

Discussion Points

- ❑ **Adult immunization strategic overview – Carolyn Bridges, Assoc Dir Adult Immunizations**
- ❑ **Immunization Information Systems and Adult vaccinations – Gary Urquhart, Chief, Immunization Information Systems Support Branch**
 - **Legislative impacts on adult immunization**
 - **Pediatric IIS participation impact on Immunization Information Systems (IIS)**
 - **CDC initiatives to support immunization programs**
 - **Other national IIS initiatives**
 - **Opportunities for improvement**

Immunization Information Systems and Adult Immunizations

Gary A. Urquhart, MPH
Carolyn B. Bridges, MD, FACP

Immunization Services Division
NCIRD
CDC

September 10, 2013

Figure 2. Recommended Vaccination Chart

FIGURE 2. Recommended vaccinations indicated for adults based on medical and other indications¹

VACCINE ▾	INDICATION ▸	Pregnancy	Immunocompromising conditions (excluding human immunodeficiency virus [HIV]) ^(a,c,d,e,f)	HIV infection CD4+ T lymphocyte count ^(a,c,d,e,f)		Men who have sex with men (MSM)	Heart disease, chronic lung disease, chronic alcoholism	Asplenia (including elective splenectomy and persistent complement component deficiencies) ^(a,b)	Chronic liver disease	Kidney failure, end-stage renal disease, receipt of hemodialysis	Diabetes	Healthcare personnel
				< 200 cells/μL	≥ 200 cells/μL							
Influenza ^(1,2)			1 dose IIV annually			1 dose IIV annually		1 dose IIV annually				1 dose IIV annually
Tetanus, diphtheria, pertussis (Td/Tdap) ^(1,2)		1 dose Tdap if pregnant	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs									
Varicella ^(1,2)			Contraindicated					2 doses				
Human papillomavirus (HPV) Female ^(1,2)			3 doses through age 26 yrs					3 doses through age 26 yrs				
Human papillomavirus (HPV) Male ^(1,2)			3 doses through age 26 yrs					3 doses through age 21 yrs				
Zoster ⁽¹⁾			Contraindicated					1 dose				
Measles, mumps, rubella (MMR) ^(1,2)			Contraindicated					1 or 2 doses				
Pneumococcal polysaccharide (PPSV23) ^(1,3)							1 or 2 doses					
Pneumococcal 13-valent conjugate (PCV13) ⁽¹⁾							1 dose					
Meningococcal ^(1,2)							1 or more doses					
Hepatitis A ^(1,2)							2 doses					
Hepatitis B ^(1,2)							3 doses					

^aCovered by the Vaccine Injury Compensation Program



For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection; zoster vaccine recommended regardless of prior episode of zoster



Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)



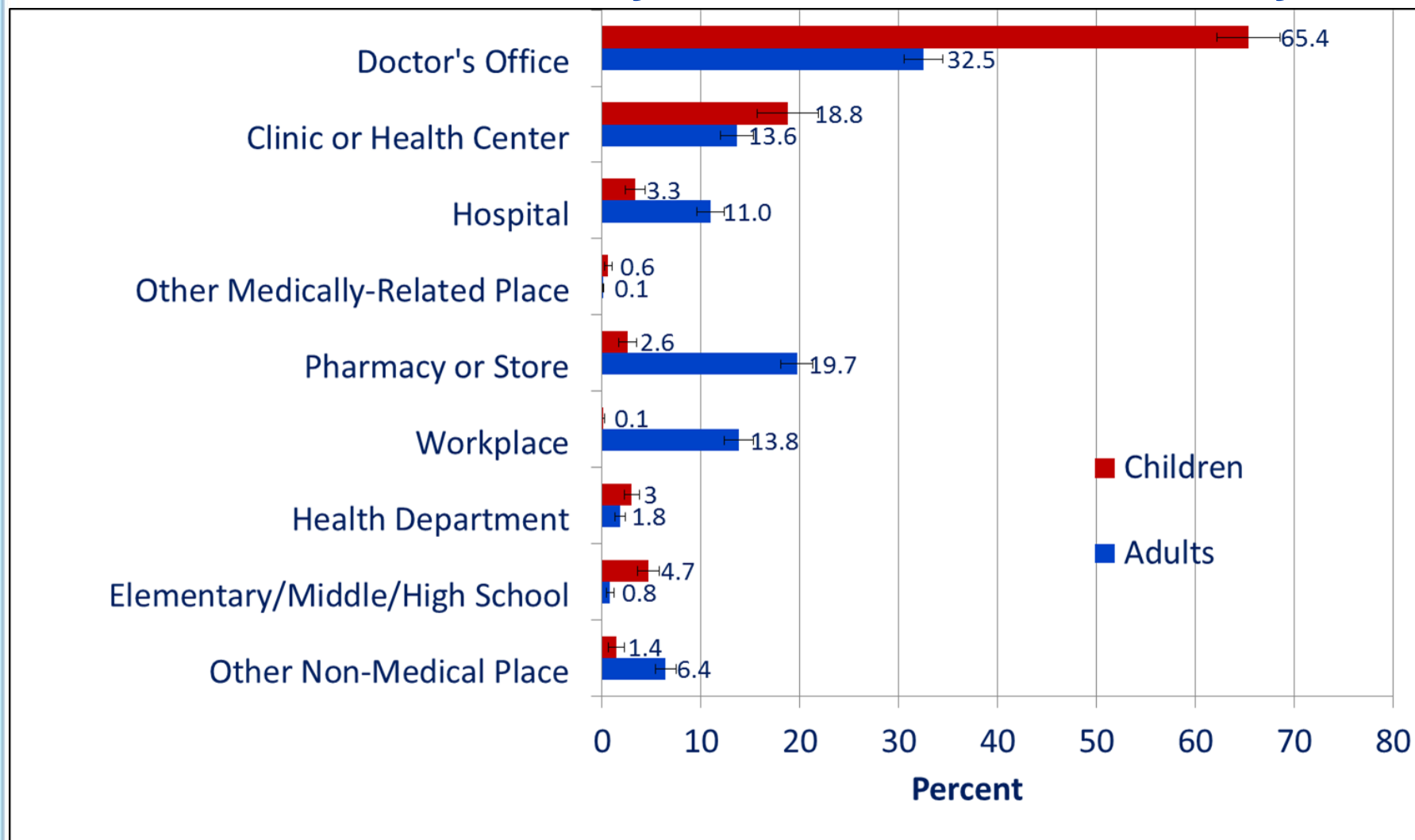
No recommendation

These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages 19 years and older, as of January 1, 2013. For all vaccines being recommended on the Adult Immunization Schedule, a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Licensed combination vaccines may be used whenever any components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/pubs/acip-list.htm). Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

