

Strategic Planning for Vaccine Coverage Assessment

NVAC Immunization Coverage Subcommittee
June 7, 2007



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DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



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Presentation Purpose

- **Inform NVAC Immunization Coverage Subcommittee about vaccine coverage assessment activities and strategy**
- **Solicit feedback on strategic directions and preliminary priorities**

Outline

- **Need for strategic planning**
- **Planning process**
- **Vaccine assessment goals**
- **Current assessment activities**
- **Strategic directions and preliminary priorities**
- **Questions for Subcommittee**

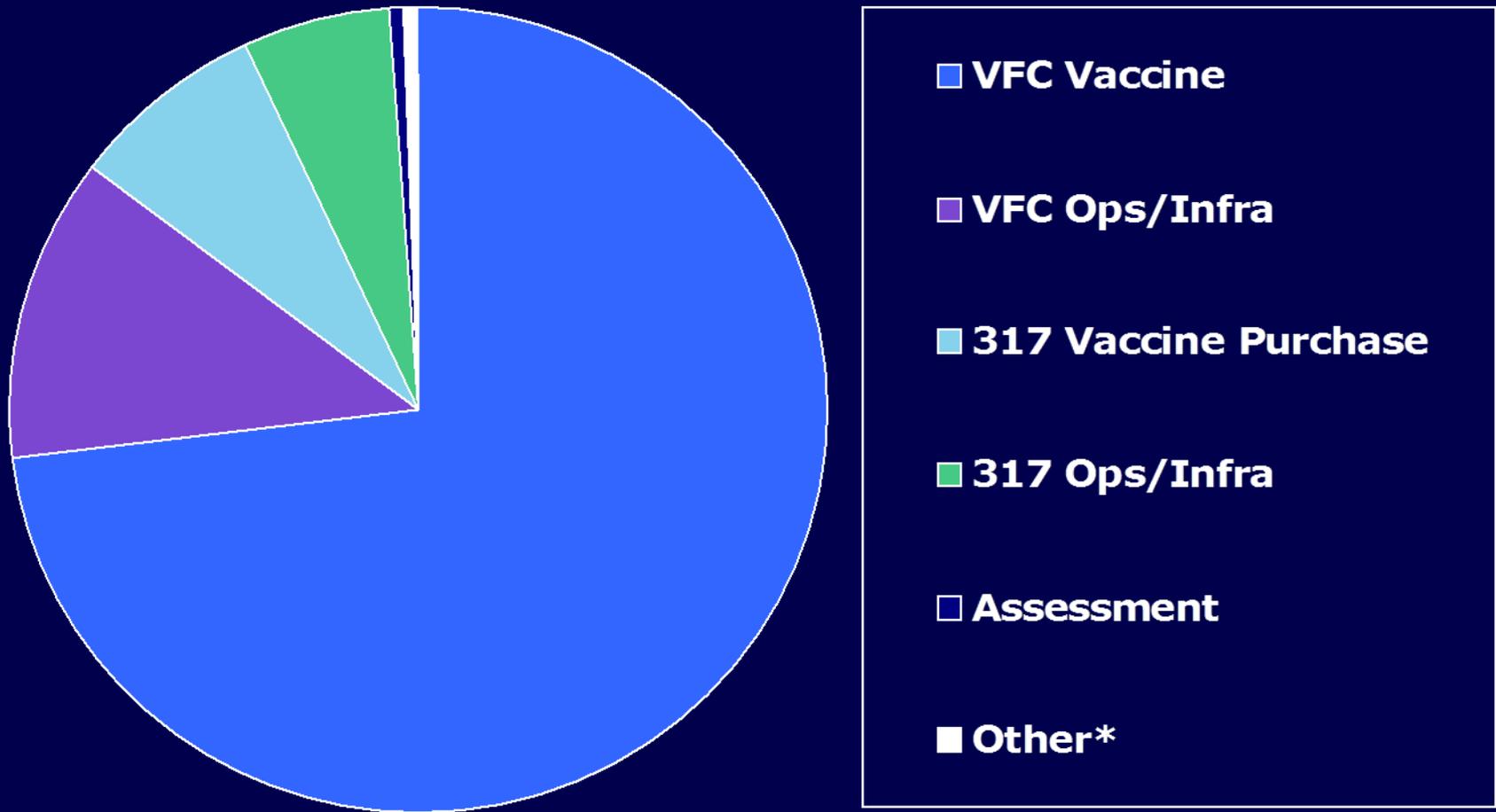
Need for Strategic Planning Challenges

- **New vaccines licensed & recommended**
- **Increased program emphasis on adolescent vaccination**
- **More timely assessment needed**
 - **Vaccine safety denominators**
 - **Substantial preventable morbidity**
- **Quality assessment is expensive**
- **Increasing wireless only households**

