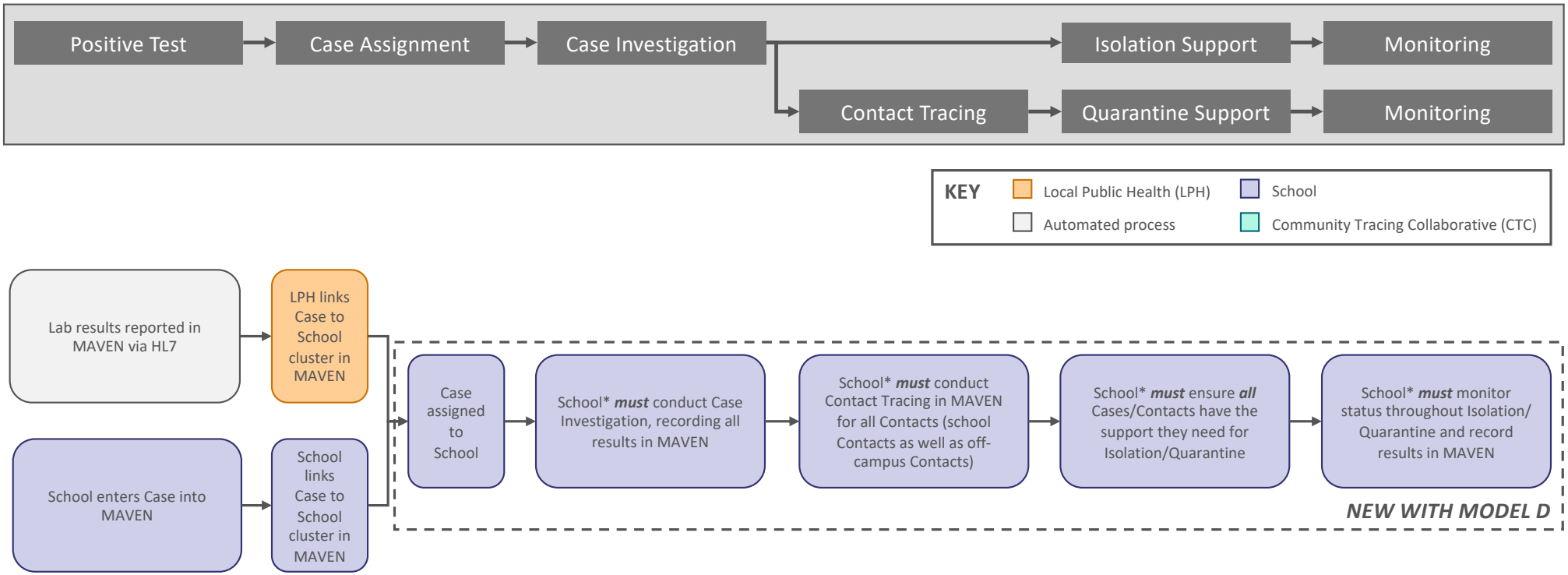



* CTC available as backstop in the event of a surge

# **Working Together** | Model C Workflow (CTC Prime)



# **Working Together** | Model D Workflow




* CTC available as backstop in the event of a surge

## **Working Together** | Details: Using MAVEN

- Collaboration Models C & D may require School access to **DPH MAVEN** (state system-of-record)
- LPH must approve. School must comply with requirements in order to qualify
- DPH and CTC will provide training and technical assistance

| | | | |
|---|---|---|---|
| **LPH** grants permission for School to have access | ✓ | ✓ | ✓ |
| **School** identifies users have public health understanding | | | ✓ |
| **School** users access MAVEN from secure location | ✓ | | ✓ |
| **School** users complete MAVEN specific training, complete comprehensive training, pass proficiency test | | | |
| **School** users complete training on CI/CT/Monitoring protocols, pass proficiency test | | | |
| **Schools** submit to ongoing oversight–performed by CTC: Regular QA and monitoring | ✓ | | ✓ |
| **Schools** submit to ongoing oversight–performed by CTC: Adoption of changing protocols, etc. | | | ✓ |

Collaboration Model selected will drive details re access to MAVEN, Read-Only, Read/Write access, etc.

