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Damon A. Ferlazzo, MPA
Clinical Use and Benefits of State Immunization Information Systems
August 21, 2014

What are Immunization Information Systems (IIS)?

- "[…]confidential, population-based, computerized databases that record all immunization doses administered by participating providers to persons residing within a given geopolitical area."[1]
- Sometimes called "Immunization Registries"
- Missouri's Statewide IIS is known as "ShowMeVax"
- All US states, territories and even some large cities (e.g. Chicago, NYC, LA, DC) have IIS

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What are the Purposes of IIS?

- "At the point of clinical care, an IIS can provide consolidated immunization histories for use by a vaccination provider in determining appropriate client vaccinations." [1]

- "At the population level, an IIS provides aggregate data on vaccinations for use in surveillance and program operations, and in guiding public health action with the goals of improving vaccination rates and reducing vaccine-preventable disease." [1]

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Who Uses IIS?

- Clinics
- Hospitals
- Pharmacies
- Schools
- Child care Facilities
- Public Health
  - Local public health agencies
  - DHSS Division of Community and Public Health

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Fast Stats. (as of May 2014)

- Total Clients: 3,826,725
- Total Doses: 34,619,141
- 579 medical provider locations with 3,175 active users
- 481 schools and child care facilities with over 1,643 active users
- 200+ Connections with EMR/EHRs
  - 10 bi-directional connections

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What are the benefits to patients?

- Easily tracks immunizations over time and for multiple medical facilities
- Helps ensure patients are properly immunized
  - On schedule
  - Not over immunized
- Makes school immunization verification quick
- Records medical alerts and adverse reactions

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What are the benefits to providers?

- Ensures patients are up-to-date
- Helps complete medical records
- Easier to work with patients who are referred or transferred to new medical home
- Coverage reports for quality care measures or grant applications
- Reminder recall reports
- If using EMR/EHR, The Centers for Medicare and Medicaid Services (CMS) Meaningful Use incentive eligibility
- Faster Vaccines for Children (VFC) vaccine order processing and delivery

How are IIS Related to CMS EMR/EHR Meaningful Use?

- CMS is authorized to make incentive payments to eligible professionals (EPs) and eligible hospitals (EHs) demonstrating meaningful use of certified Medicare and Medicaid Electronic Health Records (EHR) technology.

How are IIS and CMS EMR/EHR Meaningful Use Related?

- EPs
  - For Stage 2 of Meaningful Use (MU) ongoing submission of electronic data for immunizations is in the core set for EP's and reporting for cancer and specialty registries is a menu selection.
- EHs
  - The Stage 2 MU requirement for EHs ongoing submission of electronic data for immunizations, syndromic surveillance and electronic laboratory results.

What are the Data Sources for IIS?

- Manual Entry from Web Application
- Vital Records – (hepatitis B birth doses)
- Electronic Medical Records / Electronic Health Records (EMR/EHR) via Health Level Seven (HL7) messages
  - Direct interface or
  - Health Information Networks (Missouri Health Connection)
- Medicaid Billing
- Batch files

Is reporting to an IIS subject to the HIPAA Privacy Rule?

- Per CDC, “No. Reporting of immunizations to an IIS are exempt from the Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rule since it is considered a public health activity.”[2]

ShowMeVax

EMR/EHR Interoperability

- Uses HL7 version 2.5.1
- Interfaces with existing EMR/EHR systems
- Bi-directional capability with EMR/EHR
  - Submit & Query

Web Application

- Internet Browser based-application
- Provides similar features to some EMR systems
- Provides several aggregate reports

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Missouri's Statewide Immunization Information System

SHOWMEVAX WEB APPLICATION (NON EMR/EHR ACCESS & USE)

ShowMeVax Web Application Requirements

- PC*
- High Speed Internet
- Internet Explorer*
- Paperwork – Memorandum of Agreement, User Security

- Does not work with mobile devices (smart phones and non-Windows based tablets)

*limited support is supplied for Mac and other browsers

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ShowMeVax Web Application Key Features

- Updated immunization schedule guidance
- Online vaccine ordering for Vaccines for Children Program
- Data reports available to providers
- Auto deducting immunization inventory management
- Patient immunization-related medical alerts

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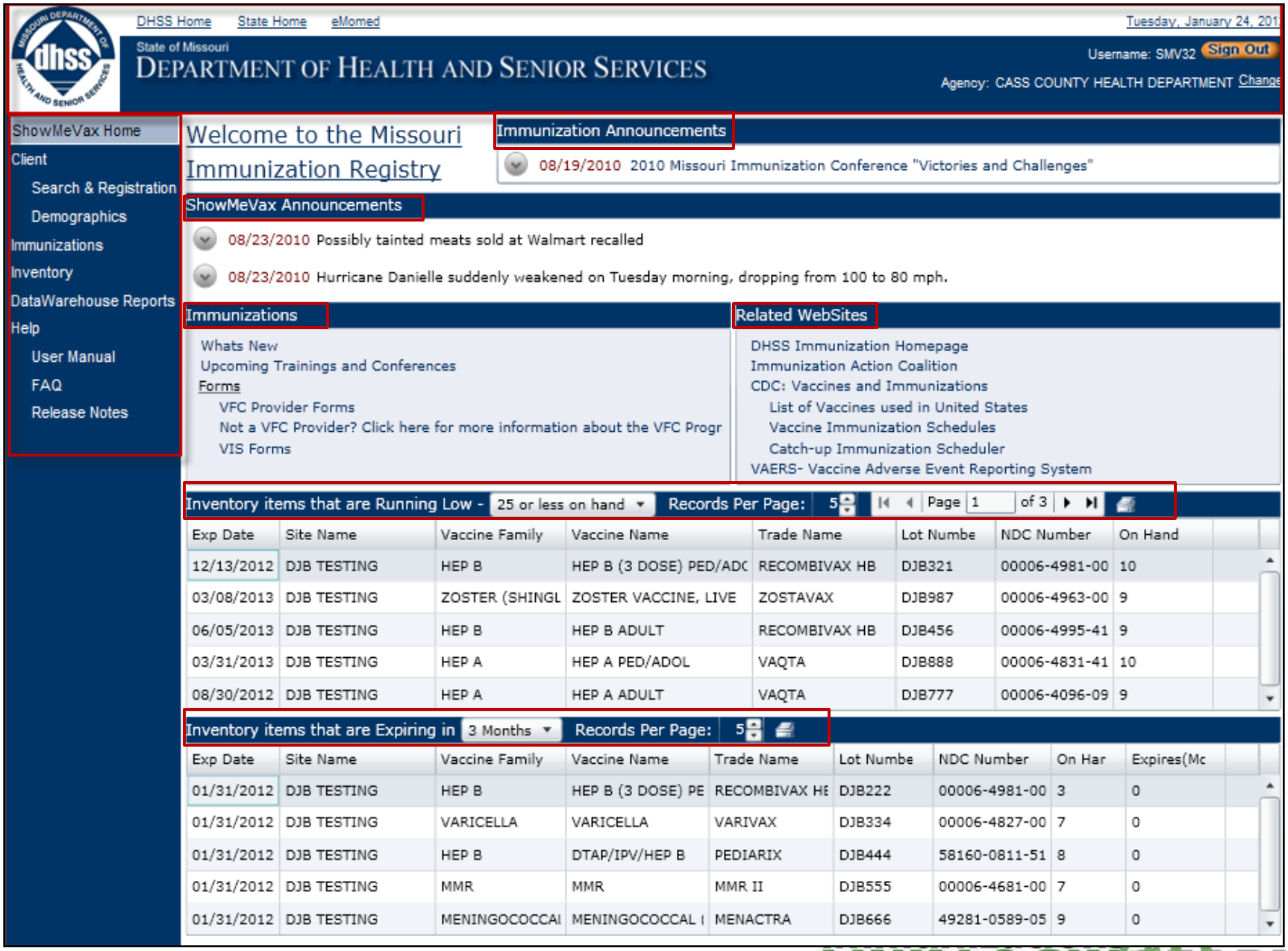
Home Page



