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# Background and Context

Demonstrating proof of vaccination has been a long-standing need. International travel has long called for proof of vaccination for certain destinations, and most schools require proof of immunization for attendance.¹ However, consumer interest in accessing vaccination records has increased substantially as individuals have been immunized to protect against COVID-19. Immunization information systems (IIS) are faced with broad demand for access to consolidated records (i.e., records combined from multiple sources) stored in their systems.

In the absence of formal guidance, the American Immunization Registry Association (AIRA) is developing this "Working Guide" that aims to gather and document common terminology and references related to consumer access and vaccine credentials.

Historically, many IIS have focused on providing consumer access to vaccination records, which may be considered separate from the concept of vaccine credentials. For the purposes of this working guide, consumer access is defined as the process of offering individuals direct access to their own immunization records and, in some cases, their family members' immunization records. To date, formal guidance on consumer access to immunization records has been limited, although many IIS offer this level of role-based access. The IIS must have a process to authenticate the individual (verify their identity), but this process is not yet standardized. Guidance on how to provide consumers with access and the process of authentication is needed.

As part of the COVID-19 response, newer terms have expanded the consumer access conversation. Verifiable vaccination credentials (VVCs), digital vaccine credentials (DVCs), vaccine certificates, and vaccine passports have all been used to describe either paper or electronic immunization records or a current immunization status (as in, "Immunized for COVID-19"). Further guidance is needed to differentiate these terms, provide specifications for data and information exchanged, and clarify expectations of IIS to support these concepts. In April 2021, the White House administration stated it would defer to private companies that may choose to implement a vaccine credentialing or "passport" system and emphasized that there would be no federal mandate for individuals to obtain a single vaccine credential. This stance has not changed since that time.<sup>2</sup> According to recent polling, the term "passport" is particularly sensitive, as it has connotations of threats to

<sup>&</sup>lt;sup>1</sup> CDC Travel Guidance, accessed 5/4/2021: https://wwwnc.cdc.gov/travel/page/faq

<sup>&</sup>lt;sup>2</sup> The Hill, accessed 5/4/2021: <a href="https://thehill.com/homenews/administration/546705-white-house-rules-out-involvement-in-vaccine-passports">https://thehill.com/homenews/administration/546705-white-house-rules-out-involvement-in-vaccine-passports</a>

freedom and choice.<sup>3</sup> The alternate term that 40% of Americans support is vaccine "verification."

In the absence of national guidance or standards, IIS and their jurisdictions' leadership and administrators are left to determine individually how best to meet the growing consumer demand for vaccination records. This diversity in IIS response may impose interoperability challenges to consumers and partner organizations that need to interface with multiple IIS. In addition, the number of potential or actual actors and functions involved in accessing vaccination records is significant. In part due to this complexity, terms and concepts may get misinterpreted and/or joined together.

# Working Definitions

This working guide is an effort to document a set of common concepts and terminology related to vaccine credentials across the IIS community. These definitions will continue to be refined as guidance emerges and use cases specific to IIS become clearer.

**Consumer Access:** As mentioned above **Consumer Access** is the process of offering individuals direct access to their own immunization records and, in some cases, their family members' immunization records.

**Vaccine Credentials** or **Verifiable Credentials:** Although there is no broadly agreed upon definition, **Vaccine Credentials** is the emerging term that may represent either paper or digital records of one's immunizations. This term may also be associated with **Verifiable Credentials**, a broader and more general term not solely associated with vaccinations. According to the World Wide Web (W3C) Data Model, **Verifiable Credentials** can represent the same information that a physical credential represents, but the addition of technologies such as digital signatures makes **Verifiable Credentials** more trustworthy and tamper-resistant than their physical counterparts.<sup>4</sup>

**Vaccine Certificates** and **Vaccine Passports:** The term "vaccine credentials" is also sometimes synonymous with **Vaccine Certificates** and **Vaccine Passports.** The term **Vaccine Verification Cards** is also used; although, definitionally, this does not appear to be different from the terms above. As mentioned above, the term Vaccine Passport is not preferred by the general public because of its associations with requirements.

**Vaccination Pass:** The terms above typically refer to a paper or electronic record of immunizations received, whereas immunization status (e.g., complete for COVID-19) may more commonly be called a **Vaccination Pass**.

<sup>&</sup>lt;sup>3</sup> Becker's Hospital Review, accessed 5/5/2021: <a href="https://www.beckershospitalreview.com/digital-marketing/viewpoint-ditch-the-term-vaccine-passport-and-try-these-messaging-strategies-instead.html">https://www.beckershospitalreview.com/digital-marketing/viewpoint-ditch-the-term-vaccine-passport-and-try-these-messaging-strategies-instead.html</a>

<sup>&</sup>lt;sup>4</sup> W3C Verifiable Credentials Data Model, accessed 5/20/2021: <a href="https://www.w3.org/TR/vc-data-model/">https://www.w3.org/TR/vc-data-model/</a>

**Digital Vaccine Credential:** An attribute of many of these credentials is digitization; the term **Digital Vaccine Credential** is used often. A **Digital Vaccine Credential** is a way to demonstrate a person's vaccination status, generally through a smartphone app or a QR code that is displayed digitally and/or has been printed. There are many reasons why shifting to a digital credential may be advantageous. Digital credentials are typically:

- More secure/private
- Easier to share/more interoperable (e.g., QR codes)
- Easier to save (and find when needed)
- Easier to ensure they are being issued and presented by the entity meant to issue and present them
- Less vulnerable to counterfeiting
- Less susceptible to modification, fraud<sup>5</sup>

**Authentication and Authorization:** Two components of the process worthy of more discussion are **Authentication** and **Authorization**. In the simplest terms, **Authentication** is the process of verifying whether someone is, in fact, who they declare to be. The National Institute of Standards and Technology (NIST) defines authentication as "verifying the identity of a user, process, or device, often as a prerequisite to allowing access to resources in an information system." **Authorization**, on the other hand, gives users permission to access a resource, such as an IIS record. Historically, IIS have had policy agreements with provider sites and, less commonly, with individual users working within these provider sites who are authorized users of their systems. These individuals are already authenticated by the provider sites employing them. They are also authorized to access the IIS. Individual consumers must be authenticated and authorized to access their records and/or the records of family members. In some cases, IIS conduct this authentication themselves through verifying matches across demographic data elements. In other cases, this authentication may be conducted by a third party. Local law or policy may also dictate whether consumers are authorized users within a jurisdiction.

# Select Successful Vaccine Credentialing/Consumer Access Efforts

There are a number of initiatives emerging to support vaccine credentials and access to them. This guide will explore a small subset of initiatives that may have particular relevance to the IIS community. This is <u>in no way</u> meant to be a comprehensive list of initiatives under way. These initiatives are also not mutually exclusive and may leverage each other and/or use overlapping methods or concepts.

