

Health Priority: Existing, Emerging and Re-emerging Communicable Diseases Objective 2: Vaccine Preventable Diseases and Immunization (Template)

Long-term (2010) Subcommittee Outcome Objective:

Increase to at least 90 percent the percentage of children and adults who are fully immunized with vaccines recommended for routine use by the Advisory Committee on Immunization Practices (ACIP).

2a: By 2010, at least 90 percent of Wisconsin residents under two years of age will be fully immunized in accordance with current Advisory Committee on Immunization Practices (ACIP) recommendations.

2b: By 2010, at least 97 percent of Wisconsin school age residents will be fully immunized in accordance with current Advisory Committee on Immunization Practices (ACIP) recommendations.

2c: By 2010, at least 90 percent of Wisconsin residents 65 years of age and older and individuals with chronic health conditions will be fully immunized in accordance with current Advisory Committee on Immunization Practices (ACIP) recommendations.

Long-term outcome objective updated as of: Sept 2004

Wisconsin Baseline	Wisconsin Sources and Year
None. Objectives (2a), (2b), and (2c) are developmental objectives.	

Federal/National Baseline	Federal/National Sources and Year
7 cases of congenital rubella syndrome	1998 – National Congenital Syndrome Registry
1 case of diphtheria (persons under 35)	1998 – National Notifiable Disease Surveillance System (NNDSS)
253 cases of Haemophilus Influenzae B (children under 5)	1998 – NNDSS
945 estimated cases of Hepatitis B (children 2-18)	1997 – NNDSS
74 cases of measles	1998 – NNDSS
666 cases of mumps	1998 – NNDSS
3,417 cases of Pertussis (children under 7)	1998 – NNDSS
0 cases of Polio (wild virus)	1998 – NNDSS
364 cases of Rubella	1998 – NNDSS
14 cases of tetanus (persons under 35)	1998 – NNDSS
4 million cases of Varicella	1990-94 averages National Health Interview Survey (NHIS)
1,682 chronic hepatitis B infections in children under 2	1995- National Hepatitis B Prevention Program
24.0 cases of hepatitis B per 100,000 population in adults 19-24	1997 – NNDSS

Federal/National Baseline	Federal/National Sources and Year
20.2 per 100,000 in adults 25-39	1997 – NNDSS
15.0 per 100,000 in adults 40+	1997 – NNDSS
7,232 cases of hepatitis B in injection drug users	1997-NNDSS Sentinel Counties Study of viral hepatitis
15,225 cases of hepatitis B in heterosexually active persons	1997-NNDSS Sentinel Counties Study of viral hepatitis
7,232 cases of hepatitis B in men who have sex with men	1997-NNDSS Sentinel Counties Study of viral hepatitis
249 cases of hepatitis B in occupationally exposed workers	1997-NNDSS Sentinel Counties Study of viral hepatitis
13.0 new cases of bacterial meningitis per 100,000 population in children 1-23 months	1998 – Active Bacterial Core Surveillance (ABCS), Emerging Infections Program
76 new invasive pneumococcal infections per 100,00 population in children under 5	1997 – ABCS
62 per 100,00 in adults 65+	1997 – ABCS
16 invasive penicillin-resistant pneumococcal infections per 100,000 in children under 5	1997 – ABCS
9 per 100,000 in adults 65+	1997 – ABCS
4.5 new cases of hepatitis A per 100,000 population	1997- NNDSS
84% of children 19-35 months with 4 doses of diphtheria-tetanus-pertussis (DTaP) vaccine received	1998 – National Immunization Survey (NIS)
93% with 3 doses of Haemophilus influenzae type b (Hib) vaccine	1998 – NIS
87% with 3 doses of hepatitis B (hep B) vaccine	1998 – NIS
92% with 1 dose of measles-mumps-rubella (MMR) vaccine	1998 – NIS
91% with 3 doses of polio vaccine	1998 – NIS
43% with 1 dose of varicella vaccine	1998 – NIS
96% of children in daycare fully immunized with DTaP vaccine	1997-98 Annual Immunization Assessment Reports
93% fully immunized with MMR vaccine	1997-98 Annual Immunization Assessment Reports
95% fully immunized with Polio vaccine	1997-98 Annual Immunization Assessment Reports
97% of children in grades K-1 fully immunized with DTaP vaccine	1997-98 Annual Immunization Assessment Reports
96% fully immunized with MMR vaccine	1997-98 Annual Immunization Assessment Reports
97% fully immunized with varicella vaccine	1997-98 Annual Immunization Assessment Reports
73% of children 19-35 months have received all of the recommended vaccines	1998 – NIS

