IIS Provider Onboarding Shared Services

AIRA Discovery Session
December 2018

Using Poll Everywhere

Interactive Audience Participation

Your participation in today's discussion is encouraged. We will be using Poll Everywhere to capture your anonymous feedback.

How do I participate?
1. From a computer or mobile browser, access: https://pollev.com/bstratton.
2. When a poll is displayed, submit your response(s) to the question.
3. We will solicit volunteers to discuss responses to poll questions.

To respond, from a computer or mobile browser, access:
https://pollev.com/bstratton

Poll Everywhere

Live Polling Question Preview

- **For Each Service:**

  – How likely are you to use this service?

  – How likely are your stakeholders (provider offices, EHR vendors, other stakeholders) to use the service?

  – How do you see yourselves or others benefiting from the service?

  – What do you like most about this service?

  – How could this service be improved?

  – How difficult would this be to implement in your jurisdiction?

  – What would make it easier to implement?

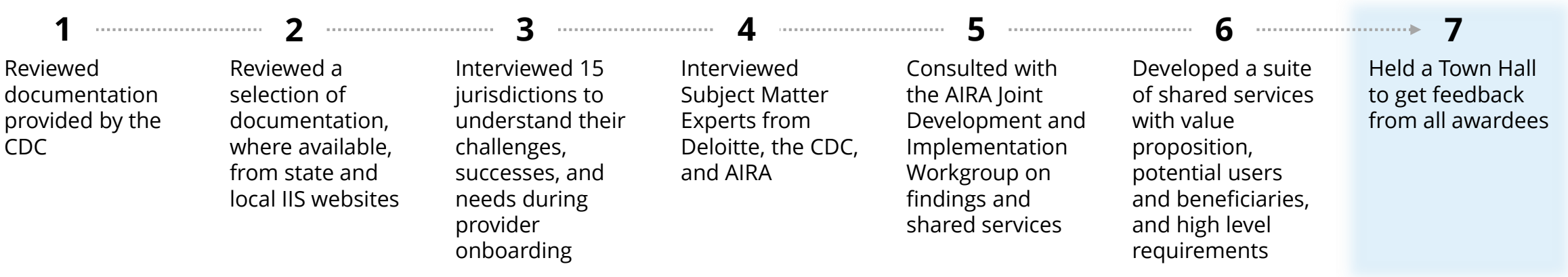- **Overall Questions:**

  – Rank the different services in terms of your most desired service.

  – What other services would you have liked to see?

  – What other considerations should we take into account when developing onboarding shared services?

Purpose of the Town Hall

Background

CDC has been exploring possible shared, centralized services to effectively and efficiently onboard providers to the IIS. Over the last several months, CDC discussed challenges of the onboarding process and the types of shared services that could improve the process with several awardees and IIS vendors. With this input, CDC developed an initial list of potential shared services for the IIS community to consider. The Town Hall is an opportunity for awardees to learn more about the shared services, provide their input on the shared services, and to share their thoughts on any other services they would find useful

Our Approach

1	**2**	**3**	**4**	**5**	**6**	**7**
Reviewed documentation provided by the CDC	Reviewed a selection of documentation, where available, from state and local IIS websites	Interviewed 15 jurisdictions to understand their challenges, successes, and needs during provider onboarding	Interviewed Subject Matter Experts from Deloitte, the CDC, and AIRA	Consulted with the AIRA Joint Development and Implementation Workgroup on findings and shared services	Developed a suite of shared services with value proposition, potential users and beneficiaries, and high level requirements	Held a Town Hall to get feedback from all awardees

Potential Shared Services Offerings

Based on literature review, awardee interviews, SME discussions, and meetings with the CDC, the following shared services are the most likely to be helpful to improve provider onboarding

Central Document and Resource Library. Host onboarding documentation organized by jurisdiction on a public website that providers and vendors can easily access, reference, and use to understand requirements throughout the onboarding process with any jurisdiction.

Provider, EHR Vendor, and IIS Electronic Data Exchange Profiles. Create profiles on the shared services site of how organizations perform electronic data exchange to allow their partners to better prepare for onboarding. Content in profiles could include supported connection types, supported HL7 message types, etc.

Onboarding Training Modules. Provide self-guided training modules that walk through the "what" and "why" for specific core topics necessary for successful onboarding (such as "Establishing a Connection").