Need for Strategic Planning Opportunities

- **Reorganization consolidated responsibility for vaccine assessment across the lifespan**
- **Multiple survey platforms available**
- **Resources for “national immunization surveys”**
 - **\$12.8m PHS evaluation line item**
 - **\$ 7.7m VFC support for NIS**

CDC Immunization Budget FY 2007



* Does not include funding to CDC programs other than ISD/NCIRD

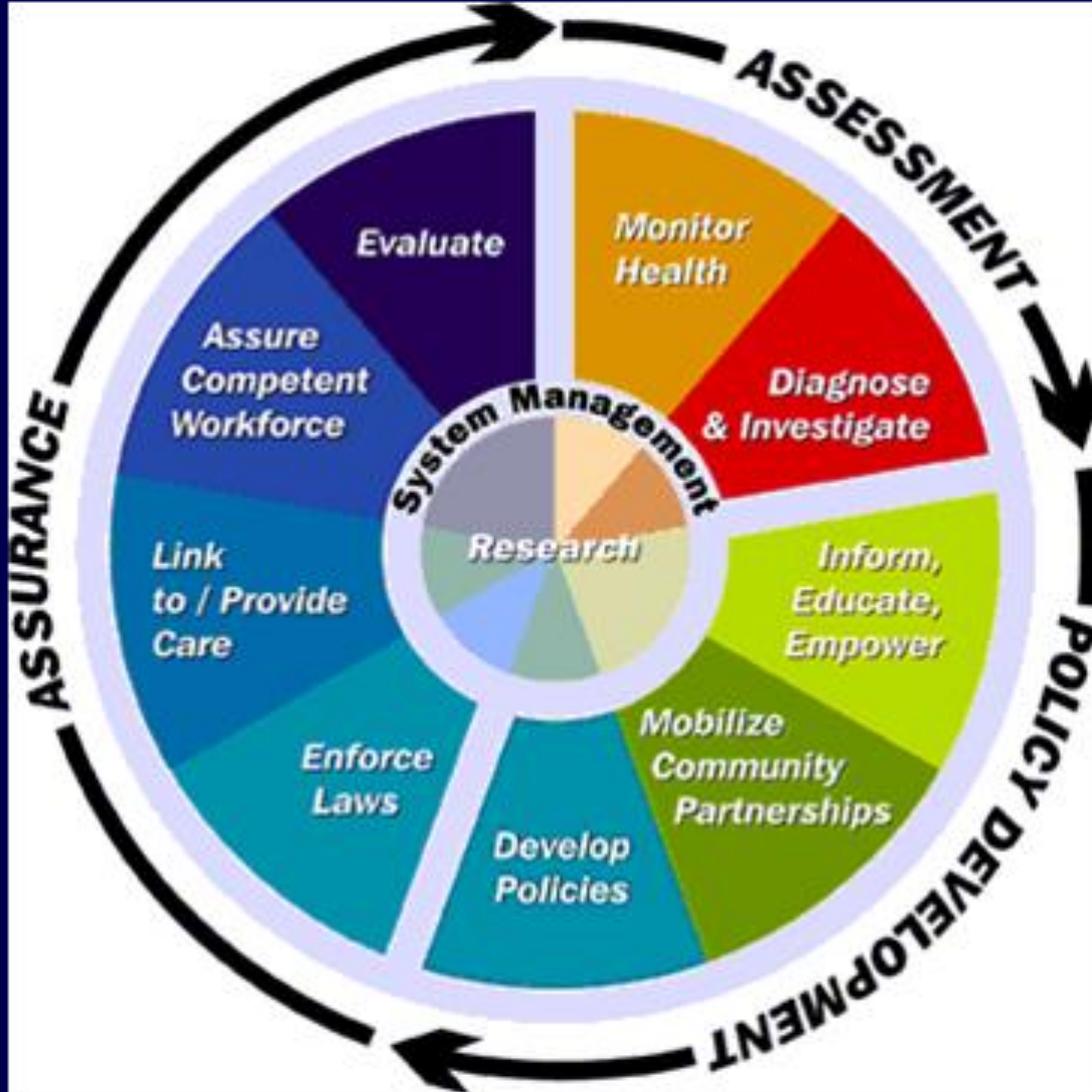
Planning Process

- **CDC Vaccination Assessment Work Group**
- **External Review of Intramural Research**
 - **Priorities for assessment**
- **Feedback from partners**
 - **AAFP, AAP, ACOG, ACP, AMA**
 - **AIM, ASTHO, CSTE, NACCHO, NVAC**
- **NCHS External Review of NIS/SLAITS**
 - **NIS methods**
- **Draft strategic plan for next 5 years**
 - **New NIS contract in place by 2010**

