FY 2001 Performance Plan

Final FY 2000 Performance Plan

FY 1999 Performance Report

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Centers for Disease Control and Prevention

Introduction

The Centers for Disease Control and Prevention (CDC) is the lead federal agency responsible for promoting health and quality of life by preventing and controlling disease, injury, and disability. CDC accomplishes its mission by working with partners throughout the nation and the world to monitor health, detect and investigate health problems, conduct research to enhance prevention, develop and advocate sound health policies, implement prevention strategies, promote healthy behaviors, foster safe and healthy environments, and provide public health leadership and training.

A unique and critical aspect of CDC's leadership role is embodied by its National Center for Health Statistics (NCHS). NCHS provides strong leadership in monitoring the health of the American people and is an unparalleled resource for health information. NCHS performs several key roles including providing a solid information base for designing and tracking prevention programs, identifying health problems and risk factors that affect the population, and monitoring the dramatic changes taking place in our nation's health care system. NCHS represents an investment in broad-based, fundamental public health and health policy statistics that meets the needs of a wide range of users within the public health community, the Department, other Federal Agencies, research institutions, and health care practitioners.

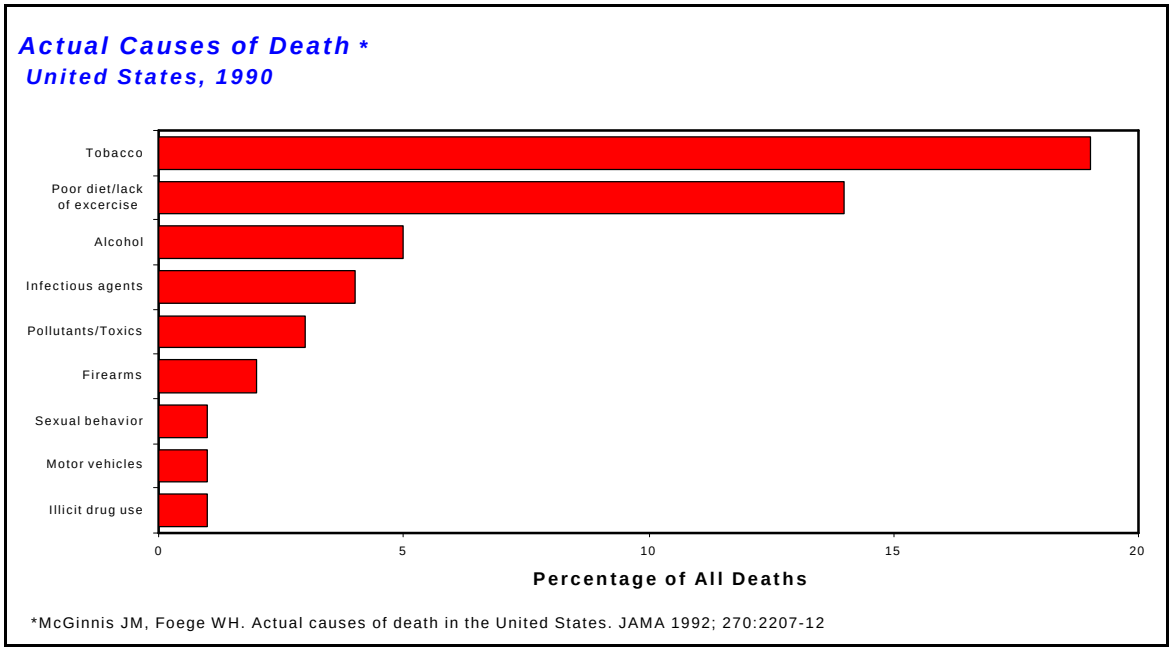
CDC's reliance upon and access to existing data is exemplified by its approach to public health problems. In order to address these problems, CDC uses a reliable, proven, flexible four-step process that adapts to the wide variety of problems that are subjects of CDC programs: infectious diseases, environmental and occupational health, injuries, and chronic diseases. This public health approach consists of detecting and defining a problem through surveillance, determining the causes, developing and testing potential strategies for handling the problem, and implementing nationwide prevention programs. The approach is supported by science, and is reflected in CDC's programs, as well as its evaluation of programs. Prevention effectiveness has been institutionalized as a public health science at CDC. Since 1992, CDC has substantially increased its ability to scientifically assess the prevention effectiveness of its programs and strategies. More than ever, CDC is able to prove that prevention is a sound and solid investment.

CDC's distinguished history of success in disease prevention has spanned 53 years, beginning with the first national disease-elimination strategy used against malaria in 1947. Some well-known accomplishments of the Nation's prevention agency resulting from the more than 3,000 investigations of disease outbreaks include identifying Legionnaires' disease and toxic shock syndrome, Reye's Syndrome, Ebola, hantavirus, and many foodborne and waterborne diseases. CDC's "Disease Detectives" are renowned worldwide for their ability to work with local authorities responding to urgent health threats by aggressively investigating outbreaks of disease or injury, identifying ways to stop transmission, and preventing further occurrence. Each year CDC is instrumental in accurately tracking influenza strains around the globe, and as a World Health Organization Collaborating Center, using sophisticated techniques to provide scientific data essential for vaccine development. As part of a global partnership, CDC played a major role in the worldwide eradication of smallpox in 1977 and, as a partner in massive immunization campaigns, is on the verge of globally eradicating polio. In addition, CDC is making steady progress toward eliminating measles. In this country, vaccine-preventable childhood diseases such as measles, mumps, rubella, pertussis, and diphtheria occur at the lowest rates ever seen. CDC's sentinel surveillance permitted early identification of the AIDS epidemic, thus allowing prevention strategies to be formulated and applied to curtail the frightening growth of this epidemic. Today, CDC works with state, community, national, and international campaigns to prevent and control human immunodeficiency virus infection (HIV), sexually transmitted diseases, and tuberculosis (TB).

CDC is well on its way to correcting the budget mistakes of the past and reemphasizing throughout CDC

that we take direction from Congress regarding spending priorities. CDC remains stalwart in our commitment to acknowledge and correct shortfalls, build upon our trust with Congress, prepare for the next emerging disease outbreak, and continue to protect the health and safety of Americans.

As the Nation approaches the 21st century, CDC has embarked on a mission of preventing and controlling the Nation's new leading killers, adapting the epidemiologic and laboratory techniques that have proved successful with infectious diseases, while continuing to battle emerging and re-emerging infectious diseases. Chronic diseases, including heart disease, cancer, and diabetes, now cause more than 70 percent of the deaths in the United States (U.S.), a dramatic shift from the beginning of the 20th century when infectious diseases caused most premature deaths. Early diagnosis saves money as well as lives, and research documents that healthy behavioral choices in diet and physical activity can significantly reduce the incidence of many chronic diseases. For this reason, many of CDC's programs approach prevention by targeting the underlying causes of disease, disability, and injury. These



underlying factors have been termed the "actual causes of death" and their toll on the health of Americans is significant.

Figure 1: Actual Causes of Death

For example, CDC's chronic disease prevention strategy is based upon behavioral interventions designed to reduce the underlying causes of chronic diseases. These programs incorporate behavior modification and education to assist the public in efforts to stop smoking, follow a healthier diet, and increase their level of physical activity. Similarly, injury prevention programs rely upon the adoption of prevention practices--the use of seat belts and bicycle helmets, for example. Health promotion and behavior modification are also central to CDC's HIV and sexually transmitted disease programs. Reductions in HIV and sexually transmitted diseases are being achieved through drug education and promotion of safe sex practices, including abstinence. CDC's programs have been strategically grouped into appropriate Centers, Institute, and Offices (CIOs) to more effectively address these factors.

Environmental and occupational health threats also have increased, and CDC's role includes addressing the public health aspects of toxic exposures and occupational diseases, injuries and disabilities. CDC's vision of "Healthy People In a Healthy World Through Prevention" means working with partners to prevent the leading health threats confronting Americans.

Public health and CDC contribute significantly to Americans' ability to lead longer, healthier lives. An infant born today in the United States has 30 more years of life expectancy than in 1900. Twenty-five of these years are directly related to public health efforts. Many public health efforts result in considerable financial savings; others carry a net cost but represent an important investment--and the saving of lives. Clear evidence, for instance, shows that comprehensive health education in schools is effective in reducing risk behaviors among youth, which account for most of the health problems among young people that will follow them into adulthood if not prevented or solved. Such education is also cost-effective: for every $1 spent on tobacco, drug, alcohol, and sexuality education, $14 are saved in avoided health care costs. Other public health strategies such as some childhood vaccines save up to $29 in direct medical costs for each $1 spent. The signature feature of CDC's public health programs is that they achieve results and cost savings through the promotion of health and quality of life by preventing disease, disability, and injury.

Part I
Agency Context for Performance Measurement

1.1 Agency Vision, Mission and Long-term Goals

In June 1995, CDC launched an agency-wide strategic planning process to refocus the organization's priorities, directions for the future, and assess constituents' requirements. Even though this process was initiated to satisfy the requirements of the Government Performance and Results Act (GPRA), the director of CDC decided to conduct full-scale strategic and performance planning to ensure that CDC continues to be a leader in public health policy and practice. This annual performance plan builds upon those efforts.

The agency used its document published in 1994, "Strategic Thinking at the Centers for Disease Control and Prevention," as a foundation for continuing strategic planning at CDC and to move the agency forward into the 21st century. To continue the process, CDC reconfirmed that the vision and mission statements contained in the 1994 document were still valid.

Vision: "Healthy People in a Healthy World--Through Prevention"

The CDC vision conveys an idea of what the world would be if CDC's health promotion and disease prevention goals were fully achieved. The agency is committed to helping create a safe physical and social environment where health is both protected and promoted nationally and internationally. CDC believes that prevention is the foundation for achieving this vision.

Mission: To promote health and quality of life by preventing and controlling disease, injury, and disability.

CDC's mission statement succinctly states how the agency approaches its responsibilities as the nation's prevention agency. Accomplishing this mission is predicated on CDC's ability to build on the following agency strengths:

- Prevention strategies based on sound scientific knowledge.
- Leadership and technologic capabilities of state and local health organizations and the integration of those capabilities with private health organizations.
- Trained public health workers and leaders.
- Ability to serve a diverse population with a diverse work force.

Strategic Agency Goals

During a one-year period that began in mid-1995, the CIOs of CDC engaged in a planning process that involved their stakeholders and employees in identifying strategic issues for CDC. The agency-wide goals were intended to be broad and all-encompassing. Because CDC's opportunities and responsibilities are often determined by societal changes and environmental events, as opposed to planned internal actions, the goals had to project a broad, overarching approach that relates the agency's programs to the public health community and to the public in general. Under each goal statement, strategies were articulated to elaborate the goal statement as well as describe ways to achieve goals.

The CDC Strategic Framework was developed in the following way: Actions needed to achieve the agency goals were drafted by the CIOs in the form of strategic (five-year) and annual goals. Annual goals represented the first year of achievement of the five-year goal. Performance measures were also

developed by the CIOs for both strategic and annual goals. Specific, measurable objectives were developed to support CIO strategic and annual goals.

Healthy People 2000/2010 goals and objectives serve as a foundation for a number of CDC's performance measures. However, it should be noted that although CDC has lead responsibility for many of the objectives contained in *Healthy People 2000/2010*, achievement of the goals represents a national effort in which CDC partners with other federal, state, local, and community public health entities. Therefore, performance measures within CDC's plan have been crafted to reflect the collaborative nature of CDC's program activities.

Below are the four strategic goals that capture the direction for CDC over the next five years. Each goal statement is followed by a brief presentation that associates the CDC goals and strategies with CDC's budget program activities. Resources required to achieve these activities have been submitted as part of CDC's budget submission.

û Goal 1 *Science*: Assure a strong science base for public health action.

The applied techniques of epidemiology, laboratory, behavioral, and social sciences are the primary tools that CDC uses to understand the causes of poor health, identify populations at risk, and develop interventions for disease control and prevention. As research provides more information about the relationships between the physical, mental, and social dimensions of well-being, a broader approach to public health has become important in the quest for answers to prevent and solve health problems. CDC is committed to expanding its research agenda to help bridge the gap between research and public health practice. Through the integration and communication of scientific information, the most effective public health solutions will be translated into practice in the Nation's communities. Sound public health policy decisions are based on excellence in science and provide the means to achieve the best results.

Program Activities and Strategies for accomplishing Goal 1

CDC's strategy for assuring a strong science base for public health action requires an agency commitment to support and conduct high quality epidemiologic, laboratory, behavior, and social science research. Through its programs in Environmental Health, Infectious Diseases, Occupational Safety and Health, Epidemic Services, and the Prevention Centers, CDC advances the science base in public health by conducting and supporting both extramural and intramural research on a wide range of public health issues. For FY 2001, research on several major public health issues will be conducted in order to improve decision making, to examine health outcomes, or to prevent disease. To ensure the scientific foundation of public health practices, CDC is continuing to coordinate the development of the *Guide to Community Preventive Services*. This *Guide* will provide public health practitioners, their community partners, and policy makers with evidence-based recommendations for planning and implementing population-based services and policies at the community and state level.

û Goal 2 *Assessment*: Detect and assess threats to public health.

The wisdom and legitimacy of public health decisions are crucially affected by the quality of the information on which they are based. A unique role of CDC is to provide comprehensive information on health including health status, health risks, the health care system, and health-related outcomes. By maintaining a broad-based monitoring capability, CDC can quickly detect and assess public health threats. CDC's assessment capability, epidemiologic and laboratory surveillance, and response capacity ensure a system that identifies health problems and deploys teams of experts to help resolve the problems promptly. Additionally, the assessment and surveillance capacity ensures data for analysis that can help identify causes of disease early and assist in decisions about appropriate research, policy, and programmatic actions.

Program Activities and Strategies for accomplishing Goal 2

To accomplish this goal, emphasis will be on assuring that CDC's surveillance and health information systems address current health issues and problems and that existing and new CDC data systems are carefully coordinated and integrated. CDC's Health Information and Surveillance Systems Board stimulates and sponsors innovation in health information and surveillance systems supportive of the essential public health services. In addition, epidemiologic and laboratory capacity for surveillance and response will be strengthened. Making health information available to a wide audience is a major CDC priority that requires adjustments to existing data and surveillance systems and modifications of the procedures for accessing information. For FY 2001, this goal is accomplished through many of CDC's program activities, with emphasis on Health Statistics, the Preventive Health and Health Services Block Grant, Epidemic Services, and Cancer Registries.

û Goal 3 *Policy*: Provide leadership for the nation in prevention policy and practice.

As the emphasis in responsibility for public health services moves from the federal level of government to local governments, CDC will continue in a crucial public health role. CDC's leadership in prevention policy can and should help focus scientific and professional expertise in setting national public health policy. CDC also encourages actions on the part of other federal, state, and local agencies, tribal nations and private organizations to aid in the reduction of threats to health and the promotion of good health. Public health leadership includes the provision of funds and technical assistance, the development of national health data, the conduct of research, and the development of policies and practices that are shaped by science. Through these mechanisms, CDC assures that the public's interest is best served by the measures and programs that are adopted. CDC's role in policy development includes communicating with all affected parties, considering the long-term effects of policy decisions, and speaking for persons or groups who have difficulty being heard.

Program Activities and Strategies for accomplishing Goal 3

The strategy to address this goal requires CDC to commit to systematic planning and evaluation of its programs and products and when feasible to document the costs and benefits of prevention programs. The establishment of a mechanism for continuous review and feedback on the science produced in and through CDC-funded projects is an important means for improving the overall effectiveness of the agency. The processes of planning, evaluating, peer reviewing, and providing feedback assure that the research standards and policy guidelines developed by CDC provide current and reliable information for use in health promotion and disease prevention programs. To augment this process, CDC has developed a framework for evaluation in public health practice, an activity designed to encourage combining the science of evaluation with the demands of program management.

û Goal 4 *Assurance*: Assure the public's health through the translation of research into effective community-based action.

This goal is oriented toward developing the capacity of public health departments to carry out essential public health programs and services, and involve community institutions and community groups in health promotion and disease prevention. As CDC strengthens its ongoing relationships with state and local health agencies, it is also committed to building partnerships with non-governmental organizations at the community and national levels. These partnerships are essential for the design, implementation, and evaluation of sound prevention programs. What people understand about their health and potential risks to their health is of major concern in public health. CDC is committed to promoting effective health communication, conveying information to appropriate populations, and facilitating access to health

information. The agency seeks to enhance the public's health knowledge through communication that is congruent with the values of diverse communities.

Program Activities and Strategies for accomplishing Goal 4

To accomplish this goal, a major emphasis must be placed on expanding CDC's partners to reflect the diversity of the nation. The role and influence of the community are vital when designing, implementing, and evaluating public health intervention strategies. There are many areas where CDC is building the capacity of its partners to carry out important public health programs. Through state and local health departments, prevention and control programs focus on the reduction of sexually transmitted diseases, HIV/AIDS, tuberculosis, vaccine preventable diseases, breast and cervical cancer, diabetes, injuries, and childhood lead poisoning. In FY 2001, CDC will continue its efforts in the training of public health leaders in the science of public health practice. Training efforts in this area are critical in addressing future public health issues. For example, the CDC-sponsored Public Health Leadership Institute is an ongoing program that develops the leadership skills of public health officials at the Federal, State, and local levels.

1.2 Organization, Programs, Operations, Strategies and Resources

The CDC is known as the "Nation's Prevention Agency." Since the agency was founded in 1946, it has been at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats. Finding workable approaches to these complex health problems presents multidimensional challenges for our nation's public health network, and requires a broad array of skills, abilities and experience. CDC has constantly evolved and innovated to effectively address new health challenges. From the traditional public health practice of infectious disease control, CDC has broadened its mission to address the role of complex social and behavioral risk factors for disease, injury, and disability.

To effectively carry out its mission, CDC is currently organized into 10 major program components and nine staff offices (See Page 2-CDC Fiscal Year 2001 Preliminary Budget Submission to DHHS). One of CDC's greatest resources is it's more than 7,400 employees, who provide quality service to the American people and who provide expertise in public health surveillance, epidemiology, statistical analysis, laboratory investigation and analysis, health communications and social marketing, behavioral risk reduction, technology transfer, and prevention research. CDC's presence is global, with employees assigned to posts in 20 countries, and 46 of the 50 states. CDC headquarters is located in Atlanta, Georgia, with 15 field stations located throughout the nation and in Puerto Rico.

Levels of preventable illness, disability, and death in the United States are still unacceptably high, creating gaps in areas where people haven't benefitted from progress made during the last century. For instance, gains in life expectancy have not benefitted all Americans equally; the gap in life expectancy between African Americans and whites has been increasing since the 1970's. To prepare CDC to meet these and other challenges of the new millennium, CDC has committed to the following priorities that reflect our commitment to excellence and social justice, creativity, and compassion:

> **Strengthen Science for Public Health Action**: CDC is only as strong as its science. But science is only the first step and not an end unto itself. We must use our science to make real, measurable differences in people's lives. To do that, we must have a strong, flexible, and supportive public health infrastructure. This infrastructure should promote strong science, including laboratory, epidemiologic, social, and behavioral sciences, and biomedical prevention and health systems research to direct public health action. It should develop and maintain a skilled and highly effective workforce, able to put that science to best use. And it should build integrated information and surveillance systems that improve our ability to monitor the effectiveness of our use of science to improve the public's health.

Collaborate with Health Care Partners for Prevention: CDC and those involved in health care delivery–including medical organizations, managed care organizations, Medicare and Medicaid, state and local health departments, and large corporations that buy health care for employees and their families–-share similar interests in preventing disease and disability. These common interests offer CDC unprecedented opportunities for involvement in Americans' health care delivery system. We should capitalize on these opportunities by incorporating prevention and health promotion into all of our programs and by helping our health care partners hone their expertise and knowledge.

Promote Healthy Living at Every Stage of Life: Americans are living longer, bringing about a demographic transition as we become a nation with more older adults. Because of this transition, we face new challenges in promoting health at every stage of life. In recent years, we have accomplished much in improving the health of children. The same intensity of effort used to improve our children's health now must be extended to all age groups, and we must guarantee that at every stage of life people are empowered with the knowledge necessary to help them in improving their own health.

Work with Partners to Improve Global Health: Disparities in health status have widened between developed and developing nations. In addition, transportation and population shifts make it possible for new and emerging disease to travel swiftly across continents and around the world. Facing these challenges requires even closer cooperation with our global partners in using science and sound policy to promote public health globally.

1.3 Partnerships and Coordination

The concept of partnerships and coordination toward the completion of established goals and objectives is not new among the public health organizations. The July 1979 publication, *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention,* described for the first time a national public health agenda. This report established five quantifiable goals for improving health status, risk reduction, public and professional awareness of prevention, health services and protective measures, and surveillance and evaluation by the year 1990. Success in meeting these objectives has been documented in areas such as hypertension, childhood infectious diseases, and injury prevention. Several objectives were not met by 1990. The Public Health Service's commitment to developing Year 2000 and 2010 Objectives affirms the commitment to addressing public health problems that persist, as well as problems that have appeared or intensified since the inception of the national health objectives.

To ensure broad-based input, more than 300 national organizations and 7,000 individuals and organizations participated in the development of the year 2000 objectives. Key participants included representatives of state and local health departments. This broad-based approach is currently ongoing in the development of Year 2010 Objectives. The extensive participation by representatives of state and local governments, academic institutions, business and labor, and community and professional organizations at each step in the process is helping to establish the broad network needed for successful implementation of programs. CDC has actively participated in this process, accepting the lead in overseeing the coordination, collaboration and implementation of several health promotion and disease, injury and disability prevention objectives. Many of the performance objectives in the CDC Annual Performance Plan are directly linked to the Healthy People Objectives.

Just as the development of the national health objectives is dependent on the work of many, CDC works with its many partners throughout the United States and the world to accomplish the long-term and annual goals in the CDC Performance Plan and the DHHS Strategic Plan. State and local health departments provide the infrastructure on which the public's health is built. Other traditional partners include individuals and institutions that educate and promote the health of Americans of all ages, such as school systems, local community groups, businesses, and voluntary and professional associations and

other federal organizations. In view of the increasingly diverse and complex role of public health, CDC has reached out to newer and less traditional public health partners, including churches, local organizations, health insurance organizations, health alliances, health boards, consumer groups, and private medical providers.

The Agency for Toxic Substances and Disease Registry (ATSDR) provides a unique partnership opportunity for CDC. In 1983, the Secretary of the Department of Health and Human Services (DHHS) established, by Administrative Order, ATSDR as an agency within the Public Health Service located at the CDC headquarters in Atlanta, Georgia. ATSDR was created to address the health related sections of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or what is more commonly known as "Superfund" legislation. In June 1985, ATSDR was formally organized as an independent agency. By implementing the programs that support its mission, ATSDR forms a critical link among environmental public health, research, and regulatory organizations.

ATSDR, in concert with CDC, the Environmental Protection Agency (EPA), and the National Institute of Environmental Health Sciences (NIEHS), supports CERCLA, one of the most challenging and innovative environmental laws relating to public health. The coordination and collaboration among these environmental public health organizations strengthen the Nation's capacity to understand and respond to environmental public health concerns. Because ATSDR carries out a unique mission, separate and distinct from CDC's, a performance plan specific to ATSDR's programs and activities has been created and submitted separately from this plan.

1.4 Summary FY 1999 Performance Report: Accountability Through Performance Measurement

Several activities have been undertaken at CDC to ensure the effective use of performance-based management. Upon becoming Director of CDC in December 1998, Dr. Jeffrey Koplan immediately established health priorities and operating principles to ensure the use of performance-based management in directing the work of CDC.

The health priorities identify what we must do to prevent unnecessary injury, disease, disability, and death in the United States and around the globe. The priorities are as follows:

- Collaborate with Health Care Partners for Prevention.
- Promote Healthy Living at Every Stage of Life.
- Work with Partners to Improve Global Health.
- Strengthen Science for Public Health Action.

The operating principles support achievement of the priorities by specifying how day-to-day operations at CDC must function. The operating principles involve:

C using *science* as a basis for decision-making and public health action.
C expanding the quest for *social equity* through public health action.
C ensuring that our efforts are *outcome oriented*.
C being *accountable*.
C performing enthusiastically and effectively as a *service* organization.

These health priorities and operating principles are clearly consistent with the intent of the Government Performance and Results Act, and emphasize ongoing, objective measurement of performance, accountability, and outcomes.

Changes are occurring in CDC's business practices, such as:

C An emphasis on accountability in program reviews, as evidenced by the Director's request that participation be limited to upper management, thereby allowing for questions focused on program performance.
C Improved fiscal forecasting, supported by financial systems that allow for more accurate budget projections.
C Requirements for new initiatives to include performance measures and evaluation strategies.

Development and refinement of performance indicators has had a positive effect on many programs throughout CDC. As part of the developmental process, CDC programs worked closely with partners to identify measures that would be meaningful to all working in a particular program area. These collaborations resulted in clearer expectations about program intent, outcomes, and management challenges. Similarly, as new initiatives are developed, goals and measures to support them are created and incorporated into CDC's Performance Plan. In order to achieve this end, a crosscutting approach has been followed. Budgetary, operational, policy, and technical staff are all involved in the development of a program's measures. This approach is very helpful in generating a shared vision for a program's intent as well as its operation. This model will allow CDC effective, early evaluation of program operations.

FY 1999 Performance Summary

CDC's FY 1999 activities supported a strong performance across the Agency's programs. Of the 110 performance measures established for CDC in FY 1999, 79 (72%) of the performance measures have data available to report in January 2000. For the remaining 28% of the performance measures, data will be available by the end of FY 2000, with one exception. This exception is the performance measure for CDC's tuberculosis program. The reason why performance data will not be available for this measure is related to the extended length of treatment associated with tuberculosis treatment programs. Because the tuberculosis treatment regime lasts a full year, a time lag in reporting is anticipated. Therefore, we will not have complete data to report for the tuberculosis program until two years after the reporting year. In instances where performance data will not be available until after January 2000, CDC programs have reported interim data, or data that is the most recent available and appropriate to assess performance. Once FY 1999 data becomes available and can be reconciled in the FY 1999 Performance Report, it will be added to subsequent submissions.

Overall, CDC has met 61% of its targets with 32% of those targets exceeded. Thirty-two percent of CDC's targets will not have assessment data until mid- to late FY 2000 or 2001; however, trend data indicate that the majority of those targets will more than likely be met. Two percent (two targets) of CDC's targets were not fully met, although significant progress toward their achievement was made.

Significant accomplishments summarized in the FY 1999 Performance Report include the following highlights:

< The National Center for Health Statistics (NCHS) has far exceeded established goals and targets. These goals and targets relate to the timely release of data and the accessibility of data to decision-makers and researchers. During FY 1999, NCHS reduced the time lags for the release of 5 major data systems from 5% to 23%. This performance met the target of a 5% reduction for one system and exceeded the targets for the other four systems. In addition, NCHS made virtually all NCHS publications available on the Internet at the same time they are released in published form--a phenomenal achievement in making data readily available to decision-makers and researchers on a global scale.

< CDC's Epidemic Intelligence Service (EIS) Program exceeded its target of responding to at least 95% of the requests for epidemic assistance from domestic and international partners by responding to 99% of the requests. The EIS program deployed its "disease detectives" and

coordinated 90 Epidemic Assistance Investigations and over 300 state-based field investigations in FY 1999. These investigations helped to rapidly resolve public health problems related to food poisoning, disease outbreaks, environmental hazards, and natural disasters.

< CDC's Emerging Infections program fully achieved three of its performance measures; therefore, these measures will not be included in future performance plans. The performance measures achieved included reducing the time for parasitic diagnostic testing to the lowest time possible for accurate and reliable testing, providing training in viral diagnostics for foodborne diseases, and the establishment of laboratory-based surveillance for *Heliobacter pylori* in Alaska.

< The Emerging Infections program exceeded several targets. Specifically, these targets related to the number of public health microbiology fellows trained for the public health workforce, the number of outbreaks detected and investigated, the proportion of reported foodborne outbreak investigations in which the causative agent is identified, and a significant increase in the participation by hemophilia treatment centers in the Universal Data Collection system.

In few instances, CDC was not able to fully achieve desired targets. For example, 34 state and major city health departments (rather than the targeted 40) expanded their epidemiology and surveillance capacity to investigate and mitigate health threats by bioterrorism. In another instance, CDC was able to develop core asthma programs in four states instead of the targeted six states. Despite these few instance in which CDC did not achieve its targets, when assessing overall performance for FY 1999, CDC made significant progress in meeting all of its desired goals and performance measures.

CDC's Performance Plan continues to evolve based on the needs of its program managers, OMB, Congressional, and Executive staff. Data verification and validation sections of the plan were enhanced to provide assurance to the public that CDC's data are reliable and valid for the programs they are designed to measure. Because many CDC programs rely on data from the same data systems, an appendix has been created to address the data verification/validation issues of these common data systems. The use of this reference appendix is intended to minimize duplication of data quality control information throughout the document. Specific data issues related to programs is addressed within the program sections of the document, whereas the common data quality issues of major data systems have been referenced in Appendix A.2.

Part II
2.0 Program Planning and Assessment and Reporting

Introduction

This document includes CDC's Final FY 2001 GPRA Annual Performance Plan, FY 2000 Revised Final GPRA Annual Performance Plan, and FY 1999 GPRA Annual Performance Report. As indicated in the performance measurement charts, the FY 1999 measures represent actual targets for FYs 1999 and 2000 based on appropriated funds. The FY 2001 Performance Measures are estimates of CDC's targets based on FY 2000 requested funds. Any changes in the FY 1999 and FY 2000 performance measures from previous submissions are based on appropriated funding levels unless otherwise referenced within the performance measurement tables. Data supporting actual performance for the FY 1999 report has been included with this draft submission for data that is currently available. A reference (**Ref.**) column has been included in the tables to link the program goals and objectives to the page number of the appropriate budget section that supports a particular goal and measure.

CDC's Performance Plan discusses performance objectives and measures by functional areas. The plan is organized in this way to provide the reader with an understanding of how programs within the agency complement and relate to one another. Diverse centralized support services are provided to all program areas, crossing program activity lines. In developing performance measures for non-centralized services, we attempted to link objectives and measures to the program activity lines and provide outcome measures whenever possible. However, we also looked at programs realistically, taking factors into consideration that may have an effect on performance measures. These factors included:

C Program maturity and the relative need for capacity building in certain areas.
C Availability of annual data to measure performance.
C Latency periods associated with particular disease-specific programs.
C Input from our partners.

2.1 Infectious Diseases

2.1.1 Program Description, Context and Summary of Performance

Once expected to be eliminated as a public health problem, infectious diseases remain the leading cause of death worldwide. In the U.S. and elsewhere, infectious diseases increasingly threaten public health and contribute significantly to the escalating costs of health care. They are a continuing menace to all segments of society, regardless of age, gender, lifestyle, ethnic background and socioeconomic status. Earlier predictions of the elimination of infectious disease did not take into account changes in demographics and human behaviors and the extraordinary ability of microbes to adapt, evolve, and develop resistance to drugs. As early as the 1950s, penicillin began to lose its power to cure infections caused by *Staphylococcus aureas*, a common bacterium that can cause serious illness. In 1957 and 1968, new strains of influenza emerged in China and spread rapidly around the globe, and in the 1970s there was a resurgence of sexually transmitted diseases. Also during the 1970s, several new diseases were identified including Legionnaires' disease, Lyme disease, toxic shock syndrome, and Ebola hemorrhagic fever. Between 1973 and 1995, thirty newly emerging infectious diseases were identified, including hepatitis C virus (HCV) infection, now shown to be the most common bloodborne infection in the U.S. The re-emergence of diseases such as TB, malaria, rabies, dengue, and growing drug resistance of many pathogens continued to dramatically change the global and domestic landscape of infectious diseases. By the early 1990s, it had been demonstrated that the threat of infectious diseases was increasing in the United States and elsewhere.

2.1.1a Emerging Infections

In 1994, CDC began working with other federal agencies, state and local health departments, and other partners to strengthen our Nation's capacity to recognize and respond to infectious disease threats through implementation of the CDC plan, *Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States.* The effort to build U.S. capacity to combat infectious diseases is well underway. However, the fulfillment of CDC's vision of a safer world in the next millennium requires a long-term commitment and sustained effort. The second phase of CDC's effort, *Preventing Emerging Infectious Diseases: A Strategy for the 21st Century*, has involved taking into account new challenges and building on experience, success, and knowledge gained from the initial plan.

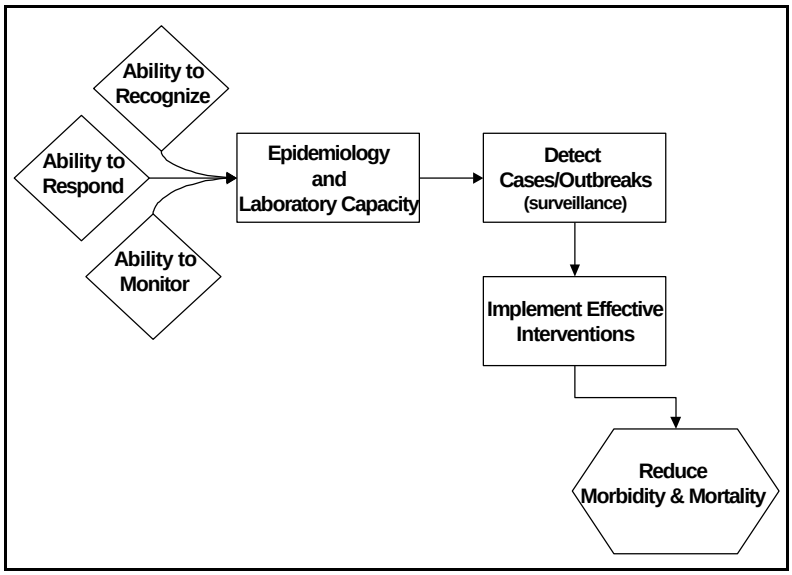
CDC's infectious disease goals and performance measures continue to evolve, not only to reflect updated strategies, but to address the challenges posed by new and resurgent infectious disease threats. For example, the recent recognition of an avian strain of influenza in Hong Kong raised the specter of an influenza pandemic. Such a pandemic will have a high death rate, carry with it a huge economic burden, and create massive disruption of public life. A Hepatitis C Virus (HCV) epidemic affecting almost four million Americans of whom about 7% may have acquired their infection through blood transfusion, has also been recognized. The emergence of drug resistance in bacteria, parasites, viruses, and fungi is swiftly reversing advances of the previous 50 years. Here in the 21st century, many important drug choices of the treatment of common infections are becoming increasingly limited and expensive, and in some cases, nonexistent. This year's performance plan has been updated to include major program efforts for HCV infection, food safety, and antimicrobial resistance.

