WASHINGTON STATE IMMUNIZATION INFORMATION SYSTEM (WAIIS)

Office of Immunization and Child Profile

Immunization Summit
October 8, 2019

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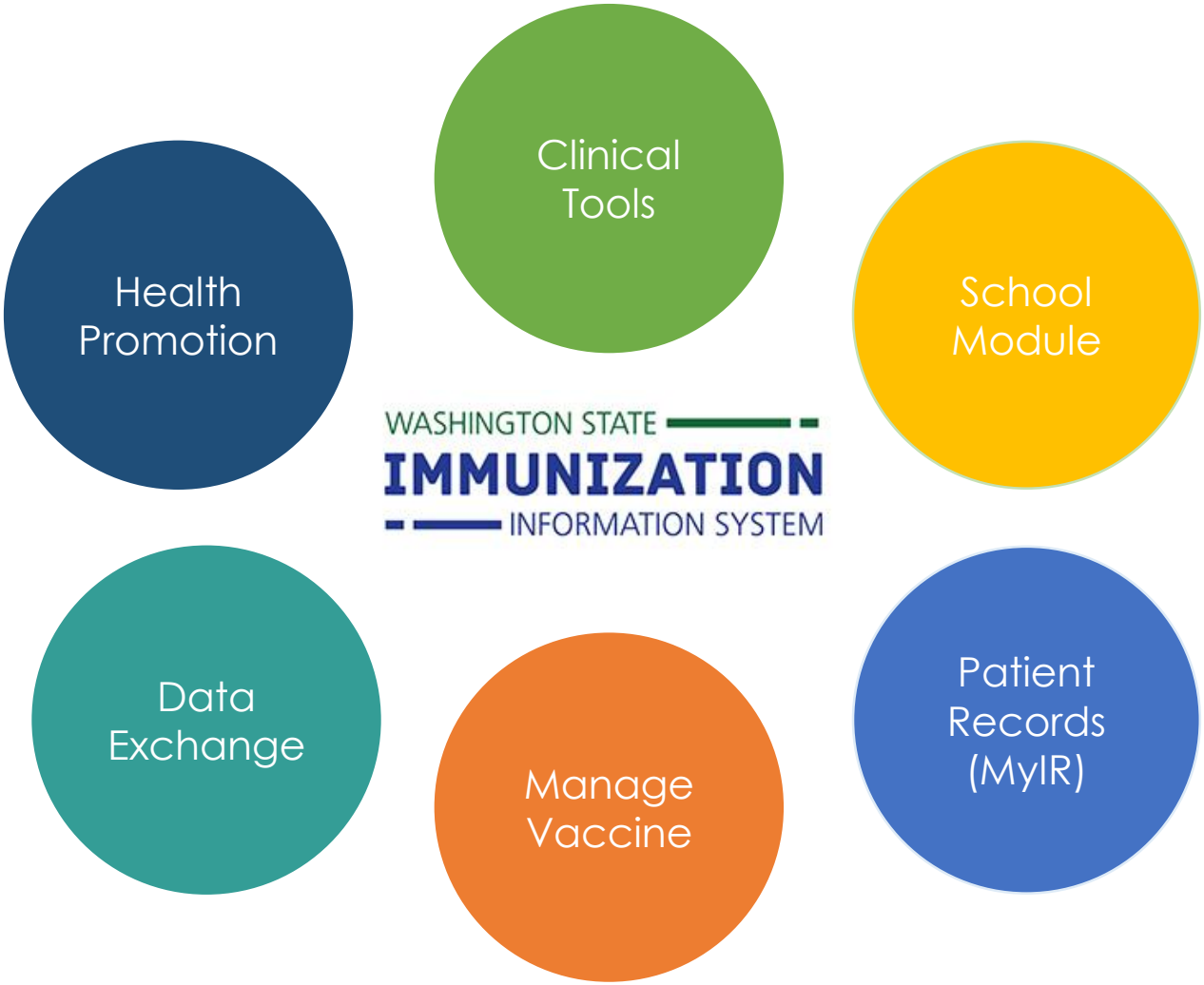
What is the Washington State Immunization Information System?

- Statewide web-based system that contains immunization records for patients of **all ages**
- Includes **105 million immunization records** for about **10 million people**

WASHINGTON STATE
IMMUNIZATION
INFORMATION SYSTEM

Components of the IIS



Data Exchange Definitions

Data Exchange

The process of transforming data into a set style so that it can be shared and understood between two different systems.

Interface

A point where two systems connect and send data from one system to another.

HL7 (Health Level 7)

HL7 is a set of standards for transferring health care data between healthcare providers and systems (e.g. EHR-EHR, EHR-IIS).

- **HL7 Messages** are the format used to send data between healthcare systems.
- **HL7 Codes** are a standard way to communicate information such as vaccine type, manufacturer, patient eligibility status, etc.

Before there was data exchange…

Organizations provided data to the IIS through:

- Manual data entry
- Imported data files

Electronic data exchange is now the most common way data is shared with the IIS!

Data Exchange
93%

Data Entry
6.5%

Data File
0.5%

Data Exchange Requirements

Organizations must have:

- **Information sharing agreement** to exchange data with the IIS.

The IIS requires the organization and clinic(s) to meet a set of **data quality standards**.

- The standards help ensure that accurate and complete data is sent to the IIS.

Washington State Immunization Information System

Information Sharing Agreement for

EXCHANGE OF IMMUNIZATION DATA

This agreement ("Agreement") is between the Washington State Department of Health ("DOH") and _____ ("Provider/Plan") for the exchange of immunization records.

