



Immunization Registry Design Group

A Design Group of the Connecticut Health IT Advisory Council

July 27, 2017 | 11:30 am – 1:00 pm

Session 4

Facilitated by CedarBridge Group



CEDARBRIDGE
GROUP

Agenda

Welcoming Remarks	Christina Coughlin	11:30 AM
Review Agenda		
Approve Session 3 Meeting Summary	Design Group Members	11:32 AM
Discuss Identified Issues, Emerging Recommendations, and Possible Prioritization <ul style="list-style-type: none">• Role of HIE Services in IIS Interoperability• CIRTS Roadmap	Design Group Members and Support Staff	11:35 AM
Finalize and Prioritize Stakeholders and Value Propositions	Design Group Members	12:30 PM
Meeting Wrap-up and Next Steps	Christina Coughlin	12:55 PM

Approve Session 3 Meeting Summary

Discuss Identified Issues,
Emerging Recommendations, and
Possible Prioritization

Issues and Recommendations

Issue/Gap	Recommendation
Current CIRTIS does not meet CDC standards	Support DPH's decision to maintain current CIRTIS functionality for now, while exploring purchasing a new IIS platform that can meet priority stakeholder value propositions.

Issues and Recommendations

Issue/Gap	Recommendation
Provider onboarding / education and technical assistance	Identify a high-value use cases to build outreach and education around. NOTE: Design Group to identify priorities, i.e., integrated forecasting; draft technical assistance plan

Issues and Recommendations

Issue/Gap	Recommendation
<p>Lack of sufficient IT infrastructure, including current inability of DAS-BEST to support SOAP</p>	<p>Align with HIE planning efforts and recognize that IIS should be integrated with HIE services.</p> <p>Prioritize HIE shared services that will support transport mechanism (SOAP), patient and provider identification, infrastructure to support attribution. NOTE: Design Group to identify additional services.</p>

Issues and Recommendations

Issue/Gap	Recommendation
Sustainable funding	Maximize IAPD funds and alignment with HIE activities; participate in consortium with other states to leverage resources (financial and subject matter expertise)
Parallel systems (CIRTS and new IIS platform)	Create implementation roadmap; identify priority use cases to move into production quickly in new system

Issues and Recommendations

Issue/Gap	Recommendation
Legislative updates	Identify priority topics including expansion to lifetime registry; reporting from all vaccine providers including pharmacies; coordination with legislative representatives on the Health IT Advisory Council on legislative next steps
Other	
Other	

Role of HIE Services in IIS Interoperability

Public Act 16-77: A Vision for Health IT in Connecticut

PA 16-77...

Authorized the development and implementation of a statewide health information technology (health IT) plan

•Created the role of Connecticut's Health Information Technology Officer (HITO), reporting to Lt. Governor Wyman

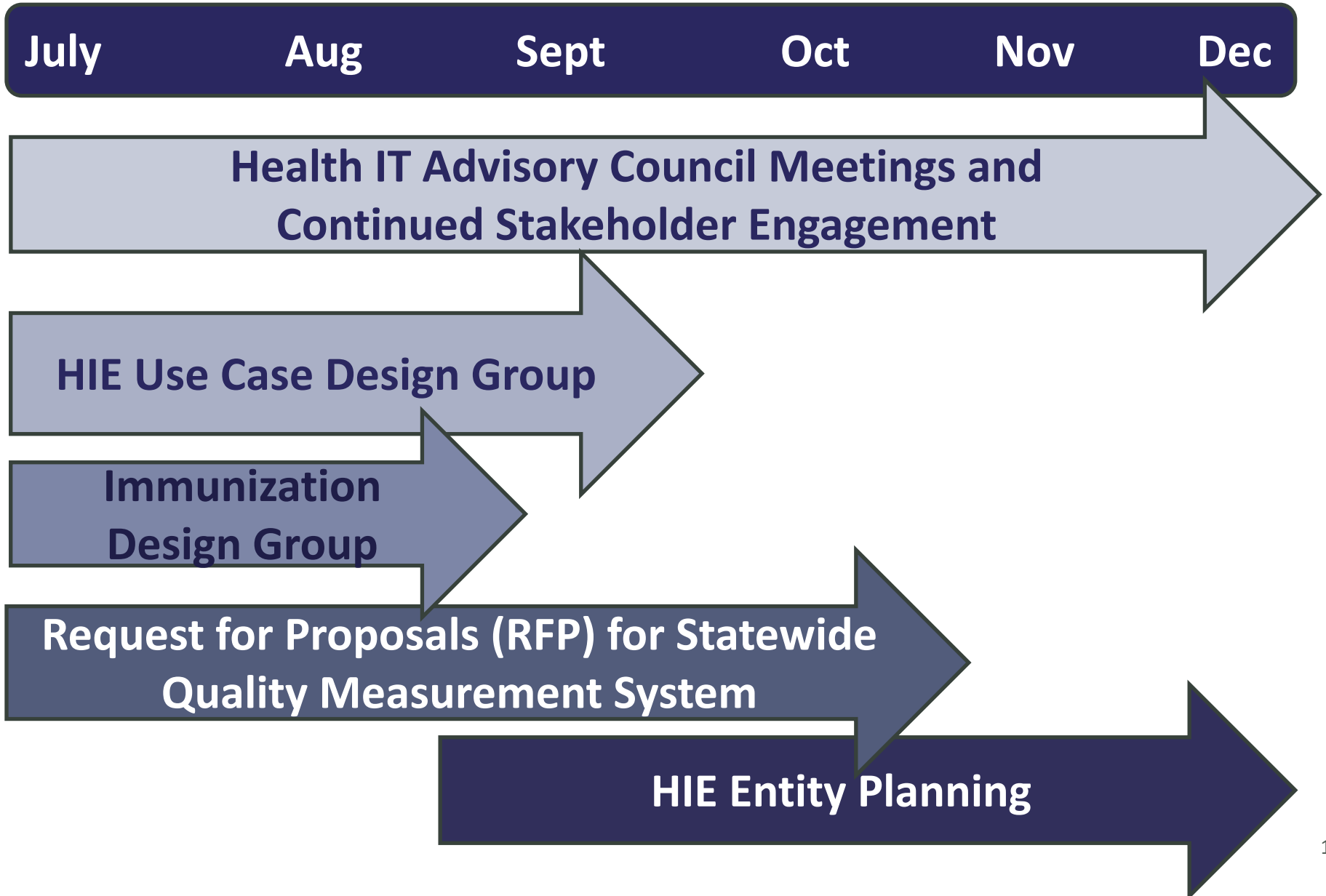
•Created the Connecticut Health Information Technology Advisory Council