Partnerships and Links to DHHS Strategic Plan

These performance measures are related to DHHS Goal 1: To promote health and reduce major threats to health and productive lives for all Americans; DHHS Goal 5: Improve public health and safety systems; and DHHS Goal 6: Strengthen the Nation's science base for health and human services. To accomplish these objectives, CDC collaborates with a number of agencies and organizations including: Council of State and Territorial Epidemiologists, Association of State and Territorial Public Health Laboratory Directors, National Institutes of Health, Food and Drug Administration, Department of Agriculture, Department of Interior (U.S. Fish and Wildlife), Department of Justice (U.S. Immigrations and Naturalization Service), Department of State, Department of Treasury (U.S. Customs), and the GeoSentinel project.

Performance Summary: The goals for preventing and controlling emerging infectious diseases focus on rebuilding the infectious disease-control component of the public health infrastructure by developing and building national epidemiologic and laboratory capacity. Building national capacity will improve our ability to recognize, respond to, and monitor new and resurgent infectious diseases --the key to prevention and control (Figure 2). For emerging infectious diseases (EID), many of which are new or previously unrecognized, disease-based outcome measures are not applicable. Without knowing what diseases will emerge, baselines do not exist and performance measures of disease incidence cannot be developed. Success depends on ensuring that national public health capacity exists to quickly recognize and respond to the appearance of new and re-emerging threats, as well as to prevent and control existing infectious disease problems. When public health efforts are successful, fewer cases of disease eventually occur,
and small outbreaks are stopped before they can become large ones. Better surveillance may actually result in the recognition of more outbreaks. This does not mean there are more cases of disease occurring, it simply means our eyes, ears, and other tools to find them are better. However, the success of disease control programs can be difficult to measure, because it is difficult to measure the absence of a

Figure 2: Model for Prevention and Control of Infectious Disease



problem. Thus, rather than focusing on disease-based outcomes, the EID performance measures assess CDC's efforts in achieving the goals for developing new epidemiology and laboratory methods and building national capacity through training programs, the development of enhanced disease surveillance systems, new laboratory diagnostics, and by funding state and local health departments for public health infrastructure improvements. Achieving these targets will improve our nation's capacity to recognize, respond to, and monitor infectious disease threats.

Most of the targets for FY1999 were achieved as indicated under "actual performance" in the table. For example, 33 sites --31 states and 2 local health departments--were funded as targeted for the Epidemiology and Laboratory Capacity program. The purpose of the ELC program is to assist State and eligible local public health agencies to strengthen the public health infrastructure to address infectious disease threats. Resources have been used to improve surveillance, develop new and improved diagnostic and subtyping methods, implement electronic disease reporting systems, transfer state-of-the-art technologies into public health laboratories, and train epidemiologists and laboratory workers.

A greater number of health care facilities than expected were recruited and agreed to participate in the National Surveillance System for Health Care Workers. It was estimated that 50 health care facilities would agree to conduct surveillance of occupational exposures and infections; however, a total of 64 were enrolled in the system in FY 1999. The greater than expected participation may be due to an increased level of awareness among health care providers about the importance of occupational exposures. The rate of central line associated bloodstream infections in adult intensive care unit patients was reduced beyond the estimated target for FY 1999. While it is too early to fully understand the reasons for this decrease, it is likely multifactorial and related to an increased awareness among hospital personnel of the risk which has led to improved infection control practices. We expect that rates of bloodstream infections in this population will fluctuate from year to year and it will be necessary to follow trends over time to detect true decreases.

ELC funding has been used to hire 94 FTEs in funded sites, including 36 epidemiologists and 23 microbiologists. Even though each grant award is modest in size (average $271,000), the ELC program has made a dramatic impact. The infrastructure developed through the ELC program was crucial in the response to West Nile encephalitis in the New York metropolitan area. In addition, through technology

transfer, states now have state-of-the-art molecular laboratory diagnostic tools, including pulsed field gel electrophoresis (PFGE) in 26 states and polymerase chain reaction (PCR) technology in 15 states. These tools have been used to identify, investigate, and rapidly implement control measures in hundreds of outbreaks; examples in 1999 include *E.coli* 0157:H7 at an upstate New York county fair linked to contaminated water; multi-state outbreaks of salmonella associated with alfalfa sprouts; and multi-state outbreaks of listeria associated with hotdogs.

CDC has been able to achieve certain goals, such as those associated with foodborne outbreaks, due to states' training in standardized laboratory methods and purchase of equipment that allows their participation in PulseNet. While data for FY1999 are not yet available, based on FY1998 data, he incidence has continued to drop due to higher compliance from physicians of Group B Streptococci (GBS) practice guidelines, and the FY 1999 target will be easily achieved . As targeted, 22 extramural applied research grants were awarded in FY 1999, primarily to academic medical centers. The research included improved diagnostics for influenza, malaria, and other infectious diseases; infectious causes of chronic diseases, such as arthritis; and waterborne diseases in drinking and recreational water. Projected participation by hemophilia treatment centers (HTC) in the Universal Data Collection was exceeded due to the recognition by HTC staff and patients of the benefits of better patient monitoring for bloodborne pathogens.

Several performance measures have been achieved and will not be included in future submissions. Reducing parasitic diagnosis time has been decreased to the lowest amount of time that could be expected for accurate and reliable testing. Training for several viral diagnostics involved in foodborne diseases has been achieved. The number of health care facilities conducting occupational exposure will not be in future submissions because this surveillance system could not be validated for obtaining accurate data. The goal of establishing laboratory-based surveillance for *Helicobacter pylori* has been achieved.

Another performance measure that was not achieved in FY 1999 was diminishing the rapid rise in the proportion of enterococci resistant to vancomycin. The target was established at a 40% increase in the rate of enterococci resistant to vancomycin. While the actual performance (43%) was slightly higher than the target, it still represents a decrease in the rapid rise in the proportion of enterococci resistant to vancomycin compared to the historical mean (47%). Decreasing the spread of antimicrobial resistance is a difficult challenge. CDC, along with many partners, is developing *A Public Health Action Plan to Combat Antimicrobial Resistance*, which will be published in FY 2000 and will guide our actions in curbing the spread of antimicrobial resistance. With implementation of this plan, we hope and anticipate that future targets for this measure will be achieved.

2.1.2a Goal-by-Goal Presentation by Budget

Performance Goal:
Develop and strengthen epidemiologic and laboratory methods for detecting, controlling, and preventing infectious diseases.

***Note the new reference column (Ref.) in which page number references are provided for the budget sections supporting the goal and measures.**

Performance Measures	Targets	Actual Performance	Ref.

Public health microbiology fellows will be trained and available for employment in local, state, and federal public health laboratories.	**FY 01:** 100 fellows trained. **FY 00:** 70 fellows trained. **FY 99:** 40 fellows trained.	**FY 01:** **FY 00:** **FY 99:** 40 fellows trained. **FY 97:** 13 fellows trained.	Page 166
Regional population-based Emerging Infections Programs will conduct early warning investigations of agents of infectious diseases.	**FY 01:** 10 regional programs. **FY 00:** 9 regional programs. **FY 99:** 9 regional programs.	**FY 01:** **FY 00:** **FY 99:** 9 regional programs. **FY 97:** 7 regional programs.	Page 166
Large or unusual outbreaks of diarrheal and/or foodborne illness will be detected and investigated.	**FY 01:** 27 outbreaks investigated. **FY 00:** 26 outbreaks investigated. **FY 99:** 23 outbreaks investigated.	**FY 01:** **FY 00:** **FY 99:** 25 outbreaks investigated. **FY 98:** 15 outbreaks investigated.	Page 166
The proportion of reported foodborne outbreak investigations in which the causative organism or toxin is identified.	**FY 01:** 55% identified causative organism. **FY 00:** 50% identified causative organism. **FY 99:** 45% identified causative organism.	**FY 01:** **FY 00:** **FY 99:** 48% identified causative organism. **FY 98:** 40% Identified causative organism.	Page 166
Performance Measures	**Targets**	**Actual Performance**	**Ref.**

The proportion of reported foodborne outbreaks in which the food that caused the outbreak is identified.	**FY 01:** 55% of outbreaks where causative food is identified. **FY 00:** Greater than 50% of outbreaks where causative food is identified. **FY 99:** 50% of outbreaks where causative food is identified.	**FY 01:** **FY 00:** **FY 99:** 50% of outbreaks where causative food is identified. **FY 98:** 45% of outbreaks where causative food is identified.	Page 166
22 extramural awards will be provided to conduct enhanced research investigations to assist in development and improvement of diagnostic tests for use in areas such as antimicrobial resistance, sexually transmitted diseases, malaria, Lyme disease, healthcare-associated infections, and blood safety.	**FY 01:** 45 awards. **FY 00:** 22 awards. **FY 99:** 22 awards.	**FY 01:** **FY 00:** **FY 99:** 22 awards. **FY 97:** 17 awards.	Page 166

Performance Goal: Strengthen domestic and global epidemiologic and laboratory capacity for surveillance and response to infectious disease.

Performance Measures	Targets	Actual Performance	Ref.
The incidence of perinatal Group B streptococcal infections will be reduced.	**FY 01:** 50% reduction over FY 1995 baseline. **FY 00:** 40% reduction over FY 1995 baseline. (Able to increase reduction due to large acceptance of guidelines by physicians). **FY 99:** 30% reduction over FY 1995 baseline.	**FY 01:** **FY 00:** **FY 99:** Data available September 2000. **FY 95:** 1.3 perinatal group B streptococcal infections per 1,000 live births.	Page 166
Performance Measure	**Target**	**Actual Performance**	**Ref.**

The rate of central-line associated bloodstream infections in adult intensive care unit patients will be reduced as measured through the National Nosocomial Infections Surveillance (NNIS) System.	**FY 01:** 4.3 bloodstream infections. **FY 00:** 4.4 bloodstream infections. **FY 99:** 5.2 bloodstream infections.	**FY 01:** **FY 00:** **FY 99:** 4.4 bloodstream infections. **FY 98:** 5.3 bloodstream infections.	Page 166
Diminish the rapid rise in the proportion of enterococci resistant to vancomycin (VRE rate) among pathogens associated with nosocomial infections in intensive care unit patients.	**FY 01:** 33% increase. **FY 00:** 38% increase. **FY 99:** 40 % increase.	**FY 01:** **FY 00:** **FY 99:** 43% increase.	Page 166
State/local health departments will be provided with support for a.) HCV counseling, testing, and referral demonstration sites and b.) Hepatitis C coordinators.	**FY 01:** 9 health departments with funding for testing, counseling and demonstration projects; 34 health departments with hepatitis C coordinators. **FY 00:** 9 health departments with funding for testing, counseling and demonstration projects; 9 health departments with hepatitis C coordinators	**FY 01:** **FY 00:** **FY 99:** 0 health departments.	Page 166

Performance Measure	Target	Actual Performance	Ref.
Sentinel surveillance systems for chronic Hepatitis C Virus (HCV) will be established in select sites.	**FY 01:** 5 states with sentinel surveillance system for chronic HCV. **FY 00:** Sentinel Surveillance system for chronic HCV will be established in 3 sites. **FY 99:** Sentinel surveillance system for chronic HCV will be developed and pilot tested.	**FY 01:** **FY 00:** **FY 99:** 2 pilot tests of the sentinel surveillance system were conducted. **FY 98:** 0 Surveillance Systems.	Page 166
Extramural domestic and global surveillance networks will monitor conditions including antimicrobial resistance, threats from transfusion of blood and blood products, infectious diseases among travelers and immunosuppressed and underserved populations.	**FY 01:** 6 extramural networks. **FY 00:** 5 extramural networks. **FY 99:** 4 extramural networks.	**FY 01:** **FY 00:** **FY 99:** 4 extramural networks. **FY 98:** 3 extramural networks. **FY 97:** 3 extramural networks.	Page 166
States will have increased epidemiologic and laboratory capacity for surveillance and response.	**FY 01:** 53 states. **FY 00:** 43 states. **FY 99:** 33 states.	**FY 01:** **FY 00:** **FY 99:** 33 states. **FY 98:** 30 states.	Page 166

Performance Measure	Target	Actual Performance	Ref.
Reduced time for providing parasitic diseases reference laboratory diagnostic results to state laboratories.	**FY 99:** The time for providing laboratory diagnostic results to state laboratories will be improved in urgent situations, from 24 hours to 2 hours, and in routine cases, from 2 weeks to 2 days, in 90% of the requests.	**FY 99:** Within 2 hours, urgent results reported. Within 2 days, routine results reported. **FY 97:** Within 24 hours urgent results reported. Within 2 weeks routine results reported.	Page 166
Training will be provided to states in *Calicivirus*, *Bartonella*, and *Ehrlichia* diagnostics.	**FY 99:** 10 States.	**FY 99:** 10 States.	Page 166
A surveillance system will be established to collect data on antimalarial drug resistance in sub-Saharan African countries.	**FY 01:** 75% of sub-Saharan African Countries. **FY 00:** 50% of sub-Saharan African Countries.	**FY 01:** **FY 00:** **FY 99:** 0% of sub-Saharan African Countries.	Page 166
Increased participation by federally supported U.S. hemophilia treatment centers (HCTs) in the Universal Data Collection (UDC) system (total of 134 centers)	**FY 01:**100% participation. **FY 00:** 90% participation. **FY 99:** 40% participation	**FY 01:** **FY 00:** **FY 99:** 70% participation. **FY 98:** 0% participation.	Page 166
Surveillance for unusual HIV variants will be expanded.	**FY 01:** 8 countries. **FY 00:** 6 countries.	**FY 01:** **FY 00:** **FY 99:** 2 countries. **FY 98:** 0 countries.	Page 166

Performance Measure	Target	Actual Performance	Ref.
Enhanced surveillance for influenza will be initiated in state and local departments and global sites.	**FY 01:** 680 domestic sentinel sites/118 global sentinel sites. **FY 00:** 400 domestic sentinel sites/110 global sentinel sites.	**FY 01:** **FY 00:** **FY 99:** 300 domestic sentinel sites/110 global sentinel sites. **FY 96:** 0 State/local health departments/domestic and global sentinel sites.	Page 166
Provide support for state/local health departments and hospitals in the surveillance, prevention, and control of microbial resistance.	**FY 01:** 13 states supported **FY 00:** 10 states supported.	**FY 01:** **FY 00:** **FY 99:** 0 states supported. **FY 98:** 0 states supported. **FY 97:** 0 states supported.	Page 166

Performance Measure	Target	Actual Performance	Ref.
Expand state health department capacity to subtype and rapidly exchange information using PulseNet for *E.coli* and *Salmonellla* Typhimirium, and *Listeria monocytogenses.*	**FY 01:** Enhanced surveillance and control in 45 labs each for *E.coli* and *Salmonella* Typhimirium and 30 labs for *Listeria monocytogenes*. **FY 00:** Enhanced surveillance and control in 40 labs each for *E.coli* and *Salmonella* Typhimirium and 20 labs for *Listeria monocytogenes.* **FY 99:** Enhanced surveillance and control in 29 state labs for E.coli O157:H7 and expanded to include *Salmonella* and *Listeria* in 7 state labs.	**FY 01:** **FY 00:** **FY 99:** Enhanced surveillance and control in 29 state labs for *E.coli* O157:H7 and expanded to include *Salmonella* and *Listeria* in 7 state labs. **FY 97:** 0 states with enhanced foodborne surveillance and control activities for *E.coli* O157:H7.	Page 166
The number of health care facilities that conduct surveillance of occupational exposures and infections using the National Surveillance System for Health Care Workers (NaSH) will be increased.	**FY 99:** 50 Health Care facilities conducting surveillance.	**FY 99:** 64 Health Care facilities conducting surveillance. **FY 98:** 17 Health Care facilities conducting surveillance.	Page 166
Laboratory-based surveillance for *Helicobacter pylori* will be maintained at three Alaska Native regional hospitals.	**FY 99:** Establish 3 in Alaska Native regional hospitals.	**FY 99:** Established 3 in Alaska Native regional hospitals. **FY 98:** 0 Alaska Native regional hospitals.	Page 166

Performance Measure	Target	Actual Performance	Ref.
Electronic Laboratory Reporting (ELR) used by states.	**FY 01:** 15 states using ELR. **FY 00:** 10 states using ELR.	**FY 01:** **FY 00:** **FY 99:** 5 states using ELR.	Page 166
Enhance foodborne diseases active surveillance network, FoodNet, to identify sources of foodborne disease by adding pathogens/syndromes.	**FY 01:** Provide surveillance of 12 pathogens or syndromes. **FY 00:** Provide surveillance of 11 pathogens or syndromes. **FY 99:** Expand to 8 pathogens.	**FY 01:** **FY 00:** **FY 99:** 8 pathogens/syndromes. **FY 97:** 7 pathogens.	Page 166
Total Program Funding (Dollars in thousands)	**FY 2001: 201, 522** **FY 2000: 175,610** **FY 1999: 137, 302**		

Verification/Validation of Performance Measures: Successful accomplishment of these objectives will, in part, be verified using data submitted from funded states. Performance, in these instances, will be verified through on-site technical assistance and periodic visits and progress reviews. Other data are monitored using published and unpublished studies and recommendations. Additional systems used for verification included: 1) Hepatitis C Virus County Surveillance Project; 2) PulseNet and FoodNet; 3) U.S. Influenza Physicians Surveillance Network; and 4) Group B Streptococcus Surveillance System. The following systems referenced in Appendix A.2 are also used for data verification and validation: 1) National Nosocomial Surveillance System (NNIS); 2) National Electronic Telecommunication System for Surveillance (NETSS); and 3) Public Health Laboratory Information System (PHLIS).

2.1.1b Tuberculosis

Tuberculosis (TB) is an example of an infectious disease that did undergo a sustained decades-long decline until the mid 1980s only to reemerge strongly in the late 1980s and early 1990s with drug-resistant strains. In 1989, the Secretary of the Department of Health and Human Services stated the goal of eliminating TB: “It is time to commit to a tuberculosis-free society.” But a resurgence was associated with a deterioration of the public health infrastructure and complicated by the AIDS epidemic, increased numbers of cases among the foreign born, and transmission of tuberculosis in institutions, particularly in hospitals and prisons. During the 1970s and 1980s, many health departments around the country redirected TB control funds to other activities; key elements of some TB control programs were dismantled. Progress toward the control of TB slowed in the years 1985 to 1992 when the downward TB trend reversed, TB cases increased by 20 percent, and outbreaks of multidrug-resistant tuberculosis (MDR-TB) and deaths among health care workers occurred. In 1992-1993, additional resources helped to rebuild the crumbling public health TB infrastructure permitting health departments to address these problems, and TB declined again from 1993-1998. Achievement of this long term strategic objective requires a continued commitment of resources to prevent additional deterioration of the necessary infrastructure at the local, state, and/or federal levels. Reducing the case rate of tuberculosis will put the

nation back on track toward eliminating TB from the U.S.

Partnerships and Links to DHHS Strategic Plan
These performance measures relate to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans. In addition to state and major city health departments, the Division of Tuberculosis Elimination also works with the Advisory Committee for the Elimination of TB, the National TB Controllers Association, and the American Lung Association/American Thoracic Society to set guidelines, recommendations, and policies related to TB prevention and control.

Performance Summary: In the mid-1980s the trend toward TB elimination was reversed, and drug-resistant strains emerged that were even more deadly than before. TB cases increased by 20 percent between 1985 and 1992. As a result of the resurgence, Congress appropriated increased funding for TB control, enabling the rebuilding of the TB-related infrastructure. From 1993 through 1998, TB incidence again declined, although the resurgence of TB and related outbreaks set back TB elimination efforts by about a decade. Continued progress will depend upon continued resources and significant cooperation between public and private health care providers and agencies at the Federal, State, and local levels.

Completion of therapy (within 12 months) for TB patients: completion of therapy percentage is moving up toward the goal of 88% by 2001. (72.4% for 1995, up from 67.6% in 1994.) The highest priority is being placed on achievement of this objective and CDC is supporting outreach workers hired from high incidence language/cultural/ethnic groups in virtually all of the states and territories whose highest priority is to ensure completion of TB therapy. They do this through the use of directly observed therapy, incentives, and other adherence strategies. In addition, CDC and the CDC funded Model TB Centers are designing and implementing training and educational aids for health department and health care provider staff to improve skills needed to help achieve this objective.

Percentage of TB patients with initial positive cultures who also have drug susceptibility studies done: the rate for 1998 was 90.9% up from 73.3% when reported in 1993. With continued progress, it is reasonable to assume programs will achieve the 95% target by 2001. Much of this progress can be attributed to increased attention paid to TB, the efforts of state and local health departments and hospital infection control practitioners, and the increased funding by CDC which has enabled health department laboratories to purchase state-of-the-art equipment needed to perform more accurate and rapid laboratory testing and confirmation for TB and MDR TB.

Percent of contacts of infectious cases placed on therapy for latent TB infection who complete a treatment regimen: The 1997 rate was 71.6% up from 68.4%. Continued progress is expected and CDC through its TB Cooperative Agreements is placing higher priority of the identification and examination of contacts and the completion of therapy for contacts who are have latent TB infection. Health departments are required to address this in their TB cooperative agreement applications which are up for renewal this fall - FY 2000. CDC is also designing training for health department TB staff to help improve their skills in this area.

Percent of other high risk persons placed on therapy for latent TB infection who complete a treatment regimen: The 1997 rate was only 60.6% and achievement of this objective will require a great deal of effort on the part of health departments and health care providers who serve individuals at risk for TB. In recent years, many health departments placed greatest priority on treatment of TB cases, reducing morbidity and controlling outbreaks. TB is now back under control and CDC is prioritizing activities related to completion of therapy for latent infection in the TB Cooperative agreements which are all up for renewal this fall (FY 2000). Up to 10 % of CDC TB Cooperative agreement funds will be set aside next year for targeted testing and completion of preventive therapy in groups at high risk for TB. CDC will also be working with HRSA-FUNDED programs serving groups at high risk for TB to try to better facilitate the testing and completion of therapy for persons at high risk for TB who are served in HRSA-FUNDED programs. Finally, late this year, CDC and the American Thoracic Society will issue new recommendations for the treatment of latent TB infection that will permit two month therapy for latent TB

infection and it is believed these regimens will significantly increase the percent of persons who complete these regimens which now take from 6-12 months. These new recommendations have been made possible through CDC and NIH supported research.

States will report at least 95% complete information to CDC on surveillance items considered essential for TB surveillance: Significant progress is being made toward the achievement of this item and the states now report from 95% to 100.0% complete information on 19 of the 22 targeted essential reporting items. Progress can be attributed to CDC funding for TB surveillance activities and ongoing on-site as well as frequent telephone and electronic communication between CDC and health department surveillance staff. Two of the under reported items relate to information about HIV-status of TB patients and CDC is working with health department TB staff, state epidemiologists, HIV program staff and others to resolve related problems, many of which are related to HIV confidentiality issues.

2.1.1b Goal-by-Goal Presentation by Budget

Performance Goals:
Reduce the tuberculosis case rate through the following strategies:

- Collect TB morbidity data from states and territories and ensure complete reporting of surveillance data items considered essential for describing the epidemiology of TB and monitoring trends in TB morbidity for the U.S.
- Fund state/local health agencies to ensure core TB prevention and control activities are met: finding all cases of active TB and ensuring completion of therapy; finding and screening persons who have had contact with TB patients, evaluating them for TB infection and disease, ensuring completion of appropriate treatment and conducting TB surveillance and TB public health laboratory activities that are essential to addressing these priorities.
- Collect, analyze, and disseminate TB program evaluation data.
- Complete TB outbreak investigations and issue recommendations where applicable.
- Continue TB diagnostic, treatment, and process training for civil surgeons and panel physicians responsible for screening refugees and immigrants.
- Support and report on TB-related applied and operational research.
- Continue activities with USAID, the American Lung Association (ALA), the American Thoracic Society (ATS), and other partners in support of the international TB control efforts and the WHO Stop TB Plan.
- Work with health departments, Model TB Centers, ALA, ATS, and other partners to implement the new Strategic Plan for TB Training and Education.
- Deliver three satellite based training courses to public health workers.
- Continue implementation and support for the Tuberculosis Information Management System (TIMS) for state and local health departments for surveillance and case management.
- Respond to the Institute of Medicine Report on TB in the U.S.

Performance Measures	Targets	Actual Performance	Ref.
The percentage of TB patients that will complete a course of curative TB treatment within 12 months of initiation of treatment (some patients require more than 12 months).	**FY 01:** 88% of TB patients. **FY 00:** 85% of TB patients. **FY 99:** 85% of TB patients.	**FY 01:** **FY 00:** **FY 99:** Data available mid-2001. **FY 97:** 72.4% of TB patients. **FY 94:** 67.6% of TB patients.	Page 126
A percentage of TB patients with initial positive cultures will also have drug susceptibility results.	**FY 01:** 95% of TB patients. **FY 00:** 93% of TB patients. **FY 99:** 92% of TB patients.	**FY 01:** **FY 00:** **FY 99:** Data available mid-2000. **FY 98:** 90.9% of TB patients. **FY 97:** 88.5% of TB patients. **FY 94:** 87.4% of TB patients.	Page 126
A minimum percentage of contacts of infectious cases who are placed on therapy for latent TB infection will complete a treatment regimen.	**FY 01:** 78% of contacts. **FY 00:** 75% of contacts. **FY 99:** 75% of contacts.	**FY 01:** **FY 00:** **FY 99:** Data available late 2000. **FY 97:** 71.6% of contacts. **FY 93:** 68.4% of contacts.	Page 126

Performance Measure	Target	Actual Performance	Ref.
A minimum percentage of other high risk infected persons who are placed on therapy for latent TB infection will complete a treatment regimen.	**FY 01:** 72% of other infected persons **FY 00:** 70% of other infected persons. **FY 99:** 70% of other infected persons.	**FY 01:** **FY 00:** **FY 99:** Data available late 2001. **FY 97:** 60.6% of other infected persons. **FY 93:** 64.8% of other infected persons.	Page 126
States will report to CDC complete information on surveillance data items (variables) considered essential for TB surveillance.	**FY 01:** States report to CDC at least 95% complete for identified variables. **FY 00:** States report to CDC at least 95% complete for identified variables. **FY 99:** States will report to CDC for identified variables. (Note: the percentages reported are the percent with complete reporting results for each variable. Data are collected electronically as part of the national TB surveillance system).	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 97:** Priority variables selected and baselines for complete reporting of these variables are: **DOB** (99.9%); **Country of origin** (99.3%); **Sex** (100.0%); **Race** (99.8%); **Month-year arrived in U.S.** (80.6%); **Status at diagnosis of TB** (100%); **Major site of disease** (99.9%); **AFB Smear** (99.6%); **AFB Culture** (99.8%); **TB skin test** (91.3%); **Initial drug regimen** (99.2%); **Initial drug susceptibility results** (90.4%); **Previous TB** (98.9%); **Year of diagnosis** (94.6%); **HIV status-all ages** (39.3%); **HIV status-ages 25-44** (52.5%); **Resident of correctional facility** (99.2%) **and long term facility** (99.1%); **Sputum conversion** (95.6%); **Reason stopped therapy** (97.6%); **DOT used/not used** (95.7); %); **Date therapy stopped** (97.5%). Continued on next page.	Page 126

Performance Measure	Target	Actual Performance	Ref.
		...continued. **FY 93:** Priority variables selected and baselines for complete reporting of these variables are: **DOB** (99.9%); **Country of origin** (99.3%); **Sex** (100.0%); **Race** (99.8%); **Month-year arrived in U.S.** (71.8%); **Status at diagnosis of TB** (99.7%); **Major site of disease** (99.9%); **AFB Smear** (99.3%); **AFB Culture** (99.7%); **TB skin test** (83.4%); **Initial drug regimen** (99.9%);**Initial drug susceptibility results** (96.1%); **Previous TB** (99.2%); **Year of diagnosis** (93.3%); **HIV status-all ages** (27.5%); **HIV status-ages 25-44** (41.4%); **Resident of correctional facility** (95.4%) **and long term facility** (82.8%); **Sputum conversion** (90.4%); **Reason stopped therapy** (99.8%); **DOT used/not used** (97.9%); **Date therapy stopped** (99.6%).	Page 126
Total Program Funding (Dollars in thousands)	**FY 2001: 127,672** **FY 2000: 127,728** **FY 1999: 119,909**		

Verification/Validation of Performance Measures: Information on the percentage of TB patients reported in 2001 who completed a course of curative TB treatment within 12 months of initiation of treatment will be available in June 2003. The last TB cases reported in 2001 (on December 31) will not have their 12 months treatment period completed until December 31, 2002. Then six to nine months are needed to tabulate, complete, verify, and report the completion of therapy data. This information is obtained from the National TB Surveillance System.

Information on the percent of TB cases reported in 2001, with initial positive cultures and drug susceptibility results will be available by June 2002. The delay is due to the fact that cases are reported up until December 30, 2001, and then approximately six months are then needed to process specimens, tabulate, complete, verify and report the data. This information is obtained from the National TB Surveillance System.

Information on the completion of therapy for latent TB infection for persons (contacts of infectious cases and other persons at high risk for TB disease) who are started on treatment in 2001 will be available in late 2003. Depending upon the regimen chosen, it takes 2 to 12 months to complete the therapy so some patients will not complete their regimen until December 31, 2002, then approximately six-nine months are allowed to tabulate, complete, verify and report the data. This information is obtained from the National TB Program Evaluation Reports.

Information on the percent of complete reporting on surveillance data items for TB cases reported in 2001 will be available by June 2002. The delay is due to the fact that cases are reported up until December 30, 2001, and then approximately six months are allowed to tabulate, complete, verify and

report the data. This information is obtained from the National TB Surveillance System.

For TB morbidity data and related information submitted via the National TB Surveillance System, the data are initially entered locally or at the State level into CDC developed software. The software contains numerous data validation checks. Additionally, the data are reviewed to confirm data integrity and evaluate data completeness as it is initially received at CDC. Routine data quality reports are generated to assess data completeness and identify data inconsistencies. These data quality reports are shared with the reporting areas and discussed during site visits. CDC also provides funds to selected areas to do more detailed evaluation studies. Finally, at the end of each year, data are again reviewed and verified with each reporting area before the data and counts are finalized and published. In addition, CDC encourages the health departments to conduct active surveillance and many of them do on a regular basis.

For data submitted via the National TB Program Evaluation Reports, the data are reviewed on an ongoing basis as it is received at CDC. Data are checked for accuracy and inconsistencies. Problems are resolved by Division of Tuberculosis Elimination (DTBE) staff working with state and local TB program staff. In addition, during regular visits to state, local and territorial health departments, DTBE staff review TB registers, other records and data systems, and often compare records for verification and accuracy. Finally at the end of each year, data are again reviewed before the data and counts are finalized and published.

2.1.1c HIV/AIDS

The epidemic of HIV and AIDS presents unique social, economic, and public health challenges to governments and individuals in the United States and around the world. Although significant progress has been made in understanding the disease and developing both prevention strategies and treatments since the first case was reported in the U.S. in 1981, HIV remains a deadly infection for which there is no vaccine or cure and for which there are limited treatments. An average of 100 Americans are diagnosed with AIDS every day, and approximately 100 men, women, and children become infected with HIV every 24 hours. Globally, 16,000 people become infected each day, including nearly 1,000 children.

Through December 1998, a total of 688,200 cases of AIDS among persons in the U.S. had been reported to CDC, and more than 410,800 of these persons have died. Since 1987, AIDS has risen from being the 15th leading cause of death among all Americans to the 8th. AIDS is now a leading cause of death among Americans aged 25 to 44. CDC estimates that approximately 40,000 Americans are becoming newly infected with HIV each year and that between 800,000 and 900,000 Americans are currently living with HIV.

Transmission of HIV infection can be prevented through changes in high-risk behaviors. Prevention is an important cost-effective component of the control of HIV infection. Disadvantaged populations, especially African-Americans and socioeconomically stressed youth, continue to have high rates of HIV infection despite high levels of knowledge about behavioral prevention methods. Two biomedical interventions have demonstrated possibilities in reducing the spread of this deadly disease. First, antiretroviral combination therapy lowers viral load, which may translate to lower infectivity and, second, there is some evidence that treatment of other STDs can reduce the spread of heterosexually transmitted HIV infection.

Successful prevention of HIV transmission requires individual effort as well as the collective participation of federal, state, and local governmental, non-governmental, and international organizations. The federal government's role is critical in providing assistance to state and local health agencies and community-based organizations to implement effective HIV risk reduction and prevention programs, surveillance of the incidence of HIV and AIDS, research, evaluation, training, and technology transfer of effective interventions, prevention programs, and evaluation activities.

The following are external factors that affect accomplishing goals and objectives for the HIV program:

- All states do not have integrated HIV/AIDS surveillance systems.
- It is difficult for CDC and its partners to ask explicit questions about adolescents' sexual behaviors.
- For prevention education programs, sensitive issues exist such as abstinence vs. condom use and needle exchange.
- Limited capacity of surveillance staff at the state/ local level to collect, analyze, integrate and interpret data for state/local program usage.

Additionally, in the case of counseling and testing, it should be noted that in formulating the performance measure for this area, a number of factors were considered in estimating the improvement in the overall rate of persons who return for their HIV tests. The objective addressing this issue is based upon an annual evaluation of approximately 2.0 million HIV tests, reported from nearly 10,000 sites, each with varying test return rates. Improvements in testing technologies may make "results while you wait" a possibility in some settings, and will also compromise the value of retaining this as a performance objective for more than the next few years.

Every school day, 50 million young people attend more than 110,000 schools across the nation. Research has demonstrated that HIV education in schools can be effective in reducing risk behaviors among youth. CDC's efforts to help State and local education agencies implement HIV prevention education programs in schools nationwide include teacher training programs, dissemination of model policies and effective prevention programs, evaluation and technical assistance. The performance measures for this aspect of CDC's HIV/AIDS prevention program monitor students' exposure to HIV/AIDS prevention education in schools and youth behaviors that effect their risk of becoming infected with HIV. The selected measures are derived from epidemiologic modeling that describes the connections and interrelationships of policies and programs; knowledge, attitudes, and skills; health behaviors; and health outcomes.