BACKGROUND

- DOH is the public health agency that maintains the Washington State Immunization Information System ("IIS"). IIS serves as a communications link, repository, and retrieval tool for data on the immunization status of individuals ("immunization data"). IIS allows health care providers and health plans to exchange immunization data with other health care providers and health plans as authorized under Chapter 70.02 RCW.
- Provider/Plan is: (check one):

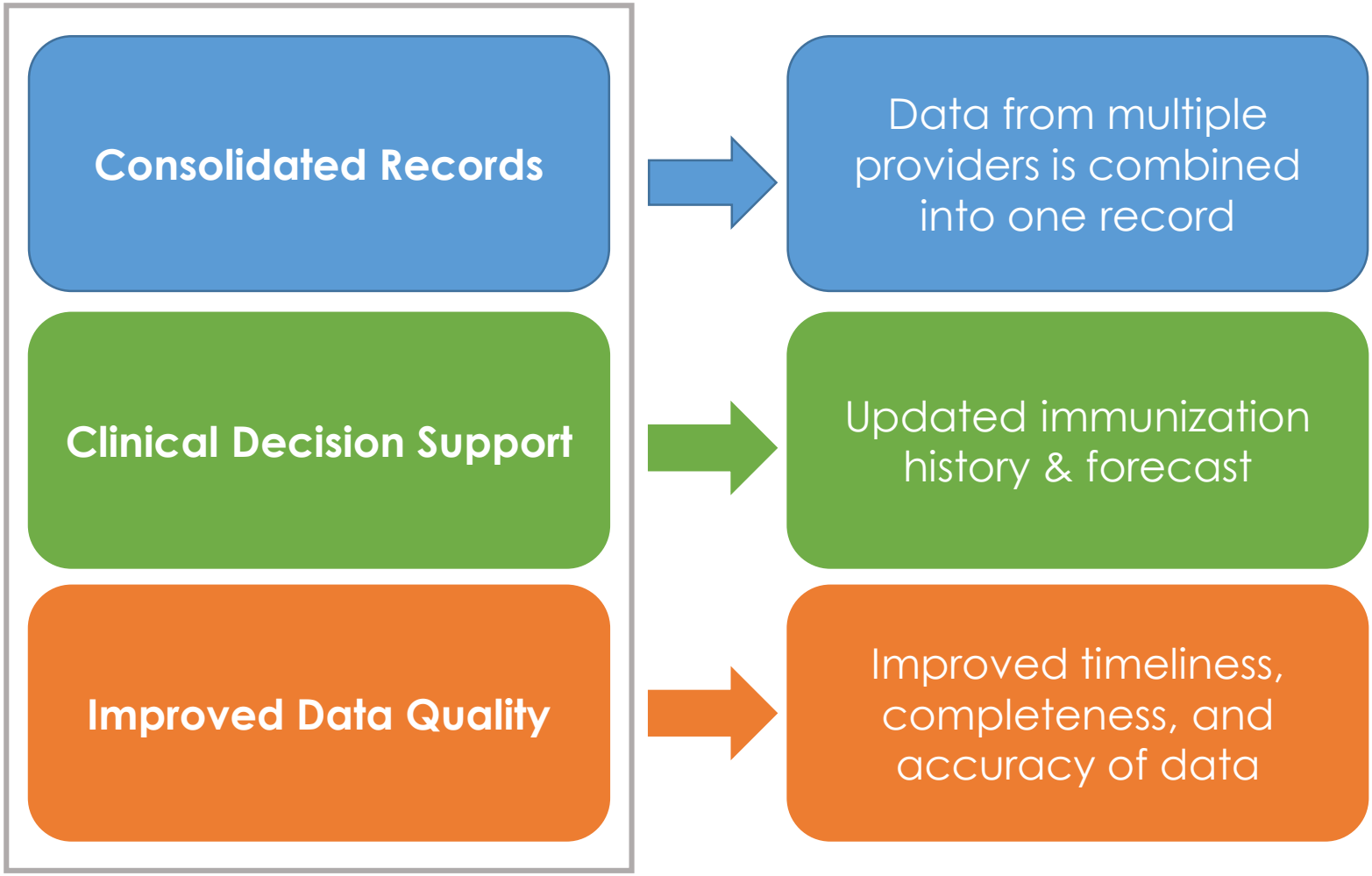
  [ ] A public agency, corporation, or other entity with individual shareholders, members, officers, employees, contractors, or other personnel who are authorized under Washington law to provide health care or public health services to individuals.

  [ ] A healthcare service contractor authorized by the Washington Insurance Commissioner to sell health insurance to, and/or administer health insurance plans in Washington State.

  [ ] A school, school district, Head Start organization, and/or ECEAP grantee authorized to provide or coordinate healthcare services for students through personnel who are authorized under Washington law to provide such services.

  [ ] An individual authorized under Washington law to provide health care services to individuals.

Benefits of Data Exchange with the IIS



EHR's & IIS

EHR	IIS
An organization's medical record for their patients	Immunization records for a broad population
Record of immunizations received from an org/clinic*	Immunization records from multiple providers/data sources
Supports clinical decision-making for patients	Supports clinical decision-making for immunizations

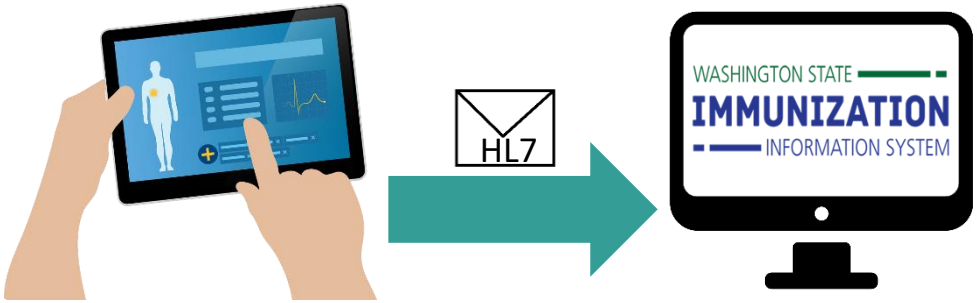
*If the clinic documents historical vaccinations in their EHR or has a bi-directional interface, they may have immunization records from other providers in their EHR.

