# AIRA
## AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

# Potential COVID-19 Vaccination Supplemental Funding Activities

FEBRUARY 2021

# Overview & Background

In January 2021, CDC sent out an announcement to Awardees about COVID-19 Supplemental Funding supported through the Coronavirus Response and Relief Supplemental Appropriations Act. The announcement was accompanied by a workplan template for jurisdictions to use in their response to CDC outlining how they would use the funds to support COVID-19 vaccination activities.

The workplan template covers all vaccination activities, and Immunization Information Systems (IIS) and the data they manage are critical parts of this response. For many years, the IIS community has come together to implement standards and standardized guidance, coordinating efforts whenever possible to act as one nationwide network of systems. To that end, it is critical to consider where the collective COVID-19 response can benefit from broader collaboration and common approaches across IIS.
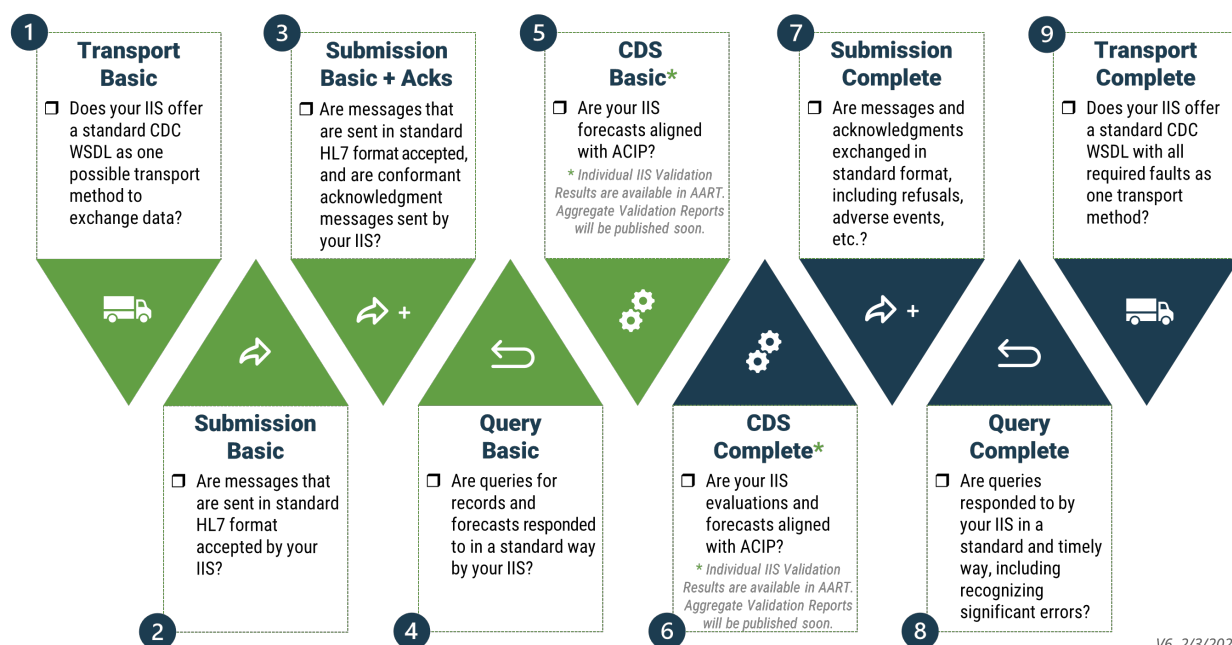
AIRA is committed to supporting the IIS community and our members. This document outlines activities jurisdictional IIS could undertake to utilize the COVID-19 Vaccination Supplemental Funding to support the pandemic response while securing long-term system sustainability. Where possible, this document suggests points of collaboration among IIS. The AIRA Team is available to provide technical assistance (TA) and may also be a current or potential partner to play a coordinating role in supporting collaborative efforts, particularly through onboarding, interoperability, standards adoption, and testing.

AIRA has organized suggested activities using the IIS Functional Model framework developed by PHII in collaboration with CDC, AIRA, and IIS jurisdictions; the framework was shared with Awardees via email from CDC in early February. The Functional Model framework is organized by IIS core functions and capabilities in several categories. On the following pages, you will find activity recommendations to enhance IIS operations, organized by category. These categories are listed in priority order below:

A. Support Interoperability
B. Evaluate & Forecast
C. Ensure Data Quality
D. Provide Public Data Access
E. Manage Organizations & Facilities
F. Manage Patients & Immunization Records
G. Manage Vaccine Inventory

After each suggested activity are potential budget considerations. These are suggestions intended to help jurisdictions think through the resources that may be necessary to accomplish the desired activities. These suggestions are not intended as an exhaustive list, but rather considerations to assist with budget development.

