An Opportunity for Sharing: The Massachusetts Immunization Information System

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Agenda

1. Background
2. High Level Functionality
3. Opportunities for Sharing
4. Next Steps

MA IIS History

- Before MIIS went live in Feb 2011, MA was one of 3 states in the nation without an immunization registry
- MA had several attempts at establishing an immunization registry
  - Never fully launched due to funding challenges, system requirements (not J2EE compliant), etc.
- Bureau vision to use one core platform for EDSS, HIV, and IIS

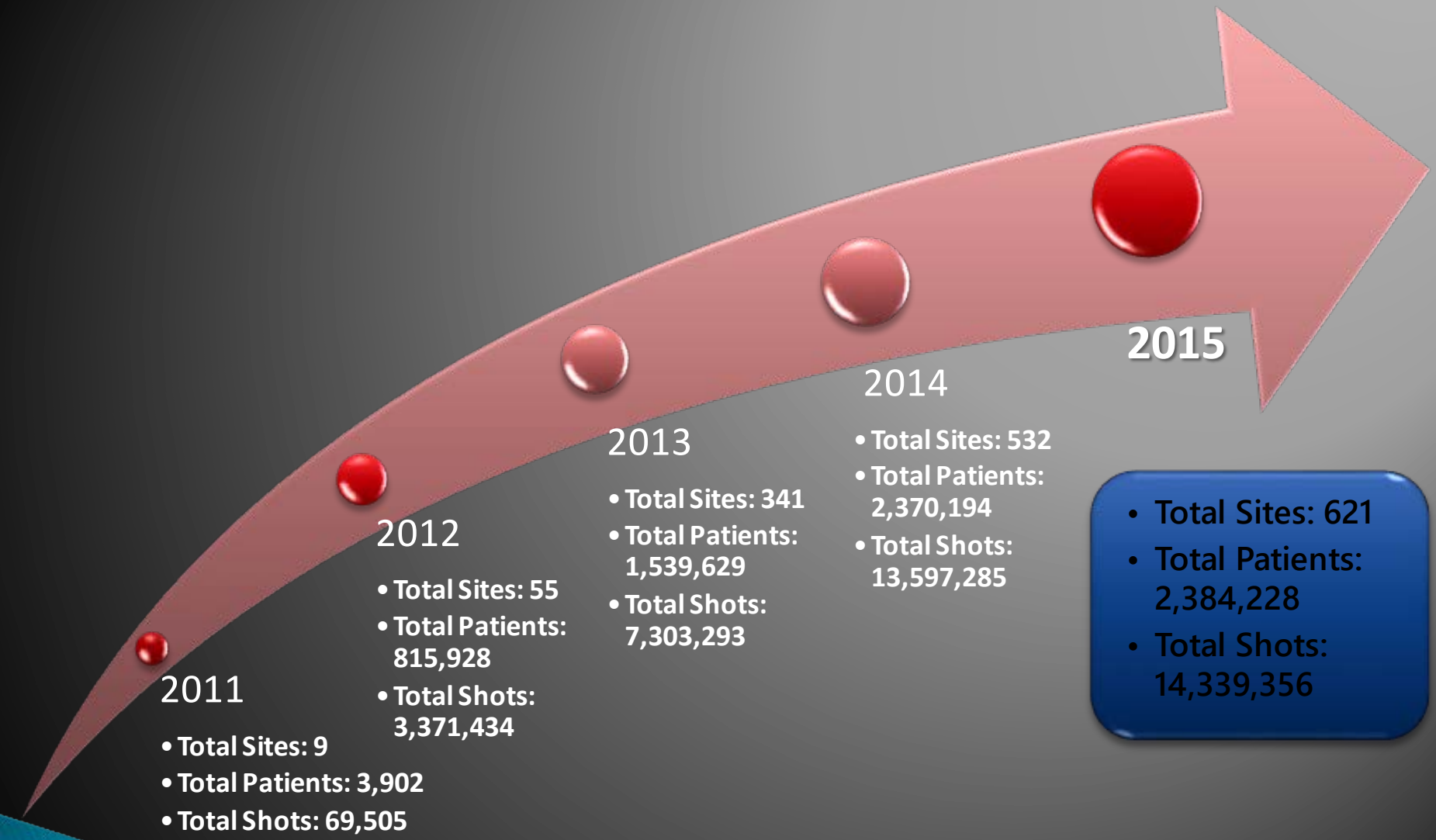
First MIIS Platform

- ‘Pro’– core application highly configurable/customizable
- ‘Con’–system not developed specifically for immunization purposes
  - required a lot of work by contracted developers to achieve a user-friendly GUI, meet IIS specific requirements for deduplication, etc.
  - concern about deviating too much from core and being able to implement version upgrades from vendor

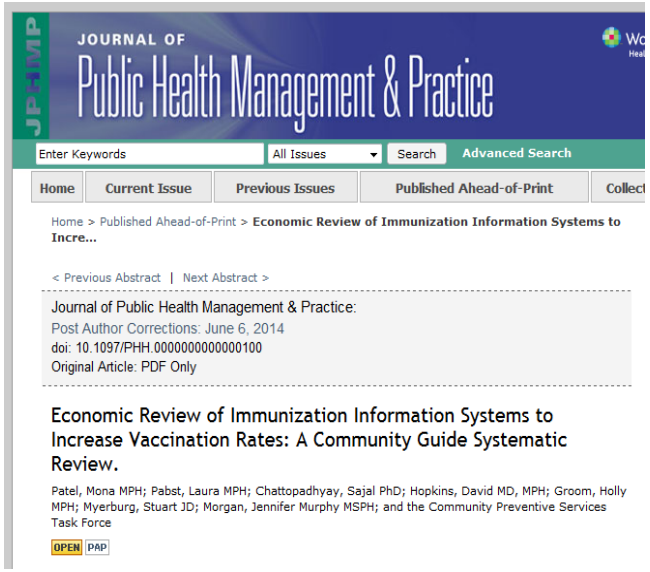
Massachusetts IIS (MIIS) Timeline

- **2009:** Re-procured core platform of MIIS through existing EDSS vendor
- **2010**: Legislation passed mandating that *all* healthcare providers must report administered immunizations to the state
- **2011**: Launched MIIS, initially UI users only
- **2012:** First successful HL7 2.5.1 interface
- **2012**: Concerns about existing platform's ability to perform core IIS functions with expanding load projections
- **2012:** Decision to develop custom IIS using Open Source tools
- **2012 - 2013:** Requirements definition (including Vaccine Management module), development and testing
- **June 2013**: Launch of *new,* open source-based MIIS, data migration

