



A Blueprint
for
Sustained Success

NATIONAL IMMUNIZATION PROGRAM



Strategic Plan


2000-2005







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Immunization has been cited as one of the top ten public health achievements of the 20th century. Smallpox no longer exists. The threat of polio is close to being eradicated. The number of measles cases in the United States is at an all-time low. In the history of vaccine development and use, major challenges have been successfully overcome, and many lessons have been learned. The National Immunization Program (NIP) can help focus national efforts and assist in global efforts to prevent disease by providing public health leadership on vaccination issues.

Our challenge is to effectively balance our efforts in the domestic and global arenas as well as accommodate the specific needs of all populations at risk of vaccine preventable diseases from children to older adults.

On the domestic front, our Nation has made outstanding progress in increasing the U.S. immunization rate in children by the time they are 2 years of age. In 1997, the 90 percent vaccination coverage goals of the Childhood Immunization Initiative (CII) were met. The increase in overall immunization coverage has included increases in coverage for children living both above and below the poverty level as well as for children of all major racial and ethnic groups.

Despite these gains, every day in the United States, 11,000 babies are born who must be vaccinated. To be protected against 10 vaccine-preventable diseases, they should receive 12-16 doses of vaccines by 18 months of age and 16-20 doses through childhood. We are still challenged to improve childhood immunization rates for newer vaccines, such as Varicella (chicken pox) and Hepatitis B, that have not yet reached 90 percent coverage.

In order to address the challenges we face with the childhood population, we must commit to remaining diligent—for ironically, it is our past success that can threaten our ability to sustain our achievements. Some diseases have been so well controlled by the use of vaccines that the public and many healthcare providers have no memory of them ever existing. Ignored, this

loss of awareness can lead to public apathy about the need for vaccination and, more dangerously, a loss of political will to sustain vital immunization interventions.

Furthermore, changes in healthcare financing are causing the responsibility for childhood immunization to shift to the private sector. Since October of 1994, the Vaccines for Children (VFC) program has been providing publicly purchased vaccine to eligible children at no charge to both public and private providers. By eliminating vaccine cost as a barrier to immunizing children, the practice of referring children from the private to the public sector for vaccination has been reduced. The 1999 National Immunization Survey (NIS) showed that private providers administered more than 61 percent of immunizations. This proportion will likely rise each year as more children are insured through Medicaid Managed Care and the Child Health Insurance Program (CHIP). Therefore, the public health sector must make certain that it provides support to the private sector in order to maintain the record high immunization coverage rates achieved over the past several years. In particular, NIP must revisit its traditional approach to providing vaccines primarily through public health providers and further develop its role in immunization assessment and assurance in order to document continued program effectiveness.

While the NIP continues to build an immunization system to protect children, we are also working to improve immunization rates in other populations, such as adolescents, adults, diverse racial and ethnic populations, and pockets of need, where we still fall short of our goals. For example, for each one-year age group of unvaccinated adolescents, as many as 160,000 may become infected with hepatitis B virus, which will result in 10,000 chronically infected individuals and 1,400 deaths, primarily from cirrhosis and liver cancer. We must do more to provide services to adolescents before they leave high school and become difficult to reach as young adults.

We must be equally committed to our adult population, where loss of life and costs from vaccine-preventable diseases are staggering. Each year, about 30,000 adults die from complications of influenza, pneumococcal disease, and hepatitis B, all preventable, at an annual cost to the nation's taxpayers of over 10 billion dollars. Immunizations rates for adults 65 years of age and older, while increasing, are still well below 90% coverage goals. In 1998, the National Health Interview Survey (NHIS) indicated that pneumococcal vaccination coverage among persons aged

65 and over was only 46%. The NHIS also identified significant racial and ethnic disparities in the adult population, with African Americans reporting a 26% coverage rate and Hispanics a 23% coverage rate compared to a 49% rate in the white population.