External Review of Intramural Research

- **Meeting April 27, 2007**
 - Feedback on goals of assessment
 - Develop criteria for prioritizing activities
 - Identify gaps in assessment
 - Recommend priorities for assessment
- **Panelists**
 - Walt Orenstein, MD (Emory U.)
 - Nancy Bennett, MD (U. Rochester, NY)
 - Kevin Dombowski, PhD (U. Michigan)
 - Steve Robison, PhD (Oregon DHS)
- **Preliminary recommendations incorporated in strategic directions & priorities**

What gets measured,
gets done



Vaccine Assessment Goals (I)

- **Reduce health & societal burden of vaccine-preventable diseases**
 - **Evaluation of VFC and Section 317 immunization grant programs**
 - **Information for action by states & nation**
 - **Accountability**

Vaccine Assessment Goals (II)

- Evaluate effectiveness of immunization grant programs over time
- Help with allocation of VFC resources
- Monitor progress toward national *Healthy People* objectives
- Build and maintain support for national & state immunization programs

Vaccine Assessment Goals (III)

- **Identify subgroups at higher VPD risk**
- **Identify facilitators & barriers to vaccination to improve interventions**
- **Evaluate compliance with ACIP recommendations**
- **Assess differential impact of vaccine shortages**
- **Evaluate uptake of new vaccines**

Vaccine Assessment Goals (IV)

- **Assist in evaluating health impact of vaccination**
 - Proxy for immunity
 - Ecologic analysis of trends
 - Vaccine effectiveness studies
 - Vaccine safety studies
- **Emergency preparedness**
 - Influenza pandemic monitoring

Recommended Immunization Schedule for Persons Aged 0–6 Years—UNITED STATES • 2007

Vaccine▼	Age►	Birth	1 month	2 months	4 months	6 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B ¹		HepB	HepB	<i>see footnote 1</i>	HepB	HepB	HepB	HepB	HepB	HepB Series		
Rotavirus ²				Rota	Rota	Rota						
Diphtheria, Tetanus, Pertussis ³				DTaP	DTaP	DTaP		DTaP				DTaP
<i>Haemophilus influenzae</i> type b ⁴				Hib	Hib	<i>Hib</i> ⁴	Hib	Hib	Hib	Hib		
Pneumococcal ⁵				PCV	PCV	PCV	PCV				PCV PPV	
Inactivated Poliovirus				IPV	IPV	IPV	IPV	IPV	IPV			IPV
Influenza ⁶							Influenza (Yearly)					
Measles, Mumps, Rubella ⁷							MMR	MMR	MMR			MMR
Varicella ⁸							Varicella	Varicella	Varicella			Varicella
Hepatitis A ⁹							HepA (2 doses)	HepA (2 doses)	HepA (2 doses)		HepA Series	
Meningococcal ¹⁰											MPSV4	

-  Range of recommended ages
-  Catch-up immunization
-  Certain high-risk groups

National Immunization Survey (NIS)

- **Noninstitutionalized children aged 19-35 months at time of telephone interview**
- **Stratified, two phase survey:**
 - **List-assisted, random-digit-dialing survey to identify age-eligible children**
 - **Mailed survey to providers identified during telephone interview to collect provider-reported vaccination histories**
- **Assesses vaccinations since birth**
- **Health insurance module added 2006 to annually monitor by VFC status**

NIS City/County Survey Areas, 2006

Tan areas receive Section 317 grants

Light Blue areas were sampled for the first time in 2006

AZ-Maricopa

CA-Los Angeles, Santa Clara,
San Diego, Fresno Co,
Rural northern Co's

District of Columbia

FL-Miami-Dade Co

FL-Duval Co

GA-Fulton/DeKalb

IL-Chicago

IN-Marion Co

KS-Eastern Co's

MD-City of Baltimore

MA-City of Boston

MI-City of Detroit

NM-Rural southern Co's

NJ-City of Newark

NY-City of New York

OH-Cuyahoga Co

PA-Philadelphia Co,
Allegheny Co

TN-Shelby Co

TX-Bexar Co, Houston,
Dallas, El Paso

WA-King Co, Eastern
Co's

WI-Milwaukee Co

NIS Areas Sampled, 2007

- **50 states**
- **6 Urban areas with Section 317 Immunization Grants**
 - **DC, Chicago, New York City, Philadelphia, Bexar County TX, City of Houston**
- **Areas chosen by state grantees using Section 317 grant funds**
 - **CA: Los Angeles, Santa Clara Co., San Bern. Co.**
 - **FL: Miami-Dade Co.**
 - **IN: Marion Co.**
 - **TX: Dallas Co., El Paso Co.**
 - **WA: Western counties**

