CLINICAL TRIAL DATA

A PATHWAY TO IMMUNIZATION INFORMATION SYSTEMS (IIS) GUIDANCE

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AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

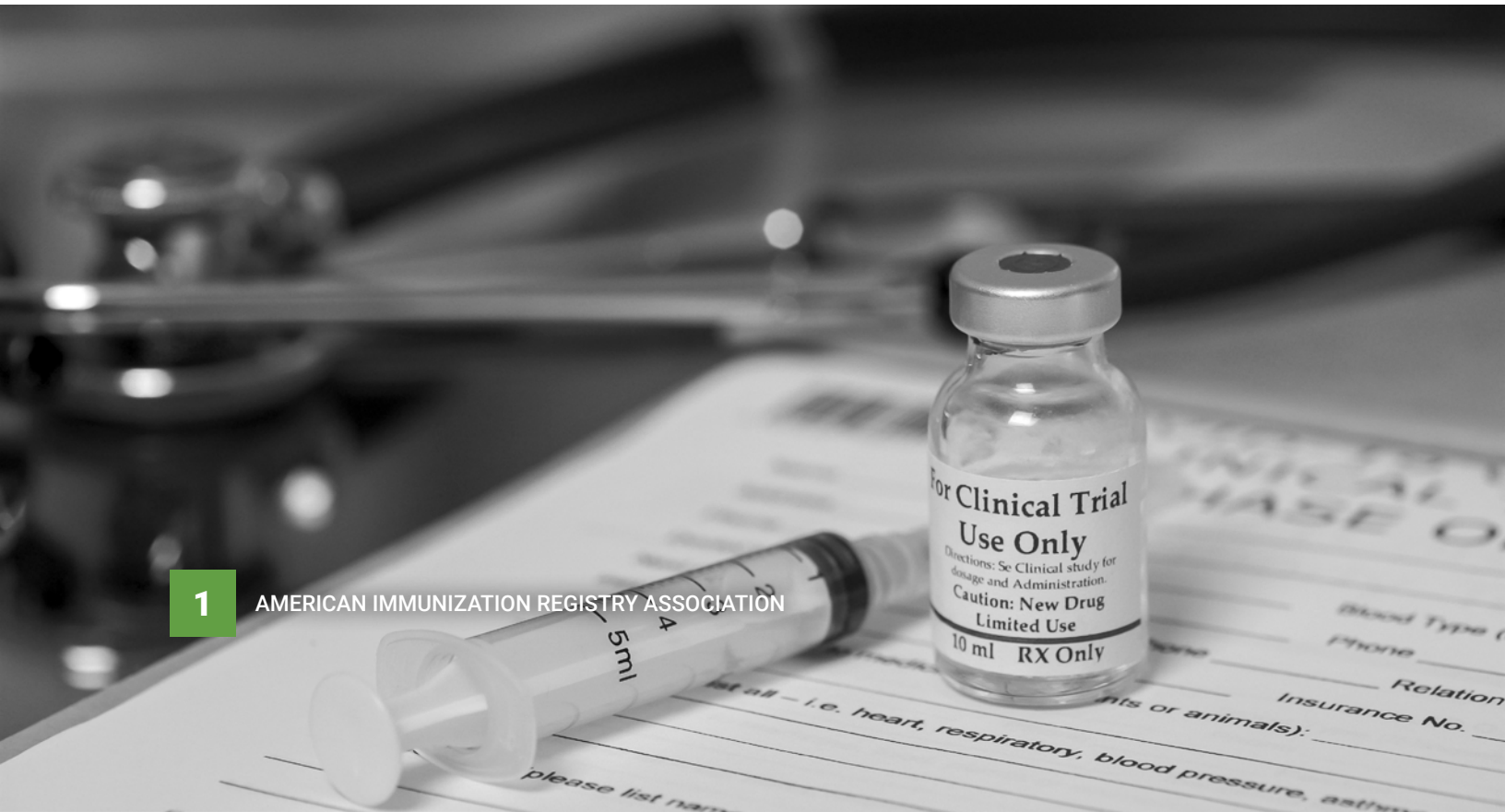
BACKGROUND

Prior to the COVID-19 pandemic, clinical trial vaccinations were not normally reported to the IIS for several reasons, including the strict patient blinding policies in clinical trial protocols.