In addition to our domestic efforts, NIP is also making a strong commitment to global immunization efforts. Wild polio circulation has been absent in the United States since 1980. NIP is currently working with international partners to help achieve global certification of polio eradication by 2005. The World Health Organization (WHO) estimates that in 1988, polio existed in over 125 countries on five continents, and caused more than 350,000 children to be paralyzed that year. By the end of 1999, the number of polio-infected countries decreased to 30 and reported polio cases fell to 7,012. While polio eradication is in sight, the final steps—which will require intensified efforts in the most populous countries and unique strategies for war-torn countries—remain the most difficult. Even as we near that monumental goal, we are working to marshal the same resources toward worldwide eradication of the most common cause of vaccine-preventable death in the world, measles. Currently, measles accounts for almost 1 million preventable deaths worldwide. NIP, together with the National Center for Infectious Disease's Measles Lab, participates as a key partner organization in an initiative led by the Pan American Health Organization (PAHO) to eliminate indigenous transmission of measles in the Americas by the end of 2000. Measles is currently at record low levels in the Western Hemisphere with less than 700 cases reported during the first seven months of 2000.

Our global goals will be accomplished through effective partnerships with Rotary International, our counterparts at WHO, the Task Force for Child Survival and Development, UNICEF, other international groups including the American Red Cross and International Federation of Red Cross/Red Crescent Societies, and individual countries. Currently, dozens of NIP staff are stationed in foreign countries working to help make both global polio eradication and measles elimination a reality. In 1999, NIP staff began providing assistance to the new Global Alliance on Vaccines and Immunization (GAVI) to address the issues of strengthening immunization programs, introducing new vaccines in countries that have previously been unable to afford them, and advancing development of vaccines targeted at diseases predominating in less-developed countries.

We have experienced many successes, and lessons from the past

ready us for the next set of challenges. To identify these challenges and explore ways to address them, NIP sought input from a diverse group of NIP constituents, including private and public health providers, community organizations, government agencies, and national and international associations. Our issues are complicated. What new goals do we need to develop? Which strategies will give us the best results? How do we ensure that we sustain our past achievements? What systemic changes do we need to make to our organization or the infrastructure to meet new goals and challenges? Who are the new partners we should engage? What additional resources are available?

In “A Blueprint for Sustained Success,” you will find our collective response to these and other important questions. The document is a comprehensive map, developed by persons who are committed to creating a vaccine-preventable disease-free world. We invite you to join with us in our work, for we cannot do it alone. Whatever your capacity—healthcare provider, community advocate, policy maker, business person, NIP employee, mother or father—you can play a role in shaping the policies and implementing the strategies that will help us to achieve our unique public health mission.

The NIP planning process involved taking stock, setting goals, and defining strategies and systems for monitoring our progress. This planning process—and the work that will come to translate the plan into action—are informed and guided by the public health priorities of the Centers for Disease Control and Prevention (CDC). The commitments that we share will assure that our work is carried out in a spirit of cooperation to promote excellence.

We are committed to providing effective, proactive leadership.

NIP has played a significant role in identifying and articulating the opportunities and challenges of developing an effective immunization “system” for the country. We intend to maintain and strengthen this role through the implementation of our strategic plan. We will influence effective immunization policy by conducting quality research, engaging public support, and partnering with a wide range of professional and other organizations.

We are committed to strengthening science and communicating the results.

One of the NIP’s most important responsibilities is to conduct reliable scientific research on vaccine-preventable diseases, vaccines, and their delivery. However, we are challenged to apply research and ensure that our findings make real, measurable differences in people’s lives. We must work to create a public health infrastructure that promotes strong science, including epidemiological, social, behavioral, and health systems research.

As the primary link between immunization policy and patients, physicians, nurses and other public and private sector health care providers must have the skills and knowledge necessary to implement proper immunization and clinical practices and educate adolescents, adults and parents regarding proper immunization.

We are committed to collaboration and partnerships.

NIP has experienced first-hand the beneficial impact of collaboration and partnerships. We have effective partnerships with organizations such as Rotary International, the World Health Organization, the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP), the Association of State and Territorial Health Officials (ASTHO), and UNICEF. We also partner with managed care organizations, Medicaid, and Medicare, as well as State and local organizations.