<sup>&</sup>lt;sup>5</sup> Paraphrased from Dakota Gruener, ID2020, Medpage Today, accessed 5/6/2021: https://www.medpagetoday.com/podcasts/trackthevax/92303

<sup>&</sup>lt;sup>6</sup> NIST Glossary, accessed 2/14/2022: <a href="https://csrc.nist.gov/glossary/term/authentication">https://csrc.nist.gov/glossary/term/authentication</a>

<sup>&</sup>lt;sup>7</sup> NIST Glossary, accessed 2/14/2022: https://csrc.nist.gov/glossary/term/authorization

## The SMART Health Cards Framework and VCI

AIRA and the IIS community have come out in support of the SMART Health Cards Framework as an open source, non-proprietary standard for accessing vaccine credentials. AIRA's Standards and Interoperability Steering Committee recently approved the following statement of support for this framework:

- AIRA and its members strongly encourage Immunization Programs and Immunization Information Systems (IIS) to explore and, where allowed by local law and policy, adopt SMART Health Cards for providing consumer access to vaccination records.
- SMART Health Cards have been embraced by VCI™, a voluntary coalition of public and private organizations committed to empowering individuals' access to a trustworthy and verifiable copy of their vaccination records in digital or paper form using open, interoperable standards. VCI leads development and implementation of the SMART Health Cards Framework, a non-proprietary approach for accelerating access to immunization records. AIRA, as well as several member and partner organizations, have signed on as VCI partners, with the belief that IIS can and should play a significant role as issuers of digital or paper vaccine credentials, and that broader consumer access to immunization information supports health equity and empowers individuals to share their health information as they choose.
- This recommendation does not preclude or prohibit IIS from providing more than one model for access to immunization records, but rather encourages adoption of SMART Health Cards as one common method across IIS where possible.

VCI is a supporting entity that brings together a coalition of private and public organizations to support consumers' having access to their vaccination records. VCI has strong buy-in from the health and technology communities, involvement from government-adjacent organizations, and a well-developed structure for governance and participation. It leverages open, interoperable standards and uses the SMART Health Card Framework and specifications in its development. To ensure broad access and to avoid reinforcing health inequities, VCI is designed to provide records in either digital or paper form. Because the framework is built using open standards, there is no charge for using VCI-created standards or guidance. As these standards have matured, HL7 has assumed an ongoing governance role for both SMART Health Cards and the FHIR data models.

## Conceptual model of VCI

This diagram illustrates the simplified roles and information flows forming the basis of the VCI specification; this conceptual model can be found on the SMART Health Cards

<sup>&</sup>lt;sup>8</sup> VCI, accessed 5/4/2021: <a href="https://vci.org/">https://vci.org/</a>

<sup>&</sup>lt;sup>9</sup> SMART Health Card Framework, accessed 5/4/2021: https://smarthealth.cards/

Framework website and is adapted from the World Wide Web Consortium (W3C) Verifiable Credentials Specification.<sup>10</sup>



Graphic and concepts adapted from the SMART Health Cards Framework: <a href="https://smarthealth.cards/">https://smarthealth.cards/</a>

**Issuer:** An entity that generates verifiable credentials. An IIS can be considered the issuer in most cases. Other entities might be a lab, pharmacy, health care provider, EHR, or public health department. The issuer may authenticate the holder, or the holder may be authenticated by a separate party or proxy issuer.

**Holder:** A person who "holds" a (paper or digital) record. This record can be the person's own or that of an authorized person, like a child.

**Verifier:** An entity that applies its own rules to the event facts contained in the holder's record. Some example entities are airlines, countries, music venues, employers, and schools.

It is important to note that the holder's credential contains only the facts of the vaccination event(s). For instance, it will contain the dates and relevant details of two separate COVID-19 vaccinations; it will not contain outcomes such as "valid" or "series complete." Each verifier applies its own rules or logic to the facts on the credential. For example, an airline might apply one set of rules to a traveler heading to Europe and another set of rules to a traveler heading to Canada.

The SMART Health Cards model may also reference a common registry of users with appropriate conformance testing and associated "**trust framework**." This mediates the creation and verification of identifiers, keys, and other relevant data which might be required to use verifiable credentials. Examples include trusted databases, decentralized databases, government ID databases, and distributed ledgers.

<sup>&</sup>lt;sup>10</sup> Verifiable Credentials Data Model, accessed 5/5/2021: <a href="https://www.w3.org/TR/vc-data-model/">https://www.w3.org/TR/vc-data-model/</a>

As of February 2022, 16 IIS jurisdictions have implemented SMART Health Cards, and over 20 additional IIS were in the process of implementing the framework.

## WHO Smart Vaccination Certificate

Efforts by the World Health Organization (WHO) will likely have a global impact, given its reach and influence. WHO established a short-term SMART Vaccination Certificate Working Group, which focused on standards for a common architecture for a digital vaccination certificate. To this end, WHO released an Interim Guidance Document for developing a Smart Vaccination Certificate in March 2021. This effort supports both continuity of care as well as cross-border uses and is designed to be useful if and when COVID-19 vaccine is included in the updated version of International Health Regulations.

## The COVID-19 Credentials Initiative (CCI)

This initiative describes itself as an "open global community looking to deploy and/or help deploy privacy-preserving verifiable credential projects to mitigate the spread of COVID-19." It builds on the same verifiable credentials projects mentioned above. As of December 2020, it is also affiliated with Linux Foundation Public Health, which supports an open-standard-based open-source development approach to public health. What makes CCI distinctive is that it has a specific US-focused workgroup that is examining vaccine credential issues from that perspective. CCI does not appear to be defining any standards nor building any software but is a forum for developers and stakeholders to interact and exchange plans and ideas.

## The Good Health Pass Collaborative (GHPC)

Similar to CCI, the Good Health Pass Collaborative describes itself as "an open, inclusive, cross-sector initiative, bringing together leading companies and organizations from the technology, health, and travel sectors." The collaborative cites as guiding values the goals of restoring confidence, promoting equity, and fostering collaboration across its work. Most notably, GHPC collaborators are actively working on an extensive blueprint document that

<sup>&</sup>lt;sup>11</sup> WHO, accessed 5/4/2021: <a href="https://www.who.int/groups/smart-vaccination-certificate-working-group">https://www.who.int/groups/smart-vaccination-certificate-working-group</a>

<sup>&</sup>lt;sup>12</sup> WHO, accessed 5/20/2021: <a href="https://www.who.int/publications/m/item/interim-guidance-for-developing-a-smart-vaccination-certificate">https://www.who.int/publications/m/item/interim-guidance-for-developing-a-smart-vaccination-certificate</a>

<sup>&</sup>lt;sup>13</sup> WHO International Health Regulations, accessed 5/6/2021: <a href="https://www.who.int/health-topics/international-health-regulations#tab=tab\_1">https://www.who.int/health-topics/international-health-regulations#tab=tab\_1</a>

<sup>&</sup>lt;sup>14</sup> CCI, accessed 5/20/2021: <a href="https://www.covidcreds.org/">https://www.covidcreds.org/</a>

<sup>&</sup>lt;sup>15</sup> CCI Meeting Page, accessed 5/20/2021: <a href="https://docs.google.com/document/d/1">https://docs.google.com/document/d/1</a> 502-bt|2dQx172GHzGdATvar-S01XaWRBM0muNnNJI/edit

<sup>&</sup>lt;sup>16</sup> Good Health Pass, accessed 5/20/2021: https://www.goodhealthpass.org/

describes in detail the collaborative's understanding of the use case, architecture, and operation of vaccine credentials.