Risk Group Chart

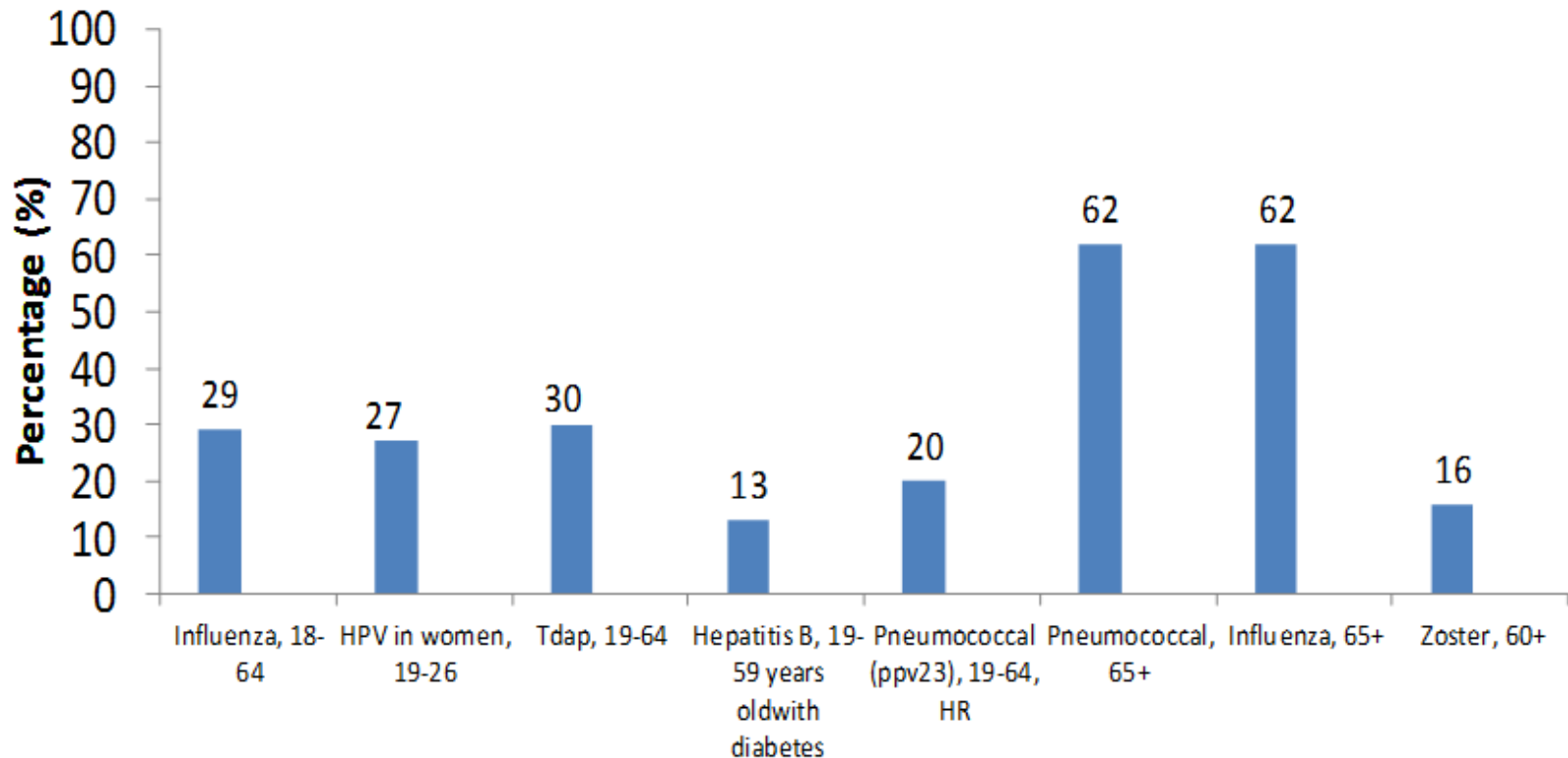
Risk group	Underlying medical condition	PCV13	PPSV23	PPSV23 5-year Revax	PPSV23 at 65 years
Immune competent persons	Chronic heart disease†		✓		✓
	Chronic lung disease§		✓		✓
	Diabetes mellitus		✓		✓
	Cerebrospinal fluid leak	✓	✓		✓
	Cochlear implant	✓	✓		✓
	Alcoholism		✓		✓
	Chronic liver disease, cirrhosis		✓		✓
	Cigarette smoking		✓		✓
Persons with functional or anatomic asplenia	Sickle cell disease/other hemaglobinopathy	✓	✓	✓	✓
	Congenital or acquired asplenia	✓	✓	✓	✓
Immunocompromised persons	Congenital or acquired immunodeficiency	✓	✓	✓	✓
	Human immunodeficiency virus infection	✓	✓	✓	✓
	Chronic renal failure	✓	✓	✓	✓
	Nephrotic syndrome	✓	✓	✓	✓
	Leukemia	✓	✓	✓	✓
	Lymphoma	✓	✓	✓	✓
	Hodgkin disease	✓	✓	✓	✓
	Generalized malignancy	✓	✓	✓	✓
	Iatrogenic immunosuppression**	✓	✓	✓	✓
	Solid organ transplant	✓	✓	✓	✓
	Multiple myeloma	✓	✓	✓	✓

Place of Vaccination by age group, March 2012 National Immunization Survey and National Flu Survey*

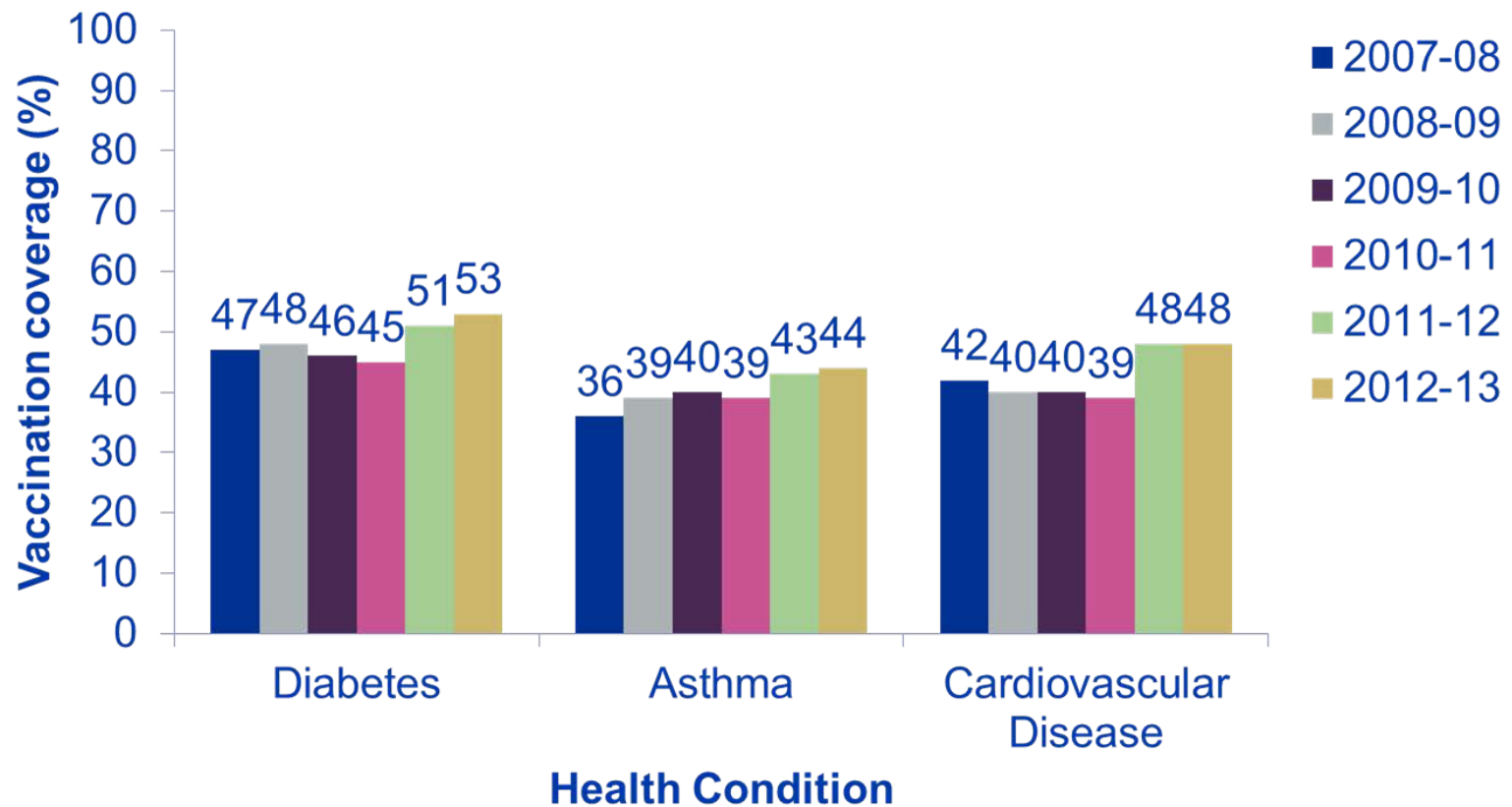


*March 2012 National Immunization Survey (NIS) data for children 6 months through 17 years of age
March 2012 National Flu Survey (NFS) data for adults ≥ 18 years of age

Vaccination coverage for target groups by vaccine, age, and high-risk status, NHIS 2011



Influenza Vaccination Coverage Among 18-64 Year Olds with Certain Conditions, BRFSS 2007-2013



National Adult and Influenza Immunization Summit

- **Identifying barriers and solutions to increasing adult vaccinations documentation in IIS one of the highest priority issues among Summit working groups**

Immunization Information Systems

Legislative Issues that Impact Adult Immunization

A recent CDC legislative survey of all states plus Washington DC revealed that:

- 47 of 50 states plus Washington DC are lifespan IISs;
- 42 of 50 states plus Washington DC are opt-out IISs for adults.