Provider & Vendor Onboarding HL7 Message Help Desk. Develop and staff a Help Desk that gives providers and vendors access to real time support that can help them perform self-testing during initial construction and generation of their HL7 messages without involving IIS staff.
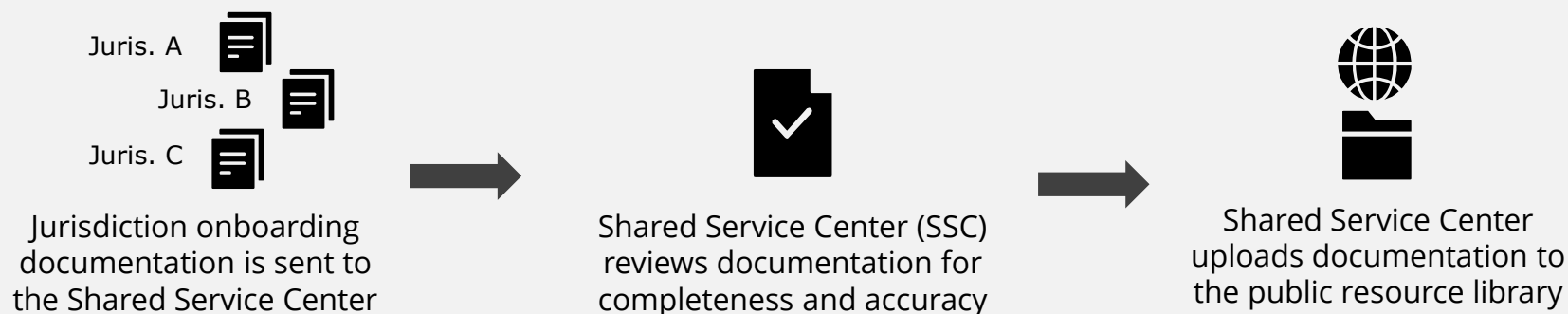
Multi-record Message Data Quality Testing Tool for EHRs. Offer providers and EHR vendors with a secure, web-based platform to analyze message quality from EHRs without intervention from IIS staff, similar to how IISes are able to use the MQE tool with their own systems.

Central Document and Resource Library

Problem: Inaccessible, Hard to Find, or Out of Date Onboarding Documentation

Providers and vendors often do not have access to up to date or adequate documentation to help inform them of a jurisdiction's onboarding process. Instead, they rely on documents posted on the CDC's website, which do not account for jurisdiction variations. IIS staff then have to spend significant time during onboarding focusing on providing jurisdictional-specific documents and requirements to providers and vendors as well as educating providers and vendors on some of the basics of electronic data exchange.

Solution: Central Document and Resource Library

Create a centralized library with up-to-date onboarding documents for all IIS jurisdictions allowing easy access by vendors, providers, and other jurisdictions. In addition, provide a mechanism to illuminate jurisdictional differences

Juris. A

Juris. B

Juris. C

Jurisdiction onboarding documentation is sent to the Shared Service Center

Shared Service Center (SSC) reviews documentation for completeness and accuracy

Shared Service Center uploads documentation to the public resource library

Users

EHR Vendors

Providers

Central Document and Resource Library

How to Use: Central Document and Resource Library

SSC creates a database on a public facing website

↓

SSC requests current onboarding documentation from jurisdictions

↓

Jurisdictions send onboarding documentation to SSC via email or web app

↓

SSC uploads documentation to the public website, organized by jurisdiction

SSC develops process for standardizing the format on onboarding jurisdictions

↑

Jurisdictions approve or provide feedback on standard formats

↑

SSC reviews uploaded documentation and proposes a standard format

↑

Providers and vendors access documentation from the public website

SSC provides process for jurisdictions to automatically update documents and sends a yearly reminder

↓

SSC configures function to return documentation for a jurisdiction based on provider or vendor location (e.g. zip code)

↓

SSC develops mechanism to clarify and illuminate jurisdictional differences

↓

SSC maintains and enhances the resource library

☐ Designates jurisdiction involvement

Expected Outcomes and Impact

✓ Decreases time spent by stakeholder groups going back and forth providing and confirming requirements, correct documentation, timelines, and expectations

✓ Puts documentation for each jurisdiction in the location that providers and vendors can rely on

✓ Increases IIS staff availability to focus on major challenges that come up during onboarding

Implementation Timeline and LOE

High Complexity Short Term	High Complexity Medium Term	High Complexity Long Term
Medium Complexity Short Term	Medium Complexity Medium Term	**Medium Complexity Long Term**
Low Complexity Short Term	Low Complexity Medium Term	Low Complexity Long Term

Provider, EHR Vendor, and IIS Electronic Data Exchange Profiles

Problem: Working with Unknown Partners

The onboarding process is often delayed when an awardee, provider, or EHR vendor is not familiar with the onboarding processes and procedures of the other stakeholders. IIS staff dedicate a significant portion of time during onboarding to gather and clarify this information, which includes identifying POCs, confirming EHR versions, noting technical capabilities, etc.

