



AIRA
AMERICAN IMMUNIZATION
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HIMSS[™]



2022 IIP Collaborative Existing Issue Topics

Category Definitions

As part of the IIP Collaborative's issue prioritization process in 2021, the IIP compiled a list of immunization data exchange challenges submitted by our partners. Four issue topics were selected for IIP work and the unselected issues remained on the list. To prepare for the 2022 issue prioritization process, the IIP project team reviewed and prioritized the remaining issue topics, and grouped them into two categories, Consider and Postpone, as defined below. Issue descriptions are from issue topics that were submitted in 2021.

	Category	Definition
1	Consider	Issue topics are relevant and in scope for the IIP to work on and have identifiable activities in the next 12 months.
2	Postpone	Issue topics were considered by IIP and were determined to be out of scope at this time. These topics are important, and the IIP will stay informed and partner with other efforts as appropriate.

1. Consider Issue Topics

The following IIP Collaborative issue topics were considered appropriate to prioritize and within the scope of the IIP to work on and have identifiable activities in the next 12 months.

Issue Number	Issue Topic Title	Description of Issue
1.1	Best Practices for Recording and Messaging Estimated or "Fuzzy" Dates	When obtaining historical information from patients about when they received vaccines, sometimes the exact dates of the vaccine administration aren't known. It is, of course, most ideal to determine the exact dates, if possible, but in many cases, it is not necessary to have an exact date to know whether a patient is due, overdue, or up to date. For example, if a 10-year-old received an influenza vaccine in October, he/she is up to date for the current season - the exact date of the vaccine is not necessary. Similarly, if an adult last received a Tetanus vaccine in 2005 and arrives in the ER with a dirty wound, it is clear the patient needs a booster. Most systems require users to enter exact dates, even if the information isn't accurate (i.e., entering '2015-01-01' if only 2015 is known). This bad data can potentially be clinically misleading when propagated to other systems and can skew downstream use of the data in research, reports and analytics
1.2	Dealing with Submissions Prior to the Assignment of a Legal Baby Name	The first vaccination in life (hepatitis B) typically happens within 24 hours of birth. But sometimes, the legal name is not yet assigned at this time. When an HL7 message is sent from the hospital to the IIS the name is often just a placeholder (e.g., BabyBoy Smith)

1.3	Improved Immunization Data Sharing with Schools	<p>School nurses often cannot access IIS records in adjacent or other states – they need access across states; records can only be viewed. Students are mobile.</p> <p>More primary care providers are entering immunization data.</p> <p>Need interoperability of school EHR and IIS – opportunity to work with EHR companies.</p> <p>School entry IZ requirements are determined by the state; may want paper copies that are printed from IIS.</p> <p>Public health should be able to audit school IZ from IIS; after 12th grade – send the student/family a record of immunization with HS diploma.</p> <p>In the new school nurse orientation, some healthcare providers say they need authorization to share IZ records with school health. We need to disseminate accurate communication to community healthcare providers and schools.</p> <p>Immunization coalitions – get input from them. Need to advocate for evidence-based immunization law.</p>
1.4	Mapping Facility Identifiers for Immunizing Providers	<p>Significant resources are needed for every site involved in the immunization ecosystem to identify themselves as an immunizing provider site. Currently, every jurisdiction with an IIS has a unique and separate way of identifying immunizing sites.</p> <p>A national strategy and framework for identification could go a long way to streamline and standardize site identifiers.</p>
1.5	Patient Employment/Demographic Information to Identify Needed Immunizations	<p>Prioritizing and track COVID immunizations (e.g., essential/frontline workers)</p>
1.6	Standardized Workflow for Managing Potential Subpotent Immunization Administrations	<p>Vaccine may be administered and reported, but at some point, deemed clinically invalid. For example: (1) Vaccine may be stored out of temperature range, then administered prior to realizing there was a cold chain break; (2) A full dose may not be given if the needle doesn't go all the way into the arm or the individual jerks away; or (3) Practices around how to flag, store, and/or display this information within IIS or EHRs vary widely.</p>

1.7	Triggers that Prompt Submission or Query Messages from EHRs to IIS	A significant advancement in usability of IIS would be to have EHRs automatically query the registries based on specific criteria ('triggers'), so that the results of a query (if found) would be available to providers in a timely fashion in the clinic/practice workflow. Some EHRs already have this capability, but the available choices for triggers may be inappropriate, leading to unnecessary queries that overload IIS. For example, triggers such as 'upon scheduling of an appointment' or 'upon arrival of patient' can (and do) result in unanticipated outcomes. Triggers should be optimally defined and timed for the appropriate patients, supporting both batch and real-time IIS functionalities.
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2. Postpone

The following IIP Collaborative issue topics were considered by IIP and were determined to be out of scope at this time.