As your jurisdiction selects activities for the coming years, AIRA and MACAW (the Measurement for Assessment and Certification Advisory Workgroup) encourage each IIS to consider funding activities that have been prioritized by the community through Measurement and Improvement (M&I). A prioritized path was established in collaboration with CDC to help IIS focus on essential M&I goals. See sections A and C for more M&I-related activities.

**1 Transport Basic**
☐ Does your IIS offer a standard CDC WSDL as one possible transport method to exchange data?

**2 Submission Basic**
☐ Are messages that are sent in standard HL7 format accepted by your IIS?

**3 Submission Basic + Acks**
☐ Are messages that are sent in standard HL7 format accepted, and are conformant acknowledgment messages sent by your IIS?

**4 Query Basic**
☐ Are queries for records and forecasts responded to in a standard way by your IIS?

**5 CDS Basic***
☐ Are your IIS forecasts aligned with ACIP?
*Individual IIS Validation Results are available in AART. Aggregate Validation Reports will be published soon.*

**6 CDS Complete***
☐ Are your IIS evaluations and forecasts aligned with ACIP?
*** Individual IIS Validation Results are available in AART. Aggregate Validation Reports will be published soon.*

**7 Submission Complete**
☐ Are messages and acknowledgments exchanged in standard format, including refusals, adverse events, etc.?

**8 Query Complete**
☐ Are queries responded to by your IIS in a standard and timely way, including recognizing significant errors?

**9 Transport Complete**
☐ Does your IIS offer a standard CDC WSDL with all required faults as one transport method?

*V6, 2/3/2021*

## A. Support Interoperability

The ability for the IIS to interoperate with data exchange partners is essential. Receiving and sending patient and vaccination information bidirectionally, as well as the implementation of standards that support this exchange, creates a foundation for ensuring IIS and clinicians have ready access to complete patient and vaccination records. COVID-19 has substantially increased the number of providers who need to be onboarded and tested to exchange data with IIS. Well-documented and standardized onboarding procedures will help streamline this process.

## Suggested Activities to Support Interoperability:

1. Identify your IIS Validation status using the IIS Measurement and Improvement Validation - Priority Order document and Aggregate Analysis Reporting Tool (AART) results in the AART dashboard. Develop a plan to advance IIS towards alignment with IIS standards.
2. Conduct a review of onboarding processes and documentation using the Introduction to Onboarding Consensus-Based Recommendations guidance. Implement changes to aid in COVID-19 provider onboarding.
3. Participate in AIRA's Interoperability Training Course to increase onboarding, general IIS, and IT staff interoperability capacity. Contact info@immregistries.org for more information.
4. Review the IIS AART COVID-19 Standards Alignment Report with AIRA staff and identify and implement next steps to ensure standards alignment. Fill out a Technical Assistance Request or contact info@immregistries.org for more information.
5. Evaluate the effectiveness of existing EHR to IIS interfaces in collecting all patient data (childhood and adult) by reviewing and determining whether all providers within a jurisdiction are actively exchanging data.
6. Develop a plan to implement the Immunization (IZ) Gateway suite of products.

## Potential Budget Considerations:

- Staff and/or consultants to:
  - Investigate and document IIS gaps in standards using individual IIS reports within AART and other resources (e.g., CDC Dashboard and the IIS Blueprint).
  - Develop or improve onboarding practices.
  - Support increased demand to onboard and test new data exchange partners.
- IT and development staff and/or consultants to enhance IIS to meet interoperability standards.
- Hardware to ensure IIS stability and capacity and to decrease system downtimes (e.g., computer hardware and infrastructure including SLAs between vendors and IIS programs, etc.).
- Business analysts to document automated system build processes and testing scripts to streamline the software development life cycle.

## B. Evaluate & Forecast

Clinical decision support (CDS) is an important function of IIS. It provides clear and accurate clinical guidance in the context of increasingly complex immunization recommendations. The ability of an IIS to accurately evaluate patient records and forecast for needed doses is critical to ensuring patients receive vaccinations on time. It also reduces over-vaccination by identifying minimum, acceptable intervals for each vaccination series. Clinical decision support is also a foundational building block that enables the use of IIS data to improve vaccination coverage by creating coverage level assessment reports, identifying pockets of need for targeted interventions, and conducting reminder/recall campaigns—all of which are important strategies for improving immunization rates.