**Bipartisan support; co-sponsored by
Senate President Pro Tem
Martin M. Looney (D-New Haven) &
Senate Minority Leader
Len Fasano (R-North Haven)**

...establish a Health Information Exchange that will:

- *empower consumers to make effective health care decisions,*
- *promote patient-centered care,*
- *improve the quality, safety and value of health care,*
- *reduce waste and duplication of services,*
- *support clinical decision-making,*
- *keep confidential health information secure, and*
- *make progress toward the state's public health goals.*

Current and Planned Activities



Statewide HIE

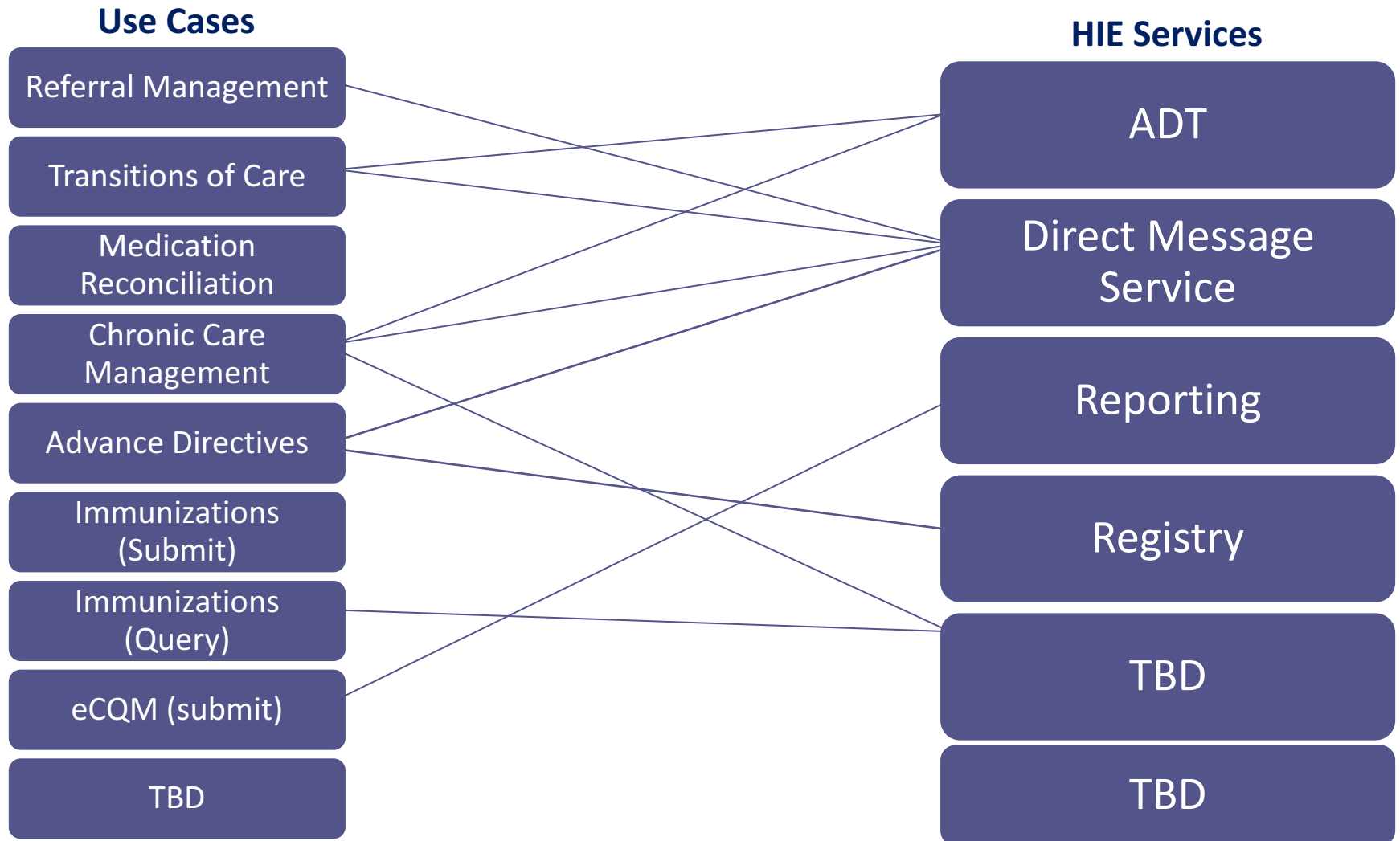
Shared Services Entity Design Group

Health IT Advisory Council members and designees representing diverse stakeholder groups will be appointed and tasked with the following goals:

