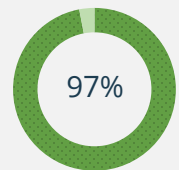
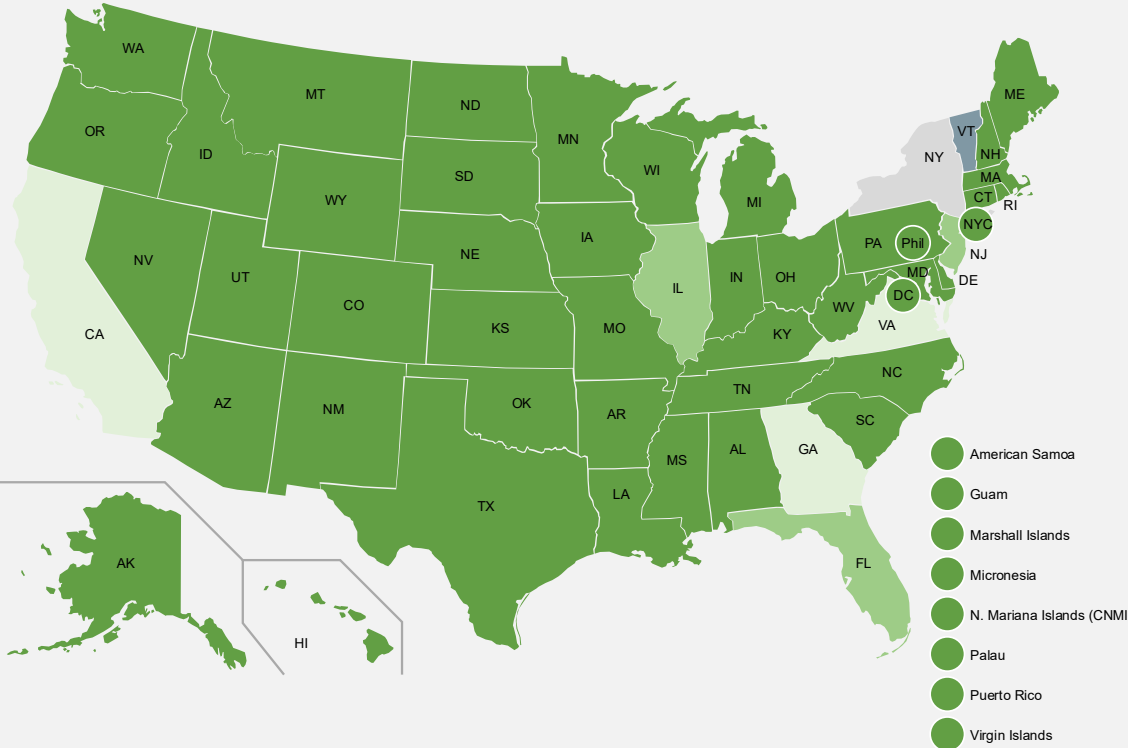
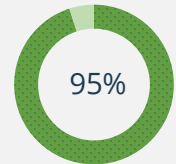


TRANSPORT VALIDATION Complete Level

2025



59 of 61 (97%) IIS had a CDC WSDL available and were measured.



56 of 59 (95%) connected IIS were Validated or Validated with Minor Differences at the complete level for Transport.

The American Immunization Registry Association (AIRA) launched its community-driven immunization information system (IIS) Measurement and Improvement (M&I) Initiative in mid-2015, with the dual goals of providing IIS with information to align with IIS Functional Standards and developing a summary of IIS community alignment progress with best practices and standards. This report contains the results of IIS that have been measured within Validation, the final stage of the M&I process.

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Introduction

Overview: The measurement process for Transport uses the [National Institute of Standards and Technology \(NIST\) Immunization Test Suite Validation Tool](#). This tool provides consistent conformance-based results for all measured IIS. In addition, the technical requirements for data transport are documented in the [HL7 Version 2.5.1: Implementation Guide for Immunization Messaging, Release 1.5](#) and [addendum](#). This is referred to as the National IG.