## Other global efforts

There are additional initiatives and projects being explored across the globe, and these efforts will continue to evolve. One such effort is the EU Digital COVID Certificate, <sup>17</sup> designed to facilitate safe, free movement of citizens in the European Union during the COVID-19 pandemic. According to the European Commission's website, the EU Digital COVID Certificates are issued and used in all EU Member States and Iceland, Norway and Liechtenstein, as well as Switzerland to help people travel freely between these different countries during the COVID-19 pandemic. The EU Digital COVID Certificate provides proof that a person has (1) been vaccinated against COVID-19, (2) received a negative test result, or (3) recovered from COVID-19.

## The Role of IIS

Public health is fundamentally a state and local responsibility; states are the principal government entity responsible for protecting the public's health in the United States. <sup>18</sup> IIS are governed by laws and policies at the state and/or jurisdictional level. As a result of the alignment of IIS with their local laws and policies, they may have inherent differences when compared to each other. However, IIS strive to function as a nationwide network of systems, and consistency of functions and standards is key to interoperability and data exchange. Although roles may vary, in the majority of cases, it is assumed that IIS will play a fairly narrow role as an "issuer" of vaccine credentials. This could mean enhancements to the IIS to authenticate the holder and/or the record requested and to issue a standards-compliant vaccine credential. However, with the development of new notions such as "proxy issuer," an IIS might never have to issue a standards-based vaccine credential but may have someone else access the IIS through existing query functionality and issue the credential on behalf of the IIS. For example, a proxy issuer may query IIS data and provide the credential "sanctioned" by the state in which the IIS operates.

In terms of how IIS will issue credentials, this will likely vary across jurisdictions, depending on how they provide access to their consumers and if they opt to conduct the authentication step. As mentioned above, IIS have typically worked with provider sites as their primary interface endpoint. It is a separate process to allow individual consumers direct access to the IIS. Individual consumers must be authenticated and authorized to access their records and/or the records of family members.

<sup>&</sup>lt;sup>17</sup> EU Digital COVID Certificate, accessed 5/27/2021: <a href="https://ec.europa.eu/info/policies/justice-and-fundamental-rights/eu-citizenship/movement-and-residence/eu-digital-covid-certificate-vaccinations-and-travel-restrictions-en">https://ec.europa.eu/info/policies/justice-and-fundamental-rights/eu-citizenship/movement-and-residence/eu-digital-covid-certificate-vaccinations-and-travel-restrictions-en</a>

<sup>&</sup>lt;sup>18</sup> Institute of Medicine Committee for the Study of the Future of Public Health, accessed 5/4/2021: https://www.ncbi.nlm.nih.gov/books/NBK218212/

In some cases, IIS will conduct this authentication themselves through verifying matches across demographic data elements. In other cases, this authentication may be conducted by a third party. Local law or policy may also dictate whether consumers are authorized users within a jurisdiction. For IIS, this may mean expanding the pool of those eligible to query their IIS from hundreds or thousands of provider sites to potentially millions of consumers within their jurisdiction. This could have implications across policy, operational, and technical aspects for IIS.

Several discussions have focused on what key data elements make up an official immunization record. Although there is no documented standard, some jurisdictions have articulated what constitutes proof of vaccination. The Oregon Health Authority published a bulletin<sup>19</sup> that stated that acceptable forms of proof of vaccination must include:

- Your vaccination card with your name, your date of birth, and date and location of vaccination
- A photo of your vaccination card, or
- Electronic record through a vaccination application on a smartphone, computer, or tablet

Other jurisdictions have noted that the Department of Health's seal or logo is necessary on official records to ensure they are acceptable to external users.

For more information on the role of IIS and vaccine credentials, HLN Consulting has published a number of blogs on this topic and related topics. These blogs are available on the HLN Consulting website.<sup>20</sup>

# Importance of health equity

When considering the IIS role in issuing vaccine credentials, it is critically important that programs consider accessibility and equal access to information. Can all of a jurisdiction's constituents access immunization records and/or immunization status through the means offered? Are records broadly available in urban and rural areas to populations with high and low socioeconomic status? Is the technology offered accessible to populations that may or may not have smartphones or broadband internet access (i.e., offered in both paper and digital methods)? Is the information offered in multiple languages? Is the presentation of the information culturally relevant?

In part because of the success of the Vaccines for Children program, immunizations have long been a positive example of health equity.<sup>21</sup> As the health information technology

https://content.govdelivery.com/accounts/ORDHS/bulletins/2e23dbd

<sup>&</sup>lt;sup>19</sup> Oregon Health Authority Coronavirus Update, accessed 6/9/2021:

<sup>&</sup>lt;sup>20</sup> HLN Consulting, accessed 5/24/2021: <a href="https://www.hln.com/vaccine-credentials-do-not-replace-full-vaccination-histories/">https://www.hln.com/vaccine-credentials-do-not-replace-full-vaccination-histories/</a>

<sup>&</sup>lt;sup>21</sup> National Institute for Children's Health Quality, accessed 5/21/2021: https://www.nichq.org/insight/what-health-equity-efforts-can-learn-immunization-initiatives

community implements consumer access and vaccine credential options, it will be essential to consider these questions of accessibility and equity.

## Scenarios

There are many different scenarios in which consumers need to access their records. Here are some examples, but note that this does not represent a comprehensive list:

- A patient loses card for dose one, needs to verify vaccination status for dose two.
- A student requires verification of vaccination status for school or university enrollment.
- An individual is planning for international travel.
- A potential new employee is applying for a position with an organization that requires proof of vaccination.
- A parent needs verification of their child's immunization status prior to school enrollment.
- An individual needs documentation to provide proof to a skilled nursing facility that their elderly mother is vaccinated.

While the players and context vary, most of these scenarios can be distilled down into the following actions:

- 1) The consumer requests credentials from issuer.
- 2) The consumer receives and holds their credentials.
- 3) The consumer presents their credentials to a verifier when needed.

The only exceptions above are the cases of the parent or adult child needing verification for their family members. In those cases, the verification process involved in requesting a credential needs to not only authenticate the requester but also confirm the requester's authorization to access the records or immunization status of family members.

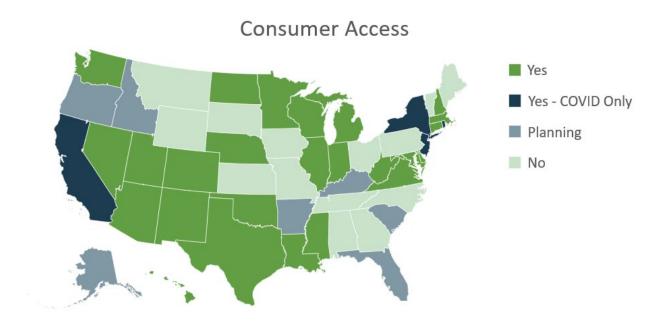
# IIS Implementations

Consumer access to vaccination records and status and/or vaccine credentialing is already available in several jurisdictions. AIRA has been working to gather information on the status of implementations across the IIS community. AIRA has been working with IIS managers on a landscape analysis to capture consumer access, SMART Health Card usage, and policy barriers preventing IIS from providing consumer access or SMART Health Cards.