How Does Data Get to the IIS?

Without Interface

Clinic staff log in to the IIS and enter vaccines.

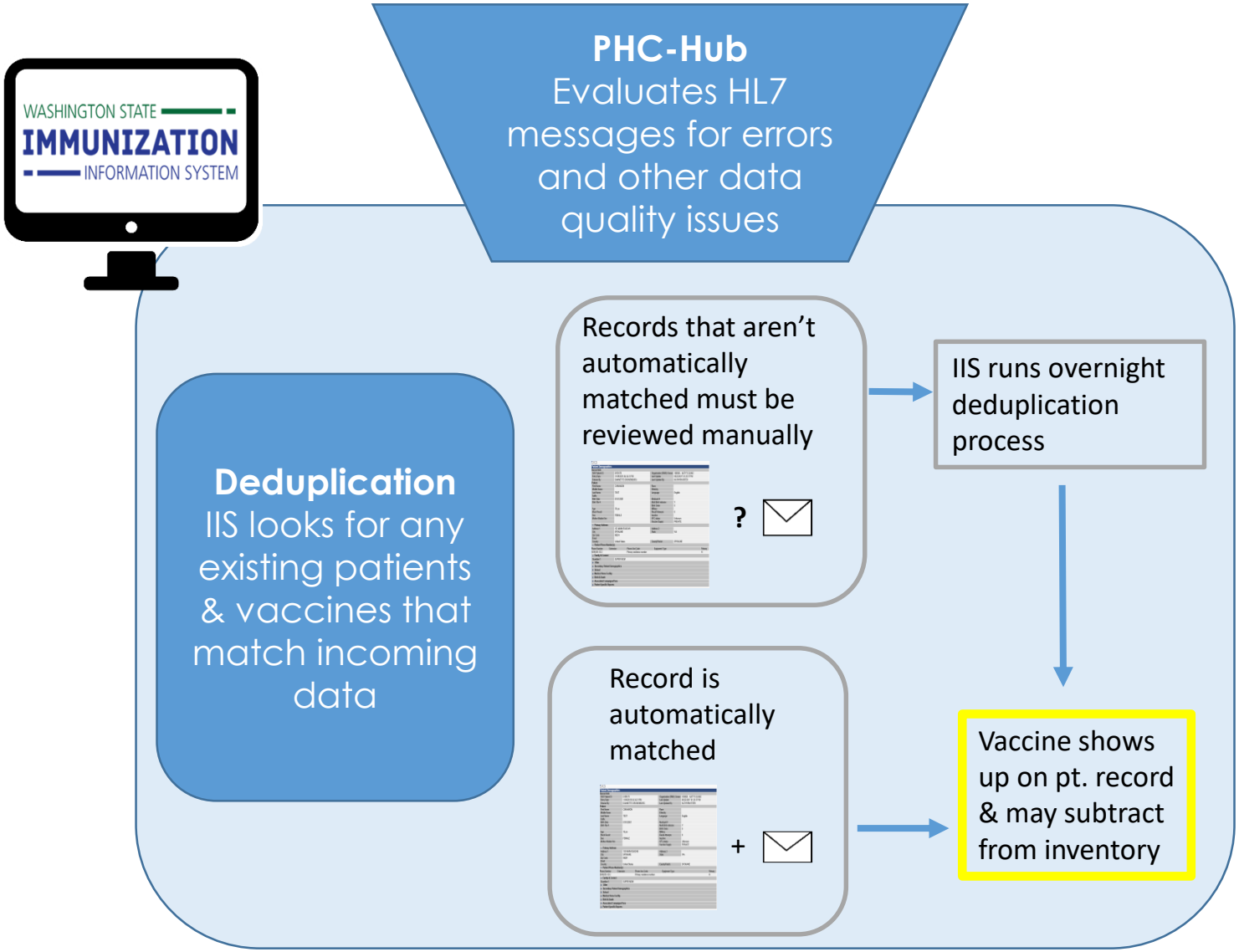
With Interface



Clinic staff enter vaccines in EHR and data is sent as an HL7 message to the IIS.