NIS Modules

- **Develop 2007, collect data 2008**
- **SES Module (national)**
 - **Barriers to immunization**
 - **Factors associated with racial/ethnic and income-related coverage disparities**
 - **Add key questions to NIS core later**
- **Parental Concerns Module (national)**
 - **Early warning system for parental concerns about vaccination**
 - **Developed with NVAC Subcommittee on Public Engagement**
 - **Consider periodic state-specific estimates**

NIS Operational/Methods Research

- **Research to decrease bias, increase cost-efficiency, and guide future NIS methodology**
 - Use of IIS sample frame & age-targeted phone lists, 2+ phone banks, redesign questionnaire, advance letter, calling rules, answering machine messages
- **Research to address wireless only and phoneless households**
 - Analysis of NHIS by phone status
 - Pilot studies calling cell phones

NIS and Immunization Information Systems (IIS)

- *“The quality and completeness of the registry data must be improved and must be comparable across all states before consideration may be given to supplement or replace the provider-reported data in the NIS.”*
 - Khare et al., Arch Pediatr Adolesc Med 2006
- **NIS provider question on use of IIS to obtain vaccination histories (2006)**
- **May offer service to grantees to evaluate IIS via match with NIS sample**

NIS and Immunization Information Systems (IIS)

- **Conducting NIS survey & provider record check on IIS sample in 2 states**
 - **Dual frame approach may reduce cost, increase validity**
 - **Evaluate use of provider record check on IIS sample to estimate local vaccination coverage**
 - **Evaluate non-response bias in the RDD frame using IIS data as “gold” standard**
- **Encourage use of IIS for local assessment**

Strengths of the NIS

- **Comparability of methodology means estimates are comparable across states and urban areas over time**
- **Identifies areas, populations and factors associated with under-immunization**
- **Provider-verified results**
- **Very precise national level coverage estimates**
- **Provides sampling frame for other health surveys (NIS-Teen, SLAITS)**

Immunization Surveys in U.S.- Affiliated Jurisdictions

- **Areas receive immunization grant funds**
- **Telephone surveys not feasible**
- **Household cluster surveys**
 - **review shot cards & medical records to verify immunization status**
 - **2005 CNMI; 2006 FSM, PR; 2007 VI, American Samoa, Palau, Marshall Islands, Guam, CNMI**
 - **Children 12-35 months, 6 years**
 - **Adults 65+ years (influenza, PPV)**
- **Repeat each area every other year**

Recommended Immunization Schedule for Persons Aged 0–6 Years—UNITED STATES • 2007

Vaccine▼	Age►	Birth	1 month	2 months	4 months	6 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B ¹	HepB	HepB	HepB	<i>see footnote 1</i>	HepB			HepB Series				
Rotavirus ²			Rota	Rota	Rota							
Diphtheria, Tetanus, Pertussis ³			DTaP	DTaP	DTaP		DTaP					DTaP
<i>Haemophilus influenzae</i> type b ⁴			Hib	Hib	<i>Hib</i> ⁴	Hib		Hib				
Pneumococcal ⁵			PCV	PCV	PCV	PCV					PCV PPV	
Inactivated Poliovirus			IPV	IPV	IPV							IPV
Influenza ⁶					Influenza (Yearly)							
Measles, Mumps, Rubella ⁷						MMR						MMR
Varicella ⁸						Varicella						Varicella
Hepatitis A ⁹						HepA (2 doses)					HepA Series	
Meningococcal ¹⁰											MPSV4	

-  Range of recommended ages
-  Catch-up immunization
-  Certain high-risk groups

School and Child Care Coverage Assessment

- **School coverage reported to CDC annually**
- **States assess compliance with immunization requirements**
 - **Survey of schools/facilities**
 - **May conduct record reviews / validation audits**
 - **May follow-up with schools/facilities for children needing additional vaccinations**
 - **Inconsistencies in methods**
 - **grade at assessment, facilities assessed, vaccines reported, sampling methods, denominator**
- **Encourage standardization of school assessments**

Influenza vaccine assessment among children

- **HP 2010 goal 14.22h (6-23 mos old, 1+ dose)**
- **For children 6 mos-4 years:**
 - NIS core used for 6-23 mos
 - NHIS for 2-4 year old
- **For children 5-18 years:**
 - NHIS to assess for HR conditions in sample children and the household contacts of sample children with other children < 5 yrs & adults \geq 65 yrs
 - Cannot assess contact with other HR persons in the household