The results of these partnerships have already begun to show. A partnership among NIP, AAP, AAFP and the Advisory Committee on Immunization Practices (ACIP) has recommended a harmonized Childhood Immunization Schedule to guide public and private sector providers on the delivery of immunization services to children, eliminating the confusion that resulted from different recommendations from various groups.


Through these partnerships, we have not only implemented innovative and effective intervention programs, but also succeeded in gaining the attention of other key audiences—corporate and community leaders and the media—to help achieve our mission.

We are committed to promoting immunization at every stage of life.

To ensure that childhood immunizations remain at high levels and that more adolescents and adults are immunized, immunization must be emphasized every time anyone, at any age, receives preventive and acute healthcare services.

NIP will help bring this about by being a resource for reliable research and information to keep the public knowledgeable about immunization issues. We will support a daytime hot-line that parents and others may call for information. Working with our partners, we will continue to support information-exchange and scientific assistance opportunities similar to those on the world-wide web, and participate in activities such as National Infant Immunization Week and Adult Immunization Awareness Week.

Finally, NIP will work to ensure that citizens receive balanced information about vaccines. While there are some rare health risks associated with vaccinations, research and experience demonstrate that the benefits of vaccines far outweigh the risks for almost all persons for whom they are indicated. Recognizing



that informed consumers will make appropriate choices, we commit to work diligently to ensure that accurate and complete immunization information is made available.

We are committed to working with partners to improve global health.

There are glaring health disparities among developed and developing nations. Therefore, NIP will work very closely with both established and new global partners to provide immunization expertise to strengthen and expand global childhood immunization programs. Global activities will include improving routine immunization, introducing new vaccines and micronutrients, and conducting disease surveillance and program assessment. NIP is committed to making polio eradication a reality, pursuing efforts to eliminate or better control measles and rubella, and introducing new vaccines.

MISSION

GOALS & STRATEGIES

Based upon a strong track record, the NIP has high hopes for the future. However, expectations alone will not drive progress. We recognized a need to develop a blueprint to guide our improvement and progress and ensure that we maintain healthy relationships with our staff and constituents.

It is the mission of NIP to: **prevent disease, disability and death in children and adults through vaccination.** In support of this mission, we established goals in seven key areas:

1. Disease Prevention
2. Immunization Coverage
3. Partnerships
4. Science
5. Systems
6. Vaccine Safety
7. NIP Work Environment

In order to maximize resources, improve inter- and intra-agency communications, improve the collection, analysis and dissemination of information, increase the effectiveness of our studies, and protect the integrity, security and the privacy of public health data, NIP is committed to utilize the National and Global Information Infrastructures to achieve its goals and related strategies. Furthermore, NIP will work with the other Centers, Institutes, and Offices within CDC and its HHS and outside partners to enhance the Nation's Healthcare and Public Health Information Infrastructure.

These goals will guide our work for the future. For each of these goals, we have identified priority strategies—those activities that will have the greatest and most immediate impact on success. Additionally, we developed specific, quantifiable objectives so that we can monitor our progress toward achieving these goals.

**Preventing Disease:
Eradicate, eliminate or control vaccine-preventable disease (VPD),
disability and death in the U.S. and globally**

STRATEGIES

- Develop and implement effective surveillance and response systems in collaboration with state and local partners
- Maintain global polio eradication strategy

The intent of Goal 1 is to decrease the occurrence and existence of diseases. Once a disease occurs, effective, continuous intervention will decrease the occurrence of the disease to an acceptable level. A disease is not considered eradicated until it has been halted throughout the world. To achieve this goal, the NIP will continue to create and enhance surveillance systems for children, adolescents, and adults that will enable us to monitor disease elimination and reduction efforts.

As a core public health function, surveillance systems must have adequate funding and be maintained in partnership with state and local organizations. In addition, the introduction of newer vaccines to the childhood schedule increases the need for effective surveillance to measure the impact vaccination has on disease occurrence.

