

# Best Practices Around Adult Influenza and Pneumococcal Vaccines and Using IIS

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 OptumCare/USMD

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## USMD / OptumCare – Dallas Fort Worth

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- Multi-specialty medical group, provides primary and specialty care to nearly 400,000 patients annually across the Dallas-Fort Worth area
- NextGen EMR & Allscripts EMR
- ~2,000 employees
- 214 physicians (109 primary care providers and 105 specialists)
- 35 advanced practice clinicians (APCs)
- MSSP ACO, NCQA PCMH Level 3, Commercial ACOs, Medicare Advantage Risk Plans

## Best Practices from our Learning Collaborative Experience



- **Created Multi-disciplinary group to Address Vaccine Gaps**
  - Primary Care, Training Dept, Clinical Operations, Specialty, Medical Directors, Nursing Leadership, Analytics, Quality Dept, Pharmacy
- **Created Flu Vaccine Group to Manage Vaccine Analysis, Purchasing, Rollout, and Patient Marketing each year**
  - Primary care and specialty operations, Med Director, Nursing Leadership, Clinical Operations, Purchasing/Supply Chain, Pharmacy
- **Involve Case Management Team**
- **New Formal Reporting to Identify Low and High Performers**



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## Best Practices from our Learning Collaborative Experience

- **Vaccine Consent Process**
  - All influenza vaccine consents have pneumococcal screen as well
  - All staff are trained to give them concomitantly

**SECTION 2: PROCEDURE**

Influenza Vaccine and/or Pneumonia Vaccine

**Screening Questions**

1. Is the person to be vaccinated sick today?  Yes  No

2. Does the person to be vaccinated have an allergy to eggs or any part of the influenza vaccine?  Yes  No

3. Has the person to be vaccinated ever had a serious reaction to influenza vaccine in the past?  Yes  No

4. Is the person to be vaccinated pregnant or could become pregnant within the next month?  Yes  No

5. If you have any of the following conditions, have you ever received a pneumonia vaccine?  Yes  No  n/a

- Asthma, COPD/Emphysema, Diabetes, Heart Failure

6. If you are 65 years or older:

- Has it been more than one year since your last pneumonia vaccine?  Yes  No  Unsure  n/a



## Best Practices from our Learning Collaborative Experience

- **Training Primary Care (pneumococcal)**
  - Physician seminars
  - Staff training and competencies - LASA errors emphasized
- **Training Specialists (Rheum, Cards, Uro)**
  - Using MSSP/MACRA/MIPS Quality Metrics to Gain Buy In
  - Electronic vaccine RX for those that don't give vaccines
  - Pocket Guide
- **Standing Delegated Orders and Competency Checks (Pneumococcal and Influenza)**
  - 100% primary care participation



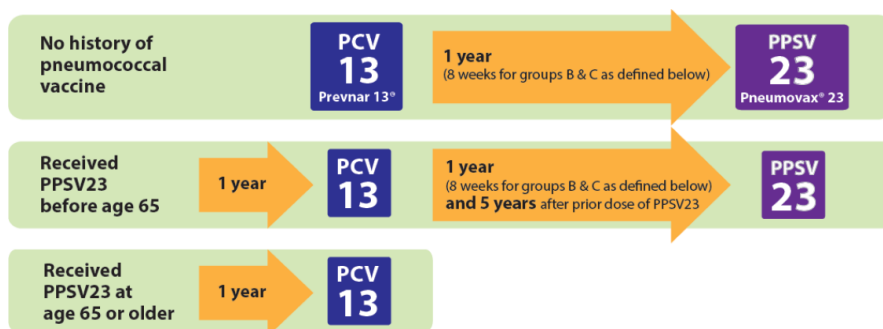
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## Education and Training

### Age 65 Years or Older

• If PCV13 was given before age 65 years, no additional PCV13 is needed.