### Suggested Activities to Enhance IIS Evaluation & Forecasting:

1. Review AART CDS Assessment Report for IIS and implement changes to ensure optimal functionality of forecaster.
2. Leverage IIS data to identify pockets of need and respond to vaccine-preventable disease outbreaks. Partner with AIRA on these important activities through TA or by participating in AIRA user groups.
3. Utilize IIS data to assess vaccine uptake and coverage levels. Increase the analytics capacity of IIS staff. Partner with AIRA on these important activities through TA or by participating in AIRA user groups.
4. Conduct analysis of IIS population data in comparison to recent Census counts to assess gaps in patient capture.
5. Conduct centralized reminder/recall for second COVID-19 vaccine doses.
6. Conduct assessment of provider utilization of reminder/recall functionality in IIS and develop strategies to increase report utilization.
7. Develop coding for coverage rate reports that can be easily modified to respond to different vaccine-preventable disease outbreaks.

### Potential Budget Considerations:

- Staff and/or consultants to:
  - Conduct coverage level assessment activities.
  - Implement centralized reminder/recall.
  - Identify and develop an action plan to address IIS CDS functionality needs.
- Contracts to develop new or improved IIS CDS and/or reminder/recall functionality.
- Printing and postage or phone/text services for centralized reminder/recall.

## C. Ensure Data Quality

High quality data allows IIS to support clinical and public health activities which help ensure people get the right vaccine at the right time and are protected from vaccine-preventable diseases. Improved data quality allows for optimal use of the IIS (e.g., accurate forecasting and reports) and leads to increased trust in IIS data by providers, partners, and the public.

Suggested Activities to Ensure Data Quality:

1. Participate in AIRA Data at Rest Pilot to evaluate data completeness in IIS.
2. Conduct internal review of data completeness based on AIRA guidance:
   a. IIS Data Quality Practices Guidance: Monitoring and Evaluating Data Submissions
   b. IIS Data Quality Practices Guidance: To Monitor and Evaluate Data at Rest
3. Conduct review of IIS functionalities that support data quality (e.g., deduplication, consolidation of records). Develop a plan to improve IIS functionality in these areas, as necessary.
4. Develop and implement a plan to increase valid data capture, prioritizing the fields most important to the COVID-19 response, such as race/ethnicity, address, and eligibility.
5. Research, develop, and implement a plan to establish legacy data loads.
6. Conduct review of data timeliness and implement strategies to support providers in timely reporting. Depending on the workflow issue identified, develop job aids, and work with jurisdictional IT to remedy any technical challenges.
7. Develop and implement provider and vendor data quality report cards that prioritize COVID-19 data submission.
8. Develop a plan to utilize the no-cost, shared SmartyStreets address validation, standardization and geocoding service to increase accurate address data in IIS and geocoded data for visualization.
9. Establish memorandums of understanding (MOUs) with Vital Records to exchange birth, death, adoption, and update data.
10. Develop or expand data quality protocols to identify, mitigate, and remedy additional data quality impact of high-volume COVID-19 submission.

Potential Budget Considerations:

- Staff and/or consultants to:
  - Communicate, educate, and/or train providers on data quality best practices.
  - Develop new or improved IIS data quality functionality.
  - Manage, analyze, and share data (e.g., data management, visualizations, etc.).
- Contracts to develop new or improved IIS data quality functionality
- Software licenses for assessing and/or visualizing IIS data (i.e., SAS, Tableau, etc.)

## D. Provide Public Data Access

Providing the public with access to near-real-time data increases transparency, confidence in the vaccination process, and can help manage expectations. Giving people a way to access their immunization records encourages patient awareness and accuracy of immunization data.

Suggested Activities to Provide Public Data Access:

1. Develop and publish COVID-19 dashboards using IIS data.
2. Develop talking points for public health leadership, media, and other stakeholders to assist in understanding dashboard data.
3. Participate in AIRA's Tableau User Group to learn strategies for visualizing IIS data.
4. Assess capacity for IIS to support consumer access to patient records.
5. Develop and implement capacity for consumers to access records.

Potential Budget Considerations:

- Staff and/or consultants to create and manage data (data management, visualizations, consumer access management, etc.).
- Software for visualizing IIS data.
- Contracts to modify IIS to allow consumer access, update reporting capabilities, etc.

## E. Manage Organizations & Facilities

Full provider participation is essential to ensure complete data capture and broad use of IIS data at the clinical point of care and for population health. Organization and facility management is necessary to link doses administered and/or reported with the appropriate entity. It has ramifications for ordering, inventory, reporting, identity management, etc.

With a growing number of enrolled providers engaging in the COVID-19 response, this function is especially critical to manage within the IIS.

There are typically multiple layers of tracking organizations and facilities that may include parent-child linkages to designate relationships between sites (e.g., a health care organization with multiple clinic hospital facilities).

