

## What Are Standing Orders Protocols?

### Making a Difference in Adult Immunization Rates

Immunization Action Coalition

August 2018 • Item #S8072



## Outline

- Overview of factors contributing to low vaccination rates
- What are standing orders and who recommends them?
- Essential components of standing orders
- Do standing orders improve vaccination rates?
- How standing orders benefit medical practices
- Resources
- Q&As

2



## Overview of Factors Contributing to Low Vaccination Rates

3



## Low Adult Vaccination Rates: A Problem

- Adult immunization rates are below Healthy People 2020 target goals
- Patients aren't receiving their vaccination during office visits

[www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases/objectives](http://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases/objectives)  
Public Health Rep. 2014;129(2):115-123.

4



## Factors Associated with Low Vaccination Among Adults

- Patient factors
  - May not have regular healthcare provider or only see specialists
  - Inconvenient access, competing social and economic demands
  - Many adults 18–64 years of age still unaware of ACA vaccination coverage, and many still remain uninsured
- Provider factors
  - Many other health issues compete with preventive services
  - Lack of provider recommendation
  - Lack of effective reminders to offer vaccinations

Public Health Rep. 2014;129(2):115-123.

5



## Factors Associated with Low Vaccination Among Adults (cont.)

- System factors
  - Fewer requirements for vaccination (e.g., by employers)
  - State regulations differ on who can vaccinate and what vaccines are allowed (e.g., pharmacists, visiting nurse associations)
  - Inability to access patient vaccination history easily
- Complex adult vaccine schedule

6



## Standing Orders – A Solution

The goal of using standing orders is to increase vaccination coverage by:

- Reducing missed opportunities in your healthcare setting
- Routinizing vaccination by making it a program rather than relying on an individual clinician's order for each dose of vaccine.
- Empowering nurses (or other legally qualified individuals) to manage your vaccination program
- Improving efficient use of clinician time by freeing clinicians from active roles in immunization

Public Health Rep. 2014;129(2):115-123.  
Yonas, et al. *J Healthcare Quality*.2012;34:34-42.



7

## What Are Standing Orders?



8

## Standing Orders – What Are They?

Written protocols, approved by a physician or other authorized practitioner, that authorize nurses, pharmacists, or other healthcare personnel (where allowed by state law) to:

- Assess a patient's need for vaccination
- Administer the vaccine without a clinician's direct involvement with the individual patient at the time of the interaction

[www.thecommunityguide.org/findings/vaccination-programs-standing-orders](http://www.thecommunityguide.org/findings/vaccination-programs-standing-orders)



9

## Who Recommends Use of Standing Orders?



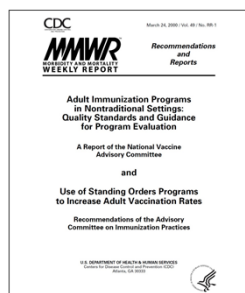
The *Community Preventive Services Task Force* recommends standing orders to increase vaccination coverage among adults and children on the basis of strong evidence of effectiveness.

[www.thecommunityguide.org/findings/vaccination-programs-standing-orders](http://www.thecommunityguide.org/findings/vaccination-programs-standing-orders)



10

## Who Recommends Use of Standing Orders?



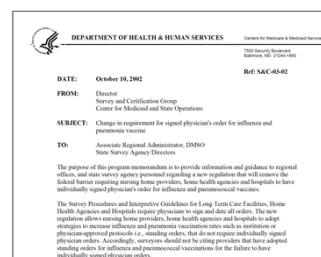
The *Advisory Committee on Immunization Practices (ACIP)* recommends standing orders for influenza and pneumococcal vaccinations and several other adult vaccines.

CDC. *MMWR*. 2000;49(RR-1):1-26.