## Education and Training

### Age 19-64 Years With Underlying Condition(s)

**A. Smoker,  
Long-term facility resident, or**

**Chronic conditions:**

- heart disease (excluding hypertension)
- lung disease (including asthma)
- liver disease (including cirrhosis)
- diabetes
- alcoholism

**PPSV  
23**

**B. Immunocompromised**  
(including HIV infection),  
**Chronic renal failure,  
Nephrotic syndrome, or  
Asplenia**

**PCV  
13**

8 weeks

**PPSV  
23**

5 years

**PPSV  
23**

**C. CSF leaks or  
Cochlear implants**

**PCV  
13**

8 weeks

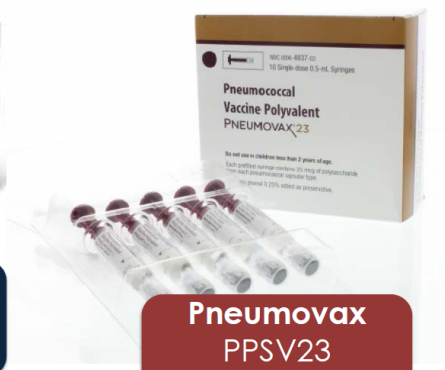
**PPSV  
23**



## What's the difference?



**Prevnar  
PCV13  
Conjugate vaccine**



**Pneumovax  
PPSV23  
Polysaccharide  
vaccine**



## Pneumococcal Vaccine Pocket Guide

### Routine Vaccination with PCV13 and PPSV

Children: Administer pneumococcal conjugate vaccine (PCV13) to all infants and children at ages 2, 4, and 6 mos with a booster at age 12–15 mos. For incomplete or unvaccinated children, catch-up vaccination should occur through age 59 mos.

Adults age 65 years (or older):

- Administer a 1-time dose of PCV13 (if not previously received).
- Administer a dose of pneumococcal polysaccharide vaccine (PPSV) at least 1 yr after PCV13.

### Risk-Based Vaccination with PCV13 and PPSV

A dose of PPSV is recommended for all people age 2 through 64 yrs with any of the following conditions:

- Cigarette smokers age 19 yrs and older
- Chronic cardiovascular disease (e.g., congestive heart failure, cardiomyopathy)
- Chronic pulmonary disease (including asthma in people age 19 yrs and older)
- Diabetes mellitus, alcoholism, or chronic liver disease
- Candidate for or recipient of cochlear implant
- Cerebrospinal fluid leak
- Functional or anatomic asplenia (e.g., sickle cell disease, splenectomy)
- Immunocompromising conditions (e.g., congenital or acquired immunodeficiency, HIV infection, leukemia, lymphoma, Hodgkin disease, generalized malignancy, iatrogenic immunosuppression, multiple myeloma, or on immunosuppressive therapy, including long-term systemic corticosteroids, radiation therapy)
- Solid organ transplantation; for bone marrow transplantation patients, see [www.cdc.gov/vaccines/pubs/hemato-cell-transplants.htm](http://www.cdc.gov/vaccines/pubs/hemato-cell-transplants.htm)
- Chronic renal failure or nephrotic syndrome

A second dose of PPSV is recommended for children and adults through age 64 yrs who are at highest risk of serious pneumococcal disease or likely to have a rapid decline in pneumococcal antibody levels (categories g–j above) at least 5 yrs after dose #1.

Note: Administer an additional dose of PPSV to all adults at age 65 yrs (or older). Give it at least 5 yrs after any previous PPSV.

A 1-time dose of PCV13 is recommended for previously unvaccinated people age 6 through 64 yrs who meet any of the criteria in categories e–j above.

Created by the Immunization Action Coalition ([www.immunize.org](http://www.immunize.org)) Item #62201 (1/16) Supported by an educational grant from Merck.

### Vaccine Dosing and Administration

- Administer 0.5 mL PCV13 or PPSV intramuscularly (22–25g; needle length according to the patient's age/body mass [1–1½"]; PPSV may also be administered subcutaneously (23–25g, ½" needle).

