
RAPIDTEST K-12 IMPLEMENTATION
PLAYBOOK

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PROGRAM OVERVIEW

As the COVID-19 pandemic continues, finding ways to safely reopen schools for in-person learning is a pressing need. Schools provide a critical outlet for children through education, safety, nutrition, behavioral health care and important social interaction. Incredible efforts have been made to transition to virtual learning for education continuity, but in-person instruction remains essential for children, their families, and communities.

Returning children to in-person learning environments requires ensuring staff and student safety. Conducting rapid COVID-19 antigen tests at schools for assurance and symptom-induced testing is a cost effective, easy, and reliable way to ensure student and staff safety.

Utilizing rapid COVID-19 antigen tests requires adherence to state and federal reporting regulations. These regulations instruct test administrators to report all test results to the relevant health authorities in a timely manner. Schools are encouraged to use sponsored technologies that ease administrative burdens and comply with reporting requirements. The information found in this implementation guide will outline the steps required to successfully develop an application-supported testing program at K-12 schools that keeps teachers and children safe.

Implementing a COVID-19 reporting application typically takes four major steps (Figure 1):

1. Create the testing initiative to acquire test kits, plan tests, and gain approval to administer tests.
2. Select the right testing application and implementation method that meets the requirements of your environment and available resources.
3. Build the technical architecture to support the collection and transmission of test results and patient information.
4. Launch the test program with the necessary training.

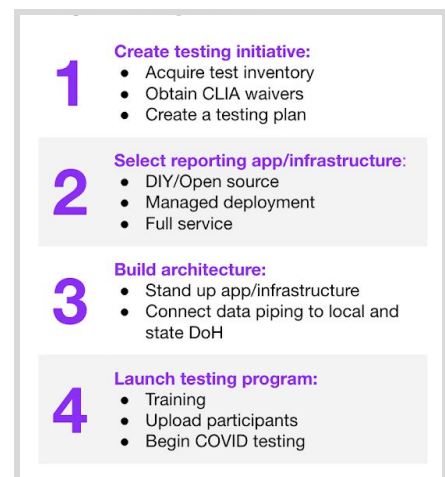
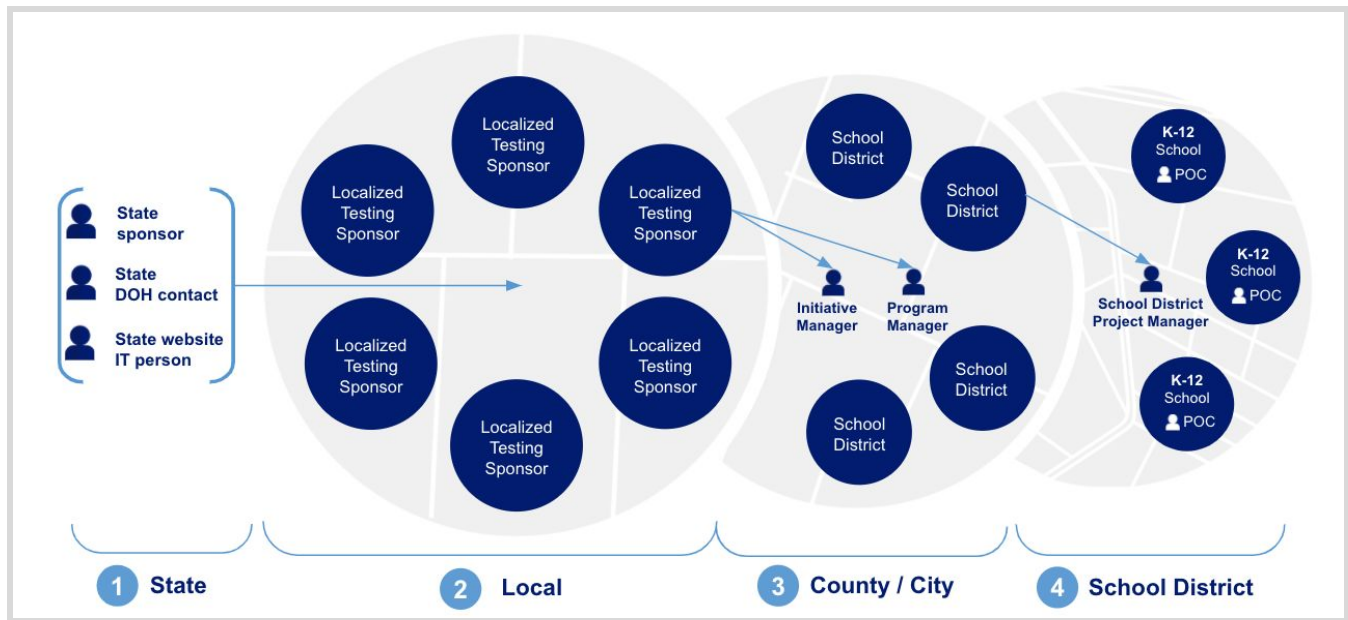