MIIS Data So Far…



Background: Key findings from the Journal of Public Health Management & Practice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Journal of Public Health Management & Practice:
Post Author Corrections: June 6, 2014
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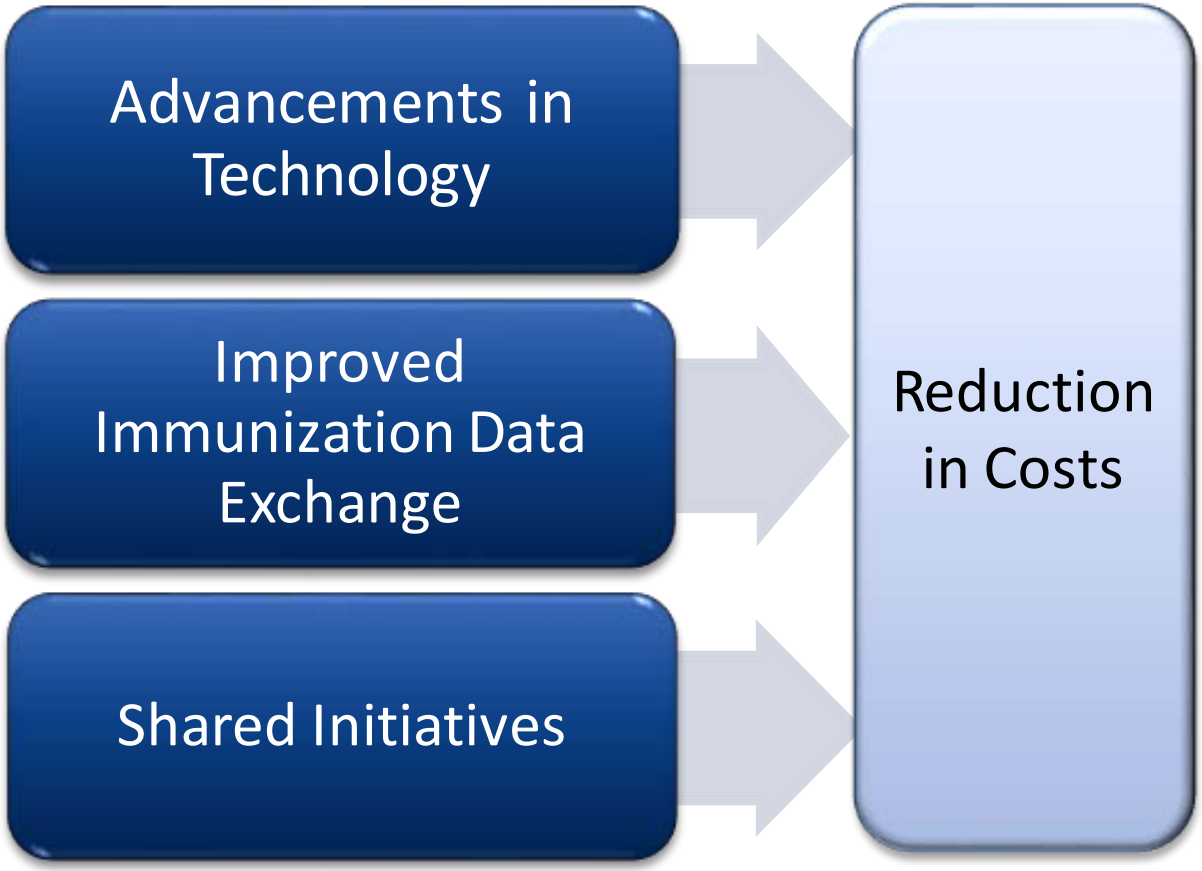
Original Article: PDF Only

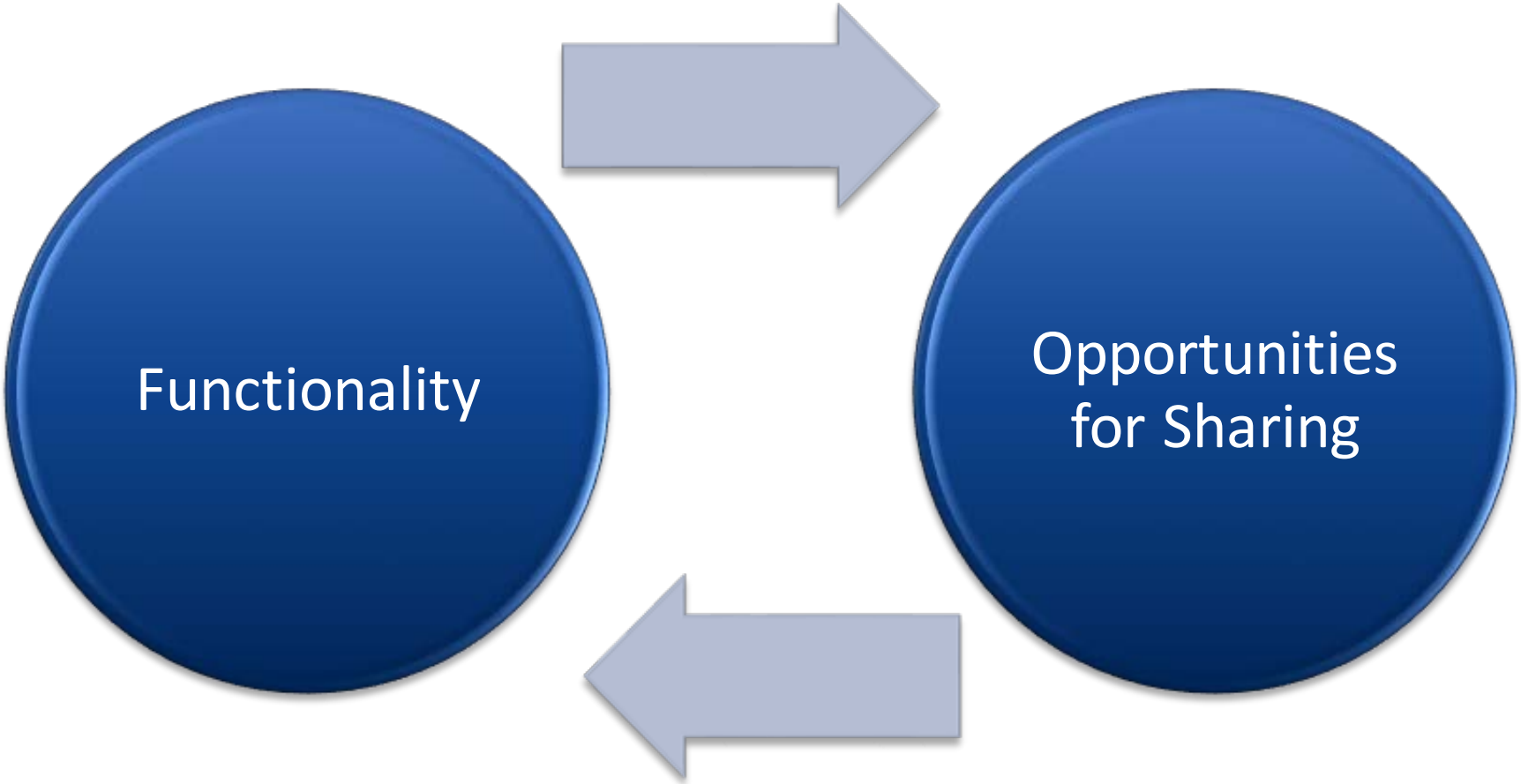
Economic Review of Immunization Information Systems to Increase Vaccination Rates: A Community Guide Systematic Review.