We cannot cease our work to control any given disease until it has been globally eradicated. The global eradication of polio is, therefore, another major focus. In collaboration with global partners, NIP will assist in the implementation of the four-pronged strategy in polio endemic or recently endemic areas to eradicate polio worldwide:

1. high routine immunization with the Oral Polio Vaccine (OPV);
2. supplementary immunization in the form of national immunization days and mass campaigns;
3. effective epidemiologic and laboratory surveillance of suspected and confirmed polio cases; and
4. in the final stages, “mopping up” campaigns which involve immunizing communities by going door to door in areas where the virus persists.

**Achieving Maximum Coverage:
Raise and sustain vaccine coverage levels
in all populations for all recommended vaccines**

STRATEGIES

- Support development of community- or state-based immunization registries
- Implement strategies that have been proven to be effective to enhance childhood and adult immunization
- Maintain and enhance methods to assess both childhood and adult immunization coverage levels at national, state and local levels
- Enhance methods to assess and increase immunization coverage levels globally
- Ensure an adequate vaccine supply through the successful negotiation of contracts, efficient vaccine ordering, and safe and timely delivery
- Develop an overall immunization communications plan

Goal 2 seeks to increase immunization coverage rates by constantly assessing the use of vaccines. Because we feel it is necessary to institutionalize our strategies proven to increase coverage rates, many of the strategies used to accomplish this goal will also be measured through our Systems Goal (Goal 5).

NIP strongly promotes the use of state and community-based immunization registries by public and private health providers. Effective immunization registries provide the most comprehensive record of immunization rates because they consolidate immunization information from a variety of sources. Registries can be used to help remind parents and patients of the need for immunizations and immunization appointments, as well as advising health care providers and practitioners when their patients' immunizations are due or overdue.

NIP also will expand upon strategies proven to assure and improve the quality of immunization services for children and adults. The AFIX system—Assessment, Feedback, Incentives, information eXchange—is our version of Continuous Quality Improvement (CQI). It includes **Assessment** of the immunization performance of individual public and private providers; **Feedback** of the results of that assessment along with suggestions for improvement; **Incentives** for improving coverage; and

Exchange of information to encourage friendly competition among providers. Thus, providers improve their performance by comparing their immunization coverage levels in the populations they serve with the coverage levels of their peers.

Another proven strategy to enhance coverage is NIP's partnership with the Women, Infants and Children Program (WIC). WIC is the largest single point of access to health-related services for low-income preschool children, with approximately 1.8 million infants participating. Demonstration projects that linked WIC services with immunization delivery significantly increased immunization levels by as much as 34 percentage points.

Immunizing adolescents and adults is a more complicated undertaking than immunizing children. Vaccination recommendations for adults depend on a person's age, occupation, health status, and behavior. Also, the diseases to be prevented are often clinically indistinguishable from similar syndromes, making assessment of the impact of immunization difficult. NIP will expand the use of AFIX to assess adult and adolescent immunization rates. As with the childhood population, the key to increased adolescent and adult coverage appears to be the performance of the physicians and nurses with whom patients interact. NIP will continue to support quality immunization training and education programs for these professionals.

New vaccines for many diseases, including Lyme disease and pneumococcal and meningococcal disease, have been recently developed. More are on the way including new vaccines against influenza, parainfluenza, and respiratory Syncytial Virus (RSV). Vaccines are also in development to prevent chronic diseases like gastric ulcers and cancer caused by *Helicobacter pylori*, cervical cancer caused by human papilloma virus, and rheumatic heart disease that can occur as a result of group A streptococcal infection. While new vaccines offer the opportunity for increased disease prevention, these additions impact ordering and inventory systems and place a greater burden on current disease surveillance and delivery systems.

As we have stated throughout this document, the NIP will consistently seek opportunities to communicate its progress. We will continue to facilitate awareness activities, immunization campaigns, and information opportunities. We also seek to form relationships with the media to encourage them to help us effectively communicate our mission and services.