Today's Children are Tomorrow's Adults

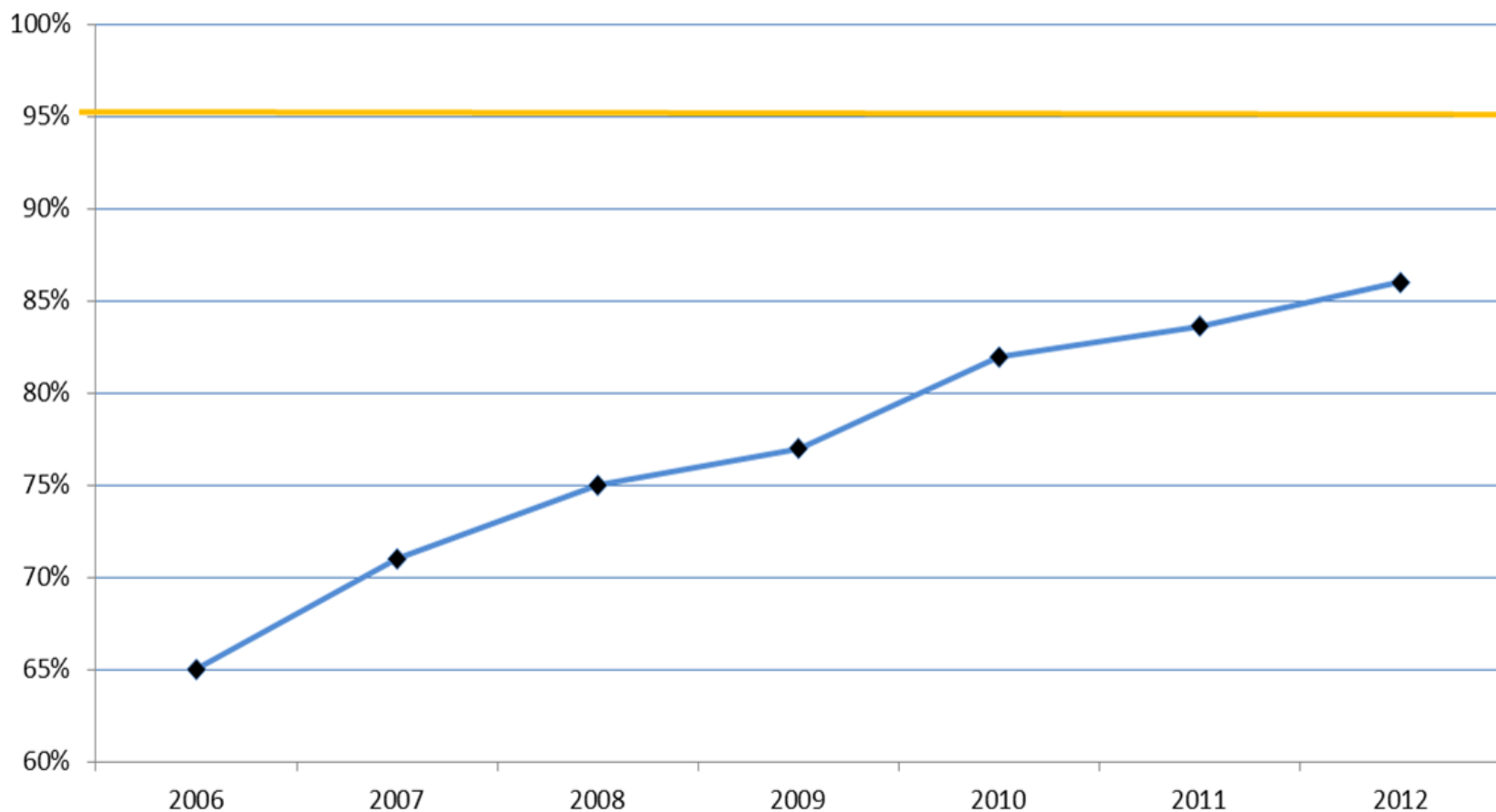


- **Births in the U. S. - 2010:**
3.99 million live births
(10,957 births every day).*
- **Every year, a similar cohort of children age into adulthood.**

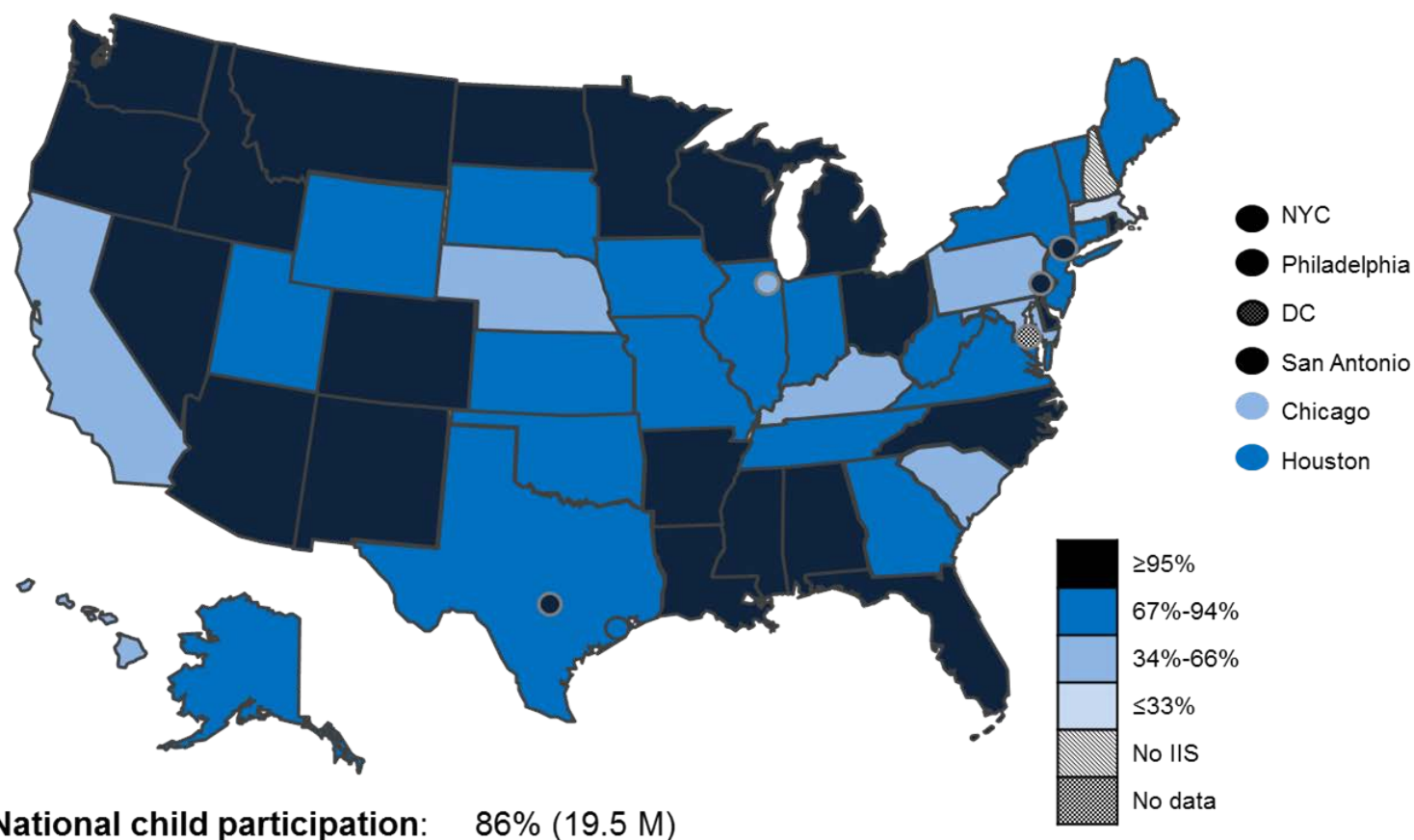
* U.S. National Center for Health Statistics, Vital Statistics of the United States, annual; and National Vital Statistics Reports (NVSR)