Partnerships and Links to DHHS Strategic Plan

These objectives relate to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans. CDC continues to work closely with the Health Resources and Services Administration to evaluate access to care, and to evaluate the extent to which states' efforts have been effective in reducing perinatal transmission of HIV. CDC is collaborating with the Substance Abuse and Mental Health Services Administration and the National Institute on Drug Abuse on issues related to transmission of HIV/AIDS in the injecting drug using population. A working group has also been established to address health care issues in correctional institutions. Development and implementation of the plan to Eliminate Racial and Ethnic Health Disparities is an inter-agency effort within DHHS.

Performance Summary: In 1996, annual AIDS incidence decreased for the first time in the United States. Declines were seen in men, non-Hispanic whites, Hispanics, and all 5-year age groups. This pattern continued in 1997. Deaths attributable to AIDS have also decreased since 1996 in all racial/ethnic groups and in men and women. The recent decreases in AIDS-related deaths reflect a combination of the effects of new antiretroviral therapies that delay progression to AIDS, treatments to prevent secondary opportunistic infections, and the expected decreases in some groups from past declines in HIV incidence.

At the end of 1998, approximately 297,137 persons who had a diagnosis of AIDS and who had been reported to CDC with AIDS were alive. Although the annual number of new AIDS diagnoses has decreased, AIDS prevalence increased by approximately 30,000 persons from 1996 to 1997, and by approximately 27,000 from 1997 to 1998, in part because of longer survival times after diagnosis. In every state, the District of Columbia, and Puerto Rico, the number of prevalent AIDS cases increased between the end of 1996 and the end of 1998. If medical treatments continue to improve survival and if the number of new infections does not decrease, the number of persons living with HIV and AIDS is expected to increase slightly each year for some time.

Historically, AIDS incidence data have served as the basis for assessing needs for prevention and treatment programs. However, because of the effect of potent antiretroviral therapies, AIDS incidence can no longer provide unbiased information on HIV incidence patterns; AIDS is delayed or may not develop in a growing number of HIV-infected persons as they benefit from new therapies and persons reported with AIDS will increasingly represent persons whose diagnosis was too late for them to benefit from treatments, persons who either did not seek or had no access to care, or persons for whom treatment failed.

AIDS incidence is therefore no longer the most appropriate means of describing the needs of different populations and HIV reporting data are increasingly necessary to monitor the effect of the epidemic. The next few years will represent a time of transition for HIV/AIDS surveillance. AIDS incidence will continue to be affected by therapy, but the full effect of new therapies on AIDS incidence is not yet known. At the same time, HIV surveillance is gradually being implemented by an increasing number of states.

During this transition, data on AIDS prevalence together with the data on the prevalence of those with a diagnosis of HIV infection, where available, will probably be more useful than data on AIDS incidence for public health planning purposes. AIDS incidence data will probably be more useful in identifying populations that require outreach to improve timely access to testing and treatment. As of November 1, 1999, a total of 34 states and the Virgin Islands conducted surveillance for HIV infection using the same confidential system for name-based case reporting for both HIV infection and AIDS. In addition, four states and Puerto Rico reported cases of HIV infection using a coded identifier and one state reported by patient name, to enable health follow-up, then converted the names into codes. CDC anticipates that by 2003, all states will have implemented HIV surveillance as an extension of their AIDS surveillance activities. By the year 2003, a national system of integrated HIV surveillance should be fully in place.

During the next 3 years, HIV/AIDS surveillance together with serologic surveys of HIV incidence and prevalence will enable improved federal, state and local responses to the epidemic. CDC provides HIV prevention funding to 65 state and local health departments.

In FY 1999, CDC received additional funding which was used to augment existing prevention efforts addressing disparities in health among ethnic and racial minorities. For example:

- Additional funding for directly funded Community Based Organizations (CBOs) - Funds were awarded through a new program announcement, providing funding to 47 more African-American CBOs. These organizations complement the existing network of 94 directly funded organizations by assuring that HIV prevention services are targeted to those at greatest risk in communities hard hit by the HIV/AIDS epidemic.

- Capacity-building assistance - 29 African-American organizations and several hard hit communities were awarded funds to help underserved communities deliver HIV prevention services to HIV-infected individuals. These funds help communities build the basic services and infrastructure needed to implement HIV prevention programs and link HIV-infected and at-risk individuals to other health and social services.

Also in FY 1999, CDC continued to fund 57 state and territorial education agencies, District of Columbia, 18 local education agencies, and 40 national non-governmental organizations to implement HIV prevention education programs in schools nationwide. The performance measures for this aspect of CDC HIV/AIDS prevention program monitor students' exposure to HIV/AIDS prevention education in schools and youth behaviors that affect their risk of becoming infected with HIV. Specifically, the FY 1999 measured state that the programs: (1) achieved and maintained the percentage of high school students who have been taught about HIV/AIDS prevention in school at 90% or greater; (2) reduced the percentage of high school students who have ever engaged in sexual intercourse; and (3) reduced the percentage of currently sexually active high school students who engage in sexual intercourse without a condom. Data for these performance measures are collected on a biennial basis (during odd-numbered

years) through CDC's Youth Risk Behavior Surveillance System (YRBSS). The data from the 1999 YRBSS will be available in the summer of 2000. Until then, program decisions are guided by examining the trends for these performance measures from 1991 to 1997, which currently indicate good progress toward the stated targets. The program's performance for FY 1999 is expected to continue in this positive direction, though we cannot definitively determine this until the data from the 1999 YRBSS have been released.

*Note: To more accurately measure progress in HIV/AIDS programs, separate measures for long-term survival rates and incidence of new infections have been created. The FY 1999 measure (which includes both activities) is therefore reported in two areas in the following tables.

2.1.1c Goal-by-Goal Presentation of Performance

Performance Goal:
Improve the ability of the Nation's HIV/AIDS surveillance system to identify incidence and prevalence of HIV infection.

Performance Measures	Targets	Actual Performance	Ref.
Percentage of states that will begin to adopt recommended security and confidentiality standards.	**FY 01:** 100% of states will maintain standards. **FY 00:** 100% of states will attain standards. **FY 99:** CDC's current guidelines for security and confidentiality contained in the HIV/AIDS surveillance guidelines are updated to include minimum standards of performance for state, local and HIV/AIDS surveillance systems.	**FY 01:** **FY 00:** **FY 99:** 100% of states have adopted confidentiality standards.	Page 114
Measure HIV incidence in selected high-risk populations.	**FY 01:** Will continue to conduct seroincidence and seroprevalence studies. **FY 00:** Continue to conduct 14 studies in approximately 53 sites.	**FY 01:** **FY 00:** **FY 99:** Conducted 14 studies in approximately 53 sites. HIV incidence figures will require the application of the "detuned" HIV incidence testing technology together with national HIV and AIDS case reporting. This surveillance strategy will be fielded during the next 3 years.	Page 114

Performance Measure	Target	Actual Performance	Ref.
Number of states that will monitor trends in HIV incidence with CDC's technical assistance.	**FY 01:** 45 states will monitor HIV incidence. **FY 00:** 40 states will monitor HIV incidence.	**FY 01:** **FY 00:** **FY 99:** 34 states monitor HIV incidence and CDC released the CDC Guidelines for National HIV Case Surveillance including Monitoring for HIV Infection in Acquired Immunodeficiency Syndrome for HIV reporting.	Page 114
Refine methods for measuring long-term survival.	**FY 01:** Final results of survival analyses will be published and methodology will be disseminated to states. **FY 00:** Preliminary results of survival analyses from the Adult Spectrum of Disease (ASD) project will be published. ***FY 99:** Trends in long-term survival and rates of transmission of new infections will be measured.	**FY 01:** **FY 00:** **FY 99:** Data analysis underway.	Page 114

Verification and Validation of Performance Measures: Validation/evaluation studies are conducted on an ongoing basis. Evaluation projects include: reviewing surveillance methodologies and redirecting resources to those case-finding methods that are the most productive; routinely analyzing surveillance data to discover possible under reporting and delays in reporting; monitoring data quality; and assessing completeness of reporting by comparing HIV/AIDS surveillance registries with alternate databases that are not routinely used for case finding (e.g., Medicaid databases).

Further, at least once a year, state health departments are expected to re-abstract demographic, risk, laboratory, and clinical data from a representative sample of records to assess the quality and validity of information collected.

Although completeness of reporting of diagnosed AIDS cases to state and local health departments varies by demographic region and patient population, studies conducted by state and local health departments indicate that reporting of AIDS cases in most areas of the United States is more than 85% complete. Among persons reported with AIDS, reporting of deaths is estimated to be more than 90% complete.

There is a period of time between when a person is diagnosed with AIDS and the report reaches the CDC. This period, is known as a reporting delay (50% of AIDS cases are reported to CDC within 3 months of diagnosis, 80% within one year). Because AIDS Surveillance data based on the date of diagnosis provides the most direct measure of AIDS incidence, mathematical adjustments have to be made to the data to examine trends in more recent time periods. To make accurate adjustments, CDC requires a minimum of six months of additional data after the close of the examined time period. Adjustments for 1999 data will be available approximately June 1, 2000, with 1999 diagnosis data available June 30, 2000 (all numbers updated by 1 year).

Performance Goal:
Through the implementation of HIV prevention programs, reduce the number of cases of HIV infection and

AIDS:

- acquired heterosexually,
- related to injecting drug use;
- associated with male-to-male homosexual contact; and
- acquired perinatally.

Performance Measure	Target	Actual Performance	Ref.
The number of diagnosed heterosexually-acquired AIDS cases will be decreased.	**FY 01:** Will decrease by 10% from the FY 00 target of 10,350. **FY 00:** Will decrease by 10% from the 1997 base of 11,500 AIDS cases diagnosed. **FY 99:** Decrease by 10% from the 1995 base of 9,300 AIDS cases diagnosed. (Changes in baseline data from 1995 to 1997 reflects adjustments in AIDS case definitions, and availability of more accurate data).	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 97:** 11,500 cases (numbers represent diagnosed cases adjusted for reporting delay with risk redistributed).	Page 114
The number of AIDS cases related to injecting drug use will be decreased.	**FY 01:** Decrease by 10% from FY 2000 target of 14,130 cases diagnosed. **FY 00:** Decrease by 10% from the 1997 base of 15,700 cases diagnosed. **FY 99:** Decrease by 15% from the 1995 base of 17,800 cases diagnosed. (Changes in baseline data from 1995 to 1997 reflects adjustments in AIDS case definitions, and availability of more accurate data).	**FY 01:** **FY 00:** **FY 99:** Data available in May 2000. **FY 97:** 15,700 cases (numbers represent diagnosed cases adjusted for reporting delay with risk redistributed).	Page 114
The number of AIDS cases related to male homosexual contact will be decreased.	**FY 01:** Decrease by 10% from FY 2000 target of 19,170 cases diagnosed. **FY 00:** Decrease by 10% from the 1997 base of 21,300 cases diagnosed. **FY 99:** Decreased by 20% from the 1995 base of 28,600 cases diagnosed.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 97:** 21,300 cases diagnosed.	Page 114

Performance Measure	Target	Actual Performance	Ref.
Reduce annual incidence of new HIV infections.	**FY 01:** Reduce incidence 5% from 2000 estimate. **FY 00:** 40,000. ***FY 99:** Trends in long-term survival and rates of transmission of new infections will be measured.	**FY 01:** Data available in June, 2002 **FY 00:** Data available in June, 2001. **FY 99:** Estimated baseline is 40,000. National number will be available when the HIV/AIDS surveillance system is completely in place in 2003. HIV incidence figures will also require the application of the "detuned" HIV incidence testing technology together with national HIV and AIDS case reporting. This surveillance strategy will be fielded during the next 3 years.	Page 114
CDC will provide technical assistance to states to help evaluate HIV prevention programs.	**FY 01:** Additional training will be provided to all states on the guidance. **FY 00:** Evaluating CDC-Funded Health Department HIV Prevention Programs guidance document will be published. Evaluators from all states will attend training conferences on using the guidance. **FY 99:** Evaluation technical assistance will be provided to all community planning groups that request it.	**FY 01:** **FY 00:** **FY 99:** Evaluation technical assistance provided on request.	Page 114

Performance Measure	Target	Actual Performance	Ref.
The number of diagnosed perinatally-acquired HIV/AIDS cases will be decreased from the 1998 base of 225 diagnosed cases. (Baseline changed from reported cases to diagnosed cases. This is a more accurate measure.)	**FY 01:** 193. **FY 00:** 203. **FY 99:** The number of perinatally-acquired HIV/AIDS cases will be decreased to 214 cases diagnosed.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 98:** 225 cases (numbers represent diagnosed cases adjusted for reporting delay with risk redistributed). **FY 97:** 310 cases. **FY 96:** 502 cases.	Page 114

Performance Goal:
Among persons counseled and tested for HIV infection in CDC-supported sites, improve the percentage of persons who return for their results and post-test counseling.

Performance Measure	Target	Actual Performance	Ref.
Increase the percentage of persons who return for their results and posttest counseling.	**FY 01:** 70% returning for posttest counseling. **FY 00:** 65% returning for posttest counseling. **FY 99:** 60% returning for posttest counseling.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 96:** 55.9% Persons returning for posttest counseling.	Page 114

Performance Goal:

Working with other countries, USAID and International and U.S. government agencies, CDC will reduce the number of new infections among 15-24 year-olds in sub-Saharan Africa from an estimated two million by 2005.

Performance Measure	Target	Actual Performance	Ref.
Initiate, expand, or strengthen HIV/AIDS surveillance.	**FY 01:** 15 countries and 3 regional areas. **FY 00:** 15 countries and 3 regional areas.	**FY 01:** Report available September 2002. **FY 00:** Report available September 2001.	Page 114

Performance Measure	Target	Actual Performance	Ref.
In partnership with USAID, initiate, expand, or strengthen voluntary counseling and testing.	**FY 01:** 15 countries and 3 regional areas. **FY 00:** 15 countries and 3 regional areas.	**FY 01:** Report available September 2002. **FY 00:** Report available September 2001.	Page 114
Initiate, expand, or strengthen opportunistic infection treatment.	**FY 01:** 5 countries. **FY 00:** 5 countries.	**FY 01:** Report available September 2002. **FY 00:** Report available September 2001.	Page 114

Performance Goal:
Reduce the percentage of HIV/AIDS-related risk behaviors among school-aged youth through dissemination of HIV prevention education programs.

Performance Measures	Targets	Actual Performance	Ref.
Achieve and maintain the percentage of high school students who have been taught about HIV/AIDS prevention in school at 90% or greater.	**FY 01:** 90% or greater. **FY 99:** 90% or greater.	**FY 01:** **FY 99:** Data available in summer of 2000. **FY 97:** 92% (per YRBS) **FY 95:** 86% (per YRBS).	Page 114

Performance Measures	Targets	Actual Performance	Ref.
Reduce the percentage of high school students who have ever engaged in sexual intercourse.	**FY 01:** Reduce the percentage of high school students who have ever engaged in sexual intercourse by 15% (to 45%). **FY 00:** Reduce the percentage of high school students who have ever engaged in sexual intercourse by 15% (to 45%).	**FY 01:** **FY 00:** **FY 99:** Data available in summer of 2000. **FY 97:** 48% **FY 95:** 53% (per YRBS).	Page 114
Reduce the percentage of currently sexually active high school students who engage in sexual intercourse without a condom.	**FY 01:** Reduce the percentage of currently sexually active high school students who engage in sexual intercourse without a condom by 15% (to 37%). **FY 00:** Reduce the percentage of currently sexually active high school students who engage in sexual intercourse without a condom by 15% (to 37%).	**FY 01:** **FY 00:** **FY 99:** Data available in summer of 2000. **FY 97:** 43% **FY 95:** 46% (per YRBS).	Page 114

Verification/Validation of Performance Measures: Data for this performance measure are collected on a biennial basis (during odd-numbered years) through CDC's Youth Risk Behavior Surveillance System (YRBSS), a system designed to focus attention on priority behaviors among youth that cause the most important health problems. YRBSS was developed in a partnership with numerous federal agencies, state departments of education, scientific experts, and survey research specialists. The YRBSS includes separate national, state and local school-based surveys of high school students. A recent study of the YRBSS provides evidence that this adolescent survey has good reliability in measuring health behavior. This data will be available for reporting in the summer of 2000.

Baseline data will be used from the 1995 YRBSS data collection because: (a) it was the most recent data available when the original measures were created and, consequently, has been used throughout the entire process to determine our targets for FY 1999 & FY 2000, and (b) the 1995 data will allow us to more accurately illustrate trends in sexual behaviors over time.

Performance Goal: Increase the capacity of community-based organizations providing HIV prevention services to persons of color.

Performance Measures	Targets	Actual Performance	Ref.
Fund community-based organizations to provide priority HIV prevention services to high risk individuals, including HIV-infected persons.	**FY 01:** Will continue to fund 139 Community-based organizations. **FY 00:** Will continue to fund 139 Community-based organizations. **FY 99:** Will fund 139 Community-based organizations.	**FY 01:** **FY 00:** **FY 99:** 139 Community-based organizations funded. **FY 97:** 94 directly funded organizations.	Page 114
Fund Community Coalition Planning and Implementation Projects to expand community demonstration projects	**FY 01:** Continue to fund 3 Community development grants. **FY 00:** Will fund 3 Community development implementation grants out of 20 planning grants initially funded. **FY 99:** 20 Community Coalition Planning projects funded.	**FY 01:** **FY 00:** **FY 99:** 20 Community Coalition Planning projects funded. **FY 97:** 0 Community Coalition Planning projects funded.	Page 114
Total Program Funding (Dollars in thousands)	**FY 2001: 795,403** **FY 2000: 729,751** **FY 1999: 656,590**		

Verification/Validation of Performance Measures: By the end of FY 1999, a Request For Application (RFA) will be developed and selected community based organizations will be funded. In FY 2000, grantees will report on the development progress and evaluation plans which will be reviewed by CDC staff.

2.1.1d Sexually Transmitted Diseases

Sexually Transmitted Diseases (STDs) are one of the most critical challenges in the nation today because of their severe, costly consequences for women and infants; their tremendous impact on the health of adolescents and young adults (especially among minority populations); and the integral role they play in the transmission of HIV infection. CDC recently reported that over 85% of the most common infectious diseases in the U.S. are sexually transmitted. The immediate and long-term disease burden and costs associated with STDs globally and in the U.S. are immense. Conversely, an investment in STD prevention is leveraged several ways--it improves the health of women, infants, and young people, and slows down the spread of HIV infection in our most vulnerable and disadvantaged populations. In

addition to the human costs, STDs other than AIDS add 10 billion dollars to the nation's health care costs each year.

The U.S. has one of the highest STD rates in the industrialized world. U.S. rates of gonorrhea are 50 to 100 times higher than rates in Sweden. Canada and some Western European countries have nearly eliminated infectious syphilis. In the U.S., large-scale regional screening demonstration programs have rapidly, dramatically, and reproducibly reduced chlamydia prevalence in women. Chlamydia, a serious reproductive tract infection with many associated negative health consequences, is currently the most frequently reported infectious disease in the U.S. Estimates are that 4 million new cases occur annually, as many as one-half occurring among women ages 15-19. Chlamydia often causes severe medical conditions that are also costly, especially in women (pelvic inflammatory disease (PID), ectopic pregnancy, and infertility) and in newborns (eye infections and pneumonia). Conservatively, these reproductive consequences in women result in an estimated annual cost of chlamydia infection in the U.S. of $1.5 billion, $1.1 billion of which is attributed to treatment of preventable, serious after-effects in women. In recent years, a number of effective biomedical interventions that prevent these consequences and save money have been implemented in some parts of the country.

Although STD prevention is technically feasible today in the U.S., an effective national system for STD prevention currently does not exist. Among the obstacles to establishing such a system are: (1) profound cultural and social barriers to adoption of healthy sexual behaviors; (2) a fragmented system of informational and educational services that leads to inadequate awareness of STDs and misperceptions of risk among high risk individuals; (3) a fragmented system of STD-related clinical services manifested by inadequate training of health care providers, the under-recognition of the importance of private sector providers in STD prevention, and the absence of innovative services targeted to youth and disenfranchised populations that lead to inadequate diagnosis and treatment of STDs or missed clinical opportunities; (4) inadequate integration and coordination of STD, HIV, unintended pregnancy, and cancer prevention programs at the local level despite the strong interrelationships among these conditions; and (5) inadequate human and financial resources in both the public and private sectors to meet recognized needs for behavioral and biomedical solutions.

Partnerships and Links to DHHS Strategic Plan
These performance measures relate to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans.

Performance Summary: In 1998, 609,707 cases of genital chlamydia infection were reported to CDC, for a rate of 233.7 cases per 100,000 population. This is the highest rate of chlamydial infection reported to CDC since cases were first reported in the mid-1980s. The increase in reported infections reflects the continued expansion of chlamydia screening programs and the increased use of more sensitive diagnostic tests for this condition. Over the same period, data on chlamydia prevalence obtained by monitoring positivity rates of persons screened in a variety of clinic settings have consistently documented declining levels of infection in many parts of the U.S.

In 1998, 355,642 cases of gonorrhea were reported to CDC, for an overall rate of 132.9 cases per 100,000 population. This was an 8.9% increase in cases compared with 1997, and the first increase since 1985. The increase in 1998 was seen in all demographic groups defined by age, sex, and race/ethnicity, and occurred in all major geographic regions except the Northeast. Possible reasons for the increase in gonorrhea include expansion of screening programs (motivated bythe availability of simultaneous testing for genital chlamydial infections), increased use of new diagnostic tests with improved sensitivity, improvements in surveillance systems, and, in some segments of the population (including men who have sex with men), true increases in morbidity.

As of 1997, the incidence of PID in women aged 15-44 had decreased to 157 cases per 100,000 population. Further, the number of initial visits reported had also decreased to 234,000 visits in 1998. The decrease in the incidence of PID and initial physician visits are reflective of the intensified

nationwide screening and treatment efforts for chlamydia, which is a precursor of PID. These decreases may also be attributable to an increasing trend of outpatient management for PID, shorter hospital stays and an increased use of oral regiments for treatment.

In 1998, 801 cases of congenital syphilis were reported to CDC, for a rate of 20.6 cases per 100,000 live births. In parallel with the decline in primary and secondary syphilis, the rate of congenital syphilis has declined dramatically in recent years, from a peak of 107.3 per 100,000 live births in 1991. No or late syphilis serologic testing during pregnancy, often related to lack of prenatal care or late prenatal care, remains the major reason that congenital syphilis persists in the U.S. Congenital syphilis remains a high priority for programmatic activity and each positive test in a child is considered a medical emergency with immediate health services follow-up. Effective prenatal screening programs for patients at high risk of syphilis account for a substantial portion of the reduction.

In 1998, 6,993 primary and secondary syphilis cases were reported to CDC. From 1990 to 1998, the primary and secondary syphilis rate declined by 86%, from 20.3 per 100,000 to 2.6 per 100,000, the lowest level since reporting began in 1941. Syphilis has declined in all regions of the United States and in all racial/ethnic groups, however rates remain disproportionately high among non-Hispanic blacks and in the South, and focal outbreaks continue to occur. CDC has begun a national syphilis elimination initiative and provided additional funding to 28 high morbidity project areas and 5 potential re-emergence areas to implement community-based elimination efforts.

2.1.1d Goal-by-Goal Presentation of Performance

Performance Goal:
Reduce STD rates by providing chlamydia and gonorrhea screening, treatment, and partner treatment to 50% of women in publicly funded family planning and STD clinics nationally.

Performance Measures	Targets	Actual Performance	Ref.

The prevalence of *Chlamydia trachomatis* among high risk women under 25 will be reduced. from 11.6%.	**FY 01:** < 8% prevalence rate. **FY 00:** < 8% prevalence rate. **FY 99:** < 8% prevalence rate.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 98:** 11.7% prevalence. **FY 95:** 11.6% prevalence rate.	Page 121
Performance Measure	**Target**	**Actual Performance**	**Ref.**
The prevalence of *Chlamydia trachomatis* among women under the age of 25 in publicly funded family planning clinics will be reduced.	**FY 01:** < 6% prevalence rate. **FY 00:** < 6% prevalence rate. **FY 99:** < 6% prevalence rate.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 98:** 5.4% prevalence (median all states). **FY 96:** 9% prevalence rate.	Page 121
The incidence of gonorrhea in women aged 15-44 in publicly funded family planning and STD clinics will be reduced.	**FY 01:** <250 per 100,000. **FY 00:** <250 per 100,000. **FY 99:** <250 per 100,000.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 98:** 292 per 100,000. **FY 97:** 261 per 100,000. **FY 96:** 259 per 100,000. **FY 95:** 299 per 100,000.	Page 121

The incidence of PID, as measured by a reduction in hospitalizations for PID, will be reduced in women aged 15-44 in publicly funded family planning and STD clinics and... * 1997latest data available for National Hospital Discharge Survey by NCHS.	**FY 01:** <125 per 100,000. **FY 00:** <125 per 100,000. **FY 99:** <125 per 100,000.	**FY 01:** **FY 00:** **FY 99:** Data available 2001. **FY 98:** Data available 2000. **FY 97:** 157 per 100,000.* **FY 96:** 164 per 100,000. **FY 95:** 162 per 100,000.	Page 121
Performance Measure	**Target**	**Actual Performance**	**Ref.**
...the number of initial visits to physicians in publicly funded family planning or STD clinics for PID will be reduced.	**FY 01:** <225,000 visits. **FY 00:** <225,000 visits. **FY 99:** <225,000 visits.	**FY 01:** **FY 00:** **FY 99:** Data available 2000. **FY 98:** 234,000 visits. **FY 97:** 261,000 visits. **FY 96:** 286,000 visits. **FY 95:** 262,000 visits.	Page 121

Performance Goal:
Reduce the incidence of congenital syphilis through the following strategies:

- More than 95% of women attending publicly funded prenatal clinics will be screened for syphilis *(subject to development of state and local surveillance)*.
- More than 80% of women attending publicly funded prenatal clinics who have untreated or inadequately treated syphilis will be treated within 2 weeks of their initial prenatal visit *(subject to development of state and local surveillance)*.
- More than 95% of pregnant women in counties with a syphilis rate greater than 4 per 100,000 will be screened for syphilis in hospitals at the time of delivery *(subject to development of state and local surveillance)*.

Performance Measure	Targets	Actual Performance	Ref.

The incidence of congenital syphilis in the general population will be reduced.	**FY 01:** <18 per 100,000 per live births. **FY 00:** <19 per 100,000 per live births. **FY 99:** <20 per 100,000 per live births	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 98:** 20.6 per 100,000. **FY 97:** 27.5 per 100,000. **FY 96:** 33.3 per 100,000. **FY 95:** 47.4 per 100,000.	Page 121

Performance Goal:
Reduce the incidence of primary and secondary syphilis through the development of syphilis elimination action plans for each state that had a primary and secondary syphilis rate in 1995 of greater than or equal to 4 per 100,000 population and an HIV prevalence in childbearing women of greater than 1 per 1,000.

Performance Measure	Targets	Actual Performance	Ref.
Increase the percentage of U.S. counties that will have an incidence of primary and secondary syphilis in the general population of less than or equal to 4 per 100,000.	**FY 01:** >90% of U.S. counties. **FY 00:** >90% of U.S. counties. **FY 99:** 90% of U.S. counties.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000. **FY 98:** 90% of U.S. counties. **FY 97:** 87% of U.S. counties. **FY 96:** 90% of U.S. counties. **FY 95:** 81% of U.S. counties.	Page 121
Total Program Funding (Dollars in thousands)	**FY 2001: 150,668** **FY 2000: 135,734** **FY 1999: 123,695**		

Verification/Validation of Performance Measures: STD incidence and prevalence data (hard copy and electronic) undergo ongoing verification and validation procedures including quarterly reports back to project areas comparing reporting across all data sources, trend information, % unknowns for clinical fields, edit checks and updates, as well as constant communication via fax, phone, and email with

project staff. PID hospitalization data is collected through the National Hospital Discharge Survey conducted by the National Center for Health Statistics, and PID initial visits to physicians is collected the National Diagnostic and Therapeutic Index by IMS America, Ltd. Additional feedback is provided to project areas via annual publications and reports.

There is a period of time between when a person is diagnosed with an STD and the report reaches the CDC. This period (which varies from one month to one year, due to states being in transition from using STD aggregate hard-copy reporting forms to electronic line-listed data via the National Electronic Telecommunications Surveillance System (NETSS)) is known as a reporting delay. The reporting delay also covers data processing time which includes data collection, delinquent reports, editing data and feedback to the field, corrections, and final release of the data for publication.

2.2 Immunization

2.2.1 Program Description, Context and Summary of Performance

Appropriate administration of safe and effective vaccines remains the most cost-effective method of preventing disease, disability, and death and reducing economic costs resulting from vaccine-preventable diseases. For every dollar spent on diphtheria/tetanus/acellular pertussis vaccination, $27 are saved.

Beginning in 1962 when it proposed the first national effort to improve the immunization status of children, CDC has counted immunization among its most vital programs, recognizing it as a core public health activity and perhaps the best example of effective primary prevention. CDC's National Immunization Program (NIP) focuses on several major programmatic areas to achieve its goals, including childhood immunization, adult immunization, and global polio eradication. Although NIP has assistance from many partners, state and local health agencies play a primary role in helping NIP carry out its mission in the United States. NIP ensures quality immunization services by awarding grants to states and large local health departments; offering technical, epidemiologic, and scientific assistance to state and local areas; monitoring immunization coverage; ensuring an adequate supply of vaccine by overseeing vaccine purchases made through CDC contracts and managing the Vaccines for Children program; developing immunization registries; and conducting operational research to develop new and improved delivery strategies.

NIP also has a unique and vital role in monitoring vaccine safety to identify and minimize vaccine-related injuries. Assessments of the risks and benefits of vaccines can also influence vaccine policy and recommendations.

NIP plays a critical role in developing immunization policy by providing technical and scientific support to groups that recommend immunization policy in the United States and globally. These groups include the Advisory Committee on Immunization Practices, the Committee on Infectious Diseases of the American Academy of Pediatrics and the American Academy of Family Physicians, the National Vaccine Advisory Committee of the National Vaccine Program Office, and the Advisory Commission on Childhood Vaccine of the National Vaccine Injury Compensation Program, among others.

NIP increases community participation, education, and partnerships through public information campaigns, education and training for providers, assistance to communities on building coalitions, and partnerships with community-based organizations, national minority organizations, volunteer groups, vaccine companies, professional organizations and federal agencies.

Global disease eradication and elimination programs are also a shared effort. NIP collaborates with the World Health Organization, Rotary International, the United States Agency for International Development, the Task Force for Child Survival and Development, UNICEF, other centers within CDC, and international agencies, to enhance polio eradication efforts by providing scientific assistance and financial support for vaccine purchase and other key activities. This collaboration is unique among public health initiatives for the unprecedented level of partnerships. Extraordinary progress towards eradicating polio worldwide by the year 2000 continues to occur, suggesting that the current global strategies are effective and that achievement of the global objective is feasible. Examples of activities include:

- Expanding the network of CDC staff, epidemiologists, technical and scientific officers, and virologists assigned to WHO country and regional offices.
- Managing cooperative agreements with UNICEF through which approximately 500 million doses of oral polio vaccine for mass immunization campaigns were provided to 70 polio-endemic countries.
- Expanding the global virology laboratory network in cooperation with CDC's National Center for Infectious Diseases.
- Implementing a special program to prepare a cadre of trained public health professionals from throughout CDC to complete short-term assignments with WHO.

There are two primary sources to measure attainment of U.S. performance goals. The National Notifiable Diseases Surveillance System (NNDSS) is the data source for tracking cases of vaccine-preventable disease. Provisional data from this system are routinely published in the *Morbidity and Mortality Weekly Report* (*MMWR*). Final data are published in the Annual Summary of Notifiable Diseases.

CDC collects vaccination coverage data at the national, state, and local levels through the National Immunization Survey (NIS). With these data, the impact of national, state, and local policies and programs can be evaluated and monitored, and the results will provide the primary means of monitoring progress toward the goals of the performance plan. These surveys measure vaccine-specific and series complete coverage, with detailed analyses for race/ethnicity and by poverty groups also being presented. Such surveys are necessary to monitor the maintenance or improvement of immunization coverage levels in the target populations of 78 state and major urban areas.

Although coverage for preschool immunization is high in almost all states, pockets of need, or areas within each state and major city where substantial numbers of under-immunized children reside, continue to exist. These areas are of great concern because, particularly in large urban areas with traditionally under-served populations, there is a potential for outbreaks of vaccine-preventable diseases.

Cases of vaccine-preventable diseases are at or near all-time low levels, and childhood immunization rates are at an all-time high. Infrastructure funds are essential to sustain the systems that have resulted in the highest immunization levels ever recorded. These funds are used to implement proven strategies to raise immunization coverage, to conduct vaccine-preventable disease surveillance, to implement disease outbreak control measures, to assure adequate access to and appropriate administration of vaccines, to perform outreach activities, to develop immunization registry systems, to educate providers and parents about the need for timely immunization, and to assess immunization coverage levels and pockets of under-immunized children, among many other activities. Infrastructure investments must be maintained to ensure that proven systems and high immunization levels are not jeopardized.

Partnerships and Links to DHHS Strategic Plan
These performance measures relate to DHHS Goal 5: Improve public health systems. CDC collaborates with the Health Resources and Services Administration, the Health Care Financing Administration, the Food and Drug Administration, the National Institutes of Health, and others in achieving these objectives.

Performance Summary: By all counts, efforts to protect children in the U.S. from vaccine-preventable disease have been a success. Cases of most vaccine-preventable diseases of childhood are down more than 97% from peak levels before vaccines were available. No cases of paralytic polio due to indigenous transmission of wild polio virus have been reported in the U.S. since 1979. *Haemophilus influenzae* type b (Hib) invasive disease, the main cause of bacterial meningitis, has declined by more than 99% in children under five since the introduction of the vaccine. Measles hit a low of 89 provisionally reported cases in 1998. Coverage levels for preschool children are at an all-time high for all racial and ethnic groups.

Among persons 65 years of age or older, the percentage receiving vaccine against influenza rose from 33% in 1989 to 63% in 1997. Similarly, the coverage rate for pneumococcal vaccine increased from 15% to 43% over the same period.

On the global front, as with smallpox, worldwide eradication of polio is now within our grasp. In 1998, the American Region of WHO completed its seventh year without a reported case of polio. The Western Pacific Region (i.e., China Vietnam, and Cambodia) is close to achieving regional eradication of polio. Additionally, measles cases in the Western Hemisphere have declined 85% from 1990 to 1998.

2.2.2 Goal-by-Goal Presentation of Performance

Performance Goal:
Reduce the number of indigenous cases of vaccine-preventable diseases.