- Recommendations for **operational and financial sustainability strategies** for a statewide HIE Shared Services entity
- Development of a **high-level roadmap** for the governance of a statewide HIE Shared Services entity, and for certification/accreditation of organizations providing federated HIE services in Connecticut



Shared Infrastructure Services



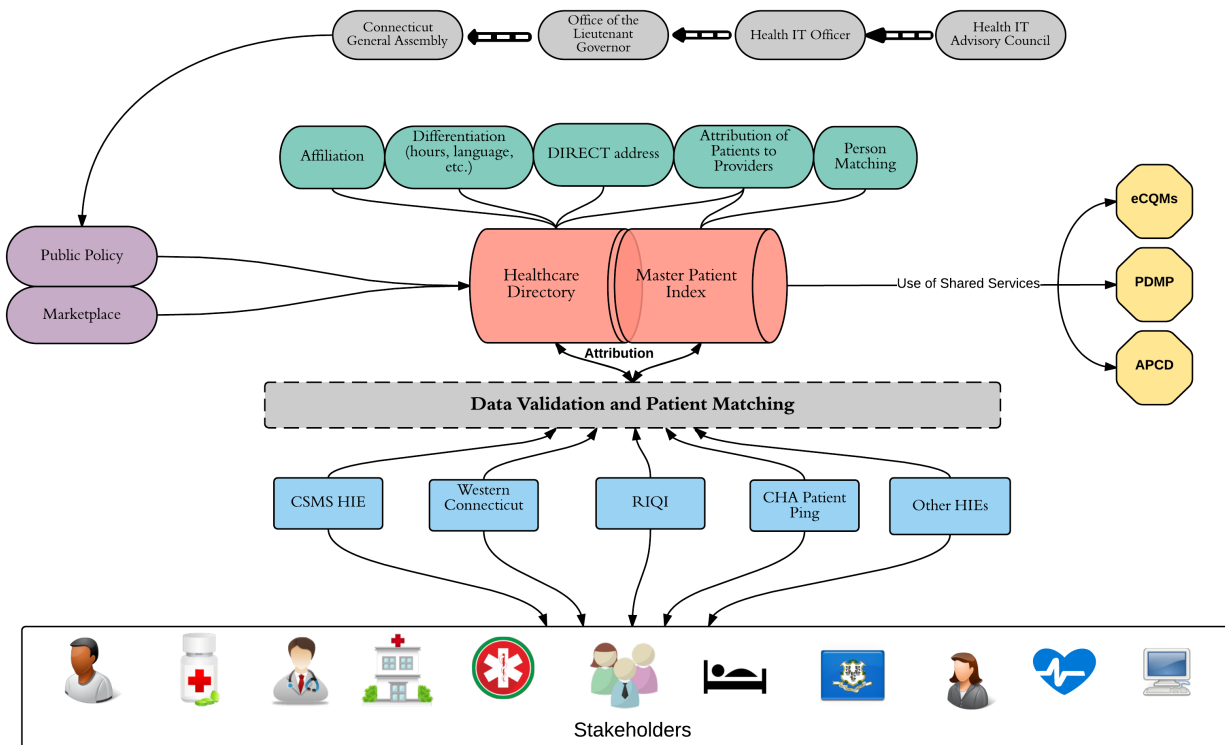
Shared Infrastructure Services

(e.g., Individual Common ID, Identity Conformance [Patient Matching], Health Directory, Attribution Service, Record Locator Service)

HIE Shared Services from Stakeholder Report

Connecticut must implement core technology that complements and interoperates with systems currently in use by private sector organizations.