Federal/National Baseline	Federal/National Sources and Year
66% of public providers measured the vaccination coverage levels of children in their practices within the previous 2 years	1997 – Immunization Program Annual Reports
6% of private providers measured the vaccination coverage levels of children in their practices within the previous 2 years	1997 – Immunization Program Annual Reports
32% of children under age 6 had at least one immunization record entered in an immunization registry	1999 – Immunization Program Annual Reports
48% of adolescents age 13-15 had 3 or more doses of hep B vaccine	1997 – National Health Interview Survey (NHIS)
89% had 2 or more doses of MMR vaccine	1997 – NHIS
93% had 2 or more doses of DTaP vaccine	1997 – NHIS
45% had 2 or more doses of varicella vaccine	1997 – NHIS
35% of patients receiving chronic dialysis had received at least 3 doses of hep B vaccine	1995 – Annual Survey of Chronic Hemodialysis Centers
9% of men who had sex with men had received at least 3 doses of hep B vaccine	1995 – Young Men’s Survey
71% of health care workers had received at least 3 doses of hep B vaccine	1995 – Periodic Vaccine Coverage Surveys
64% of noninstitutionalized adults 65+ had in influenza vaccination in the previous 12 months	1998 – NHIS
46% had ever received pneumococcal vaccine	1998 – NHIS
26% of high-risk individuals ages 18-64 had an influenza vaccination in the previous 12 months	1998 – NHIS
13% had ever received pneumococcal vaccine	1998 – NHIS
59% of adults in long-term care facilities had an influenza vaccination in the previous 12 months	1997 – National Nursing Home Survey (NNHS)
25% had ever received pneumococcal vaccine	1997 – NNHS

Related USDHHS Healthy People 2010 Objectives			
Chapter	Goal	Objective Number	Objective Statement
14-Immunization and Infectious Diseases	Prevent disease, disability and death from infectious diseases, including vaccine-preventable diseases.	14-1	Reduce or eliminate indigenous cases of vaccine-preventable disease.
		14-2	Reduce chronic hepatitis B virus infections in infants and young children (perinatal infections).
		14-3	Reduce hepatitis B.

Related USDHHS Healthy People 2010 Objectives			
Chapter	Goal	Objective Number	Objective Statement
		14-4	Reduce bacterial meningitis in young children.
		14-5	Reduce invasive pneumococcal infections.
		14-6	Reduce hepatitis A.
		14-22	Achieve and maintain effective vaccination coverage levels for universally recommended vaccines among young children.
14-Immunization and Infectious Diseases (continued)		14-23	Maintain vaccination coverage levels for children in licensed day care facilities and children in kindergarten through first grade.
		14-24	Increase the proportion of young children who receive all vaccines that have been recommended for universal administration for at least 5 years.
		14-25	Increase the proportion of providers who have measured the vaccination coverage levels among children in their practice populations within the past 2 years.
		14-26	Increase the proportion of children who participate in fully operational population-based immunization registries.
		14-27	(Developmental) Increase routine vaccination coverage levels of adolescents.
		14-28	Increase hepatitis B vaccine coverage among high-risk groups.
		14-29	Increase the proportion of adults who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease.

Definitions	
Term	Definition
Vaccine-Preventable Diseases (VPDs)	In the broader context, any disease for which an FDA approved vaccine exists is by definition “vaccine preventable,” but for purposes of this objective, the definition is limited to the diseases which are recommended for routine immunization by the Advisory Committee on Immunization Practices. These are: diphtheria, haemophilus influenzae type b, hepatitis A, hepatitis B, measles, mumps, pertussis, rubella, tetanus, varicella, influenza, and pneumococcal pneumonia.
High Risk	The degree of risk from age debility, compromised immunity, impaired respiratory function, and other medical conditions, which would put a person at elevated probability of serious complications from acute diseases of the respiratory tract.
Individuals with chronic health conditions	Individuals with chronic health conditions means those with conditions that place them at high risk of severe consequences from a vaccine preventable disease.