Recommended Immunization Schedule for Persons Aged 7–18 Years—UNITED STATES • 2007

Vaccine ▼	Age ►	7–10 years	11–12 YEARS	13–14 years	15 years	16–18 years
Tetanus, Diphtheria, Pertussis ¹	<i>see footnote 1</i>		Tdap		Tdap	
Human Papillomavirus ²	<i>see footnote 2</i>		HPV (3 doses)		HPV Series	
Meningococcal ³		MPSV4	MCV4		MCV4' MCV4	
Pneumococcal ⁴		PPV				
Influenza ⁵		Influenza (Yearly)				
Hepatitis A ⁶		HepA Series				
Hepatitis B ⁷		HepB Series				
Inactivated Poliovirus ⁸		IPV Series				
Measles, Mumps, Rubella ⁹		MMR Series				
Varicella ¹⁰		Varicella Series				

 Range of recommended ages

 Catch-up immunization

 Certain high-risk groups

NIS-Teen

- Children aged 13-17 years at time of telephone interview with parent
- Vaccination histories from providers
- Measures vaccinations ages ≥ 11 years
- Conducted national survey Q4 2006
 - 5,483 completed interviews
- Repeat Q4 2007
- Expansion to state/grantee level survey high priority for 2008

Data Collected by NIS-Teen

- **Household (parental report)**
 - **Receipt: MMR, HepB, HepA, VZV, Influenza, Td/Tdap, MCV4, HPV**
 - **Reason for non-receipt: Td/Tdap, MCV4, HPV**
 - **Intent for vaccination next 12 months: HPV**
 - **Race/ethnicity of mother, child**
 - **Mother's age, education, marital status**
 - **Family income**
 - **Health insurance**
 - **Child's age at last check-up**
 - **Asthma, general health status**
- **Providers**
 - **Dates and types of vaccines recorded for patient**
 - **# physicians at practice**
 - **Facility type**
 - **VFC provider**

National Immunization Survey - Teen

Teen Immunization History Questionnaire



Confidential Information. If received in error, please call 1-800-858-4963.

START HERE → Please review your records and complete this questionnaire for the adolescent identified on the label to the right. Then return the questionnaire in the postage-paid envelope provided or fax toll-free to (888) XXX-XXXX. These medical records are confidential. If faxing, please take extra care to dial the correct number.

1. Which of the following best describes your immunization records for this adolescent?

- You have all or partial immunization records for this adolescent for vaccines given by your practice or other practices.
- Was any of the immunization information for this adolescent obtained from your community or state registry? Yes No Don't Know
- Go to question 2 below.

- Other-Explain _____
- You have provided care to this adolescent, but do not have immunization records.
- You have no record of providing care to this adolescent.
- Please complete item 8 and return form as instructed above.

2. According to your records, what is this adolescent's date of birth?

Month Day Year
 Don't know

3. What was the date of this adolescent's first visit, for any reason, to this place of practice?

Month Day Year
 Don't know

4. What was the date of this adolescent's most recent visit, for any reason, to this place of practice?

Month Day Year
 Don't know

6. About how many physicians work at this practice, including those who work part-time?

- 0 1 2 3 4-5 6-10 11 or more

6. Which of the following best describes this facility? Check only one box, representing the most specific description.

- Federally-qualified health center including community/migrant/urban/Indian health center
- Hospital-based clinic, including university clinic, or residency teaching practice.
- Private practice, including solo, group practice, or HMO.
- Specialty: _____
- Public health department-operated clinic
- STD clinic
- School clinic
- Teen clinic
- Other-Explain _____

7. Does your practice order vaccines from your state or local health department to administer to children?

- Yes No Don't know

8. Did you or your facility report any of this adolescent's immunizations to your community or state registry?

- Yes No Don't know
- Not applicable (No registry in my community/state)

8. Contact information for the person returning this form.

- Name: _____
- Physician Nurse
- Office Manager/Receptionist Medical Records Administrator/Technician
- Other

Phone: () _____ ext. _____

Fax: () _____ ext. _____

10. Go to next page →

National Immunization Survey - Teen

Please record all vaccination dates in your records for these vaccine types. We realize you might not have the full immunization history of this adolescent.