Data Exchange Through the HIE

Patient & Vaccine Deduplication



Recap of Data Exchange Process

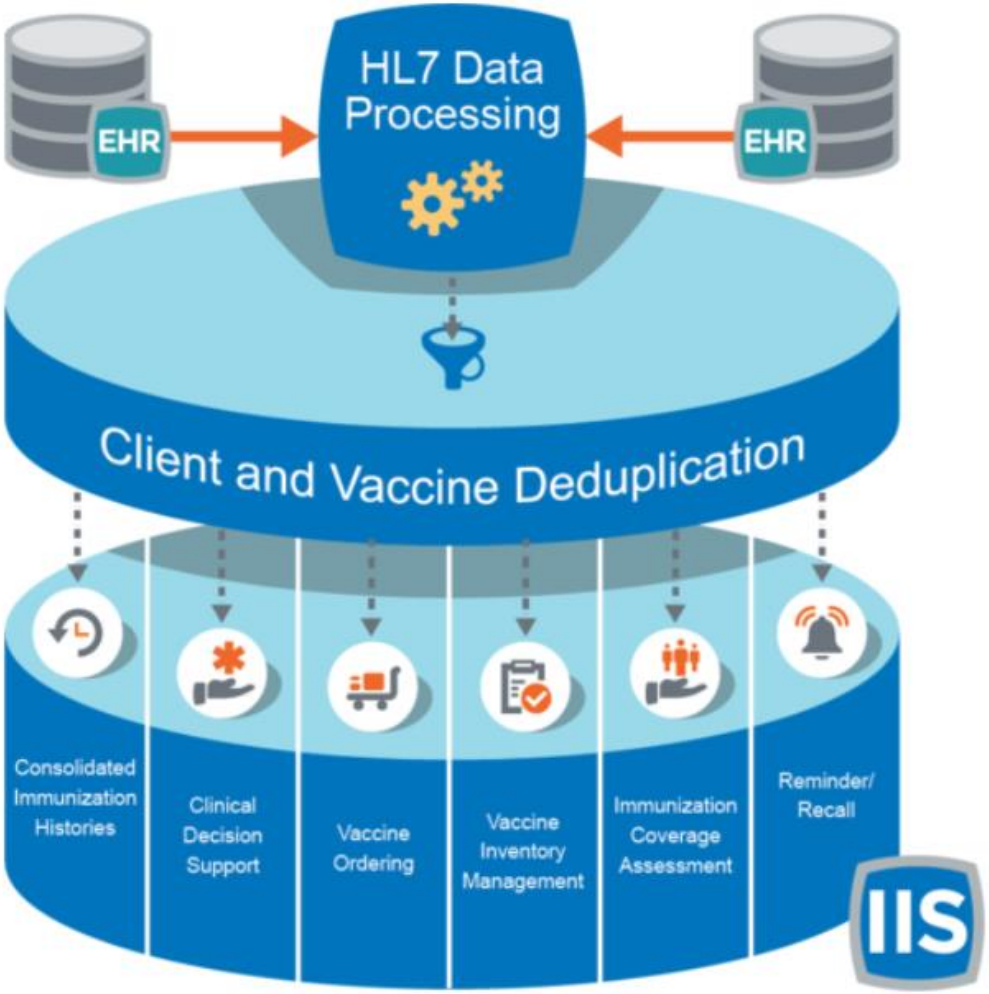


Image courtesy of HL7 Basics for IIS - informaticsacademy.org

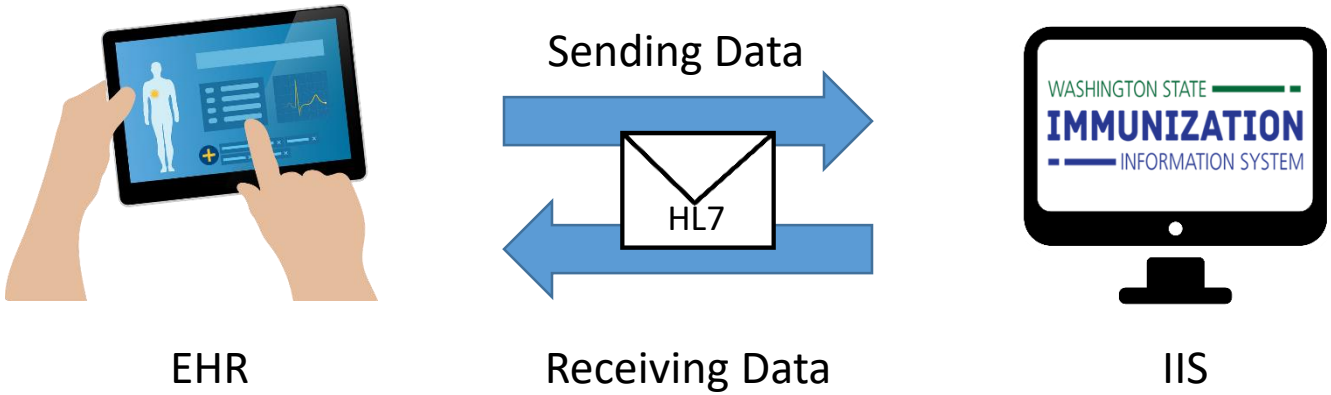
Types of Data Exchange

Unidirectional

Data exchanged in one direction (EHR to IIS).

Bidirectional

Data exchanged in two directions (EHR to IIS and IIS to EHR)



HL7 Data Elements

Date/Time of Message

Patient Name

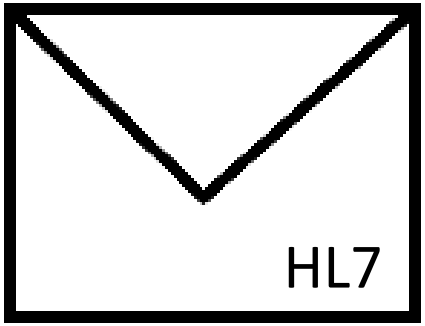
Date of Birth

Date of Vaccine Administration

CVX Code

Dose Size

Route of Administration



For other required data elements and information regarding data exchange requirements, please review the WAIIS HL7 Interface Project Guide

For current CVX, MVX, CPT codes, please visit the CDC code sets. Subscribe to receive IIS related CDC updates here.

Common HL7 Message Types

Vaccination Event (VXU) – Sends administered and historical vaccination information.

Acknowledgement (ACK) – Confirms receipt of message & communicates any issues with the message.

A sample interface used for updating the IIS

Image courtesy of HL7 Basics for IIS - informaticsacademy.org

Common HL7 Message Types

Query (QBP) – Request a patient's immunization history or evaluated history and forecast.

Response to Query (RSP) – Response to the query that may include immunization history, forecast, a list of possible patient matches, or indicate if a matching patient was not found.

A sample interface used for querying the IIS

Image courtesy of HL7 Basics for IIS - informaticsacademy.org

Not all Interfaces are the Same

Many variables depend on how each interface is set up:

- Unidirectional vs bidirectional
- Data your EHR is able to send (e.g. vaccine funding source)
- How often data is sent to the IIS (immediately after documenting in EHR, daily batches of data, etc.)
- Ability to send update & delete messages

Data Quality

- IIS data is a compilation of all data provided by participating organizations.
- The accuracy of records in the IIS are based on accuracy of information shared by participating organizations.

Data Quality & IIS

Image courtesy of Data Quality for IIS - informaticsacademy.org

Data Quality Considerations

Data exchange issues impact the quality of data in the IIS

- Inaccurate or incomplete demographic data may result in more manual review/bad merges/duplicate records.
- Inaccurate or incomplete vaccination data may affect school/child care immunization compliance and accuracy of the patient's history & forecast.
- Issues with inventory decrementing (for clinic's who manage vaccine inventory in the IIS).
- Inaccurate immunization coverage rates.