Interoperability is a core function for IIS. Although there are many aspects to interoperability, message transport, or how messages get from system A to system B, it is an important building block for standardized data exchange. In 2011, the Centers for Disease Control and Prevention (CDC) convened an Electronic Health Record (EHR)-IIS Interoperability Expert Panel that recommended SOAP (Simple Object Access Protocol) Web Services as the [IIS Transport standard](#), and CDC developed a common Web Services Definition Language ([WSDL](#)) to facilitate and enable easier IIS and EHR adoption.

Background: Transport moved into the [Measurement and Improvement \(M&I\)](#) stage of Validation in 2018. Validation testing occurs in the first quarter of each calendar year. Transport Validation Summary reports are updated twice a year, and an IIS can achieve either Basic or Complete Validation during either half of the year. Once achieved, Validation is considered active for the calendar year. This report contains the Complete Validation results from Quarter 1, 2025 (January through March).

Measures: Measurement for Assessment and Certification Workgroup ([MACAW](#)), the advisory body for M&I, approved measures and tests for Transport Validation in December 2017. The detailed measures and tests document is located on the [AIRA repository](#). Measures and tests are based on the [IIS Functional Standards v5.0](#). Transport measures and tests are specifically based on the following:

- **Functional Standard C5.0:** Manage interfaces for exchange and integration of data electronically between the IIS and other information systems in accordance with federal and jurisdictional standards.
- **Guidance Statement C5.1:** The IIS exchanges data in accordance with current interoperability standards endorsed by CDC for message content, format, and transport.

Testing Method: [AART](#) sends HL7 messages to IIS pre-production systems to test connectivity using SOAP XML. The IIS SOAP XML response is validated using the [NIST HL7v2](#)

[Immunization Test Suite \(2015 Edition\)](#). This tool provides consistent conformance-based results for all measured IIS.

Results: This report provides results for the **complete** level of Transport Validation; results for the **basic** level can be found [here](#). Summary information is presented for all measured IIS; individual results are available to authorized users in [AART](#). IIS can achieve the following **complete** level statuses for Transport:

- **Validated:** The IIS meets Measure 1 (Connectivity Test), Measure 2 (Submit Single Message), and Measure 3 (Security Fault Support).
- **Validated with Minor Differences:** The IIS meets Measure 1 (connectivity test) and Measure 2 (submit single message) and Deviates in Measure 3 (security fault).
- **Major Differences:** The IIS fails to meet the requirements for one of the above measures.
- **Not Measured:** The IIS was not able to be tested at this time.
- **Opted Out:** The IIS has chosen not to be measured.

Results

Below are the results for the complete level of Transport Validation from Quarter 1, 2025. Unless an IIS declares otherwise, the functionality tested in preproduction is presumed to be available to end users in production.

The 61¹ IIS participating² in AIRA's M&I Initiative were encouraged to be formally measured in Transport Validation. Of the 61 IIS, **59 (97%)** had a CDC WSDL available and were measured. Of those 59 IIS connected and measured, **56 (95%)** were **Validated or Validated with Minor Differences** at the **complete** level for Transport. Another three IIS were measured but displayed major differences from the standard. Additionally, one IIS was not able to be measured at this time, while one opted not to be measured in Transport Validation.

Below are the results for the complete level of Transport Validation from Quarter 1, 2025 in tabular form.

¹ Note that the denominator for M&I participation decreased from 62 to 61 in Q2 2022, due to San Diego IIS's merge with California's state IIS.

² Includes all 50 states, American Samoa, the Commonwealth of the Northern Mariana Islands, the District of Columbia, the Federated States of Micronesia, Guam, New York City, Philadelphia, Puerto Rico, the Republic of the Marshall Islands, the Republic of Palau, and the Virgin Islands.