Proposed Future-State Shared Services

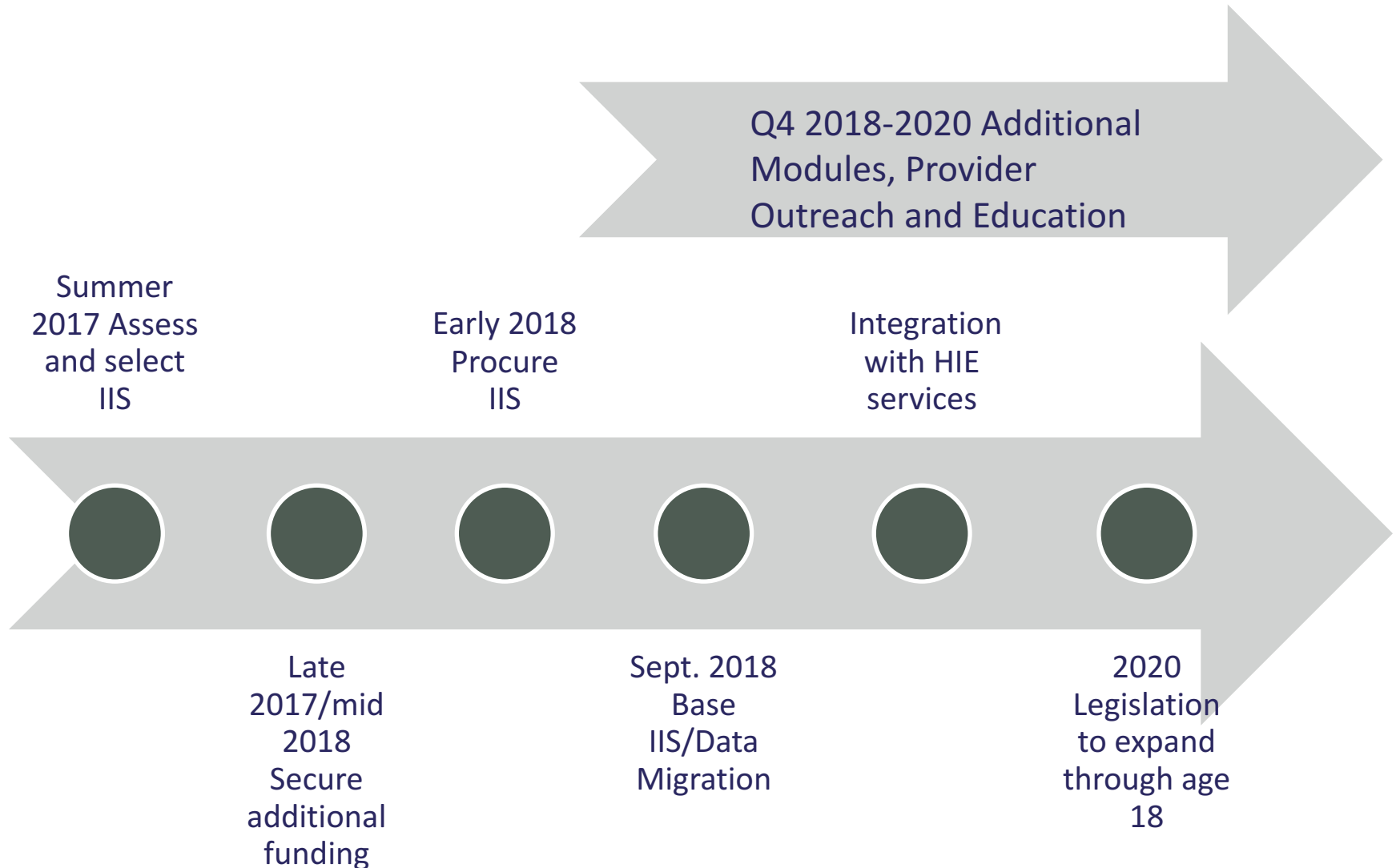


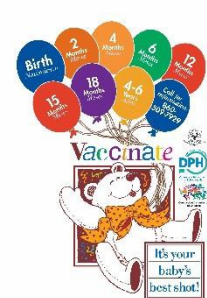
At a minimum, core technology should include the ability to **authenticate identities of patients/consumers and providers** through a **statewide Healthcare Directory** including providers, healthcare delivery organizations, community services organizations, etc., linked to a statewide **Master Patient Index** through strong attribution capabilities.

The diagram to the left displays a draft potential model of how State shared services could be designed.