Data Quality Monitoring

Organizations submitting electronic data to the IIS are responsible for monitoring their data quality:

- Review the daily warnings & errors report and correct issues.

DOH routinely monitors data sent from EHRs and evaluates whether data quality standards are being met.

It's very important for organization's to monitor their daily Warnings & Errors report after any EHR or IIS upgrades to identify any issues early.

Common Errors

Errors

Stops data from getting to the IIS. Data sent from the EHR will not appear on patient records.

Error Reason	Description
VFC Status Missing/Unrecognized	No VFC eligibility status was sent or an invalid code was sent
CVX Code Missing	No data was sent indicating which vaccine type was administered
Vaccination Administered Units Missing	No data was sent indicating the unit of measure for the vaccine (e.g. mL)

Common Warnings

Warnings

The IIS accepts the data, but it may be inaccurate or incomplete.

Warning Reason	Description
Vaccination Entering Organization Missing	The facility that **documented** the vaccine was not sent
Patient Immunization Registry Status Missing	The patient status indicator (e.g. active, inactive) was not sent
Vaccination Lot Unrecognized	The lot number sent does not match a lot number in the clinic's IIS inventory

For More Information on Data Exchange

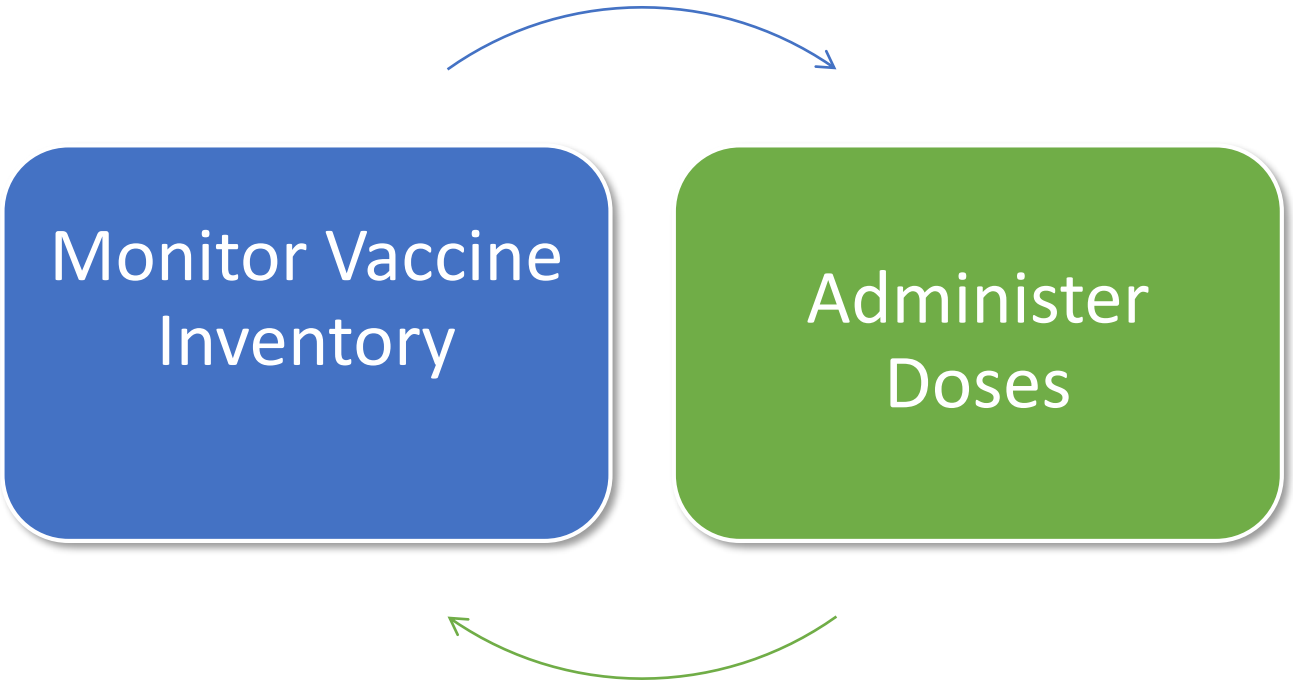
IIS Data Exchange Resources

- WAIIS Data Exchange Information
- WAIIS Data Exchange Onboarding Process
- WAIIS HL7 Interface Project Guide
- HL7 Code Sets
- IIS Common Codes Guide
- Managing Inventory with an Interface Guide