## Suggested Activities to Enhance the Management of Organizations & Facilities in an IIS:

1. Research and ensure alignment with HL7 2.5.1 Release 1.5 Guide and Addendum standard for organizational and facility management.
2. Conduct a review of existing organizations to ensure all vaccinating facilities are reporting vaccination data.
3. Conduct review of vaccination reporting from organizations serving high-risk populations and those living in congregate settings (e.g., prisons), homeless populations, and essential workers. Address any workflow or technical challenges identified.
4. Develop a targeted plan to recruit providers and increase data reporting. Consider stakeholders, such as adult immunizers, pharmacies, Indian Health Services/Tribal health, military, etc.
5. Develop a targeted communication and training plan to encourage non-traditional providers to enroll in and report to IIS.
6. Where appropriate, recruit providers participating in COVID-19 response to the Vaccines for Children (VFC) program and other public vaccination programs that serve adults.

## Potential Budget Considerations:

Staff and/or consultants to:
- Research current standards around organization and facility management to ensure and/or update to align more fully with standards.
- Review and develop reports on enrollment and participation among current organizations and facilities.
- Develop communications for outreach and recruitment of additional organizations and facilities.

## F. Manage Patient & Immunization Records

Management of patient and vaccine records within the IIS is critical to ensure the IIS has a complete immunization history for patients without duplications. This enables the IIS to share these consolidated records with data exchange partners and increase confidence in IIS data to assess coverage rates and inform immunization activities and interventions.

Accurate capture of Patient Status enables jurisdictions to more confidently evaluate the progress of age-appropriate immunization coverage and mass vaccination campaigns.

Suggested Activities to Improve the Management of Patient & Immunization Records:

1. Evaluate and improve user interface for patient record screens and printed records to aid providers and consumers.
2. Ensure business rules align with guidance and best practices; review AIRA's MIROW Guides to assess alignment.
3. Evaluate and improve system mass vaccination functionality.
4. Conduct centralized reminder/recall activities. Use the Conducting Centralized Reminder/Recall Using an IIS guide to support these activities.
5. Use the Management of Patient Status in Immunization Information Systems guide to implement guidance to ensure patient populations are being managed and there is always a party responsible for immunization of every patient.
6. Evaluate IIS capability to appropriately capture jurisdictional patient status in a mass vaccination event.
7. Establish or expand policies and practices to recommend or mandate querying the IIS prior to immunizing and reporting all doses administered to individuals of all ages to the IIS.

Potential Budget Considerations:

- Staff and/or consultants to:
  - update emergency response plans.
  - draft or modify policies and practices to recommend or mandate vaccination querying and/or reporting.
- Contracts to enhance/modify IIS for mass vaccination capabilities.
- Software to support text and phone reminder/recall efforts.
- Purchase of equipment such as tablets, bar code scanners, portable coolers, etc., to streamline mass vaccination efforts.
- Infrastructure updates and other functionality enhancements to streamline mass vaccination data capture/reporting and to support automatic syncing of vaccination records when administered offsite.

## G. Manage Vaccine Inventory

Vaccine inventory tools in an IIS assist the immunization program in maintaining accurate information about a provider's vaccine supply. These tools also assist provider organizations in appropriately managing their vaccines and meeting Awardee immunization program operational requirements (i.e., vaccine accountability). Improving inventory functionality will assist providers in managing vaccine, reducing vaccine loss

while also meeting state and federal accountability requirements. Likewise, these improvements will increase transparency for state and federal programs into the amount of vaccine available at provider sites.

Suggested Activities to Manage Vaccine Inventory:

1. Evaluate and improve vaccine ordering and/or prebook functionality.
2. Develop vaccine inventory tools to meet the following needs:
   a. Decrementing inventory via electronic data exchange.
   b. Searching, adding, and editing inventory.
   c. Reconciling inventory.
   d. Reporting vaccine transfers, wastage, and returns.
3. Assess and increase IIS capacity to incorporate vaccine allocation logic to respond to mass vaccination events.
4. Develop reports to compare COVID-19 vaccine ordering data to immunizations reported in IIS.
5. Develop coding for vaccine usage and wastage reports that can be easily modified to respond to different vaccine-preventable disease outbreaks.

Potential Budget Considerations:

- Staff and/or consultants to:
  o Develop new or improved IIS vaccine management functionality.
  o Manage, analyze, and share data (data management, visualizations, etc.).
- Contracts to develop new or improved IIS vaccine management functionality.
- Software for assessing and/or visualizing IIS data.

If you have comments or questions, or want to discuss potential activities, please email info@immregistries.org.