### Intervals for Sequential Use of PCV13 and PPSV

- Adults age 65 years (or older):
  - Administer a 1-time dose of PCV13 (if not previously received).
  - Administer a dose of PPSV 1 yr after PCV13. For those with conditions e–j listed on side 1, administer 8 wks later.
- Children 2 through 18 yrs who previously received PCV13 and who need dose #1 of PPSV, should wait at least 8 wks after the dose of PCV13 before receiving PPSV.
- People age 19 yrs and older who need PPSV dose #2 should receive it at least 5 yrs after PPSV dose #1.
- For children and adults through age 64 yrs who need PCV13 and PPSV, give PCV13 first, followed by PPSV at least 8 wks later. If previously vaccinated with PPSV, give children through age 18 yrs PCV13 at least 8 wks after the most recent dose of PPSV; give adults age 19 through 64 yrs PCV13 1 yr after the most recent PPSV.
- For more details, see [www.cdc.gov/mmwr/preview/mmwrhtml/mm6434a4.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6434a4.htm).

### Contraindications and Precautions

- Do not give PPSV or PCV13 to patients with a history of anaphylactic reaction after a previous dose of PCV13, PPSV, or one of their components.
- Do not give PPSV and PCV13 at the same visit; see "Intervals for Sequential Use of PCV13 and PPSV" section above.

### Side Effects

Most common side effects from PPSV (in all) and PCV13 (in adults) are soreness/redness at the injection site for 1–2 days. For PCV13 in young children, most common side effects are decreased appetite and irritability.

### Talking Points with Patients

- Pneumococcal disease most commonly presents as a serious infection in the lungs (pneumonia), blood (bacteremia), or brain (meningitis).
- The annual U.S. case estimate for invasive pneumococcal disease (bacteremia and/or meningitis) is nearly 35,000 cases and 4,200 deaths.
- Pneumococcal disease most often occurs in older people, as well as in people with a predisposing condition (e.g., immunosuppression, pulmonary or cardiac disease, diabetes).
- Patients age 65 and older who can't remember receiving pneumococcal vaccines should be vaccinated.
- Both pneumococcal vaccines are covered under Medicare Part B for people 65 yrs and older when given at least 1 yr apart.

## Pneumococcal Standing Delegation Order, Training, & Competency

Department: Primary Care Women's Services

Initiation Date: 10/01/2016 (renewal after 2 year)

Standing Delegation Order: Administering Pneumococcal Vaccines (PCV13 and PPSV 23) to Adults

*Only licensed staff members may perform this Standing Delegation Order if a Provider is not physically present in the clinic.*

**Objective of the SDO:**  
To reduce morbidity and mortality from pneumococcal disease by vaccinating all adults who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices. This is accomplished by enabling eligible clinical employees to determine the need for vaccination and to vaccinate adults who meet any of the criteria below.

**Indications:**

- Routine pneumococcal vaccination –**
  - Pneumococcal conjugate vaccine (PCV13) should be administered routinely to all previously unvaccinated adults age 65 years and older.
  - Pneumococcal polysaccharide vaccine (PPSV23) is recommended for all adults age 65 years and older.
- Risk-based pneumococcal vaccination –**
  - Age 19 through 64 years with an underlying medical condition or other risk factor as described in the following table:

CATEGORY OF UNDERLYING MEDICAL CONDITION OR OTHER RISK FACTOR	RECOMMENDED VACCINES ARE MARKED "X" BELOW	PCV13	PPSV23	PPSV23 booster <sup>1</sup>
Chronic heart disease, "chronic lung disease"		X	X	X
Diabetes mellitus		X	X	X
Chronic liver disease, cirrhosis		X	X	X
Cigarette smoking		X	X	X
Alcoholism		X	X	X
Cochlear implant, cerebrospinal fluid leak		X	X	X
Sickle cell disease, other hemoglobinopathy		X	X	X
Congenital or acquired asplenia		X	X	X
Congenital or acquired immunodeficiency, <sup>2</sup> HIV		X	X	X
Chronic renal failure, nephrotic syndrome		X	X	X
Leukemia, lymphoma		X	X	X
Generalized malignancy, Hodgkin disease		X	X	X
Iatrogenic immunosuppression <sup>3</sup>		X	X	X
Solid organ transplant, multiple myeloma		X	X	X