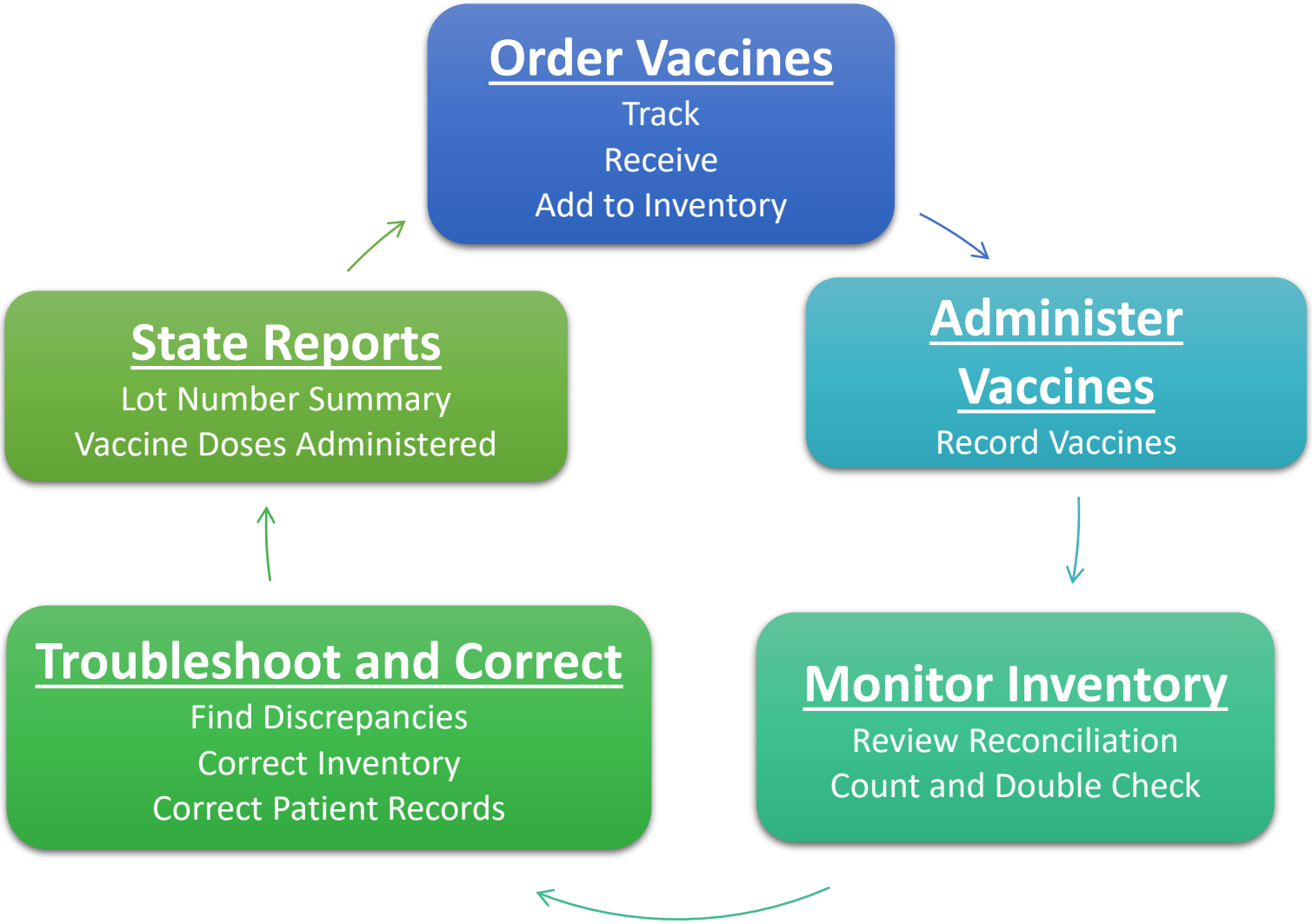
Questions?

IISDataExchange@doh.wa.gov

Using the IIS to manage vaccine inventory



Childhood Vaccine Program: Vaccine Management



Vaccine Ordering & Inventory Management

Create Order

Organization: MEGAN ORGANIZATION
Facility: MEGAN - FAMILY PRACTICE
Phone Number: (360)236-2829
Phone Extension:
Email: WACHILDHOODVACCINES@DOH.WA.GOV

First Name: JANE
Middle Name: C
Last Name: DOE
Address: 5513 TUMWATER BLVD
City: OLYMPIA
State: WA
Zip: 98501

Monday:	☐	09:00	12:00	13:00	17:00	**Tuesday:**	☐	09:00 12:00	13:00 17:00
Wednesday:	☐	09:00	12:00	13:00	17:00	**Thursday:**	☐	09:00 12:00	13:00 17:00
Friday:	☐	09:00	12:00	13:00	17:00				

PIN: 193190
Instructions: SECOND DOOR ON LEF
Order Date: 08/27/2019
Order Status: In Progress
Submitter: MEGAN DEMING (MDEMING)
Comments:
Inventory Last Submitted: 07/30/2019
Vaccine Administered Report Last Submitted: 07/30/2019
Last Order Submitted: 07/30/2019 06:43:48 AM
Order Set: STATE SUPPLIED 003 / Distributor

Inventory Transaction Report | Lot Number Summary | Edit Temperature | Doses Administered Report

Order Frequency: Monthly **Order Timing:** 1st to 15th
Order Schedule:

Order Details

Vaccine	Vaccine Name	Funding Source	Dose Used Last Month	Physical Inventory	Order Quantity	Urgent	Priority Reason	Comments
DT (pediatric)	DIPHTHERIA AND TETANUS TOXOIDS ADSORBED	SPLIT	0	0				
DTaP-Hep B-IPV	PEDIARIX	SPLIT	0	0		☐	--select--	
DTaP-Hib-IPV	PENTACEL	SPLIT	0	0		☐	--select--	
DTaP-IPV	KINRIX	SPLIT	0	0				

Monitor Inventory – Reconciliation Screen

- Can manage / display public & private vaccine
- Can add / manage state-supplied adult vaccine
- Ex. L1234-ADU, L1234*, or L1234-S
- Shows Expired / Soon to Expire Vaccine
- Shows Last Inventory & Dose Administered Report Submission Dates

Reconcile Inventory

Vaccine	Lot Number	Exp Date	Quantity on Hand	Physical Inventory	Adjustment (+/-)	Category	Reason	Funding Source
DTaP (Daptacel,Infanrix,Tripedia)	C5254AA	09/18/2019	19		0.0	--No Category Required	--No Reason Required--	PUB
DTaP (Daptacel,Infanrix,Tripedia)	C5281AA	10/05/2019	10		0.0	--No Category Required	--No Reason Required--	PUB
DTaP-Hep B-IPV (Pediarix)	2HC47	12/13/2020	10		0.0	--No Category Required	--No Reason Required--	PUB
DTaP-Hep B-IPV (Pediarix)	M9A93	09/18/2020	3		0.0	--No Category Required	--No Reason Required--	PUB
DTaP-IPV (Kinrix,Quadracel)	27D9A	06/16/2020	10		0.0	--No Category Required	--No Reason Required--	PUB
DTaP-IPV (Kinrix,Quadracel)	95FR9	11/18/2019	10		0.0	--No Category Required	--No Reason Required--	PUB
Hep A, ped/adol, 2 dose (Havrix,Vaqta)	9374N	09/01/2020	9		0.0	--No Category Required	--No Reason Required--	PUB
Hep B, adolescent or pediatric	R007212	11/04/2020	17		0.0	--No Category Required	--No Reason Required--	PUB