Solution: Provider, EHR Vendor, and IIS Electronic Data Exchange Profiles

Create profiles of how organizations perform electronic data exchange to enable their partners to better prepare for onboarding; host profiles on a public website

Suggested Profile Attributes

EHR Vendor	Supported connection type & related costs | Supported EHR releases | HL7 messaging capabilities | EHR upgrade timeline | Supported HL7 versions | Vendor support structure for providers | POC for onboarding by position | Publicly available provider organization relationships
Medium to Large Provider	Supported connection types | Technical support structure within the organization | Organization's EHR type | EHR version by site | POC for onboarding by position
IIS	Location of IIS | Supported and preferred connection types | Supported and preferred HL7 versions | Implementation guide used | POCs for onboarding

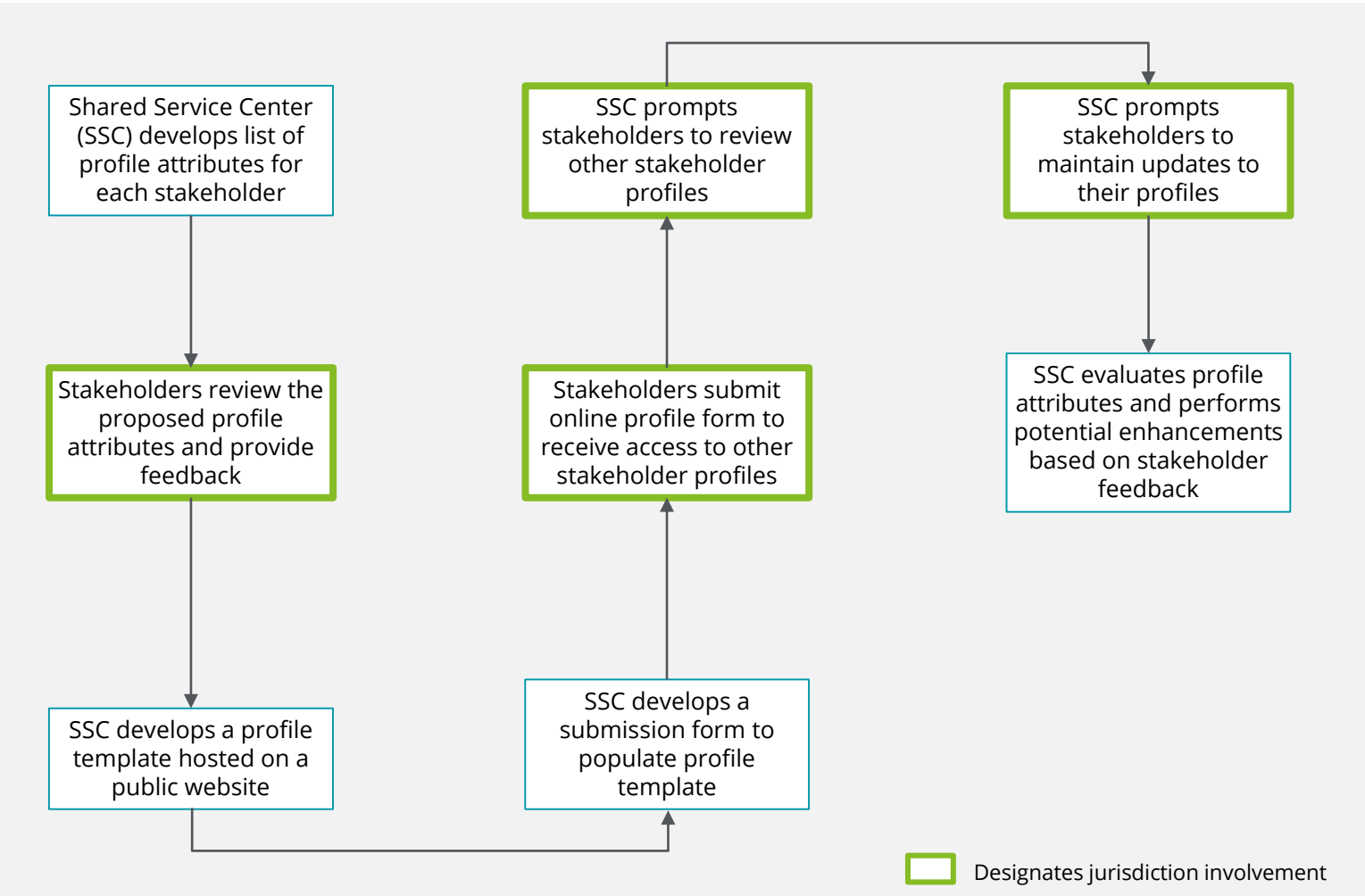### Users

EHR Vendors   Providers   IIS Staff

How to Use: Provider, EHR Vendor, and IIS Electronic Data Exchange Profiles

Flow diagram:

- Shared Service Center (SSC) develops list of profile attributes for each stakeholder
- → Stakeholders review the proposed profile attributes and provide feedback
- → SSC develops a profile template hosted on a public website
- → SSC develops a submission form to populate profile template
- → Stakeholders submit online profile form to receive access to other stakeholder profiles
- → SSC prompts stakeholders to review other stakeholder profiles
- → SSC prompts stakeholders to maintain updates to their profiles
- → SSC evaluates profile attributes and performs potential enhancements based on stakeholder feedback