Figure 1: Project Sequence

ROLES AND RESPONSIBILITIES

K-12 COVID testing involves multiple levels of oversight and coordination, from school districts, to county/city levels, to local and state agencies. Each level plays a unique and vital role in the testing process and program. Aligning responsible individuals at each level of the system is essential for a successful end-to-end testing and reporting program (Figure 2).

Figure 2: Overview of Roles and Responsibilities of Each Level of Government for K-12 COVID Testing



State sponsors identify local testing sponsors (e.g. counties, hospitals) to coordinate test administration with school districts, design test administration strategy, and provide supporting training to leads at districts and schools.

School districts in turn identify schools, coordinate district-wide test distribution and prioritization, and train school program leads on test administration and reporting.

Finally, schools themselves provide staff to administer tests, establish program communications with parents, and conduct supplementary training for new test administrators (Figures 2a, 2b, 2c, 2d on next page).

Figure 2a: State Responsibilities

Department of Health Contact	State Sponsor [Optional]	State IT [Optional]
<ul style="list-style-type: none"> • Provide reporting requirements / guidance • Provide guidance for school district selection 	<ul style="list-style-type: none"> • Provide technology funding • Procure and distribute tests for local sponsors 	<ul style="list-style-type: none"> • Technical Implementation (see “Technical Implementation” section)

Figure 2b: Local Sponsor Responsibilities

Initiative Manager	Program Manager
<ul style="list-style-type: none"> • Procure and distribute additional tests • Coordinate Sponsor’s supporting staff (e.g. test admins) • Coordinate with state roles, including DOH • Own reporting program KPIs • Nominate participating school districts 	<ul style="list-style-type: none"> • Manage test distribution • Coordinate with district Project Managers • Distribute supplemental training materials • Manage total list of schools involved in their program • Manage list of test administrators involved in their program

Figure 2c: District Responsibilities

Project Manager / Lead
<ul style="list-style-type: none"> • Provide Program Manager with the list of participating schools in their district • Provide Program Manager with the list of test administrators in their district • Coordinate district-wide test distribution and request additional tests from the program manager • Train school Program Leads on test administration and reporting and coordinate school training sessions

Figure 2d: School Responsibilities

Program Lead
<ul style="list-style-type: none"> • Run school-wide training sessions for test administrators • Operational rollout at each school (table setup, etc) • Set up program communication channels with parents and other school stakeholders

TECHNICAL IMPLEMENTATION

Tailor implementation to the approach that best meets your program's needs. The three main RapidTest implementation options are full service, managed implementation, and open source implementation. Refer to Figure 3 for a high level overview of each option.

Figure 3: Implementation Options - Overview

Option	Description	Technical Complexity	Contracting Complexity
Full Service (Recommended)	Partner directly with a vendor to build, host, and handle all collateral services including reporting details.	None: All development, hosting, data transfer, and HIPAA compliance completed by vendor.	High: External contracting for technical team
Managed	Partner with a vendor that provides technical resources to leverage open sourced code and build an application hosted and maintained internally.	Low: The vendor manages deployment. Details of data transfer assisted by vendor	High: External contracting for technical team
Open Source	Using open source code, duplicate the point-of-care application with an in-house development team, DIY data transfers.	High: Requires deployment and configuration, data transfer, and HIPAA compliance.	None: No external contracting

Each choice for technical implementation should consider the different support options available. Open sourced options have less support included while a full-service implementation will include technical and user support. Refer to Figure 4 for a summary of the support levels you can expect for each implementation option. The subsequent sections describe the high-level architectural component responsibilities of users and vendors for each option.