Patel, Mona MPH; Pabst, Laura MPH; Chattopadhyay, Sajal PhD; Hopkins, David MD, MPH; Groom, Holly MPH; Myerburg, Stuart JD; Morgan, Jennifer Murphy MSPH; and the Community Preventive Services Task Force

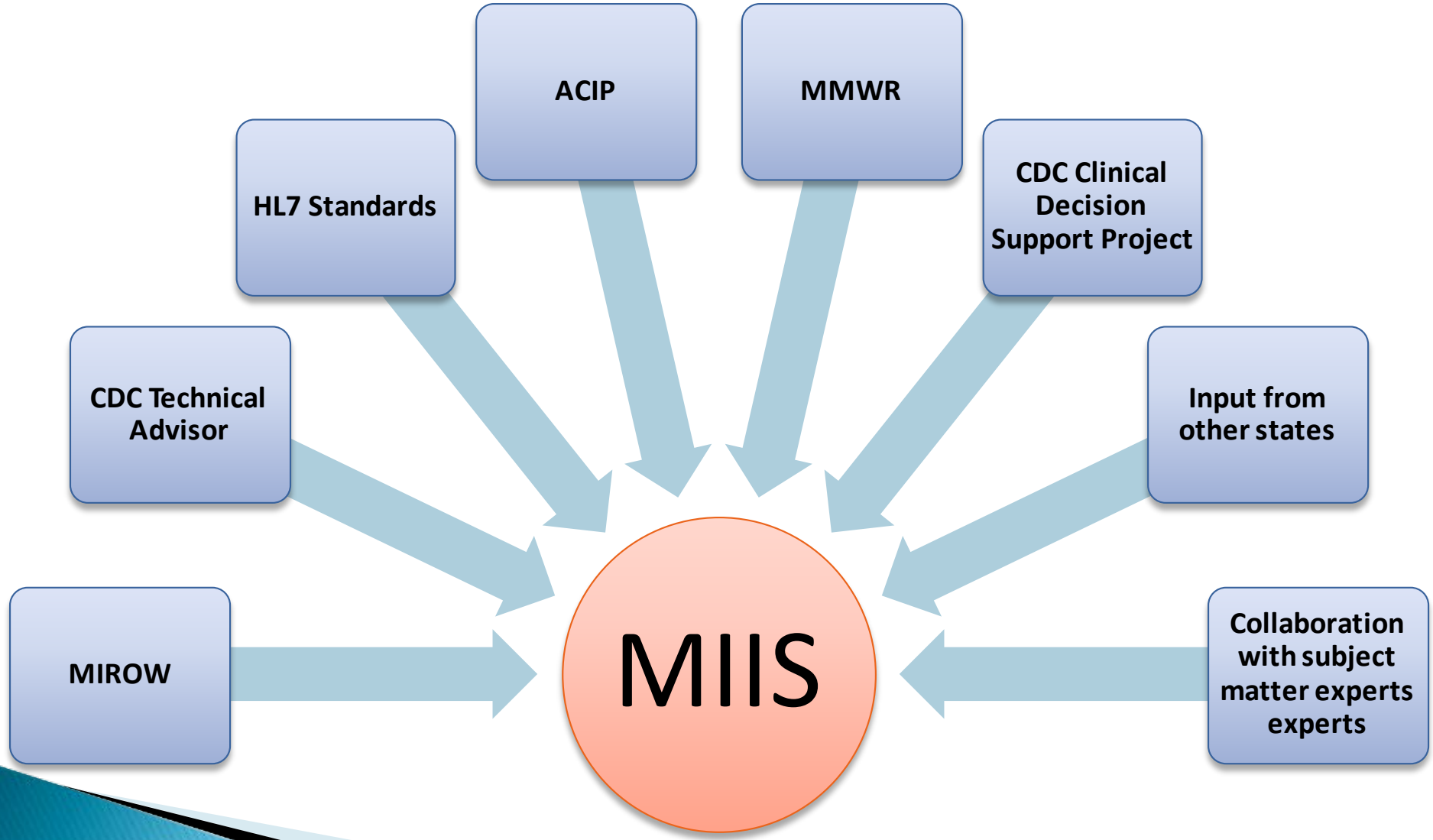
OPEN PAP



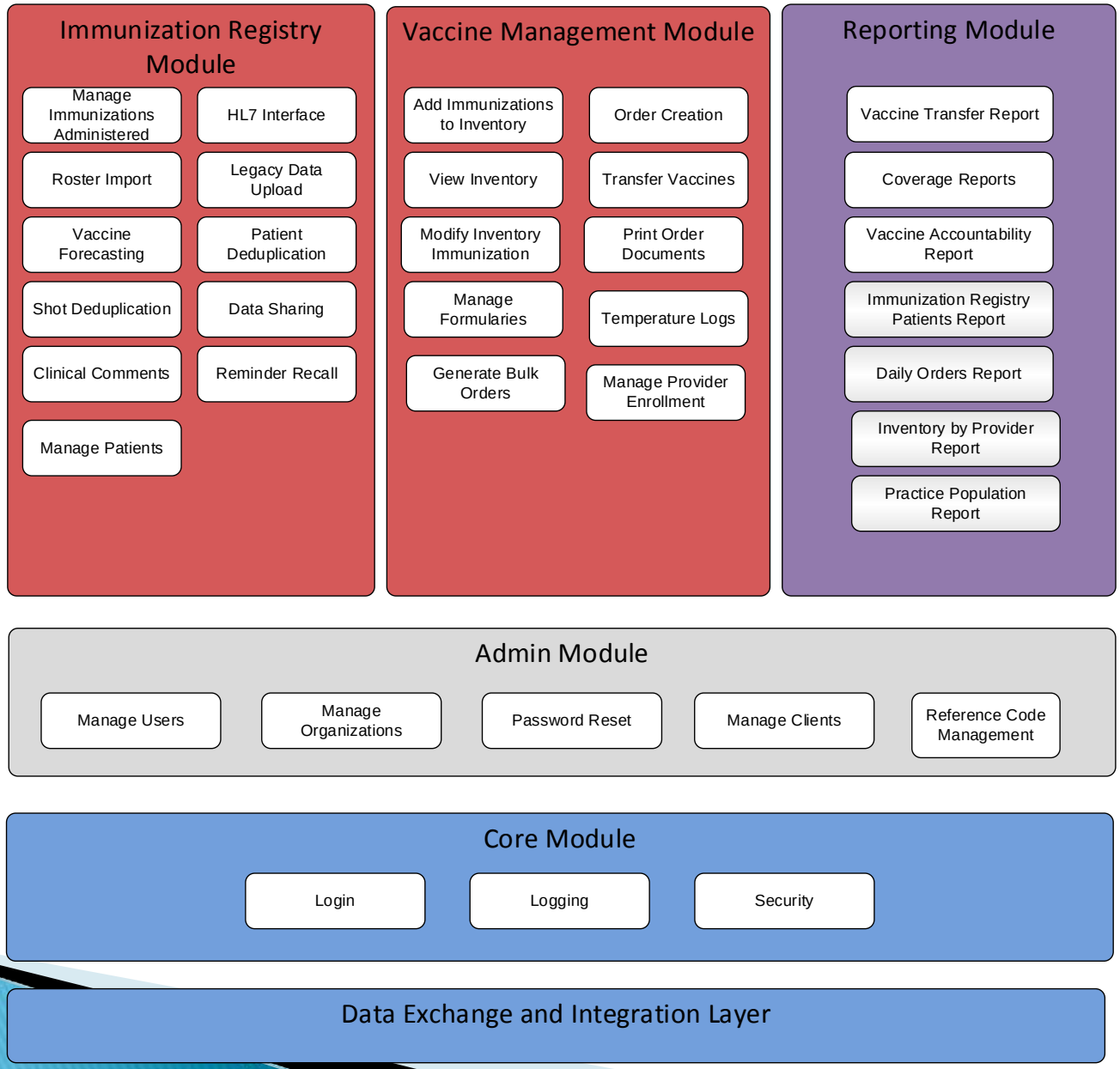
Let's Explore What's Available



Informed by the work of others

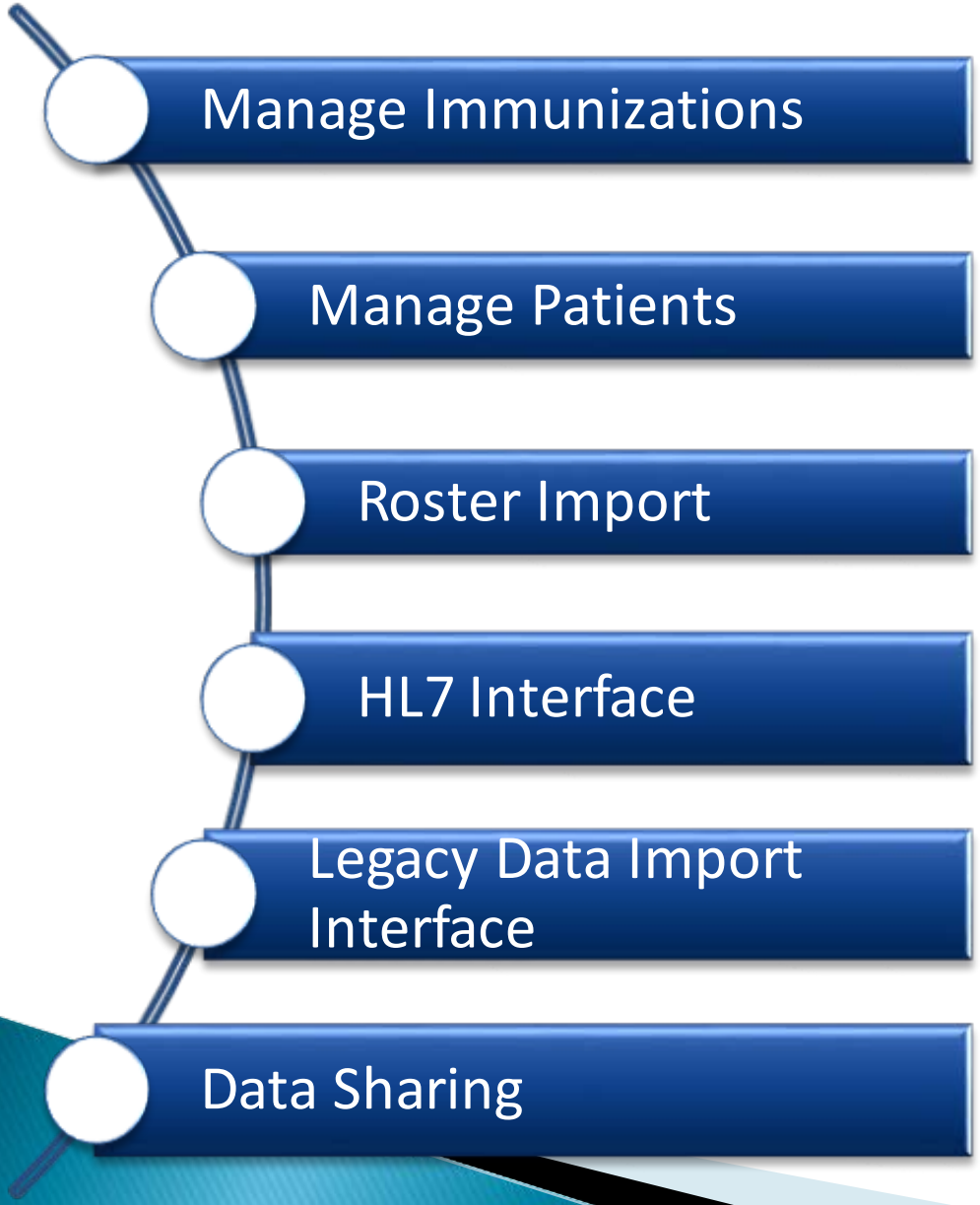


High-Level Functionality: Modules