Chart of Healthy People 2020 – Objective IID-18

Healthy People 2020 - Objective IID-18: Increase the percentage of children under age 6 years of age whose immunization records are in a fully operational, population-based IIS



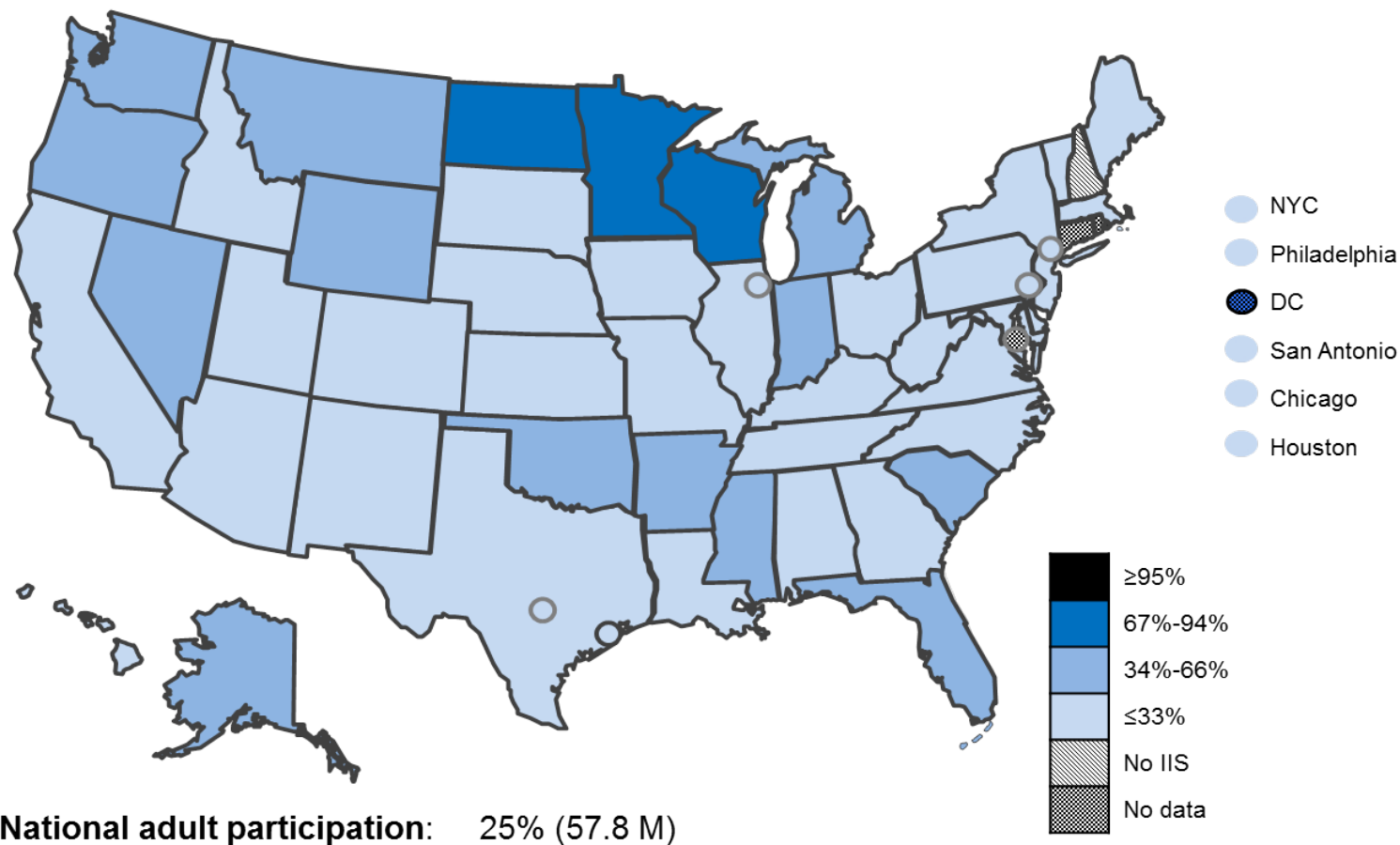
Percentage of children aged <6 years participating* in an Immunization Information System (IIS) – United States, five cities†, and the District of Columbia, 2012



* Participation is defined as having two or more vaccinations recorded in the IIS

†Chicago, Illinois; Houston, Texas; New York, New York; Philadelphia, Pennsylvania; and San Antonio, Texas.

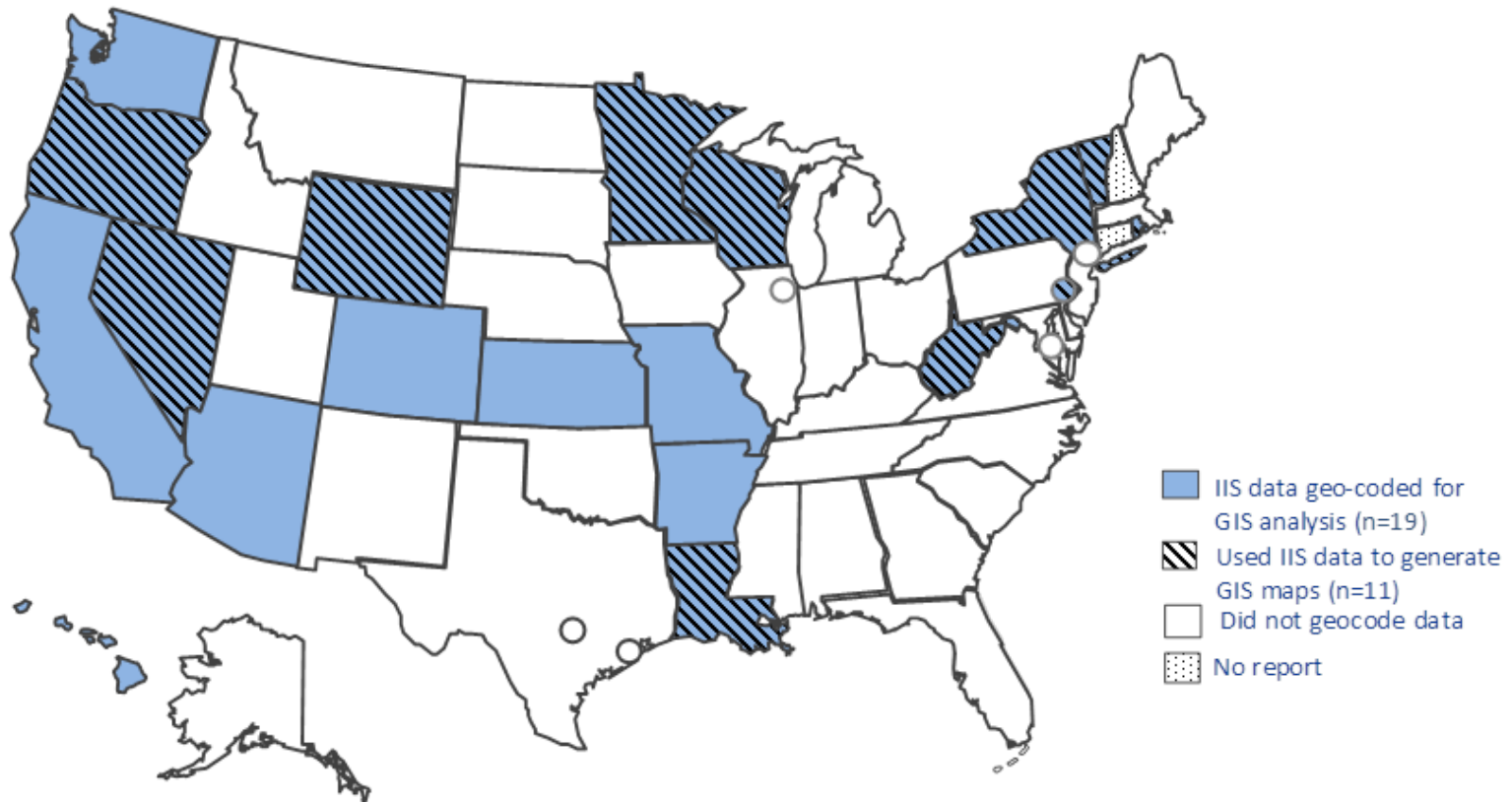
Percentage of adults aged ≥ 19 years participating* in an Immunization Information System (IIS) – United States, five cities⁺, and the District of Columbia, 2012