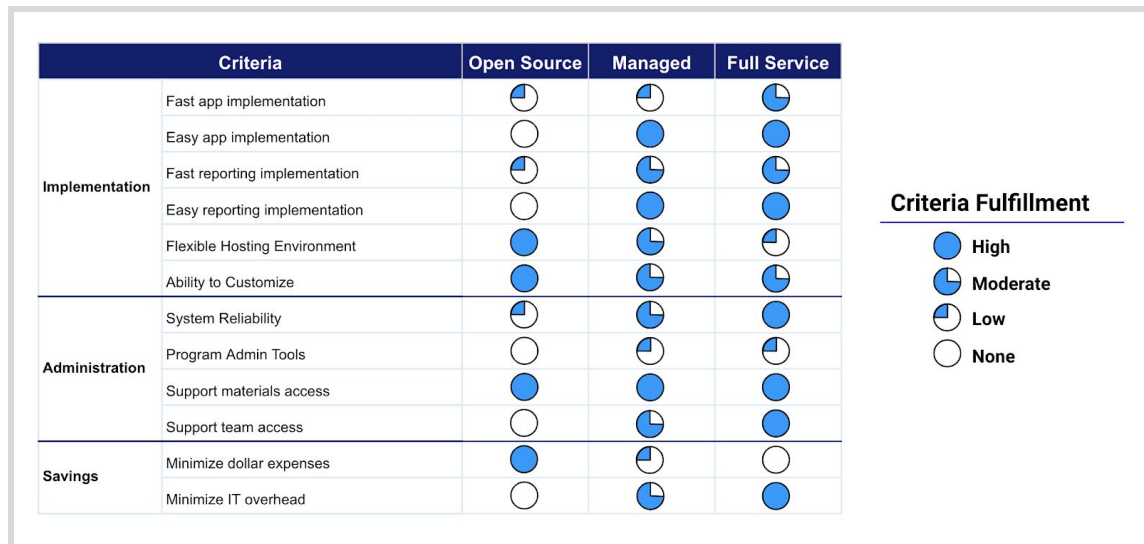


Figure 4: Implementation Options

FULL SERVICE

This is the current recommended deployment option.

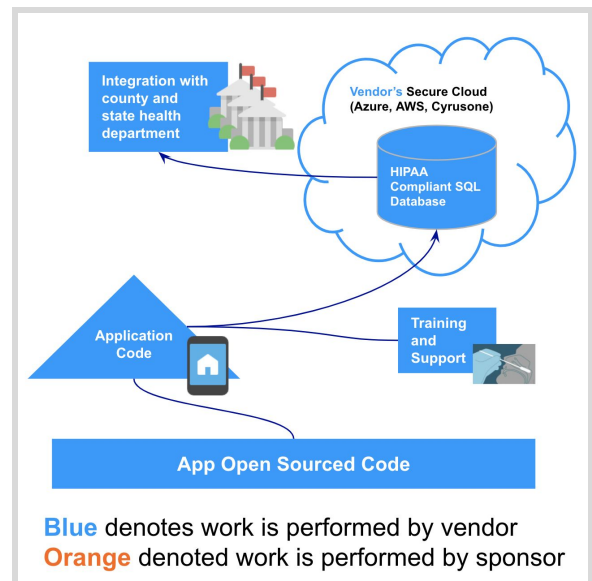
A full service deployment option requires no technical resources. All data hosting and services are handled completely by the vendor. The vendor builds, hosts, and handles all collateral services including reporting.

Application Setup

1. Contract vendor
2. Vendor stands up system
3. Develop Analytics and Reports (if required)
4. Enroll Users

Support

All technical and user support is handled by the vendor.