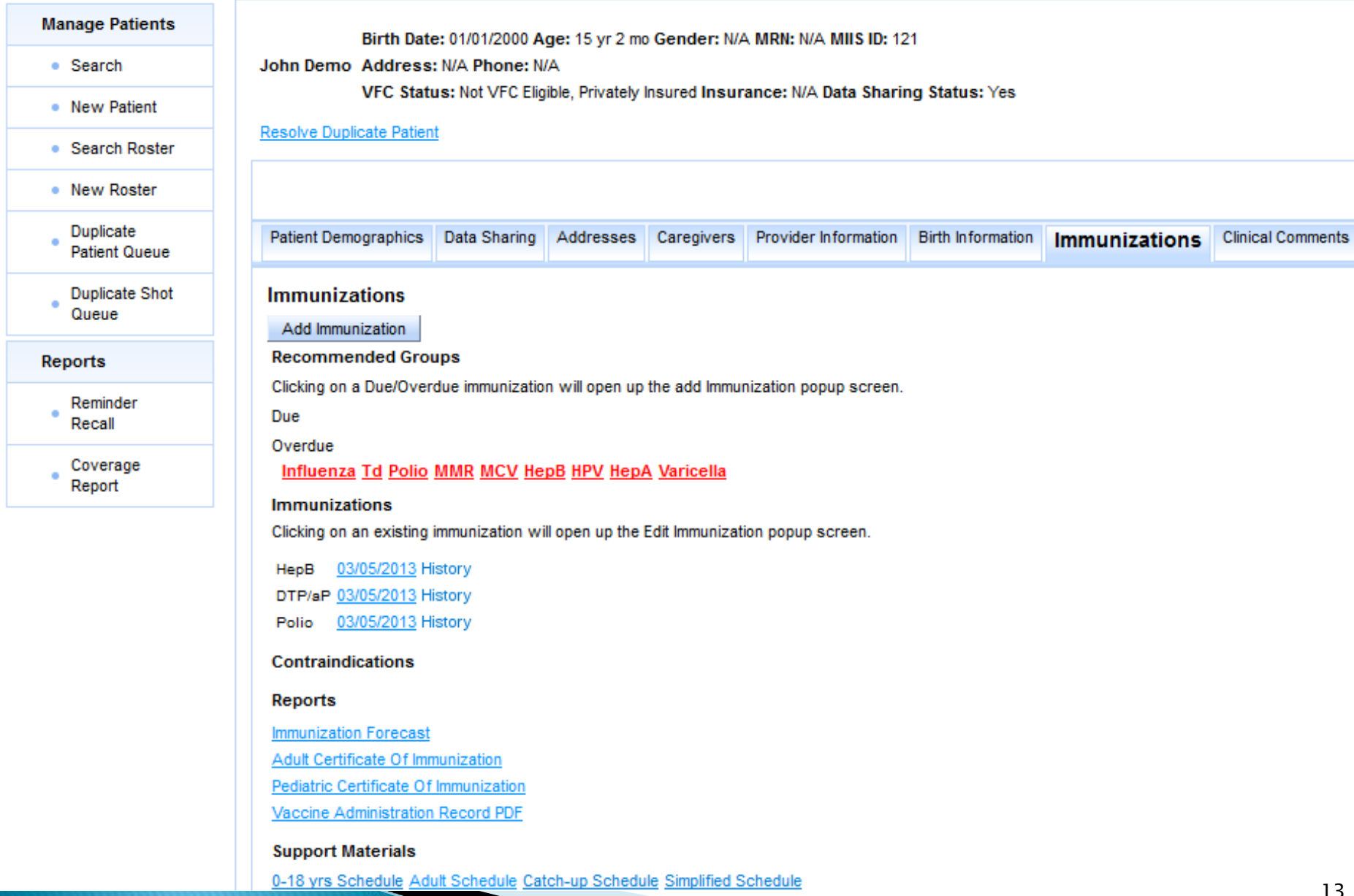
High-Level Functionality: Modules

Modules: Immunization Registry



- Vaccine Forecasting
- Shot Deduplication
- Clinical Comments
- Patient Deduplication
- Hl7 Message Processing