**Establishing Effective Partnerships:
Engage new and existing partners to help achieve our mission**

STRATEGIES

- Develop and implement an overall partnering plan that includes an evaluation component for NIP's domestic agenda that more clearly defines the purpose and outcomes for each partnership
- Inform and educate current and potential partners about NIP's vision, mission and goals

NIP has been able to inform and influence immunization work and practice by establishing effective partnerships at the global, national, state, and local levels. Our strategic plan will guide us in forming new alliances which leverage and expand upon our current resources.

We will continue to seek partners who can help us reach our “pockets of need”—defined as an area or population with low immunization coverage, a large number of undervaccinated children and high potential for disease outbreaks. These “pockets” are closely associated with low socioeconomic status and cofactors such as crowded living conditions, low parental educational level, large family size, and young parental age. These populations have a critical need for resources and assistance.

NIP must ensure that our relationships are not based solely upon financial incentives. Together with our partners we must each identify our unique contributions to this effort. Each partner brings a unique experience and resource to help protect the children and adults of our country and the world from vaccine-preventable diseases.

We are committed to expanding upon our existing partnerships by reaching out to “newer” players and other critical constituencies. Some of these include public health officials, health care-financing organizations, and other national and international agencies. The healthy growth of our relationships with partners is critical to sustained success.

Conducting Reliable Scientific Research: Provide scientific leadership in vaccine-preventable disease control, vaccines, and their delivery

STRATEGIES

- Conduct scientific research in accordance with an annually reviewed and updated NIP research agenda linked to goals and objectives
- Ensure dissemination of research findings and effective translation of science to policy and program

Guided by the strategic plan, NIP will coordinate the routine development of a research agenda to ensure that our work supports achieving our mission. To help develop this agenda, we will meet with experts and support scientific discussion devoted to reviewing current research needs and strategically identifying and prioritizing our research agenda.

However, we know much of what our research agenda must include: an improved understanding of the epidemiology and impact of vaccination on vaccine preventable diseases; vaccine safety and risk communication; improved methods for immunization research, surveillance, and practice; and international issues surrounding eradication of disease. Our research will focus on vaccine preventable disease in adults and adolescents, where coverage has lagged and mortality remains high. We will also continue to promote research in the childhood arena, including research leading to the appropriate implementation and evaluation of new vaccines and associated technologies. Optimizing the immunization schedule requires a range of studies of vaccine delivery and cost; studies of immune response; and modeling of disease impacts. Our research must also address the most appropriate analytic methods to accurately evaluate associations between vaccines and adverse events, monitor coverage, and assess delivery practices. As new, more expensive vaccines and vaccine combinations are introduced, we will use our expertise in science and epidemiology, economic analysis, and data management to improve methods for collection and analysis of data on vaccine economics and cost-effectiveness.

Widespread use of vaccines has led to significant decreases in child mortality in developing countries, but further progress is needed. In addition, controlling vaccine-preventable diseases

internationally will decrease importation of causative agents and the potential for epidemics in the United States. In this area, we will study the scientific basis for stopping polio vaccination following global eradication, the effectiveness of different strategies for achieving accelerated control and/or elimination of measles, and improved technologies for high-speed, safe delivery of vaccines such as needleless injectors for mass measles campaigns. We will also promote the development and implementation of new vaccines globally.

GOAL 5

Implementing Effective Immunization Systems: Build and sustain systems that ensure optimal vaccination

STRATEGIES:

- Domestically, through grant guidance, ensure that each of the core functions of immunization programs is adequately reflected in each State's grant
- Collaborate with and provide scientific assistance and tools to grantees in the United States and assistance to countries globally to build technical and administrative capacity
- Domestically, in the private health sector, implement purchasing specifications for Medicaid managed care and other mechanisms for assuring immunization and vaccine-preventable disease services
- Globally, implement key strategies which include National Immunization Days (NIDs), acute flaccid paralysis (AFP) surveillance, mop-up immunization campaigns, global laboratory network for polio, measles, and rubella, strengthening routine immunization, and initiatives of GAVI.