## Working Together | Mobile Apps

- Many schools planning to use technology to collect & manage information to support reopening
- Information collected via school-deployed apps may be shared via established methods, but not via automated system interfaces

| Technology Category | Guidance | Interface with Commonwealth Contact Tracing Model? |
|---|---|---|
| **Symptom Tracking/Attestation** (e.g. symptom self-monitoring, self-reporting of test results, self-reported contact diary) | ▪ At school's discretion | ▪ Information sharing via established methods<br>▪ No automated system interface planned<br>▪ School determines use case(s) |
| **GPS Location Monitoring** (e.g. mobile app, wearables) | ▪ At school's discretion<br>▪ Commonwealth does not support the widespread use of GPS apps due to privacy concerns | ▪ Information sharing via established methods<br>▪ No automated system interface planned<br>▪ School determines use case(s) |
| **Bluetooth Proximity Awareness** (mobile app leveraging privacy-protection, for example Apple/Google dev platform) | ▪ Commonwealth to evaluate Bluetooth proximity awareness technology via a series of pilot tests; RFP forthcoming<br>▪ Apple/Google allows only one distribution license per state; Massachusetts has not yet awarded a license | ▪ No automated system interface at present<br>▪ Possible future interface, pending pilot test results and clear use case(s) for how the app would enhance traditional contact tracing programs (LPH, CTC, School) |

## **Working Together** | Reactions, Feedback, Advice?

### For Local Public Health

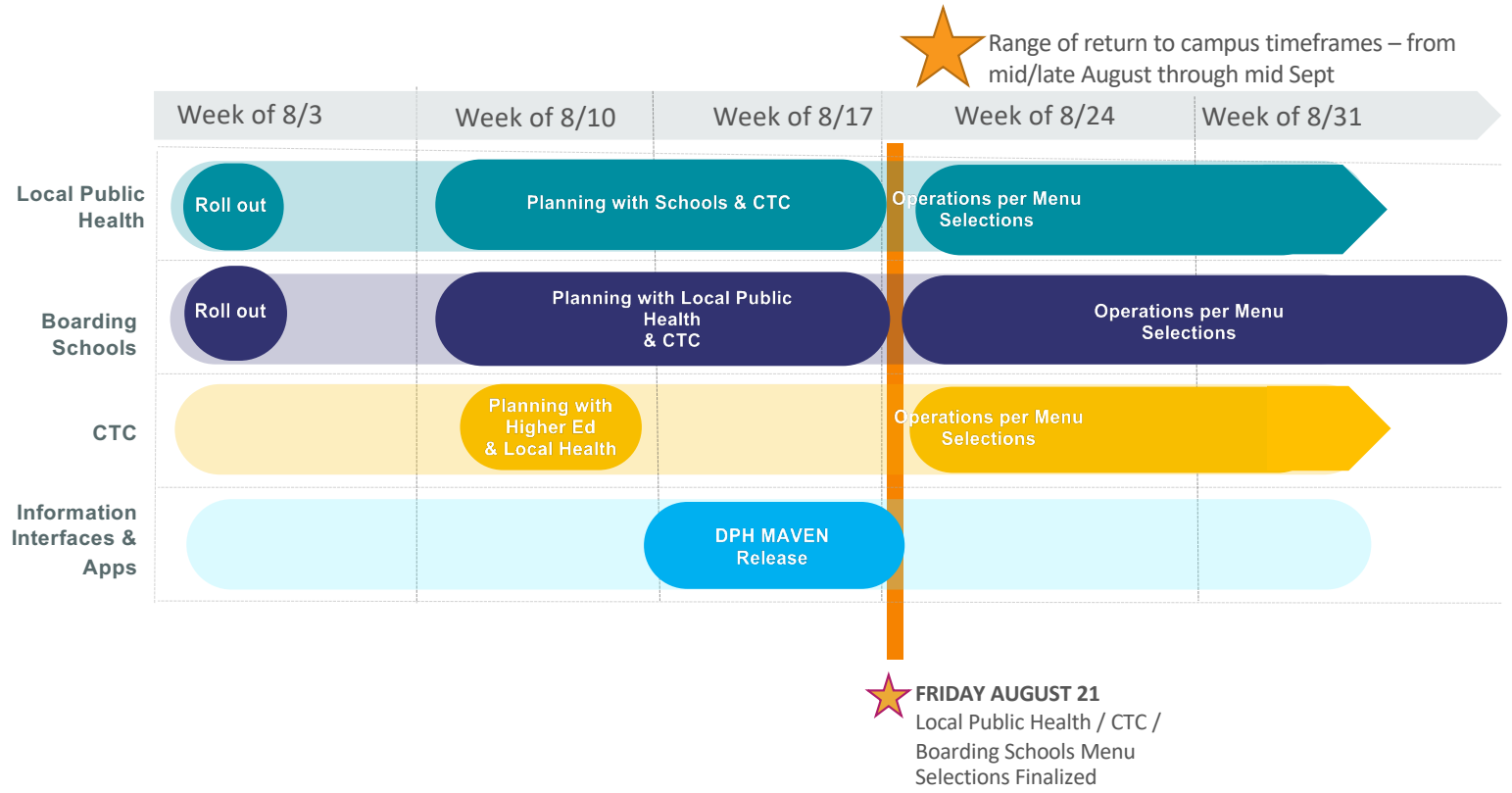
- *In your experience, do these Collaboration Models represent viable/effective options for managing Higher Ed contact tracing?*
  - Are there additional options that are not included?
  - Do you believe any of these options, or components of options, to be infeasible or impracticable?
- *Which of the Collaboration Models do you anticipate being attractive to Schools in your jurisdiction?*
  - What have you learned from colleges/universities about their Contact Tracing plans for the Fall?
  - How likely are you to allow MAVEN access–Read, Read-Write?
- *Do you anticipate leveraging the CTC for Schools in your jurisdiction?*
  - At what levels of capacity–all vs. some schools? For what roles–CI + CT vs. just CT?
  - Other support you anticipate needing from the CTC?
- *What operating model does LPH suggest for schools with locations in multiple jurisdictions?*