Issue Number	Issue Topic Title	Description
2.1	Addressing Issues with Publicly Purchased Vaccine Programs	The federal VFC program requires that participating provider organizations screen patients for VFC eligibility and report certain eligibility-related information that, among other things, is used to determine needs for vaccine ordering. Immunization Programs also may require provider organizations to screen patients for state vaccine program eligibility. Among Immunization Programs that use IIS to support the VFC and grantee vaccine programs, there is variation in resolving and tracking patients' eligibility status and in the collection and reporting of data used to estimate the amount of vaccine that provider organizations will administer. Additional barriers to VFC status at the point of care complicate this issue. Medicaid eligibility/coverage by a particular MCO has significant challenges at the point of care. In an effort to not lose an opportunity to vaccinate, often practices "do their best" to verify insurance coverage, but it cannot be 100% accurate and there is no standard for communicating "changes" post vaccination. Having a central place to verify VFC status would help. Also having a way to "update" that information when the practice receives updated information would help. In addition, many states are now asking for more granular statuses (and there is variation between states) on what makes the patient VFC eligible. Not all EHRs have the ability to record this information in a place that makes it easy for a practice to update and transmit it along with the immunization administered. Consider the technical process for updating VFC status. It is true that you do not always know VFC status at the time of vaccination (underinsured is notoriously hard to identify), but it would be a big (probably manual) process to update status after billing is complete
2.2	Strategic Roadmap for Exploring and Coordinating the Use of FHIR as an	FHIR is emerging as a broadly accepted standard across health care. Although the HL7 V2 standard is broadly implemented and works well across immunizations, there

	Emerging Messaging Standard for Immunization Data	are likely many areas of immunization messaging that could be well-served by FHIR messaging.
2.3	Governance and Standards Around Interoperability Between EHR and IIS	Especially in the face of public health emergencies (planning for the next outbreaks) - this connects to the EHRA meetings held at HIMSS21 and interest on both sides (government and EHRs) to have these ongoing conversations.
2.4	Intermediary Connections - (HIEs, EHR Hubs, Interface/Integration Engines)	Between EHRs and IIS help facilitate data exchange. This is sometimes necessary when IIS have unique requirements or do not support the same data transport standards. For example, some IIS do not support the SOAP transport protocol while some EHRs require it, therefore an intermediary is required. These intermediaries take on the responsibility of managing data submissions, keeping the data feeds compliant, remediating errors, and keeping our clients up to date with meaningful and readable reports so that remediation can occur in the source system reducing future errors.
2.5	Standardizing Pandemic Data Elements	There has been a wide swath of different expected data elements between jurisdictions that arose during the pandemic. Standardizing the list of elements that can be collected during a Public Health Emergency will assist organizations that need to scale to emergency immunizations or multiple jurisdiction reporting requirements. Additionally, part of this project goal should be to ensure there is available information to help combine multiple sources of information (such as dose number) given the nature of how people are vaccinated in a pandemic. This issue may also include addressing poor data quality that has become apparent due to the pandemic and increased volume of adult vaccinations. Two complete series of COVID-19 vaccinations is not uncommon for the same patient which emphasizes the need for accurate patient de-duplication and merge/unmerge algorithms. Cultural differences regarding birth dates have also become more of an issue – some cultures do not track/record actual birth dates and are frequently assigned a January 1st birthdate. This issue combined with common last names within certain cultures contributes to patient matching challenges. Another issue that has been

		<p>recognized is that some submitters are sending scheduled vaccinations that are not actually administered and this can lead to duplicate records. It would be helpful to develop a standard definition or method of determining data quality. Potentially assign a percentage of confidence that data are legitimate and plausible (e.g., 3 vaccinations in a short time period would receive a low score to indicate error/poor data quality).</p>
2.6	<p>Guidance for Use of Consent and Protection Indicators Across IIS and EHRs</p>	<p>Patient consent is largely governed by local law and statute, and these jurisdictional policies will vary. These variations, and their inconsistent application, interfere with EHR-IIS interoperability</p>
2.7	<p>Improving Onboarding Process</p>	<p>Although it is improving, community surveys and stakeholder feedback continue to indicate variability among jurisdictional onboarding approaches resulting in some level of backlog within specific jurisdictions for establishing EHR-IIS interfaces. The variability in onboarding approaches and lengthy wait times contribute to frustration among all major stakeholders. This is a broad, multi-faceted issue. Solutions could span policy, technical, and operational areas. The problem would need to be scoped further to facilitate the identification of solutions. Standardization of onboarding processes across IIS can help improve and speed up provider onboarding to multiple IIS. This is part of the work within the IZ Gateway/Onboarding Shared Services (IZG/OSS) project and is currently focusing on onboarding documentation templates, processes, and direct onboarding assistance/training. Currently working with and piloting templates and processes with Guam, Wyoming, and Oregon</p>
2.8	<p>Cross-jurisdictional Queries are Needed</p>	<p>For vaccines administered across public health jurisdictions (e.g., a person lives in Rhode Island, works in Massachusetts, went to a mass vax site in Connecticut). IZ Gateway is solving for that on the IIS side, but it is unclear if the EHR or HIE queries will receive cross-jurisdictional data returned from the IIS via IZ Gateway.</p>

