Vaccination 101

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MDPH Adult Immunization Conference 2015

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Presenter Disclosure Information Mary Conant-Cantor BSN, RN

Consultant	No relevant conflicts of interest to declare or relevant conflict
Grant Research/Support	No relevant conflicts of interest to declare or relevant conflict
Speaker's Bureau	No relevant conflicts of interest to declare or relevant conflict
Major Stockholder	No relevant conflicts of interest to declare or relevant conflict
Other Financial or Material Interest	No relevant conflicts of interest to declare or relevant conflict
Off Label Use of Vaccines	Will be discussed, but in accordance with current ACIP recommendations

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Outline

- Principles of vaccination
- Types of vaccines
- □ Tips on using the 2015 Adult Schedules
- □ Screening prior to vaccination
- Contraindications and Precautions to vaccination
- Vaccine Information Statements (VIS)
- Vaccine administration documentation requirements
- Vaccine adverse events and medical error reporting

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Principles of Vaccination

Active Immunity

- Protection produced by the person's own immune system
- Occurs due to natural exposure to antigen or by vaccination
- Usually permanent

Passive Immunity

- Protection transferred from another person or animal
- Temporary protection that wanes with time

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Principles of Vaccination

Antigen

 A live or inactivated substance (e.g., protein, polysaccharide) capable of producing an immune response

Antibody

 Protein molecules (immuno-globulin) produced by B lymphocytes to help eliminate an antigen

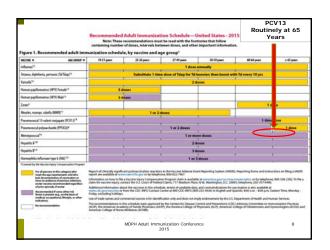
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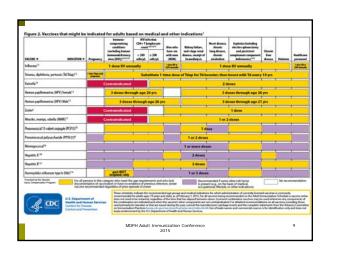
Classification of Vaccines

- Live attenuated
 - viral
 - bacterial
- Inactivated

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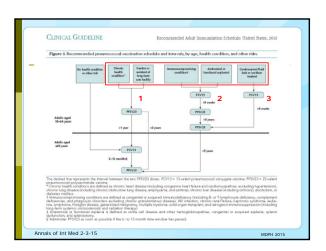






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CLINICAL GUIDELINE Annals of Internal Medicine - Advisory Committee on Immunization Practices Recommended Immunization Schedule for Adults Aged 19 Years or Older: United States, 2015* David K. Kim ND: Carely R. Bridge, MD: and Kaltheen H. Harriman, PMD, MH. RN en behalf of the Advicey Committee on Immunization Practices In Octobe 2014, the Advisory Committee on Immunilization Practices (AGP) approved the Recommended Adult Immunization Schedule, builded States, 2015 in schedule procide a summary of AGP recommended for adults and Experience of the State of State of the State of State of



Your Opinion Counts!

A health care provider recommendation and offer is the single most important determinant of whether or not someone gets vaccinated.



Try using a "presumptive" rather than "participatory" approach

2008 NFID Survey:

- 87% indicated they would be likely to get a vaccine if the provider recommended it
- 55% indicated they would get it only if their provider recommended it

Your Strong routine recommendation is critical!





Screening Questions

- Are you sick today?
- □ Do you have allergies to medications, food, a vaccine component, or latex?
- Have you ever had a serious reaction after receiving a vaccination?
- □ Do you have a long term health problem with heart disease, lung disease, asthma, kidney disease, metabolic disease (e.g. diabetes), anemia, or other blood disorder?
- □ Do you have cancer, leukemia, HIV/AIDS, or any other immune system problem?

Screening Questions, con't

- In the past 3 months, have you taken any medications that weaken your immune system, such as cortisone, prednisone, other steroids, or anticancer drugs, or had radiation treatments?
- Have you had a seizure or a brain or other nervous system problem?
- During the past year, have you received a transfusion of blood or blood products, or been given immune (gamma) globulin or an antiviral drug?
- □ For women: Are you pregnant or is there a chance you could become pregnant during the next month?
- Have you received any vaccinations in the past 4 weeks?

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Screening Forms

- Available from:
 - Immunize.org
- Screening Forms
 - Adult Immunizations
 - Child and Teen Immunizations
 - TIV and LAIV Seasonal Influenza
 - Do I need any vaccines today

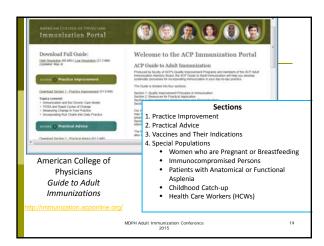
www.immunize.org/handouts/screening-vaccines.asp

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Contraindication and Precautions

- Contraindication
 - A condition in a recipient that greatly increases the chance of a serious adverse reaction
- Precaution
 - A condition in a recipient that might increase the chance or severity of an adverse reaction, or
 - Might compromise the ability of the vaccine to produce immunity

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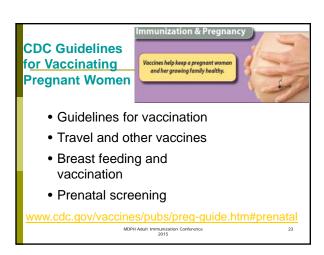