Performance Measures	Targets	Actual Performance	Ref.

The number of indigenous cases of paralytic polio, rubella, measles, *Haemophilus influenzae* invasive disease in children under 5 years, diphtheria, congenital rubella syndrome, and tetanus will remain at or be reduced to 0.	**FY 01:** Paralytic polio 0 Rubella 0 Measles 0 *Haemophilus influenza*e 0 Diphtheria **(<25 years)** 0 Congenital rubella syndrome 0 Tetanus **(<25 years)** 0 **FY 00:** Paralytic polio 0 Rubella 0 Measles 0 *Haemophilus influenza*e 0 Diphtheria **(<25 years)** 0 Congenital rubella syndrome 0 Tetanus **(<25 years)** 0 **FY 99:** Paralytic polio 0 Rubella 0 Measles 0 *Haemophilus influenza*e 0 Diphtheria **(<25 years)** 0 Congenital rubella syndrome 0 Tetanus **(<25 years)** 0	**FY 01:** **FY 00:** **FY 99:** Data available 9/2000. **FY 98:** Paralytic polio 0 Rubella 364 Measles 100 *Haemophilus influenzae* 129 Diphtheria (<25 years) 1 Congenital rubella syndrome 7 Tetanus (<25 years) 41 **FY 97:** Paralytic polio 0 Rubella 158 Measles 81 *Haemophilus influenzae* 152 Diphtheria (<25 years) 3 Congenital rubella syndrome 7	Page 130

Performance Measure	Target	Actual Performance	Ref.
The number of indigenous cases of mumps will be reduced from 639 (1997) to 500.	**FY 01:** 500 cases of mumps. **FY 00:** 500 cases of mumps. **FY 99:** 500 cases of mumps.	**FY 01:** **FY 00:** **FY 99:** Data available 9/2000. **FY 98:** 666 cases of mumps. **FY 97:** 639 cases of mumps.	Page 130
The number of cases of pertussis among children under 7 years of age will be reduced.	**FY 01:** 2,000 cases. **FY 00:** 2,000 cases. **FY 99:** 2,000 cases.	**FY 01:** **FY 00:** **FY 99:** Data available 9/2000. **FY 98:** 3,417 cases. **FY 97:** 3,015 cases.	Page 130

Performance Goal:
Ensure that 2-year-olds are appropriately vaccinated.

Performance Measure	Targets	Actual Performance	Ref.
Achieve or sustain the following immunization coverage of at least 90% among children 19- to 35-months of age for each vaccine: 1. 4 doses of Diphtheria-Tetanus-Pertussis containing vaccine 2. 3 doses of *Haemophilus influenzae* type b vaccine 3. 1 dose of Measles-Mumps-Rubella vaccine* 4. 3 doses of Hepatitis B vaccine 5. 3 doses of Polio vaccine 6. 1 dose of Varicella vaccine**.** *Includes any measles-containing vaccine. Continued on next page.	**FY 01:** Achieve or sustain immunization coverage of at least 90% among children19- to 35-months of age. **FY 00:** Achieve or sustain immunization coverage of at least 90% among children19- to 35-months of age. **FY 99:** Achieve or sustain immunization coverage of at least 90% among children 2 years of age for each vaccine. Continued on next page.	**FY 01:** **FY 00:** **FY 99:** Data available 8/2000. Continued on next page.	Page 130

Performance Measure	Target	Actual Performance	Ref.
...continued.	...continued.	...continued. **FY 98:** 90% vaccination coverage for each vaccine below: 1. 4 doses of Diphtheria-Tetanus-Pertussis containing vaccine **(84%)** 1. 3 doses of *Haemophilus influenzae* type b vaccine **(93%);** 2. 1 dose of Measles-Mumps-Rubella vaccine* **(92%)**; 3. 3 doses of Hepatitis B vaccine **(87%**); 4. 3 doses of Polio vaccine **(91%)**. 5. 1 dose of Varicella vaccine **(43%)**. *Includes any measles-containing vaccine.	Page 130

Verification/Validation: Data is collected through the National Immunization Survey (NIS), CDC, NIP. Under normal circumstances, NIS data is available approximately seven months after the end of each calendar year. In 1999, NIP engaged in a more comprehensive review and dissemination of substantially more data. Consequently, 1998 data release is delayed until November 1999. Therefore, the most current and final data available is for the period of July 1997 through June 1998.

Performance Goal:
Increase pneumococcal pneumonia and influenza vaccination among persons $65 years.

Performance Measures	Targets	Actual Performance	Ref.
The rate of vaccination among persons $65 years will be increased for influenza and pneumococcal pneumonia.*****	**FY 01:**Influenza: 72% vaccination rate**.** **Pneumococcal pneumonia:** 63% vaccination rate.	**FY 01:**	Page 130
*****Influenza and pneumococcal vaccination coverage goals for adults aged 65 and older are based on the 90% coverage goals in Healthy People (HP) 2010. It is expected that influenza vaccination coverage will increase approximately 2% per year and pneumococcal vaccination will increase about 3% per year to realize the HP 2010 goals. Continued on next page...	**FY 00: Influenza**: 70% vaccination rate**.** **Pneumococcal pneumonia:** 60% vaccination rate. Continued on next page...	**FY 00:** Continued on next page...	

Performance Measure	Target	Actual Performance	Ref.
...continued.	...continued. **FY 99:** The rate of vaccination among non-institutionalized high-risk populations: **Influenza**: 60%vaccination rate; **Pneumococcal pneumonia**: 54% vaccination rate.	...continued. **FY 99:** Data available in the summer of 2000. **FY 97: Influenza**: 63% **Pneumococcal pneumonia**: 43% **FY 95: Influenza**: 58% vaccination rate. **Pneumococcal pneumonia**: 34% vaccination rate**.**	Page 130

Verification/Validation of Performance Measures: These data will be validated with the National Health Interview Survey for pneumonia and influenza.

Performance Goal:
Collaborate with domestic and international partners to help achieve WHO's goal of global polio eradication by December 31, 2000.

Performance Measures	Targets	Actual Performance	Ref.
Purchase doses of oral polio vaccine needed to assist in conducting mass immunization campaigns in Asia, Africa, and Europe.	**FY 01:** 450 million doses. **FY 00:** 526 million doses. **FY 99:** 445 million doses.	**FY 01:** **FY 00:** **FY 99:** 450 million doses. **FY 98:** 390 million doses.	Page 130
Expand the network of CDC and CDC-funded staff, virologists, epidemiologists, technical and scientific officers on long-term assignments in WHO country and regional offices.	**FY 01:** 90 persons. **FY 00:** 82 persons. **FY 99:** 67 persons.	**FY 01:** **FY 00:** **FY 99:** 75 persons. **FY 98:** 60 persons.	Page 130
Performance Measure	**Target**	**Actual Performance**	**Ref.**

Expand a special program to prepare a cadre of trained public health professionals throughout CDC to complete short-term assignments with WHO.	**FY 01:** 100 trained public health professionals. **FY 00:** 60 trained public health professionals. **FY 99:** 50 trained public health professionals.	**FY 01:** **FY 00:** **FY 99:** 100 trained public health professionals. **FY 98:** 23 trained public health professionals.	Page 130

Data validation/verification: UNICEF provides the number of doses of polio purchased and the number of CDC-funded staff on assignment with WHO in the form of an annual report as part of the CDC/WHO cooperative agreement CDC personnel data and CDC/WHO cooperative agreement staffing records are also used to validate and verify data. Under the Stop Transmission of Polio campaign, annual training reports are available to determine the number of public health professionals trained.

Performance Goal: Reduce the number of vaccine-associated adverse events.

Performance Measures	Target	Actual Performance	Ref.
Eliminate all cases of vaccine-associated paralytic polio (VAPP).	**FY 01:** 0 cases of VAPP. **FY 00:** 0 cases of VAPP. **FY 99:** 0 cases of VAPP.	**FY 01:** **FY 00:** **FY 99:** **FY 98:** 1 provisional case of VAPP. **FY 97:** 5 cases of VAPP.	Page 130
Reduce the number of febrile seizures caused by pertussis vaccines.* *The goal and targets for reducing the number of febrile seizures caused by pertussis vaccine is based on achieving the Healthy People 2010 objective of reducing the number of febrile seizures caused by pertussis vaccine from 152 in 1998 to 75 by the year 2010. It is expected that the number of seizures will reduce by approximately 7 seizures per year to reach the 2010 goal.	**FY 01:** 131 febrile seizures. **FY 00:** 138 febrile seizures. **FY 99:** 145 febrile seizures.	**FY 01:** **FY 00:** **FY 99:** 53 febrile seizures. **FY 98:** 152 febrile seizures.	Page 130
Total Program Funding (Dollars in thousands)	**FY 2001: 529,643** **FY 2000: 509,875** **FY 1999: 447,948**		

Verification/validation: National Notifiable Disease Surveillance System will be used to determine the number of VAPP cases. The number of febrile seizures caused by the pertussis vaccine will be determined using the Vaccine Adverse Event Reporting System and Vaccine Safety Datalink.

2.3 Health Statistics

2.3.1 Program Description, Context and Summary of Performance

CDC's National Center for Health Statistics provides strong leadership in monitoring the health of the American people and is a vital, unique resource for health information. As the Nation's principal health statistics agency, NCHS provides statistical information to guide actions and policies to improve health of Americans. In the current climate of dramatic change in the health system, such data become critically important and play a crucial role in public health and health policy. Unprecedented changes make investments in determining health status and monitoring health system structure, operation, quality, and effectiveness critically important. There is significant demand, as well as new opportunities, for using new approaches to monitoring, assessing, and evaluating key public health, health policy, and welfare policy changes. CDC is taking significant steps to improve the speed with which data are made available to researchers, policy makers, and the public. The National Vital Statistics System has greatly improved the timeliness of data which are highly relevant to health and welfare reform monitoring, through the introduction of a "preliminary" data set in 1996. Preliminary data, though less detailed, were released a full year ahead of the final data, affording policy makers an early view of major trends in births and deaths. Similarly, data from the most recent National Health and Nutrition Examination Survey (NHANES) were released on a timetable that was nearly two years earlier than previous survey cycles. Continuing efforts to automate the collection of data, apply new data processing and analytic tools, and disseminate data more widely via the Internet will result in further improvements in timeliness and access.

NCHS represents an investment in broad-based, fundamental public health and health policy statistics that meets the needs of a wide range of users. This investment has important payoffs in:

- Tracking change in health and health care, particularly as major changes are occurring in private markets and federal and state policy. NCHS provides mechanisms for obtaining consistent, uniform statistics that allow for comparison across population groups, types of health care providers, and states.
- Planning, targeting, and assessing the effectiveness of public programs.
- Identifying health problems, risk factors, and disease patterns.

NCHS data are used by virtually the entire range of public health and health policy community, including:

- Congress and other policymakers, to track major initiatives, set priorities for prevention and biomedical research programs, and evaluate outcomes;
- Biomedical and Health Services Researchers, to understand trends in diseases, the relationship of observed risk factors to diseases, and the use of health services;
- Public health professionals, to track major preventable illnesses, and evaluate the success of intervention programs;
- Individual physicians, in evaluating the health and risk factors of their patients (for example, reference standards and norms for conditions such as cholesterol, body weight, and blood pressure, and reference growth charts for children);
- Actuaries, including those gauging the health of the Social Security and Medicare trust funds, and setting premiums for health and life insurance;
- Business, such as pharmaceutical and food manufacturers, market research firms, consulting firms, and trade associations.

NCHS continually strives to meet priority data needs by improving ongoing surveys, developing new tools for monitoring health, and finding new ways to make data accessible to users. Important steps underway include the beginning of full field operation of the National Health and Nutrition Examination Survey, which fills an important gap in our knowledge of health by taking direct measurements in mobile examination centers that move around the U.S. Other steps include the capability to conduct state-level monitoring surveys using the State and Local Area Integrated Telephone Survey (SLAITS). Efforts to improve the usability of NCHS data include improving timeliness, increasing access through the Internet, and facilitating research based on detailed, micro-data without jeopardizing confidentiality of our

respondents.

Partnerships and Links to DHHS Strategic Plan
These performance measures are related to DHHS Goal 5: Improve public health systems. NCHS collaborates in the development of types of information collected with the HHS Data Council (charged by the Secretary to provide overall policy, guidance for HHS data activities), the National Committee on Vital and Health Statistics (the Secretary's outside advisory council on health statistics), representatives from the states and users of NCHS data in the public and private sectors. Close cooperation with state vital statistics offices assure timely reporting of data.

FY 1999 Performance Summary: NCHS has made significant progress towards meeting or exceeding its GPRA goals in 1999. As mentioned above, with the return of the National Health and Nutrition and Examination Survey (NHANES) to field operations, all four of NCHS' major data systems are in operation, adding a critical dimension to the ability to monitor trends in the Nation's health - through actual physical examinations. The latest NHANES will be able to assess the status of the population relative to emerging health issues such as physical fitness, tuberculosis, and exposure to volatile organic compounds. Steps also have been taken in the development of a small scale NHANES that will be more capable of addressing emerging topics such as racial/ethnic differences in health by surveying concentrated areas of diverse populations. A third new monitoring tool also mentioned above, the State and Local Area Integrated Telephone Survey (SLAITS), piloted its Welfare and Child Well-being and the Children's Health Insurance and Health Care modules in two States, and also released data from its Health module conducted in two different States.

Technological advances have greatly enhanced NCHS' ability to make data more timely, as well as more accessible to decision-makers and researchers. As such, it is an ongoing goal of NCHS to take advantage of these technological advances and to reduce the time lag for the release of data. In 1999, with rare exception, NCHS will meet or exceed the 5% reduction in time lag for the release of data from the major data systems. This goal will be kept in future years to continually improve the timeliness of NCHS data. Virtually all NCHS publications are now available on the Internet at the same time as they are released in published form or earlier - an objective accomplished far ahead of schedule. The NCHS Data Center has allowed for the completion of more than a dozen projects, in a secure environment, without compromising the confidentiality of respondents. These projects could not have been completed prior to the establishment of the Data Center.

Finally, NCHS has been instrumental in producing and releasing data in new formats to document trends, issues, and problems in health. The Health and Aging Chartbook, part of*Health, United States, 1999*, formally released October 1999 in conjunction with a Congressional briefing sponsored by the American Public Health Association. Health and aging was selected as the topic of the chartbook because older people are major consumers of health care and their numbers are increasing. The chartbook also coincides with the International Year of Older Persons as proclaimed by the United Nations. NCHS also was an active participant in the publication of the Federal Interagency Forum on Child and Family Statistics' report, *America's Children: Key National Indicators of Well-being 1999,* a publication devoted to the other end of the life spectrum. Both of these publications are compendiums of data on health and well-being representing statistics collected from multiple Federal agencies. Other NCHS data sets have been released on CD-ROMs or via the Internet speeding the release of data even prior to the availability of a published report.

include the beginning of full field operation of the National Health and Nutrition Examination Survey, which fills an important gap in our knowledge of health by taking direct measurements in mobile examination centers that move around the U.S. Other steps include the capability to conduct state-level monitoring surveys using the State and Local Area Integrated Telephone Survey (SLAITS). Efforts to improve the usability of NCHS data include improving timeliness, increasing access through the Internet, and facilitating research based on detailed, micro-data without jeopardizing confidentiality of our respondents.

2.3.2 Goal-by-Goal Presentation of Performance

The following goals allow CDC to better anticipate the future directions of the health care system and health behaviors in order to design effective public health policy.

Performance Goal: Monitor trends in the nation's health through high quality data systems addressing issues relevant to decision makers.

Performance Measures	Targets	Actual Performance	Ref.
Conduct ongoing surveys and data systems that produce detailed trend data needed for monitoring health.	**FY 01:** Conduct **four** ongoing data systems that produce detailed trend data needed for monitoring health. With the increase in initiative funding, NCHS will maintain existing data systems. **FY 00:** Conduct four ongoing data systems that produce detailed trend data needed for monitoring health. **FY 99:** Conduct four ongoing data systems that produce detailed trend data needed for monitoring health.	**FY 01:** **FY 00:** **FY 99:** In 1999, the fourth major data system (NHANES) was returned to field operation. **FY 97:** Baseline data used in the conduct of 3 major data systems.	Page 200

Performance Measure	Target	Actual Performance	Ref.
Develop new monitoring tools needed to address emerging topics (State and Local Area Integrated Telephone Survey--SLAITS).	**FY 01:** With the increase in initiative funding, NCHS will successfully provide necessary management, oversight and technical assistance to support prospective users of SLAITS mechanism. **FY 00:** With initiative funding in FY 2000, will successfully provide necessary management, oversight and technical coordination to facilitate the implementation of a survey on children with special health care needs. **FY 99:** The development of SLAITS, which includes conduct of a pretest in 3 test sites including one Indian Reservation, will be finalized.	**FY 01:** **FY 00:** **FY 99:** Achieved: A Health module was fielded in Iowa and Washington with the public use file being released in FY 1999. In 1999, piloted the Welfare and Child Well-being and the Children's Health Insurance and Health Care modules to the SLAITS in Texas and Minnesota. Plans are being finalized to conduct a field test on an Indian Reservation. **FY 98:** Developed the Welfare and Child Well-Being and the Children's Health Insurance and Health Care modules to the SLAITS.	Page 200

Performance Measure	Target	Actual Performance	Ref.
Develop new monitoring tools needed to address emerging topics (NHANES).	**FY 01:** NHANES has been moved to an ongoing data system and is reflected in performance measure for the conduct of ongoing surveys and data systems... **FY 00:** NHANES will have completed the first full year of data collection using newly automated survey, examination, and laboratory methods that will improve timeliness of data release. **FY 99:** The development of NHANES, including conduct of a pretest, will be finalized.	**FY 01:** **FY 00:** **FY 99:** Pretest conducted and survey fielded.	Page 200

Performance Goal: Reducing time lags for release of core data systems by 5% per year. With the additional initiative funding the overall objective is to reduce time lag of data release by 5% per year, which will be achieved over time–the interim reductions may not be achieved.

Performance Measure	Target	Actual Performance	Ref.
Reduce time lags for release of core data systems	**FY 01:** With additional initiative funding the overall objective is to reduce time lag of data release by 5%. Vital Statistics (VS): 1. Release of 1999 final mortality data in **20 months** or a **23% reduction** from baseline. 2. Release of 1999 final natality data in **17 months** or a **6% reduction** from baseline. 3. Preliminary VS 1999 data available **within 9 months** or a **10% reduction** from baseline. Health Care Surveys: 1. Release of 1999 National Hospital Discharge Survey data in **19 months** or a **10% reduction** from baseline. Health Interview Surveys: 1. Release of 1999 National Health Interview Survey data in **20 months** or a **23% reduction** from baseline. **FY 00:** With the increased funding, time lag in release of final VS will be reduced by **2 months**. Currently data are released within 21 months following the end of the data collection year.	**FY 01:** **FY 00:** Continued on next page...	Page 200

Performance Measure	Target	Actual Performance	Ref.
...continued. Reduce time lags for release of core data systems.	...continued. **FY 99:** Reduce the time lags for release of core data systems by 5%.	...continued. **FY 99:** In 1999, NCHS met or exceeded the 5% reduction in time lag for the release of data from the major data systems. Vital Statistics (VS): 1. Release of the 1997 final mortality data in **18 months--30% reduction**. 2. Release of 1997 final natality data in **16 months–11% reduction**. 3. Preliminary VS 1995 data was available within **10 months–11% reduction**. Health Care Surveys: 1. Release of 1997 National Hospital Discharge Survey data on CD ROM in **20 months** or a **5% reduction** in time lag of data release. Health Interview Surveys: 1. Release of 1997 National Health Interview Survey data in **20 months** or a **23% reduction** in time lag of data release from the baseline. **FY 96:** Baseline data used for core data systems are as follows: Vital Statistics (VS): 1. Release of 1993 final mortality data in **26 months**. 2. Release of 1994 final natality data in **18 months**. 3. Preliminary VS 1995 data was available within **10 months**. Health Care Surveys: 1. Release of 1995 National Hospital Discharge Survey data in **21 months**. Health Interview Surveys: 1. Release of 1994 National Health Interview Survey data in **26 months** on CD-ROM series 10 No. 9 issued February 1997.	Page 200

Performance Measure	Target	Actual Performance	Ref.
...continued. Reduce time lags for release of core data systems.	...continued.	...continued. Health Examination Surveys: NHANES III 2nd half (1991-1994) available in **31 months** CD-ROM series 11 No. 1A issued July 1997 NHANES.	Page 200

Performance Goal: Make data more readily accessible to decision makers and researchers.

Performance Measure	Target	Actual Performance	Ref.
Make health statistics available via the Internet.	**FY 01:** With increased funding, develop at least one new product for the Internet, e.g., Health E-STAT-Internet -only data release or Statistical Export and Tabulation System (SETS) interface enabled for the Web. **FY 00:** Monthly vital statistics reports will be available to be viewed, searched, and downloaded via the Internet within 4 months of data release. **FY 99:** Monthly vital statistics reports will be available to be viewed, searched, and downloaded via the Internet within 4 months of data release.	**FY 01:** **FY 00:** **FY 99:** Virtually all NCHS publications are now available on the Internet at the same time as they are released in published form or earlier. This means that NCHS has accomplished this objective ahead of schedule. **FY 96:** Within 6 months of data release.	Page 200

Performance Measure	Target	Actual Performance	Ref.
With increased funding, release statistics in new formats to speed the release of data on high-priority topics.	**FY 01:** Release two reports. **FY 00:** Release one report.	**FY 01:** **FY 00:** **FY 99:** *1999 Health and Aging Chart book* published in October 1999. NCHS was an active participant in the publication of Federal Interagency Forum on Child and Family Statistics. 1998 published America's children: Key National Indicators of Well-being. Published Blood Folate and Vitamin B12, United States, 1994-1998. NCHS released CD-ROMs of data, e.g. 1997 Final Natality data with the Statistical Export and Tabulation System - a desktop interface system making analysis of data sets more user friendly. **FY 98:** *Teenage Births in the United States: National and State Trends 1990-96* was published.	Page 200

Performance Measure	Target	Actual Performance	Ref.
With increased funding, allow non-NCHS researchers to access detailed data files in a secure environment, without jeopardizing the confidentiality of respondents — through the NCHS Data Center.	**FY 01:** 50 researchers outside of NCHS Data Center. **FY 00:** Establish an NCHS Data Center, which will allow non NCHS researchers to access detailed data files in a secure environment, without jeopardizing the confidentiality of respondents 30 researchers outside of NCHS utilizing the NCHS Data Center.	**FY 01:** **FY 00:** **FY 99:** (Baseline year) Based on partial year of operation for the NCHS Data Center, 17 projects completed; 6 data sets made available to external investigators and 3 test onsite researchers using the Data Center. **FY 98:** Development of the NCHS Data Center was completed.	Page 200
Produce reports and publications that document trends, issues, and problems in health.	**FY 01:** Produce reports and publications that document trends, issues, and problems in health. **FY 00:** Produce reports and publications that document trends, issues, and problems in health.	**FY 01:** **FY 00:** **FY 99:** *Health in the United States, 1999*, the report on health status of the Nation, with Health and Aging Chart book - October 1999. **FY 98:** *Health, United States, 1998*, with Socioeconomic Status and Health Chart book. **FY 97:** *Health, United States 1996-97* and Injury Chart book.	Page 200
Total Program Funding (Dollars in thousands)	**FY 2001: 109,985** **FY 2000: 105,000** **FY 1999: 94,487**		

Verification/Validation of Performance Measures: The National Center for Health Statistics will maintain

administrative documentation that verify performance of these objectives through contractor reports, pretest reports, proceedings from meetings of scientific partners, copies of publications, and records of times data available on the Internet.

2.4 Chronic Disease Prevention and Health Promotion

2.4.1 Program Description, Context and Summary of Performance

The United States cannot effectively address escalating health care costs without addressing the prevention of chronic diseases for the following reasons:

C More than 90 million Americans live with chronic illnesses.
C Chronic diseases account for 70 percent of all U.S. deaths.
C 61 percent of the $655 billion total cost of health and medical care in 1990 was attributable to chronic diseases.
C Chronic diseases account for one-third of the years of potential life lost before age 65.

The increase in the proportion of older Americans, largely due to the aging of the baby boom generation, means that an effective public health response to chronic and disabling conditions must be developed now. Cancer will strike more than 1.3 million Americans this year. More than 40% of all deaths in the United States each year are directly attributable to heart disease and stroke. The impact of conditions such as arthritis, osteoporosis, Alzheimer's disease, and urinary incontinence on our society is considerable and will grow as our population ages. These and other conditions result in disability and decreased quality of life for millions of Americans.

Prevention of the occurrence and progression of chronic disease is based on reducing or eliminating behavioral risk factors, increasing the prevalence of health promotion practices, and detecting disease early to avoid complications. Prevention programs have been shown to be effective. For example, for every dollar spent on school health programs addressing tobacco, drug and alcohol and sexuality education, fourteen dollars are saved in avoided health care costs.

When developing performance measures for chronic disease prevention programs, several factors tempered our consideration. These factors included:

C The long latency of chronic diseases.

- Chronic diseases include the three leading causes of death in the United States--heart disease, cancer, and cerebrovascular--which account for nearly two thirds of all deaths. Multiple behavioral risk factors such as smoking, poor diet, and lack of exercise often become habitual during youth or early adulthood and contribute to the development of these chronic diseases over long periods of time.

- Health outcome measures are particularly problematic for chronic disease prevention programs because of the long latency period of many chronic diseases. For instance, reductions in smoking rates will not produce reductions in lung cancer deaths for decades. Further, behavior change itself is adopted slowly. Many of the most effective interventions are aimed at preventing youth from adopting risky behaviors, while the positive outcomes associated with these interventions are not reaped until adulthood. Over time, Americans can be influenced to adopt healthier behaviors, but such progress rarely results in significant or startling changes on an annual basis.

C The relatively recent development of chronic disease programs and hence the need for objectives focusing on state capacity to address chronic diseases.

- Chronic disease programs are relatively new in the public health world. For example, only recently have all states received funding for diabetes control programs. CDC's State tobacco control programs are only four years old. 1998 marked the first year of

CDC's state-based cardiovascular disease prevention program, when CDC funded 8 states. All States now participate in the Behavioral Risk Factor Surveillance System (BRFSS). Because of the newness of chronic disease programs, many states are still putting into place the basic infrastructure of people, networks, and systems needed to conduct effective prevention programs. Further, with the exception of the National Breast and Cervical Cancer Early Detection Program, none of CDC's chronic disease programs are focused on service delivery. Instead, they are focused on developing the policies, environments, and systems which are supportive of healthy behavior and appropriate health care.

C The availability of annual data to measure performance.

- CDC's data collection systems for monitoring chronic diseases are collected annually for adults (BRFSS), but only biennially for adolescents (YRBSS). While these data collect valuable information about the chronic disease behavioral risk factors, they are not designed to collect specific outcome data on chronic diseases.

C The opinions and recommendations of our key stakeholders.

- CDC's efforts to achieve improvements in health behaviors, appropriate health care, and chronic disease burden are dependent on collaborative relationships. Reductions in our nation's future chronic disease burden will depend on the commitment and success of programs coordinated by CDC and a broad range of efforts by health care providers, medical and public health researchers, state and local public health and education agencies, insurers and payers of private medical insurance, other Federal agencies, and the private and nonprofit sectors. CDC's key chronic disease partners have voiced concern regarding their ability to demonstrate specific outcome measures related to chronic disease issues and are committed to a balance between outcome and process objectives.

C Recognition that efforts to reduce the burden of chronic diseases must involve multiple public, private, and nonprofit entities across the country.

- Chronic diseases are a community-wide burden. CDC partners with the leaders of state and local health and education agencies, academic institutions, national organizations, nonprofit agencies, business and philanthropies to reduce the burden of chronic diseases

2.4.1a Heart Disease and Health Promotion

Cardiovascular disease is the Nation's number one killer among men and women of all racial and ethnic groups. More than 40% of all deaths in the United States, 900,000 each year, are directly attributable to heart disease and stroke. Associated annual costs exceed $286 billion. CDC is taking a crosscutting approach to address the burden of heart disease and other health risks in the U. S. through the prevention of risk factors (e.g. tobacco use, physical inactivity, and poor nutrition), surveillance, epidemiologic research, and health promotion activities. Cardiovascular disease is the leading cause of death in all states; CDC is implementing this approach to heart disease and stroke prevention by building state-specific capacity for cardiovascular health promotion, first in those states with the greatest heart disease and stroke burden.

Tobacco use is the leading preventable cause of disability and death, killing more than 400,000 Americans each year at an annual cost of $50 billion in direct medical costs. CDC serves as the focal point for DHHS' smoking and health prevention activities. Comprehensive state programs, including school based programs and local outreach efforts, have been shown to be effective in reducing the prevalence of tobacco use. CDC first funded tobacco prevention programs in 32 states and the District of Columbia in 1994. In FY 1999, CDC provide financial assistance to 50 state health departments, the District of Columbia, and 12 national organizations. The FY 2000 request will allow CDC to expand

funding through states to more extensively reach local communities and schools. CDC currently conducts surveillance and analysis of tobacco use and its impact; implements national health communication and education campaigns; and distributes technical, health communication, and advertising materials to states and other constituents.

CDC is committed to reducing tobacco use in the population with an ultimate goal of reducing the burden of tobacco-attributable disease. Although CDC's FY 1999 GPRA measures represented processes necessary for states to establish tobacco control programs, CDC's FY 2000 measures will include an outcome indicator related to use of tobacco products. Specifically, CDC's FY 2000 measure for tobacco seeks to reduce smoking among teenagers. The request for increased funding in FY 2001 will support effective tobacco-control activities, thus moving us toward the national target the year 2010 (i.e., cigarette use of 16% among adolescents).

It is important to note that reduction of tobacco use is a shared effort. Multiple agencies in DHHS address tobacco use, including CDC; the Food and Drug Administration (FDA) that regulates production, sale, and advertising of products within its jurisdiction (FDA jurisdiction over nicotine-containing cigarettes and smokeless tobacco products is currently before the courts); the Federal Trade Commission (FTC) that oversees the testing protocol for tar and nicotine yields in cigarettes and monitors and regulates advertising practices; the National Institutes of Health (NIH) that conducts biomedical and applied research, as well as surveillance activities and public health interventions; and the Substance Abuse and Mental Health Services Administration (SAMHSA) that performs tobacco use surveillance and implements regulations on minors' access to tobacco. In addition, state and local governments ,non-governmental organizations, (e.g., American Cancer Society, the Robert Wood Johnson Foundation) , and health care providers all play an important role in efforts to reduce tobacco use. Therefore, our accomplishments in the area of tobacco control will be collective, resulting from partnerships between government and non-government entities. In addition, it is important to note that environmental factors can counteract efforts to reduce tobacco use. Such factors include tobacco advertising, industry pricing patterns, and glamorization of tobacco use in the popular media.

Partnerships and Links to DHHS Strategic Plan

These performance objectives are related to DHHS goal 1, particularly 1.1: Reduce major threats to health and productivity of all Americans by reducing tobacco use, especially among youth. CDC plans to reduce teen smoking among youth through intervention programs, community-based programs, health communication campaigns, and collaborative partnerships with schools and state programs. State capacities will be developed to reduce the burden of Cardiovascular Disease, a major threat to the health and productivity of Americans, through core capacities as well as the further development of data systems.

Performance Summary: During FY 1998, 2 states were funded for comprehensive cardiovascular health programs and 6 states were funded for core-capacity building. Only the 2 comprehensive program states met at least 5 out of 7 cardiovascular disease prevention core capacities in 1998. The funding increase for FY 1999 was specifically designated to reduce racial disparities in cardiovascular disease. These additional funds supported core-capacity building in 2 of the 3 new state programs and racial disparity prevention programs in 10 of 11 participating states. In FY 1999, 7 of the 11 participating states met at least 5 core cardiovascular disease prevention capacities.

Between 1991 and 1997, cigarette use among youth (grades 9-12) increased from 27.5 percent to 36.4 percent. The rate of increase in youth smoking slowed between 1995 and 1997 and experts predict that the slowing will continue. This prediction is based on findings from other surveys, which indicate that smoking among adolescents has remained unchanged or declined somewhat in 1998 and 1999. Success in slowing the rate of increase in youth smoking trends is attributed to a number of factors, including current restrictions on the tobacco industry, increased funding at the state level for tobacco control programs, technical assistance from the Federal government to determine effective tobacco control strategies, FDA's efforts in the states to expand enforcement of youth tobacco prohibitions, and coordination of tobacco control efforts among public agencies and non-governmental organizations. The continued success of these efforts will be determined by monitoring cigarette use among youth.

However it should be noted that in 1996 and 1997 spending by the tobacco industry increased from $5.11 billion to $5.66 billion (i.e., a 10.8 percent increase). This spending represents an external factor which could undermine efforts in youth tobacco control. Data on cigarette use among youth in 1999 will be available in 2000. By 2001, tobacco control programs should start producing annual rates of decline in tobacco use among youth.

2.4.2a Goal-by-Goal Presentation of Performance

Performance Goal:
Reduce morbidity and mortality attributable to behavioral risk factors by building nationwide programs in chronic disease prevention and health promotion and intervening in selected diseases and risk factors.

Performance Measures	Targets	Actual Performance	Ref.
Reduce the percentage of teenagers (in grades 9-12) who smoke by conducting an educational campaign, providing funding and technical assistance to state programs, and working with non-governmental entities.	**FY 01:** 35.9 percent **FY 99:** 36.4 percent	**FY 01:** **FY 99:** Data available 4/2000. **FY 97:** 36.4 percent **FY 95**: 34.8 percent **FY 93:** 30.5 percent **FY 91:** 27.5 percent	Page 136
The number of states with 5 of the 7 core cardiovascular disease prevention capacities as delineated in Preventing Death and Disability from Cardiovascular Diseases: A State Based Plan for Action," and in CDC Program Announcement: CDC Cardiovascular Health Programs," will be increased.	**FY 01:** 18 states. **FY 00:** 11 states.	**FY 01:** **FY 00:** **FY 99:** 7 states. **FY 98:** 2 states.	Page 136

Performance Measure	Target	Actual Performance	Ref.
Increase the percentage of states participating in the Behavioral Risk Factor Surveillance System (BRFSS) who will communicate the findings from their behavioral risk factor data collected through an annual summary of results.	**FY 99:** 85% states participating.	**FY 99:** Data available 4/00. **FY 98:** 70% states participating. **FY 97:** 76% states participating. **FY 95:** 63% states participating.	Page 136

Verification/Validation of Performance Measures: CDC will monitor cigarette use among youth and report performance on a biennial basis (in 1999, 2001, 2003, etc.). This allows the use of a single data source, the Youth Risk Behavior Survey (YRBS), which is a component of the YRBSS (see Appendix A.2). The rationale is consistent with Healthy People 2010 and increases validity and the ability to interpret data. The YRBS is conducted on a biennial basis by the Centers for Disease Control and Prevention. Two additional surveys, the National Household Survey on Drug Abuse (NHSDA) and the Monitoring The Future (MTF) Survey, provide complementary data for examining trends and better understanding youth-related tobacco issues. The NHSDA is conducted annually by the Substance Abuse and Mental Health Services Administration. The MTF is conducted annually by the University of Michigan's Institute for Social Research.