Designates jurisdiction involvement

Expected Outcomes and Impact

✓ Clearly identifies activities and requirements for participating in electronic data exchange that can be completed ahead of time, thus allowing partners to better prepare to work with each other prior to onboarding kick off and helping to eliminate common issues encountered during the initial steps of onboarding

✓ Promotes better initial and ongoing relationships between IISes and healthcare organizations by showing how best to work together

Implementation Timeline and LOE

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Problem: Educating Providers and EHR Vendors on Onboarding Basics

IIS staff spend considerable time working with providers and EHR vendors educating them on fundamental aspects of onboarding. The work required to support providers and sometimes vendors on these basic onboarding concepts takes time away from addressing more complex tasks and issues related to establishing interfaces for production and assuring data quality.

Solution: Onboarding Training Modules

Provide self-guided training modules that walk through the "what" and "why" for specific core topics necessary for successful onboarding; house trainings on a public website

Proposed Training Modules

- Onboarding Overview
- Basics of HL7 Messaging
- How to Set Up HL7 Messages
- Establishing a Connection
- Using Vaccine Code Sets
- Addressing Jurisdictional Variations

Training Medium

Training modules can take a variety of forms. The Service Center will develop modules using training development best practices which incorporate audio-visual, interactive, and reinforcement techniques
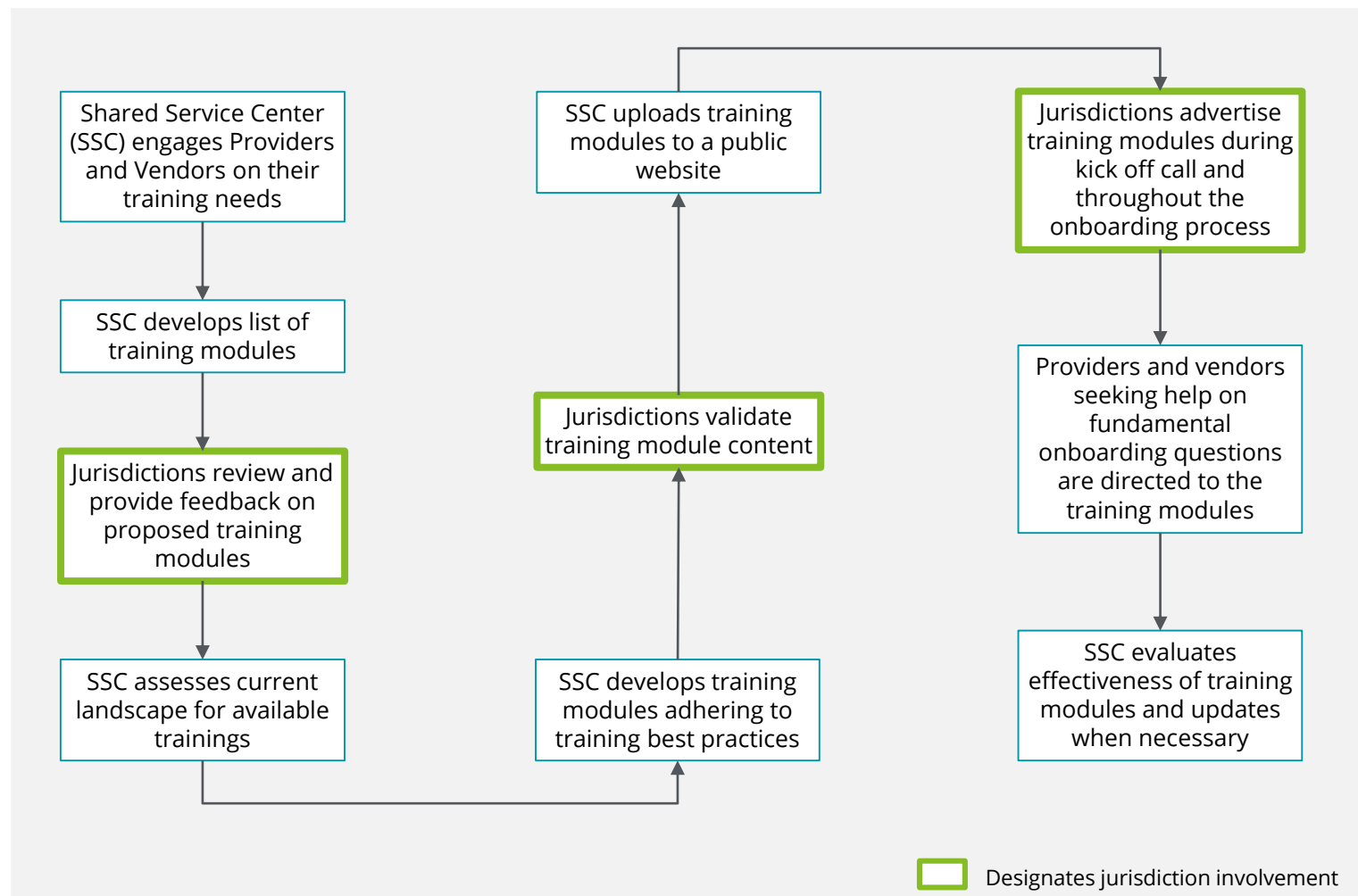
Users