The information below reflects data gathered as of February 1, 2022. AIRA recognizes that this information is changing rapidly and requests ongoing help from the community to ensure the information for each jurisdiction is up to date.

# Map 1: Does the IIS offer consumer access to immunization records?

Definition: Consumer Access: The process of offering individuals direct access to their own immunization records and, in some cases, their family members' immunization records



Not Pictured: Yes: DC, NYC

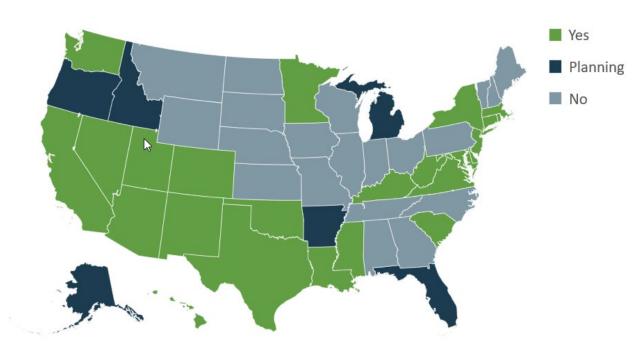
Planning: Philadelphia, CNMI, Puerto Rico

No: San Diego, American Samoa, Guam, Marshall Islands, Micronesia, Palau, USVI

Map 2: Does the immunization record retrieved by consumer access align with the SMART Health Cards Framework?

Definition: In this context, the SMART Health Card is an IIS-issued COVID-19 vaccine credential as specified by the SMART Health Cards specifications.<sup>22</sup> As it stands now, the standard includes only COVID-19 vaccinations.

# **SMART Health Card**



Not Pictured:

Yes: DC, American Samoa, CNMI, Guam, Marshall Islands, Micronesia, Palau

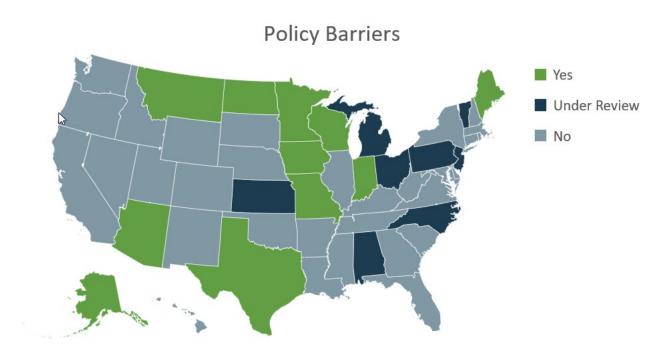
Planning: Philadelphia, Puerto Rico

No: NYC, San Diego, USVI

<sup>22</sup> SMART Health Cards Technical Specifications, accessed 2/14/2022: <a href="https://spec.smarthealth.cards/">https://spec.smarthealth.cards/</a>

Map 3: Does the jurisdiction have policy barriers preventing the IIS from providing consumer access or SMART Health Cards?

Definition: A policy barrier is a state or local policy or law preventing the IIS from issuing a vaccine credential and/or SMART Health Card.



Not Pictured:

No: DC, NYC, Philadelphia, San Diego, American Samoa, CNMI, Guam, Marshall Islands, Micronesia, Palau, Puerto Rico, USVI

# Considerations

Each IIS must consider its own unique context as it defines its role in vaccine credentialing. Below are some relevant concepts to think about during this process:

- There is a broad global effort under way to define and operationalize vaccine credentials, and it is not clear how much of it will affect domestic decisions on vaccine credentialing.
- The domestic vaccine credentialing effort is evolving rapidly, and there may be forthcoming guidance that renders some of the information here moot.
- Policies for each IIS and its jurisdiction vary and must be in harmony with any solutions implemented.
- Consider reaching out to IIS peers with similar policies and structures to learn how they are handling comparable challenges.
- Given that there will not be a national vaccine credential, it is likely that multiple vaccine credentialing systems will seek access to each IIS.

- No uniform guidance for vaccine credentialing standards may be forthcoming, so diversity of design and implementation will continue.
- Legislation about vaccine credentialing, consumer access, and other related issues is pending in many jurisdictions. It's important to map out how vaccine credentialing and IIS access may be impacted by forthcoming laws.
- Private organizations might not have a full working knowledge of HIPAA guidelines and IIS law and policy. Each IIS is advised to assess the legality of any vaccine credential system and the risk of unlawful access to its data—as well as what to do if that happens.
- If you are planning to modify your system to enable consumer access and/or generation of vaccine credentials, it is wise to get your program's tech team involved as soon as possible, along with your attorney general's office.
- Make a point to understand how proposed vaccine credentialing systems would work with your IIS through asking questions of the connecting entity. You know your IIS best; clarify (and, if necessary, question) assumptions made by others and speak up if something doesn't look right.
- Vaccine credentialing is a political hot potato. It's helpful to draft and share clear, consistent, apolitical messaging about what you choose to do.
- In the absence of clear federal directives, decisions about vaccine credentials are state-level decisions that cannot necessarily be compared across jurisdictions.

# Next Steps

AIRA will continue to refine this guidance moving forward. Additional versions will be sent out by email and shared across AIRA membership.

# Key References

World Health Organization (WHO) Smart Vaccination Certificate:

https://www.who.int/groups/smart-vaccination-certificate-working-group

WHO International Health Regulations: <a href="https://www.who.int/health-topics/international-health-regulations#tab=tab">https://www.who.int/health-topics/international-health-regulations#tab=tab</a> 1

VCI: <a href="https://vci.org/">https://vci.org/</a>

Smart Health Card Framework: <a href="https://smarthealth.cards/">https://smarthealth.cards/</a>

W3C Verifiable Credentials Data Model: <a href="https://www.w3.org/TR/vc-data-model/">https://www.w3.org/TR/vc-data-model/</a>

COVID-19 Credentials Initiative: <a href="https://www.covidcreds.org/">https://www.covidcreds.org/</a>

Good Health Pass Collaborative: <a href="https://www.goodhealthpass.org/">https://www.goodhealthpass.org/</a>

EU Digital COVID Certificate: <a href="https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate\_en?mc\_cid=7b73084a87&mc\_eid=302aff3c9b">https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate\_en?mc\_cid=7b73084a87&mc\_eid=302aff3c9b</a>

World Wide Web Consortium (W3C) Vaccination Certificate Vocabulary: <a href="https://w3c-ccg.github.io/vaccination-vocab/">https://w3c-ccg.github.io/vaccination-vocab/</a>