11

## Who Recommends Use of Standing Orders?



Centers for Medicare and Medicaid Services (CMS)

[www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/downloads/5Cletter03-02.pdf](http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/downloads/5Cletter03-02.pdf)



12

## Use of Standing Orders

- In 2009, only **42%** of physicians reported using standing orders for adult influenza vaccination
- Only **23%** reported consistently using standing orders for both influenza vaccine and pneumococcal polysaccharide vaccine

Zimmerman et al. *Am J Prev Med* 2011; 40(2):144-8.  
Albert, et al. *BMC Fam Pract.* 2012;13(1):22.

13



## Use of Standing Orders (cont.)

The most important factors associated with greater likelihood of a practice consistently using standing orders are:

- Being aware of the ACIP recommendations or Medicare regulations regarding adult immunizations
- Agreeing that standing orders are effective
- Having two or more clinical staff per physician

Zimmerman et al. *Am J Prev Med* 2011; 40(2):144-8.

14



## Use of Standing Orders (cont.)

Other important factors:

- Being a family physician
- Having an office staff that works well together and is open to innovation
- Having an electronic medical record (EMR)
- Having an immunization champion in the practice

Zimmerman et al. *Am J Prev Med* 2011; 40(2):144-8.

15



## Use of Standing Orders (cont.)

Lack of standing orders implementation may be due to:

- Weak or no organizational support
- Small size of the clinical support staff relative to providers
- Concerns about legal ramifications

Zimmerman et al. *Am J Prev Med* 2011; 40(2):144-8.  
Yonas, et al. *J Healthcare Quality* 2012;34:34-42.

16



## Barriers to the Use of Standing Orders

Table 2. Among Physicians with Differing Use of Standing Orders Programs (SOPs), Percent Reporting Various "Major Barriers" to Initiating or Maintaining SOPs for Adult Vaccinations\*

Barrier	Percent Who Report Major Barrier to SOPs for Influenza Vaccine			
	None, no Plans to Implement n = 273	None, Would Like to Implement n = 142	Uses Inconsistently n = 97	Uses Consistently n = 378
Inadequate care staff	22.6	22.6	12.2	4.9**
Inadequate training of staff	11.0	3.5	3.7	2.1**
Staff communication	6.7	5.3	11.0	3.3**
Lack of reliable tracking system	15.4	19.5	15.7	4.5**
Work flow barriers	21.9	20.9	12.2	3.4**
Resources to change policy	28.0	26.5	15.9	6.0**
Patient preference for physician management of care	15.1	8.9	4.9	2.1**
Physician preference for management of care	25.7	5.2	4.9	2.4**
Fear of malpractice	17.1	3.5	2.5	2.4**
Frequently changing recommendations	8.7	10.5	4.9	2.3**
Physicians do not support vaccination as a preventive measure	2.1	1.5	0.0	0.9*

\*Comparisons are for each barrier across all physician groups, values represent column percentages.  
\*\*p < .05 by  $\chi^2$ .  
\*\*\*Not significant.

Yonas et al. *J Healthcare Quality* 2012;34:34-42.

17



## Vaccine Injury Compensation Program

- Established by National Childhood Vaccine Injury Act (1986)
- Provides no-fault compensation for specified injuries that are temporally related to specified vaccinations
- Program has greatly reduced the risk of litigation for both providers and vaccine manufacturers
- Covers most routinely recommended vaccines, including those administered to adults, with a couple of exceptions:
  - Pneumococcal polysaccharide
  - Zoster

[www.hrsa.gov/vaccinecompensation/index.html](http://www.hrsa.gov/vaccinecompensation/index.html)

18



## What are the Components of a Standing Orders Protocol?

19



[www.immunize.org/catg.d/p3074.pdf](http://www.immunize.org/catg.d/p3074.pdf)

20



## Components of a Standing Orders Protocol

A comprehensive standing order should include these elements:

- Who is targeted to receive the vaccine
- How to determine if a patient needs or should receive a particular vaccination (e.g., indications, contraindications, and precautions)
- Provision of any federally required information (e.g., Vaccine Information Statement)
- Procedures for preparing and administering the vaccine (e.g., vaccine name, schedule for vaccination, appropriate needle size, vaccine dosage, route of administration)