Table: Transport Validation, complete level Quarter 1, 2025

Validation Status and Definition	IIS
<p>Validated: The IIS meets Measure 1 (connectivity test), Measure 2 (submit single message), and Measure 3 (security fault).</p>	<p>Alabama, Alaska, American Samoa, Arizona, Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Guam, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Marshall Islands, Maryland, Massachusetts, Michigan, Micronesia, Minnesota, Mississippi, Missouri, Montana, N. Mariana Islands, Nebraska, Nevada, New Hampshire, New Mexico, New York City, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Palau, Pennsylvania, Philadelphia, Puerto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, US Virgin Islands, Utah, Washington, West Virginia, Wisconsin, Wyoming</p>
<p>Validated with Minor Differences: The IIS meets Measure 1 (connectivity test) and Measure 2 (submit single message) and Deviates in Measure 3 (security fault).</p>	<p>Florida, Illinois, New Jersey</p>
<p>Major Differences: The IIS fails to meet the requirements for Validated or Validated with Minor Differences.</p>	<p>California, Georgia, Virginia</p>
<p>Not Measured: The IIS was not able to be tested at this time.</p>	<p>Vermont</p>
<p>Opted Out: The IIS has chosen not to be measured.</p>	<p>New York (State)</p>

Conclusion

The IIS community continues to work towards full conformance with the IIS Functional Standards, with ongoing efforts to enhance functionality and align with community-driven standards. While results may vary due to evolving recommendations, standards updates,

or differences in system implementation, the long-term trend is expected to show steady progress toward greater alignment across the IIS community.

Published Validation reports provide transparency into this progress, offering insights into how IIS are advancing toward meeting these shared standards. AIRA staff are available to provide technical assistance to IIS programs and vendors as needed.

For more information on the Measurement and Improvement (M&I) Initiative, please visit AIRA's [website](#). Questions and comments can be submitted via AIRA's [Technical Assistance Request form](#).

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Appendix A: Glossary of Terms and Acronyms

AART: The Aggregate Analysis Reporting Tool, an application used to display and share results from the Measurement and Improvement process.

Assessment Stage: A more formal testing step to measure IIS using IIS community-selected measures and tests, to share those results for quality improvement, and to provide technical assistance to accelerate improvement. This is the second of three stages.

Basic Level: A level of Validation measurement that includes only essential measures to functionally meet this content area.

Complete Level: A level of Validation measurement that includes conformance to all measures approved for Validation.

Content Area: A category for measuring IIS functionality and capability within a specific functional area, made up of distinct measures and tests. Measures and tests will become more formalized as they progress into different stages.

MACAW: Measurement for Assessment and Certification Advisory Workgroup.

Major Differences Status: The IIS cannot support the measures because of additional requirements that conflict with the national standard; the IIS must make significant changes in one or more measures to align with standards.

Measure: A metric developed to measure how well an IIS aligns with IIS Functional Standards/operational guidance statements or another recognized standard.

Stage: A distinct period of testing in the Measurement and Improvement process.

Testing and Discovery Stage: A step in testing IIS to gather preliminary and general information on community alignment with standards. Testing and Discovery is the first of all the stages.

Validated Status: The IIS has achieved full alignment with community-selected measures.

Validated with Minor Differences Status: The IIS has achieved full alignment with community-selected measures except for differences that (1) are allowed by the standard (e.g., constraints) or (2) are meeting requirements of local policy/law that do not conflict with standard requirements.

Validation Stage: A summary step to acknowledge IIS that are progressing toward or achieving alignment with community-selected measures and tests. A Validation designation is automatically achieved when an IIS meets the designated measures and tests in a specific content area (e.g., Transport, Submission/Acknowledgment, Query/Response, etc.).

Appendix B: Measures/Methods – Additional Information

The **complete** level of Transport Validation contains three measures:

1. The IIS supports the connectivity test operation as defined in the SOAP Standard Interface 1.2 specification, Web Services Description Language (WSDL), as endorsed by CDC.
2. The IIS supports the submit single message operation as defined in the SOAP Standard Interface 1.2 specification, Web Services Description Language (WSDL), as endorsed by CDC.
3. The IIS supports the security fault as defined in the SOAP Standard Interface 1.2 specification, Web Services Description Language (WSDL), as endorsed by CDC.