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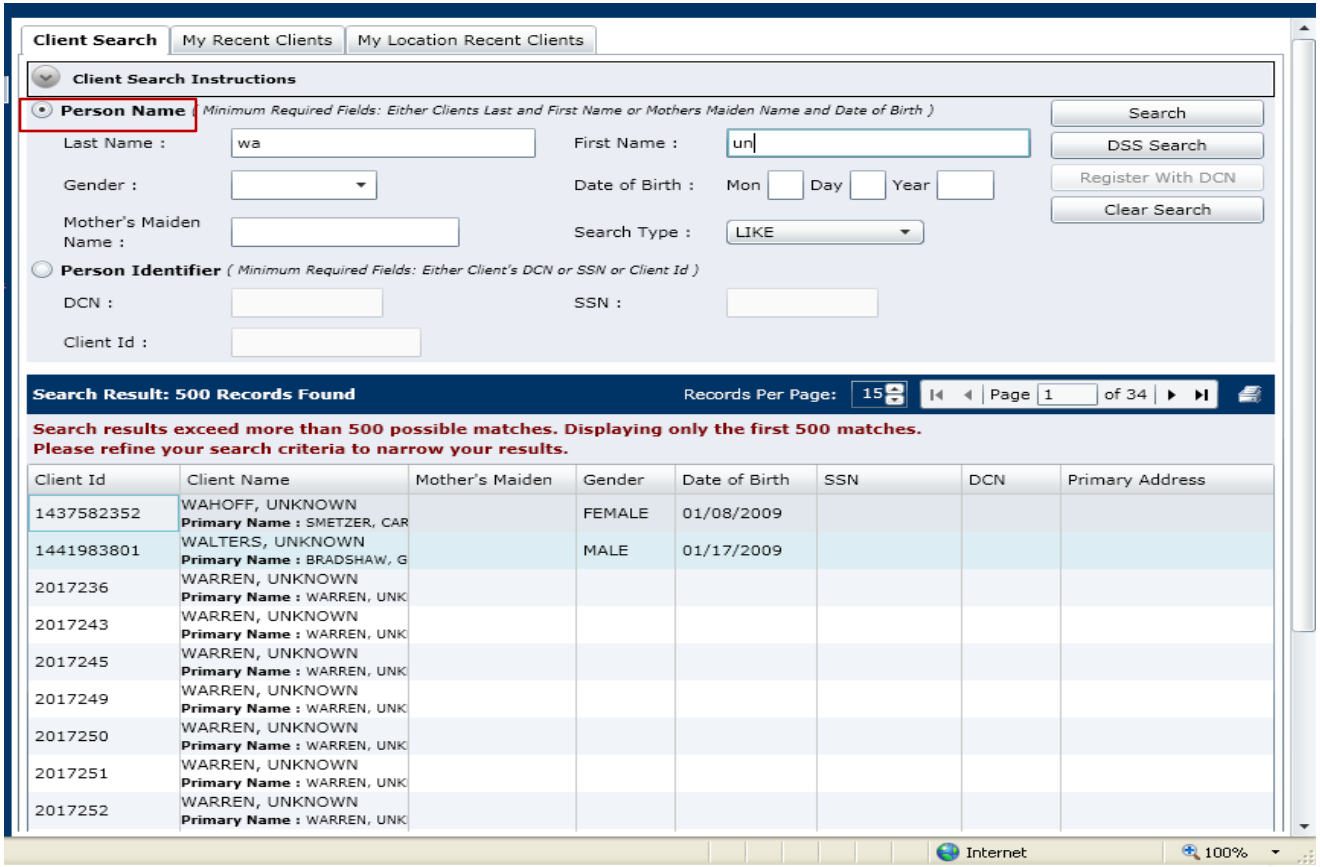
Client Search

Client Search



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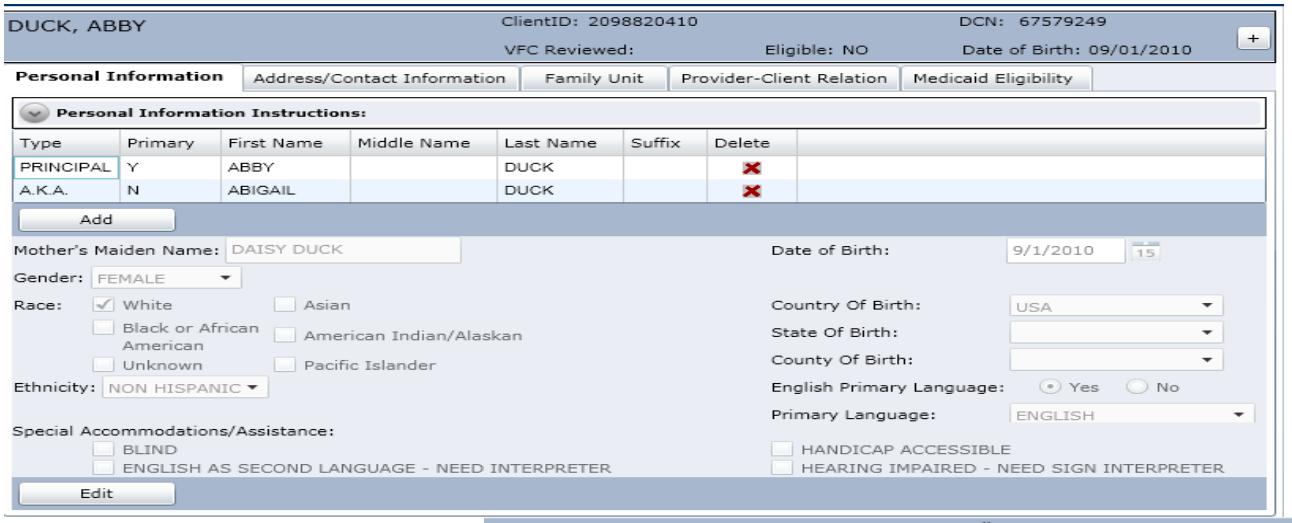
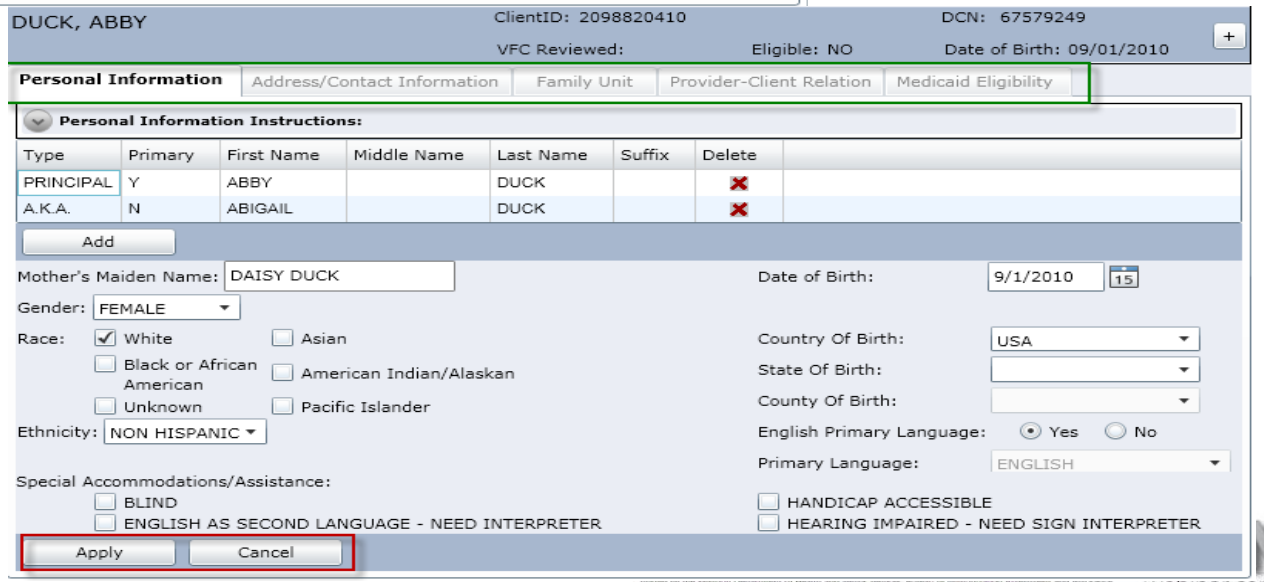
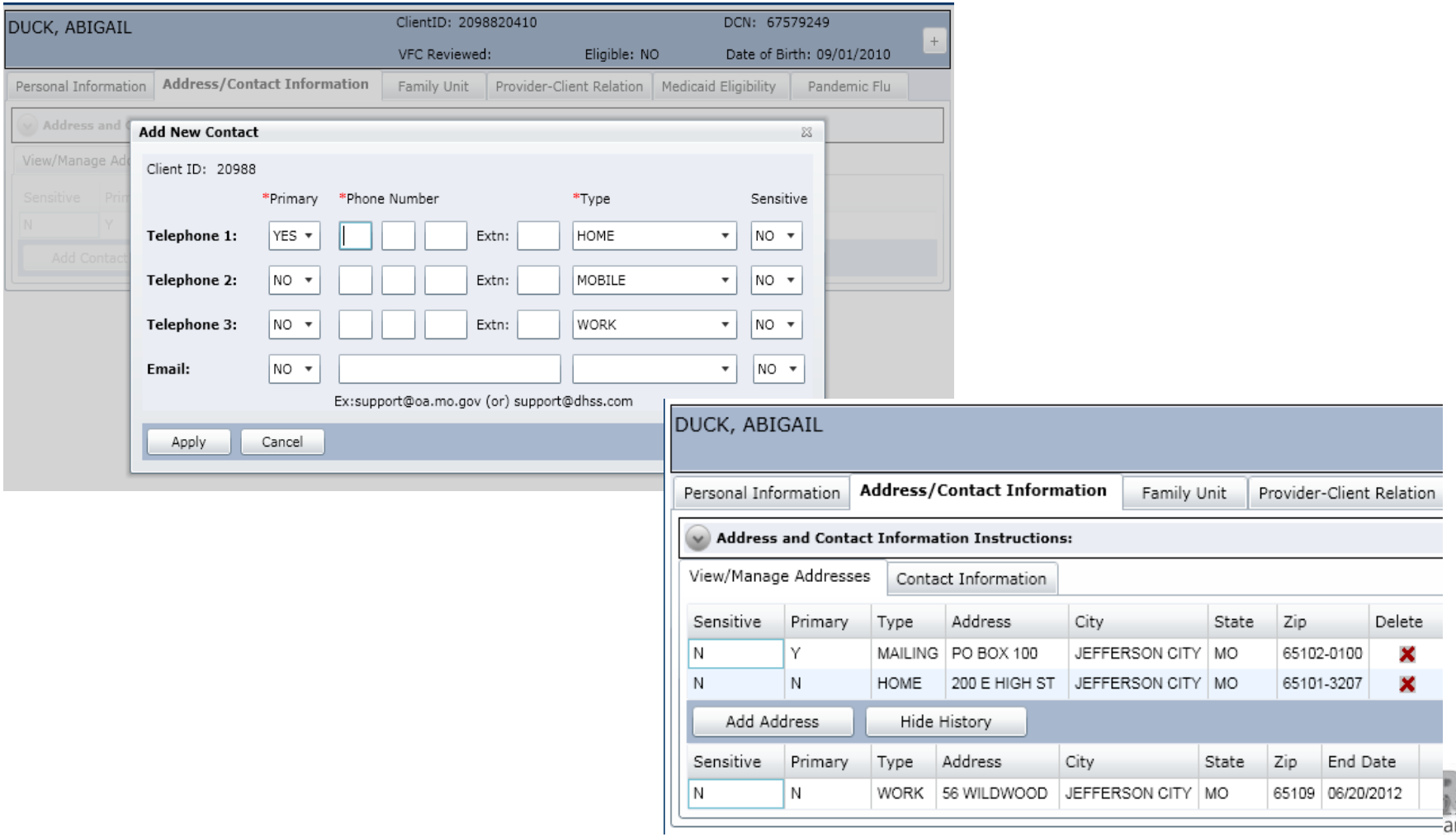
Personal Information & Demographics