21



## Components of a Standing Orders Protocol (cont.)

A comprehensive standing order should include these elements:

- How to document vaccination in the patient record
- A protocol for the management of any medical emergency related to the administration of the vaccine
- How to report possible adverse events occurring after vaccination
- Authorization by a physician or other authorized practitioner

22



## Components of a Standing Orders Protocol (1)

Who is targeted to receive the vaccine – assessing the need

### Procedure

#### 1 Assess Adults for Need of Vaccination against influenza

- All adults are recommended to receive influenza vaccination each year.
- Pregnant women are recommended to receive influenza vaccination each year. Administer any recommended, age-appropriate inactivated influenza vaccine (IIV) to pregnant women in any trimester.
- People who do not recall whether they received influenza vaccine this year should be vaccinated.

23



## Components of a Standing Orders Protocol (2)

How to determine if the patient can receive a particular vaccination (e.g., screen for contraindications and precautions)

### 2 Screen for Contraindications and Precautions

#### Contraindications for use of all influenza vaccines

Do not give influenza vaccine 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 ([www.immunize.org/packages/influenza](http://www.immunize.org/packages/influenza)) or go to [www.cdc.gov/vaccines/imz/downloads/appendices/flu/compinst-1.pdf](http://www.cdc.gov/vaccines/imz/downloads/appendices/flu/compinst-1.pdf)

#### Contraindications only for use of live attenuated influenza vaccine (LAIV; Fluzel, nasal spray)

- Do not give live attenuated influenza vaccine (LAIV; nasal spray) to a person who:
- has a history of either an anaphylactic or non-anaphylactic allergy to eggs
  - is pregnant
  - has immunosuppression (including that caused by medications or HIV)
  - is age 50 years or older
  - received influenza antivirals (e.g., amantadine, rimantadine, zanamivir, or oseltamivir) within the previous 48 hours or will possibly receive them within 14 days after vaccination
  - provides care for a severely immunosuppressed person who requires a protective environment

#### Precautions for use of all influenza vaccines

- Moderate or severe acute illness with or without fever

24



### Screening Checklist for Contraindications to Inactivated Injectable Influenza Vaccination

For patients both children and adults to be vaccinated. The following questions will help you determine if there is any reason that you should not give your child inactivated injectable influenza vaccination today. Please answer "yes" to any question. If there are no reasons, please answer "no." If a question is not clear, please ask your healthcare provider for help.

1. Has the person to be vaccinated ever had a seizure?  Yes  No

2. Does the person to be vaccinated have an allergy to a component of the vaccine?  Yes  No

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

4. Has the person to be vaccinated ever had Guillain-Barre syndrome?  Yes  No

www.immunize.org/catg.d/p4066.pdf

### Components of a Standing Orders Protocol (3)

#### Provision of federally required information: the Vaccine Information Statement

**3 Provide Vaccine Information Statements**

Provide all patients with a copy of the most current federal Vaccine Information Statement (VIS). 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 6 titled "Document Vaccination.")

### Vaccine Information Statement

#### Influenza (Flu) Vaccine (Inactivated or Recombinant): What you need to know

**1 Why get vaccinated?**

**2 Inactivated and recombinant influenza vaccines**

**3 Some people should not get this vaccine**

**4 What if there is a serious reaction?**

**5 How can I learn more?**

www.immunize.org/vis

### Components of a Standing Orders Protocol (4)

#### Prepare to administer the vaccine (e.g., by choosing appropriate vaccine product, needle size, and route of administration)

**4 Prepare to Administer Vaccine**

For vaccine that is to be administered intramuscularly, 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	1/2"-1"	Deltoid muscle of arm
Female or male 130-152 lbs	22-25	1"	Deltoid muscle of arm
Female 153-200 lbs	24-25	1 1/2"	Deltoid muscle of arm
Male 153-200 lbs	22-25	1 1/2"	Deltoid muscle of arm
Female 200+ lbs	22-25	1 3/4"	Deltoid muscle of arm
Male 200+ lbs	22-25	1 3/4"	Deltoid muscle of arm

\* A 1/2" needle may be used in patients weighing less than 130 lbs (60 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-degree angle to the skin.