The NIP provides grants to 64 immunization grantees to support effective immunization systems and high rates of coverage. To ensure high quality performance and promote accountability, NIP will identify expectations for grant recipients that include critical core functions required of all immunization programs. Working with our grantees, NIP will provide data which will help to more effectively build and sustain systems for information, surveillance and vaccine purchases. Additionally, NIP will provide grantees with scientific assistance for evaluation, delivery, communications, and partnership development.

We must ensure that an adequate immunization infrastructure is

maintained to guarantee the effective delivery of vaccines. Financial barriers must not prevent even the poorest citizen from receiving vaccines. As children and adults move into managed health care, the Child Health Insurance Program, and other programs evolve, the NIP must help to assure that immunization coverage is a component of all health insurance plans.

On the global front, overcoming obstacles and ensuring the highest quality of immunization activities in the 30 remaining polio-endemic countries will be given the highest priority. In particular, efforts will focus on countries where polio transmission is particularly intense due to large, dense populations, low routine coverage, and poor sanitation and where implementation of vaccination and surveillance activities is particularly challenging due to weak or destroyed infrastructure. Central to the success of polio eradication is ensuring that extra rounds of high-quality NIDs are conducted in these priority countries. During the mop-up phase of polio eradication, high-quality AFP surveillance is essential to identify the remaining pockets of polio and to target immunization activities to break the final chains of transmission.

Building on the models of successful partnerships to achieve smallpox and polio eradication, GAVI intends to improve global childhood immunization by expanding these programs to include new vaccines and strengthen immunization systems. NIP will work with international partners to provide immunization expertise and strengthen the technical capacity of countries to sustain childhood immunization programs by improving routine immunization, introducing new vaccines and micro-nutrients, conducting disease surveillance and program assessment, and evaluating new disease control strategies.

GOAL 6

Ensuring Vaccine Safety: Promote optimal safety of vaccines and immunization practices.

STRATEGIES

- Improve surveillance and research on vaccine safety issues
- Expand research in the area of vaccine benefit-risk communications

As we continue to successfully reduce the incidence of vaccine-preventable diseases, we must be sensitive to concerns about

vaccine safety. We cannot minimize the pain and suffering of one adverse event. We must continue to monitor serious adverse events to determine whether vaccines cause them, and if so, what is the risk, and ways this risk could be minimized or eliminated.

To assure the timely detection and investigation of adverse events, NIP currently uses two tools. The Vaccine Adverse Event Reporting System (VAERS) and the Vaccine Safety Datalink (VSD). VAERS receives about 10,000 reports of suspected adverse reactions to vaccines annually. We are seeking ways to improve early detection of potential VAERS clusters using artificial intelligence. We are also improving the quality and usefulness of VAERS data by expanding our reporting and follow-up efforts in new regional Clinical Immunization Safety Assessment (CISA) Centers. The VSD is a database that contains comprehensive medical and immunization histories of 6 million people from four health maintenance organizations. With this database, it is possible to do research studies that compare the incidence of health problems between vaccinated persons and an appropriate comparison group. NIP plans to eventually expand the VSD to five percent of the U.S. population. This expansion would increase the statistical ability to identify and rigorously evaluate rare associations between vaccinations and potential adverse outcomes. Increasing the size of the database will also increase the number of scientists involved in vaccine safety research.

In order to assure the availability of safer vaccines, NIP plans to increase opportunities for independent research studies on vaccine safety. These studies could occur shortly after, or in response to, a new hypothesis involving immunization and vaccine adverse reactions. Such research could also be used to evaluate or extend previously published scientific research.

Vaccine safety has become a controversial issue in today's medical news. The facts regarding vaccine safety can be obscured by misleading news reports, questionable studies, and even by well-intentioned persons who have suffered from what they perceive to be vaccine-related injuries. The complexity of this issue requires that NIP expand research in the area of vaccine benefit-risk communications, including parent and professional education. The research will be designed to identify communication and education gaps, the best or most effective ways to communicate vaccine benefits and risks, and the best channels to place such information. In addition, it will help

guide NIP's efforts to disseminate information electronically.