<sup>1</sup> = a second dose 5 years after the first dose of PPSV23

<sup>2</sup> Includes hypogammaglobulinemia, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocyte disorders (excluding chronic granulomatous disease)

<sup>3</sup> Including B- (rituximab) or T-lymphocyte depletions; immunosuppressive drugs (including long-term systemic corticosteroids and radiation therapy)

<sup>4</sup> Diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy

**Screen for Contraindications and Precautions:**

- Contraindications –**  
Do not give pneumococcal vaccine (PCV13 or PPSV23) to a person who has experienced a serious systemic or anaphylactic reaction to a prior dose of the vaccine or to any of its components. For a list of vaccine components, refer to the manufacturer's package insert or go to [www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/exceptant-table-3.pdf](http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/exceptant-table-3.pdf)
- Precautions –**  
Moderate or severe acute illness with or without fever

**Provide Vaccine Information Statements (VIS):**

Provide all patients with a copy of the most current federal Vaccine Information Statement. Provide non-English speaking patients with a copy of the VIS in their native language, if one is available and desired; these can be found at [www.immunize.org/vis/](http://www.immunize.org/vis/). (For information about how to document that the VIS was given, see section titled "Document Vaccination.")

**Prepare to Administer Vaccine:**

For vaccine that is to be administered IM, choose the needle gauge, needle length, and injection site according to the following chart:

Gender and Weight of Patient	Needle Gauge	Needle Length	Injection Site
Female or male less than 130 lbs.	22–25	5/8"–1"	Deltoid muscle of arm
Female or male 130–152 lbs.	22–25	1"	Deltoid muscle of arm
Female 153–200 lbs.	22–25	1–1½"	Deltoid muscle of arm
Male 153–200 lbs.	22–25	1–1½"	Deltoid muscle of arm
Female 200+ lbs.	22–25	1½"	Deltoid muscle of arm
Male 200+ lbs.	22–25	1½"	Deltoid muscle of arm

<sup>1</sup> = 5/8" needle may be used in patients weighing less than 130 lbs. (40 kg) for IM injection in the deltoid muscle only if the skin is stretched tight, the subcutaneous tissue is not bunched, and the injection is made at a 90° angle to the skin.

For vaccine to be administered via subcutaneous route, select a 23–25 gauge, 5/8" needle for injection into the fatty tissue overlying the triceps muscle.

**Specific written order:**

- Administer PCV13 or PPSV23, 0.5 mL, according to the following dosing information and schedule:
  - PCV13 must be administered by the intramuscular (IM) route.
  - PPSV23 may be administered either IM or subcutaneously (SubQ).

Revised 11/16/2017

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# Pneumococcal Standing Delegated Order, Training, & Competency

 Standing Delegation Order: Administering Pneumococcal Vaccines (PCV13 and PPSV23) to Adults

**Routine vaccination for all adults ages 65 years and older –**

Age of Patient	Vaccine(s) Indicated (See table on page 1)	History of Prior Vaccination	Schedule for Administration of PCV13 and PPSV23
65 yrs. or older	PPSV23 and 1-time dose of PCV13	None or unknown	Administer PCV13 followed in 1 year* by PPSV23
		PPSV23 when younger than age 65 years; 0 or unknown PCV13	Administer PCV13 at least 1 year after previous PPSV23. Administer another PPSV23 at least 5 years after previous dose of PPSV23 and at least 1 year* after PCV13.
		PPSV23 when age 65 years or older; 0 or unknown PCV13	Administer another PPSV23 at least 5 years after previous dose of PPSV23 and at least 1 year* after previous dose of PCV13.