### Components of a Standing Orders Protocol (5)

#### Specific guidance for administration of the vaccine (e.g., right patient, right vaccine, right age group, right dose, right route, and right site)

**5 Administer Influenza Vaccine according to the criteria and guidance in the table below:**

TYPE OF VACCINE	AGE GROUP	DOSE	ROUTE	INSTRUCTIONS <sup>1</sup>
Inactivated influenza vaccine (IV)	All ages	0.5 mL	Intramuscular (IM)	Administer vaccine in deltoid muscle.
(IV-intradermal)	18 through 64 years	0.1 mL	Intradermal (ID)	Insert needle of the microinjection system at a 90 degree angle in the deltoid area.
(IV-high dose)	65 years and older	0.5 mL	Intramuscular (IM)	Administer vaccine in deltoid muscle.
Adjuvanted inactivated influenza vaccine (IIV)	65 years and older	0.5 mL	Intramuscular (IM)	Administer vaccine in deltoid muscle.
Cell culture-based (IV-pocIV)	All ages	0.5 mL	Intramuscular (IM)	Administer vaccine in deltoid muscle.
Recombinant influenza vaccine (RIV)	18 years and older	0.5 mL	Intramuscular (IM)	Administer vaccine in deltoid muscle.
Live attenuated influenza vaccine (LAIV)	Healthy, younger than age 50 years (except pregnant women)	0.2 mL (0.1 mL into each nostril)	Intranasal spray (NAS)	Spray half of vaccine into each nostril while the patient is in an upright position.

### Wrong!

Wrong!



31

Wrong! Wrong!



32



Correct locations for intramuscular vaccine injections  
(gloves not required)



33

### Components of a Standing Orders Protocol (6)

How to document vaccination in the patient record

#### 6 Document Vaccination

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

**Medical record:** Document the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. You must also document, in the patient's medical record or office log, the publication date of the VIS and the date it was given to the patient. Note that medical records/charts should be documented and retained in accordance with applicable state laws and regulations. If vaccine was not administered, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal). Offer the vaccine to the patient at the next visit.

**Personal immunization record card:** Record the date of vaccination and the name/location of the administering clinic.

**Immunization Information System (IIS) or "registry":** Report the vaccination to the appropriate state/local IIS, if available.



34

Available for purchase on [www.immunize.org/shop](http://www.immunize.org/shop)



35

### Components of a Standing Orders Protocol (7)

A protocol for the management of any medical emergency related to the administration of the vaccine

#### 7 Be Prepared to Manage Medical Emergencies

Be prepared for management of a medical emergency related to the administration of vaccine by having a written emergency medical protocol available, as well as equipment and medications. For IAC's "Medical Management of Vaccine Reactions in Adults," go to [www.immunize.org/catg.d/p3082.pdf](http://www.immunize.org/catg.d/p3082.pdf). To prevent syncope, vaccinate patients while they are seated or lying down and consider observing them for 15 minutes after receipt of the vaccine.



36

**Medical Management of Vaccine Reactions in Adult Patients**

All reactions have the potential to result in adverse effects in adults in various clinical settings. Providers should be prepared to respond to reactions and complications. This document provides information on the management of reactions to vaccines in adults. It is intended for use by providers in all settings, including ambulatory care, primary care, and hospital inpatient settings. The information in this document is based on the current best evidence available at the time of publication. It is subject to change as new information becomes available.