CIRTS ROADMAP

Draft High-Level Implementation Roadmap





Connecticut Immunization Registry and Tracking System (CIRTS) Highlights and Recap

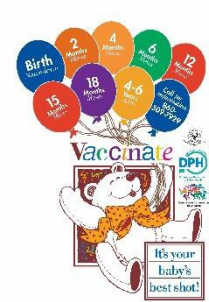
Immunization Information System (IIS)
Implementation and Alignment Design Group
Meeting
July 27, 2017

Presented by:
Nancy Sharova, MPH, CIRTS Supervisor



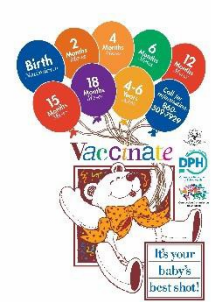
Connecticut Department of
Public Health





CT IIS Needs to Meet National IIS Functional Standards

- DPH, in consultation with the CDC, had a “gap analysis” conducted to assess CIRT, the vendor and the program’s ability to meet IIS functional standards.
 - Replacement IIS solution operates with a Consortium of states which would provide resource and cost-sharing benefits.
- DPH needs to **move forward ASAP on procurement using the Government Services Administration (GSA) contract** and implementation of a new IIS **because of funding deadline constraints**.
 - Per the authority of DAS, the use of this GSA contract has been approved.
 - CT is also eligible for a discount if the IIS is procured through the GSA.
 - We will not be putting out a request for proposal for the new IIS.



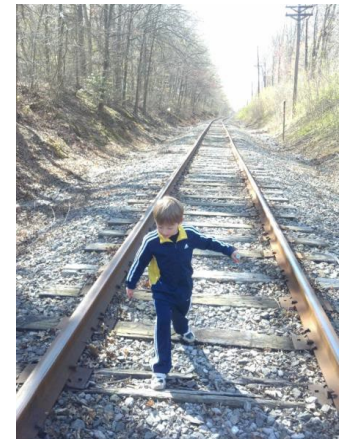
Connecticut IIS Roadmap

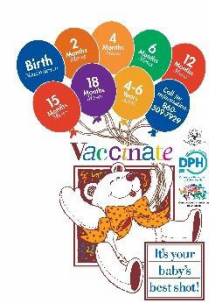
Steps to acquiring a replacement IIS:

- Assess and **select a replacement IIS**.
- **Secure additional funding** (DPH has funds to purchase the new IIS, but will need additional funds for year 2/3)
- **Procure** the replacement IIS.
- **Complete customization** to meet CT needs and complete **data migration** from current to new base IIS by September 2018 (ambitious goal). Work to be done in a phased approach through 2020.

Future steps:

- **Summer 2019 for 2020 session – Submit legislative proposal** to amend CT statutes to expand age range up through age 18.
- **Integrate with HIE** (once available).





CT IIS Funding & Deadlines

Currently 100% federally grant funded:

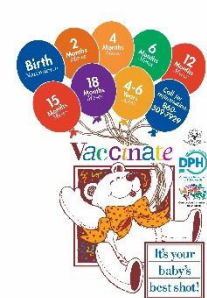
- Cooperative Agreement from CDC – base funding renewed annually
- Additional Competitive CDC grant funds (PPHF) – usually one time funding:
 - EHR Interoperability through 09/28/2018 (no cost extension approved)
 - AFIX-IIS through 08/31/2017 (submitted a no cost extension request)
 - **This money must be spent on this deadline or returned to CDC.**

Plan to seek additional funding:

- DPH has federal funds through our PPHF AFIX and Interoperability grants to procure the replacement IIS.
- After October 2017, through DSS, DPH will apply for the IAPD update 90/10 match funds from CMS. DPH is working with an [ASTHO](#) consultant on this application. These funds will provide support for years 2/3.

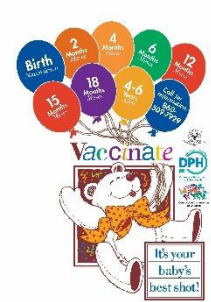
Concern/Risks:

- Sustainability for IIS annual maintenance and ongoing development to meet new national functional standards.
- Staffing levels need to be sustained or increased to meet new requirements.



Process & Timeline for IIS Replacement

- **Sept 2015:** DPH was awarded competitive PPHF funds from CDC for Interoperability and AFIX grants, in the amount of \$1,800,000 and \$286,000, respectively.
 - DPH worked to meet grant activities and timelines.
 - DPH came to understand CIRTIS is lagging behind on meeting functional standards
 - DPH had concerns about sustainability of funding with our current system
 - CT is the only state using Conduent as an IIS (not part of consortium)
 - CIRTIS receives no state funds to support/augment CDC funds
- **Sept 2016–March 2017:** Requested and received a gap analysis on CIRTIS through CDC contract:
 - CDC will allow CT to use Interoperability and AFIX grants to pay for new IIS platform
 - CDC asked CT to conserve spending on these grants pending the gap analysis results
- **Spring 2017:** DPH requested no cost extension on PPHF Interoperability grant, which was granted and extends budget period to Sept 2018. DPH requested no cost extension on PPHF AFIX grant, which is pending, and would extend budget period to Sept 2018.