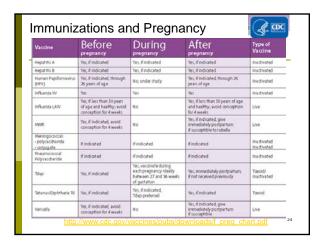
Vaccination of Pregnant Women

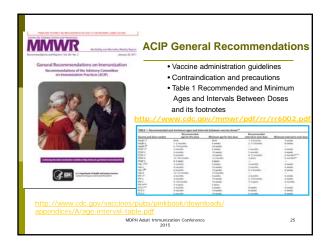
- Live vaccines should not be administered to women known to be pregnant
- In general inactivated vaccines may be administered to pregnant women for whom they are indicated
- Tdap is recommended for pregnant women with each pregnancy between 27 and 36 weeks gestation
- HPV vaccine should be deferred during pregnancy

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Vaccine Information Statements (VISs)

- VISs requirements
 - benefits
 - risks
- injury compensation program
- Healthcare provider requirements
 - give VISs before vaccine is administered
 - offer a copy of the VISs to take away
 - applies to every dose of a vaccine series not just the first dose

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VISs Webpage

- <u>www.cdc.gov/vaccines/pubs/vis</u>
- downloadable PDF files
- □ links to RTF files
- □ links to translations in 40 different languages
- □ link to one-page instruction sheet with essential VISs information titled "Mandatory Instructions for the Use of Vaccine Information Statements"

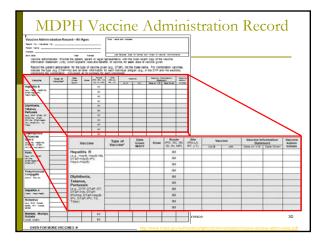
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Healthcare Provider Requirements

- Record in medical record or permanent office log
 - date vaccine was administered
 - vaccine manufacturer
 - lot number
 - name, address and title of person administering vaccine
 - VIS edition date
 - date VIS was provided
- MDPH also recommends the vaccine type, dose, site and route of administration be documented

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MIIS Reporting Requirements

- Legislation passed in June 2010, charging MDPH to establish an immunization registry (M.G.L. c. 111, s.24M)
 - Mandatory reporting of all immunizations administered in MA
 - Access given to healthcare professionals that administer immunizations, as well as schools, LBOH, WIC, and other state agencies' programs involved in immunizations
- MIIS Regulations
 - outlines information on system access, confidentiality, and requirements for reporting immunizations
 - describes a provider's duty to inform patients, and a patient's right to object to data sharing across providers
- See MIIS table or <u>www.contactmiis.info</u> for more information

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MIIS Reporting Compliance

- "What date do I need to be reporting my immunization data to the MIIS by what date?"
 - Providers without an electronic health record (EHR) must report by 9/1/2015
 - Provider with an EHR who administer more than 1,000 doses of vaccine will submit data via electronic data exchange by 12/1/2015
 - Providers with an EHR who administer less than 1,000 doses of vaccine per year will submit data via electronic data exchange by 6/1/2016

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Adverse Event Classification

- Vaccine-induced
- Vaccine-potentiated
- Programmatic error
- Coincidental

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Vaccine Adverse Reactions

■ Adverse reaction

- extraneous effect caused by vaccine
- side effect

■ Adverse event

- any event following vaccination
- may be true adverse reaction
- may be only coincidental

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Vaccine Adverse Reactions

□ Systemic

- fever, malaise, headache
- nonspecific
- may be unrelated to vaccine

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Vaccine Adverse Event Reporting System (VAERS)

- □ National reporting system
- Jointly administered by CDC and FDA
- Passive (depends on healthcare providers and others to report)
- □ Receives about 28,000 reports per year

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Vaccine Adverse Event Reporting System (VAERS)

- Detects
 - new or rare events
 - increases in rates of known side effects
 - patient risk factors
- Additional studies required to confirm VAERS signals
- Not all reports of adverse events are causally related to vaccine
- □ File electronically using the VAERS website

www.vaers.hhs.gov

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Vaccine Safety Datalink (VSD)

- Involves partnerships with 10 large managed care organizations
- □ Links vaccination and health records
- Allows for planned immunization safety studies
- Allows for investigations of hypotheses that arise from review of medical literature, reports to VAERS changes in immunization schedules, or the introduction of new vaccines

Recent IOM report states: The federal surveillance infrastructure for detecting adverse events is robust, particularly Vaccine Safety Datalink, and provides confidence about safety of current schedule

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Vaccine Injury Compensation Program (VICP)

- Established by National Childhood Vaccine Injury Act (1986)
- "No fault" program
- Covers all routinely recommended childhood vaccines
- Vaccine Injury Table

www.hrsa.gov/vaccinecompensation

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Institute of Safe Medication Practices (ISMP)

- What to report?
 - Errors in the prescribing, transcribing, dispensing, administering, and monitoring of medications;
 - Wrong drug, wrong strength, or wrong dose errors;
 - Wrong patient errors;
 - Confusion over look-alike/sound-alike drugs or similar packaging;
 - Wrong route of administration errors;
 - Calculation or preparation errors; and
 - Misuse of medical equipment.
- Report all medical errors online to ISMP at:

www.ismp.org

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Adult Immunization Practice Standards

- □ All providers, including those who don't provide vaccine services, have role in ensuring patients up to date on vaccines
- Call to action for healthcare professionals to
 - Assess immunization status of all patients at every clinical encounter
 - Strongly <u>recommend</u> vaccines that patients need
 - Administer needed vaccines or refer to a provider who can
 - <u>Document</u> vaccines received by patients in state vaccine registries

What *you* say matters.

How you say it matters even more!

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ADULT IMMUNIZATION PRACTICE http://www.cdc.gov/vaccines/hcp/patient-ed/adults/for-practice/standards/

Model Standing Orders Adult and Childhood Vaccines Recommended use Contraindications and precautions Emergency Orders AC http://www.immunize.org/handouts/screening-vaccines.asp

Questions?	
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