* Participation is defined as having one or more vaccinations administered during adulthood recorded in the IIS

⁺Chicago, Illinois; Houston, Texas; New York, New York; Philadelphia, Pennsylvania; and San Antonio, Texas.

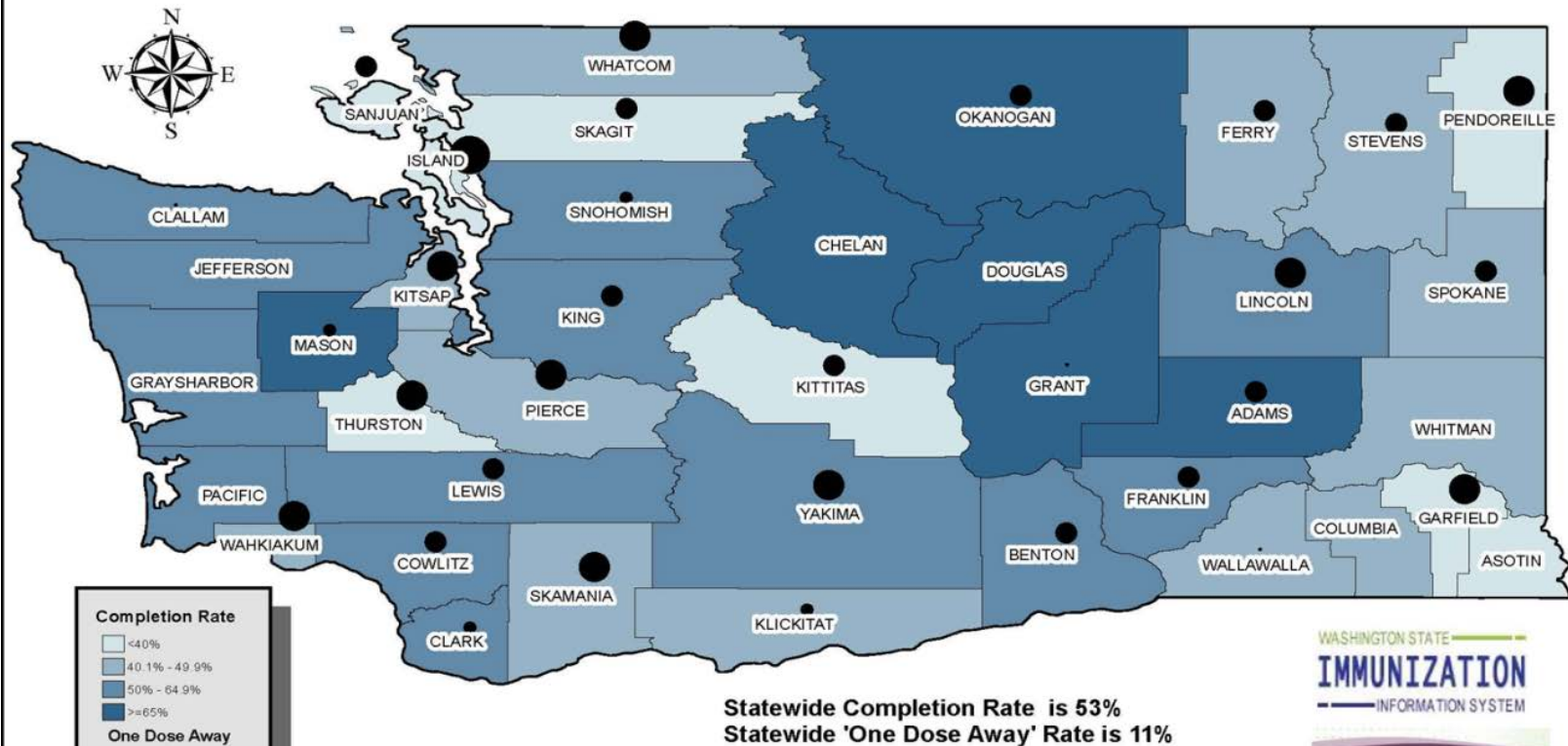
Local area analysis and use of GIS among immunization program grantees—2011*



* self-reported, self-validated data from 54 immunization program grantees as reported in the 2011 IISAR

One Dose Away Rates Comparison

Washington State Child Immunization Completion and 'One Dose Away' Rates Comparison For Series: 4313314



For Children 19-35 months as of 10/21/2012. Series 4313314 includes: 4 DTaP/DT, 3 HEP-B, 3 DOSE, 3 HIB, 1 MMR, 4 PNEUMO (PCV7), 3 POLIO, 1 VARICELLA

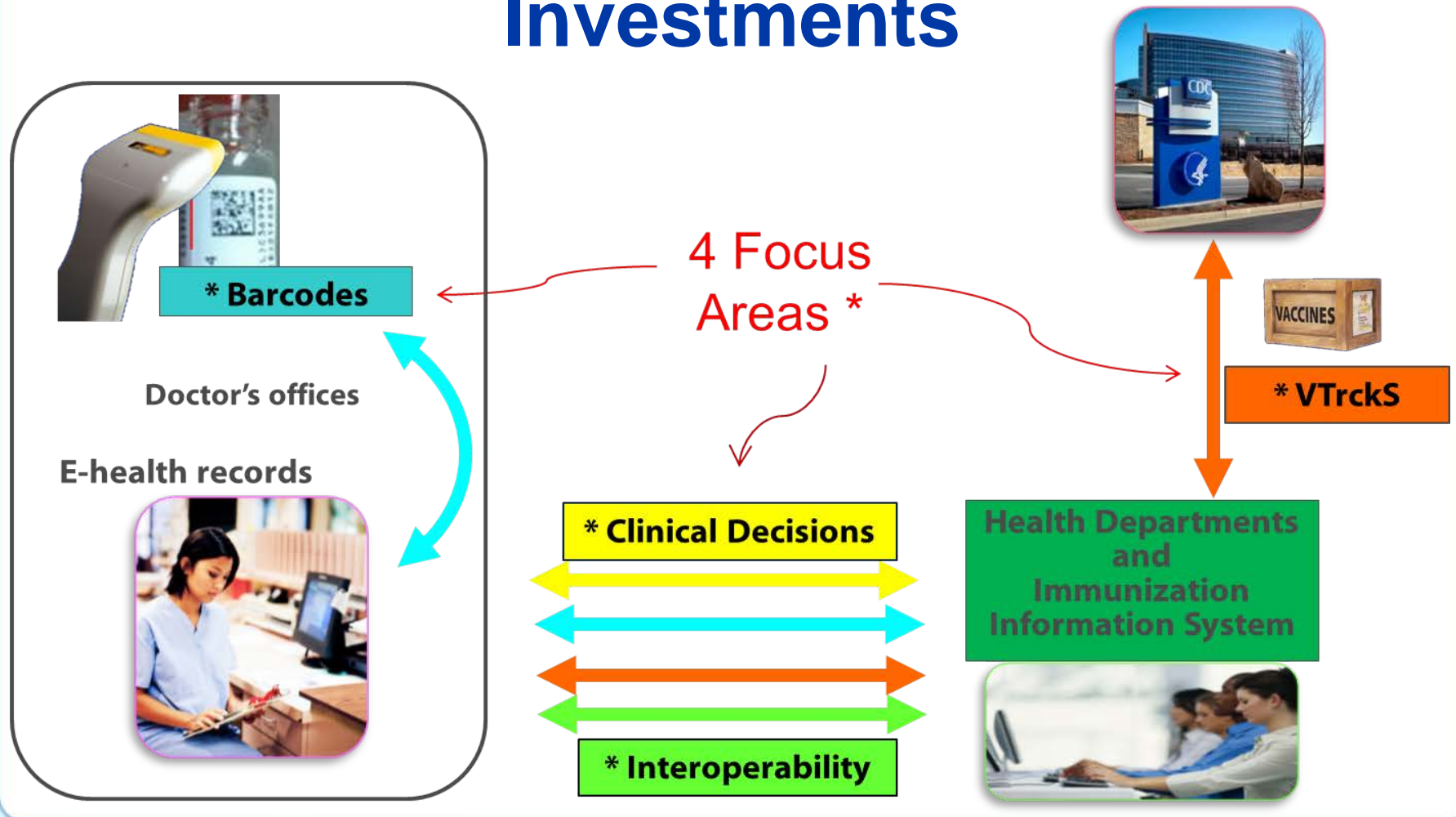
Data Source: Washington State Department of Health Immunization Information System database (IIS)-User Defined Pocket of Need Report. Coordinate System: GCS North American 1983
 Map By: Isaiah berg