Troubleshooting Reports

Reconciliation Page

Reconcile Inventory

Vaccine	Lot Number	Exp Date	Quantity on Hand	Physical Inventory	Adjustment (+/-)
DTaP	12345	09/14/2015	2		0.0
DTaP	1234567	01/01/2016	9		0.0
DTaP	349586	12/31/2017	10		0.0
DTaP/Hep B/IPV (Pediarix)	4927-1	12/30/2017	10		0.0
DTaP/IPV (Kinrix)	1213	09/01/2015	9		0.0
IPV	104	12/31/2017	10		0.0
Mening. (MCV4P) (Menactra)	23489562	12/31/2017	-2		0.0
Pneumococcal(PPSV) (Pneumovax 23)	482749587HH	10/30/2017	29		0.0
Rotavirus, pentavalent RV5 (RotaTeq)	45980	12/31/2017	9		0.0
Tdap (Boostrix, Adacel)	20723409	12/31/2017	19		0.0
Varicella (Varivax)	1234	01/20/2015	5		0.0

Reasons for Discrepancies:

Lot Numbers Not Entered

Incorrect Lot Choice

Negatives After Lot has Run Out

Patient Detail Report

Reasons for Discrepancies:

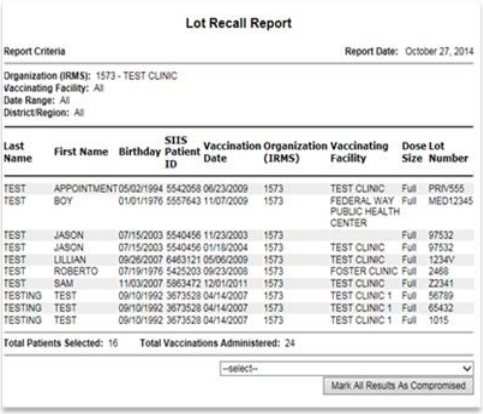
Lot Number Typo

Missing Info

VFC Status

Administered Before Received

Lot Usage and Recall



Lot Recall Report

Report Criteria — Report Date: October 27, 2014

Organization (IRMS): 1573 - TEST CLINIC
Vaccinating Facility: All
Date Range: All
District/Region: All

Last Name	First Name	Birthday	SIIS Patient ID	Vaccination Date	Organization (IRMS)	Vaccinating Facility	Dose Size	Lot Number
TEST	APPOINTMENT	05/02/1994	5542058	06/23/2009	1573	TEST CLINIC	Full	PRIV555
TEST	BOY	01/01/1976	5557643	11/07/2009	1573	FEDERAL WAY PUBLIC HEALTH CENTER	Full	MED12345
TEST	JASON	07/15/2003	5540456	11/23/2003	1573		Full	97532
TEST	JASON	07/15/2003	5540456	01/19/2004	1573	TEST CLINIC	Full	97532
TEST	LILLIAN	09/26/2007	6463121	05/06/2009	1573	TEST CLINIC	Full	1234V
TEST	ROBERTO	07/19/1976	5425203	09/23/2008	1573	FOSTER CLINIC	Full	2468
TEST	SAM	11/03/2007	5863472	12/01/2011	1573	TEST CLINIC	Full	Z2341
TESTING	TEST	09/10/1992	3673528	04/14/2007	1573	TEST CLINIC 1	Full	56789
TESTING	TEST	09/10/1992	3673528	04/14/2007	1573	TEST CLINIC 1	Full	65432
TESTING	TEST	09/10/1992	3673528	04/14/2007	1573	TEST CLINIC 1	Full	1015

Total Patients Selected: 16 Total Vaccinations Administered: 24

--select--

Mark All Results As Compromised

Reason for Use:

Run for Negatives on Reconciliation

Compare with Records

Run for When Lot was Not Available

School Module Overview

- The Washington State Immunization Information System (IIS) is a statewide system used by a majority of providers to record millions of vaccines administered to their patients.
- The School Module is a portal to the IIS that allows schools to track and manage student and school-level immunization information.
- Provides a consolidated system for healthcare providers, parents, and schools are access the same immunization information.

Relationship of the School Module to the Immunization Information System (IIS)

Healthcare Provider Access

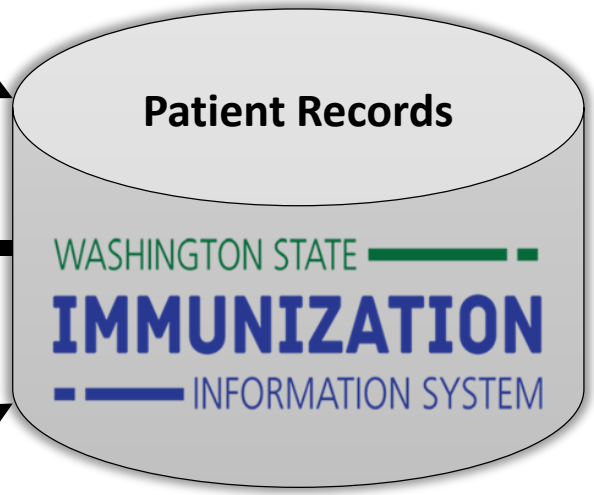
- View Records
- Print CIS
- Add/Edit records & contraindications
- Run clinic & patient reports

School (View Only Access)

- View Records
- Print CIS

School Module Access

- View Records
- Print CIS
- Add records
- Run school-specific reports & parent letters



School Module Rollout

Who is using the School Module?