The COVID-19 pandemic has thrust the role of vaccine clinical trials and their vaccinated participants into a new spotlight. There is an urgent need to share participant clinical trial vaccination data with appropriate immunization information systems (IIS) to help ensure the capture and inclusion of COVID-19 vaccination data in participants' comprehensive vaccination records. As the need to provide evidence of vaccination status for clinical decision making, work, travel, or social purposes increases, the urgency for clinical trial data to be captured in an IIS is essential.

PURPOSE

The purpose of this guidance document is to share considerations and data sharing methods that may be helpful in facilitating the exchange of data between clinical trial sites and their respective jurisdictional IIS.



SCOPE

This guidance is intended to be operational in nature and link to technical guidance where applicable. There are two distinct audiences for this guidance: IIS program staff and clinical trial site staff.

CDC GUIDANCE

As of February 2022, the initial CDC guidance provided to the 64 CDC immunization awardees maintains that it is appropriate to accept valid doses administered during a clinical trial into the IIS and to include those doses in data reports. For a dose of COVID-19 vaccine used in a clinical trial to be considered valid, all the following conditions must be met:

- The vaccine received has been authorized by the U.S. Food and Drug Administration (FDA) or listed for emergency use by the World Health Organization (WHO).

  Participants in clinical trials within or outside the United States who received all the recommended primary series doses of a WHO-EUL COVID-19 vaccine (i.e., not placebo) that is not FDA-approved or FDA-authorized are considered fully vaccinated. In addition, people who received a vaccine that is not listed for emergency use by WHO but for which a U.S. data and safety monitoring board or equivalent has independently confirmed efficacy are considered fully vaccinated. https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-b

- The individual received the trial vaccine and not the placebo or comparator vaccine for future studies, i.e., COVID-19 vaccines which have already been approved.

- The individual received a dose volume that is at least half of the currently authorized dose of the vaccine.

- The vaccine was administered per a recommended Advisory Committee on Immunization Practices (ACIP) or WHO schedule (e.g., age, interval).

CONSIDERATIONS

The following considerations are intended for the noted specific audience, IIS, or clinical trial site.

IMMUNIZATION INFORMATION SYSTEM

The following considerations are tailored to the IIS program in each jurisdiction with a clinical trial vaccination clinic site. The IIS program may encounter these scenarios when working with vaccine pharmaceutical companies and their contracted clinical trial sites to report clinical trial vaccinations to the IIS.

Patient consent (i.e., clinical trial participant consent)

Provide consent language to the clinical trial vaccination clinic site if specific patient consent is required for the clinical trial vaccination to be shared with the IIS.

Data submission

Determine the most efficient and logical way to share and exchange data with the clinical trial sites in your jurisdiction. Data sharing can occur via electronic messaging, direct data entry, or bulk data transfer.

Electronic messaging: If the clinical trial vaccination site is connected/affiliated with a large medical or hospital group, the data may be transmitted via HL7 through the larger provider organization. It may be possible to explore establishing a new electronic data exchange connection between the clinical trial site and the IIS.

- This pathway might not reflect the clinical trial site as the name of the provider in the inbound messages, which may affect future reporting of clinical trial vaccinations.
- If an electronic connection is feasible with the clinical trial site, proceed with testing and HL7 configuration with the IIS. The IIS program monitors this electronic connection in the same manner in which other live connections are monitored.

Some of the jurisdictions that have been successful in receiving clinical trial vaccines are Colorado, Florida, New York, New York City, Texas, and Utah.

Direct data entry: Direct data entry is necessary for data sharing if an electronic connection is not possible or appropriate.

- Establish the clinical trial sites in the IIS as a provider. The IIS program should consider characterizing these provider sites as a "Clinical Trial Site" if this is a customizable field in the IIS. This may assist with reporting later.
- Provide user accounts to the clinical trial staff. Ensure user account agreement protects protected health information. Consider adding language to the user account agreement to include that a user account with the IIS is not a route for identifying future clinical trial participants.
- Training on how and when users should enter vaccinations into the IIS may be necessary.