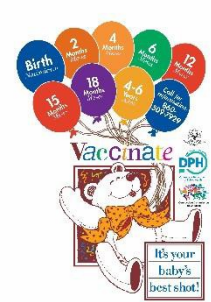
Process & Timeline IIS Replacement, Cn'td

- **Spring 2017:**

- Based on results of the gap analysis, and estimates provided by the current IIS vendor of costs to build required new functionality, DPH began exploring options for new commercial off the shelf (COTS) IIS vendor.
- DPH spoke with DAS about procurement through GSA.
- DPH saw demonstrations of IIS (Envision, STC, WIR.)
- Eliminated WIR from consideration (not a complete platform/not a complete system supported by that same vendor, need to build out functionality through contract/vendor support to meet functional standards, not part of a consortium of states.)
- Developed standardized questionnaire to rate customer satisfaction with IIS in states supported by Envision and STC.
- Interviewed IIS Coordinators in those states, tallied and scored results.

- **Summer 2017:**

- DPH met with Purchasing Officer from fiscal and DAS to request to procure replacement IIS off of GSA contract.
- Per the authority of DAS, the use of this GSA contract has been approved.
- DPH started process to get GSA procurement in place.



IIS Implementation & Features

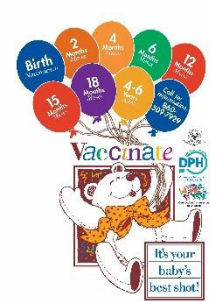
The replacement IIS will be an existing market vendor solution, but will require additional work for customization and implementation. DPH will follow standard best practice application life cycle development phases and project management.

IIS Features Currently in CIRTS:

- Provider Registration and Management (manual process managed by DPH)
- Vital Records Interface
- Vaccine Forecasting
- Reports (limited functionality)
- Reports (data quality)
- Uni-directional HL7 Electronic Data Exchange and Onboarding (pilot phase)
- School Nurse Access (read only)

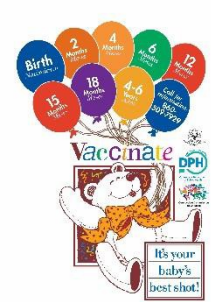
New/Enhanced IIS Features:

- Provider Registration and Management (automated process managed in the IIS)
- Vaccine Ordering and Inventory Management
- Mass Immunizations
- Reports (provider coverage assessments, etc.)
- Reports (additional data quality reports)
- Bi-directional HL7 Electronic Data Exchange and Onboarding
- Azure/Cloud Hosting
- School Nurse Access (enhanced)
- Public Access Portal



CIRTS IT Environment

- The CIRTS application and database is hosted at the CT Department of Administrative Services Bureau of Enterprise Systems and Technology (BEST).
- [BEST only supports CDC's PHIN MS as the secure public health transport.](#)
- Nationally, the recommended secure public health transport for immunization data exchange is [SOAP Web Services using the WSDL that CDC supports.](#)
- [Nationally](#), most vendors prefer Web Services.
 - This is a large [barrier](#) for setting up electronic data exchange.
- A Health Information Exchange (HIE) might help support CIRTS with secure data exchange.



CONTACT INFO

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CIRTS Supervisor:

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Immunization Program Manager:

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Finalize and Prioritize Stakeholders and Value Propositions

Stakeholder List

Stakeholder (see Value Proposition worksheet)

1. Consumers

2. Clinicians

3. Clinic Staff

4. Provider Organizations

5. “Walk-in,” Retail, Urgent Care, Travel Clinics

6. Federally Qualified Health Centers (FQHCs)

7. Public Health

8. Local Health Departments (some of which run vaccine clinics and SBHCs)

9. Federal and State Government

10. Schools

Stakeholder List, cont.

Stakeholder (see Value Proposition worksheet)

11. Childcare/Preschools

12. Target Populations (i.e, incarcerated youth, foster care, refugee, domestic violence centers, homeless)

13. Payers

14. Medicare and Medicaid

15. Employers

16. Pharmacies

17. Pharmaceutical Companies

Proposed Timeline

Milestones/Deliverables	Planned Dates
Session 1: Kickoff Meeting (Validate charter, roles and responsibilities, and timeline of Design Group; receive update on current status of IIS system; identify value propositions)	7/7/17
Session 2: Discuss value propositions, high level review of CDC IIS functional standards and overall services; identify issues, obstacles, gaps	7/13/17
Session 3: Determine stakeholder needs and prioritization, identify additional stakeholders and their roles; review high-level implementation roadmap	7/20/17
Present update to Health IT Advisory Council	7/20/17
Session 4: Complete roadmap and draft action plan; review role of the HIE entity in supporting IIS interoperability	7/27/17
Session 5: Considerations for financial sustainability models and future Design Group needs, if necessary; draft recommendations	8/3/17
Present Report and Recommendations to Health IT Advisory Council	8/17/17