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual state-based telephone survey (active in 50 states, District of Columbia and three territories) that routinely collects behavioral risk factor information and demographic information (age, race, sex, etc.) (refer to Appendix A.2 for more information about BRFSS). States design the instrument that is used to collect data. CDC, besides providing funding, technical support, and consultation, edits and processes the data from each state's monthly interviews and then returns prevalence information and selected reports to states for their use. Behavioral risk factors are chosen based on their strong relationship with many of the leading causes of premature death and disability. The information obtained is used to track progress in reducing behavioral risk factors over time. The data is collected on an ongoing basis and there are no foreseen data lags. A 1996 baseline is used because it is based on data available at the time of the creation of the measure.

State information on core cardiovascular disease prevention capacities will be collected annually and evaluated by CDC through grantee applications.

2.4.1b Cancer Registries

Cancer surveillance is the key to a unified scientific and public health approach to fighting cancer. Cancer surveillance includes ongoing, timely, and systematic collection and analysis of information on cancer deaths, new cancer cases, extent of disease, screening tests, treatment, and survival. Data collected through statewide cancer registries can be used to identify trends over time, to discover cancer patterns among various populations, and to show whether screening and other prevention measures are making a difference. This information is essential to states in directing effective cancer prevention and control efforts.

Despite the critical role registries can play in helping direct cancer prevention efforts, 10 States had no registry in 1990. Although the remaining 40 States had registries operating at some level, many lacked the financial support and the personnel to gather complete, timely, and accurate data on their population or to ensure that the data collected had minimum standards of quality. A number of states also lacked legal support for their registry's operation, which further hindered their ability to collect important information.

Through the National Program of Cancer Registries (NPCR), CDC funds states and territories to enhance existing cancer registries; plan and implement statewide registries where they do not exist; develop model legislation and regulations for states to enhance viability of registry operations; set standards for completeness, timeliness, and quality; and provide training. The NPCR serves as the foundation of a national, comprehensive prevention strategy; it is a basic tool in surveillance efforts that will provide the needed factual basis for appropriate policy decisions and allocations of scarce resources. Comprehensive, timely, and accurate data about cancer incidence and stage at diagnosis are needed to provide useful feedback for evaluating progress toward cancer control. In FY 1999, CDC will support 45 States, 3 territories, and the District of Columbia for cancer registries.

NPCR-funded central registries complement existing registries, such as the National Cancer Institute's (NCI) Surveillance, Epidemiology, and End Results (SEER) program, which monitors trends in incidence, treatment, survival time, and extent of disease. SEER is an outgrowth of the National Cancer Act of 1971, which included a mandate to collect, analyze, and disseminate data that would aid in the prevention, diagnosis and treatment of cancer. SEER was established to provide continuous coverage in certain U.S. regions. Trends in cancer incidence, mortality and patient survival in the United States, as well as many other studies, are derived from this data bank.

Under the NPCR's authorization, federally supported medical facilities are not required to report cancer cases to state registries. To encourage reporting from these facilities, NPCR has initiated and maintained an ongoing liaison with the Department of Defense (DOD), Department of Veterans Affairs (DVA), and the Indian Health Service (IHS). The DOD wants to assess the completeness, timeliness, and quality of its data for use in research. NPCR has established a memorandum of agreement with the DOD to assist with this analysis and to facilitate collaborative cancer control activities between the agencies. The DVA is currently in the process of initiating a central cancer registry database. While the IHS does not maintain a centralized cancer registry database, it does maintain a centralized medical informatics database. State cancer registries develop and maintain data exchange agreements with individual IHS facilities in their respective states. NPCR will continue to work with the DVA and IHS to encourage the routine submission of complete, timely, and quality data to state cancer registries.

CDC and its partners also collaborate to develop successful strategies to capture cancer information on patients who are diagnosed and treated outside the hospital setting and to audit case completeness and quality in outpatient settings.

Because NPCR is a new program, many states do not yet collect information on all the cancer cases occurring in the state each year. However, collection of complete information is critical to the program. The outcomes expected for NPCR--the ability to monitor trends in cancer by site of the cancer, age and ethnicity of the patient, geographic region, and treatment outcomes--will not be possible until the central registries contain complete information. Thus, the performance measure proposed is the best available because it is the most critical to the eventual success and usefulness of the program.

Partnerships and Links to DHHS Strategic Plan

The DHHS Strategic Plan, Objective 5.1 states "Improve public health systems' capacity to monitor the health status and identify threats to the health of the nation's population." Data collected through statewide cancer registries can be used to identify trends over time, to discover cancer patterns among various populations, and to show whether screening and other prevention measures are making a difference. This information is essential to states in directing effective cancer prevention and control efforts.

CDC works closely to coordinate its efforts with other federal agencies, states, and with national organizations, such as the American Cancer Society, the American College of Surgeons, the North American Association of Central Cancer Registries, and the National Cancer Registrars Association in designing, conducting, and analyzing surveillance research related to cancer. These groups have formed a working consortium, the National Coordinating Council for Cancer Surveillance, to provide an opportunity for collaborating on cancer surveillance and registration issues. These organizations encourage and facilitate voluntary reporting of cancer cases from federally supported facilities to state registries. CDC assists states and national organizations in using cancer surveillance data to describe state or national disease burden,

evaluate cancer control activities, and identify populations at high risk for certain cancers. Through collaboration with NAACCR, quality assurance activities are provided for the NPCR.

Performance Summary: The 1998 data indicated that 29% of NPCR funded states were reporting data on the number of reportable cancer cases within the state. The 29% is one percentage point away from the 1999 and year 2000 goals and demonstrates that the NPCR is on track with progress towards meeting current objectives. Data for fiscal year 2999 will be available in June 2000.

2.4.2b Goal-by-Goal Presentation of Performance

Performance Goal: Improve the assessment capacity of cancer prevention by enhancing existing cancer registries.

Performance Measure	Targets	Actual Performance	Ref.
Increase the percentage of states funded by CDC's NPCR that have at least 95% of unduplicated, expected malignant cases of reportable cancer occurring in state resident in a diagnosis year reported to the state cancer registry.	**FY 01:** 40% of states in the NPCR. **FY 00:** 30% of states in the NPCR. **FY 99:** 30% of states in the NPCR.	**FY 01:** **FY 00:** **FY 99:** Data available in June 2000. **FY 98:** 29% of states in NPCR. **FY 97:** 17% of states in NPCR.	Page 136

Verification/Validation of Performance Measures: States participating in the NPCR are expected to collect information on at least 95% of cancer cases diagnosed or treated in their state each year. Cancer cases should be reported to the central registry within 6 months of diagnosis, and funded states are required to incorporate the standards for data quality and format as described by NAACCR. CDC receives an annual administrative summary from each NPCR program, as well as quarterly reports that indicate progress towards reaching goals of completeness, timeliness, and quality of registry data. In addition, NPCR staff complete annual internal evaluations of program progress. Data from these evaluations are available in April each year, thus FY 1999 data will be available in April of 2000. State cancer registries do not report raw data to the CDC, and CDC does not aggregate NPCR data at this time.

In 1994, 28 enhancement states and 9 planning states were funded through NPCR. Currently, NPCR provides support to 49 programs: 36 for enhancement of established central registries and 13 for planning and implementation of registries. Variations in states' capacities (planning or enhancement status) and initial year of funding result in differences across reference years used for calculating registry data completeness. NAACCR has also established a process by which state registries can apply for certification that ensures that member registries are collecting useful and high-quality data. Member registries are evaluated yearly and provided confidential feedback. Data for FY 1999 will be available in June 2000 for reporting.

A new, more reliable baseline for the NPCR performance measure is a result of clarification of data issues.

2.4.1c Diabetes and Other Chronic Conditions

Diabetes

Almost 16 million people in the United States have diabetes, with approximately 800,000 new cases each year or 2,200 new cases each day. The number of individuals with known diabetes has increased steadily, especially within selected racial and ethnic communities. Diabetes remains the 7th leading cause of death in the U.S. People with diabetes also suffer significant complications such as kidney disease (approximately 30,000/year), high blood pressure (60 to 65% of people with diabetes have high blood pressure), amputations (approximately 57,000/year or 150/day); blindness among working aged adults (approximately 20,000/year or 60/day); and end-stage kidney disease (approximately 30,000/year or 70/day).

The goal of CDC's diabetes control program is to eliminate preventable diabetes-related morbidity and disability while improving the overall quality and length of life for all persons with diabetes. This effort requires a multifaceted approach that works to translate research findings into clinical and public health practice. The CDC diabetes prevention and control program emphasizes (1) support for state-based diabetes control programs in all 50 states to develop or expand diabetes control efforts in the statewith additional funding for selected states to conduct comprehensive control efforts statewide; and (2) activities to improve the quality of care received by persons with diabetes.

Partnerships and Links to DHHS Strategic Plan
These performance objectives are related to DHHS Goal 4: Improve the quality of health care and human services, and specifically Goal 4.1: Promote the appropriate use of effective health services. This goal area reflects the intent of having state programs adopt and promote patient care guidelines for persons with diabetes, which in turn enables both health care providers andpatients to know what is needed for quality diabetes care. This effort, along with other educational and programmatic activities, should lead to an increase in foot and eye exams for diabetics.

CDC collaborates with the National Institutes of Health in providing federal leadership in the development, coordination and implementation of the National Diabetes Education Program (NDEP). CDC has primary responsibility for coordination the NDEP Partnership Network of over 100 organizations, coordinating several of the 10 NDEP planning workgroups, and administering the implementation of the NDEP community interventions component. CDC also collaborates with the Indian Health Service and other organizations in a partnership to establish the National Diabetes Prevention Center. Then National Diabetes Prevention Center will address the serious epidemic of diabetes in American Indians. Further, CDC collaborates with the Health Resources and Services Administration as part of the Health Status and Performance Improvement Collaborative in Community Health Centers. CDC's state-based diabetes control programs will partner with the community health centers to improve the health status of people with diabetes who receive care at the centers.

In addition to state health departments, CDC collaborates with the American Diabetes Association, Juvenile Diabetes Foundation, American Association of Diabetes Educators, and managed care organizations in the control of diabetes and its complications.

Other Chronic Conditions

Since 1900 the total U.S. population has tripled, but the number of older persons has increased eleven-fold, from 3.1 million to 33.9 million. The prevalence of preventable morbid conditions among seniors is substantial. For example, arthritis affects over 42 million Americans and is projected to affect 60 million by 2020; nationally, 50% of the elderly report having arthritis. In FY 2001, CDC will expand preventive services and community programs to protect elders from arthritis and other threats through the development of prevention research demonstration projects, surveillance, and partnerships.

Partnerships and Links to DHHS Strategic Plan
These performance objectives are related to DHHS Goal 4: Improve the quality of health care and human services and, specifically Goal 4.1: Promote the appropriate use of effective health services. It also relates to Goal 5: Improve public health systems.

Performance Summary: CDC is currently conducting 7 Prevention Research Studies to better understand how to apply diabetes scientific findings. The BRFSS measures the percentage of diabetics who receive an annual eye exam and annual foot exam. CDC will complete the analysis of FY 1998 BRFSS data by

October 1999 and the analysis of FY 1999 data will be completed by October 2000. FY 1999 data regarding the (1) percentage of CDC-funded state diabetes control programs that will adopt, promote, and implement patient care guidelines for improving the quality of care received by persons with diabetes and regarding the (2) percentage of the 58 State Diabetes Programs that will have core capacities will be available by the end of January 2000 once 4th quarter (or Program Year end) reports are submitted and analyzed.

2.4.2c Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the prevalence of chronic and disabling conditions and improve the quality of life for those already affected by these conditions by building nationwide programs in chronic disease prevention and health promotion, and intervening in selected diseases and risk factors.

Performance Measures	Targets	Actual Performance	Ref.
Percentage of CDC-funded state diabetes control programs that will adopt, promote, and implement patient care guidelines for improving the quality of care received by persons with diabetes.	**FY 01:** 100% adopted guidelines. **FY 00:** 100% adopted guidelines.	**FY 01:** **FY 00:** **FY 99:** 70% adopted guidelines. **FY 98:** 60% adopted guidelines.	Page 136
For all states that receive CDC funding for comprehensive diabetes control programs, increase the percentage of diabetics who receive an annual eye exam and annual foot exam.	**FY 01:** Eye 72%/Foot 62% (increase FY 96 baseline by 10%). **FY 00:** Eye 72%/Foot 62% (increase FY 96 baseline by 10%).	**FY 01:** **FY 00:** **FY 99:** Data available 10/2000. **FY 98:** Eye 64.7%/Foot 56.5%. **FY 97:** Eye 65.6%/Foot 56.6%. **FY 96:** Eye 61.7%/Foot 52.4%.	Page 136

Performance Measure	Target	Actual Performance	Ref.
Prevention research studies will be conducted to better understand how to apply diabetes scientific findings in clinical and public health practice and the results published in peer-reviewed journals.	**FY 01:** 7 Prevention Research studies. **FY 00:** 7 Prevention Research studies. **FY 99:** 5 Prevention Research studies.	**FY 01:** **FY 00:** **FY 99:** 7 Prevention Research studies. **FY 97:** 4 Prevention Research studies.	Page 136
Percentage of the 58 State Diabetes Programs that will have core capacities: surveillance of diabetes and diabetes-related conditions and risk factors; formal relationships with medical and private, nonprofit organizations; communication networks with collaborating organizations; assessment of quality of care of diabetes patients; and public awareness.	**FY 01:** 100% of the 58 State Diabetes Programs. **FY 00:** At least 85% of the 58 State Diabetes Programs. **FY 99:** At least 75% of the 58 State Diabetes Programs.	**FY 01:** **FY 00:** **FY 99:** 75%. (43 states). **FY 94:** 21 states/jurisdictions or 36%.	Page 136

Verification/Validation of Performance Measures: Performance will be verified through quarterly state reports to CDC and periodic site visits, demonstration of CDC development of studies, and, for efforts in Native American/Alaskan Native populations, program reports submitted to CDC and demonstration of the number of programs supported by CDC. The BRFSS (refer to Appendix A.2) measures the percentage of diabetics who receive an annual eye exam and annual foot exam.

Performance Goal: Reduce the onset and consequences of arthritis by expanding preventive services and community programs.

Performance Measure	Target	Actual Performance	Ref.
Enhance state-based arthritis surveillance using the Behavioral Risk Factor Surveillance System (BRFSS) modules on arthritis and quality of life.	**FY 01:** 35 states. **FY 00:** 30 states.	**FY 01:** **FY 00:** **FY 99**: 8 states.	Page 136
Increase the number of states addressing arthritis, at a comprehensive level, with CDC support.	**FY 01:** 2-3 states. **FY 00:** 0 states. **FY 99:** 0 states.	**FY 01:** **FY 00:** **FY 99**: 0 states.	Page 136

Validation/Verification of Performance Measures: Data on the number of states addressing arthritis can be confirmed by annual reports from grantees and site visits. CDC has an inventory of the questions that are asked on the BRFSS.

2.4.1d Health Promotion

CDC's Health Promotion and Disease Prevention Research Centers (PRC) Program integrates the resources of 23 academic centers nationwide to engage in prevention research for the benefit of the public good. This national network develops and implements community-based prevention research interventions aimed at remediating the primary causes of death and disability throughout the nation.

Expertise from university-based prevention research centers is made available to constituencies including health agencies, community-based organizations, and national nonprofit organizations. The link between university research and grassroots organizations helps promote the application of research findings resulting in practical, cost-effective and innovative programs.

CDC's PRC Program is also conducting the community prevention component of NIH's multi-year Women's Health Initiative--one of the largest US studies of women's health. Seven of the 23 prevention centers are creating models for preventing heart disease, diabetes, and the consequences of osteoporosis; detecting breast and cervical cancer; and evaluating hormone replacement therapy, dietary and vitamin supplements among women.

CDC's support for innovative community demonstration projects in 13 communities is helping to mobilize and organize community leaders and resources to both demonstrate and evaluate the effectiveness comprehensive teen pregnancy prevention programs. These projects involve a public health research approach to develop, implement and test best practices using scientific methods. (CDC provides state-based surveillance of teen

Partnerships and Link to DHHS Plan: This performance objective is related to DHHS: Goal 6: Strengthen the nation's health sciences research enterprise and enhance its productivity through the Prevention Research Centers and community-based Teen Pregnancy Prevention demonstration projects.

CDC is working with NIH's Office of Extramural Research by conducting the community prevention portion of NIH's multi-year Women's Health Initiative.

Performance Summary: Increased collaborative efforts through innovative intervention methods are illustrated by CDC's Prevention Research Centers Office (PRCO) and PRC research demonstration projects. Data regarding the community demonstration programs are presently being compiled from grantee progress reports, and will subsequently be verified through site visits and publications related to the programs. Thus, data for this FY 1999 measure will be available for review in July 2000. Currently, there are a total of 23 PRCs. The FY 99 target of 1 PRC in each of the 10 DHHS regions has been met.

2.4.2d Goal-by-Goal Presentation of Performance

Performance Goal:
Increase collaboration efforts focusing on innovative intervention methods that provide results to state, local and community-based organizations through CDC's Prevention Research Centers Program and prevention research demonstration projects.

Performance Measure	Target	Actual Performance	Ref.
The University-based Prevention Research Centers will have at least one Prevention Research Center (PRC) in each DHHS region establishing research priorities and developing research interventions in collaboration with a constituent community.	**FY 01:** **FY 00:** Each PRC will undertake at least one research project that reflects community-based participatory research. **FY 99:** 1 PRC in each DHHS region.	**FY 01:** **FY 00:** **FY 99:** At least 1 PRC has been established in each DHHS Region. **FY 98 :** 0 PRC in each DHHS Region.	Page 136
In all 13 community demonstration programs, the hub organization and at least five coalition partner organizations will collaboratively have begun implementing three or more intervention programs to prevent teen pregnancies in response to specific needs identified through a community assessment in at least two neighborhoods.	**FY 01:** All 13 community demonstration programs meet the criteria. **FY 00:** All 13 community demonstration programs meet the criteria. **FY 99:** Seven of the 13 community demonstration programs meet the criteria.	**FY 01:** **FY 00:** **FY 99:** Data available 7/00 **FY 98:** Only 1 of the 13 demonstration programs meets the criteria.	Page 136
Total Program Funding (Dollars in thousands)	**FY 2001: 399,299** **FY 2000: 392,477** **FY 1999: 312,621** *** These totals include Chronic, Environmental Health, and Prevention Centers**		

Verification/Validation of Performance Measures: Data for these measures will be available from grantee progress reports, and will be verified through site visits and publications. Data for the FY 1999 teen pregnancy actual performance measure will be available for review in July of 2000.

A set of cross-site indicators are used for all 13 community demonstration projects. The evaluation team from each community collects data for these indicators and submits them as part of semiannual reports submitted to CDC. In addition, CDC Program Consultants validate information received through site visits and telephone consultations. No data lags are expected.

2.5 Breast and Cervical Cancer Prevention

2.5.1 Program Description, Context, and Summary of Performance

Breast and cervical cancer will kill more than one-half million women in this decade. Breast cancer accounts for nearly one-third of all cancers in women, and approximately 14,500 new cases of cervical cancer are diagnosed each year. Almost all deaths from cervical cancer and an estimated 30 percent of deaths from breast cancer in women over age 50 are preventable through widespread use of Papanicolaou (Pap) testing and screening mammography. A combination of annual clinical breast examinations and mammography can reduce breast cancer mortality by more than 30 percent for women age 50-74. Early detection also increases the 5-year survival rate to 91 percent. Early diagnosis of breast and cervical cancer saves money as well as lives. Treatment costs for breast cancer diagnosed at the localized or insitu stage may be as much as 31 percent lower than treatment costs for breast cancer diagnosed in the regional or distant stages (Taplin SH, Barlow W, Urban N, et.al. Stage, age, comorbidity and direct costs of colon, prostate, and breast cancer care. Journal of the National Cancer Institute 1995; 87: 417 - 26).

CDC's National Breast and Cervical Cancer Early Detection Program (NBCCEDP) provides cancer screening for underserved women, particularly low-income women, older women, and members of racial/ethnic minorities. This program creates the foundation for an aggressive response to this health problem and ensures the delivery of successful screening services. CDC supports activities at the state and national level in the areas of screening referral and follow-up services, quality assurance, public and provider education, surveillance, collaboration and partnership development.

The ability to implement a nationwide program depends on the involvement of partners in national, state and local governments; health care professions and organizations; social service and advocacy organizations; and academia. Partnerships assist private and public nonprofit organizations to develop, implement, and evaluate national, community-based interventions for cancer prevention and early detection. They also test new methods and replicate already-proven strategies to educate their constituents about the prevention, early detection and control of cancers; increase access to screening among underserved populations; and create new collaborations with state health departments and others to enhance efforts for cancer control in priority populations. CDC funds a strong and effective network of partners that are well positioned in communities at risk and that bring critical knowledge, skills, credibility, and resources to CDC's cancer control efforts among priority populations. Such populations include the uninsured and such minority groups as American Indians, Alaskan Natives, African-Americans, Hispanics, Asian/Pacific Islanders, Lesbians, women with disabilities, and those who live in hard-to-reach communities in urban and rural areas.

CDC collaborates with the National Cancer Institute (NCI) in a variety of areas related to cancer prevention and control. One example of this collaboration is CDC's partnership with NCI's Cancer Information Service to develop demonstration projects to improve breast and cervical cancer early detection among older women through innovative outreach. The goal of this project is to increase and sustain the participation of eligible underserved women, aged 50 and older, in the education and screening services offered through the NBCCEDP and to educate women in the program who are diagnosed with breast or cervical cancer about state-of-the-art treatment options. Additionally, memoranda of agreement between CDC and the Indian Health Service (IHS) provide support for collaborative scientific and training activities. The aim of these agreements is to develop, deliver, and promote chronic disease prevention activities for American Indians and Alaska Natives. CDC has also assisted the Food and Drug Administration (FDA) in conducting quality assurance training programs for mammography.

Both performance measures submitted for the NBCCEDP are outcome measures. The measures are ambitious in view of the fact that the NBCCEDP is able to reach about 12 percent of the eligible population. Both mammograms and Pap tests are underused by women who are members of racial and ethnic minority groups. Additionally, the NBCCEDP strives to eliminate racial and ethnic disparities in screening for breast and cervical cancers. By its nature, such a screening program requires time to demonstrate the positive

effects of annual screening within the target population. Data collection for these measures has been systematized by the NBCCEDP, and state health agencies were involved in the development of these measures.

Partnerships and Links to DHHS Strategic Plan

These performance measures are related to DHHS goal 4: To improve the quality of health care and human services states " Promote the appropriate use of effective health services," and it includes as a measure of success "Rates of increase in age-appropriate mammography screening." Additionally, Strategic Objective 4.2 states "Reduce disparities in the receipt of quality health care services,"and a measure of success for this objective is "Disparities in breast and cervical cancer screening and management." Thus, increasing rates of breast and cervical cancer screening, particularly among population groups with poorer screening rates, is a priority stated in the DHHS Strategic Plan and implemented by CDC's National Breast and Cervical Cancer Early Detection Program.

Performance Summary: In 1998, excluding breast cancers diagnosed on an initial screen in the NBCCEDP, at least 70% of women aged 40 and older were diagnosed at localized stage. In 1998, excluding invasive cervical cancers diagnosed on an initial screen in the NBCCEDP, the age adjusted rate of invasive cervical cancer in women aged 20 and older was 23 per 100,000 Pap tests provided. These data suggest that CDC is on track towards meeting the GPRA goals and objectives for fiscal year 1999. Due to the reporting cycles of the minimum data elements, data for fiscal year 1999 will be available after March 2000.

2.5.2 Goal-by-Goal Presentation of Performance

Performance Goal:
Increase early detection of breast and cervical cancer by building nationwide programs in breast and cervical cancer prevention.

Performance Measures	Targets	Actual Performance	Ref.
Excluding breast cancers diagnosed on an initial screen in the NBCCEDP, at least 73% of women aged 40 and older will be diagnosed at localized stage.	**FY 01:** 73% diagnosed at a local stage. **FY 00:** 72% diagnosed at a local stage. **FY 99:** 71% diagnosed at local stage.	**FY 01:** **FY 00:** **FY 99:** Data available March 2000. **FY 98:** 70% diagnosed at a local stage. **FY 95:** 70% diagnosed at a local stage.	Page 160

Performance Measure	Target	Actual Performance	Ref.
Excluding invasive cervical cancers diagnosed on an initial screen in the NBCCEDP, the age adjusted rate of invasive cervical cancer in women aged 20 and older is not more that 22 per 100,000 Pap tests provided.	**FY 01:** No more than 22 per 100,000. **FY 00:** No more than 22 per 100,000. **FY 99:** No more than 22 per 100,000.	**FY 01:** **FY 00:** **FY 99:** Data available March 2000. **FY 98:** 23 per 100,000. **FY 95:** 26 per 100,000.	Page 160
Total Program Funding (Dollars in thousands)	**FY 2001: 171,420** **FY 2000: 166,495** **FY 1999: 158,965**		

Verification/Validation of Performance Measures: CDC uses the Minimum Data Elements (MDEs) to report the percentage of women aged 40 and older who were diagnosed at localized stage, excluding breast cancers diagnosed on an initial screen in the NBCCEDP. MDEs are electronically submitted (by states, territories, and tribes/tribal organizations) twice a year (January 15 and July 15) to a data management contractor, who analyzes the data and submits a data file to the CDC. These files are made available in March and September of each year. CDC uses the January 15 submission to report performance for this measure. The data provided in the GPRA report include only screening exams through March 31 of the previous year in order to allow adequate time to gather the data and to present a complete program report. States, territories, and tribes/tribal organizations are provided 9½ months after the initial screening date (March 31) to gather diagnostic and treatment information and to prepare the data submission for the data management contractor by January 15. The data management contractor analyzes the data by March and sends the report to CDC. All the date collected and submitted by the states have indicators to assess completeness. Data are also assessed against established clinical standards.

2.6 Prevention Research

2.6.1 Program Description, Context and Summary of Performance

The Nation's scientists in medicine, public health and other specialties have advanced the United States' stature as a world leader in research and development. Substantial progress in disease detection, treatment, and prevention is but one outcome of the Nation's investment in health research and technology. But public health problems still affect the country's neighborhoods and communities. Many contemporary innovations and scientific advances are yet to be transformed into actions with direct applicability to protecting the public's health and improving the health status of many populations in this nation.

Prevention research (also known as public health research) is a meansto identify and evaluate practical and effective strategies to promote health and prevent disease, injury and disability. The term is used to describe many types of scientific activities, but is often used to describe *applied research that takes discovery to the point of actual practice*.

This section of CDC's GPRA report focuses on a specific set of activities related to expanding CDC's "prevention research" program – the *Prevention Research Initiative*. Reporting is based upon activities

under the auspices of the 21st Century Research Fund (FY 1998), the budget for the CDC Prevention Research Initiative (FY 2000), and the proposed FY 2001 Initiative - Building Research Partnerships for Prevention (continuation and enhancement of PRI activities). Other CDC "prevention research" activities (e.g., organized scientific research centers for chronic disease, injury, and occupational health research) can be found in other sections of this report.

CDC, viewed by many as "disease detectives" for the nation and the world, conducts many forms of prevention research each and every day. However, few understand CDC's hallmark as "disease detectives" is possible only through the use of the best available applied research methods and techniques – those which identify emerging problems, test potential solutions, and translate knowledge gained from scientific discoveries into public health action.

CDC began the process to strengthen public health research with an emphasis on strengthening extramural research activities and programs in FY 1998. The introduction of the plans for the 21st Century Research Fund complemented CDC's movement toward expanding R&D opportunities in prevention research. CDC embarked on several activities to strengthen relationships between universities, university-affiliated programs and other centers of scientific investigation. Feedback from partners allowed CDC to identify challenges in sustaining a comprehensive public research program.

Initial program objectives were established for FY1999. The objectives included:

- developing "Centers of Excellence" in special topical areas by supplemental or first-time funding of existing extramural research center programs;
- identifying priority areas for expanding CDC's portfolio of public health research projects;
- establishing research agendas specific to CDC priorities for public health;
- providing direct financial assistance to extramural research programs in academic settings; and
- promoting the use and acceptance of peer review for CDC research program operations.

The Prevention Research Initiative, as funded for FY 1999, provided funds for fifty (50) extramural research projects. These projects will gather information to develop and test interventions; to identify best practices for public health programs and operations; and to inform public health policy. As such, the PRI allows CDC to take full advantage of the increasing opportunities offered by technological advances and scientific discoveries.

As of the beginning of FY 2000, approximately 83% of all PRI funds were awarded as direct financial assistance (grants, cooperative agreements) or R&D contracts for extramural research activities. The remaining funds support the infrastructure and program operations (personnel, equipment, special projects, contracts to support research grant administration and program development) needed to administer and advance extramural research activities. To improve services to CDC customers and constituents, CDC will pilot test an "e-grants" system during FY 2000. This is the first step to adopt "e-commerce" activities to support CDC partnerships with academic research programs.

In the future, CDC seeks to maintain the current proportion of PRI funds used for direct assistance to academic research programs.

Partnerships and Links to DHHS Strategic Plan: These performance objectives are related to DHHS Goal 6: Strengthen the nation's health sciences research enterprise and enhance its productivity. This performance objective is related to DHHS Goal 6: Strengthen the nation's health sciences research enterprise and enhance its productivity through the Prevention Research Initiative.

Performance Summary: The program is making satisfactory progress toward the achievement of the performance goals. There has been no delay in obtaining data, and the program continues to monitor the measures of performance according to the established time lines.

Fifty (50) extramural research projects were awarded using PRI funds in FY 1999. Awards (grants, cooperative agreements, and contracts) were subject to external peer review. (Average award was

$250,000 per year. Most projects were funded for a three year performance period.) This represents awards to institutions in twenty-one (21) states, with grantees in each DHHS region. Institutions receiving awards included academic health centers, schools of public health, and university-affiliated programs(e, g., teaching and research affiliates of medical schools including health departments and managed care organizations). Awards were also made to support investigators in academic research programs of engineering, communications, public policy, and nursing.

Several projects will focus on balancing CDC's research portfolio. This includes advancing the next generation of health statistics; training and retention of scientists in critical areas of public health; and promoting dissemination of research findings. PRI funds also support ability to address the psychosocial, behavioral, legal and ethical issues associated with research in genetic, occupational, and environmental health. the next generation of public health statistical methods and tools.

The critical need to have an infrastructure to support new R&D activities is being addressed by PRI activities. Eleven (11) new projects were funded to obtain external involvement in CDC research agenda development or to assess research gaps in specific areas of disease prevention and control. Also, contracts to support research communications planning and program execution were established. This supports implementation of performance goals to expand the diffusion of research to key populations and groups.

Data regarding PRI services and activities will be compiled from a number of sources throughout FY 2000. The sources include progress reports from grantees and project officers; correspondence and communications with partners in public health research; assessments conducted through research communications activities (e.g., media bibliometric report data from existing sources); site visits to a variety of projects (if appropriate); and feedback from participants in research programs. Thus, data related to funds awarded in FY 1999 should be available no later than 15 months from the date of award with preliminary data available throughout FY2000. Data and information from "infrastructure", research communications and "e-grants" projects should be available as tasks are completed. (March through December 2000).

2.6.2 Goal-by-Goal Presentation of Performance

Performance Goal: CDC will strengthen its ability to obtain and disseminate extramural research findings to partners, public health practitioners and the public through a Prevention Research Communications program.

Performance Measure	Targets	Actual Performance	Ref.
CDC will develop a longitudinal studies research agenda, including identification of specific studies to be conducted, with involvement of the broader research and practice communities. These studies will be designed in order to provide timely data relevant to prevention research and intervention programs.	**FY 00:** Complete an inventory of existing and completed longitudinal studies covering multiple health domains. Also convene a meeting to develop a research agenda for a program of longitudinal studies for possible funding by CDC.	**FY 99:** No longitudinal study research agenda exists.	Page 215

Performance Measure	Target	Actual Performance	Ref.
CDC will develop reporting mechanisms and communication strategies to assure that results from these studies will stimulate new and improved interventions to prevent disease.	**FY 01:** Communication strategies and targets will be assessed for efficacy and "reach" to specific audiences. **FY 00:** CDC extramural research communications plan developed, approved and executed.	**FY 01:** **FY 00:** **FY 99:** Zero reporting mechanisms or communication strategies.	Page 215

Verification/Validation of Performance Measures: Examination of written reports and documents showing reporting mechanisms and communication strategies. Reviews of published documents including journal articles, mass media, and other reports.

Performance Goal:
Increase collaboration among academic health centers, public health departments, managed care organizations and other public health organizations to develop, implement, and evaluate the effectiveness of community-based public health interventions.