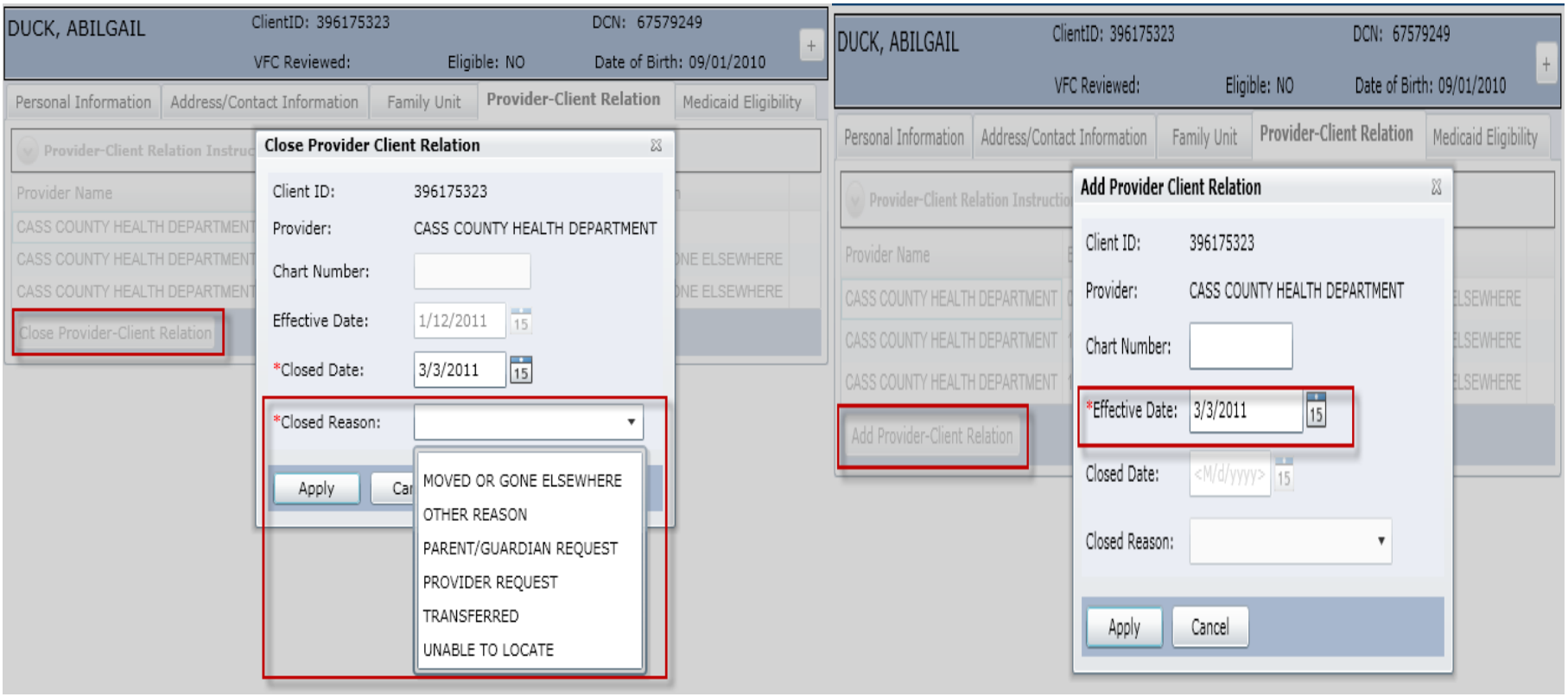




Adding/Deleting Contact Information



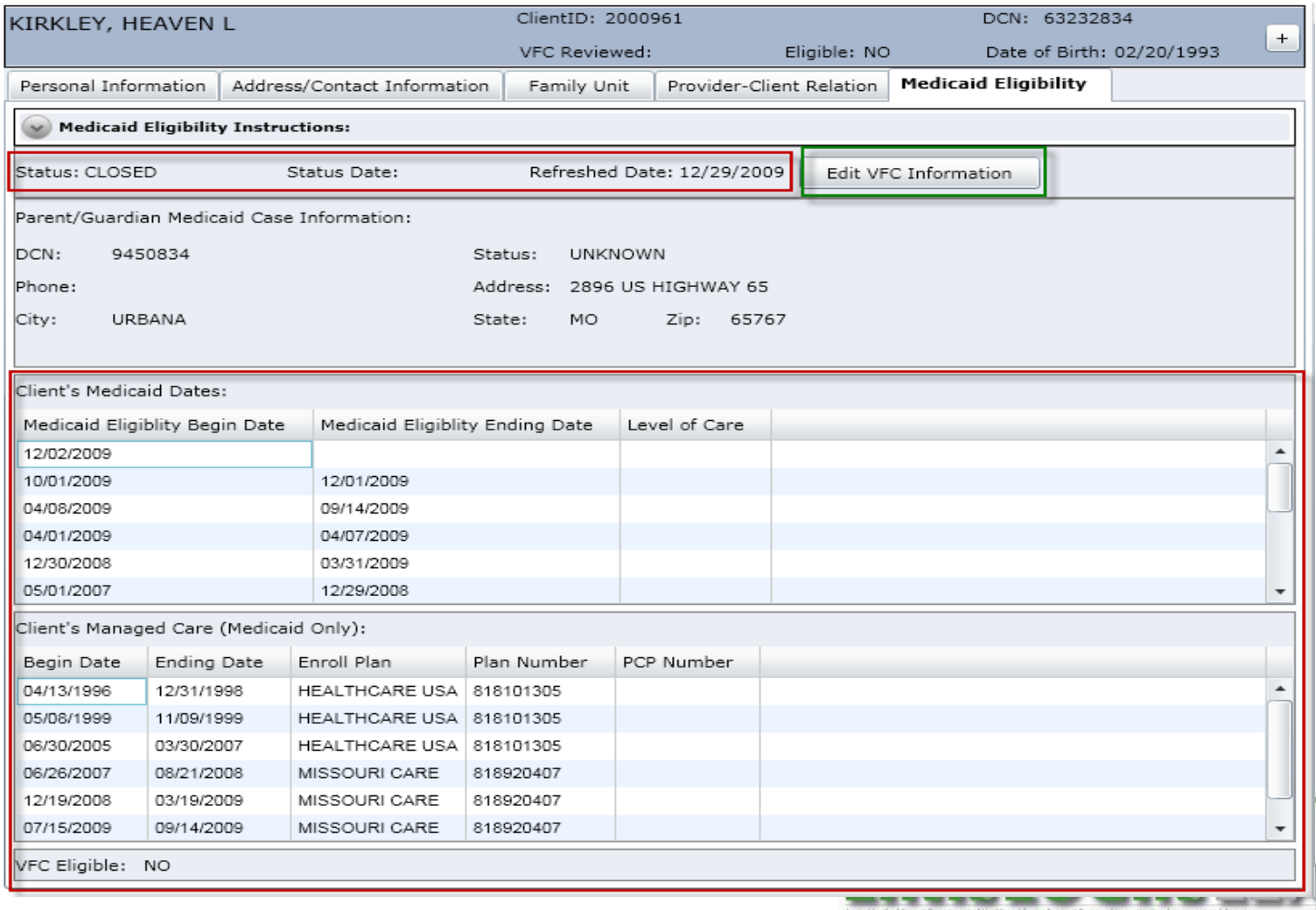
Provider Client Relationship



- If a relationship already existed for the client, then the only option available is to close.
- After clicking the Close button, user can enter the Closed Date and Closed Reason.

- If a client's relationship is closed, the provider can re-open or open a new relationship by clicking the Add Provider-client Relation button.
- In the Add screens, the only required field is the effective date.