HLN.com blogs on vaccine credential efforts: <a href="https://www.hln.com/vaccine-credentials-do-not-replace-full-vaccination-histories/">https://www.hln.com/vaccine-credentials-do-not-replace-full-vaccination-histories/</a>

NYS Excelsior Pass: <a href="https://covid19vaccine.health.ny.gov/excelsior-pass">https://covid19vaccine.health.ny.gov/excelsior-pass</a>

LA Wallet: <a href="https://lawallet.com/">https://lawallet.com/</a>

My Vax Indiana: <a href="https://www.in.gov/isdh/17094.htm">https://www.in.gov/isdh/17094.htm</a>

Vaxview NM:

https://nmsiis.health.state.nm.us/webiznet nm public/Application/PublicPortal

Docket Care: https://docket.care/

North Dakota MyIR: <a href="https://www.health.nd.gov/immunize/immunization-record-request">https://www.health.nd.gov/immunize/immunization-record-request</a>

# Appendix A – Summary of Known Vendors Active in Consumer Access and/or Vaccine Credentialing

This information was collected from vendors themselves and is meant to inform IIS members who may be contacted by companies seeking to partner or enter into a business relationship. Information gathered is represented as accurately as possible. **Inclusion of any vendor or product does not imply endorsement or support from AIRA in any way**.

## Ardian Technologies

## **General Vendor Information**

- Name of Vendor: Ardian Technologies
- Website: <a href="https://ardiantechnologies.com/">https://ardiantechnologies.com/</a>
- Contact Information:
  - o Maria Shelton maria@ardiantechnologies.com

#### About the Product / Service

## What does the system/app/service do?

- The platform can intake any type of data from any type of resource and verify identity. It is typically used for secure identity verification and access management at large-event venues.
- Events set rules for sharing and who is allowed to enter a venue. These rules can set multilevel reporting and share options (e.g., a state can see all counties, but county A can see just its data).
- Ardian Technologies' platform can share data quickly and in an encrypted format. It uses the SMART Health Cards Framework.

#### • With whom are data shared?

 It depends on the client and with whom they want to share data. Under contract with and at the direction of national security agencies, Ardian Technologies will share, as required by the client, HIPAA and personal, identifiable, protected information, which is conveyed via a highly encrypted API. For example, for the 59th presidential inaugural, COVID test results were mutually exchanged with a contracted testing laboratory.

## • With what (if any) IIS is the product currently connected?

 Ardian Technologies is not yet connected to IIS. It is working on a proof of concept. It would like to have an API connection to IIS and receive a yes/no from the IIS on an individual's immunization status. It is anticipated that, under a recently awarded national security contract for major events, a value proposition will be made to connect to one or more IIS for verification purposes.

## What security standards/protocols are followed for transfer and storage of data?

- Notwithstanding MOUs between Ardian Technologies, clients, and vendors, the exchange and verification of information is crosswalked over Ardian's encrypted platform and APIs.
- o The customer/agency owns the data, not Ardian Technologies.
- The system uses NIST protocols and patented technology for end-to-end encryption with data in transit and at rest.

#### Describe the flow of data.

As a data hub, information can flow from various inputs and outputs. This
includes inputs from other data sources and devices as well as outputs to
mobile applications, native features such as reporting and dashboards, and
devices.

#### How is information validated?

 Whether it's via API or direct input to the system, information can be validated based on programmed business rules, standard data validation tools, and/or third-party identity verification tools.

## AZOVA

## **General Vendor Information**

Name of Vendor: AZOVA

• Website: <a href="https://www.azova.com/">https://www.azova.com/</a>

• Contact Information:

Cheryl Lee Eberting, MD – <u>cheryllee@azova.com</u>

#### About the Product / Service

## • What does the system/app/service do?

- o AZOVA provides a service for any immunization provider or for any IIS to issue a SMART Health Card and an electronic human-readable vaccination record. AZOVA is a personal health record within a fully connected digital health system. Vaxigo is the electronic vaccination record and connected immunization provider network module on AZOVA. It enables a consumer to go to an IIS and request a complete electronic vaccination record and SMART Health Card and to find a vaccination provider, schedule an appointment, and receive the vaccination and an electronically validated version of the record with an accompanying SMART Health Card. Any IIS can use AZOVA as its SMART Health Card service and gain the added benefits of issuing a SMART Health Card within a connected digital health ecosystem. AZOVA enables consumers to query their complete vaccination record from any connected IIS that supports QBP through AZOVA. This service combines immunization records from different sources into a real-time, consolidated, and shareable digital record.
- AZOVA has a direct-to-consumer platform for COVID-19 testing and vaccination record management for large employers, including Walmart, Delta Air Lines, and Konica Minolta; health departments; schools; and the travel industry, with accounts including many global airlines, the state of Hawaii, Cayman Islands, Aruba, and more. The employer platform invites the employee to join, and employees create a record on AZOVA and consent to share their vaccination and testing data with the employer.
- o Vaxigo meets SMART Health Card specifications.
- AZOVA has worked with CDC to connect to the IZ Gateway and is able to connect directly to your IIS or to connect through the IZ Gateway.

#### With whom are data shared?

- The patient controls with which health care professional, pharmacist, schools, employers, family members, or friends their information is shared and what level of data is shared: a full record or record status only.
- With what (if any) IIS is the product currently connected?

- AZOVA is connected with the following IIS for immunization query and reporting: Utah, Arizona, Florida, New York City. It has also had conversations with New Jersey and California for QBP or VXU.
- AZOVA would like to enable QBP with every IIS to enable consumers to query their vaccination records from any jurisdiction simultaneously.
- AZOVA has bidirectional connections with pharmacy chains that use AZOVA for vaccine management. It is choosing not to piggyback off these pharmacy connections to conduct queries for VAXIGO. It would like to follow the proper channels, create appropriate data use agreements, and be connected to each individual IIS.
- AZOVA is integrated with the state of Hawaii through AZOVA's data-free sharing API, called Credential. Credential enables consumers to share their vaccination status without sharing vaccination data with the state of Hawaii or with any entity that uses the AZOVA Credential API.
- Describe the flow of data.
  - Anyone can create an electronic record on the app and share it with any organization for free. If an employer, school, or IIS uses AZOVA to provide access to a validated vaccination record, it is no cost to the consumer. AZOVA charges a \$25 fee to get a vaccination record source verified and aggregated when a consumer accesses the service without their employer or IIS. This service is available in Utah. AZOVA also offers a human plus Al augmented confirmation service of vaccination records without source verification for \$10. All vaccination records include a QR code. The source-verified and human-confirmed records support the SMART Health Card specification.
- How is information validated?
  - AZOVA confirms identity using human plus augmented artificial intelligence (comparing photo ID with demographics the patient has shared). Staff validates information that is not verified by 100% match with artificial intelligence. Identity verification is separate from vaccine validation. Staff may call the provider to verify vaccination if outside of Utah. AZOVA uses first name, last name, date of birth, gender, and address for matching.

#### Docket

## **General Vendor Information**

• Name of Vendor: Docket Health, Inc.