Performance Measure	Targets	Actual Performance	Ref.
Increase partnerships between academic health centers, managed care organizations, and the public health networks in the Nation's communities to support prevention research.	**FY 00:** Organize formal subcommittee of CDC Director's Advisory Committee. **FY 99:** CDC will provide periodic briefings to members of CDC Advisory and Scientific Committees on opportunities to increase partnerships.	**FY 99:** Provided briefings to 3 advisory and scientific committees. Participated in meetings with CDC CIOs, other federal agencies, and external scientific organizations to describe the Prevention Research Initiative (PRI), to encourage collaboration in CDC's extramural prevention research, and to alert partners of PRI-funded RFAs.	Page 215

Performance Measure	Target	Actual Performance	Ref.
Increase the "hit rate" for investigator-initiated research projects (excluding unsolicited requests for funding).	**FY 01:** Decrease, by 5%, the percentage of newly "approved, but unfunded (ABU)" investigator-initiated projects. **FY 00:** Develop standard operating definition for CDC "hit rate". Assess the number of PRI applicants receiving notice of "ABU" approved peer-review projects that were unfunded in FY 1999 and 1998.	**FY 01:** **FY 00:** **FY 99:** No baseline data exists regarding "hit rate" for investigator-initiated projects.	Page 215

Performance Measure	Targets	Actual Performance	Ref.
Increase the number of organizations receiving notices of availability of PRI funds.	**FY 01:** Implement research communications plan activities specific to announcement of extramural funding opportunities. Track trends in responses to R&D funding announcements. **FY 00:** Pilot test "e-grants" system which provides comprehensive information and tools for extramural programs seeking funds for research. Assess dissemination patterns for announcing research opportunities to scientific community.	**FY 01:** **FY 00:** **FY 99:** Web-site dissemination process could not fully meet the needs articulated by representatives of extramural research programs. Also, "e-commerce" technology more widely available for use in government R&D operations. Web site activity now focused on one to "piggy-back" on systems commonly used by academic health centers and university affiliated programs. Assessed electronic grants application and management systems available to Federal programs (e.g. PeerNet, Federal Commons, FastLane)	Page 215

Verification/Validation of Performance Measures: Data and information will be obtained through progress reports from contractors and partners working on "e-grants" and research communications plan; reviews of correspondence and inquiries from applicant organizations' hits to websites containing funding announcements; and if available, data from CDC Procurement and Grants Office (PGO).

Performance Goal: Increase input of external scientific community on extramural prevention research.

Performance Measures	Targets	Actual Performance	Ref.
CDC will increase the use of external peer review in processes for competitive research awards of funds (cooperative agreements, and grants) for projects, especially those receiving full or partial support through the Prevention Research Initiative.	**FY 01:** 100% of PRI-funded projects will be subject to peer review. (Targets: 70% through Special Emphasis panels and 30% through established Study Sections.) Number of Special Emphasis panels used overall at CDC will increase. **FY 00:** 100% of PRI extramural funds will be externally peer reviewed (Targets: 75% through Special Emphasis panels and 25% through established Study Sections.) Number of Special Emphasis panels used overall at CDC will increase. **FY 99:** CDC will increase the use of external peer review in processes for competitive research awards of funds for projects supported with prevention research funding.	**FY 01:** **FY 00:** **FY 99:** 100% of PRI-funded extramural projects were subject to external peer review. Number of Special Emphasis panels used for CDC funding decisions increased from 5 to 25. **FY98:** Baseline: 5 Special Emphasis Panels.	Page 215

Performance Measure	Target	Actual Performance	Ref.
CDC will promote the use of research advisory groups and multidisciplinary collaborative teams to develop and conduct research.	**FY 01:** Implement goals for use of research advisory groups and collaborative teams on projects, programs, and priorities. **FY 00**: Establish goals for use of research advisory groups and collaborative teams on projects, programs, and priorities. Use results of FY 99 research advisory ("infrastructure") projects to inform directions for future extramural research partnerships and programs. **FY 99:** CDC will promote the use of research advisory groups within the agency.	**FY 01:** **FY 00:** **FY 99:** PRI funds will be made available for external assessment and review and advisory projects in 8 CIOs and ATSDR.	Page 215

Performance Measure	Target	Actual Performance	Ref.
CDC continues to support a subcommittee for extramural research chartered through the CDC Advisory Committee.	**FY 01:** CDC continues to support a subcommittee for extramural research chartered through the CDC Advisory Committee with meetings at least twice in FY 2001.	**FY 01:**	Page 215
	FY 00: CDC continues to support a working group for extramural research chartered through the CDC Advisory Committee with at least two meetings in FY 2000. Implement procedures to charter a working group as a prevention research subcommittee of CDC Advisory Committee.	**FY 00:**	
	FY 99: CDC continues to support a subcommittee for extramural research chartered through the CDC Advisory Committee.	**FY 99:** Achieved. The actual charter for the subcommittee will be obtained in FY 2000. Until then, a working group of Committee members and key representatives from academic fields will advise the Director.	

Verification/Validation of Performance Measures: Data for these measures will be available from information obtained from CIO program announcements, strategic plans, and Federal Register announcements. Data will be verified using data obtained through site visits with the grants management office and reports to CDC's Committee Management program.

Performance Goal:
Disseminate research findings and other relevant information from prevention research programs to public health practitioners, managed care organizations, and consumer groups.

Performance Measures	Targets	Actual Performance	Ref.
Research findings will be disseminated by investigators receiving PRI funds.	**FY 01:** Implement dissemination tracking system. **FY 00:** Establish dissemination goals for PRI-funded projects and methods for collection of data, including the number of published peer-reviewed studies and the number of products developed and distributed to consumers.	**FY 01:** **FY 00:** **FY 99:** Developed initial design and plan for implementing a website.	Page 215
Distribute information on availability of research findings.	**FY 01:** Increase by 5% the number of hits to website highlighting PRI-funded research projects. **FY 00:** Establish website with highlights of selected PRI-funded studies and linkages to CIOs websites on projects, where available.	**FY 01:** **FY 00:** **FY 99**: Developed initial design and plan for implementing a web site.	Page 215

Verification/Validation of Performance Measures: Data for these measures will be available from grantee applications for new/continuation funds, grantee progress reports and bibliometric studies. Data be verified through site visits and published reports.

Performance Goal: Strengthen the scope and nature of extramural public health research programs.

Performance Measures	Targets	Actual Performance	Ref.
CDC will increase the number of young investigator and public health research training opportunities.	**FY 01:** CDC will increase by 5% the number of career development awards funded by PRI. **FY 00:** CDC will increase by 5% the number of career development awards funded by PRI.	**FY 01:** **FY 00:** **FY 99:** Two (2) extramural projects and 1 "infrastructure" projects funded to support expanded training activities.	Page 215
CDC will expand the scope of public health research to multidisciplinary research efforts, which in turn are able to bridge the gaps between public health practice, public health research, bioethics, and health policy research.	**FY 99:** CDC will expand the scope of public health research to multidisciplinary research efforts, which in turn are able to bridge gaps between public health practice, public health research, bioethics, and health policy research.	**FY 99:** CDC funded projects with multidisciplinary teams of scientists. CDC funded 2 career development awards through Prevention Research Centers. CDC funded a review of existing prevention research training programs to determine gaps and identify specific programs and courses that CDC might support.	Page 215

Verification/Validation of Performance Measures: Data for these measures will be available from program announcements, Federal Register announcements, grantee progress reports, and reports to the CDC Director on CDC-funded training programs. Data will be verified through site visits.

Performance Goal:
Increase collaboration efforts focusing on innovative intervention methods that provide results to state, local and community-based organizations through CDC's Prevention Research Centers Program and prevention research demonstration projects.

Note: Performance measures revised to reflect PRI funding. Prevention Research Centers' performance measures now should be in a separate section of this report.

Performance Measures	Targets	Actual Performance	Ref.

Research communications plan will be developed and implemented to assure rapid diffusion of information on interventions, outcomes, scope and methods to public and private public health organizations. All grantees will be subject to annual assessments of their work to disseminate findings/best practices.	**FY 01:** At least three (3) recommendations related to diffusion of findings will be implemented. **FY 00:** Key recommendations from research communications will be available for review and comment by organizations and other Federal agencies. Project officers will be required to conduct the first annual assessment of grantee dissemination activities and outcomes.	**FY 01:** **FY 00:** **FY 99:** No plan for assessment and review of research dissemination and diffusion activities.	Page 215
CDC will track and analyze diffusion and dissemination activities for all PRI extramural and intramural projects.	**FY 01:** **FY 00:** Initial monitoring of diffusion and dissemination activities will be performed using media monitoring and bibliometric services. This shall provide baseline data for projects funded in FY 1999.	**FY 01:** **FY 00:** Data available from analysis of monitoring reports in late summer 2000.	Page 215
Total Program Funding (Dollars in thousands)	**FY 2001: 14,993** **FY 2000: 15,000** **FY 1999: 14,989**		

Verification/Validation of Performance Measures: Data for these measures will be available from annual inventory of PRI-funded projects; reports from CDC project officers; grantee progress reports; external information systems (media monitoring and bibliographic/metric); and will be verified through interviews with managers.

2.7 Preventive Health and Health Services Block Grant

2.7.1 Program Description, Context and Summary of Performance

This grant provides states with funds for preventive health services, not covered by other grants, to reduce preventable morbidity and mortality and improve quality of life. The Preventive Health and Health Services (PHHS) Block Grant is not a program, and unlike other DHHS block grants which have a programmatic focus, the PHHS Block Grant permits states to choose which programs will receive funding. Because the allowable uses of the funds cover all of the objectives of Healthy People 2000, rape prevention, fluoridation, and emergency medical services, over 60 distinct programs can receive PHHS Block Grant funds. No two states allocate their block grant resources in the same way. No two states provide similar amounts of funding when they fund the same program area.

The issue of measuring the performance of block grants has been addressed by the General Accounting Office (GAO) and others. GAO has examined the subject on numerous occasions, and has contacted CDC to investigate how CDC measures the PHHS Block Grant's performance under GPRA. GAO's inquiry was based on their examination of the feasibility and appropriateness of applying GPRA requirements to block grants across the government.

CDC and its partners have worked for years to develop a means for accountability under the Block Grant. CDC has considered the use of many types of general indicators including life expectancy, years of potential life lost, premature mortality, and disability adjusted life years. CDC has also looked at specific program indicators for those programs which are most commonly funded by the states. Because the states vary widely in the programs they support and the funding given to each program, no single indicator or group of indicators can appropriately capture what the states are doing.

The states are responsible for reporting on a complete range of program data, the uniform data set, for every program supported with Block Grant funds. The uniform data sets (which correspond directly to programs) contain outcome, risk factor, and service delivery data items based on 116 health status outcome objectives contained in Healthy People 2000. The 116 health status objectives constitute a total of 8,432 data items. Beginning in FY 1999, the uniform data sets will also contain GPRA performance measures for those programs which have such measures. The current measure, to increase the proportion of the data reported to CDC annually, reflects the agency's efforts to better capture the accomplishments of each state attributable to block grant funds, while at the same time addressing the most pressing issue with the grant--accountability.

Partnerships and Links to DHHS Strategic Plan

This program activity relates to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans. CDC collaborates with the National Highway and Traffic Safety Administration for accident related data, Health Resources and Services Administration for maternal and child health related data, and the Department of Justice for rape prevention data.

Performance Summary: This grant provides states with funds for preventive health services, not covered by other grants, to reduce preventable morbidity and mortality and improve quality of life. The Preventive Health and Health Services (PHHS) Block Grant is not a program, and unlike other DHHS block grants which have a programmatic focus, the PHHS Block Grant permits states to choose which programs will receive funding. The Block Grant FY 1999 Uniform Data Sets will not be collected until February 1, 2000. The reason for the delay is due to data sources for existing federal and state data are tabulated on a calendar year basis. The PHHS block grant supports all areas contained within Healthy People 2000. This constitutes over 116 health status outcomes within 22 chapters. The top 5 areas which states choose to fund are: cardiovascular disease, health promotion and disease prevention, emergency medical services, injury, and data and surveillance systems.

2.7.2 Goal-by-Goal Presentation of Performance

Performance Goal: Reduce preventable morbidity and mortality and improve quality of life of people within the framework of Healthy People 2000 by improving the assessment capacity of prevention programs.

Performance Measure	Targets	Actual Performance	Ref.
At least 80% of total required data from all programs funded by the Preventive Health and Health Services Block grant will be reported to CDC annually.	**FY 01:** At least 85% of required data. **FY 00:** At least 85% of required data. **FY 99:** At least 80% of required data.	**FY 01:** **FY 00:** **FY 99:** Data available 3/00. **FY 98:** 82% required data. **FY 95:** 77% required data.	Page 111
Total Program Funding (Dollars in thousands)	**FY 2001: 179,250** **FY 2000: 179,329** **FY 1999: 194,927**		

Verification/Validation of Performance Measure: Annual reports will be collected from each program funded in order to verify performance. The Uniform Data Sets are due from each grantee on February 1st of each fiscal year for the prior fiscal year's performance. The Uniform Data Set information will be available after February 1, 2000.

2.8 Injury Prevention and Control

2.8.1 Program Description, Context and Summary of Performance

Injury, the leading cause of death for Americans ages 1 to 44 years, is largely preventable. CDC leads federal efforts to prevent and control injuries with a program that addresses the main causes of death and disability from injury: fires and burns; poisoning; drowning; violence, including homicide and suicide; motor vehicle crashes; and lack of use of bicycle helmet, seat belts, and child restraint seats. Injury has a disproportionate impact on children, youth, and young adults. Every day 60 children die from injury, almost 3 children every hour. Each year over 150,000 Americans die from injuries, and 1 in 3 persons suffers a nonfatal injury. Injuries, one of our most expensive health problems, cost $224 billion per year as a total lifetime cost of injuries sustained. While the CDC and our public and private partners have made tremendous progress in injury prevention and control during the past several years, examples of the magnitude of the injury problem are highlighted below:

- Home fires and falls among older persons cause thousands of deaths and injuries each year and result in high medical costs and property losses;
- Violence continues to result in staggering numbers of lives lost, and frequently this is violence among intimate partners -- each year over 30% of women murdered in the U.S. are killed by a spouse or ex-spouse;
- The rates of homicide and suicide for young Americans, particularly men, are alarmingly higher than for any other Western industrialized nation;
- An estimated 2 million Americans suffer a traumatic brain injury (TBI) each year, of which about 50,000 die and another 50,000 to 70,000 are disabled;

- Approximately 4 million poisonings occur each year costing the health care system approximately $3 billion/year; and

- Each year about 153,000 children receive treatment in hospital emergency departments for bicycle-related head injuries.

Through the National Center for Injury Prevention and Control, CDC provides national leadership for designing programs to prevent premature death and disability and reduce human suffering and medical costs caused by injuries. CDC accomplishes its mission through: extramural and intramural research; developing, evaluating, and implementing prevention programs; assisting state and local health jurisdictions in their efforts to reduce injuries; and conducting prevention activities in partnership with other federal and private-sector agencies. Evaluation of intervention programs is a key component of CDC's overall strategy to discover what works and determine how to deliver programs to the American people.

As the lead federal Center for injury prevention and control NCIPC continues to discover and deliver proven interventions. For example:

- Funded nineteen states to conduct three-year programs aimed at increasing the number of working smoke alarms in homes. During the project period, over 15,000 long life, lithium-powered smoke alarms were distributed and/or installed.

- Funded six states for programs aimed at increasing bicycle helmet use among riders of all ages. Measurable increases in helmet use has resulted from the implementation of this intervention.

- NCIPC and the National Institute of Justice cosponsored a study that identified gaps in our knowledge of violence against women and developed a research agenda to better understand and control the problem. Violence against women research centers are being established.

- Community and school-based efforts to prevent youth violence have been launched, including evaluation of promising violence prevention strategies such as peer mediation and conflict resolution training, mentoring and role playing, and efforts to improve parenting skills.

- Work to prevent suicide among our Nation's elderly and youth continues, including taking steps to establish the first research center focused on suicide prevention.

- Funded fifteen state health departments to conduct TBI surveillance. Data from these surveillance systems will enable NCIPC to estimate the magnitude and severity of TBI nationally and to assist states in developing TBI prevention programs.

- To ensure that data is available to study and improve trauma care, NCIPC is leading a national effort to develop uniform data elements for emergency department records.

- Determine the feasibility of using follow-up registries to link persons with TBI to prevention, medical and social services.

- Improving institutional and community living environments for elderly citizens as a means of reducing the risks and consequences of falls.

Focus of the FY 2001 Performance Plan

The performance measures for injury prevention and control best represent NCIPC's mission to provide leadership in preventing and controlling injuries through research, surveillance, implementation of programs, and communication. Priority areas for the FY 2001 Performance Plan include:

1). Youth violence prevention
2). Intimate partner violence prevention
3). Bicycle helmet usage and head injury prevention
4). Fire-related injury prevention

Links to the DHHS Strategic Plan:
Each of the NCIPC performance objectives and measures are related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans.

2.8.1a Youth Violence Prevention

Violence is a public health problem because of its tremendous impact on the health and well-being of our youth. In 1997, 6,146 young people 15-24 years old were victims of homicide. This amounts to an average of 17 youth homicide victims per day in the US. As the lead agency in injury control, CDC plays a key role in coordinating activities and programs in the Public Health Service to prevent youth violence through it's focus on intervention and evaluation research. Over the last 15 years, CDC has used science to understand the problem of violence in America and to determine what works to prevent it. The public health approach to violence has four major components: 1) description of the problem, 2) identification of risk and protective factors, 3) evaluation of interventions and programs designed to reduce violence, and 4) implementation of promising programs at the community level.

Poverty, discrimination, and lack of opportunities for education and employment are important risk factors for violence and must be addressed as part of any comprehensive solution to youth violence. Strategies for reducing violence should also begin early in life, before young people adopt violent beliefs and behavioral patterns. To determine how to alter these risks and prevent young people from becoming victims or perpetrators of violent behavior, in 1992 CDC began funding projects to evaluate effective interventions for preventing and reducing aggressive behavior among youth. The primary goal of these projects is to determine which interventions are effective in preventing and reducing aggressive and violent behavior. The majority of the projects emphasize primary prevention and are cooperative efforts among schools, health departments and community partners.

Several projects have been funded across the country which have looked at a broad range of promising interventions including peer mediation, conflict resolution training, mentoring, role playing, and efforts to improve parenting skills. These interventions will serve as the framework for developing performance measures aimed at reducing the incidence of youth violence.

Performance Summary: Intervention and evaluation phases of several youth violence prevention projects have ended and final reports are being assessed to determine outcomes across the projects. Some of these have achieved targets for reductions in fighting. Several additional projects are ongoing and will be ending during the coming fiscal year. Three new projects will be implemented this next fiscal year (2000) that build on findings from previous projects. Materials for the Best Practices project have been collected and put into a source book that will be published in the fall of 1999. Plans are being made to disseminate Best Practices materials to key audience segments using multiple mediums, including workshops, over the coming year.

2.8.2a Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence youth violence.

Performance Measures	Targets	Actual Performance	Ref.

Reduce the number of students reporting incidents of physical fighting among program participants in CDC-funded youth violence projects by the year 2000.	**FY 01:** n/a (FY 1999 was the last year for funding this project). **FY 00:** 30% reduction.	 **FY 00:** Data will be available in April 2000. **FY 94:** 50% reduction.	Page 180
Develop best practices protocols for implementation and evaluation of youth violence prevention programs in 1999.	**FY 01:** Provide technical assistance to at least 5 communities in implementing Best Practices. **FY 00:** Disseminate Best Practices protocols to at least one target audience. **FY 99:** Develop best practices protocols for implementation and evaluation of youth violence prevention programs in 1999.	**FY 01:** **FY 00:** **FY 99:** Protocols have been developed and compiled into a Sourcebook of Best Practices.	Page 180
Increase the number of regional best practices workshops and disseminate results of the workshops.	**FY 01:** Develop and test new mechanisms for disseminating Best Practices, such as a website. **FY 00:** 8 workshops	**FY 01:** **FY 00:** **FY 97:** 0 Workshops	Page 180

Verification/Validation of Performance Measures: The *Behavioral Frequency Scales* will be used to verify and validate this performance measure.

Behavioral Frequency Scales: This instrument is used to measure aggressive and delinquent behavior in among program participants in CDC-funded youth violence prevention programs. The inventory includes scales that assess the 30-day frequency of specific delinquent behavior (10 items), violent behaviors (5 items), gateway drug use (6 items), other drug use (4 items). An additional 16 items assess frequency of use for other drugs, concerns about safety, the use of conflict-resolution skills, and the use of the peer mediators. Reliability ranges from .64 to .87. (The Center for the Study and Prevention of Violence, Boulder, Colorado - Peter Tolan & Nancy Guerra).

2.8.1b Violence Against Women

Nearly 2 million American women experienced domestic or sexual violence in 1996: 4,581,714 physical assaults against women were committed by partners and 453, 137 rapes occurred during the preceding 12 months. Over 4,200 women were murdered by someone they knew, and half of those murders were committed by intimate partners. Strong networks of state and local groups have laid the foundation for delivering services and advocating for survivors, with limited Federal support. The Violence Against Women

Act of 1995 increased Federal funding and clearly defined the government's role to support services and provide knowledge for preventing and treating violence against women.

The investment proposed in the FY 2000 and 2001 President's Budget will help provide additional services and leverage resources from state, local, and other supporting organizations. Through additional services in research and communications, the Federal government can develop prevention strategies and tools for improving service delivery and deliver these tools to states and communities across the Nation. Together, practitioners, survivors, and scientists will work to design and carry out research, interpret results, and rapidly disseminate findings.

The problem is difficult to study because there are many barriers to disclosure. Consequently, much remains unknown about the factors that increase or decrease the likelihood that men will behave violently towards women, the factors that endanger women or protect them from violence, and the physical and emotional consequences of such violence for women and their children. Greater knowledge of modifiable factors that are causally related to intimate partner violence, methods of violence, and consequences of such violence will lead to the development of new prevention strategies.

In 1994, the CDC began funding projects to determine how effective specific prevention or intervention programs are in preventing intimate partner violence and sexual assault and how to effectively combine specific prevention or intervention programs to prevent intimate partner violence and sexual assault. The expansion of this program will lead to greater knowledge of modifiable risk factors and consequences associated with the development of effective prevention and intervention strategies for intimate partner violence and sexual assault. Our long-term goal is to, "Reduce the incidence of violence against women." However, this goal may take many years to achieve. In the interim, we know that we need to put into place an ongoing system to monitor the problem, improve the level and scope of prevention and intervention services, provide for evaluating what works and communicating what we know to violence against women service providers, and gain a greater understanding of the social norms that allow violence against women. Our short-term goal is to put surveillance, communications, and evaluation/feedback systems into place that will allow us to reduce the incidence of violence against women over time.

Performance Summary: Projects in three state health departments are progressing well in collecting data on family and intimate violence and in implementing and evaluating interventions; four multifaceted community-based projects are identifying successful methods for delivering family and intimate violence interventions at the community level and determining if these programs can reduce the violence; and fourteen projects are developing and evaluating coordinated community responses and the primary prevention of family and intimate violence. Rape prevention and education activities are taking place in all 50 states and the territories. These activities include educational seminars, the operation of hotlines, training programs for professionals, and the preparation of informational material. The states and territories are better able to address sexual violence, provide more and better services to survivors of sexual assault and rape and to implement prevention and education programs.

The first four goals below will begin in FY 2000. The projects described in the fifth goal will come to a close this September and their final reports were submitted in December, 1999. Therefore, we anticipate data on those projects will be available in March, 2000. With the $11M increase in funding for FY 00, we will 1) provide more services that are culturally appropriate to women in existing and underserved populations, such as ethnic minority populations, rural communities, people with disabilities, and others; and 2) initiate consistent monitoring of the problem at national and state levels through a biannual survey, data linkage health, social service, criminal justice, and state domestic violence and sexual assault sources. These funds will allow us to accomplish FY 00 targets and build capacity for FY 01 targets.

2.8.2b Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence of violence against women.

Performance Measures	Targets	Actual Performance	Ref.
NCIPC will establish a biannual survey of the incidence and prevalence of violence against women by the year 2001.	**FY 01:** Pilot test the survey instrument. **FY 00:** Begin development of a survey instrument.	**FY 01:** **FY 00:** **FY 99:** No ongoing biannual survey in existence.	Page 180
Establish innovative programs to address prevention of violence against women.	**FY 01:** Develop/publish progress report on funded projects with a long-term goal of developing recommendations for key components of successful programs by the year 2005. **FY 00:** Implement and begin evaluation of 2 innovative community-based programs to address violence against women.	**FY 01:** **FY 00:** **FY 99:** No evaluations done to date.	Page 180

Performance Measures	Targets	Actual Performance	Ref.
Establish a research program that addresses the understudied aspects of violence against women .	**FY 01:** Address at least 2 understudied aspects of violence against women identified in the research plan with a long-term goal of translating findings from the research funded for use at the community or program level. **FY 00:** Develop a violence against women research plan and identify potential academic institutions that are committed to conducting violence against women research.	**FY 01:** **FY 00:** **FY 99:** No research plan in place.	Page 180
Establish at least one system for collecting Intimate Partner Violence surveillance data representative of an entire state, by the year 2000. Analyze the surveillance data in 2001 and beyond.	**FY 01:** Develop and pilot the surveillance system. **FY 00:** Identify sources at the state level.	**FY 01:** **FY 00:** **FY 99:** No such system in place.	Page 180
Increase (a) by 5% the number of coalition members' working partnerships, or (b) by 15% the community's knowledge of resources, or (c) by 10% the number of calls to agencies from communities with coordinated community responses on intimate partner violence prevention intervention in at least two communities by the year 2000.	**FY 01:** Increase at least two of the three options. **FY 00:** Increase at least one of the three options.	**FY 01:** **FY 00:** **FY 99:** Data available March 2000.	Page 180
The number of state and community-based intimate partner violence and sexual assault projects will be increased.	**FY 99:** 31 Projects.	**FY 99:** Funded more than 31 projects. **FY 94:** 7 Projects.	Page 180

Verification/Validation of Performance Measure: These programs are supported by the Violent Crime Reduction Trust Fund. Programmatic oversight will be used to verify and validate this performance measure.

2.8.1c Bicycle Helmet Usage and Head Injury Prevention

Bicycling is a common recreational activity and mode of transportation among children. About 27.7 million American children less than 15 years of age ride a bicycle. However, this activity is not without risk. In 1996, an estimated 352,000 such children sought emergency department care for a bicycle-related injury, of which head, facial, and ear injuries accounted for about 30% (107,600).

Among the 254 children killed in 1995 from acute bicycle-related injuries, 154 (61%) were associated with a head injury. Several studies indicate that bicycle helmets can prevent 69-88% of serious head or brain injuries. Despite this, helmet-wearing is not yet a social norm. In a 1994 CDC survey, an estimated 25 percent of children were reported to have always used a helmet in the last month. Universal use of bicycle helmets by children aged 4 through 15 years old would prevent between 135 and 155 deaths, between 39,000 and 45,000 head injuries, and between 18,000 and 55,000 scalp and face injuries annually.

At the Centers for Disease Control and Prevention's National Center for Injury Prevention and Control (NCIPC), the Division of Unintentional Injury Prevention (DUIP) works to prevent these injuries and deaths by developing and disseminating injury control recommendations on bicycle helmets; collaborating with the National Highway Traffic Safety Administration, other federal agencies, private and voluntary agencies to promote helmet use and bicycle safety; and providing cooperative agreements to state health departments to implement and evaluate programs that promote bicycle helmet use. In 1994, CDC began funding programs in nine states to promote helmet use among children within specific communities. Substantial increases in helmet use occurred as a direct result. For example, in Pittsburgh, CA, a community of low socioeconomic status, a comprehensive, multifaceted three-year program resulted in helmet use increasing from 22% to 64% among elementary school children who participated in the program.

Accordingly, DUIP began a second round of state-based bicycle head injury prevention cooperative agreements in FY1998 in five states. Preliminary data indicate further success (see Performance Measures table) below.

Performance Summary: The National Center for Injury Prevention and Control is funding (FY1998 - 2000) demonstration projects in five states (with intense work in 15 communities) through cooperative agreements to implement and pilot-test a variety of strategies (education, outreach activities, helmet provision) for reducing bicycle-related head injuries in children 5-12 years old in CDC-funded project areas The effect of this funding will increase the number of bicycle helmets made available and used by children.

By monitoring bicycle helmet use, NCIPC can indirectly estimate the impact of these programs on the frequency of bicycle-related head injuries. One indication of the seriousness and possible improvement in bicycle-related head injuries is their incidence, which is reflected in the number of emergency department (ED) visits, where treatment would initially be sought. A reduction in the number of ED visits (the first Performance Measure) would indicate a reduction in these types of injuries. Funding of emergency department surveillance data through the CDC support of CPSC's NEISS will begin in FY 00 for the first time, allowing a more direct estimate. The second Performance Measure relates to bicycle helmets which can prevent 69-88% of serious head or brain injuries. Increased helmet use would result in a decline in serious head or brain injuries. NCIPC's program priorities for FY 00 will not include funding for community level bicycle safety activities on a national scale that would result in fewer crashes or injuries.

In cases where head injury is not prevented, we need to understand better the medical and social aspects of disability associated with traumatic brain injury. The goal has been modified to align with program direction. Also, performance measures and targets have been changed so that they are outcome versus process oriented, and representative of the larger program direction. Instead of limiting measures to development of TBI registries, NCIPC is working towards a uniform reporting system for TBI through state health departments. The funding of registries is one element of the reporting system.

2.8.2c Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the number and severity of injuries related to bicycle-related head injuries by increasing the use of bicycle helmets by children in CDC-funded projects.

Performance Measures	Targets	Actual Performance	Ref.
The number of bicycle-related emergency department visits will be reduced by 5% per year from 123,475 in 1995.	**FY 00:** 5% reduction. **FY 99:** 5% reduction.	**FY 00:** **FY 99:** Data will be obtained by June 2000. **FY 95:** 123,475 bicycle-related emergency room visits.	Page 180
Increase the use of bicycle helmets by child bicyclists in CDC-funded project areas.	**FY 01:** Increase use by 25% **FY 00:** Increase use by 25%. **FY 99**: Increase use by 30%.	**FY 01:** **FY 00:** **FY 99:** Data available April 2000. **FY 98:** California +83%. Colorado +16% Florida + 3% Oklahoma+214% Rhode Is. +15%	Page 180

Performance Goal: Provide quality data for public health programs to determine the medical and social impact associated with traumatic brain injury (TBI). These data can also be used for prevention program planning.

Performance Measures	Targets	Actual Performance	Ref.
Develop a TBI uniform reporting system with State health departments and determine the incidence and prevalence of TBI as instructed by Congress. Report information on uses of State TBI surveillance and follow-up registries data and disseminate information on TBI trends.	**FY 01:** Use State surveillance and follow registries data to disseminate information of TBI trends. **FY 00:** Disseminate a report on the uses of State TBI surveillance data and report the incidence and prevalence of TBI. **FY 99:** The number of population-based TBI follow-up registries will be increased from 1 in FY 1997 to 2 by FY 1999.	**FY 01:** **FY 00:** **FY 99:** Funding provided for: a) two follow-up registries in Colorado and South Carolina, and b) 15 State TBI systems. TBI uniform reporting system formed. **FY 98:** 1 TBI follow-up registry. 15 State TBI surveillance systems.	Page 180

Performance Measures	Targets	Actual Performance	Ref.
Implement CDC guidelines for design and use of TBI registries in 2 states by 2004. Report outcomes associated with TBI.	**FY 01:** Implement an interview instrument for follow-up of persons with TBI. Disseminate information on the outcomes associated with TBI disability.	**FY 01:**	Page 180
	FY 00: Disseminate the TBI and Public Health Report that includes recommendations on the use of registries for providing information to persons needing services. Disseminate the TBI brochure.	**FY 00:**	
	FY 99: Guidelines for the use of population-based registries for collecting follow-up data on disabilities among persons with TBI will be developed by 2002.	**FY 99:** 0 Guidelines. Information on TBI surveillance activities in 33 states were reviewed to determine if they provide follow-up to individuals identified in their surveillance systems. Twelve states report they use their systems to identify TBI survivors to provide information about services. **FY 98:** 0 guidelines.	

Verification/Validation of Performance Measures: The Youth Risk Behavior Surveillance System, National Hospital Discharge Survey, National Electronic Injury Surveillance System, and National Health Interview Survey will be used to verify and validate these performance measures.

Youth Risk Behavior Surveillance System: See Appendix A.2.
The purpose of the YRBSS is to provide a framework that will: 1) focus the nation on risk behaviors among youth causing the most important health problems; 2) assess how risk behaviors change over time; and 3) provide comparable national, state, and local data. (National Center for Chronic Disease Prevention and Health Promotion, CDC)

National Hospital Discharge Survey: See Appendix A.2

The National Electronic Injury Surveillance System (NEISS): The system is comprised of a sample of hospitals that are statistically representative of hospital emergency rooms nationwide. From the data collected, estimates can be made of the numbers of injuries associated with consumer products and treated in hospital emergency departments. Data is collected on a broad range of injury-related issues, covering hundreds of product categories, and provides national estimates of the number and severity of

product-related injuries. (Consumer Product Safety Commission).

National Health Interview Survey: See Appendix A.2.
The National Health Interview Survey (NHIS) is the principal source of information on the health of the civilian noninstitutionalized population of the United States and is one of the major data collection programs of the National Center for Health Statistics (NCHS). NHIS data are used widely throughout the Department of Health and Human Services (DHHS) to monitor trends in illness and disability and to track progress toward achieving national health objectives. The data are also used by the public health research community for epidemiologic and policy analysis of such timely issues as characterizing those with various health problems, determining barriers to accessing and using appropriate health care, and evaluating federal health programs. (National Center for Health Statistics, CDC)

2.8.1d Fire-Related Injury Prevention

In 1997, there were an estimated 400,000 home fires in the U.S., which killed 3,360 individuals (1.1/100,000) and injured an additional 18,000 other people. Direct property damage caused by these fires exceeded $4.6 billion.

Residential fire deaths occur disproportionately in the southeastern states. They also occur disproportionately during the winter months of December-February, a period during which more than one-third of home fires occur, compared to one-sixth in the summer months of June-August. Many subgroups within the population remain highly vulnerable to fire morbidity and mortality. The rate of death due to fire is higher among the poor, minorities, children under age 5, adults over age 65, low-income communities in remote rural areas or in poor urban communities, and among individuals living in manufactured homes built before 1976, when the U.S. Department of Housing and Urban Development construction safety standards became effective. Other risk factors for fire-related deaths include: inoperative smoke detectors, careless smoking, abuse of alcohol or other drugs, incorrect use of alternative heating sources including usage of devices inappropriate or insufficient for the space to be heated, inadequate supervision of children, and insufficient fire safety education.

The majority of fire-related fatalities occur in fires that start at night while occupants are asleep, a time when effective detection and alerting systems are of special importance. Operable smoke alarms on every level provide the residents of a burning home with sufficient advance warning for escape from nearly all types of fires. If a fire occurs, homes with functional smoke alarms are half as likely to have a death occur as homes without smoke alarms. As a result, operable residential smoke alarms can be highly effective in preventing fire-related deaths. It is important to understand that any smoke alarm - whether ionization or photoelectric, AC or battery powered - will offer adequate warning for escape, provided that the alarm is listed by an independent testing laboratory and is properly installed and maintained. An estimated 94% of U.S. households have at least one smoke alarm; however approximately 1/4 of these alarms are nonfunctional due to battery removal (often due to nuisance alarms from cooking, etc.), or non-replacement of 9V battery each year. Through a Small Business Innovative Research project, CDC assisted in the development of a smoke alarm with a 10 year lithium battery which should promote continued fire protection over a longer period of time. These alarms are also equipped with a hush button feature to discourage disassembly/removal do to nuisance alarms.