Medicaid Eligibility Information



KIRKLEY, HEAVEN L | ClientID: 2000961 | DCN: 63232834 | VFC Reviewed: | Eligible: NO | Date of Birth: 02/20/1993

Personal Information | Address/Contact Information | Family Unit | Provider-Client Relation | **Medicaid Eligibility**

Medicaid Eligibility Instructions:

Status: CLOSED | Status Date: | Refreshed Date: 12/29/2009 | Edit VFC Information

Parent/Guardian Medicaid Case Information:

DCN: 9450834 | Status: UNKNOWN

Phone: | Address: 2896 US HIGHWAY 65

City: URBANA | State: MO | Zip: 65767

Client's Medicaid Dates:

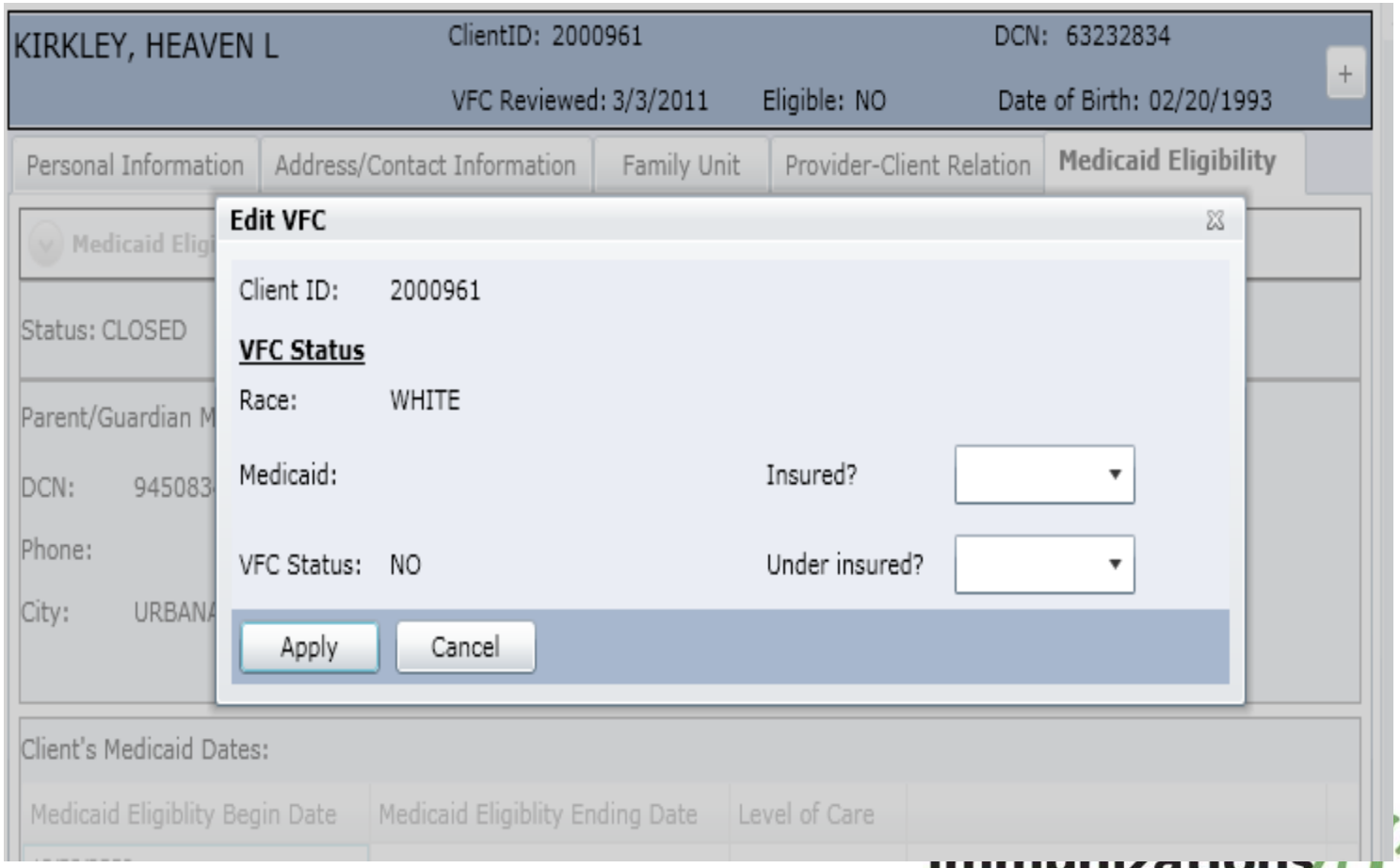
Medicaid Eligiblity Begin Date	Medicaid Eligiblity Ending Date	Level of Care
12/02/2009		
10/01/2009	12/01/2009	
04/08/2009	09/14/2009	
04/01/2009	04/07/2009	
12/30/2008	03/31/2009	
05/01/2007	12/29/2008	

Client's Managed Care (Medicaid Only):

Begin Date	Ending Date	Enroll Plan	Plan Number	PCP Number
04/13/1996	12/31/1998	HEALTHCARE USA	818101305	
05/08/1999	11/09/1999	HEALTHCARE USA	818101305	
06/30/2005	03/30/2007	HEALTHCARE USA	818101305	
06/26/2007	08/21/2008	MISSOURI CARE	818920407	
12/19/2008	03/19/2009	MISSOURI CARE	818920407	
07/15/2009	09/14/2009	MISSOURI CARE	818920407	

VFC Eligible: NO

VFC Eligibility Information



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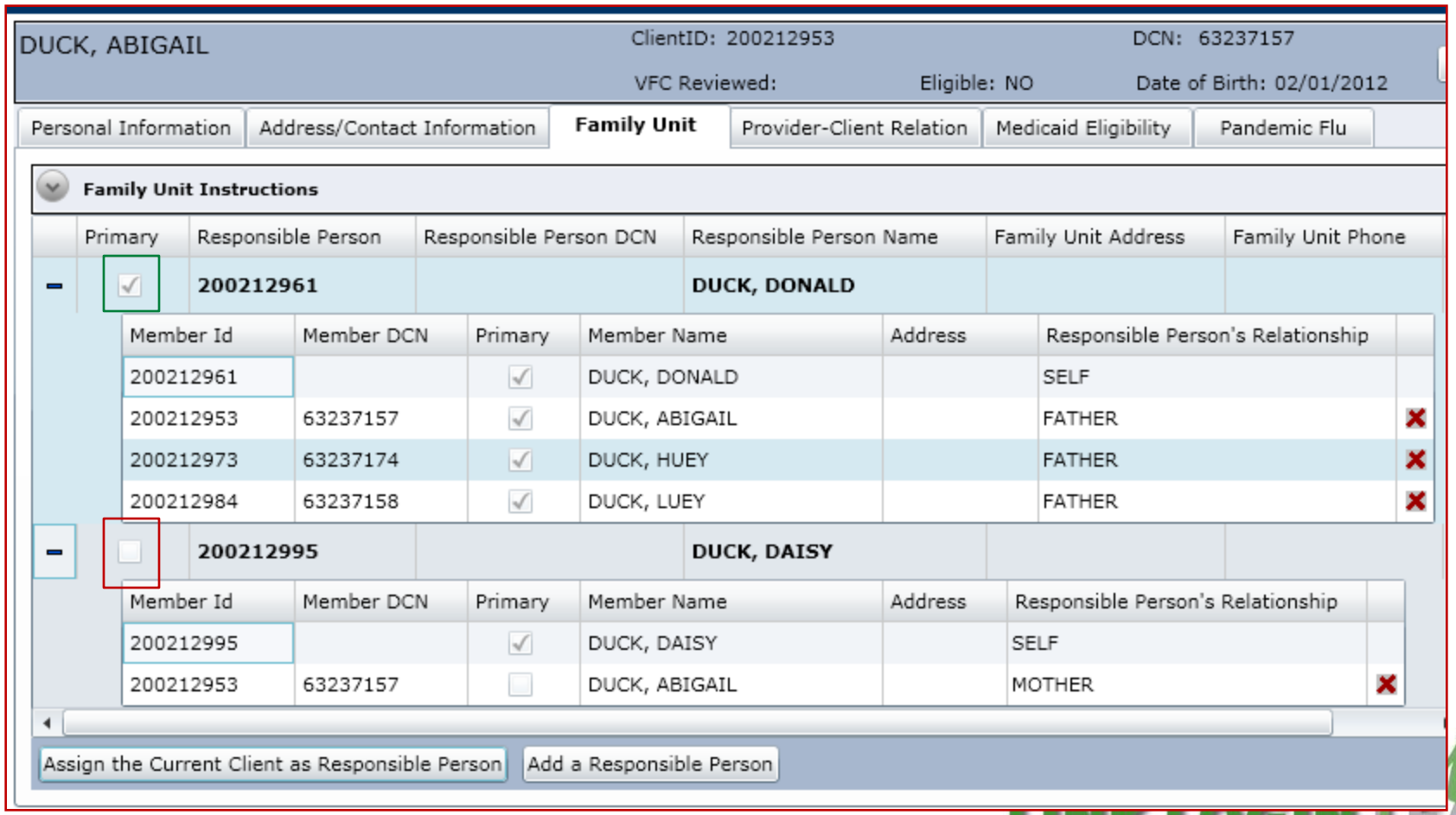
Family Unit With Responsible Persons