• Website: <a href="https://docket.care">https://docket.care</a>

• Contact Information:

o Michael Perretta – michael.perretta@dockethealth.com

#### About the Product / Service

## • What does the system/app/service do?

- O Docket is a free multilingual mobile app available for download on iOS and Android. The platform supports consumer access to personal and family immunization records from IIS via IZ Gateway, which (a) simplifies integration with IIS and (b) supports the option to enable multijurisdictional exchange. Docket queries IIS asynchronously, ensuring stability for IIS during times of peak traffic. Users of Docket receive alerts for upcoming and overdue shots, easy-to-access/share PDF immunization records (supplied via HL7 directly from the state or rendered within Docket), and SMART Health Card QR codes for COVID-19 (depending on each state's policies).
- Docket capabilities include:
  - Face ID, touch ID, and Android biometric login for added security
  - Simple immunization record PDFs for back-to-school season
  - Apple and Google sign-in for convenience

#### With whom are data shared?

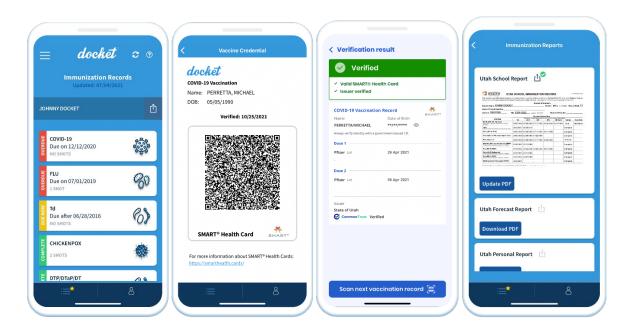
 Consumers use Docket to search their immunization records. Docket relays queries to IIS via CDC's IZ Gateway.

#### Describe the flow of data.

- Docket queries IIS through the CDC's IZ Gateway. However, Docket also supports direct-to-IIS queries as needed.
- Docket does not currently allow for self-attestation. Users cannot report their own immunization records using this service. Team Docket works directly with health departments to implement (or educate consumers on) each state's preferred process for consumers to request updates to their immunization record(s) on file with IIS.
  - Similarly, Docket tailors NO\_MATCH and MULTI\_MATCH workflows based on each state's capabilities and policies.
  - Event-based content informs Docket users how to troubleshoot their records on file with IIS.
  - Optionally, Utah residents can request a PIN from their health care providers for one-time user authentication.

#### • How is information validated?

 Docket relies on basic information from users to search their immunization records: first name, last name, DOB, and legal sex. Docket always requires multifactor authentication to search personal and/or family immunization records. Users maintain their verified cell phone numbers easily within the Docket account, which simplifies the user authentication process overall.



#### Envision

## **General Vendor Information**

Name of Vendor: EnvisionName of Product: WebIZ

• Contact Information:

Kevin Snow – ksnow@envisiontechnology.com

Jim Holsinger – <u>jholsinger@envisiontechnology.com</u>

#### About the Product / Service

## What does the system/app/service do?

 The Envision system creates a COVID-19 vaccination record that mimics the CDC's paper card and shows only COVID-19 vaccinations. Jurisdictions have the option of adding a QR code to the vaccination record.

RT674F			(PROLD)
		10/05/2021	PARENT RECOR (PROLD)
1∧RT®	Digital COVI	D-19 Vaccination Rec	ord
	This SMART Health Card is a (https://smarthealth.cards/)	Digital COVID-19 Vaccin	nation Record
	Downloaded/Printed on 10/15.	/2021 at 12:04:26PM	
		alter, amend or remove	
	COVID-19 mRNA (PFR)	TBSGH4  TBSGH4  TBSGH4  TBISGHA  TBISGHAT Health Card is a (https://smarthealth.cards).  Keep a copy or share this with scan the 2D barcode (QR cod)  Downloaded/Printed on 10/15	COVID-19 mRNA (PFR) 1005/2021 T85GH4

#### With whom are data shared?

- The QR code can be turned on or off per IIS jurisdiction. Clients have two access options:
  - Application: Only users with access to the application can print out the record (e.g., providers only, not consumers/public).
  - Consumer Portal: Jurisdictions with the consumer access portal can provide consumers with access to the same PDF with a QR code.
    - To access vaccination data, two-factor authentication is required.

#### • Describe the flow of data.

 When WebIZ's COVID-19 vaccination record is created, the IIS is queried to obtain a patient's COVID-19 vaccinations. The vaccinations are displayed on the record, and the data are sent to a central API, maintained by Envision, that creates the SMART Health Card that is included on the record.

#### • How is information validated?

 Verifier apps are third-party applications that display key vaccination information for the patient and/or apply rules to provide a validation status based on the patient's data.

- o SMART Health Cards are validated via verifier apps that:
  - Verify that the SMART Health Card is valid and was not tampered with
  - Confirms it was issued by an authorized issuer that is included in the Verifiable Clinical Information (VCI) Directory

## Epic MyChart Patient Portal

## **General Vendor Information**

• Name of Vendor: Epic

• Name of Product: MyChart

• Website: <a href="https://www.mychart.com/">https://www.mychart.com/</a>

• Contact Information:

o Janet Campbell – <u>janet@epic.com</u>

#### About the Product / Service

## What does the system/app/service do?

- Epic's EHR supports automated submission of administered immunizations to IIS, query triggered by providers, and, increasingly, automated or batch query for upcoming patient visits.
- Patients accessing a clinic using the Epic EHR have the option of using the MyChart Patient Portal to access the immunization record that the organization has on file as part of their EHR.
- Patients viewing their record in MyChart can also generate a SMART Health Card representing the vaccination data that the system has on file for them (data that is documented locally or retrieved and reconciled from the IIS).

#### • Describe the flow of data.

- Providers are encouraged to print immunization records for their patients and/or ensure current immunizations are displayed through MyChart.
   However, if the provider has had no reason to query the IIS, a patient's clinical record might not be current/complete.
- A patient can trigger a query from within MyChart to a jurisdiction's IIS; this
  query is identical to a provider-triggered query.
  - If the data returned on the patient from the IIS meets a high-threshold match and automated data quality checks, the data are automatically reconciled into the patient's clinical record in their EHR and into their MyChart Patient Portal.
  - If data are returned based on a non-high-threshold match, the patient is asked to validate the information.
  - If no match is found, the patient must wait at least eight hours before triggering another query to the IIS, which should avoid potential volume issues from repeat EHR-IIS queries. If a record is not found, the patient has the option to upload their record and have it verified by someone at the clinic. Patient-provided information doesn't trigger a submission to the IIS.

- Optionally, the organization may accept patient-supplied vaccination information (including a picture of the immunization card). If reconciled into the record, this information does not update the IIS.
- Patient-driven IIS queries allow organizations to have more complete patient data without relying on batch queries.

## • With what (if any) IIS is the product currently connected?

- Organizations using Epic's EHR have connected to 55 IIS in all states except New Hampshire (implementing).
- o Organizations that issue SMART Health Cards in MyChart can be found at <a href="https://www.mychart.com/covid">https://www.mychart.com/covid</a>.
- States without credential-creating abilities can redirect requesters to their health care organization to get them, even if the vaccination was not performed locally by the health care organization.