\* For adults age 65 years and older with immunosuppressing condition, bacterial or autonomic neuropathy, cerebrospinal fluid leak, or cochlear implant, the interval between PCV13 and PPSV23 should be shortened to 8 weeks.

**Risk-based vaccination for adults ages 19 – 64 years-**

Age of Patient	Vaccine(s) Indicated (See table on page 1)	History of Prior Vaccination	Schedule for Administration of PCV13 and PPSV23
19-64 Years	1 dose PPSV23	None or unknown	Administer PPSV23
	<i>For medical conditions in which only PPSV23 is indicated</i>		
	<i>For medical conditions in which both PCV13 and PPSV23 (or 2 doses) are recommended</i>		
	1 dose PCV13 and 1 dose PPSV23 (i.e., cochlear implant, CSF leak)	None or unknown	Administer PCV13 followed in 8 weeks by PPSV23
		0 or unknown PPSV23; 1 dose PCV13	Administer PPSV23 at least 8 weeks after PCV13.
		1 dose PPSV23; 0 or unknown PCV13	Administer PCV13 at least 1 year after PPSV23
		None or unknown	Administer PCV13 followed in 8 weeks by PPSV23 #1
		1 dose PPSV23; 0 or unknown PCV13	Administer PPSV23 #2 at least 5 years after PPSV23 #1
		1 dose PCV13 and 2 doses PPSV23 (e.g., immunocompromised)	Administer PCV13 at least 1 year after PPSV23 #1. Administer PPSV23 #2 at least 5 years after PPSV23 #1 and at least 8 weeks after PCV13.
		1 dose PPSV23; 1 dose PCV13	Administer PPSV23 #1 at least 8 weeks after PCV13. Administer PPSV23 #2 at least 5 years after PPSV23 #1 and at least 8 weeks after PCV13.



 Standing Delegation Order: Administering Pneumococcal Vaccines (PCV13 and PPSV23) to Adults

**Required documentation:**

Document each patient's vaccine administration information and follow up in the following places:

- Electronic Medical Record – Vaccine template.
  - the date the vaccine was administered,
  - the vaccine manufacturer, lot number and expiration date,
  - the vaccination site and route, and
  - the name and title of the person administering the vaccine
- the publication date of the VIS and date it was given to the patient.
- Personal immunization record card if available
- Immunization Information System (IIS) or "registry" if available
- Report all adverse reactions to Vaccine Adverse Event Reporting System (VAERS).
- Document management of all medical emergencies on an Incident Report and submit to Risk Management.

**Be Prepared to Manage Medical Emergencies:**

- Have a written emergency medical protocol available, as well as equipment and medications
- To prevent syncope, vaccinate patients while they are seated or lying down and observe them for 15 minutes, or as determined by the provider and community standards, after receipt of the vaccine.


**Notify Provider –**

- Notify Provider immediately if the recipient experiences any adverse reaction to the vaccination.
- Report all adverse reactions to Vaccine Adverse Event Reporting System (VAERS) at [www.vaers.hhs.gov](http://www.vaers.hhs.gov)
- Reporting of all adverse reactions to VAERS is mandatory
- Potential adverse reactions include, but are not limited to: syncope, itching, redness, hives, and shortness of breath, wheezing, and heart issues

**Addition information:**

For more information on pneumococcal vaccine administration visit: [www.imznanize.org](http://www.imznanize.org) and [www.vaccineinformation.org](http://www.vaccineinformation.org)




 Standing Delegation Order: Administering Pneumococcal Vaccines (PCV13 and PPSV23) to Adults

**Staff Competency Evaluation Tool**

Employee Name and Title: \_\_\_\_\_ Clinic Name: \_\_\_\_\_

Critical Elements: 

	Met	Not Met
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 Standing Delegation Order: Administering Pneumococcal Vaccines (PCV13 and PPSV23) to Adults

Provider/authorized trainer signature below indicates the employee has demonstrated competency necessary, when directed, to perform the protocol listed above. If any of the competency elements are not met, the employee may NOT perform the protocol until retrained in the element and Provider/authorized trainer deems employee competent.