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INVENTORY

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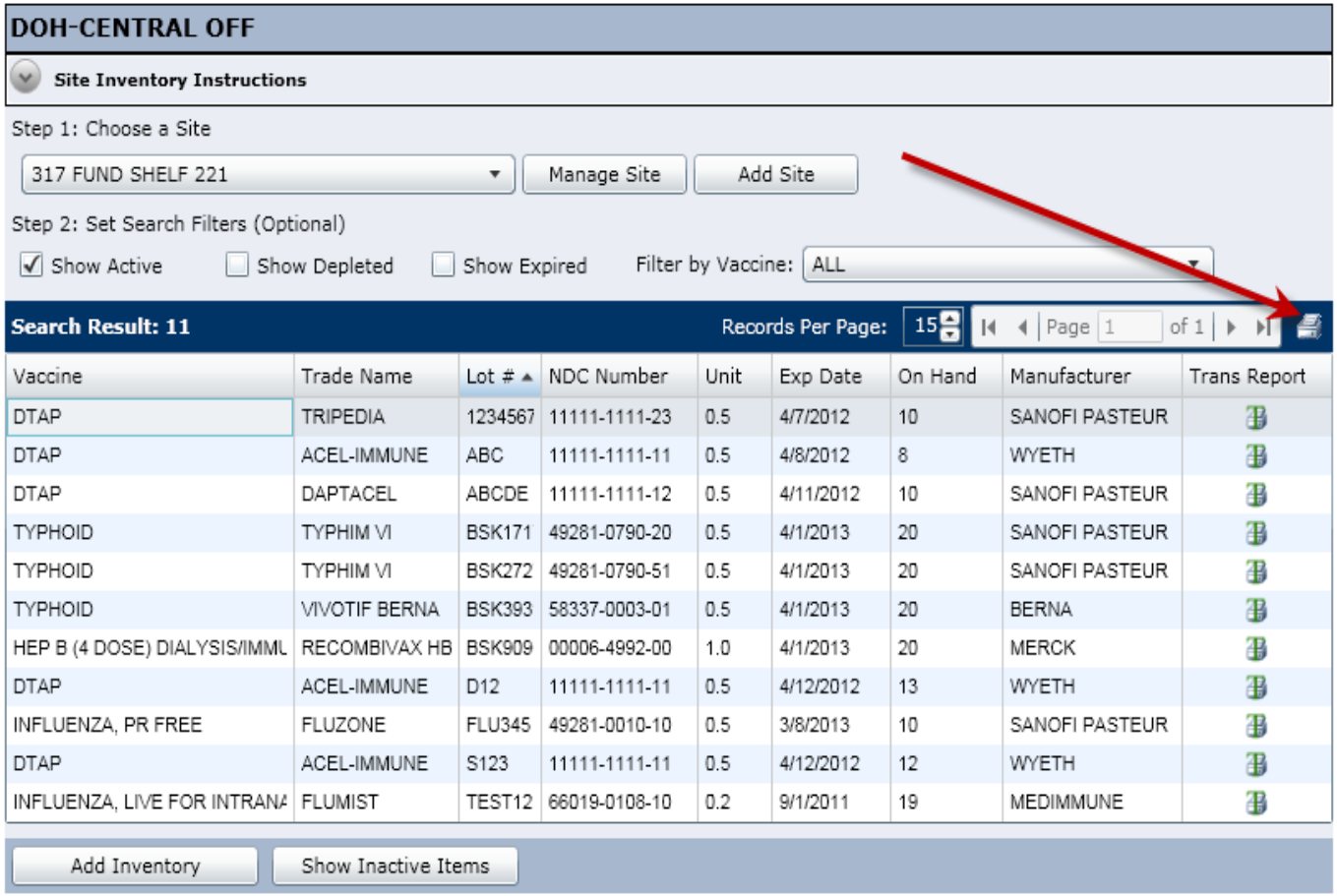
Viewing and Printing Inventory Items



Vaccine	Trade Name	Lot #	NDC Number	Unit	Exp Date	On Hand	Manufacturer	Trans Report
DTAP	TRIPEDIA	1234567	11111-1111-23	0.5	4/7/2012	10	SANOFI PASTEUR	
DTAP	ACEL-IMMUNE	ABC	11111-1111-11	0.5	4/8/2012	8	WYETH	
DTAP	DAPTACEL	ABCDE	11111-1111-12	0.5	4/11/2012	10	SANOFI PASTEUR	
TYPHOID	TYPHIM VI	BSK171	49281-0790-20	0.5	4/1/2013	20	SANOFI PASTEUR	
TYPHOID	TYPHIM VI	BSK272	49281-0790-51	0.5	4/1/2013	20	SANOFI PASTEUR	
TYPHOID	VIVOTIF BERNA	BSK393	58337-0003-01	0.5	4/1/2013	20	BERNA	
HEP B (4 DOSE) DIALYSIS/IMML	RECOMBIVAX HB	BSK909	00006-4992-00	1.0	4/1/2013	20	MERCK	
DTAP	ACEL-IMMUNE	D12	11111-1111-11	0.5	4/12/2012	13	WYETH	
INFLUENZA, PR FREE	FLUZONE	FLU345	49281-0010-10	0.5	3/8/2013	10	SANOFI PASTEUR	
DTAP	ACEL-IMMUNE	S123	11111-1111-11	0.5	4/12/2012	12	WYETH	
INFLUENZA, LIVE FOR INTRANA	FLUMIST	TEST12	66019-0108-10	0.2	9/1/2011	19	MEDIMMUNE	

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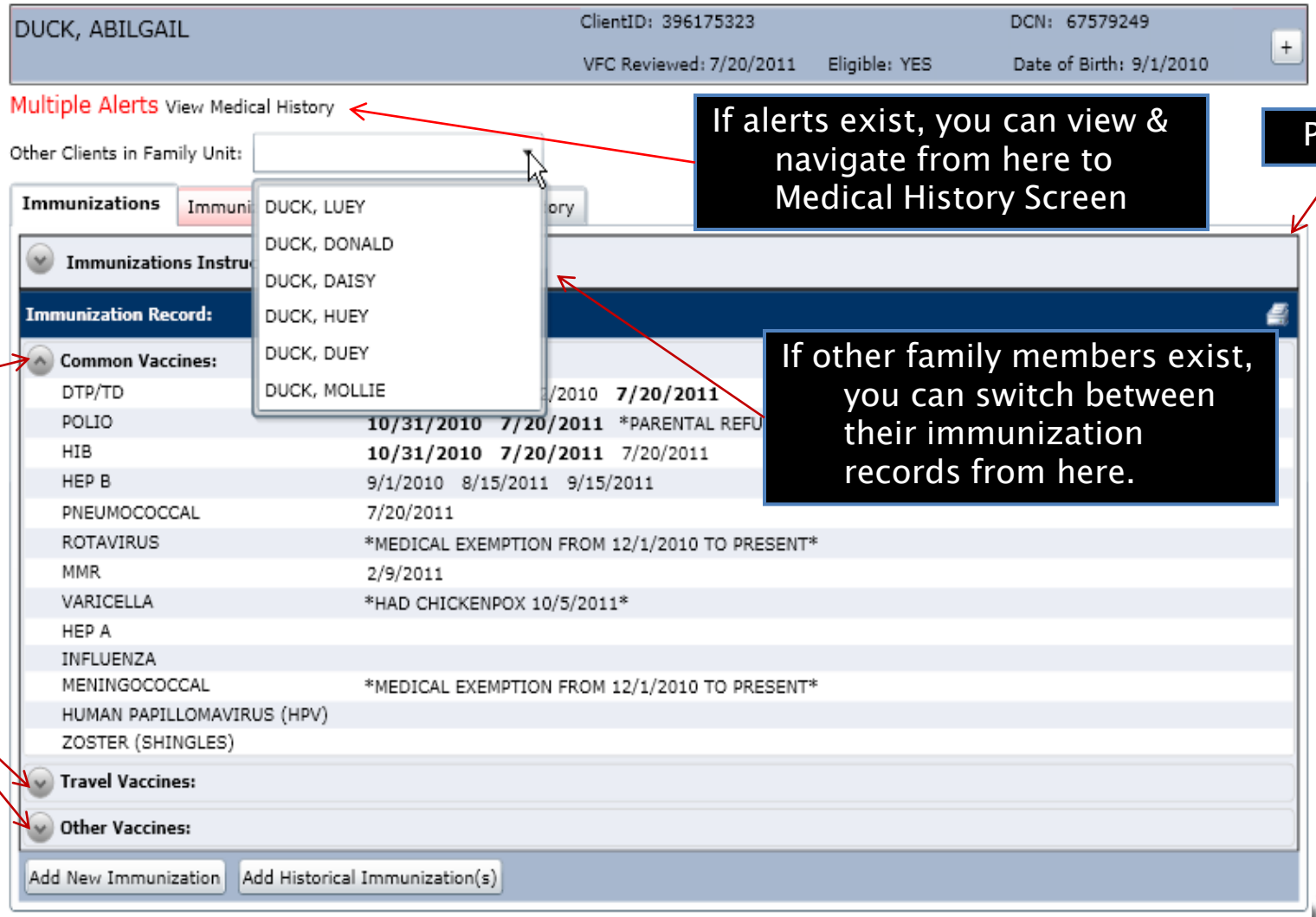
Immunization Record