Bulk data transfer: A flat file upload or other type of bulk data transfer may be a data sharing option. This type of data sharing is more labor intensive and may be a feasible option for initial data capture from trials that have already been unblinded or completed or for long-term trials that are unblinding/ending in the future. It might not be feasible for ongoing reporting.

Technical guidance

Utilize AIRA Standards and Interoperability Steering Committee (SISC) guidance for the technical mechanism for constructing a message for clinical trial vaccination events: https://repository.immregistries.org/files/resources/61b764e7c5243/clinical_trial_guidance_document_v1_0.pdf.

Core data elements

Utilize the core data elements in Appendix A for applicable data elements for clinical trial vaccine events. The data elements listed in Appendix A are a pared down list of the core data elements published by CDC.

Lot numbers

The lot numbers for clinical trial vaccines are unique and completely different from lot numbers in the IIS inventory. Clinical trial vaccines will not be pulling from VFC or 317 IIS inventory.

Expiration dates and clinical decision support

Expiration dates will pre-date all FDA authorizations and ACIP recommendations. Configure the IIS clinical decision support to accept vaccinations administered before ACIP recommendations.

ADVICE FROM THE FIELD

> Bottom up worked better than top down. While we were often able to get the attention of pharmaceutical execs and even their buy-in for sharing data, it didn't really result in much action. Finding the clinical trial leads at the physical sites was much more successful.
>
> There is a possibility to work directly with the pharmaceutical company. You may be able to get HL7 files from its employee vaccine program.
>
> IIS may have clinical trial vaccines coming through with no warning if a clinical trial site is contained within a major hospital system or academic institution that is already connected to the IIS. These doses could get automatically submitted.

CLINICAL TRIAL VACCINATION SITE

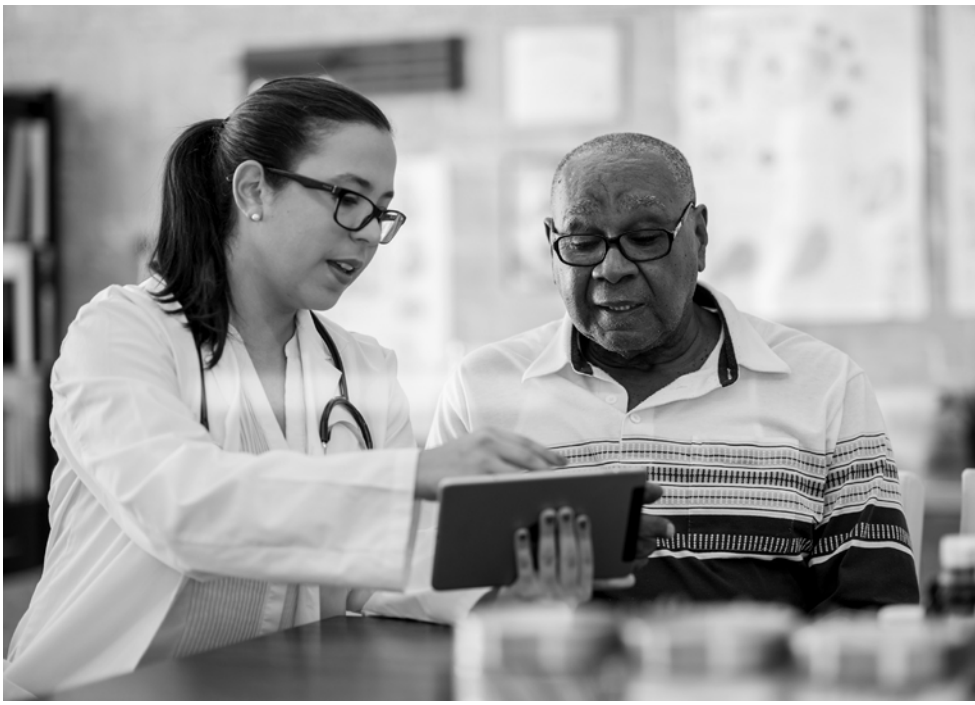
The following considerations are tailored to the clinical trial vaccination site. They represent scenarios the clinical trial site may encounter when working to report vaccinations to the IIS.