REACTION	SYMPTOMS	MANAGEMENT
<b>Localizer</b>	Redness, swelling, itching, warmth at the injection site	Apply cool compresses to the injection site. Use antihistamines for itching. Use corticosteroids for severe reactions. Avoid further vaccination at the injection site.
<b>High febrile</b>	Temperature > 102°F	Apply antipyretics (acetaminophen or ibuprofen) as needed. Monitor temperature and symptoms. Provide supportive care.
<b>Systemic allergic reactions</b>	Hives, wheezing, shortness of breath, dizziness, lightheadedness, fainting, hypotension, tachycardia, anaphylaxis	Stop the vaccine immediately. Administer epinephrine 0.1-0.5 mg IM. Administer antihistamines and corticosteroids. Provide supportive care. Monitor vital signs and symptoms. Refer to a specialist if necessary.
<b>Severe allergic reactions</b>	Hypotension, tachycardia, wheezing, shortness of breath, dizziness, lightheadedness, fainting, hypotension, tachycardia, anaphylaxis	Stop the vaccine immediately. Administer epinephrine 0.1-0.5 mg IM. Administer antihistamines and corticosteroids. Provide supportive care. Monitor vital signs and symptoms. Refer to a specialist if necessary.
<b>Neurological</b>	Seizures, weakness, paralysis, loss of consciousness	Stop the vaccine immediately. Administer supportive care. Monitor vital signs and symptoms. Refer to a specialist if necessary.
<b>Other</b>	Headache, dizziness, fatigue, malaise	Provide supportive care. Monitor symptoms. Refer to a specialist if necessary.

[www.immunize.org/catg.d/p3082.pdf](http://www.immunize.org/catg.d/p3082.pdf)

## Components of a Standing Orders Protocol (8)

### How to report possible adverse events occurring after vaccination

**8 Report All Adverse Events to VAERS**  
Report all adverse events following the administration of influenza vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at [www.vaers.hhs.gov](http://www.vaers.hhs.gov). Forms are available on the website or by calling (800) 822-7967.

**VAERS Vaccine Adverse Event Reporting System**

Report an Adverse Event | VAERS Case | Reactions | Submit Follow-up Information

What is VAERS? Report an Adverse Event | VAERS Case | Reactions | Submit Follow-up Information

VAERS is a national system for reporting adverse events following immunization. It is a voluntary system that allows healthcare providers, patients, and the public to report adverse events. VAERS is a critical tool for monitoring vaccine safety and identifying potential risks.

[www.vaers.hhs.gov](http://www.vaers.hhs.gov)

## Components of a Standing Orders Protocol (9)

### Authorization: In general, standing orders are approved by an institution, physician, or authorized practitioner. State law or a regulatory agency might authorize other healthcare professionals to sign standing orders.

**Standing Orders Authorization**

This policy and procedure shall remain in effect for all patients of the \_\_\_\_\_ (name of practice or clinic) \_\_\_\_\_ until rescinded or until \_\_\_\_\_ (date) \_\_\_\_\_.

Medical Director's signature \_\_\_\_\_ Signature date \_\_\_\_\_ Effective date \_\_\_\_\_

## Standing Orders Templates for All Routine Vaccines are Available

Handouts: Clinic Resources

Standing Orders for Administering Vaccines

All steps to implementing standing orders for immunization are covered in this document. It includes information on how to develop standing orders, how to implement them, and how to evaluate their effectiveness. The document also provides templates for standing orders for various vaccines.

[www.immunize.org/standing-orders](http://www.immunize.org/standing-orders)

## Do Standing Orders Improve Vaccination Rates?

## Are Standing Orders Effective?

- Based on a 2015 review of 35 studies (1997–2012) that examined standing orders either alone or combined with other activities\*, the Community Prevention Services Task Force found:
  - Used alone, standing orders increased adult vaccination coverage by a median of **16 percentage points** (range: 9% to 29%)
  - Used in combination with other interventions\*, standing orders increased adult vaccination coverage by a median of **27 percentage points** (range 13% to 40%)

\* Such as expanding access in health care settings, client reminder and recall systems, clinic-based education, provider education, provider reminder and recall systems, or provider assessment plus feedback

www.thecommunityguide.org/sites/default/files/assets/Vaccination-Standing-Orders.pdf