Rationale:

Achievement and maintenance of immunization levels of at least 90 percent serves to protect both individuals and communities from the preventable morbidity and mortality of vaccine preventable diseases.

Outcomes:

Short-term Outcome Objectives (2002-2004)

- By December 31, 2004, immunizations of children in subgroups with low levels of immunizations will have increases of 25 percent from baseline rates.

Inputs: *(What we invest – staff, volunteers, time money, technology, equipment, etc.)*

- Time and effort of state and local public health staff.
- State funding of hardware, software, and management information system technical support for immunization data collection and storage.
- State funding for vaccines, including storage and distribution.
- An adequate statutory and legal base for immunization activities.
- The cooperative commitment of private health care providers to participate in public health disease reporting and surveillance activities.

Outputs: *(What is done – workshops, meetings, product development, training. Who is reached – community residents, agencies, organizations, elected officials, policy leaders, etc.)*

- The Division of Public Health will set up electronic links with, and train physicians and clinic staff to participate in, the Wisconsin Immunization Registry.
- The Division of Public Health and local health departments will conduct outreach to providers through professional organizations and journals.
- The Division of Public Health will provide necessary management information system data storage and retrieval hardware and software to local health departments, with training in its use.

- The Division of Public Health will provide printed and media materials designed to encourage public and provider participation in the Wisconsin Immunization Registry.
- Parents of all newborns will receive information on vaccine preventable diseases and their importance, which is culturally and linguistically appropriate.
- Subgroups of the population with low immunization levels will be identified at the state and local jurisdictional levels and will receive priority outreach and attention for elimination of disparities.
- The Division of Public Health and local health departments will provide necessary public information and technical assistance to long-term care institutions, to ensure that all nursing homes and community based residential facilities in the state will have adult immunization programs in place for residents and staff.

Medium-term Outcome Objectives (2005-2007)

- By December 31, 2005, 85 percent of Wisconsin children will have their immunization histories entered into the Wisconsin Immunization Registry.
- By December 31, 2005, the Division of Public Health will conduct an ongoing information and education campaign targeted on health care providers to encourage them to have annual influenza immunizations at the start of each flu season.
- By December 31, 2006, all children who receive their immunizations from a regular family medical provider or a local health department will have their records entered into the Wisconsin Immunization Registry.
- By December 31, 2006, 80 percent of the residents and staff of state nursing homes and community-based residential facilities will have current influenza and pneumonia immunizations as recommended by Advisory Committee on Immunization Practices.
- By September 30, 2007, 90 percent of immunizations provided by private providers and 100 percent of those provided by local health departments will be entered into the Wisconsin Immunization Registry.
- By December 31, 2007, 98 percent of children and 80 percent of adults in Wisconsin will have levels of immunizations that meet the Advisory Committee on Immunization Practices recommendations.
- By December 31, 2007, all nursing homes and community-based residential facilities in the state will have adult immunization programs in place for residents and staff.
- By December 31, 2007, the public health and private health care systems will provide influenza vaccine to 85 percent of high risk adults requiring them.

Inputs: *(What we invest – staff, volunteers, time money, technology, equipment, etc.)*

- Time and effort of state and local public health staff.
- State funding of hardware, software, and management information systems technical support for immunization data collection and storage.
- State funding for vaccines, including their storage and distribution.
- An adequate statutory and legal base for immunization activities.
- The cooperative commitment of private health care providers to participate in public health activities.

Outputs: (*What is done – workshops, meetings, product development, training. Who is reached – community residents, agencies, organizations, elected officials, policy leaders, etc.*)

- The state student immunization law will specify and require minimum immunization levels for children entering school or day care.
- There will be a state statute authorizing the Department of Health and Family Services to prioritize and direct the distribution and administration of vaccines.
- The Division of Public Health will conduct a study to determine barriers to provider participation in the Wisconsin Immunization Registry, and a targeted outreach and technical assistance campaign directed to clinical providers who are not participating in the Wisconsin Immunization Registry.
- The Division of Public Health will establish a mechanism to monitor and manage the distribution of vaccine during the flu season.
- The Division of Public Health will collaborate with the Centers for Disease Control and Prevention, other states, and vaccine manufacturers and distributors doing business in Wisconsin to ensure adequate vaccine supplies in the state.
- The Division of Public Health will convene a workgroup including representation from the Bureau of Aging and Long Term Care in the Division of Supportive Living, agencies providing nursing home and community-based living care, and organizations representing the elderly and disabled in Wisconsin, to develop an ongoing plan for the distribution of influenza and pneumonia vaccines to groups and individuals at greatest risk.