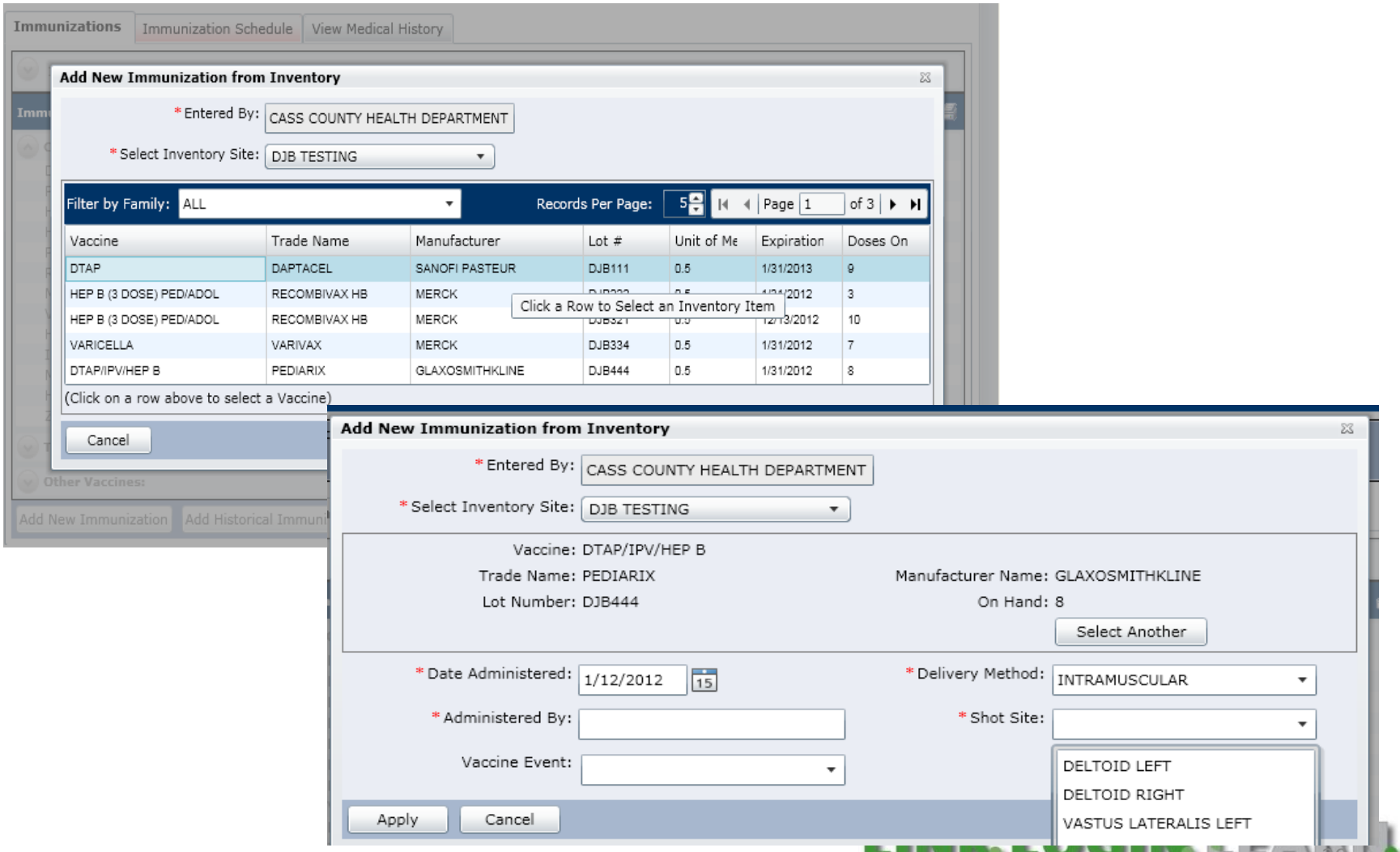
If alerts exist, you can view & navigate from here to Medical History Screen

Print

If other family members exist, you can switch between their immunization records from here.

User may expand/ collapse the list to see all vaccines

Adding New Immunizations



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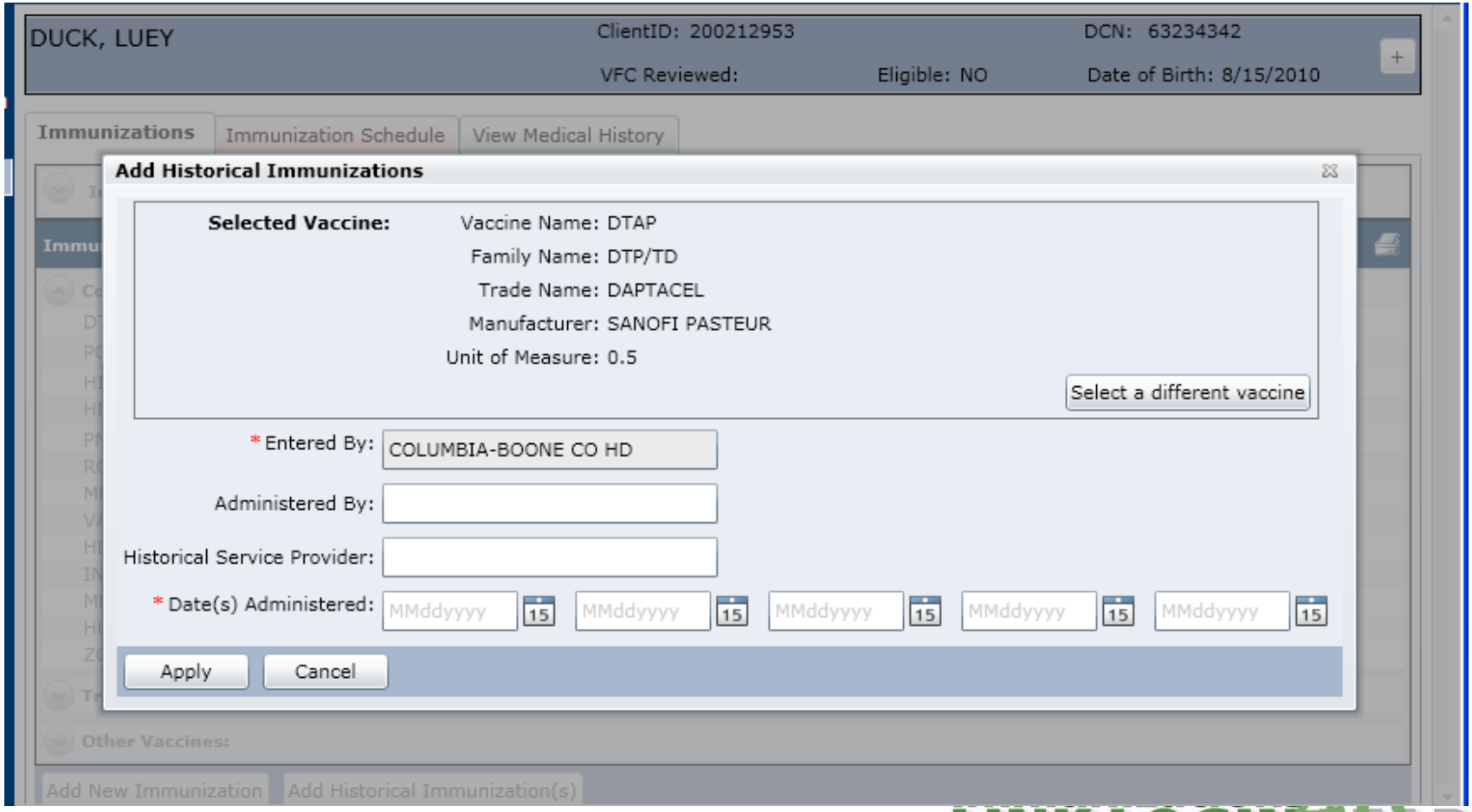
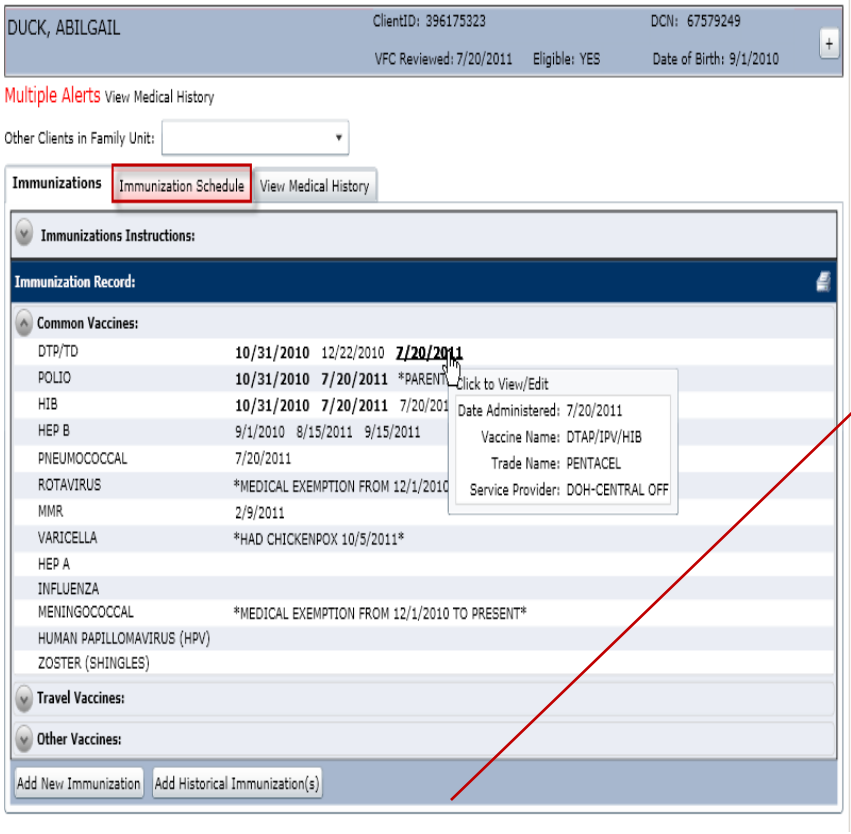
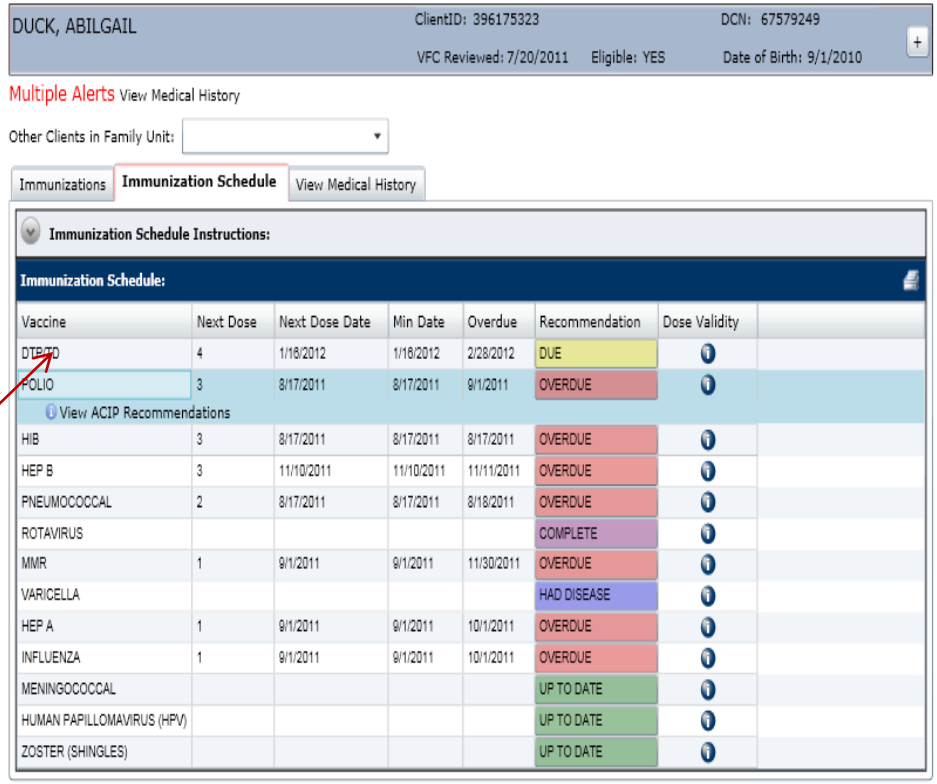
Adding Historical Immunizations