Next Steps

- Outline report and finalize recommendations at next meeting
- Final scheduled meeting: Thursday August 3, 11:30am EDT
- Draft report and recommendations
 - August 4: Distribute report for review by email
 - August 7 – 9: Individual calls with Design Group members
 - August 10 – 11: Final review by Design Group members
 - August 14: Send report to Health IT Advisory Council
 - August 17: Health IT Advisory Council presentation



Christina Coughlin

Christina@cedarbridgegroup.com

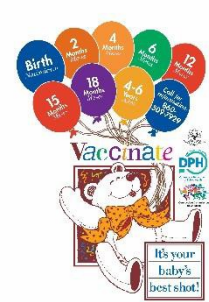
Pete Robinson

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Appendix

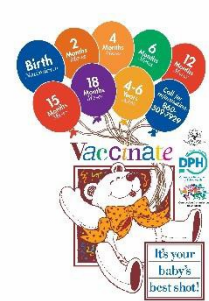


2013 – 2017 IIS Functional Standard #1



1. Support the delivery of clinical immunization services at the point of immunization administration, regardless of setting. This standard includes:

- “Real-time” access to immunization records by authorized users. Internal IIS function.
- Vaccine forecasting – automated function to show user if vaccines are due, past due, or coming due. Internal IIS function.
- Reminder/Recall – production of a reminder (due for a vaccine) or a recall (past due for a vaccine) for individuals. Internal IIS function to trigger reminder/recall, but actual notice can be sent from another system (e.g., provider’s EHRs).
- Automatic response to electronic queries from other health information systems based on interoperability standards. External function that requires a intermediary application to validate and transform incoming message to a valid output message.
- IIS can receive electronic submissions based on interoperability standards. Internal function – the IIS can receive the valid output message.



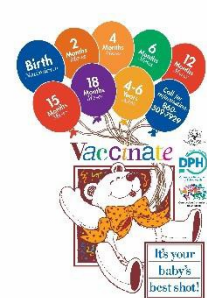
2013 – 2017 IIS Functional Standard #2



2. Support the activities and requirements for publicly-purchased vaccine, including the Vaccines for Children (VFC) and state purchase programs.

These are all required internal IIS functionality.

- Inventory function that automatically adds newly acquired vaccines and subtracts (i.e., decrements) vaccines as they are administered or otherwise “used”.
- Vaccines are tagged based on purchase with public or private funds.
- Individual vaccine records include if the vaccine was a public or private vaccine to ensure public vaccine eligible doses are given properly.
- Vaccine inventory can be automated or accessed manually and allows record keeping for expired or borrowed vaccines.
- The IIS interfaces with the national vaccine ordering, inventory, and distribution system.
- The IIS can provide data and/or produce management reports for VFC and other public vaccine programs.



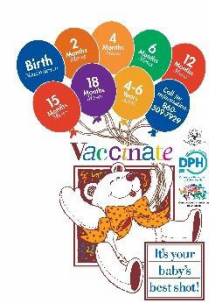
2013 – 2017 IIS Functional Standard #3



3. Maintain data quality (accurate, complete, timely data) on all immunization and demographic information in the IIS.

These are all required internal IIS functionality.

- Consolidated demographic and immunization records for all patients (in Connecticut, all patients eligible for enrollment into CIRT).
 - This demographic/immunization information is available to authorized users.
 - An individual patient's active (enrolled) and inactive (opted out) status is known.
- IIS provides ability to identify, de-duplicate and resolve incomplete patient records as well as vaccination events.
- The IIS can store all IIS Core Data Elements ([see Appendix B](#)).
- IIS can establish a record for newborns upon upload of birth record data.

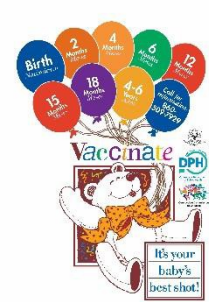


2013 – 2017 IIS Functional Standard #4



4. Preserve the integrity, security, availability and privacy of all personally-identifiable health and demographic data in the IIS.

- The DPH Immunization program has written confidentiality and privacy practices and policies based on applicable law or regulation that protect all individuals whose data are contained in the system.
- The IIS has user access controls and logging, including distinct credentials for each user, least-privilege access, and routine maintenance of access privileges.
- The IIS is operated or hosted on secure hardware and software in accordance with industry standards for protected health information, including standards for security/encryption, uptime and disaster recovery. In Connecticut, the IIS is hosted at the Bureau of Enterprise Systems and Technology (BEST) in the state data center.