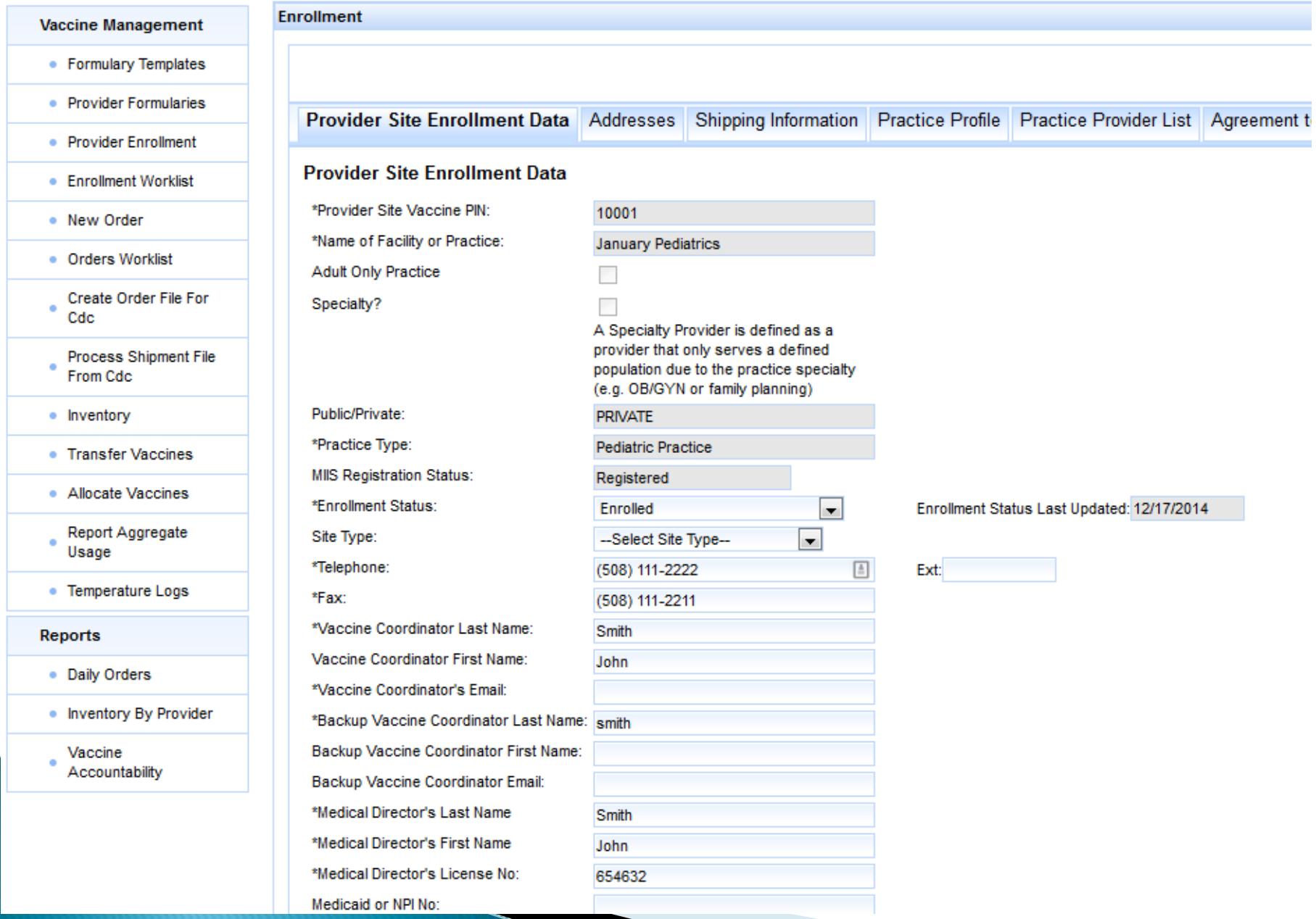
Modules: Immunization Registry



Modules: Vaccine Management

☆ Inventory Deduction

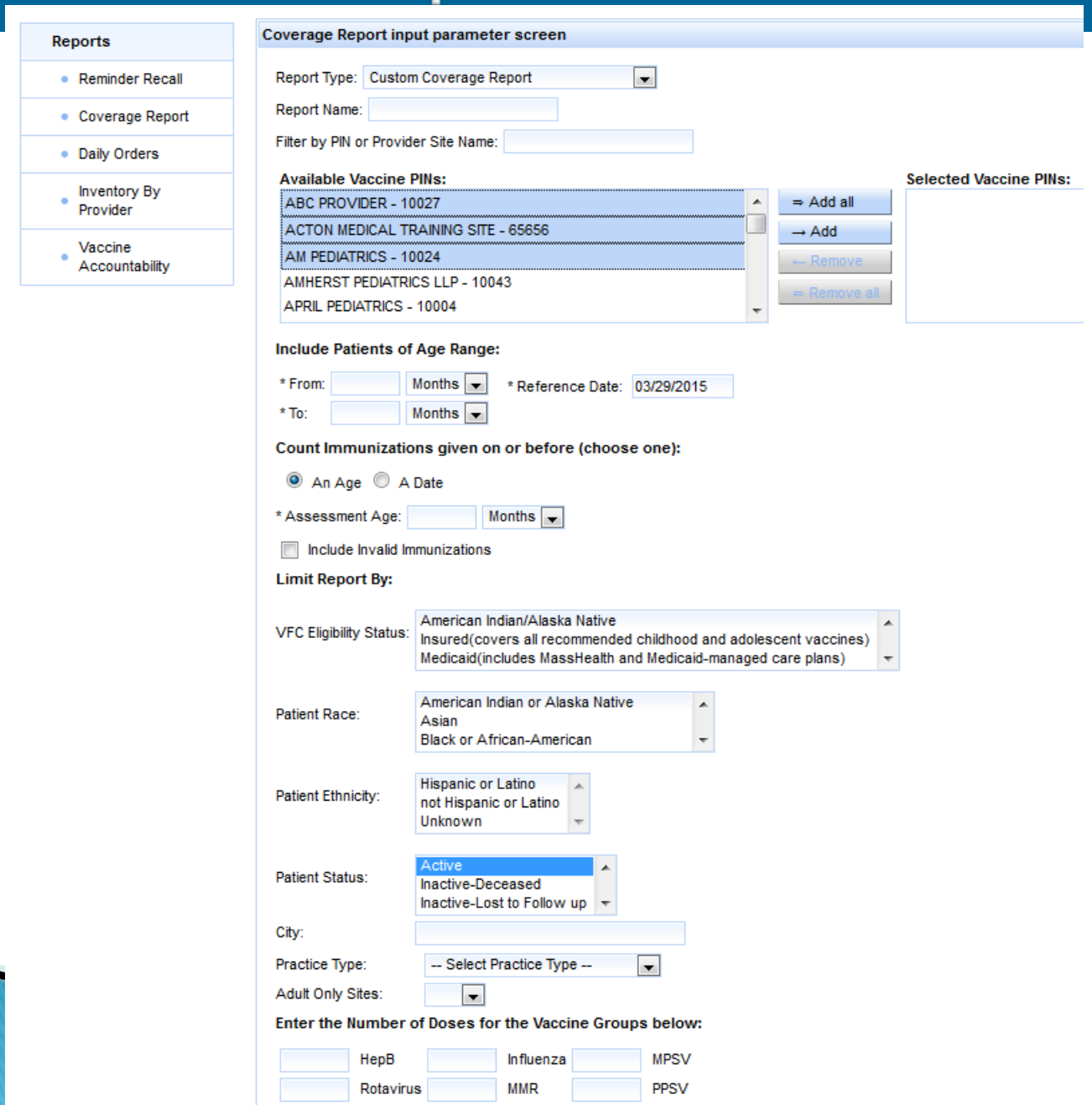
Modules: Vaccine Management



Modules: Reports

- Vaccine Transfer
- Coverage and Reminder Recall
- Vaccine Accountability
- Patient Level
- Daily Orders
- Inventory By Provider
- Practice Population