WASHINGTON STATE
IMMUNIZATION
 INFORMATION SYSTEM

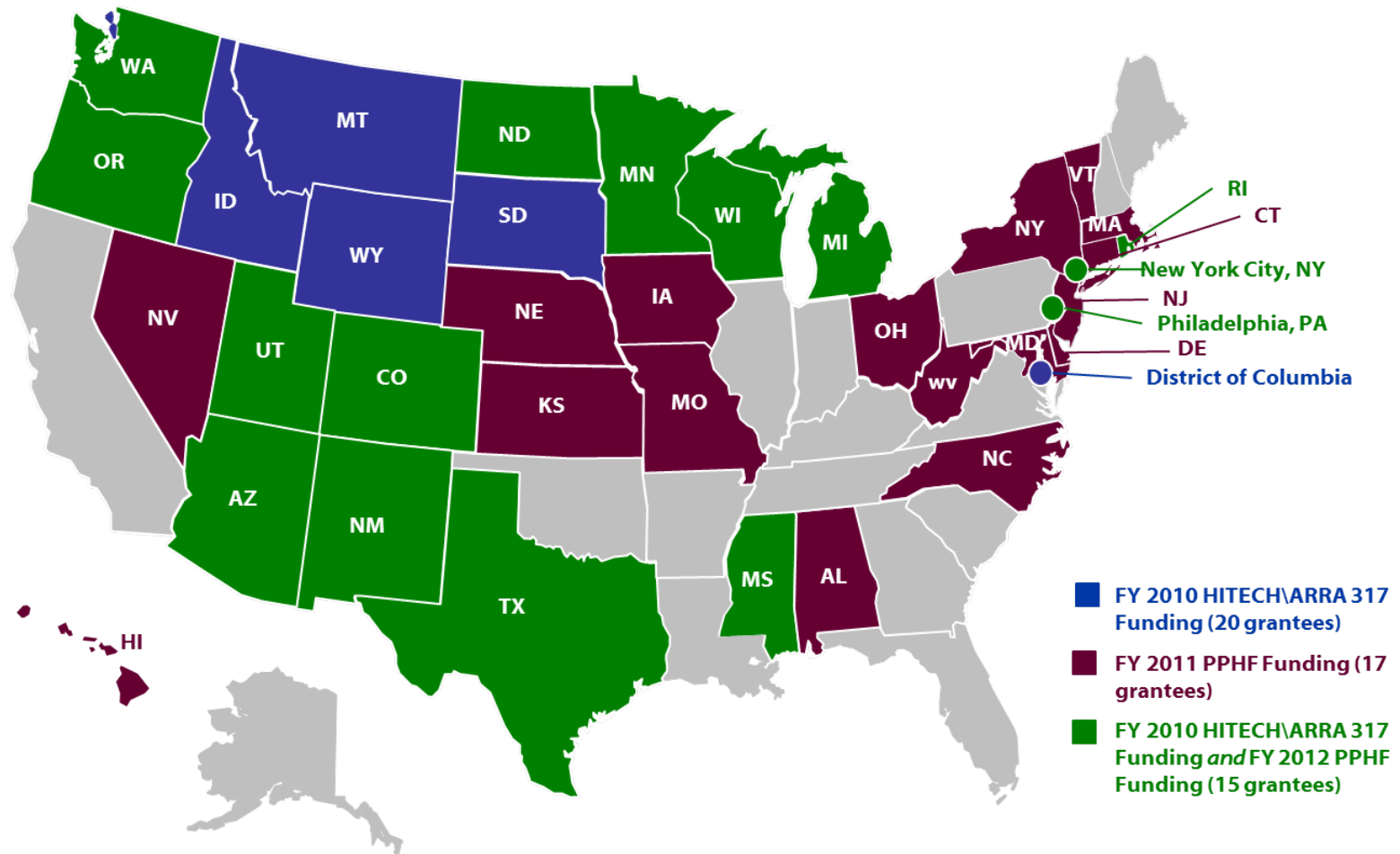
WithinReach
 essential resources for family health