CDC's Division of Unintentional Injury Prevention (DUIP) works to prevent these needless deaths by conducting, coordinating, and funding fire and burn prevention research and interventions at the state, local, and community levels, and collaborates with organizations such as the U.S. Consumer Product Safety Commission, U.S. Fire Administration, other federal agencies, private and voluntary agencies on developing recommendations for conducting and evaluating smoke alarm installation programs.

In 1994, CDC began funding programs to prevent fire-related injuries through the distribution and installation of smoke alarms in homes in high-risk communities that do not have adequate smoke alarm coverage. Measurable success has resulted from the implementation of these interventions. For example:

- To date, over 20,000 long life, lithium-powered smoke alarms have been distributed and/or installed

through this program.

These successes are the basis for developing performance measures aimed at reducing incidence of fire-related injuries.

Performance Summary: The National Center for Injury Prevention and Control provides funding (FY 1998 - FY 2000) to five demonstration states to compare two strategies for increasing the prevalence of functional smoke alarms in high risk households, as well as to provide fire safety education in these homes. The objective is to determine the most effective strategy for increasing smoke alarm use/maintenance in U.S. households.

Additionally, the Center funds (FY 1999 - FY 2001) 14 states to conduct smoke alarm installation programs coupled with fire safety education in at least 2 communities (each project year) at high risk for residential fire fatalities. Projects will work with local health departments, fire service personnel, and other community based groups in implementing these programs at the community level. Each of these projects have chosen to install lithium battery-powered smoke alarms. The objective of these programs is to increase the proportion of U.S. households with functional smoke alarms, particularly those at highest risk for fire fatalities/injuries, such as households with children under 5 years and/or older adults.

2.8.2d Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence of fire-related injuries by increasing the percent of residential dwellings that have at least one functional smoke alarm on each habitable floor in CDC-funded projects.

Performance Measures	Targets	Actual Performance	Ref.
The incidence of residential fire-related deaths will be reduced.	**FY 01:** 1.1 per 100,000. **FY 00:** 1.1 per 100,000. **FY 99:** 1.1 per 100,000.	**FY 01:** **FY 00:** **FY 99:** Data will be available early in FY 2000. **FY 97:** 1.1 per 100,000. **FY 94:** 1.4 per 100,000.	Page 180

Performance Measure	Target	Actual Performance	Ref.
The proportion of homes with at least one smoke detector on each habitable floor will be increased in 2000 in CDC-funded projects. *(This data source has changed from the one-time CPSC Smoke Detector Survey to the annual National Health Interview Survey).	**FY 01:** 65% homes with smoke detectors on each habitable floor. **FY 00:** 60% homes with smoke detectors on each habitable floor. ***FY 99:** The proportion of homes with at least one smoke detector will be increased from 80% in 1993 to 88% in 1999.	**FY 01:** **FY 00:** ***FY 99:** Data will be available September 2000. **FY 93:** 52% homes with smoke detectors on each habitable floor. 80% home with at least one smoke detector (source is one-time CPSC survey).	Page 180
Recommendations for conducting and evaluating smoke detector promotion programs will be published.	**FY 01:** Recommendations will be published and disseminated. **FY 00:** Recommendations will be published. **FY 99:** Recommendations will be developed for constituent review.	**FY 01:** **FY 00:**. **FY 99:** Achieved: Draft recommendations prepared.	Page 180

Verification/Validation of Performance Measures: The National Vital Statistics System, National Health Interview Survey, and the Consumer Product Safety Commission will be used to verify and validate these performance measures.

National Vital Statistics System: The National Vital Statistics System is responsible for the Nation's official vital statistics. These vital statistics are provided through state-operated registration systems. The registration of vital events--births, deaths, marriages, divorces, fetal deaths, and induced terminations of pregnancy -- is a state function. However, standard forms for the collection of the data and model procedures for the uniform registration of the events are developed and recommended for state use through cooperative activities of the states and the National Center for Health Statistics (NCHS). (National Center for Health Statistics, CDC).

National Health Interview Survey: The National Health Interview Survey (NHIS) is the principal source of information on the health of the civilian noninstitutionalized population of the United States and is one of the major data collection programs of the National Center for Health Statistics (NCHS). NHIS data are used widely throughout the Department of Health and Human Services (DHHS) to monitor trends in illness and disability and to track progress toward achieving national health objectives. The data are also used by the public health research community for epidemiologic and policy analysis of such timely issues as characterizing those with various health problems, determining barriers to accessing and using appropriate health care, and evaluating federal health programs. (National Center for Health Statistics, CDC)

The National Electronic Injury Surveillance System (NEISS): The system is comprised of a sample of hospitals that are statistically representative of hospital emergency rooms nationwide. From the data collected, estimates can be made of the numbers of injuries associated with consumer products and treated in hospital emergency departments. Data is collected on a broad range of injury-related issues, covering hundreds of product categories, and provides national estimates of the number and severity of product-related injuries. (Consumer Product Safety Commission).

2.8.1e Injury Prevention and Control Research

The NCIPC injury prevention and control research program funds and monitors extramural research in three phases of injury control: prevention, acute care, and rehabilitation. The program also funds research in the two major disciplines used in injury control research: biomechanics and epidemiology. Research supported by the program focuses on the broad-based need to reduce morbidity, disability, death, and costs associated with injury. The research program classifies injuries as intentional, unintentional, or occupational:

- Intentional injuries result from interpersonal, or self-inflicted, violence and include homicide, assaults, suicide attempts, elder and child abuse, domestic violence and rape;
- Unintentional injuries include those that result from such causes as motor vehicle crashes, falls, fires, poisonings, and drownings;
- Occupational injuries occur at the work site and include unintentional as well as intentional trauma.

NCIPC's extramural research program supports individual, investigator-initiated research that is targeted to a specific set of research questions. The program funds ten injury control research centers or "Centers of Excellence," two specialized prevention research centers, which address suicide and violence against women, as well as individual research grants and small business Innovative Research grants.

Performance Summary: The program supports a productive and relevant research portfolio and uses an extramural process that is both credible and transparent. This is achieved through the use of a peer review approach, referred to as the "dual review system, " which is based on two sequential levels of review. These two levels of review are conducted by the Injury Research Grant Review Committee (IRGRC) and the Advisory Committee for Injury Prevention and Control (ACIPC). The IRGRC is composed of experts in injury-related scientific disciplines or current research areas that enables their evaluation of the scientific and technical merits of grant applications, and is chartered specifically for grant application review. The ACIPC is composed of both scientific and lay representatives who are noted for their expertise, interest, or activity in matters related to the mission of the NCIPC. ACIPC recommendations are based not only on considerations of scientific merit, as judged by the IRGRC, but also geographic balance and the relevance of the proposed study to NCIPC's programs and priorities. Two cooperative agreements have been awarded to fund specialized prevention research centers which address suicide and violence against women. These cooperative agreements were awarded on a competitive basis but not through the peer review process.

2.8.2e Goal-by-Goal Presentation of Performance

Performance Goal: Increase external input on the research priorities, policies, and procedures related to the extramural research supported by NCIPC.

Performance Measures	Target	Actual Performance	Ref.
Increase efficiency and effectiveness of research investments by employing competitive peer-review processes.	**FY 01:** 2 peer reviews.	**FY 01:** **FY 00:** Baseline: 0 peer reviews.	Page 180
Total Program Funding (Dollars in thousands)	**FY 2001: 95,095** **FY 2000: 90,138** **FY 1999: 63,500**		

Validation /Verification: The following data collection sources will be utilized to verify baselines and to track performance measures.

2.9 Epidemic Services

2.9.1a Program Description, Context and Performance Summary

The scope of CDC's epidemic services extends to acute and chronic infectious and noninfectious diseases, injuries, nutrition, reproductive health, environmental health, and occupational problems. When state, local, or foreign health authorities request help in controlling an epidemic or solving other health problems, CDC dispatches skilled epidemiologists from the Epidemic Intelligence Service to investigate and resolve the problem. As part of CDC's efforts to implement the Healthy People 2000/2010 National Prevention Objectives, CDC conducts a program of scientific inquiry and applied research to solve public health problems and supports selected programs to assist states, health organizations, and others in the health field to achieve prevention goals. Resolving public health problems rapidly ensures cost effective health care and enhances health promotion and disease prevention. Activities involving rapid solutions range from local identification of food poisoning to national or even international investigations of deadly diseases, environmental hazards, or natural disasters. CDC efforts will continue to provide the U.S. with a trained professional staff able to investigate health problems affecting the U.S. population. Changing needs in public health require that the public health workforce in states, counties, cities, and other countries be trained to keep abreast of effective techniques for containing health threats.

Epidemic services cover a vast spectrum of activities: preventing and controlling epidemics and protecting the U.S. population from public health crises including biological and chemical emergencies; developing, operating, and maintaining surveillance systems, analyzing data, and responding to public health problems; training public health epidemiologists; developing leadership and management skills of public health officials at the federal, state, and local levels; carrying out the quarantine program as required by regulations; and publishing the *Morbidity and Mortality Weekly Report*, CDC's main channel for communicating public health news about disease outbreaks and trends in health and health behavior.

FY 1999 Performance Summary: In FY 1998, the accomplishments of the *Morbidity and Mortality Weekly Report (MMWR)* series of publications through multiple channels included publishing 175 *MMWR* weekly articles, 21 Recommendations and Reports, 9 CDC Surveillance Summaries and 16 articles highlighting key health events such as Child Health Month, World AIDS Day, World No-Tobacco Day, National Arthritis Month,

National Breast Cancer Awareness Month, and National Mental Health Month. CDC met its target for FY 1999 goals to enhance the scientific quality and public health applicability of the *MMWR* to communicate public health news about disease outbreaks and trends in health and health behavior by publishing 77 issues of the *MMWR.* The *MMWR* series of publications include Reports and Recommendations, Surveillance Summaries, and the Annual Summary to communicate major public health events to the media, public policy makers and health professionals through multiple media channels - print, television, radio, and the interactive World Wide Web. The FY 1999 issues are available on the interactive CDC Internet Site at http://www2.cdc.gov/mmwr. The lessons learned from the pilot study of multimedia *MMWR* were used to develop a multimedia presentation on *MMWR* for the National HIV testing day. Dissemination of health messages was further enhanced by the creation of a continuing education program for physicians, nurses, and other health professionals to link public health opportunities with the release of scientific information from CDC. In FY 2000, plans include the development of a CDC-wide communications plan to enhance health communications as a vital component of public health strategies in promoting health and preventing disease and injury.

In FY 1999, CDC continued to recognize the need of state health departments to develop public health comprehensive information and surveillance systems. CDC approached this problem systematically by assisting state health departments in developing plans for comprehensive information networks and assisting those states with a plan in implementing their network. CDC has exceeded its target for FY 99 for the number of states with a plan for a comprehensive information network by providing increased technical assistance to those states, making site visit consultations and consulting with state partners at national meetings and conferences. Assessments of state health information technology capacities have provided the data for this measure. CDC met its target in FY 99 for the number of states that have implemented a plan for a comprehensive information network. Beginning in FY 99, this initiative was expanded to address the need of major metropolitan areas for public health sector communications systems to support detection and response to terrorist events with support from the Public Health Response to Terrorism/Bioterrorism activity. This initiative ceases as a free-standing activity effective FY 2000.

In FY 1998, the Epidemic Intelligence Service (EIS) Program coordinated 90 Epidemic Assistance Investigations (Epi-Aids), and over 300 state-based field investigations. Epidemics are prevented and controlled by mobilizing and deploying CDC staff, primarily Epidemic Intelligence Service (EIS) officers, to respond rapidly to disease outbreaks and disaster situations. At the request of public health officials-at the state, national, or international level-CDC provides assistance by participating in epidemiologic field investigations. During these investigations, CDC staff act as consultants to a state or local health department or the health ministry of the host nation, investigating the patterns of disease or injury occurrence, the levels of risk behaviors, the identity of the causative agent, the transmission of the condition of concern, and the impact of preventive interventions. Each year, some requests for assistance are received which do not meet the established criteria or definition of a disease outbreak. Each request is reviewed, and once it is established that the request complies with the criteria, EIS Officers are deployed to aid in the investigation or disaster relief. In FY 1999, CDC exceeded its target of responding to "at least 95 %" of the requests for epidemic assistance from domestic and international partners by responding to 99% of the requests. The requests for which CDC did not respond (1%) were international requests and could not be conducted due to the inability to get country clearance, the lack of funding from international organizations or safety issues. During investigations, CDC staff provide training to public health staff on-site resulting in the ability of state and local staff to manage outbreak investigations without direct CDC assistance. In this event, technical assistance is provided by CDC in resolving outbreaks at the local level. In FY 2001, CDC will continue to conduct activities involving rapid solutions to problems such as local identification of food poisoning to national or even international investigations of deadly diseases, environmental hazards, or natural disasters. To accomplish this, CDC will maintain well trained professionals able to investigate health problems affecting the U.S. population and to achieve prevention goals.

CDC was successful in meeting the established target for completing the second phase of the evaluation of the Epidemic Intelligence Service. Results of the first phase are being implemented resulting in an enhanced capability to respond to disease outbreaks, natural disasters, and other major health hazards. The phrase "Continue to evaluate the impact of selected training programs on practices of laboratories" has been deleted. It was inadvertently included in the previous version. The Epidemiology Program Office does not

work directly with laboratories.

In FY 1999, CDC continually sought to improve health but to do so in economically responsible ways. When human and financial resources are limited, public health efforts must focus on prevention strategies that yield the most benefit for the investment. The prevention effectiveness fellowship and course demonstrates how spending money to prevent disease and injury and promote healthy lifestyles makes good economic sense. Prevention strategies are evaluated on: 1) the health impact of the related disease, injury, or disability on U.S. society; 2) the effectiveness of the prevention strategy; the costs of the disease, injury, or disability; and 3) the cost-effectiveness of the strategy. For instance, some childhood vaccines, save up to $29 in direct medical costs for each dollar spent. Other strategies, such as yearly mammograms, carry a net cost but are considered cost-effective because they provide considerable value in return for the money invested. CDC met its established target for FY 1999 in building expertise to conduct prevention effectiveness studies of public health interventions.

In FY 1999, CDC recognized the need of state and local public health professionals for high quality training. CDC approached this problem through a systematic needs assessment and development of programs to provide up-to-date knowledge and skills using distance-based learning technologies. CDC exceeded its FY 1999 distance learning target by expanding the range of programs offered. Examples include training in public health response to bioterrorism childhood immunization schedules, epidemiology and prevention of vaccine-preventable diseases, and preparing for an influenza pandemic. The number of states served by state and regional development programs exceeded its FY 1999 target because of expansion of currently funded programs.

2.9.2 a Goal-by-Goal Presentation of Performance

Performance Goal: Maximize the distribution and use of scientific information and prevention messages through modern communication technology.

Performance Measures	Targets	Actual Performance	Ref.
Based on established criteria, continue to publish the *Morbidity and Mortality Weekly Reports (MMWR)* series of publications including Reports and Recommendations, Surveillance Summaries, and the Annual Summary to communicate major public health events to the media, public policy makers and health professionals through multiple media channels - print, television, radio, interactive World Wide Web.	**FY 01:** 86 issues. **FY 01**: 81 issues. **FY 99:** 77 issues.	**FY 01:** **FY 00:** **FY 99:** 77 issues published available on on the CDC Internet site at http://www2.cdc.gov/mmwr/	Page 194

Performance Measures	Targets	Actual Performance	Ref.
The *Morbidity and Mortality Weekly Report (MMWR)* will refine communications efforts through an Center-wide communications plan to provide a framework for current activities and maximize communicating public health messages through print and the World Wide Web.	**FY 01:** Plan implemented and enhanced based on CDC communications assessment. **FY 00:** Communications plan developed.	**FY 01:** **FY 00:** **FY 99:** Communications plan under development	Page 194

Performance Goal: Encourage state health departments to develop efficient and comprehensive public health information and surveillance systems by promoting the use of Internet and by focusing on development of standards for communications and data elements.

Performance Measures	Targets	Actual Performance	Ref.
The number of states with a plan for a comprehensive information network will be increased.	. **FY 99:** 18 States.	**FY 99:** 33 states. **FY 97:** 14 States.	Page 194
The number of states who have implemented a comprehensive information network will be increased.	**FY 99:** 2 states.	**FY 99:** 4 states **FY 98:** 0 states.	Page 194

Performance Goal: Efficiently respond to the needs of our public health partners through the provision of epidemiologic assistance.

Performance Measure	Targets	Actual Performance	Ref.
Based upon established criteria for participation, Epidemic Intelligence Service (EIS) officers will respond to at least 95% of the requests for epidemic assistance from domestic and international partners .	**FY 01:** At least 95% response. **FY 00:** At least 95% response. **FY 99:** At least 95% response.	**FY 01:** **FY 00:** **FY 99:** 99% response to requests for epidemic assistance from domestic and international partners	Page 194

Performance Goal: Build expertise within CIOs to conduct prevention effectiveness studies of public health interventions.

Performance Measures	Targets	Actual Performance	Ref.
Increase the number of professional prevention effectiveness staff and fellows.	**FY 01:** 43 Fellows. **FY 00:** 40 Fellows. **FY 99:** 32 Fellows.	**FY 01:** **FY 00:** **FY 99:** 32 Fellows **FY 98:** 24 Fellows.	Page 194
Increase the number of staff in CIOs who can use prevention effectiveness methods.	**FY 01:** Increase by 110 persons. **FY 00:** Increase by 80 persons. **FY 99:** Increase by 80 persons.	**FY 01:** **FY 00:** **FY 99:** 80 CDC personnel participated in the annual Prevention Effectiveness Course. **FY 98:** 60 CDC personnel participated in the annual Prevention Effectiveness Course.	

Performance Goal: As a long term objective, CDC will implement accessible training programs to provide an effective work force for staffing state and local health departments, laboratories, and ministries of health in developing countries. In FY 2001, CDC will:

C Analyze early implementation of the Public Health Prevention Service.
C Evaluate the impact of laboratory training on laboratory practice.
C Increase the number of health service providers participating in distance learning activities.
C Increase the number of state and regional leadership development programs.
C Increase the number of public health professionals trained in management who conduct training in developing countries.

Performance Measure	Target	Actual Performance	Ref.
Provide for an effective workforce for staffing state and local health departments and in other public health related organizations.	**FY 01:** 90% of the first and second classes of the Public Health Prevention Service will remain in public health and 50% will be working in state/local health departments. **FY 00:** 90% of the first class of the Public Health Prevention Service will remain in public health and 50% will be working in state/local health departments.	**FY 01:** **FY 00:** Data available 9/2000. **FY 99:** 50 field assignees.	Page 194
By FY 2001, implement the plan to address needed changes in EIS training methodologies identified in the evaluation study.	**FY 01:** Implement the second phase of the plan to address needed changes in EIS training methodologies identified in the evaluation study. **FY 00:** Develop a plan to address needed changes in training methodologies identified in the 1999 evaluation study. **FY 99:** The second phase of EIS evaluation will be completed and the first phase findings will be implemented.	**FY 01:** **FY 00:** **FY 99:**Second phase of the EIS evaluation has been completed. Results of the first phase are being implemented.	Page 194

Performance Measures	Targets	Actual Performance	Ref.
The annual number of health services providers participating in distance learning activities will be increased.	**FY 01:** 120,000 Distance learning participants. **FY 00:** 115,000 Distance learning participants. **FY 99:** 105,000 Distance learning participants.	**FY 01:** **FY 00:** **FY 99:** 135,000 Distance learning participants **FY 97:** 100,000 Distance learning participants.	Page 194
Evaluation of laboratory training programs conducted by the National Laboratory Training Network.	**FY 01:** The impact of laboratory training on the adoption of improved public health laboratory methods in rabies will be evaluated. **FY 00:** The impact of laboratory training on the adoption of improved public health laboratory methods in food microbiology, tuberculosis identification, and virology will be evaluated. **FY 99:** The impact of laboratory training on the adoption of improved clinical laboratory methods will be evaluated.	**FY 01:** **FY 00:** **FY 99:** Participants from physician office laboratories reported a 71% increase in test result confidence due to training. **FY 92 - 98:** Evaluation of laboratory training programs conducted by the National Laboratory Training Network from 1992-1998.	Page 194
The number of states and regional leadership development programs will be increased.	**FY 01:** 38 states. **FY 00:** 32 states. **FY 99:** 30 states.	**FY 01:** **FY 00:** **FY 99:** 32 states. **FY 97:** 25 states.	Page 194

Performance Measure	Target	Actual Performance	Ref.
The number of public health professionals trained in management who conduct training in developing countries will be increased.	**FY 01:** 178 persons trained. **FY 00:** 160 persons trained. **FY 99:** 142 persons trained.	**FY 01:** **FY 00:** **FY 99:** 144 persons trained. **FY 97:** 86 persons trained.	Page 194

Verification/Validation of Performance Measures: Performance for objective one will be monitored through routine evaluation of data collected. Data for objective two will be validated by informal feedback from state partners, an Internet tracking system, and reports released by the CDC Health Information and Surveillance Systems Board (HISSB). All other data are monitored using unpublished and published studies and recommendations.

2.10 Environmental and Occupational Health

2.10.1 Program Description, Context, and Summary of Performance

The relationship between exposure to toxic substances in the environment and environmental diseases is a major public health concern. CDC examines health outcomes that result from interactions between people's unique biologic, social, and lifestyle factors and their physical, chemical, and developmental environment. Significant premature death and avoidable illness and disability are caused by personal behaviors, genetic predisposition, and exposure to toxic substances and natural and technological disasters. CDC's environmental health sciences laboratory develops tests of human exposure to toxicants (biomonitoring); and, when combined with epidemiologic studies, these tests provide vital information about how exposures contribute to serious human disease. In addition to gathering and analyzing human data on environmental exposures and disease, CDC leads efforts to translate scientific data into practical and cost-effective public health actions. This work by the National Center for Environmental Health complements that of the National Institute for Occupational Safety and Health (NIOSH) at CDC, which conducts research and provides national and world leadership in preventing work-related illness, death, and disability, described below under Occupational Health.

Human exposure to toxic substances causes numerous diseases, including cancer, birth defects, respiratory disease, renal disease, and neurologic disease. Many scientists estimate that about two-thirds of all cancers result from environmental exposure, but much better data are needed to improve this estimate and determine which exposures cause cancer and other diseases. Children and the economically disadvantaged are typically at higher risk for disease and death from exposure to toxicants. The single most serious impediment to assessing human risk and preventing death and disease caused by exposure to toxic substances is lack of valid human exposure data. CDC must continually conduct prevention research to identify, test, and evaluate disease prevention strategies. Some examples of critical environmental disease prevention topics are: pesticides exposure, drinking water and health; air pollution and asthma; US-Mexico Border issues; emergency response to technological and natural disasters, and veterans' health issues.

2.10.1a Environmental Health Laboratory Sciences--Biomonitoring

To protect public health from death and disease that result from exposure to toxic substances, CDC and other health officials critically need accurate and reliable **human** exposure information. Potential exposure to over 10 million different compounds is possible, but scant information exists about a number of these substances or the sequelae associated with exposure to them. Health officials cannot determine the seriousness of environmental incidents without accurate and valid **human** exposure information. With poor

exposure information, health officials can declare dangerous situations as safe--threatening the health of the public, or declare safe situations as dangerous--causing undue alarm and wasting large sums of money on needless remediation efforts.

Although the performance measures selected for this program are not outcome measures in terms of being a final health outcome, they are important outcomes in terms of addressing a major public health gap. The current inability to effectively measure toxic substances in humans limits our ability to deal effectively with environmental emergencies and compromises the results of studies that are looking for causes of environmental diseases. The availability of these methods for assessing human exposure would enable CDC to better respond to emergency situations when people are sick or dying from unknown causes, effectively implement and evaluate environmental disease prevention programs and measure trends in exposure of the U. S. population to toxic substances. Without these methods, we will be unable to effectively prevent environmental disease. Application of these methods to measure toxic exposures in the U.S. population will lead to the development and dissemination of a national exposure report card. Such information has never before been available.

CDC has unique capabilities in the area of biomonitoring. Although EPA measures environmental hazards in air, soil, and water, it does not make such measurements in people. NIEHS conducts research involving animal toxicology, but relies on CDC's environmental health lab for human exposure assessments. In addition, several other institutes of NIH (including NCI, and NHLBI) utilize CDC's environmental laboratory for human measurements. CDC partners with the Association of Public Health Laboratories on a variety of projects; however, very few of APHL's member labs have capability in the methods employed in CDC's lab. In many areas, CDC is the only place that has the capabilities to develop and effectively apply complex laboratory methods to the study of environmental disease.

Partnerships and Links to DHHS Strategic Plan
This performance measure is related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and DHHS Goal 5: Improve public health systems.

Performance Summary: CDC has achieved the FY 1999 target on methods to measure human exposure to toxic substances. CDC will release the first National Exposure Report Card by September 2000. CDC has adjusted the individual annual target for the number of new substances used to monitor human exposure to 8 new substances during FY 2000 and 12 new substances during FY 2001. However, CDC anticipates meeting the overall performance goal of 40 new substances by 2002.

2.10.2a Goal-by-Goal Presentation of Performance

Performance Goal: Increase the number of toxic substances that can be measured by CDC's environmental health laboratory to 40 new substances by the year 2002 from a baseline of 200 in 1997, so state-of-the-art laboratory methods can be employed to prevent avoidable environmental disease.

Performance Measure	Targets	Actual Performance	Ref.
Methods to measure human exposure to toxic substances will be developed.	**FY 01:** 12 new substances. **FY 00:** 8 new substances. **FY 99:** 8 new substances.	**FY 01:** **FY 00:** **FY 99:** 8 new substances **FY 97:** 200 toxic substances.	Page 153

Performance Goal: Increase assessment of the U.S. population's exposure to priority toxic substances so that a representative sample of 1,500 Americans can be tested for exposure to 100 toxic substances.

Performance Measure	Target	Actual Performance	Ref.
Population exposure will be assessed for priority toxic substances and a national report card on the results will be issued	**FY 01:** 50 toxic substances. **FY 00:** 25 toxic substances.	**FY 01:** **FY 00:** **FY 98:** Baseline 0	Page 153

Verification/Validation of Performance Measures: The development of new methods requires certification under the Clinical Laboratory Improvements Act of 1988 (CLIA) and data systems already are in place to monitor CDC's performance under CLIA (please see Appendix A.2 for further details). CDC also conducts internal quality assurance procedures to confirm the results and assure their validity. The national report card will use CLIA -approved methods for the priority toxic substances to be measured as a part of the NHANES surveys. The use of the CLIA-approved methods will be verified by both internal quality assurance personnel and senior staff. The sample size and control mechanisms for the national report card are established as part of NHANES (see Appendix A.2 for further details).

2.10.1b Birth Defects Prevention

Birth defects occur in three out of every hundred births in the United States. CDC is actively engaged in efforts to monitor trends in birth defects over time, determine what causes birth defects, develop prevention strategies and evaluate their effectiveness. Unfortunately, because most of the causes of birth defects remain unknown, prevention is not yet possible. This is the main reason that reductions in the incidence of specific birth defects cannot be used to measure performance. Other factors that hamper efforts to measure progress toward reducing the number of birth defects include the fact that some birth defects and would require a large number of births to be monitored in order to draw conclusions about changes in the rates. In addition, environmental and behavioral factors may vary geographically, therefore, state-based information is very important. CDC has chosen to emphasize the on-going efforts to increase the number of states (and thereby the number of births) that are monitored through high quality birth defect surveillance systems. The Network being developed is designed to share data resultingin more information available about rare defects and geographic variations.
Developing a network of state-based birth defect surveillance programs that are sharing data regarding cases of birth defects that occur in states will improve CDC's ability to monitor trends and geographic variations in birth defect rates across the country. This will result in an enhanced ability to measure performance of birth defect prevention programs, including the national folic acid awareness and education program. The Network is developing standards regarding minimum data sets and criteria for membership, and this will enable us to track our progress at minimal cost.

This type of collaborative data sharing has resulted in breakthroughs regarding possible prevention

strategies, and has led to major prevention efforts such as those directed at increasing women's consumption of folic acid to prevent the serious and common birth defects spina bifida and anencephaly. This exciting prevention opportunity is highlighted in CDC's second birth defects prevention objective, and as more birth defects prevention breakthroughs are made, new objectives will be added.

The reduction of folic acid-preventable spina bifida and anencephaly as a result of women's increased consumption of folic acid is the focus of CDC's second goal for its Birth Defects Prevention Program. However, we do not have the ability to measure decreases in the rate of spina bifida and anencephaly on a national basis. However, we can measure changes in the number of women consuming sufficient folic acid through nationally representative biennial surveys. These surveys were implemented to assess the performance of our efforts, prior to the development of our GPRA measures. The surveys were being conducted every other year. The current cost of the annual surveys is about $150,000 per year. The development of the National Birth Defects Prevention Network (another CDC GPRA objective) will enable us, in the future, to monitor trends in the incidence of spina bifida and anencephaly.

Partnerships and Links to DHHS Strategic Plan
These performance objectives are related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and DHHS Goal 5: Improve public health systems.

Performance Summary: CDC's efforts at preventing birth defects has been moving forward during FY 1999. The National Birth Defects Prevention Network achieved the designated target for FY 1999.

Status on the percentage of women of reproductive age consuming 400 micrograms of folic acid daily is not currently available, though data for FY 1998 demonstrates that progress is being made toward the target. Given the current funding level, CDC has invested in the conduct of high quality health communication research, rather than in the direct implementation of an educational campaign. This research is being shared with our partners to allow them to conduct an educational campaign on the health benefits of folic acid. This partnership, which includes a diverse group of over thirty national organizations, may not be able to adequately educate individuals to meet the target for future years. When FY 2000 survey data becomes available , CDC will review the established targets and make adjustments as needed.

2.10.2b Goal-by-Goal Presentation of Performance

Performance Goal: By 2002, the National Birth Defects Prevention Network will include 38 states.

Performance Measure	Targets	Actual Performance	Ref.
By 2002, 38 states will participate in the National Birth Defects Prevention Network.	**FY 01:** 38 states **FY 00:** 35 states. **FY 99:** 30 states.	**FY 01:** **FY 00:** **FY 99:** 30 states. **FY 97:** 21 states.	Page 153

Performance Goal: Increase the number of women who consume 400 micrograms of folic acid from a baseline of 25% in 1996 to 50% by 2002.

Performance Measure	Targets	Actual Performance	Ref.
Increase the percent of women of reproductive age who will be consuming 400 micrograms of folic acid.	**FY 01:** 45% women consuming folic acid. **FY 00:** 40% women consuming folic acid. **FY 99:** 35% women consuming folic acid.	**FY 01:** **FY 00:** **FY 99:**.No data available for FY 99, next data set will be available for FY 00 **FY 98:** 32% women consuming folic acid. **FY 96:** 25% women consuming folic acid.	Page 153

Verification/Validation of Performance Measure: The accomplishment of these performance measures are verified by counting the number of states who agree to data standards set by the National Birth Defect Prevention Network. These data are regularly reviewed by CDC epidemiologists to ensure that it conforms with accepted epidemiological standards. Additionally, some states participate in the network through cooperative agreements with CDC. The information from these states is regularly reviewed by project officers internal to CDC to ensure that they are in compliance with the individual requirements of the cooperative agreement.

Data related to the consumption of folic acid among women of reproductive age is collected under contract with the March of Dimes Birth Defects Foundation. The data is collected using a pool of respondents that is statistically significant and large enough to allow for appropriate generalization of the data to a national level. The results of the survey are reviewed internally by CDC personnel to ensure that appropriate statistical procedures have been applied. Currently, the survey is conducted every two years with the most recent survey being conducted in FY 1998 and the next survey scheduled to be completed in FY 2000.

2.10.1c Asthma

Deaths from asthma increased by 80% the past 10 years, and children are the most vulnerable group. Recent medical advances alone have not been able to counter this threat. With existing resources, CDC is working to develop cost effective environmental interventions that, in conjunction with improved medical management, will reduce the number of asthma exacerbations and improve the quality of life of people with asthma. Surveillance will be an integral part of any state programs so that efforts to reverse the current upward trends in asthma can be monitored and progress assessed.

In spite of the fact that improved medical management in combination with environmental interventions have been shown to be effective in preventing asthma attacks, it is clear that we will not meet our Healthy People 2000 objectives related to reductions in hospitalizations related to asthma. The minimal national data (which is neither complete, nor timely) that are available indicate that rates of asthma among both children and adults are increasing. Outcome goals are not currently feasible, because there is no suitable system for measurement since asthma programs do not currently exist. However, a core activity of state-based asthma prevention programs would be to establish surveillance systems that would allow us to track our progress as we attempt to reverse these worrisome trends. Asthma points-of-contact were established in all 50 states during FY 1998. The cost of tracking our progress will be minimal, since grants management tracking systems are already in place.

Partnerships and Links to DHHS Strategic Plan
This performance objective is related to DHHS Goal 1: Reduce major threats to the health and productivity

of all Americans.

Performance Summary: Due to internal funding constraints during FY 1999 CDC has been able to implement core asthma programs in 4 states. In an effort to assist states in moving toward the establishment of core asthma programs, CDC has been able to develop a series of questions for the Behavioral Risk Factor Surveillance Survey (BRFSS) related to adult asthma (for further information on BRFSS please refer to Appendix A.2). These questions are not a substitute for establishing a core asthma program in each state, but they will allow participating states to develop critical state-specific prevalence data on adult asthma.

2.10.2c Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence of childhood asthma attacks through implementation of comprehensive asthma prevention programs in states.

Performance Measure	Targets	Actual Performance	Ref.
States will have implemented core asthma programs.	**FY 01:** 12 states. **FY 00:** 8 states. **FY 99:** 6 states.	**FY 01:** **FY 00:** **FY 99:** 4 states. **FY 97:** 0 states.	Page 153

Verification and Validation of Performance Measure: Verification of the data related to the number of core asthma programs in place is based on the required reporting under the cooperative agreements between CDC and the selected states. CDC project officers will verify that the individual requirements under the cooperative agreements are being fulfilled by the states through the routine monitoring of the grants process. Additionally, all statistical and surveillance data will be reviewed internally by epidemiologists at CDC to ensure that appropriate statistical and epidemiological methods have been applied.