EHR Vendors

Providers

Onboarding Training Modules

How to Use: Onboarding Training Modules

```
Shared Service Center          SSC uploads training          Jurisdictions advertise
(SSC) engages Providers        modules to a public           training modules during
and Vendors on their           website                       kick off call and
training needs                                                throughout the
        |                              ↑                      onboarding process
        ↓                              |                              |
SSC develops list of                   |                              ↓
training modules                       |                      Providers and vendors
        |                      Jurisdictions validate         seeking help on
        ↓                      training module content        fundamental
Jurisdictions review and               ↑                      onboarding questions
provide feedback on                    |                      are directed to the
proposed training                      |                      training modules
modules                                |                              |
        |                              |                              ↓
        ↓                      SSC develops training          SSC evaluates
SSC assesses current           modules adhering to            effectiveness of training
landscape for available        training best practices        modules and updates
trainings              ────────→                              when necessary
```

☐ Designates jurisdiction involvement

Expected Outcomes and Impact

✓ Reduces provider and vendor reliance on IIS staff for troubleshooting and training on fundamental aspects on onboarding

✓ Increases IIS staff focus on more difficult challenges during onboarding

✓ Improves provider and vendor understanding of onboarding and electronic data exchange

✓ Streamlines the onboarding process by enhancing provider and vendor knowledge and competencies related to onboarding

Implementation Timeline and LOE
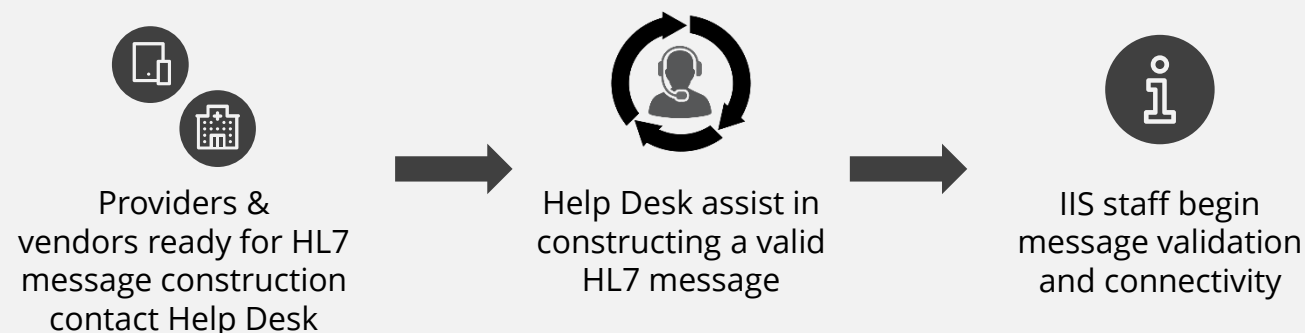
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Problem: Significant Time Spent Supporting Message Construction

The initial construction and generation of HL7 messages poses a significant challenge during the development and testing phase as many providers and vendors do not have prior experience with HL7 messaging. Providers and vendors often spend time calling and emailing IIS staff about basic aspects of development and testing during onboarding, detracting the IIS staff's time away from more complex onboarding issues. This back and forth leads to long delays between the kickoff call and data quality testing in the IIS test environment.

Solution: Provider & Vendor Onboarding HL7 Message Helpdesk

Develop and staff a help desk that gives providers and vendors access to real time support for performing self-testing during initial construction and generation of HL7 messages without involvement of IIS staff