Vaccine	Date Given			Given by other practice?	Type of Vaccine							
	Month	Day	Year		Mark one box for each vaccine dose							
DTP/DaP series and Tetanus boosters received since birth	1			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DTP <input type="checkbox"/> DTP	<input type="checkbox"/> DTP/DaP-Combo	<input type="checkbox"/> DT <input type="checkbox"/> Td	<input type="checkbox"/> Tdap				
	2			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DTP <input type="checkbox"/> DTP	<input type="checkbox"/> DTP/DaP-Combo	<input type="checkbox"/> DT <input type="checkbox"/> Td	<input type="checkbox"/> Tdap				
	3			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DTP <input type="checkbox"/> DTP	<input type="checkbox"/> DTP/DaP-Combo	<input type="checkbox"/> DT <input type="checkbox"/> Td	<input type="checkbox"/> Tdap				
	4			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DTP <input type="checkbox"/> DTP	<input type="checkbox"/> DTP/DaP-Combo	<input type="checkbox"/> DT <input type="checkbox"/> Td	<input type="checkbox"/> Tdap				
	5			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DTP <input type="checkbox"/> DTP	<input type="checkbox"/> DTP/DaP-Combo	<input type="checkbox"/> DT <input type="checkbox"/> Td	<input type="checkbox"/> Tdap				
	6			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DTP <input type="checkbox"/> DTP	<input type="checkbox"/> DTP/DaP-Combo	<input type="checkbox"/> DT <input type="checkbox"/> Td	<input type="checkbox"/> Tdap				
	7			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DTP <input type="checkbox"/> DTP	<input type="checkbox"/> DTP/DaP-Combo	<input type="checkbox"/> DT <input type="checkbox"/> Td	<input type="checkbox"/> Tdap				

Please record any DT containing shots such as DTP-Hib or DTP-Hib.

Vaccine	Date Given	Given by other practice?	HepB only						
			Month	Day	Year	Mark one box for each vaccine dose			
Hepatitis B received since birth	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> 0.5 ml Recombivax	<input type="checkbox"/> 1.0 ml Recombivax	<input type="checkbox"/> Engerix	<input type="checkbox"/> HepB only - unknown type	<input type="checkbox"/> HepB-Hib	<input type="checkbox"/> HepB-Hib	
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> 0.5 ml Recombivax	<input type="checkbox"/> 1.0 ml Recombivax	<input type="checkbox"/> Engerix	<input type="checkbox"/> HepB only - unknown type	<input type="checkbox"/> HepB-Hib	<input type="checkbox"/> HepB-Hib	
	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> 0.5 ml Recombivax	<input type="checkbox"/> 1.0 ml Recombivax	<input type="checkbox"/> Engerix	<input type="checkbox"/> HepB only - unknown type	<input type="checkbox"/> HepB-Hib	<input type="checkbox"/> HepB-Hib	
	4	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> 0.5 ml Recombivax	<input type="checkbox"/> 1.0 ml Recombivax	<input type="checkbox"/> Engerix	<input type="checkbox"/> HepB only - unknown type	<input type="checkbox"/> HepB-Hib	<input type="checkbox"/> HepB-Hib	

Vaccine	Date Given	Given by other practice?	HepA only (Havrix or Vaxta)		
			Month	Day	Year
Hepatitis A	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Havrix	<input type="checkbox"/> Vaxta	<input type="checkbox"/> Other
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Havrix	<input type="checkbox"/> Vaxta	<input type="checkbox"/> Other
	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Havrix	<input type="checkbox"/> Vaxta	<input type="checkbox"/> Other

Vaccine	Date Given	Given by other practice?	MMR		
			Month	Day	Year
MMR	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> MMR	<input type="checkbox"/> MMR-Varicella	<input type="checkbox"/> MMR only
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> MMR	<input type="checkbox"/> MMR-Varicella	<input type="checkbox"/> MMR only

Vaccine	Date Given	Given by other practice?	Varicella		
			Month	Day	Year
Varicella	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Varicella only	<input type="checkbox"/> MMR-Varicella	<input type="checkbox"/> MMR-Varicella
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Varicella only	<input type="checkbox"/> MMR-Varicella	<input type="checkbox"/> MMR-Varicella

Child has a history of chickenpox

Vaccine	Date Given	Given by other practice?	Influenza		
			Month	Day	Year
Influenza received in the past three years	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know

Please remember to answer question 9 on page 1.

Vaccine	Date Given	Given by other practice?	Pneumococcal polysaccharide		
			Month	Day	Year
Pneumococcal polysaccharide	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know

Vaccine	Date Given	Given by other practice?	Meningococcal		
			Month	Day	Year
Meningococcal	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> MCIV (Menactra)	<input type="checkbox"/> MPSIV (Menomune)	<input type="checkbox"/> Other
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> MCIV (Menactra)	<input type="checkbox"/> MPSIV (Menomune)	<input type="checkbox"/> Other

Vaccine	Date Given	Given by other practice?	Human papillomavirus (HPV)		
			Month	Day	Year
Human papillomavirus (HPV)	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know

Please enter a description of each vaccine dose

Vaccine	Date Given	Given by other practice?	Other		
			Month	Day	Year
Other	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	4	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	5	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know
	6	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know

Please do not record Polio, Hib, or Pneumococcal conjugate vaccine (Prevnar) given before 6 years old

If you need more space to report vaccines, please attach additional sheets.