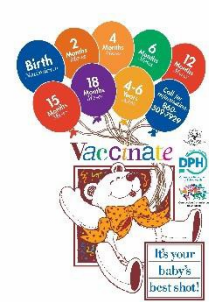


2013 – 2017 IIS Functional Standard #5



5. Provide immunization information to all authorized stakeholders.

- IIS can provide immunization data access to healthcare providers, public health, and other authorized stakeholders (e.g., schools, public programs, payers) according to law, regulation or policy.
- Reports can be generated (e.g., immunization coverage, vaccine usage, and other important indicators by geographic, demographic, provider, or provider groups) for authorized users without assistance from DPH Immunization Program personnel.
 - These include the AFIX report:
- IIS can provide copies of immunization records to individuals or parents/guardians with custodial rights (with appropriate levels of authentication).
- The IIS can produce an immunization record acceptable for official purposes (e.g., school, child care, camp).

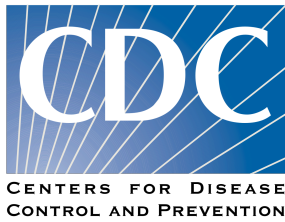


2013 – 2017 IIS Functional Standard #6



6. Promote vaccine safety in public and private provider settings

- Provide the necessary reports and/or functionality to facilitate vaccine recalls when necessary, including the identification of recipients by vaccine lot, manufacturer, provider, and/or time frame.
- Facilitate reporting and/or investigation of adverse events following immunization.



DRAFT 2018 – 2022

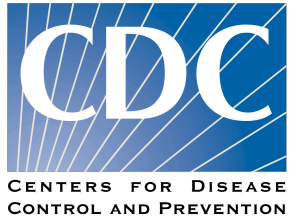
Essential Infrastructure Standards

- 1.0 Contain **complete and timely demographic and immunization data for children, adolescents and adults** residing or immunized within its jurisdiction.
- 2.0 Implement **written and approved confidentiality policies** that protect the privacy of individuals whose data are contained in the system.
- 3.0 Implement **comprehensive written and approved security policies** consistent with industry standards.
- 4.0 The IIS is **physically and digitally secured in accordance with industry standards** for protected health information, security, encryption, uptime, and disaster recovery.
- 5.0 **Support IIS users who access and use the IIS functions, submit or access IIS data.**



DRAFT Goal One: Support clinicians in delivering age-appropriate immunizations

- 6.0 **Receive submissions and returns responses in accordance with interoperability standards** endorsed by the CDC for message content, format and transport.
- 7.0 **Ensure appropriate user access** to immunization records for clinical decision making at the time immunization services are delivered.
- 8.0 **Identify, prevent and resolve duplicated and fragmented patient records** using an automated process.
- 9.0 **Identify, prevent and resolve duplicate vaccination events** using an automated process.
- 10.0 **Forecast pediatric and adult immunizations** in a manner consistent with Advisory Committee on Immunization Program (ACIP) recommendations.



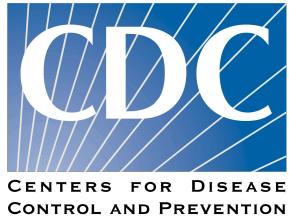
DRAFT Goal One: Support clinicians in delivering age-appropriate immunizations (cont.)

11.0 Manage patient status at the provider organization and jurisdiction levels.

12.0 Track Vaccines for Children (VFC) vaccine eligibility at the dose level for every dose of publicly purchased vaccine that is administered.

13.0 Support vaccine product recall activities.

14.0 Support reporting and investigation of vaccine adverse events.

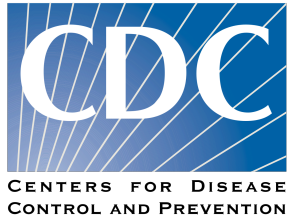


DRAFT Goal Two: Support the control and management of vaccine preventable disease outbreaks

15.0 Support public health response during disease outbreaks.

16.0 Support immunization related efforts in school and childcare settings.

17.0 Support immunization program activities during a public health emergency according to the jurisdictions public health emergency plan.



DRAFT Goal Three: Support and inform stakeholder efforts to improve immunization rates.

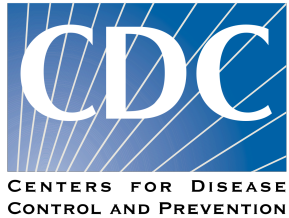
18.0 Provide predefined and ad hoc assessment and coverage reports that users can generate without assistance from IIS personnel.

19.0 Support reminder and recall activities.

20.0 Provide immunization records to individuals with appropriate authentication.

21.0 Ensure appropriate access to the data in the IIS to all stakeholders **for public and population health purposes.**

22.0 Reliably exchange information electronically with IIS in other jurisdictions.



DRAFT Goal Four: Support providers in meeting the requirements of the Vaccines for Children Program and state and local immunization programs.

23.0 Support vaccine management and quality assurance functions for the Vaccines for Children (VFC), state and local immunization programs.

24.0 Support data exchange with the national Vaccine Tracking System (VTrckS).

25.0 Support provider site level vaccine inventory management and reconciliation according to VFC, state and local immunization program requirements.

26.0 Decrement administered doses from inventory maintained in the IIS.

27.0 Provide data or produces reports for VFC, state and local immunization programs.