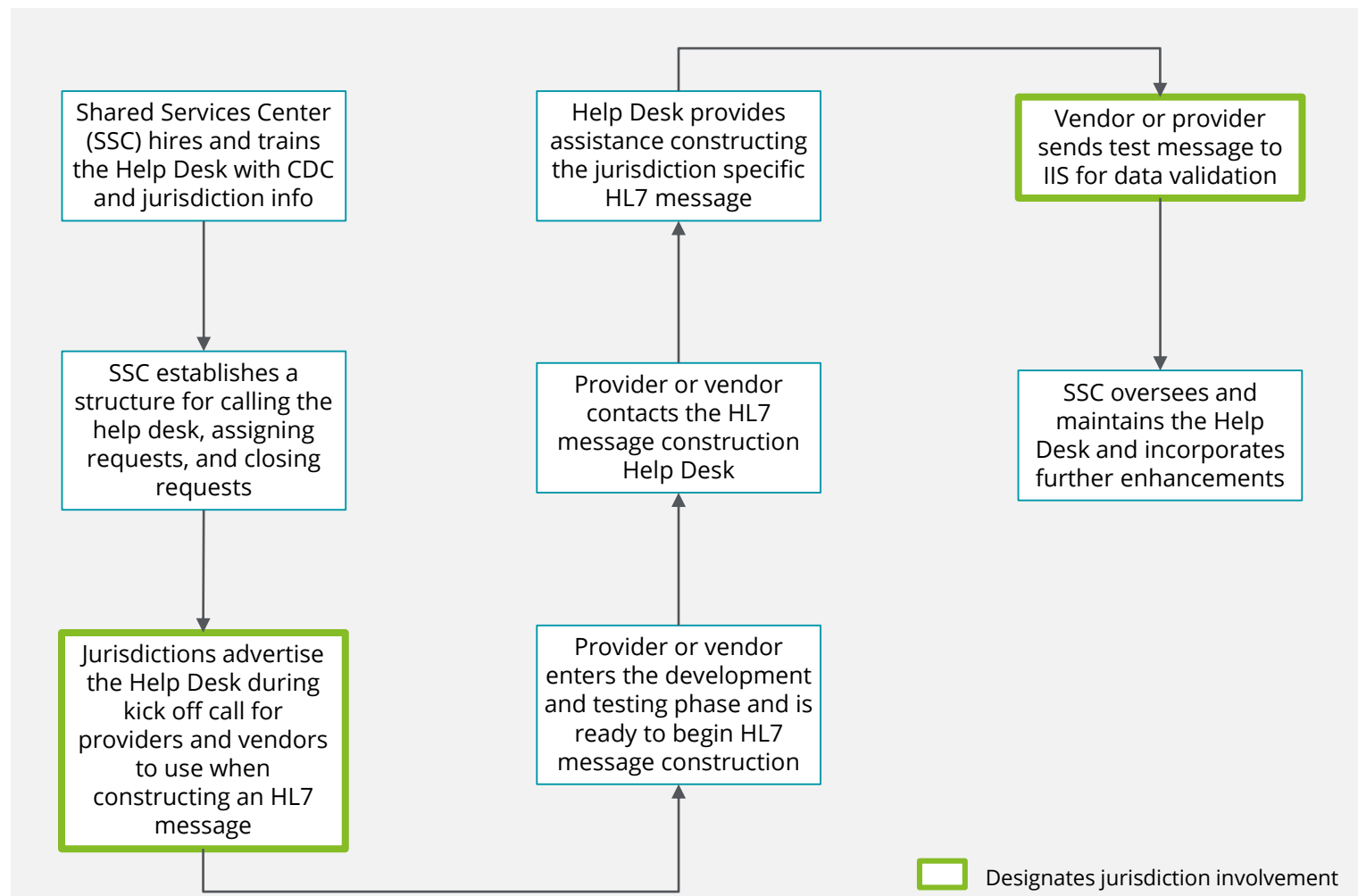Providers & vendors ready for HL7 message construction contact Help Desk

→

Help Desk assist in constructing a valid HL7 message

→

IIS staff begin message validation and connectivity

Users

EHR Vendors

Providers

Provider & Vendor Onboarding HL7 Message Help Desk

How to Use: Provider & Vendor Onboarding HL7 Message Help Desk

```
Shared Services Center          Help Desk provides            Vendor or provider
(SSC) hires and trains          assistance constructing       sends test message to
the Help Desk with CDC          the jurisdiction specific     IIS for data validation
and jurisdiction info           HL7 message
        |                               ↑                             |
        ↓                               |                             ↓
SSC establishes a               Provider or vendor            SSC oversees and
structure for calling the       contacts the HL7              maintains the Help
help desk, assigning            message construction          Desk and incorporates
requests, and closing           Help Desk                     further enhancements
requests                               ↑
        |                               |
        ↓                               |
Jurisdictions advertise         Provider or vendor
the Help Desk during            enters the development
kick off call for               and testing phase and is
providers and vendors           ready to begin HL7
to use when                     message construction
constructing an HL7
message
```

☐ Designates jurisdiction involvement

Expected Outcomes and Impact

- ✓ Allows IIS staff to focus on data quality issues during development and testing, not on message construction and generation

- ✓ Gives providers and vendors near real-time support during the onboarding process to help troubleshoot issues, inform on best practices, and proceed through testing phases