MANAGED

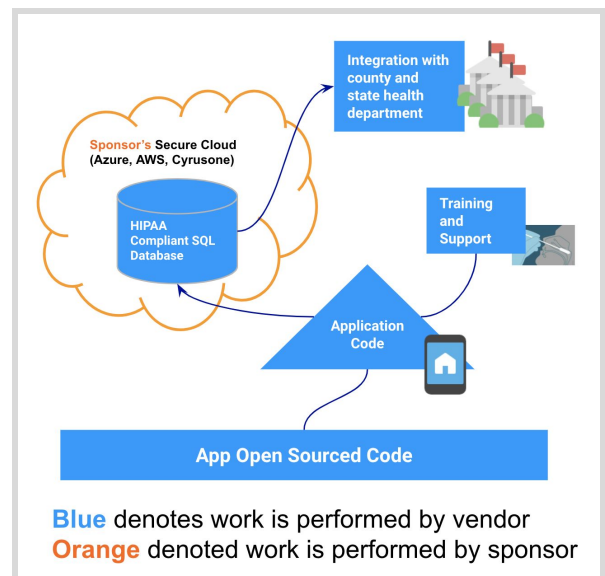
A managed deployment requires technical resources to implement a cloud hosting environment on which to install the application. These team members must have knowledge of Docker, Linux, and existing cloud services. The sponsor must also have a cloud hosting infrastructure, but the vendor will create the DB instance within the sponsor's cloud. From there, the vendor handles application provisioning and installation.

Application Setup

1. Contract vendor
2. Provision cloud environment (Azure, AWS, or Cyrusone)
3. Provide vendor cloud access
4. License barcode scanning software used by source code (Scandit)
5. Vendor deploys application
6. Develop Analytics and Reports (if required)
7. Enroll Users

Support

Contact your vendor for application support and for support with reporting systems connections and requirements. Contact your cloud provider for environment support.

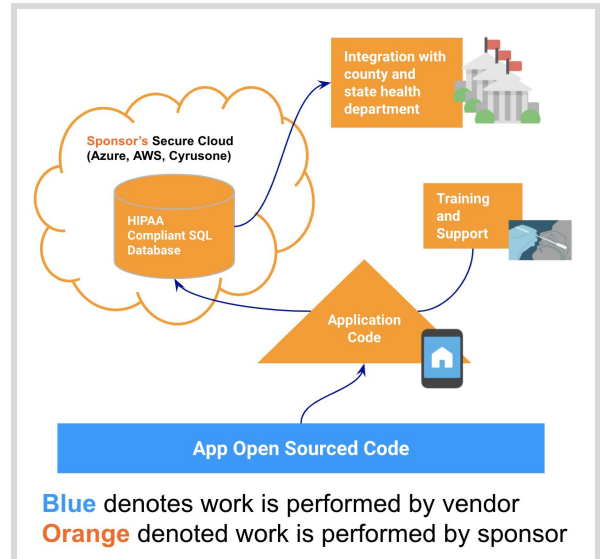


MANUAL OPEN SOURCE

Manual, open sourced deployment requires a fully staffed technical team including backend, cloud, and frontend resources as well as someone to manage the development. These team members must have knowledge of Docker, Linux, and existing cloud services. The sponsor must also provide the database and cloud hosting infrastructure.

Application Setup

1. Select the open sourced application to develop
2. Review and tailor open source code
3. Provision cloud environment (Azure, AWS, or Cyrusone)
4. Stand up HIPAA compliant Microsoft SQL database in cloud environment
5. License barcode scanning software used by source code (Scandit)
6. Deploy application code
7. Register testing sites and enroll users
8. Connect to county and state reporting systems
9. Develop analytics and reports (if required)
10. Enroll Users