Safety is not only a domestic issue; it is also an important global issue. As other national immunization programs attain high vaccine coverage rates and successfully reduce the incidence of vaccine-preventable diseases, they are also encountering the increasing prominence of immunization safety. In less developed countries, the safety concerns focus less on the rare serious reactions from the vaccines but rather on unsafe injection practices. A consortium of partners including NIP, the CDC's National Center for Infectious Diseases, USAID, and WHO started the Safe Injection Global Network (SIGN) in 1999. SIGN supports policy change, new standards for safe injections, increased availability of safer injection technologies, appropriate waste disposal, and education and communication initiatives.

GOAL 7

Promoting a Positive NIP Work Environment: Foster a healthy, productive work environment which contributes to achievement of our mission

STRATEGIES

- Develop a management training program for NIP supervisory staff
- Improve communication to and recognition of NIP staff involved in achieving our mission

To be successful, all NIP employees must be informed about the organization's activities and recognize their individual roles in helping to achieve successes. In addition, our staff is our link to the public and our partners, and they must be equipped and encouraged to serve as ambassadors to share news of our work in the communities that they serve.

NIP will continue to develop the processes, policies and systems that will result in a motivating, creative work environment in which all staff recognize their responsibilities and role in implementing our strategic plan. This will not be possible without skilled leadership. NIP managers must be able to apply proven supervisory techniques to ensure the most effective and efficient workforce possible.

MONITORING OUR PROGRESS

Through strong public support this nation has been able to achieve the record low disease rates and the highest levels of vaccination coverage in history. We believe that the implementation of “A Blueprint for Sustained Success” will help to maintain the high momentum for immunization coverage. To be successful, however, the public must understand what the NIP is seeking to accomplish and see evidence of progress.

The most effective way to monitor success is to measure progress against a set of measurable objectives, which are readjusted as appropriate. Therefore, NIP will use the following measurable objectives to monitor our progress and when the results of our monitoring show that we should be doing things differently, we will reexamine our approach and incorporate changes where appropriate and necessary.

In addition, NIP divisions have developed detailed action plans that further define the processes and policies needed to reach our goals; the time frame for activity; and the benchmarks by which we will judge our progress.

MEASURABLE OBJECTIVES

GOAL 1

Preventing Disease: Eradicate, eliminate or control vaccine-preventable diseases, disability and death in the U.S. and globally

- Achieve certification of global polio eradication by 2005
- Meet the regional measles elimination goals set for the Americas by the end of 2000, Europe by 2007, and the Eastern Mediterranean Region of WHO by 2010
- Reduce or eliminate cases of vaccine-preventable diseases in the United States.
- Eliminate cases of congenital rubella syndrome, diphtheria (in persons under 35 years of age), *haemophilus influenzae* type b (in children under 5 years of age), measles, mumps, wild-type polio, rubella, and tetanus (in persons under 35 years of age).
- Reduce cases of hepatitis B (in persons aged 2 to 18 years of age) to 9, pertussis (in children under 7 years of age) to 2,000, varicella to 400,000

GOAL 2

Achieving Maximum Coverage: Raise and sustain vaccine coverage levels in all populations for all recommended vaccines

- Achieve 90% vaccination coverage for 3 doses of polio vaccine in all countries.
- Achieve 90% vaccination coverage with measles vaccine in all countries.
- Achieve and maintain at least 90% vaccination coverage levels for each universally recommended vaccine in the U.S. among two-year-old children.