- ✓ Provides real-time feedback to providers and vendors during onboarding keeps engagement with the onboarding process and the IIS at a high level
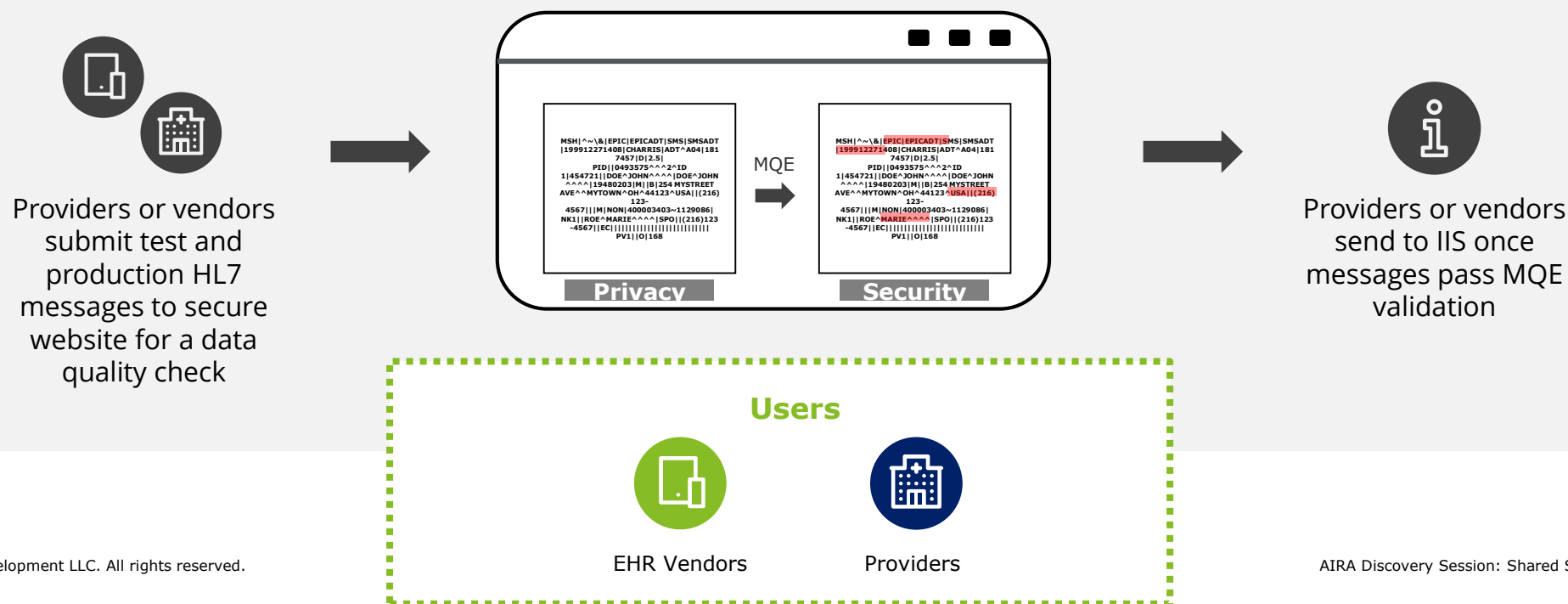
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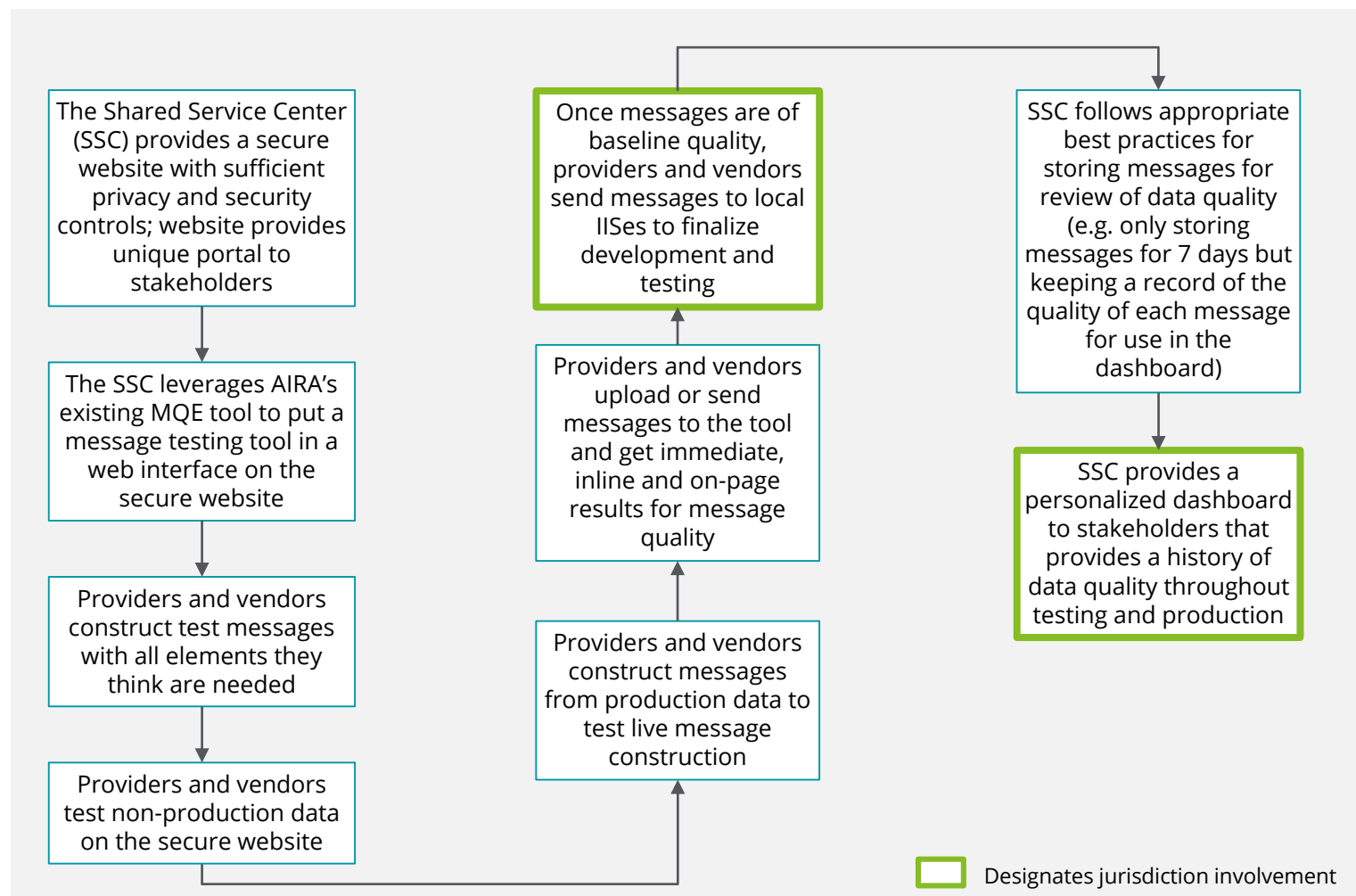## Problem: Data Quality Issues from Providers and Vendors