Provider/authorized trainer signature: \_\_\_\_\_ Date: \_\_\_\_\_

Additional notes: \_\_\_\_\_

(Retain in Employee's training file)

I have read and understand the above protocol and feel confident I am able to perform the tasks.

Staff member signature: \_\_\_\_\_ Date: \_\_\_\_\_



## Using Technology to Maximize Results

- Training and use of Point of Care Tool (includes Pneumococcal and Influenza)
- Training and Monitoring Usage of Health Maintenance Template in EMR (includes Pneumococcal and Influenza)
- Use of Pushed Reports to Make Clinics Aware of Immunization Gaps
- Created Protocol and Work Flow to Use State Adult Vaccine Registry (IIS)
  - Completed training with staff and providers
  - Update to the vaccine template in the EMR
  - Protocols and processes must be created to transition pediatric patients and their registry access to the adult registry to avoid losing their data.
  - Aided in MACRA/MIPS ACI scoring



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## POINT OF CARE TOOLS

### Vaccinations

Tetanus	
Tdap	04/08/2016
Pneumovax	09/19/2016
Pevnar	11/03/2016
Flu	09/26/2016
Zostavax	
HPV	
HepB	

✓ Completed    ✗ Not Completed    - Excluded

### Care Opportunities Total (11)

\*\*\*\* ACME MEASURES \*\*\*\*

- ✓ Adult BMI Assessment
- ✓ Advance Care Planning
- ✓ Breast Cancer Screening
- ✗ Screening for Symptoms of Clinical Depression and Anxiety
- ✗ Comprehensive Adult Diabetes Care - Blood Pressure Control
- ✓ Comprehensive Adult Diabetes Care - Eye Exam
- ✓ Comprehensive Adult Diabetes Care - Medical Attention for Nephro...
- ✓ Colorectal Cancer Screening
- ✗ Influenza Vaccine (Adult)
- ✗ Comprehensive Diabetes Care- HbA1c Control (=9)
- ✓ Tobacco Screening and Cessation Counseling



# EMR DOCUMENTATION

Health Monitor  I reviewed Health Maintenance Today US

Dashboard 
  Health Maint 
  Orders 
  Referrals 
  Completed Orders 
  Deleted Orders

Item Name	Last Done	Last Discussed	Refused	Comments
Complete Exam	04/10/19	04/10/19		
Medicare Annual Visit	04/08/19	02/01/18		Annual Wellness Visit, Subsequent
Flu Shot	10/24/17	02/01/18		Given at MCNT
PneumoVax	10/24/17	10/05/18		Given Elsewhere
Prevnar	07/01/15	10/05/18		1st dose; Prevnar 13

**Pain Scale**    **Weight / BP**  
Exam elements as appropriate based on history

**Preventive Services/Counseling/Education/Referral**

Health Monitor - Preventive Services Reviewed

**Advance Directives**

Yes    No   Have you executed an Advance Directive to a physician and family?

Advanced care plan or similar legal document present

Advanced care planning discussed

[Advance Care Planning Counseling \(>15min\)](#)

**Plan**

[Plan Comments](#)

**Education Materials (suggested)**

[Healthy Lifestyle](#)    [Stress](#)

[Healthy Diet](#)        [Insomnia](#)

[Nutrition for Older Adults](#)    [Hearing Loss](#)

[Exercise/Walking](#)            [Fall Safety](#)