- Achieve and maintain 95% vaccination coverage in the U.S. for school enterers and children enrolled in licensed day-care for each vaccine
- Achieve and sustain at least 90% coverage for each vaccine in at least 45 States (including D.C.)
- Increase to 90% the proportion of adults 65 years of age and older in the U.S. who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease
- Increase to 60% the proportion of high-risk adults aged 18 to 64 years of age in the U.S. who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease
- Increase to 90% routine vaccination coverage levels for adolescents (13 to 15 years of age) in the U.S. for each vaccine
- Achieve and sustain 90% coverage for new vaccines within 5 years of introduction for appropriate populations in the U.S. as designated by ACIP
- Achieve and sustain 90% coverage for each racial, ethnic, and socioeconomic group in the U.S. for all vaccines

GOAL 3

Establishing Effective Partnerships: Engage new and existing partners to help achieve our mission

- Maintain effective ongoing cooperation and coordination with key partner organizations on all global immunization objectives.
- On an annual basis, identify three key issues tied to our strategic planning goals that would benefit most from partnership development.
- On an annual basis, identify a select group of partners that would allow us to concentrate efforts on these key issues.
- Annually, evaluate the effectiveness of each partnership in helping us to achieve our mission.

GOAL 4

Conducting Reliable Scientific Research: Provide scientific leadership in control of vaccine-preventable diseases, vaccines and their delivery

- Ensure a high quantity of scientific output by NIP scientists as measured by MMWR's, technical manuals, scientific papers (submitted, published, and in what journals), and book chapters.
- Provide scientific leadership to enhance programs and policy as measured by Recommendations and Reports including ACIP recommendations, and presentations at local, national and international conferences.
- Increase by 20% the external funding available for research.

GOAL 5

Implementing Effective Immunization Systems: Build and sustain systems that ensure optimal vaccination

- Achieve certification-standard polio surveillance in all countries by 2005
- Finalize the 5-year global plan of action for accelerated measles control by the end of 2000
- Develop a global measles/rubella laboratory network by the end of 2001
- By 2002, 80% of countries with adequate delivery systems will introduce hepatitis B vaccine and all countries by 2007
- By 2005, 50% of the poorest countries with high burden of disease and adequate delivery systems will have introduced Hib vaccine.
- Increase to 90% the proportion of immunization providers in the U.S. who have measured the vaccination coverage levels among children in their practice populations.
- Sustain a vaccine purchase and distribution system in the U.S. for all ACIP routinely recommended vaccines.
- Increase to 95% the number of children 0-6 in the U.S. enrolled in fully operational population based registries.
- Ensure that at least 90% of children and adults in the U.S. have a mechanism to pay for vaccinations (private

insurance, Medicaid, Medicare, SCHIP).

- Increase to 90% the number of 2-year old children in the U.S. who receive vaccinations as part of comprehensive primary care.
- Achieve and maintain adequate surveillance for vaccine-preventable diseases at the national and state levels as measured by surveillance indicators.

GOAL 6

Ensuring Vaccine Safety: Promote optimal safety of vaccines and immunization practices

- Ensure provision of "bundled vaccine" (including auto-disable syringes) for all CDC-funded injectable vaccines provided for global disease control initiatives
- Eliminate vaccine-associated paralytic polio (VAPP)
- Reduce the occurrence of febrile seizures following pertussis vaccination by 50%
- Improve the vaccine safety infrastructure through enhancements to VAERS, VSD, and the CISAs
- Achieve 90% uptake with safer vaccines within 3 years of ACIP recommendations
- By 2002, establish a baseline measure for
 - a) parental, and
 - b) provider knowledge of the value, risks, and benefits of universally recommended childhood immunizations

GOAL 7

Promoting a Positive NIP Work Environment: Foster a healthy, productive work environment which contributes to achievement of our mission

- Achieve at least 80% overall employee satisfaction as measured by an annual survey
- Maintain 90% staffing levels in NIP
- Ensure that 90% of new managers receive management training within 6 months of assuming their new position
- Hold quarterly orientation sessions for new NIP employees

- Improve internal communications by sending biweekly news updates to all NIP staff via e-mail
- Increase by 20% NIP nominations for honor awards
- Increase by 10% the honor awards received by NIP staff
- Ensure that each organizational unit has a system in place to effectively recognize outstanding performance