Providers and vendors spend a significant amount of time in the development and testing phase on construction and validation of HL7 messages. HL7 data quality issues and data validation are time consuming efforts for IISes, vendors, and providers. These data challenges involve manually sending messages back and forth between provider or vendor staff to the IIS staff to check for completion and accuracy. Providers and vendors would benefit from a tool that allows them to more proactively identify issues with messages prior to sending test messages to the IIS.

Solution: Multi-Record Message Data Quality Testing Tool for EHRs

Offer providers and EHR vendors with a secure, web-based platform to analyze message quality from EHRs without intervention from IIS staff, similar to how IISes are able to use the MQE tool with their own systems

Providers or vendors submit test and production HL7 messages to secure website for a data quality check

MQE

Privacy

Security

Providers or vendors send to IIS once messages pass MQE validation

Users

EHR Vendors

Providers

Multi-Record Message Data Quality Testing Tool for EHRs

How to Use: Multi-Record Message Data Quality Testing Tool for EHRs

The Shared Service Center (SSC) provides a secure website with sufficient privacy and security controls; website provides unique portal to stakeholders

↓

The SSC leverages AIRA's existing MQE tool to put a message testing tool in a web interface on the secure website

↓

Providers and vendors construct test messages with all elements they think are needed

↓

Providers and vendors test non-production data on the secure website

Once messages are of baseline quality, providers and vendors send messages to local IISes to finalize development and testing

↑

Providers and vendors upload or send messages to the tool and get immediate, inline and on-page results for message quality

↑

Providers and vendors construct messages from production data to test live message construction

SSC follows appropriate best practices for storing messages for review of data quality (e.g. only storing messages for 7 days but keeping a record of the quality of each message for use in the dashboard)

↓

SSC provides a personalized dashboard to stakeholders that provides a history of data quality throughout testing and production

☐ Designates jurisdiction involvement

Expected Outcomes and Impact

✓ Frees up IIS staff to focus on more complicated issues of onboarding such as establishing the interface during production and complex aspects of testing

✓ Enables providers, vendors, and IISes to proactively and rapidly monitor ongoing data message quality

✓ Increases amount of self-testing providers and vendors can do by both assuring that messages providers are building conform to the standards and allowing them to examine the data quality of multiple messages on their own

Implementation Timeline and LOE

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Next Steps

❑ **Synthesize the results of the discussion, including but not limited to:**

- o Final Prioritization of Shared Services

- o Key Takeaways from the Discussion

- o Potential Short-Term Implementation Option

- o Potential Long-Term Potential Implementation Option

❑ **Provide synthesis back to the IIS community**

❑ **Begin to develop implementation roadmaps for top choices**