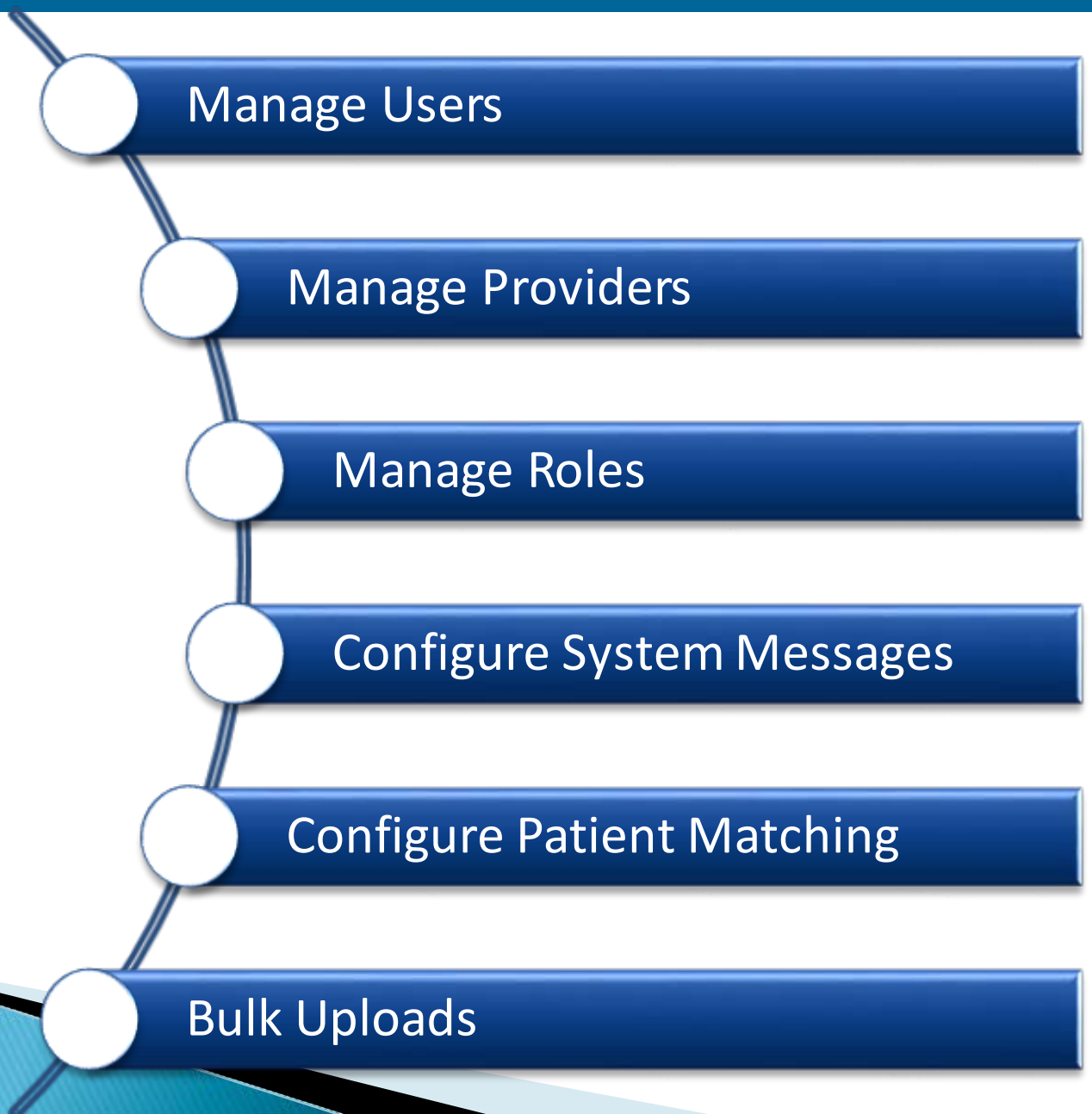
Modules: Reports



Modules: Resources

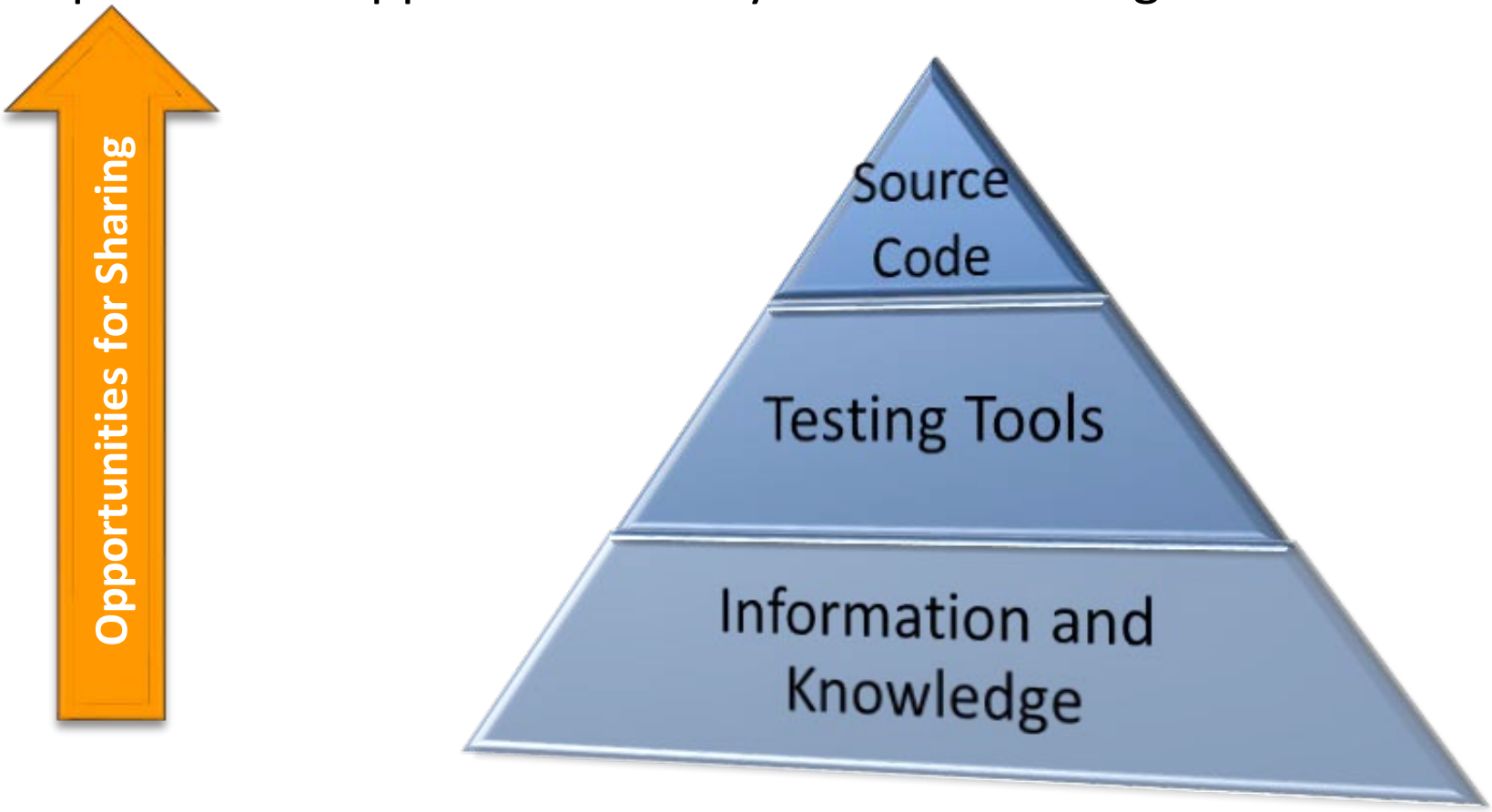
- **MIIS Resources**
  - MIIS User Manual
  - Fact Sheet for Parents and Patients in English
  - Fact Sheet for Parents and Patients in foreign languages
  - Objection (Withdrawal of Objection) to Data Sharing Form in English
  - Objection (Withdrawal of Objection) to Data Sharing Form in foreign languages
  - ContactMIIS Resource Center
  - MDPH's MIIS Website
  - Vaccine Management Information
- **Immunization Schedules and Recommendations**
  - Childhood and adolescent immunization schedule
  - Adult immunization schedule
  - Advisory Committee on Immunization Practices (ACIP) Recommendations
- **Vaccine Information Statements (VISs)**
  - Vaccine Information Statements in English
  - Vaccine Information Statements in foreign languages
- **Reporting Vaccine Errors and Adverse Reactions**
  - Vaccine Adverse Event Reporting System (VAERS)
  - Institute for Safe Medication Practices (for reporting errors)
- **Other Resources**
  - CDC's National Center for Immunization and Respiratory Diseases
  - CDC's Provider Resources for Vaccine Conversations with Parents
  - CDC's Vaccine Safety web page
  - CDC's Travelers' Health web page
  - Immunization Action Coalition (IAC)
  - Vaccine Education Center at the Children's Hospital of Philadelphia

Modules: System Administration

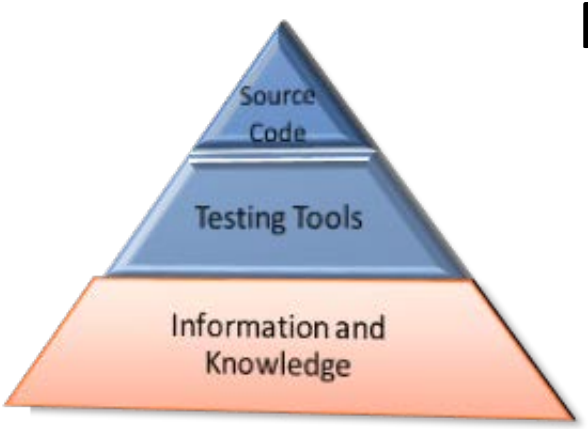