Support

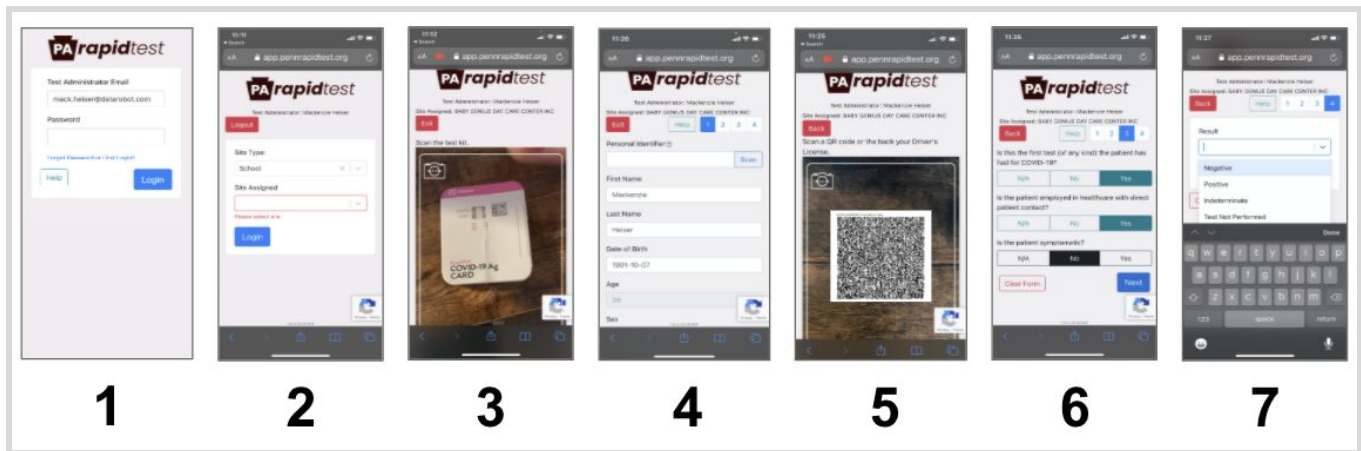
No vendor support is provided.

TRAINING MATERIALS

USING THE APP

This section will describe how a typical app might be used for COVID testing for K-12. While not all apps will follow the exact same steps, many apps may be similar in their approach. We cover the steps to enter test results and create test accounts below.

ENTERING TEST RESULTS



1. Login to the application site on a smartphone or ipad
2. Select the testing site
3. Hover the camera over the COVID-19 test
4. Fill out the form with patient information
5. OR click 'Scan' and hover the phone over a patient QR code
6. Answer the patient health questions (symptoms, etc)
7. Select the test result and submit

CREATE YOUR TEST ACCOUNT

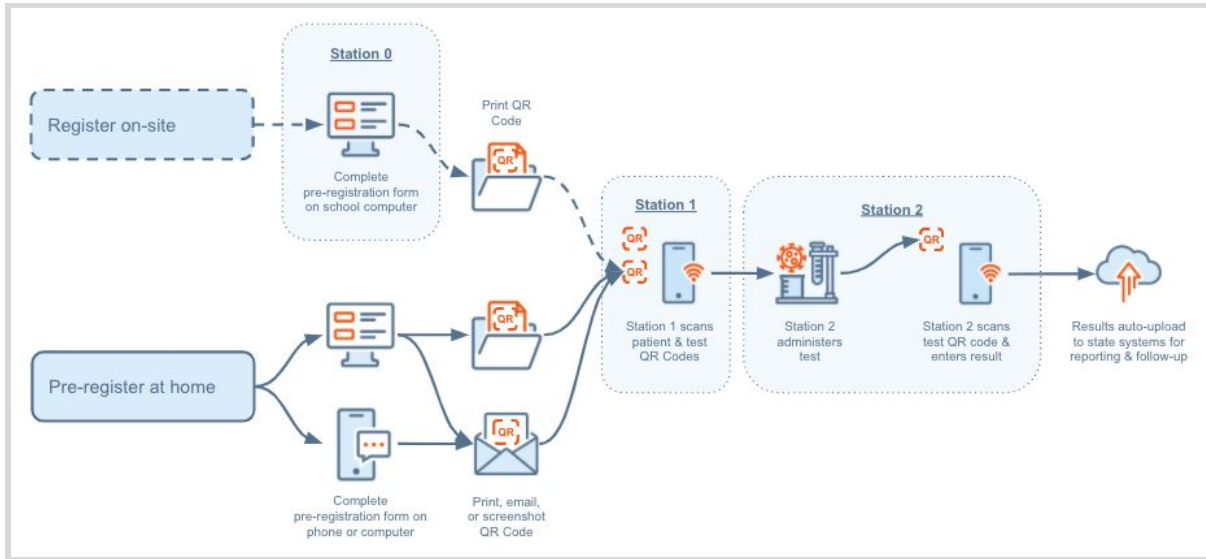
1. Sign up to receive an account through your program administrator
2. Check your email for a welcome email
3. Click the link in the email
4. Click 'Forgot password or first login?'
5. Enter your email address
6. Return to your inbox, open the reset password email and click the link
7. Set a password
8. If this does not work, contact support

ONSITE TESTING GUIDANCE

This section provides operating recommendations for testing station setup, student pre-registration, and staffing testing stations based on field experience from successful K-12 RapidTest rollouts.