Consent

If needed, identify a process for capturing consent. This is dependent upon the state or local regulations and the operational guidance from the sponsor or vaccine manufacturer and may differ by location. Depending upon the stage of the trial, consider adding consent to any initial, re-consent, unblinding, or final visit protocols.

Core data elements

Review the core data elements in Appendix A to identify gaps with data collected from the clinical trial participants. The data elements listed in Appendix A are a pared down list of the core data elements published by CDC. They have been determined to be the minimally required data needed in an IIS to achieve a complete vaccination event from a clinical trial vaccination.



Data submission

Contact the IIS in the jurisdiction where the clinical trial site is located: https://www.cdc.gov/vaccines/programs/iis/contacts-locate-records.html#state. Work with the IIS program to determine how the data should be submitted to the IIS. Data submission may occur via the following methods:

Electronic messaging: An electronic connection may be able to be established between the clinical trial site and the IIS. Direct data entry into the IIS is not needed once an electronic connection is established.

- Utilize AIRA Standards and Interoperability Steering Committee (SISC) guidance for the technical mechanism for constructing a message for clinical trial vaccination events: https://repository.immregistries.org/files/resources/61b764e7c5243/clinical_trial_guidance_document_v1_0.pdf

Direct data entry: Signing a user agreement, obtaining a user account, and training may be needed for direct data entry to the IIS.

- A user account agreement will cover how data are used and shared; specifically, a user account with the IIS is not a route for identifying trial participants.

Bulk data transfer: This is typically a static file of data that meets a file format specification for the IIS to upload to the system. This may require assistance from the IT department to download data and configure the file to meet the specifications set forth by the IIS.

If provided, follow any specific sponsor/manufacturer provided guidance for data submission to the IIS. Identify the internal process for submitting clinical trial vaccine data.

- Consider workflow—at unblinding (if offered), "transitional vaccination" (i.e., patient received a previously approved vaccination as the placebo)
- Responsible staff person for submitting data to the IIS

Work with the IIS program to submit data to the IIS in the appropriate format (see above).

APPENDIX A CORE DATA ELEMENTS FOR CLINICAL TRIAL VACCINATIONS

DATA ELEMENT	DEFINITION
Ethnicity	The ancestry of the patient
Patient address: city	The city component of the patient's address
Patient address: country	The country component of the patient's address
Patient address: state	The state component of the patient's address
Patient address: street	The street component of the patient's address
Patient address: ZIP code	The ZIP code of the patient's address
Patient date of birth	The patient's date of birth
Patient email address	The patient's email address
Patient gender	The patient's gender
Patient name: first	The patient's first name
Patient name: last	The patient's last name
Patient name: middle	The patient's middle name
Patient telephone number	The patient's phone number
Patient telephone number type	The type of phone number (e.g., home, cell)
Race	The patient's race
Responsible person name: first	The first name of the person responsible for the patient
Responsible person name: last	The last name of the person responsible for the patient
Responsible person name: middle	The middle name of the person responsible for the patient
Responsible person relationship to patient	The personal relationship the responsible person has to the patient
Administered at location	The facility name/identifier of the facility that administered the immunization
Responsible organization	The identifier of the accountable organization

DATA ELEMENT	DEFINITION
Sending organization	The identifier of the organization that connects to the IIS and submits the record
Vaccination administration date	The date the vaccination event occurred
Vaccination event ID	The vaccination event's unique identifier assigned by the submitting system
Vaccination event record type (administered/historical)	Indicates whether the vaccination event is based on a historical record or was given by the administered at location
Vaccine administering provider	The name of the provider (person) administering the vaccination
Vaccine dose volume	The amount of vaccine administered (e.g., 0.5); units for the volume are defined separately
Vaccine dose volume units	The unit of measure of the dose (e.g., ml)
Vaccine expiration date	The expiration date of the vaccine administered
Vaccine lot number – uniquely different in clinical trials	The lot number of the vaccine administered
Vaccine manufacturer name	The manufacturer of the vaccine that was administered
Vaccine ordering provider	The identifier of the provider (person) ordering the immunization
Vaccine product – likely CVX	The vaccine type that may be administered, historical, or refused
Vaccine route of administration	The route of administration
Vaccine site of administration	The anatomical site where the vaccine was given