Recommended Adult Immunization Schedule

United States, October 2006–September 2007

Recommended adult immunization schedule, by vaccine and age group

Age group (yrs) ▶ Vaccine ▼	19–49 years	50–64 years	≥65 years
Tetanus, diphtheria, pertussis (Td/Tdap) ^{1*}	1-dose Td booster every 10 yrs Substitute 1 dose of Tdap for Td		
Human papillomavirus (HPV) ^{2*}	3 doses (females)		
Measles, mumps, rubella (MMR) ^{3*}	1 or 2 doses	1 dose	
Varicella ^{4*}	2 doses (0, 4–8 wks)	2 doses (0, 4–8 wks)	
Influenza ^{5*}	1 dose annually	1 dose annually	
Pneumococcal (polysaccharide) ^{6,7}	1–2 doses		1 dose
Hepatitis A ^{8*}	2 doses (0, 6–12 mos, or 0, 6–18 mos)		
Hepatitis B ^{9*}	3 doses (0, 1–2, 4–6 mos)		
Meningococcal ¹⁰	1 or more doses		

Adult Vaccine Assessment National Estimates

- **National Health Interview Survey (NHIS)**
 - National In-home survey of U.S. noninstitutionalized population
 - Vaccination questions
 - ≤ 2007 : Influenza, PPV, HepB
 - ≥ 2008 : add HPV, shingles, Td/Tdap, HepA
- **NIS-Adult Survey**
 - Conducted May-July 2007 to collect more timely & detailed information
 - National samples in 3 age groups
 - 18-49, 50-64, ≥ 65 years
 - Old & new vaccines, reasons for non-receipt

Adult Vaccine Assessment State Estimates

- **Behavioral Risk Factor Surveillance System (BRFSS)**
 - Influenza, PPV, HepB on core survey
 - NCIRD supports optional modules
 - 2008
 - HPV, influenza high-risk conditions, HCW status
 - 2009
 - add Td/Tdap, shingles vaccine
- **Evaluating CMS Minimum Data Set for nursing home residents**

Adult vaccination surveys (self-report)

	NIS-Adult	NHIS	BRFSS
Schedule	Periodic	Annual	Annual
Method	RDD	Household	RDD
Sample	National	National	State
Advantages	Knowledge and attitudes, More flexible timeline	Other health information available, face to face data	State based data available, lower cost

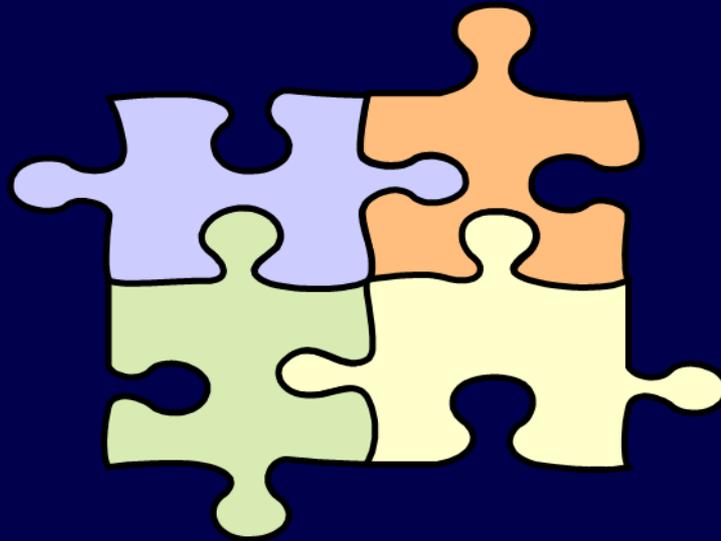
MMWR Articles Planned 2007

- **Hepatitis A coverage, NIS 2004-05 (tba)**
- **Hepatitis B birth dose, NIS (tba)**
- **Kindergarten & Middle School state assessments (8/10)**
- **NIS 19-35 month old (8/31)**
 - **DTaP, Polio, MMR, Hib, HepB, VZV, PCV7**
- **NIS-Teen (8/31)**
- **Influenza IIS Sentinel Sites, 6-23 mo & 2-4 yrs, 2006-07 (9/21)**
- **Influenza NIS 6-23 mo, 2005-06 (9/21)**
- **Influenza BRFSS 2006, adults (9/21)**