#### Healthvana

#### **General Vendor Information**

Name of Vendor: HealthvanaWebsite: https://healthvana.com/

Contact information:

o Gabriella Palmeri – gabriella.palmeri@healthvana.com

#### About the Product / Service

## What does the system/app/service do?

 Healthvana is a HIPAA-secure, mobile-friendly patient platform that is used by health care providers to manage data and communicate with their populations. It delivers actionable information to patients, including test results, vaccination records, and messaging, and supports providers with treatment adherence. More information can be found in this <u>NACCHO</u> presentation.

#### With whom are data shared?

 Data are shared directly with patients (patient records under 13 years of age are provided to the patient parent/guardian) digitally, with the option to add records to their mobile wallet.

## With what (if any) IIS is the product currently connected?

 Healthvana is connected to the Los Angeles Department of Public Health; it receives data from CAIR2 through Los Angeles County and makes it available to LA County residents.

#### Describe the flow of data.

- The system can receive data using HL7 or CSV files, depending on how the customer (e.g., LA County) wants to send data.
- Los Angeles Department of Public Health pulls all the data for its patients from CAIR2 and cleanses the data (i.e., pulls LA County residents out of the state system). LA County sends the data to Healthvana, which performs additional data cleansing (i.e., checking for "realness," duplicates).
- Patients receive a text message/email letting them know their digital vaccination record is ready to be viewed. Patients confirm their identity and have access to their records on their mobile web or in their mobile wallet.
- Patients who receive their second dose at a different location from their first dose can self-attest and upload a picture to complete their digital vaccination record.

#### How is information validated?

In the Los Angeles example, information checks are done by CAIR2, Los Angeles Department of Public Health, and Healthvana. Patients receive a text/email to access their digital vaccination record and must provide their last name, first name, and date of birth to validate their identity.

## IBM Digital Health Pass

## **General Vendor Information**

Name of Vendor: IBM

• Website: <a href="https://www.ibm.com/products/digital-health-pass">https://www.ibm.com/products/digital-health-pass</a>

• Contact Information:

o Sunaina Menawat - <u>Sunaina.Menawat@ibm.com</u>

#### About the Product / Service

## What does the system/app/service do?

- Digital Health Pass was under development back in 2019 for other purposes and can be used for anything (e.g., driver's licenses, etc.). It is a digital QR code and works like a digital boarding pass for an airline. It is a verifiable digital record that can be stored on an electronic device or printed.
- The QR code issued for immunizations uses the SMART Health Card methodology and is VCI compliant.

#### With whom are data shared?

 Data are shared with only the patient/resident. IBM does not store or share any data. Once the QR code is created on the person's device, IBM discards the information.

## With what (if any) IIS is the product currently connected?

 New York state (Excelsior Pass Plus) and some states that use Gainwell Technologies for their IIS vendor.

#### Describe the flow of data.

 New York put both COVID-19 testing and COVID-19 vaccination data in a data lake. IBM Digital Health Pass queries the data lake to verify the end user's identity and creates the QR code. New York has data-share agreements with New Jersey and Vermont. IBM can query the Vermont and New Jersey IIS after the New York data lake.

#### How is information validated?

o IBM uses configurable challenge questions based on the state's preferences. States choose variables with the highest confidence in data completeness and quality. The patient/resident does not need to answer every question correctly. The state sets the threshold, e.g., five out of seven questions, etc. New York has a greater than 90% match rate.

There is a help desk the patient/resident can call if no match is found.



## MyIR

#### **General Vendor Information**

- Name of Vendor: STChealth
- Name of Product: MyIR
- Website: https://stchealth.com/2020/04/24/myirnocost/
- Contact information:
  - o Tiffany Dent <u>tiffany dent@stchome.com</u>
  - Sarah McKee sarah mckee@stchome.com

#### About the Product / Service

## What does the system/app/service do?

 MyIR is a consumer access network that connects consumers/end users in 10+ states to their official immunization record.

#### With whom are data shared?

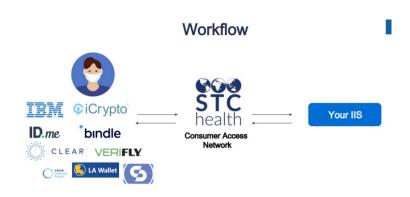
 Data are shared with consumers/end users. In MyIR, consumers explicitly consent to share their verified vaccine information with third-party entities like Bindle and CLEAR, etc.

## With what (if any) IIS is the product currently connected?

- The primary connection to IIS is through the STChealth Consumer Access Network.
- STC authorizes new technology partners to connect to the STChealth Consumer Access Network via an API connection.
- STC helps monitor traffic load and response times of IIS.

#### • Describe the flow of data.

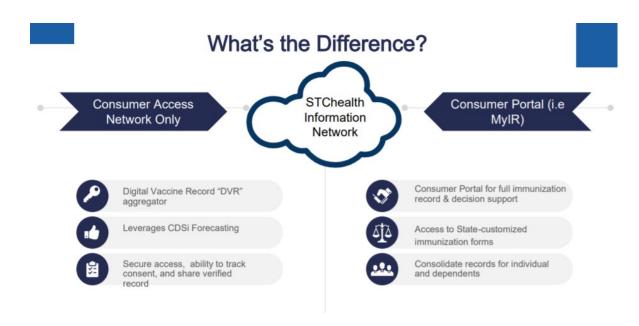
- o The data flow is one-directional and by query only.
- There are not submissions of any corrected data back into the IIS. Without this feature, the individual could be at risk of always returning bad data.
- Patients/consumers cannot add their own information into the product.
- Information is validated using the same matching algorithm that MyIR has been using.



# **STC Consumer Access Network**



- Initiate | Reach out to STC Client Partner group clientpartners@stchome.com
- 2. Agree | Execute MOU "Memorandum of Understanding" w/STC
- Connect | STC configures connection to IIS using the same format we use to report vaccines today (no technical changes needed) <u>TIME FRAME: approx</u> 48hrs
- 4. Test | STC performs Connection, Query, and Match Testing <u>TIME FRAME:</u> approx 48hrs
- 5. Go Live! | Get back to business!



## Multi-State Partnership for Prevention (MSSP) – CRAccess

## **General Vendor Information**

- Name of Vendor: Multi-State Partnership for Prevention
- Website: <a href="https://multistatep4p.com/">https://multistatep4p.com/</a>
- Contact Information:
  - o Dianna Quidera <u>dianna.quidera@multistatep4p.com</u>

#### About the Product / Service

## What does the system/app/service do?

- o Provides a full immunization record from data in state IIS
- o Provides COVID-19 vaccination status in SMART Health Card QR format
- o Provides ability to share records and create groups
- Provides ability to manage any dependents under age 18 under same account

#### With whom are data shared?

- The full immunization record is provided for the purpose of knowing what vaccines the user has received.
- A SMART Health Card QR code is provided for the purpose of being able to provide proof of COVID-19 vaccination status.
- Sharing of individual vaccination records with others is provided for the purpose of being able to provide proof of vaccination to an employer, family member, etc.
- The system allows a user to share information with an employer, family member (e.g. parent/guardian, spouse), and others.