**Preventive Services**

10/24/2017 Flu Shot

10/24/2017 Pneumovax

07/01/2015 Prevnar

06/07/2018 Shingles Vaccine

04/29/2019 Lipid Profile

09/15/2018 EKG

// AAA Ultrasound

10/25/2018 Tobacco Counseling

04/17/2017 Aspirin Counseling

09/15/2018 DM Eye Exam

04/29/2019 DM Education

04/29/2019 HgbA1C

04/29/2019 Microalb/Creat Scr

// HIV

11/09/2018 Colonoscopy

11/09/2018 Cologuard

07/11/2016 FOBT/FIT

03/04/2018 Bone Density



# EMR DOCUMENTATION

177/1956     Immunizations refused by parents     Alternative schedule requested by parents

**Immunizations 3**     Immtrac Consent Obtained    Date Obtained //     Immtrac Declined    Date Declined //

Date	Performed Elsewhere	Age	MFG	Lot #	Exp. Date	Route/Site	Cls Discussed	VIS Given	VIS Publish	Initials
//					//				//	
//					//				//	
//					//				//	
//					//				//	
virus 1 Type		Rotavirus 2 Type		Rotavirus 3 Type					//	
Prevnar13	//				//				//	
					//				//	
Influenza Declined	//	Influenza given at			//				//	
					//				//	
					//				//	
H1N1 Declined	//	Received Elsewhere		Where	//				//	

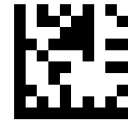


# STATE VACCINE REGISTRY – IMMTRAC2



TEXAS  
Health and Human  
Services | Texas Department of State  
Health Services

## IMMUNIZATION REGISTRY (ImmTrac2) ADULT CONSENT FORM



(Please print clearly)

**Last Name**  
  
**First Name**  
/ /   
**Date of Birth**  
  
**Address**  
  
**City**  
  
**Mother's First Name**

**Middle Name**  
 Male  Female  
 -  -   
**Apartment # Telephone**  
   
**State Zip Code County**  
    
**Mother's Maiden Name**

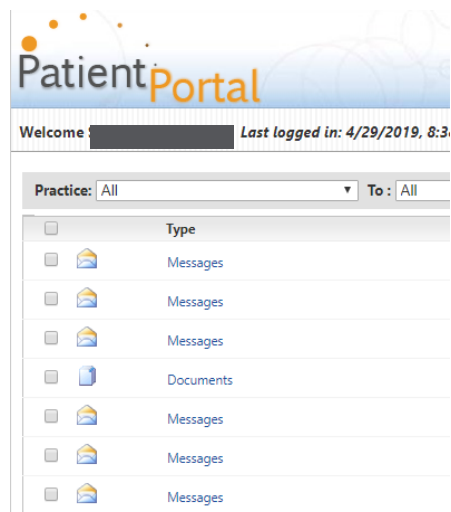


# STATE VACCINE REGISTRY – IMMTRAC2



## PATIENT PORTAL, SOCIAL MEDIA, & SECURE MESSAGING

- Used Patient Portal to Notify Patients When Influenza Immunizations are Available
- Used Website and Twitter as Well To Announce Flu Clinics and Availability
- Receive Secure Messaging of Vaccine Administration from Pharmacies in the EMR



## Challenges and Barriers Identified

- Competing Interests in Operations
- Limited IT Resources
- Clinical Education Team Stretched Thin
- Physicians and Staff Overwhelmed with Number of Reports.
- Lack of Automated Bidirectional Information Interface with the State Registry
  - State Registry required RN or MD to manage the contract



## Summary

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- Multi-disciplinary Approach Around Immunizations
- Ensure Primary Care and Specialists Education Around Vaccine Protocols (especially Pneumococcal)
- Enlist Case Management in Your Immunization Efforts
- Standing Orders and Staff Training and Competencies can Facilitate Success of an Immunization Program and Avoid LASA Errors
- Technology/ IIS can aid consistency in the outpatient setting.
  - Point of Care Tools and EMR Templates can Assist Providers and Staff in Ensuring Immunization Gaps are Met Consistently
  - Use of State Registries and Data Exchange Decreases Data Gaps



# Thank you.

Contact information:

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