Data Availability

September 2007	NIS-Adult 2007 May-June
March 2008	BRFSS 2007
June 2008	NIS 2007, NHIS 2007 National Survey of Children's Health 2007 (NCHS, sponsored by HRSA; state-level estimates of parentally- reported HPV, MCV4, Td/Tdap vaccines for children aged 12-17 yrs)
December 2008	NIS-SES (national)
March 2009	BRFSS 2008
June 2009	NIS 2008, NHIS 2008 (new vaccines)
December 2009	NIS-Parent Concerns (national)

Strategic Directions and Preliminary Priorities



External Review

Preliminary Recommendations (I)

- **Information for state/local action**
- **National & state estimates for accountability**
- **Keep annual NIS by 56 grantees with provider record check**
 - **Feedback from state partners on modules**
- **Expand NIS-Teen to state/grantee level**
- **Adult assessment high priority**
 - **Validate, enhance, promote**
- **Guide & support local assessment**

External Review

Preliminary Recommendations (II)

- **Need state-level data for influenza vaccination of children 2-4 years**
- **Work toward standardization of school immunization assessments**
- **Consider sampling selected city/county areas on NIS**
 - **Linked to special program effort**
 - **Linked to sentinel disease surveillance**
- **Low priority**
 - **College students, other venue-based settings**
 - **Developing new systems for rapid assessment of new vaccines**

**Preliminary Priorities Incorporating
External Review
and
Discussions of the
CDC Vaccine Assessment
Work Group**

High Priority (preliminary) NIS

- **Maintain annual NIS by 56 grantee areas with provider record check**
- **Need state-specific estimates for adolescent vaccination**
- **Continue NIS methods research**

High Priority (preliminary) Adult Assessment

- **Keep NHIS & BRFSS current with new vaccines for adults**
- **Periodically assess validity of self-report of vaccines other than influenza**
 - Evaluate utility of billing data, other surveys (e.g., Medstat, NAMCS)
- **Promote state use of BRFSS data**
- **Evaluate MDS data for monitoring influenza vaccine & PPV in long-term care facilities**

High Priority (preliminary) Local Assessment

- **Conduct biennial immunization surveys in the 8 U.S.-affiliated jurisdictions**
- **Provide technical assistance & support for within-state assessment**
- **Encourage grantees to conduct more local assessment**
- **Develop short and long term strategic plan for the role of IIS in coverage assessment**

Medium Priority (preliminary)

- **School assessments**
 - Standardize methods, particularly for middle school assessment
- **NIS for children 3-6 years**
 - Compare with state-conducted assessments
 - No source for state-level, validated estimates for influenza vaccination of children ≥ 3 years
- **NIS in children aged 6-12 months**
 - Be prepared for emerging safety issue
 - More timely rotavirus assessment

Lower Priority (preliminary)

- **Add NIS city/county sampling areas**
 - **Funded by CDC**
 - **Areas of enhanced disease surveillance**
 - **Areas with special program effort**
- **Certain high-risk persons not assessed by current systems**
 - **MPSV4, PPV, HepA in children 7-10 years**
 - **College students**
 - **MMR, varicella, MPSV4 in adults**

Lower Priority (preliminary)

- **Venue-based settings**
 - **Support state-based approaches**
 - e.g., hospitals and HCW vaccination
 - **Link with existing surveys**
 - e.g., HepB vaccine in correctional facilities
- **Child care facilities**
 - **Encourage state-based assessment**
- **More timely influenza assessment**
- **Increase NIS sample size**
- **Traveler's vaccines**

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Next Steps

- **Feedback from Subcommittee**
- **Share preliminary priorities with partners**
- **Send final report from External Review to partners for feedback**
- **NCHS NIS/SLAITS methodologic review**
- **Draft Vaccine Assessment Strategic Plan by end of 2007**

Questions for NVAC

Questions

- **Are there important assessments not addressed in the priorities presented?**
- **Are there assessments that should be ranked higher in priority?**
- **Are there assessments that should be ranked lower in priority?**
- **Other comments or questions?**

Online References

- **NIS vaccine coverage estimates**
<http://www.cdc.gov/nip/coverage>
- **NIS Methods & public use file**
<http://www.cdc.gov/nis>
- **School & child care facility assessment**
<http://www.cdc.gov/nip/coverage/schoolsurv/overview.htm>
- **NHIS** <http://www.cdc.gov/nchs/nhis.htm>
- **BRFSS** <http://www.cdc.gov/brfss/>
- **MDS** <http://www.medicare.gov/NHCompare>