TESTING STATION SETUP

A testing process as outlined below will minimize errors and shorten wait times:



STAFFING TESTING STATIONS

To quickly process patients for assurance testing, set up two stations to conduct discrete tasks: One station for student QR code and test scanning and one station for Test administration and result entry.

STUDENT PRE-REGISTRATION

The application requires patient information to report a result. The fastest way to record patient information is for students to pre-register with an online form. The form generates a QR code, which the test administrator scans before administering the test. When in-advance form submission is not feasible, administrators must manually enter the student's information.

Pre-register by typing 'register.' before the application URL ("register.pennrapidtest.org") and complete the form on the page. You must pre-register if you do not have a driver's license.

Fill out all information on both pages of the form and hit "submit". You will receive a QR code that you must bring (via screenshot, picture, printing, etc) to the testing site for the Test Administrator to scan.

Note: Pre-registration does NOT cover appointments/sign ups or Consent forms. Please contact your testing site for additional forms and appointment scheduling.

FAQ

USING THE APP

1. What types of devices can be used with the app?
 - a. iOS and Android smartphones are recommended, but the application should work with all devices
 - b. Laptops are not recommended for use
2. How do I get an account?
 - a. Contact your program administrator to receive an account
3. Can I share an account with someone else?
 - a. No, accounts must be unique
4. Can we scan the test and patient info then later return to enter the test result?
 - a. After scanning a test and entering patient information, save before exiting the form. You can then recall the test and patient information by re-scanning the test code.
5. I'm seeing a blank page when I click the links in the welcome email. What do I do?
 - a. Ensure that you are not blocking all cookies on your Android or iOS device.
 - i. Android Version: Chrome - > Settings (⋮ upper left corner) -> Site Settings under Advanced -> Cookies -> Allow Cookies
 - ii. iOS/Safari -> Settings -> Safari -> Block All Cookies
 - iii. If you are connected to WiFi, turn it off and try again using cellular data.
6. What if my school is not listed in the app?
 - a. If a school is not listed, contact your program administrator. They will be able to add the school using <http://rapidtestingapp.com/>
 - b. Information for program administrators to add an account can be found at <http://rapidtestingapp.com/>
7. Does the app accept details about invalid results?
 - a. If there is a defect with the device, record results by selecting 'Indeterminate' for the test result
 - b. Defect types are not currently reported through the app and should be reported directly to the test manufacturer

REPORTING AND FOLLOW-UP

1. How is personal data handled?
 - a. No personal data remains or is stored on the device
 - b. Data is sent and stored from the host's data centers
 - c. Personal information is included in reports to state and federal authorities
2. What happens if I enter the wrong result?
 - a. You have one hour after your initial results upload to amend test results by repeating the upload process.
 - b. If more than 1 hour has passed or you cannot amend the results through the app, contact your local health authorities.
3. How long will it take to get the results?
 - a. Within 2 hours of result upload, results are emailed and texted to the email address and phone number included in the patient information.
4. What is the proper procedure when there is a positive test result?
 - a. Please see CDC guidelines.
<https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/end-home-isolation.html>
5. Can I see the data for my school's tests?
 - a. Contact your program administrator for information on accessing reporting data

ADMINISTRATIVE CONSIDERATIONS

1. Where can I find more detailed information on K-12 testing strategies and recommendations?
 - a. Please refer to [CDC guidelines on administering COVID-19 tests in K-12 schools](#). Additionally, [the Rockefeller Foundation has a thorough playbook](#) on K-12 COVID-19 test administration.
2. How frequently should students and staff be tested?
 - a. This varies per program, please contact your district administrator
3. What kind of PPE should test administrators use?
 - a. Gloves should be used when running each test and handling specimens and should be changed (with hand hygiene practiced each time) in between tests
 - b. A basic medical/surgical mask
 - c. For symptomatic testing and/or for testing of children, it may be advisable to wear goggles or a face shield to protect against aerosols, should the testing subject sneeze or cough within a 6 foot range of you.
4. Is permission from families to test the students required?
 - a. Please contact your district administrator for this information