Long-term Outcome Objective (2008-2010)

- By December 31, 2008, all children and adults in Wisconsin will have access to readily available and affordable immunizations for all vaccine preventable diseases, which are recommended by the Advisory Committee on Immunization Practices.

Inputs: (*What we invest – staff, volunteers, time money, technology, equipment, etc.*)

- Time and effort of state and local public health staff.
- State funding of hardware, software, and management information system technical support for immunization data collection and storage.
- State funding for vaccines, including their storage and distribution.
- An adequate statutory and legal base for immunization activities.
- The cooperative commitment of private health care providers to participate in public health activities.

Outputs: (*What is done – workshops, meetings, product development, training. Who is reached – community residents, agencies, organizations, elected officials, policy leaders, etc.*)

Activities:

- There will be passage of a state statute requiring coverage of all Advisory Committee on Immunization practices recommended immunizations by all private third parties doing business in Wisconsin.

- Local health departments will receive funding and establish a system to directly provide or voucher provision of immunizations for all persons in the state without the ability to pay.
- The Division of Public Health will assist the Division of Health Care Financing to establish a system which expands on the Wisconsin Immunization Registry to monitor and ensure that all medical assistance recipients are current in all recommended immunizations.

Participation/Reach

- Division of Public Health and local health departments
- Schools, tribes, and parent/teacher organizations
- Physicians and clinic staff
- Health professional organizations
- Neighborhood and cultural advocacy and assistance organizations
- Clinicians and institutions serving target groups
- Wisconsin chapters of AAP and AAFP
- Federally qualified health centers and community clinics
- Administration and staff on long term care facilities
- Elderly and disabled advocacy organizations
- Centers for Disease Control and Prevention
- Wisconsin political advocacy organizations and elected officials
- Parents
- Childcare agency administrators and staff
- Division of Health Care Financing
- Health insurers and managed care organizations

Evaluation and Measurement:

The full implementation of the Wisconsin Immunization Registry is critical not only to the monitoring and evaluation of progress toward achieving the outcomes under this objective, but also in a timely manner to identify and address disparities in population and deficiencies in individual immunization status in order to prevent the occurrence of the harmful effects of vaccine preventable diseases.

Crosswalk to Other Health and System Priorities in Healthiest Wisconsin 2010

A key element in achieving and maintaining adequate populationwide immunization rates is establishment and operation of a populationwide electronic registry and database of immunization records sufficient to monitor immunization status of the entire population and to generate immunization update prompts and confirmations of immunizations given for individual patients. A major state information system, such as the Wisconsin Immunization Registry, also needs to be integrated and coordinated with other potentially synergistic patient data systems in a way that protects and preserves patient confidentiality and avoids duplication and overlap of effort. To establish and ensure these elements will require crosswalk and joint effort with the *Integrated Electronic Data and Information Systems Subcommittee*. Although the majority of immunizations are now delivered by private health care providers, the public health immunization system requires a substantial local and state workforce for distribution and usage

monitoring of vaccines, public and professional training, and education to promote correct patient behaviors and best medical practices, management of the immunization registry, and direct delivery of immunizations through public health clinics for people who lack other access. The workforce necessary to coordinate and direct mass public immunization efforts in response to bioterrorism threats or actions could require one or more additional full time employees as part of a readiness component. All of these are issues which need to be dealt with in coordination and collaboration with the Sufficient, Competent Workforce Subcommittee. The financial support for staff, computer equipment, purchase and storage of biologicals, etc., will have to be addressed in concert with the *Equitable, Adequate, and Stable Financing Subcommittee*. The access of children and adults to standard immunization protection against vaccine-preventable diseases has significant commonality with the charge to the subcommittee on *Access to Primary and Preventive Health Services*, since childhood and adult preventive immunizations are one of the most elemental components in any package of basic necessary primary care services.