Washington State Department of
Health

Some Initiatives to Modernize the Immunization Program with IT Investments



Status: EHR-IIS Interoperability Cooperative Agreements*



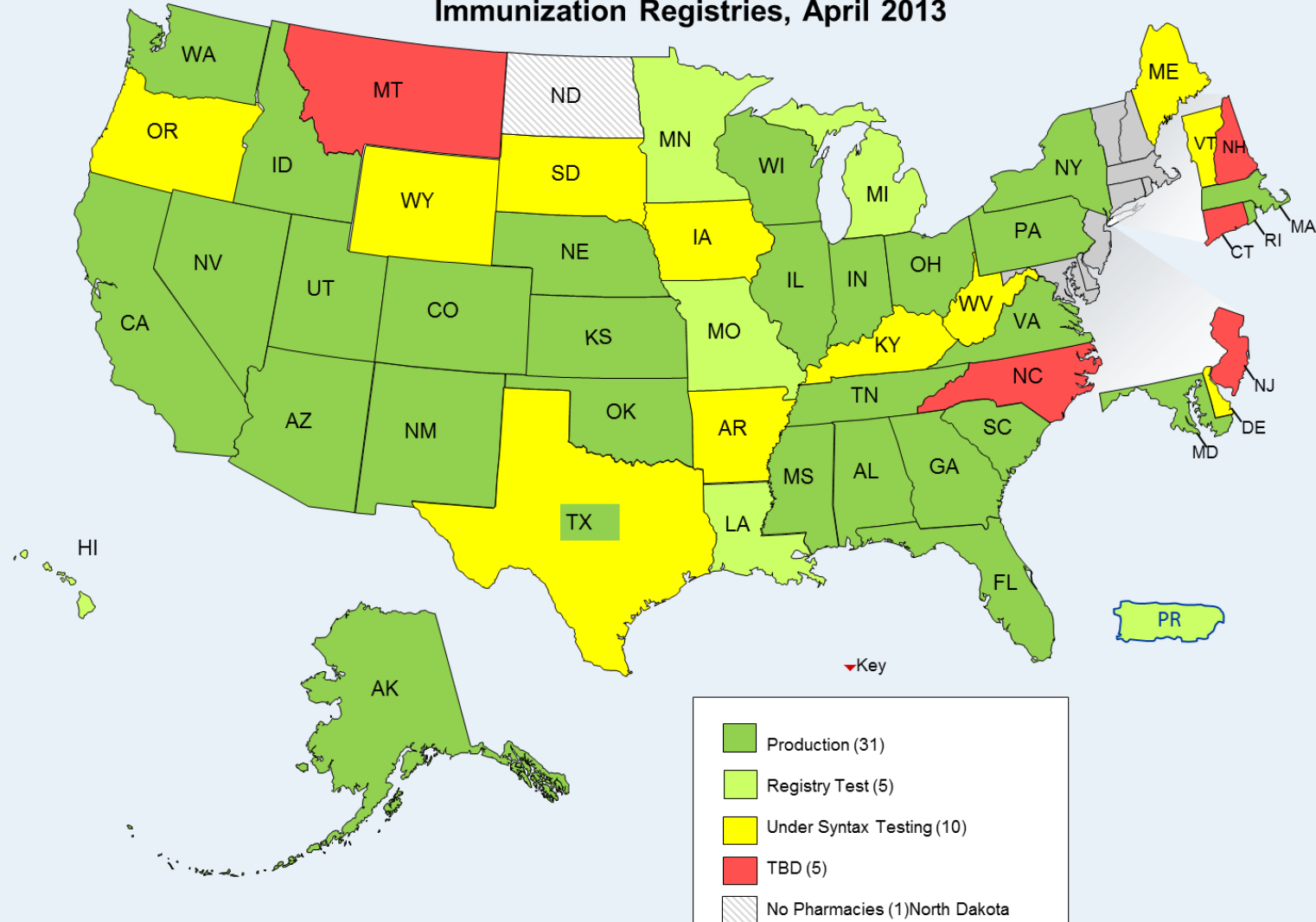
* As of August 2012

Direct Current Initiatives that Impact Adult Immunization Capacity in IIS

- 1. Retail pharmacy reporting to IISs** (example slide next)
- 2. Occupational health clinic reporting to IISs**
- 3. Improving VA immunization by using retail pharmacies to report to IISs**
- 4. Recent expansion of the Sentinel Site project to cover adult populations and report during pandemic response**
- 5. Proposed expansion of the adult ACIP Clinical decisions support schedule for EHR and IIS systems**

Walgreens Pharmacy Report

Walgreens Pharmacy Reporting to State Immunization Registries, April 2013



Adult Specific Strategies for Continued Improvement

- **Encourage use of IIS for adult immunizations among clinics/health systems already entering pediatric data, e.g FQHC-funded clinics, HMO, etc**
- **Increase participation in registries by federal agencies, e.g. IHS (already participating), federal occupational health clinics, VA health systems, Department of Defense-run clinics, etc.**
- **Disseminate information regarding state IIS-specific barriers that may be reduced (opt-in versus opt-out adult immunization registry participation for adults).**

Strategies to improve the reporting of all immunizations for all the population

- Organizational and institutional interventions
 - Consider incentives to report for all immunizations to an IIS.
 - Strengthen the collaboration between roles and responsibilities for federal, state, local and private partners because of new technology advancement and initiatives.
- Technological service interventions
 - Explore new opportunities/capacities for interstate data exchange and/or routing services to get data from single points of data collection for distribution to state networks.
 - Consider developing regionalization and or shared services approaches.
 - Promote e-consumer access to adult immunization histories.

Thank You / Discussion

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

E-mail: cdcinfo@cdc.gov Web: <http://www.cdc.gov>

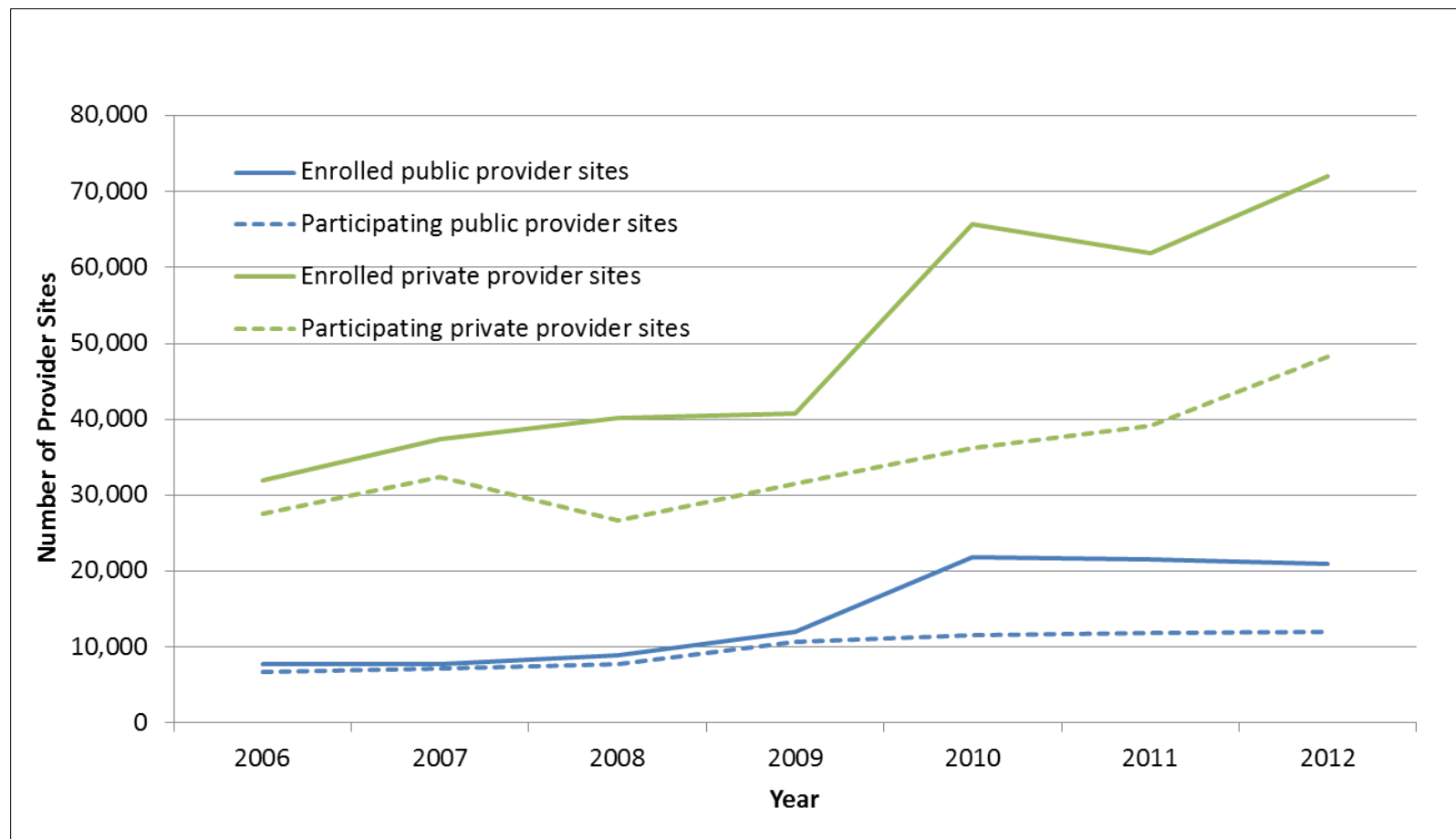
The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