43



## Are Standing Orders Effective? (cont.)

- Based on a 2015 review of 35 studies (1997–2012) that examined standing orders either alone or combined with other activities\*, the Community Prevention Services Task Force found:
  - Standing orders were effective in **increasing vaccination rates** when implemented in a range of clinical settings, among various providers and patient populations
  - Standing orders were **effective for vaccine delivery** to children (universally recommended vaccinations) and adults (influenza and pneumococcal)

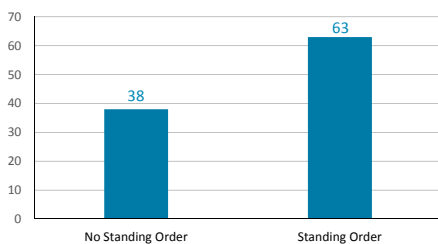
www.thecommunityguide.org/sites/default/files/assets/Vaccination-Standing-Orders.pdf

44



## Example 1: Use of Standing Orders for Influenza Vaccine in an Ambulatory Setting

Percentage of Patients Vaccinated With and Without a Standing Order



Goebel LJ et al. *J Am Geriatr Soc* 2005;53:1008-10

45



## Example 2: Impact of Standing Orders on Adolescent Vaccination Rates, Denver Health, 2013

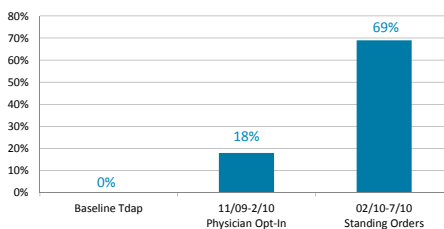
Vaccine	National (2013)	Colorado (2013)	Denver Health (2013)
Tdap	86.0	87.1	95.9
MCV4	77.8	73.6	93.5
HPV – Females $\geq 1$	57.3	58.2	89.0
HPV – Females $\geq 3$	37.6	39.1	66.0
HPV – Males $\geq 1$	34.6	33.5	89.3
HPV – Males $\geq 3$	13.9	9.9	52.5

Kempe, A. 2015. National Foundation for Infectious Diseases Clinical Vaccinology Course  
Farmer, A.M. 2016. *Pediatrics* 138(5):e20152653.

46



## Example 3: In-Hospital Postpartum Tdap Vaccination of Birth Mothers Prior to Discharge



Yeh S, et al. *Am J Obstet Gynecol*. 2014 Mar;210(3):237.e1-6.

47



## How Do Standing Orders Benefit Medical Practices?

48





## Standing Orders in Clinical Practice

- Efficiency
  - Clinician time is not required to assess vaccination needs and issue verbal or written orders to vaccinate
  - Nurses (or others) take charge of vaccination program
- Increased number of patients seen = increased income stream
- Patient safety
  - Improved vaccine coverage, less vaccine preventable disease
  - Decreased opportunities for VPD transmission in your healthcare setting



49

## Conclusions

### Standing Orders Protocols for Immunization

- Are endorsed by major vaccine policy-making institutions
- Reduce missed opportunities for vaccinating patients
- Improve vaccine coverage levels in a variety of settings
- Empower staff
- Provide more efficient use of clinician expertise
- Reduce vaccine administration errors by routinizing process, rather than ad hoc implementation
- Protect your patients and community from vaccine-preventable diseases



50

## Resources



51

## Immunization Action Coalition (IAC)

- Immunization Action Coalition
  - [www.immunize.org](http://www.immunize.org)
  - [www.immunize.org/handouts](http://www.immunize.org/handouts)
  - Email questions: [admin@immunize.org](mailto:admin@immunize.org)
- IAC Express – free weekly emails
  - [www.immunize.org/subscribe](http://www.immunize.org/subscribe)
- Standing Orders Templates
  - [www.immunize.org/standing-orders](http://www.immunize.org/standing-orders)



52

## Questions?



53