Significant Linkages to Wisconsin’s 12 Essential Public Health Services

Monitor health status to identify community health problems: The Wisconsin Immunization Registry is one of the most fundamental ongoing statewide mechanisms in operation for monitoring population health status

Educate the public about current and emerging health issues: An immunization initiative relies heavily on a variety of public information and education activities to inform the public and motivate them to seek and maintain immunizations necessary to protect themselves and the community.

Promote community partnerships to identify and solve health problems: A public health immunization program is a classic “three-legged stool” approach which is mutually interdependent on state and local public health agencies and private health care providers to achieve its goals.

Create policies and plans that support individual and community health efforts: As a public health objective, the universal availability and use of preventive immunizations is one of the most proven health care delivery strategies in existence, in terms both of the cost/benefit return on the public investment, and on the ability of mass immunization programs to prevent and control serious infectious diseases.

Enforce laws and regulations that protect health and insure safety: One of the components in a mass public health immunization program which has proven most effective in achieving and maintaining high immunization levels is a school entrance law, which requires that a child have his or her immunizations up to date prior to the beginning of the school year.

Link people to needed health services: Immunization programs serve to bring people, particularly families with children, into contact with their local health departments, and are frequently used by those agencies as a mechanism to assess and direct people to other needed services.

Assure access to primary health care for all: While immunization programs cannot provide people with assured access to a full range of access to primary care services, they at least assure access to immunizations, which are the most basic and fundamental preventive services within the scope of primary care.

Connection to the Three Overarching Goals of Healthiest Wisconsin 2010

Protect and Promote Health for All: Immunization against vaccine preventable diseases is one of the most proven and cost-effective measures for disease prevention that is available in public health practice at this time.

Eliminate Health Disparities: Proven infectious disease vaccines, and particularly vaccines to protect against childhood diseases, should be conveniently available at an affordable or no cost to every Wisconsin resident.

Transform Wisconsin's Public Health System: As vaccine technology and science advance, the public health system will be able to offer citizens protection against a growing number of diseases and pathogens. At the same time, electronic linked immunization registries are becoming an increasing underpinning of public health data systems generally. Ensuring the reliability and availability of adequate vaccine supplies may engender new functions and responsibilities for public health agencies.

Key Interventions and/or Strategies Planned:

- Full implementation of the Wisconsin Immunization Registry statewide, and its use to record and monitor the immunization status of all Wisconsin children.
- Expansion of the Wisconsin Immunization Registry to allow recording of adult immunizations on a voluntary participation basis.
- Initiation and maintenance of a targeted outreach program to children in populations with disparities in immunization status.
- Initiation and maintenance of a targeted outreach program to elderly and disabled individuals, particularly those in institutional or community-based care settings, and their caregiver organizations.
- Establishment of a state plan to manage and guarantee an adequate vaccine supply.

References:

Centers for Disease Control and Prevention. (1997). Immunization of Health-Care Workers: Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC). *Morbidity and Mortality Weekly Review (MMWR)*. December 26, 1997. <http://www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm>

Centers for Disease Control and Prevention. National Immunization Program. <http://www.cdc.gov/nip/>

Health Canada. Population and Public Health Branch. Immunization Division. <http://www.hc-sc.gc.ca/hpb/lcdc/bid/di/>

The Immunization Action Coalition. <http://www.immunize.org/>

Institute of Medicine. (2001). *Vaccines for the 21st Century: A Tool for Decision Making*. National Academy of Science. <http://www.nap.edu/catalog/5501.html>

The National Coalition for Adult Immunizations. <http://www.nfid.org/ncai/>

The National Network for Immunization Information. <http://www.immunizationinfo.org/>

National Vaccine Advisory Committee. (January, 1999). *Development of Community and State-Based Immunization Registries*. Report of the National Vaccine Advisory Committee. Available online at: <http://www.cdc.gov/od/nvpo/report071100.pdf>

U.S. Department of Health and Human Services. (2000). *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health 2 vols. Chapter 14: Washington, DC: U.S. Government Printing Office. Available online at: http://www.health.gov/healthypeople/document/HTML/Volume1/14Immunization.htm#_Toc494510239

U.S. Department of Health and Human Services. (2000). *The Childhood Immunization Initiative*. [fact sheet]. Available online at: <http://www.hhs.gov/news/press/2000pres/20000706a.html>