## **Working Together** | Reactions, Feedback, Advice?

### For Schools

- *How have schools been planning for test-trace-isolate-monitor?*
  - Where are schools most comfortable with planning? Where are they looking for guidance from the Commonwealth?
- *Which of the models do you anticipate being most attractive to boarding schools?*
  - Are there models or support options you don't see that schools are expecting?
  - Do you believe any of these options, or components of options, to be infeasible or impracticable?
- *What questions and/or concerns are likely to be raised by schools regarding these options?*

# Working Together | Timeline



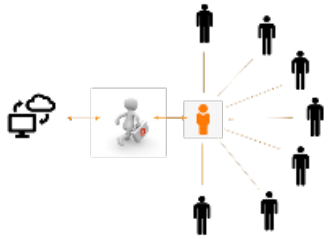
## **Working Together** | Next Steps

- Collaboration Options to be **refined** and **rolled out** to relevant LPH jurisdictions **week of July 27**
- DPH to **share models with boarding schools weeks of Aug 3 and Aug 10**
- LPH to **meet individually** with boarding schools in their jurisdiction starting **week of July 27**
  - LPH to present menu of options to school
  - DPH and/or CTC available to support as needed
- **Final decisions** for each school **submitted by LPH** via electronic form (to be provided) by **Friday, August 21**
- **Questions can be sent to Jennifer Robertson, DPH at Jennifer.R.Robertson@mass.gov**

# Appendix A

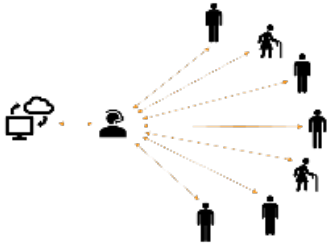
Supporting Materials

## About CTC | Workforce Teams–Three major roles



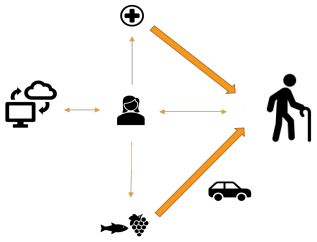
**Case Investigator**

- Contacts newly diagnosed COVID-19 patient (orange)
- Explains diagnosis, evaluates ability to Isolate
- Collects details on Contacts, enters Contact details into database. Communicates to dedicated Contact Tracers (below), Resource Coordinator (if needed)



**Contact Tracer**

- Receives names and phone numbers of Contacts
- Reaches out to Contacts
- Facilitates pathway for expedited testing, need to quarantine



**Care Resource Coordinator**

- Interview persons identified as vulnerable
- Assess basic needs, follow-up testing or quarantine recommendations
- Connect those needing support for COVID testing or quarantine with local resources & support, by municipality

## **Working Together** | Definition of School Population, for DPH/LPH/School Consensus

**LPH and School must agree on the definition of the School population, based on Operating Model selected:**

- ❑ Residential students attending class on campus
- ❑ Residential students attending remote classes only
- ❑ Non-residential students attending class/visiting/using other services on campus
- ❑ Non-residential students attending remote class only
- ❑ Employees living in school housing
- ❑ Full-time faculty teaching on campus
- ❑ Full-time faculty teaching remotely
- ❑ Part time faculty teaching on campus
- ❑ Part-time faculty teaching remotely
- ❑ Full-time staff working on campus
- ❑ Full time staff working remotely
- ❑ Part time staff working on campus
- ❑ Part time staff working remotely
- ❑ Vendors/contractors working on campus
- ❑ Vendors/contractors working remotely
- ❑ Visitors to campus (e.g. prospective students, visiting sports teams, guests of residents)