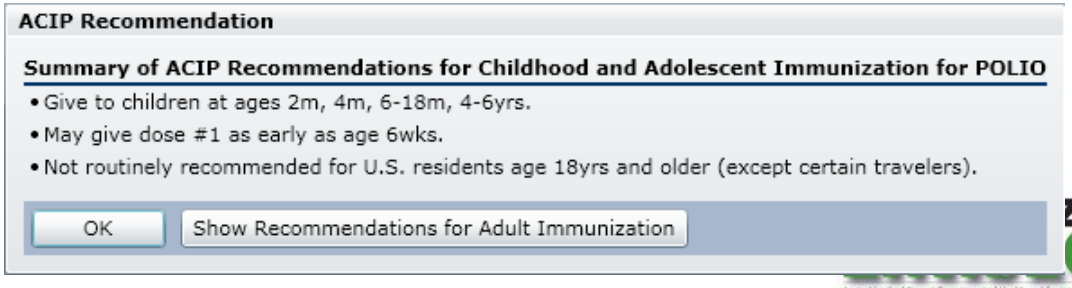


CLINICAL APPLICATION

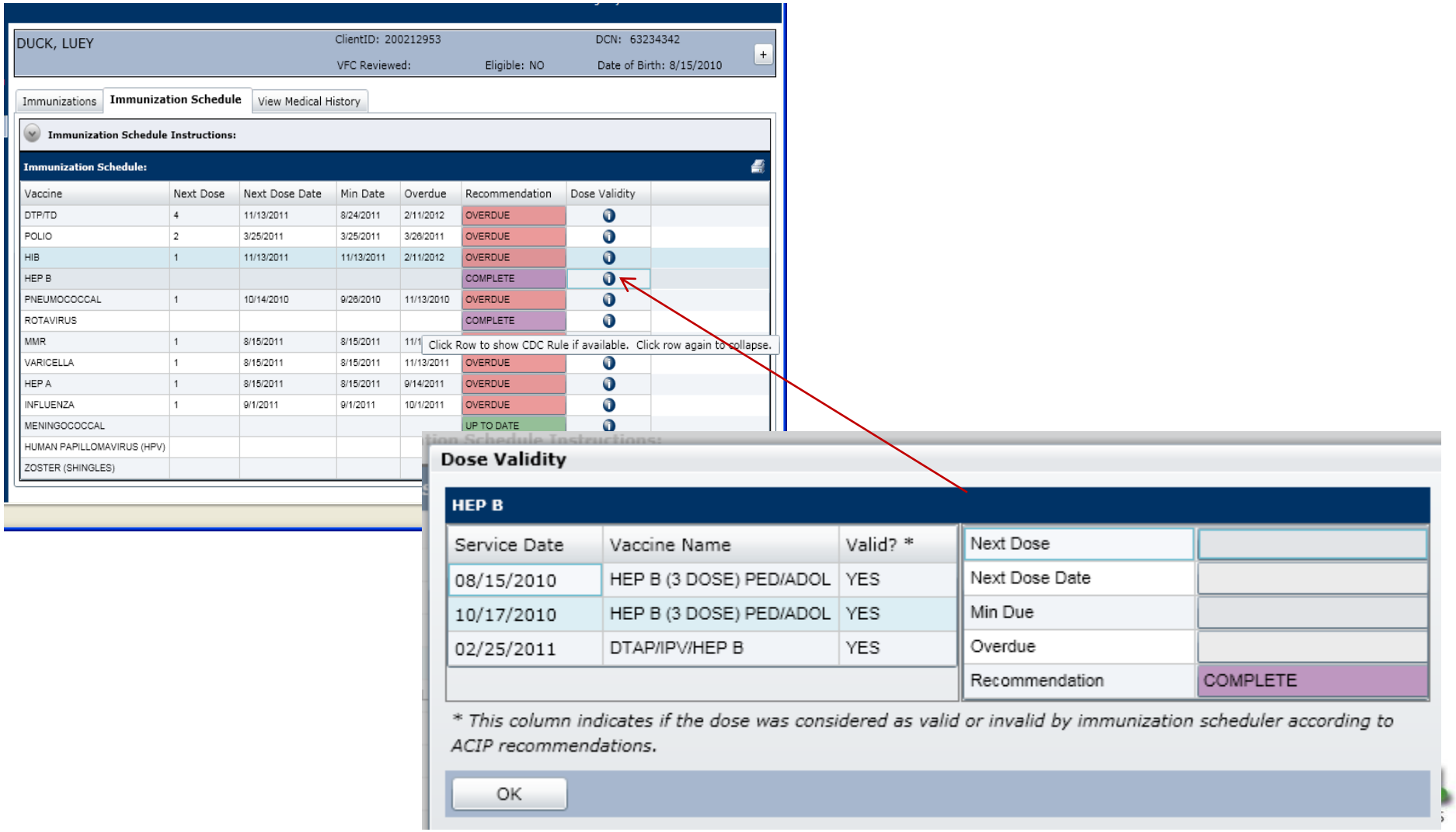
Immunization Schedule



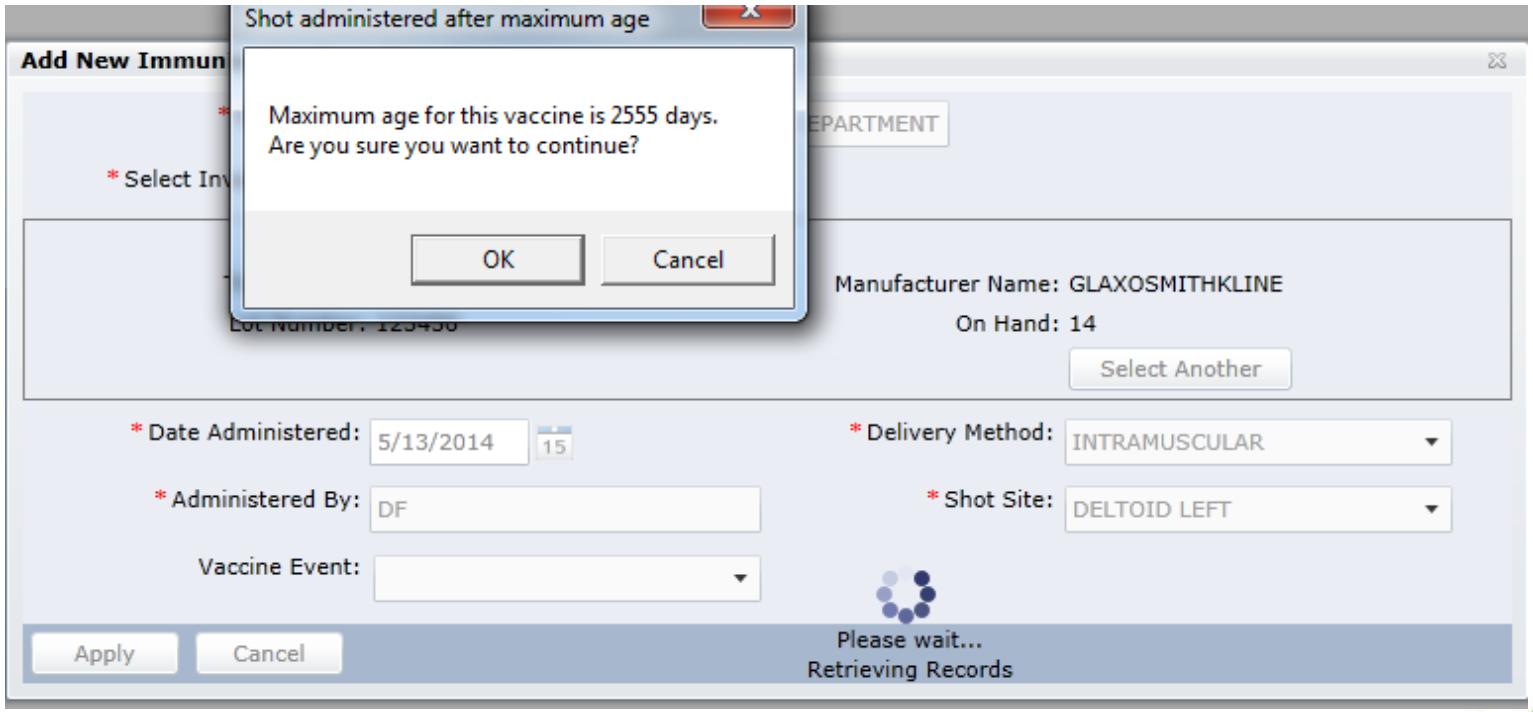




Vaccine Schedule / Dose Validity



Age inappropriate vaccine (DTaP given to adult)