#### Describe the flow of data.

- Our system only queries the IIS and does not submit data to the IIS.
   CRAccess does not store or submit data. It only retrieves data and queries the IIS through PMGateway via HTTPS. These requests must have a token.
   CRAccess also needs a valid patient token to fetch a patient's vaccination records.
- We have a primary connection to each IIS in the states we partner with.
- o Patients cannot add their own information. They would have to contact the provider that administered that vaccination.

#### • How is information validated?

o Information is validated by IIS and providers. The system does a simple guery and displays information from the IIS.

#### OneRecord

## **General Vendor Information**

- Name of Vendor: OneRecord
- Website: <a href="https://onerecord.com/">https://onerecord.com/</a>
- Contact Information:
  - o Jennifer Blumenthal <u>jennifer@onerecord.com</u>
  - o Janete Perez <u>janete@onerecord.com</u>

#### About the Product / Service

## What does the system/app/service do?

- OneRecord is a digital health care company that empowers consumers to collect, aggregate, and share their health care data.
- Consumers create a profile and connect their health records to the profile.
   They can keep profiles for all their family members.

#### With whom are data shared?

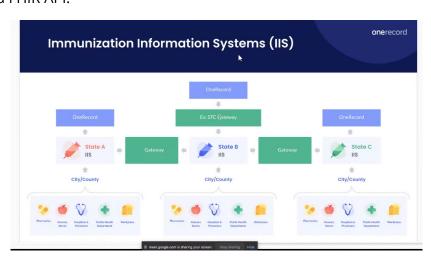
Consumers pull in their own data or family members' data. To do this,
 OneRecord must be connected to a consumer's health care provider.

## With what (if any) IIS is the product currently connected?

- OneRecord is connected to provider EHRs currently (including the top 10 EHR vendors like Epic, Cerner, and Meditech). It will soon to be connected to STChealth. Its preference would be to connect directly with the IIS.
  - In the future, a consumer would go through OneRecord then sign into MylR using username and password. If the consumer does not have a current account, they can register through MylR app at that time.
- o OneRecord connects via FHIR API.

#### • Describe the flow of data.

- A consumer queries records via an identity proofing partner.
- Consumers use their existing patient portal credentials to access their record.



## SentryMD

## **General Vendor Information**

- Name of Vendor: Sentry MD
- Website: <a href="https://www.sentrymd.com/">https://www.sentrymd.com/</a>
- Contact Information:
  - o Jack Esselen <u>jack.esselen@sentrymd.com</u>
  - o Taryn Schnitz <u>taryn.schnitz@sentrymd.com</u>

#### About the Product / Service

## What does the system/app/service do?

- Sentry MD started as a service for employees and students (members) to help them meet all their vaccination requirements. The purpose of the service is to eliminate the burden of processing member health forms and tracking compliance through three primary ways:
  - Receive, store, and track member health and immunization records in accordance with an organization's requirements
  - Verify all member-submitted health and certification records, process this information, and provide compliance status through an inquiry or on-demand reporting system
  - Assist members with maintaining compliance with reminder notices
- The system forecasts immunizations due and can store/track a declination form.
- Institutional administrators have access to this information 24/7 and can also provide clinical sites access if required. All administrators have a secure individual login to member data and image systems.

#### • With whom are data shared?

 Immunization history for meeting employer or university vaccination requirements is shared only with the member and authorized administrators.

#### With what (if any) IIS is the product currently connected?

o Sentry MD would like to partner with IIS but has not yet connected with any.

## • Describe the flow of data.

- Sentry MD provides a packet, approved by the client, to the member. The
  member completes the packet and submits it. The members have a secure
  portal for submitting documents which is smartphone compatible. The
  system has an admin section for each client's authorized administrators to
  look at their population's data. Sentry MD integrates with the client's system
  (likely their HR system).
- Data are validated by health record professionals, including nurses, on the Sentry MD system before it becomes visible to the client.

#### How is information validated?

All submissions are reviewed, validated, and entered into the Sentry MD system by health record professionals. The system is rules based whereby all data entered are validated according to the rules that apply to each immunization, test, or health requirement. For example, separate rules are applied for TB, COVID-19, hepatitis B, CPR, influenza, etc., including dosage and timing. The same rules are applied to data that are received electronically. Any data not meeting the rule criteria will be marked.

## **VAXSYS System**

## **General Vendor Information**

- Name of Vendor: VAXSYS Technologies, Inc.
- Website: <a href="https://www.vaxsystechnologies.com/">https://www.vaxsystechnologies.com/</a>
- Contact Information:
  - o Moshe Meppen Moshe Meppen@vaxsys.com

#### About the Product / Service

## What does the system/app/service do?

- VAXSYS System captures verified vaccination information directly from a health system's EHR database and prints a durable, physical card containing a VCI Standard compliant QR code to be used for vaccination verification by any patient of any age. Its target market is the 20% of the population that either does not have a phone or cannot afford a data plan for a smartphone.
- Its customers are clinics or hospitals where patients receive immunizations.
- Its software uses a Zebra handheld computer to pull patient ID information from a driver's license and the FHIR HL7 protocols to send and receive verified vaccination data from an EHR or IIS. The vaccination data are rendered as a VCI-compliant QR code and are then instantly sent to an on-site mobile Zebra card printer and purged.

## With whom are data shared?

- Patients elect to receive a physical card from their provider and affirm on the handheld device.
- Data are not stored by the vendor, on or off the Zebra handheld computer.

## • Describe the flow of data.

A real-time search to the EHR or IIS occurs via FHIR HL7 protocol.

## How is information validated?

 Information on the card can be verified by any VCI card-reading app, available for free on Android or iOS devices.

## WellUp

## **General Vendor Information**

- Name of Vendor: WellUp Health Wallet
- Website: <a href="https://www.wellup.live/">https://www.wellup.live/</a>
- Contact Information:
  - o Sumedha Mongia <u>smongia@wellup.live</u>

#### About the Product / Service

## What does the system/app/service do?

- Founder Sumedha Mongia is a pediatrician trying to respond to the challenges of getting health information to and from schools based on the difficulties she has experienced personally as a parent.
- o WellUp is a personal health data room for students and parents.

## • Describe the flow of data.

- The patient-centered platform uses anonymized data for its own analytic purposes, but parents have control of their children's' identified data. It uses immunization data and vaccine credentials via a secure portal where data are encrypted. Algorithms analyze immunization records to ensure they are complete.
- WellUp cannot provide a verified digital health credential at this time but hopes to be connected to IIS and EHRs at a future date. If possible, it wants to provide a verified health credential at that time.

#### With whom are data shared?

- o The platform offers only parent/patient mediated access to data.
- o WellUp is not planning to allow physician-to-school or IIS-to-school access.