2.9	Sharing of IIS Information Across State Lines	Students and low-income communities, and incoming refugees, for example, communities are moving often and there should be ways to move their data efficiently. Challenge for MIIC at MN Dept of Health
2.10	Standards Conformance, FHIR APIs as the Next Turn	Patient access to data, cross jurisdictional data exchange (with a reliable record locator service)
2.11	Vaccine Data Gaps from Federal Data Sources	Such as DOD/VA, Indian Health Services, pharmacy programs, LTC/SNF, and Bureau of Prisons. Non-traditional immunization data exchangers have already been submitting through various ways - what lessons have been learned? What guidelines or standards could be developed and implemented?
2.12	Promotion of Use of 2D Barcoding	Scanning of unit of use (vial/syringe) by clinicians and functionality with EHRs to record: NDC, lot number and expiration date. Produce a brief recommending EHRs that support this functionality, providers adopt this technology and staff are properly trained.
2.13	Standardized Workflow for Identifying, Recording, and Messaging Active vs Inactive Patient Information	A patient's active status with a provider signifies that the provider is responsible for ensuring the vaccination of that patient. Accordingly, patients with an active status are included in the provider's reminder/recall process and provider-specific coverage reports. At the geographic jurisdiction level, patient status helps public health entities ensure that patients without a provider receive the vaccinations they need. In addition, geographic jurisdiction level data allows for the production of public health reports, such as community vaccination coverage assessments. The information can be used to ensure complete saturation in an IIS and accurate reporting of vaccination coverage data. Currently, there are notable limitations in the ability of EHRs to submit up-to-date patient status information.
2.14	Improving Usability Associated with Multiple Reporting Requirements	Clinicians who operate in multi-jurisdictional areas (such as the DC Metropolitan area) must report to multiple registries. This creates additional cost, burdensome clinical workflows, and potentially under-reporting to IIS. IIS: Complexities associated with multiple reporting requirements among clinicians may result in under-reporting to IIS; positive impact on IIS completeness and reducing needless duplication if there was a coherent national strategy on this.

		<p>EHR: Multiple reporting requirements result in greater cost, greater burden, and complexity and lack of usability in clinical and administrative work flows within the practice/clinic setting.</p> <p>Standardization of onboarding processes across IIS can help improve and speed up provider onboarding to multiple IIS.</p>
2.15	How to Handle Vaccines Administered as Part of a Clinical Trial	Vaccine trials are an important part of public health advancement and new vaccines, or combination vaccines are not approved by the FDA until they have had clinical trials. This means that clinical trials are held in clinical sites where most of the information is now stored in EHRs. Because all of the immunization rule sets for recording data, exchanging data and clinical support/immunization forecasting rely on CVX or NDC codes, there is no way to handle these vaccines in the EHR in a way that affords safe and effective care at the point of care as well as exchange of information. Clinical sites may "make this up" along the way and it is resulting in inaccurate information being recorded and exchanged within the EHR itself, with the IIS community and to other exchange partners (HIEs, when children transfer practices, schools, etc.
2.16	Strategies for Clinical Decision Support that Include More Clinical Data	There is currently an issue of an increasing number of clinical factors which play a role in immunization validation, forecasting, and clinical decision support - especially in an era where 'personalized medicine' appears to be the trend. Most IIS don't contain the additional clinical data upon which these more precise recommendations/forecasting engines can be based.
2.17	IIS-EHR MIPS Information Page	Provide one stop shop to replace CDC's IIS Meaningful Use Page - provider and public health organizations may find it difficult to find the most current information for MIPS information (e.g., requirements, timeframes, eligibility, exclusions, public health readiness

2.18	Managing Variability in the Timing of Adoption of Standards Among EHRs and IIS	New technical standards always have an adoption curve and even when mandated by regulation, an EHR may have the technical ability to adhere to a standard and pass certification, but there can be an 18+ month lag until that gets adopted at each client installation site. This is especially true for EHR products who are not cloud based and cannot control when the practice takes an update (also true for many large self-hosted health systems.) In addition, both EHR and IIS entities have limited resources and often have roll-out and testing constraints so there is additional time for onboarding and verification/testing of updated specifications/versions. We need to ensure that data exchange functionality is not lost between versions so that all users can continue to safely, reliably and accurately exchange data with backwards compatibility because this problem will continue to exist.
2.19	Throughput Expectations (Producing Defined Expectations Around Response Times)	It is critical for healthcare systems to adequately manage their populations. Doing so requires significant situational awareness of the treatment of their patients within and outside of the walls of their organization. Producing defined expectations around response times for IIS systems and recommendations on how to scale them to meet these needs will help ensure positive outcomes for patients and providers
2.20	Health Literacy Through Digital Tools	Leveraging IIS to educate communities through apps and other tools to help improve vaccination rates and reduce vaccine hesitancy.