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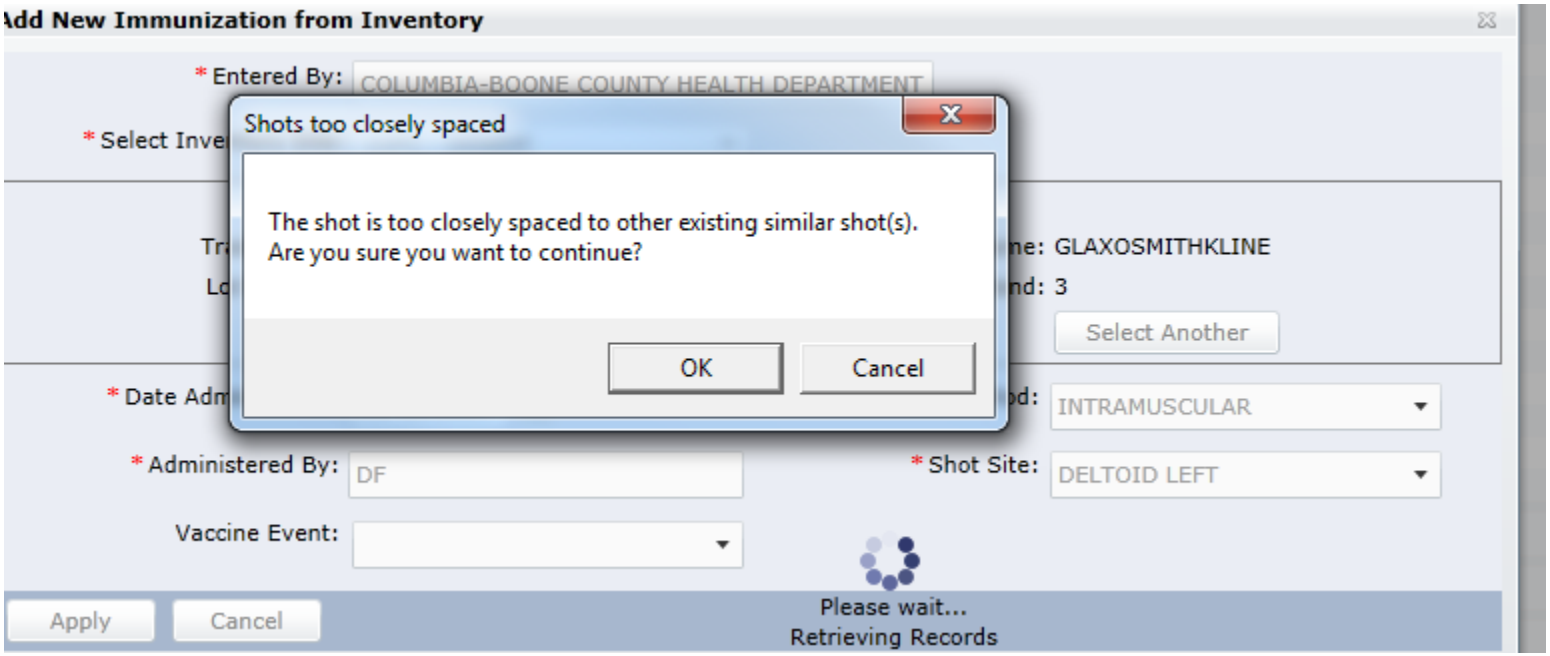
Too closely spaced (hep. B)



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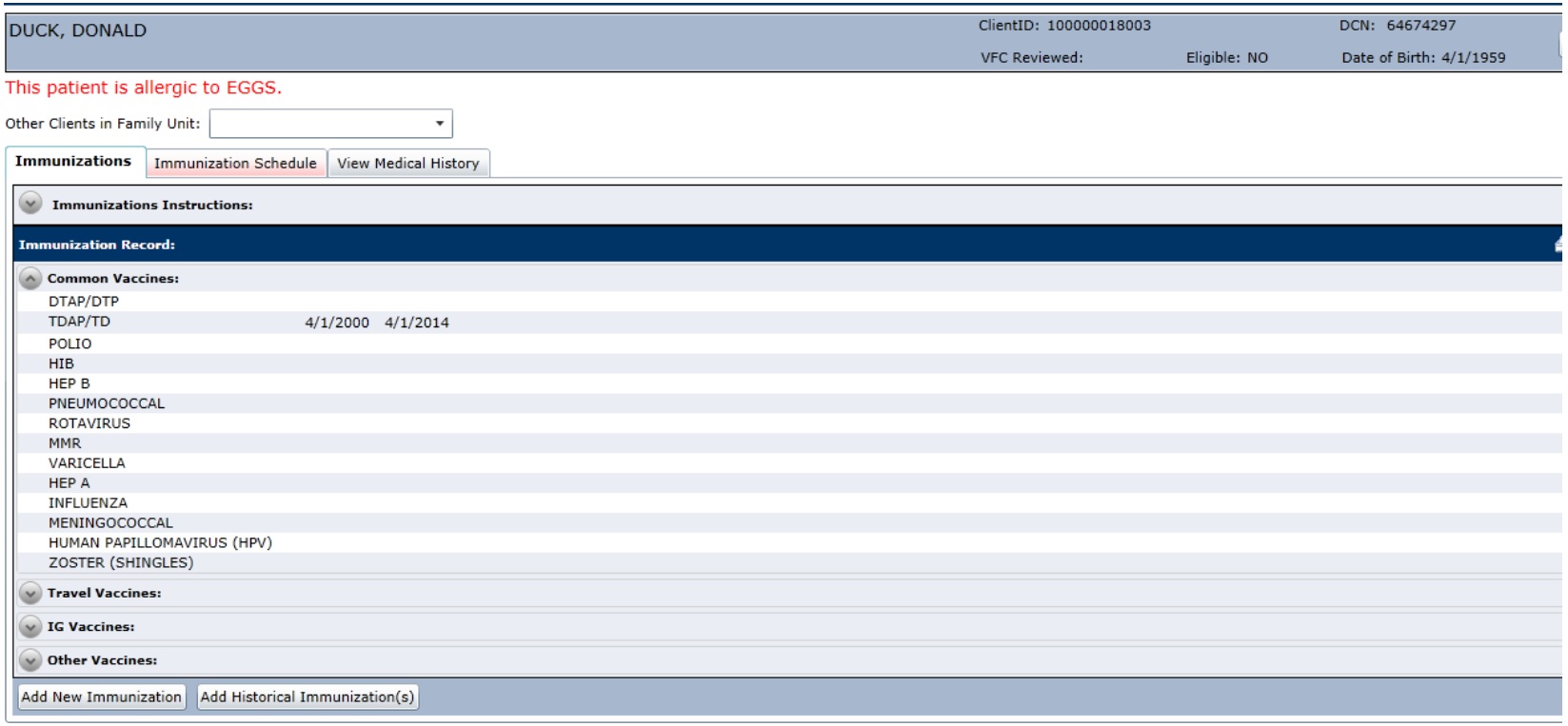
Medical Alerts



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Next Dose Reminder Recall Reports

Name and Date of Birth	Phone	Address	Email
DUCK, DAFF D	573-000-000		
		123 Main Street	
05/24/2013		Small Town MO 65550	

Client Reminder Recall

Next Due Date	Overdue Date	Shot Family	Next Dose Number
05/24/2014	08/22/2014	RUBELLA	1
05/24/2014	08/22/2014	MUMPS	1
05/24/2014	08/22/2014	MMR	1
06/06/2014	08/22/2014	HIB	1
06/06/2014	06/07/2014	HEP B	3
05/24/2014	08/22/2014	VARICELLA	3
05/24/2014	06/23/2014	HEP A	1
05/24/2014	08/22/2014	MEASLES	1

BUNNY, BUGS	573-000-000		
		123 Main Street	
06/05/2013		Small Town MO 65550	

Client Reminder Recall

Next Due Date	Overdue Date	Shot Family	Next Dose Number
06/05/2014	09/03/2014	MMR	1
06/05/2014	09/03/2014	HIB	1
06/05/2014	07/05/2014	HEP A	4
06/05/2014	09/03/2014	VARICELLA	1
06/05/2014	09/03/2014	MEASLES	1

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Additional Reports

- Vaccine Tally Sheet
- Doses Administered by Inventory Site, Vaccine Name, Trade Name and Age Group
- Doses Administered by Vaccine Name and Age Group (Historical)
- Doses Administered by Vaccine Name and Age Group (From HL7 Only)
- Client Listing
- Immunization Data by Vaccine Series
- Immunization Data by Vaccine Type and Summary of Vaccine Coverage By Age Group

Questions / Discussion

Clinical Use and Benefits of State Immunization Information Systems

ETC.

Resources:

- Four self-paced learning modules:
  - http://ShowMeVaxU.com
- Missouri Public Health Meaningful Use Page:
  - http://health.mo.gov/atoz/mophie
- Centers for Disease Control & Prevention Meaningful Use Page:
  - http://www.cdc.gov/EHRmeaningfuluse/
- Centers for Disease Control & Prevention Immunization Information Systems Page:
- http://www.cdc.gov/vaccines/programs/iis/

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References

1. About Immunization Information Systems, Centers for Disease Control and Prevention http://www.cdc.gov/vaccines/programs/iis/about.html
2. IIS Frequently Asked Questions http://www.cdc.gov/vaccines/programs/iis/resources-refs/faq.html#Q8