EXTRA SLIDES

IIS adult specific challenges immunization and documentation

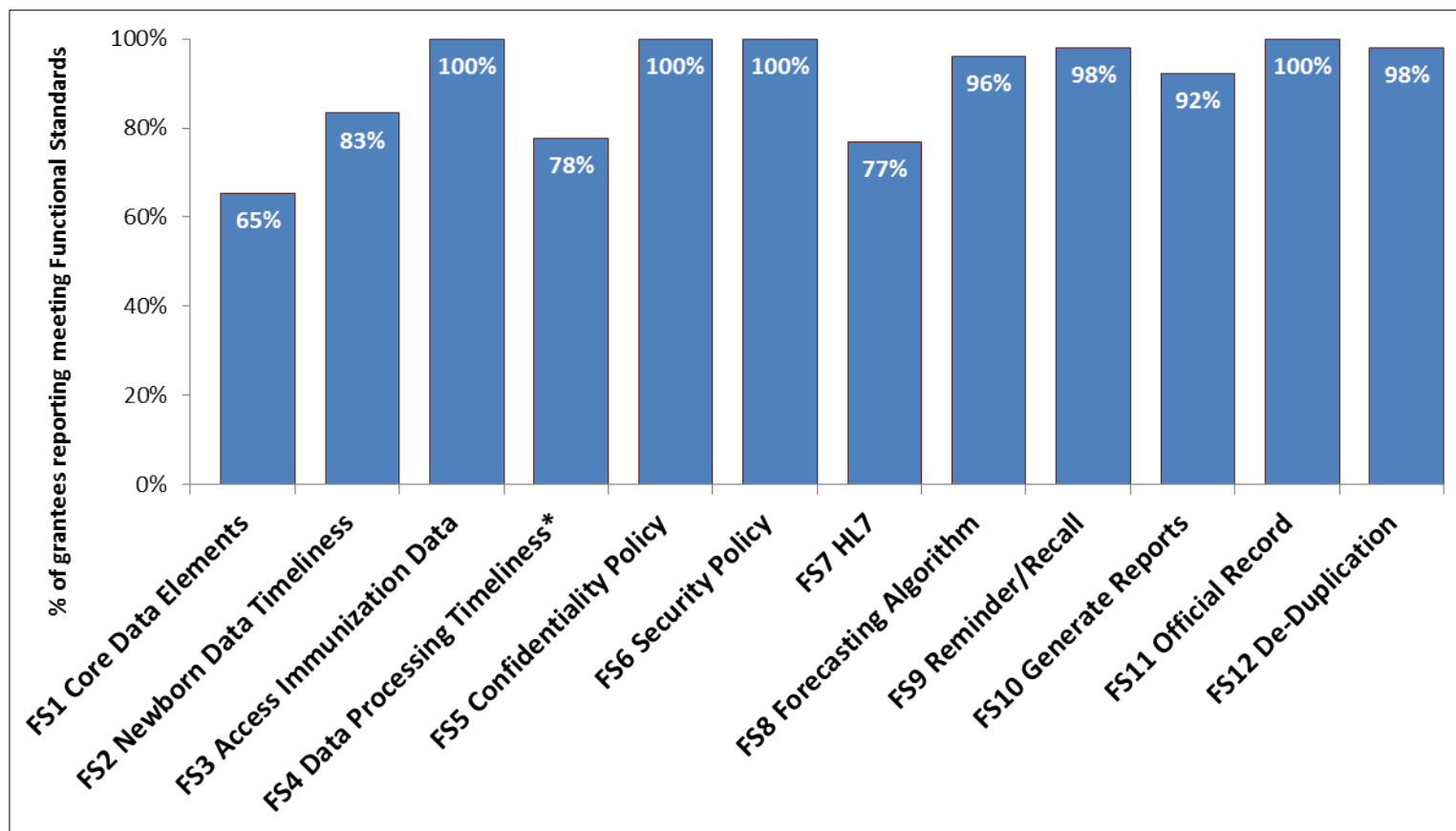
- **Challenges with resources must be addressed.**
- **Adult provider identification and onboarding is a specific challenge.**
- **Change value of an IIS for adult immunization tracking (priority groups, occupation, non-traditional providers etc) during public health emergencies.**

Number of public and private vaccination provider sites enrolled and participating* in an Immunization Information System (IIS), by year — United States, 2006–2012



* Participation is defined as having submitted data to the IIS in the past 6 months. Data include 48 grantees consistently reporting data in every year

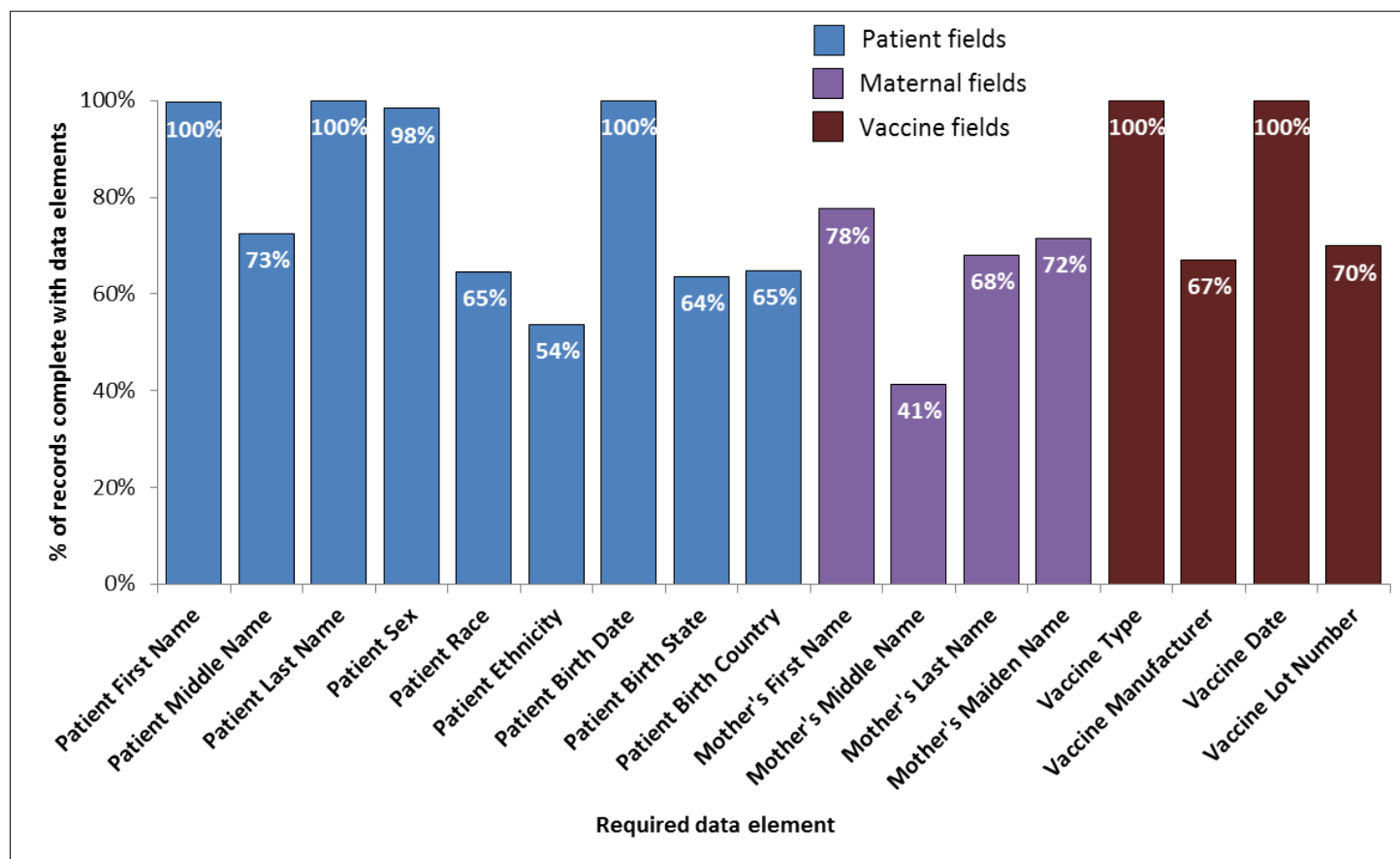
Percentage of U.S. immunization programs[†] meeting NVAC Functional Standards^{**} for IIS—2012



[†]Total number of grantees is 52 for all FS except FS2 and FS 4., excluding New Hampshire, DC, Chicago and Houston *FS2 and FS4 calculate the number of grantees out of 54, including Chicago and Houston, **These data measure the 2007 NVAC Functional Standards. Functional Standards were updated for 2013.

Functional Standard 1:

Percentage of IIS records complete with NVAC core data elements for children <6 years of age, U.S. national average—2012



*Average taken of 52 respondents. Excludes Chicago, DC, Houston, and New Hampshire