- 38 public school districts
- 18 private schools
- 2 charter schools
- 4 ECEAP/Head Starts

About 146,670 students
or
12.8% of students in Washington

- 17 are in progress
- 57 have expressed interest

Benefits for Schools Using the School Module

- Access to the IIS that contains millions of immunization records
- Reduces immunization duplicate data entry into a school's student information system
- Saves money and staff time
- Reports and parent letters and identify students at risk
- Eliminates the need to submit the required annual immunization report
- Adds missing immunizations records to the IIS
- Creates a lifetime immunization record
- **Reduces the number of unnecessary immunizations**
- **Supports healthy, well-immunized students**

What We Are Excited About

- Gold Standard for school data reporting
- Data being used to assess and evaluate
- Increased data in IIS, Immunization dates entered by school nurses:
  - 2016-2017 school year: 21,920
  - 2017-2018 school year: 33,536
  - 2018-2019 school year: 61,531
  - Total since the roll-out began: 116,987

Healthcare Providers & the School Module

The more complete the data is, the easier providers, schools and parents can determine immunization compliance

Healthcare providers can help:

- Enter missing historical immunizations
- Provide medically verified records to schools and parents or enter these missing immunizations in the IIS for your patients

School Module Website

www.doh.wa.gov/schoolmodule

Washington State Department of Health

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Community and Environment > Schools > Immunization > School Module

- Schools
  - Environmental Health
  - Immunization –
    - Child Care Status Reporting
    - Exemption Law Change +
    - School Module
    - School Status Reporting
    - Revised Code of Washington
    - Washington Administrative Code
  - Personal Responsibility and Education Plan
  - Safe Routes to School
  - Sexual Health Education +

Washington State Immunization Information System (IIS) School Module

The School Module is a feature of the Washington State Immunization Information System (IIS), an online registry of immunization records for people of all ages in Washington State. The School Module is a free, secure, and easy-to-use web-based tool that allows users to track and manage student and school-level immunization information.

With the School Module, schools can access existing immunization records in the IIS entered by healthcare providers, providing them with information they need to conduct important immunization work. The goal of this system is to improve compliance rates with immunization requirements and to support healthy, well-vaccinated students.

The Department of Health is currently rolling out the School Module to schools across Washington State. If you are interested in getting access or have a question about the School Module, please contact us by email at schoolmodule@doh.wa.gov.

Learn more about the School Module

- School Module Fact Sheet
- List of Schools Using the School Module
- School Module FAQs

This information is intended to assist schools in establishing and managing School Module access. This page is designed to act as a toolkit to guide schools through the School Module onboarding process and provide assistance to using the School Module.

IIS Training and Support

IIS Questions & Assistance

Contact the Help Desk

- 1-800-325-5599
- WAIISHelpDesk@doh.wa.gov

Request IIS Training

Email the IIS Outreach & Training Team

IIS.Training@doh.wa.gov

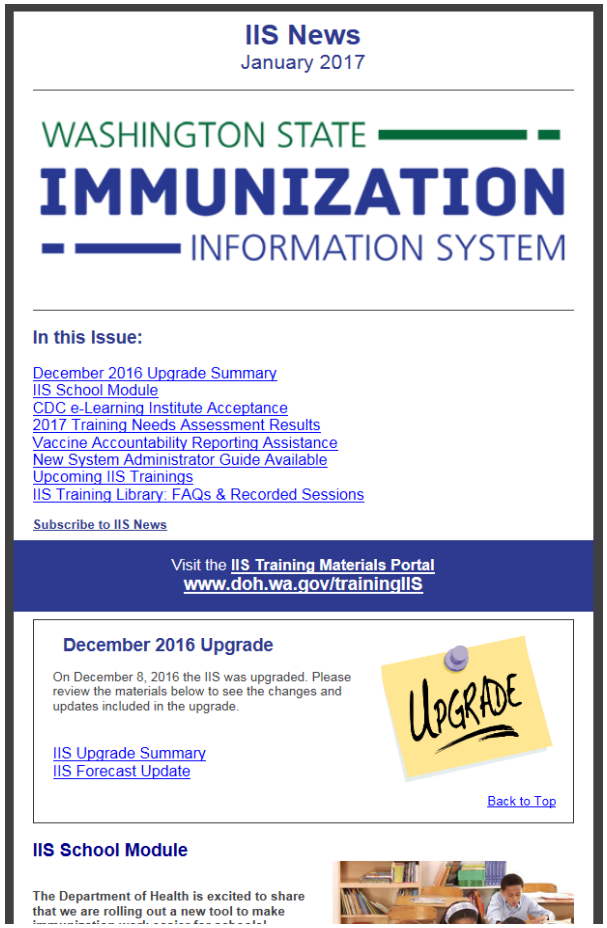
IIS Training Resources

Visit the IIS Training Materials Portal

www.doh.wa.gov/trainingIIS

Recorded IIS Webinars on YouTube

Visit the IIS YouTube Channel here



IIS News
January 2017

WASHINGTON STATE IMMUNIZATION INFORMATION SYSTEM

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Vaccine Accountability Reporting Assistance
New System Administrator Guide Available
Upcoming IIS Trainings
IIS Training Library: FAQs & Recorded Sessions

Subscribe to IIS News

Visit the IIS Training Materials Portal
www.doh.wa.gov/trainingIIS

December 2016 Upgrade

On December 8, 2016 the IIS was upgraded. Please review the materials below to see the changes and updates included in the upgrade.

IIS Upgrade Summary
IIS Forecast Update

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IIS School Module

The Department of Health is excited to share that we are rolling out a new tool to make

Subscribe to IIS News

IIS Login Changes Coming

All users will need to have a SecureAccess Washington (SAW) account to login to the IIS by late Fall.

What can you do right now?

Set up a SAW account if you don't have one.

What will happen next?

- DOH will provide instructions to connect your SAW account to the IIS.
- All users will transition to logging in to the IIS through a SAW account.

Thank you!

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