Opportunities for Sharing

Now that we have a sense of what the MIIS functions are, let's explore what opportunities may exist for sharing



Information and Knowledge



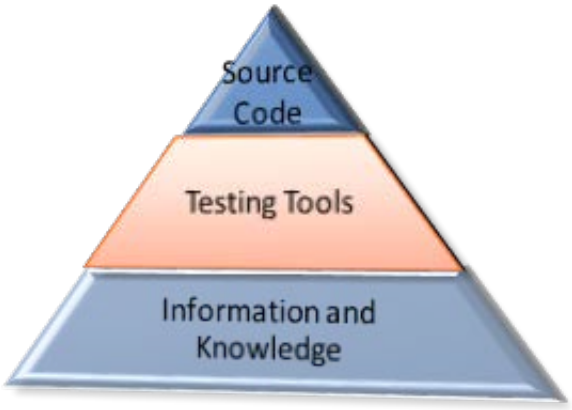
Requirements Documents

- Use Case Documents
- Data Dictionary
- Algorithm Logic (patient deduplication, shot deduplication, vaccine forecasting, inventory deduction, HL7 message processing, report logic, data sharing)

Roll-out Documents

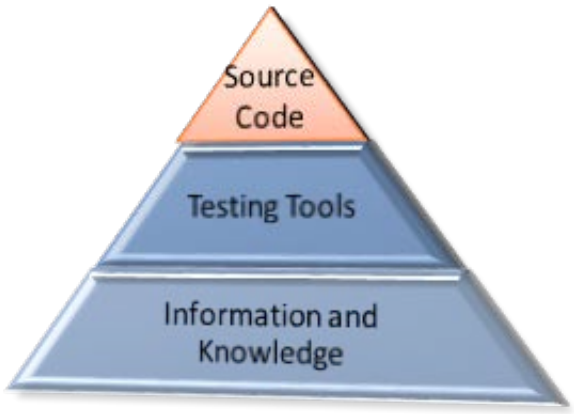
- User Manual
- Interoperability Roll-out Plans
- MA HL7 Implementation Guide

Testing Tools



- Test Cases
- Automated Test Libraries

Source Code



- The application source code can be made available.
- Code is not published for public access – intent is to share with interested Immunization Programs.

Note:

- Application built using J2EE architecture, including Spring Framework, Hibernate Persistence Layer, and JavaServer Faces
- System utilizes proprietary platform tools such as Oracle, WebLogic, Rhapsody, etc.

Summary

1. The MIIS has a wide range of functionality.
2. There are different ways in which the work can be shared.

What we do belongs to the entire IIS community.

- the community funds the work
- it is the right thing to do

Next Steps

We feel proud to be a part of the IIS Community.

If you want to learn more, contact us.

Contact Information

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