2.10.1d Disability Prevention

CDC's Office on Disability and Health focuses on the prevention of secondary conditions and health promotion among persons with disabilities. Emphasis is on scientific support for surveillance of disabilities, cost-effectiveness of prevention strategies focused on secondary conditions and health promotion activities, and identifying risk and protective factors for secondary conditions. This is implemented through providing funds to states for public health activities addressing the needs of persons with disabilities. The program emphasizes secondary conditions which cross diagnostic categories, and focus on broader disability areas. This is a relatively new approach to prevention programs for CDC, which historically focused on the primary prevention of disabling conditions. The program is focusing on activities that will enhance the ability to measure performance in this new area. This performance measure reflects a first step toward building a data collection system that will enable CDC to monitor trends related to health and quality of life among people with disabilities.

Partnerships and Links to DHHS Strategic Plan
This objective is closely linked to DHHS Goal 5: Improve public health systems.

Performance Summary: Efforts to expand the number of states who participate in a disability module of a national survey have been highly successful during FY 1999. Through the combined efforts of CDC and our state partners, we have been able to surpass the target for the number of participating states. CDC funded 14 states and the other 2 states participated in an unfunded capacity.

2.10.2d Goal-by-Goal Presentation of Performance

Performance Goal: By 2002, a national network will exist that will provide all states with better access to data on disabilities for their use in analyzing the needs of people with disabling conditions.

Performance Measure	Targets	Actual Performance	Ref.
The number of states who have begun using the Behavioral Risk Factor Surveillance Survey (BRFSS) disability module will be increased to 14.	**FY 01:** 14 states. **FY 00:** 14 states. **FY 99:** 15 states.	**FY 01:** **FY 00:** **FY 99:** 16 states. **FY 97:** 0 states.	Page 153

Verification/Validation of Performance Measures: Currently, there is not a data collection system in place that could be used to measure outcomesthat focus on actual improvements in the quality of life of people with disabling conditions. As a result, the performance goal that has been selected for this program involves the nationwide implementation of a data collection system by the year 2002. We believe that, until the nationwide data collection system is available that BRFSS data will continue to provide useful information. However, this represents a change in direction for CDC's disabilities program, which previously focused on preventing primary disabilities. As part of ongoing strategic planning efforts, the program has refocused its efforts on promoting health and improving quality of life among people with disabilities. 1997 is the first year that CDC has funded states to address these issues. As a result, the program is focusing on activities that will enhance the ability to measure performance in this new area. Tracking of the implementation of this data collection system will be accomplished through a requirement that all CDC state grantees report on whether they are utilizing the module. The cost of this data collection effort will be minimal.

Results from the disability module of the Behavioral Risk Factor Surveillance Survey (BRFSS) have been found to be less than adequate for the intended purposes. However, the survey does provide state data not previously available. In the future, if "disability status" as a demographic-like variable is included annually in the BRFSS, the survey could provide more useful data. CDC is currently developing a more thorough and direct system to measure national disability information which upon development may replace the existing performance measure. It is anticipated that this system will begin implementation prior to FY 2002. In the interim the BRFSS disability module will be maintained in the 14 states that CDC currently provides financial support, but additional states will not be added by CDC.

This performance measure will be verified by reviews of the reports required by cooperative agreement recipients. CDC project officers will verify on a regular basis that the individual requirements under the agreement have been completed. Based on this review, CDC will be able to verify which states are currently using the disability module.

2.10.1e Lead Poisoning

Childhood lead poisoning, a major preventable environmental health problem in the U.S., is estimated to cost society billions of dollars. Exposure to lead is a well-recognized cause of serious cognitive, learning, and behavioral problems in children. Progress continues to be made in reducing childhood lead poisoning, but many children nationwide, especially those who live in large central cities in older housing, continue to be heavily exposed to lead from lead-based paint, dust, and soil. The burden of lead poisoning is not equally distributed among children in the U.S. The prevalence of elevated blood lead levels (BLL) in African American children living in large inner cities is around 36 percent, and the prevalence among white, suburban children who are not poor is around 4 percent. Screening and other lead poisoning prevention approaches are being intensified among children in high-risk populations. In order to more effectively focus screening and follow up efforts on high-risk children, CDC has updated its screening guidelines, based on new scientific and practical information. This will result in better targeting of prevention efforts and enable prevention programs to use their limited resources more cost-effectively. CDC staff are expanding technical assistance, consultation, and training to support state and local health officials and their prevention

programs.

The goal of the CDC program in childhood lead poisoning prevention is to eliminate childhood lead poisoning as a major public health problem within the next two decades. The challenge is to select a mix of appropriate and complementary strategies for eliminating childhood lead poisoning in populations with different lead poisoning problems, while strengthening childhood lead poisoning prevention efforts in populations that are at highest risk.

This long-term objective is supported by outcome-based performance measures that capture the essence of the childhood lead poisoning prevention program, which seeks to eliminate childhood lead poisoning by the year 2011. We believe that an annual 5% decline in childhood blood lead levels is achievable. However, as we get closer to meeting our goal of eliminating this public health problem, we may encounter greater challenges that will result in slower declines. We are currently engaged in efforts to anticipate and address these challenges through a greater emphasis on primary prevention and targeted screening approaches. However, the National Health and Nutrition Examination Survey (NHANES) which provides the data to measure our progress, is a periodic survey that is dependent on continued congressional appropriations. The next NHANES is planned such that results will be available to assess progress on this objective by 2003. There are no data sources that allow for annual tracking of this measure, although CDC's National Center for Environmental Health (NCEH) is working with its state grantees to increase the availability of state-specific data on blood lead levels.

Partnerships and Links to DHHS Strategic Plan
This performance objective is related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans.

Performance Summary: CDC continues to actively support lead poisoning prevention programs in states throughout the country. There are currently no direct methods for CDC to use to determine the level of achievement related to the FY 1999 target for reducing the number of children with elevated blood lead levels.. It is anticipated that the next collection of national data related to lead poisoning will be available in 2003. In the interim, CDC has added a new performance measure to ensure that supported states have a system to determine the number of children participating in Medicaid who are being screened for elevated blood lead levels.. While not an ideal measure, the information developed by the supported states should allow the states to better adjust their screening efforts. CDC is also using surveillance data from 22 states (reported annually) and quarterly program reports from the supported states that CDC uses to monitor the performance of programs and make adjustments as needed. Based on the trends from the last two sets of national data, and the existing interim surveillance and reporting data, CDC believes that the existing targets can be achieved (though as national data becomes available some changes in performance targets may be appropriate).

2.10.2e Goal-by-Goal Presentation of Performance

Performance Goal: By 2011, there will be virtually no children with blood lead levels that exceed 10 micrograms per deciliter, which is the level at which children's health may be damaged (baseline data from 1991-1994 NHANES III for the period 1991-1994 indicates that there were 890,000 children with blood lead levels greater than 10 micrograms per deciliter).

Performance Measure	Targets	Actual Performance	Ref.

The number of children with elevated blood lead levels will be reduced.	**FY 03:** 45% lead level reduced. **FY 99:**: 25% lead level reduced.	**FY 03:** **FY 99:** No data available. NHANES survey results will next be available in 2003. **FY 91- 94:** 890,000 children with blood lead levels greater than 10 micrograms per deciliter.	Page 153
Increase the percentage of CDC supported states with a system to determine the number of children enrolled in Medicaid who are screened for lead poisoning.	**FY 01:** 25% of CDC supported states. **FY 00:** 15% of CDC supported states.	**FY 01:** **FY 00:** **FY 99:** 0% of supported states.	Page 153

Verification/Validation of Performance Measures: Data for measurement of this measure is not currently available since results from the next NHANES is not anticipated until 2003 (for further details on NHANES please refer to Appendix A.2). In the interim state surveillance data and reports from states with program grants are being used to provide guidance to the programs. The state surveillance data is regularly reviewed by epidemiologists internal to CDC to ensure that the data is statistically and scientifically sound. The reports from states with grants are regularly reviewed by project officers internal to CDC to ensure that the reports reflect accurately the obligations required by the grants. Included in these reviews is an update on the ability of states to determine the number of children enrolled in Medicaid who are screened for lead poisoning.

2.10.1f Genetics and Disease Prevention

CDC's activities in this area integrate discoveries in human genetics into disease prevention strategies as outlined in the CDC strategic plan, "Translating Advances in Human Genetics into Public Health Action." The components will develop genetics and public health capacity through: 1) state and community-level health assessment and planning; 2) public health research on gene-environment interactions; 3) evaluation of genetic testing; 4) a national program for implementing effective and ethical disease interventions; and 5) communication and training strategies for providing relevant genetics information to various audiences. These programs will be collaborative efforts among public, academic and private organizations that strengthen crosscutting research, training, laboratories and preventive health programs. Progress will be evaluated by the increased effectiveness of targeting interventions to individuals with specific genetic variants that, in combination with modifiable risk factors, increase their risk of disease and disability.

Partnerships and Links to DHHS Strategic Plan
This objective is closely linked to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and DHHS Goal 5: Improve public health systems.

Performance Summary: CDC is actively engaged in the integration of human genetics into public health prevention activities. At current funding levels, CDC has been providing technical assistance to individual states to begin integrating genetics into there public health activities. Additionally, CDC has been working collaboratively with other federal agencies to facilitate the integration of genetics into their federal and state activities. Based on projected funding CDC will not be able to begin developing state-based programs until FY 2001.

2.10.2f Goal-by-Goal Presentation by Budget

Performance Goal: By 2002, at least half of all states and territories will have implemented a genetics and disease prevention program, focusing on the integration of genetic testing into targeted preventable disease

programs (such as asthma, cancer, cardiovascular disease, and arthritis) and related communication programs.

Performance Measure	Target	Actual Performance	Ref.
The number of state-based genetics programs will be increased.	**FY 01:** 5 states	**FY 01:** **FY 00:** 0 states (baseline).	Page 153
Total Program Funding (Dollars in thousands)	**Environmental Health funding is included in the Chronic Disease Prevention line**		

Verification/Validation of Performance Measures: This performance measure will be verified by reviews of the reports required by cooperative agreement recipients. CDC project officers will regularly review the individual requirements under the agreements to ensure that grantees are in compliance with the agreements.

2.10.1g Occupational Safety and Health

The National Institute for Occupational Safety and Health (NIOSH), in CDC, is charged with conducting a national program of biomedical research in occupational safety and health. The purpose of this program is to establish and disseminate scientific and public health information necessary to ensure safe and healthful working conditions for 127 million American working men and women. NIOSH's corps of multi-disciplinary teams comprising engineers, epidemiologists, industrial hygienists, physicians, and toxicologists perform five basic public health functions to improve the safety and health of workers: (1) determines the nature and extent of the occurrence and causes of work injuries and diseases to target research and prevention activities; (2) detects and investigates workplace health and safety problems, identifying their causes and effects; (3) conducts studies and demonstrations to identify effective engineering solutions, personal protective equipment, work organization and practices, and health communications strategies to prevent work injuries and diseases; (4) develops and disseminates recommendations for assuring the safety and health of workers; and (5) provides leadership and training in occupational safety and health, establishing national research agendas to leverage the impact of government and private sector resources, and training professionals and scientists.

In 1996, NIOSH and the occupational safety and health community developed the National Occupational Research Agenda (NORA). More than 500 organizations and individuals outside NIOSH provided input into the development of the Agenda. This attempt to guide and coordinate research nationally is responsive to a broadly perceived need to systematically address those topics that are most pressing and most likely to yield gains to the worker and the nation. The following four performance objectives provides a strong foundation from which to implement NORA and assure progress in improving worker safety and preventing occupational disease, injury and disability.

The performance objectives systematically provide leadership and the creation of systems, guidelines, and interventions that will lead to the ultimate goal of reducing worker disease, injury, and disability. These are innovative and challenging objectives that when accomplished will result in heightened support for occupational safety research, increased awareness of worker safety, and ultimately in a decrease in occupational disease and injury. These objectives motivate and stimulate research and interventions in occupational safety and health through investments in research, the development of a national surveillance system for occupational disease and injury, assessments and application of recommended interventions,

and broad-based communication efforts. NIOSH began in FY 1996 to foster and support NORA. Many of the immediate performance measures will provide a frame of reference, capacity assessment, and baseline information before appropriate disease- and injury-specific measures can be developed.

Partnerships and Links to DHHS Strategic Plan and Partners
These performance measures are related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans, Goal 5: Improve public health systems, and Goal 6: Strengthen the Nation's health sciences research enterprise and enhance its productivity.

Performance Summary: In FY 1999, NIOSH's commitment to NORA is reflected through the impressive upward trends in the amount of both intramural and extramural research funding. NIOSH increased its overall investment in NORA-related research by $45.7 million compared to FY 1996. This was achieved through congressional support and the redirection of research funds into NORA priority areas. In FY 1999 NIOSH funded 149 extramural research grants in several NORA research priority areas (89 more grants than funded in FY 1998), making this the largest infusion of extramural funding ever by the federal government for occupation safety and health research.

Dedication to NORA and occupational safety and health has produced, a broad-based NORA liaison committee, a network of public-private partnerships, successful efforts of 20 NORA teams (including outreach, conferences and symposia, and production of white papers, documents and journal articles), a grants process that has produced record breaking funding for target research areas (for 2 consecutive years), and recognition as a partnership model for other organizations embarking in similar planning efforts.

In FY 99, NIOSH embarked on a comprehensive strategic surveillance planning process, focused on occupational illnesses, injuries, exposures, and hazards. Developed in collaboration with state and federal partners, the Surveillance Plan includes both short- and long-term objectives to enhance the generation and use of occupational safety and health information for the prevention of work-related illness and injury. Complementing NORA, the plan includes a focus on high risk industries and occupations, as well as on special populations at risk.

Communication and training efforts continue to be an important focus at NIOSH, as we look for new, more effective ways to reach workers with the latest findings and recommendations in occupational safety and health.

All NIOSH performance goals and target levels are on schedule and outlined in the table that follows. Several new measures have been adopted to more fully display performance data.

2.10.2g Goal-by-Goal Presentation of Performance

Performance Goal: Conduct a targeted program of research to reduce morbidity, injuries, and morality among workers in high priority areas and high-risk sectors.

Performance Measure	Target	Actual Performance	Ref.
Annual increases in NIOSH intramural and extramural research in NORA priority areas	**FY 01**: Funding level will increase by 6% over FY 00. **FY 00:** Funding level will increase by 17% over FY 99.	**FY 01**: **FY 00:** **FY 99:** $26.7 mil in extramural grants, $34.4 mil in intramural projects. **FY 96:** 1996 baseline: $6.7 mil in extramural grants, $8.7 mil in intramural projects.	Page 188
Annual increases in funding of other federal agencies for NORA-related research.	**FY 01:** Increase over FY 00. **FY 00:** Increase over FY 99. **FY 99:** Current levels of NIOSH and other federal agencies' intramural and extramural research funding in NORA areas will be determined as a baseline and annual increases will be calculated.	**FY 01:** **FY 00:** **FY 99:** In 1998, other federal agencies reported $23.4 million for NORA-related funding. **FY 96:** $15 million for NORA-related funding.	Page 188
Report annual NIOSH research accomplishments in high priority and high-risk areas (e.g., agriculture, construction, mining, healthcare workers).	**FY01**: Increase number of peer review articles to 259. **FY 00**: Increase number of peer review articles to 254. **FY 99**: Establish baseline measure.	**FY 01**: **FY 00**: **FY 99:** 234 peer reviewed articles.	Page 188
Annual NIOSH research accomplishments in high priority and high-risk areas (e.g., Agriculture, Construction, Mining, Healthcare Workers)	**FY 01**: Report progress since baseline. **FY 00**: Establish baseline. **FY 99**: Measure added.	**FY 01:** **FY 00:** **FY 99:** New measure added.	Page 188

Performance Measures	Targets	Actual Performance	Ref.
Demonstrated impact of NORA on research activity through bibliometrics and other proxy measures	**FY 01**: Increase over FY 00. **FY 00**: Baseline amounts for all NORA areas established. **FY 99**: Protocol on the use of bibliometrics and other research proxy measures established.	**FY 01:** **FY 00:** **FY 99:** Baseline protocol established using National Library of Medicine and Institute of Scientific Information databases. Bibliometric baselines for 12 of the 21 NORA Priority areas have been completed. 20 NORA partnership teams have been established; team products are being tracked as a measure of NORA's success.	Page 188

Validation/Verification of Performance Measures: This information will be reported through the Project Planning System of the CDC Integrated Resources Information System (IRIS). A team of NIOSH's senior scientists will review all data reported for accuracy. Baseline data and data collected in subsequent years is collected in the same format so that accurate comparisons can be make. Partnering efforts have increased the ability to effectively track resources outside the organization.

Performance Goal: Ensure safe and healthful working conditions by developing a system for surveillance for major occupational illnesses, injuries, exposures, and health hazards.

Performance Measures	Targets	Actual Performance	Ref.
Complete a comprehensive surveillance planning process and implement recommendations.	**FY 01:** Continue implementation of surveillance recommendations. **FY 00:** Finalize surveillance strategic plan and begin implementation of the recommendations **FY 99:** Undertake a comprehensive surveillance planning process with NIOSH partners at the State and Federal levels to establish surveillance priorities and identify roles for various agencies.	**FY 01:** **FY 00:** Plan will be finalized by March 2000; implementation will begin. **FY 99:** Planning process completed; draft surveillance strategic plan developed.	Page 188

Performance Measures	Targets	Actual Performance	Ref.
NIOSH will collect, analyze, and disseminate surveillance information on selected occupational illnesses, injuries, and hazards to help others target intervention and prevention efforts on a priority basis.	**FY 01:** Continue to collect, analyze, and disseminate surveillance data. **FY 00:** Continue to collect, analyze, and disseminate surveillance data. **FY 99:** Collect, analyze, and disseminate surveillance data.	**FY 01:** **FY 00:** 1999 WORLD Report will be disseminated. **FY 99:** Produced a special hazard review of high risk small business industries; initiated development of a ChartBook on Worker Health statistics; Developed 1999 WORLD Report. 5 publications based on National Occupational Mortality Surveillance (NOMS) data. Completed and disseminated 23 reports based upon the results of 40 firefighter fatality investigations in FY99, plus related publications.	Page 188

Validation/Verification of Performance Measures: This information will be reported through the Project Planning System of the CDC Integrated Resources Information System (IRIS). A team of NIOSH's senior scientists will review all data reported for accuracy.

Performance Goal: Promote safe and healthful working conditions by increasing occupational disease and injury prevention activities through workplace evaluations, interventions, and NIOSH recommendations.

Performance Measures	Targets	Actual Performance	Ref.
NIOSH will report annual performance in conducting workplace evaluations and technical assistance visits and preparing policy and technical documents that define NIOSH policy and/or make other recommendations for employers, workers, and the health and safety community.	**FY 01:** Decrease Health Hazard Evaluation (HHE) site visits to 95; increase technical assistance letters. Conduct follow-up assessments on 10% of technical assistance site visits. Continue to produce policy and technical documents on significant and emerging occupational health and safety issues to facilitate prevention of work-related injuries, illnesses, and hazards. Continue to provide comments and testimony to federal agencies on regulatory activities, as needed. **FY 00:** Decrease HHE site visits to 95 and increase technical assistance letters. Conduct follow-up assessments on 5% of technical assistance site visits. Continue to produce policy and technical documents on significant and emerging occupational health and safety issues to facilitate prevention of work-related injuries, illnesses, and hazards. Continue to provide comments and testimony to federal agencies on regulatory activities, as needed. **FY 99:** Establish baseline.	**FY 01:** **FY 00:** **FY 99:** 334 HHEs completed, 100 site visits and 234 technical assistance letters. 68 technical assistance site visits (to 20 different work settings), primarily to small employers. Provided comments and testimony to 4 federal agencies on 12 regulatory activities. Major policy documents produced on topics including: Occupational exposures and cancer, TB respiratory protection in health care facilities, Preventing injuries and deaths in firefighters, and Stress at work.	Page 188

Performance Measures	Targets	Actual Performance	Ref.
NIOSH will begin conducting an evaluation of the extent to which recommendations are being implemented.	**FY 01:** Reports and analysis will be completed. **FY 00:** NIOSH will begin conducting an evaluation of the extent to which recommendations are being implemented. **FY 99:** Two model information dissemination and training programs for key target hazards or populations (i.e., silicosis) will be designed and implemented. By working with the occupational safety and health community, develop a system for assessing, determining baseline amount, and increasing the extent to which NIOSH recommended exposure limits are used by employers and workers at work sites and by government agencies setting industry-wide standards.	**FY 01:** **FY 00:** **FY 99:** Initiated evaluation of OSH practitioners use of NIOSH recommended exposure limits (RELs). NIOSH recommended control technology equipment reduced worker exposure to asphalt paving fumes by 80% (100% industry participation).	Page 188

Performance Measures	Targets	Actual Performance	Ref.
NIOSH will conduct studies to evaluate the effectiveness of targeted prevention programs through intervention effectiveness research.	**FY 01:** Begin application of lessons learned to other efforts. **FY 00:** Continue intervention studies; report results of studies as completed. **FY 99:** Implement targeted evaluation of the effectiveness of a prevention program. (i.e., latex allergy, agriculture-related injuries to children) by tracking prevalence and level of exposure and behavior before and after intervention/prevention program.	**FY 01:** **FY 00:** Hearing evaluation will continue and data will be available in 2001. **FY 99:** Implemented intervention effectiveness studies, e.g.: ž model hearing loss program in various sectors (e.g., mining, industrial plants) ž intervention to reduce low-back pain in retail industry ž intervention to reduce injuries among sanitation workers	Page 188

Validation/Verification of Performance Measures: Data will be obtained from surveys conducted using a representative sample of the occupational safety and health community. Evaluation study reports for targeted intervention programs will be developed.

Performance Goal: Foster safe and healthful working conditions by providing workers, employers, the public, and the occupational safety and health community with information, training, and capacity to prevent occupational diseases and injuries.

Performance Measures	Targets	Actual Performance	Ref.
Track information products and levels of information dissemination.	**FY 01**: **FY 00:** Increase educational and informational documents to 24, produce 4 videos, and report progress on other information sources. **FY 99**: Establish baseline.	**FY 01**: **FY 00:** **FY 99**: ž 43 HHE reports completed ž 42 NIOSH numbered publications ž 12 educational documents ž 14.4 million Hits to Website ž 148,000 Calls to Hotline	Page 188

Performance Measures	Targets	Actual Performance	Ref.
Review a sample of new and existing documents, training materials, and communication efforts and begin implementation of findings.	**FY 01:** Continue implementation of findings. **FY 00:** Continue to review a sample of new and existing documents, training materials, and communication efforts and begin implementation of findings. **FY 99:** Conduct a review of the most widely distributed existing and new training materials to ensure that they are written in plain language and are useful for the intended user.	**FY 01**: **FY 00:** **FY 99**: Data analyzed and preliminary results reported on an evaluation of the NIOSH latex allergy alert. Survey of 347 laboratories utilizing the *NIOSH Manual of Analytical Methods* resulted in the update of 30 analytical methods. Developed new easy-to-read *NIOSH Pocket Guide to Chemical Hazards* based upon results of focus group studies.	Page 188
Support training for occupational safety and health professionals.	**FY 01:** Continue Support. **FY 00:** Continue Support. **FY 99:** New measure.	**FY 99:** $10.3 million to 15 Education and Research Centers (ERCs) in 14 states; $2.6 million to 41 Training Program Grants in 26 states and territories.	Page 188

Performance Measures	Targets	Actual Performance	Ref.
Develop model information dissemination and training programs and develop lessons for other similar efforts.	**FY 01:** Complete analysis and report. **FY 00:** Complete model information dissemination and training programs and develop lessons for other similar efforts. **FY 99:** Design and implement model information dissemination and training programs for key target hazards or populations.	**FY 01**: **FY 00:** **FY 99**: Developed model training curricula on electrical safety for vocational and technical education. Conducted training to prevent hearing loss among miners.	Page 188
Total Program Funding (Dollars in thousands)	**FY 2001: 219,556** **FY 2000: 214,652** **FY 1999: 199,706**		

Validation/Verification of Performance Measures: Data will be obtained from internal reviews. Efficiency and Effectiveness Ratio Evaluations will be used to compare actual results to planned results.

CDC and ATSDR coordinate activities in the area of environmental health. CDC's National Center for Environmental Health (NCEH) is responsible for providing leadership in the prevention and control of disease, birth defects, disability and death resulting from interactions between people and their environments. The mission of CDC's National Institute for Occupational Safety and Health (NIOSH) is to ensure that Americans are safe and healthy at work. By contrast, the focus of the Agency for Toxic Substances and Disease Registry is on the prevention of exposure and adverse human health effects associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution present in the environment.

2.11 Buildings and Facilities

2.11.1 Program Description, Context and Summary of Performance

Under the Secretary's important Public Health Infrastructure Initiative, CDC's management has the responsibility to ensure that: CDC has adequate facilities and equipment to carry out its public health mission; all facilities, particularly laboratories, must be safe for both workers and the community; the taxpayers' investment in these facilities is protected through effective maintenance and operations; facilities meet applicable fire and life safety codes; and all CDC facilities are operated in a responsible manner to reduce energy consumption.

Through the Agency's Master Plan, and annual Repair and Improvements (R&I) Plan, CDC management determines the need for and schedules major and minor renovation, construction, and other facilities projects. Since 1993, CDC has conducted and updated a CDC-wide master planning effort intended to identify and systematically address severely inadequate facilities conditions at our Clifton Road and Chamblee Campuses in Atlanta, Georgia. The Master Plan strategy, consisting of four 5-year increments,

will allow CDC to modernize existing laboratory and support facilities where economically and programmatically feasible, and construct new facilities when required, as well as to properly operate and maintain existing facilities.

The goal of the Master Plan is to enable CDC to provide safe, modern, efficient, and physically secure laboratories and support facilities in the most economical manner possible. The objectives are: (1) To significantly increase CDC's laboratory capacity to handle new, highly pathogenic microorganisms associated with new and re-emerging infectious diseases, and bioterrorism through the modernization of existing facilities, and construction of new facilities; (2) To consolidate CDC's Atlanta research, support, and administrative functions onto existing CDC-owned campuses at Clifton Road, Atlanta, Georgia and Chamblee, Georgia; and (3) To continue to lease space through GSA to meet warehouse requirements, short-term office and emergency "surge space" for which CDC has not had sufficient time to plan and budget for under the Master Plan.

Performance Summary: As of January 14, 2000, implementation of the Master Plan is proceeding substantially according to schedule, with adjustments to reflect the difference between planned and actual appropriations.

Organizational and structural changes to CDC's facilities organization continue to be implemented. For example, the old Engineering Services Office has been reorganized into three specific organizations with targeted areas of concentration – planning & project management, design and construction management, and property management and operations – to make more efficient use of time and money.

CDC is aggressively implementing an innovative new contracting structure to speed up the procurement of major capital projects under the master plan. Under this structure, CDC will use a highly competitive process to "pre-qualify" architecture and construction firms to form a "pool" of resources readily available to CDC to use on a task order basis for design and construction. Another feature of the contract is to bring the architect and builder together from the inception of a project rather than after the design is complete. CDC believes this feature could result in a better final product, reduced change orders, and better adherence to project budget and schedule.

Section 2.11.2 provides more specific information at the project level.

2.11.2 Goal-by-Goal Presentation of Performance

Performance Goal: Implement the scheduled improvements, construction, security, and maintenance as specified under the FY 2000 schedule of the Clifton Road and Chamblee Master Plans.

Performance Measure	Targets	Actual Performance	Ref.
Construct Phase II of Building 17, Infectious Disease Research Lab, Clifton Road Facility.	**FY 01:** Complete construction. **FY 00:** Construct Phase II of Building 17.	**FY 01:** **FY 00:** **FY 99:** Construction remains on schedule and on budget, with the building structure in place up to the 3rd floor. **FY 98:** Master Plan.	Page 207
Begin design of new infectious disease lab, Building 18, at Clifton Road Campus, to vacate and modernize existing Building 1 South, house Bioterrorism, and additional BSL 4 capacity.	**FY 01:** Complete design. **FY 00:** Begin design.	**FY 01:** **FY 99**: Acquisition of the Master Plan A/E Contract is well underway with task order award for Building 18 anticipated. **FY 98:** Master Plan.	Page 207

Performance Measures	Targets	Actual Performance	Ref.
Complete construction of infectious disease lab Building 109 to replace existing buildings 4, 6,7,8 and 9, Chamblee Campus.	**FY 00:** Begin construction.	**FY 01:** **FY 00:** **FY 99:** Design is underway and the task order award for Building 109 anticipated in May 2000. **FY 98:** Master Plan.	Page 207
Complete construction of infrastructure project in Security Buffer Zone, Clifton Road Campus.	**FY 00:** Complete infrastructure construction.	**FY 00:** **FY 99:** Property acquisition and demolition is 99 percent compete. Initial infrastructure work is underway ahead of schedule. **FY 98:** Master Plan.	Page 207
Begin design of environmental health lab Building 110 to replace existing buildings 17,25,31, and 32, Chamblee Campus.	**FY 01:** Begin design.	**FY 01:** **FY 98:** Master Plan.	Page 207
Continue construction of Phase II of Building 17, Infectious Disease Research Lab, Clifton Road Facility.	**FY 01:** Complete construction.	**FY 01:** **FY 98:** Master Plan.	Page 207
Total Program Funding (Dollars in thousands)	**FY 2001: 127,074** **FY 2000: 57,131** **FY 1999: 17,800**		

Verification/Validation of Performance Measures: Data will be collected through contractor reports and on-site verification.

Links to DHHS Strategic Plan:
These performance measures relate to DHHS Goal 5: Improve public health systems and Goal 6: Strengthen the Nation's health sciences research enterprise and enhance its productivity.

2.12 Bioterrorism

2.12.1a Program Description, Context and Summary of Performance

The growing threats from biological and chemical terrorism within the United States necessitates strengthening of public health capacity at the local, state, and federal level in order to prepare and respond to these perils. Proposed operations focus on buttressing the essential role that public health plays in the emergency response to terrorism through efforts that: a) reinforce systems of public health surveillance to detect unusual or covert events; b) build epidemiologic capacity to investigate and control health threats from such events; c) enhance public health laboratory capability to diagnose the illnesses and identify the compounds used in these circumstances; and d) develop and coordinate communications systems with other government agencies and the general public to disseminate critical information and allay unnecessary fear.

In FY 1999, the Bioterrorism and Preparedness Response Program (proposed) was established in the National Center for Infectious Disease (NCID) within the Centers for Disease Control and Prevention (CDC). The purpose of this Program is to oversee and coordinate an effort to upgrade national public health capability to counter biological and chemical terrorism.

Toward this effort, CDC developed an operational plan for FY 1999 to help upgrade federal, state and local preparedness and response capacity. The plan is focused in the following nine areas: (1) create a CDC Bioterrorism Preparedness and Response Activity, (2) facilitate State-level bioterrorism preparedness planning, (3) create a national Health Alert Network, (4) enhance disease surveillance and epidemiological capacity to address outbreaks caused by bioterrorism, (5) strengthen State and local capacity to identify biological and chemical threat agents, (6) strengthen CDC's capacity to identify biological threat agents, (7) strengthen CDC's and State health laboratories' capacity to identify chemical threat agents, (8) create a national pharmaceutical stockpile and (9) administer the "Select Agent Rule".

Partnerships and Links to DHHS Strategic Plan
These performance measures relate to DHHS Goal 1: Reduce major threats to the health of all Americans and Goal 5: Improve public health systems.

Performance Summary: In each of these areas, work has been accomplished that has aided in the improvement of the federal, state and local public health infrastructures. Among CDC's most prominent achievements in FY 1999 are: the distribution of $41 million in cooperative agreements to 50 States and 4 cities for upgrading their capabilities in preparedness and response, laboratory services, epidemiology and surveillance systems and electronic communication; the establishment of the Rapid Response and Advanced Technology Laboratory for the triage and testing of chemical, biological and unknown agents suspected in a bioterrorism event; the ability to rapidly test for 50 toxicants in blood and urine; the development of a five-year Bioterrorism and Preparedness Response Strategic Plan for CDC; the updating of guidelines for laboratory safety as well as of epidemiological and surveillance procedures and protocols for biological agents; and the initiation of a national pharmaceutical stockpile. This funding allowed CDC to exceed the projected targets in bioterrorism preparedness and response program planning, state and major city laboratories participating in the network to provide rapid and accurate diagnostics, and number of states or major metropolitan areas with dedicated communication systems for terrorist events. The target of 40 state and major city health departments with expanded surveillance and epidemiology capacity was set early in FY 1999, before applications were received for funding in this area. While 41 awards were made for this focus area, the awards were made in two areas (core capacity and special capacity), and by virtue of the objective review process, were distributed among 34 state and local health departments.

2.12.2a Goal-by-Goal Presentation of Performance

Performance Goal: Increase the ability of CDC, state and local health departments to respond to terrorist threats.

Performance Measures	Targets	Actual Performance	Ref.
Expand and enhance 3 sentinel networks that will be capable of identifying early victims of bioterrorism. (This measure was moved to Infectious Diseases in FY 2000).	**FY 99:** Establish 3 sentinel networks.	**FY 99:** Expanded and enhanced 3 sentinel network. **FY 98:** 0 sentinel networks.	Page 222
Increase the number of state and major city health departments with expanded epidemiology and surveillance capacity to investigate and mitigate health threats by bioterrorism.	**FY 01:** 63-68 health departments. **FY 00:** 40 health departments. **FY 99:** 40 health departments.	**FY 01:** **FY 00:** **FY 99:** 34 health departments. **FY 98:** 0 health departments.	Page 222
Create a network of state and major city laboratories to provide rapid and accurate diagnostic and/or reference support.	**FY 01:** 50-55 laboratories. **FY 00:** 43 laboratories. **FY 99:** 2 laboratories.	**FY 01:** **FY 00:** **FY 99:** 43 laboratories. Funding allowed more laboratories to be in the network. **FY 98:** 0 laboratories.	Page 222
Bioterrorism preparedness and response planning programs will be established.	**FY 01:** 54 states or localities. **FY 00:** 11 states or localities. **FY 99:** 5 states or localities.	**FY 01:** **FY 00:** **FY 99:** 11 states or localities. **FY 98:** 0 states or localities.	Page 222

Performance Measures	Targets	Actual Performance	Ref.
Rapidly measure in blood and urine toxic substances likely to be used in chemical terrorism.	**FY 01:** 150 substances. **FY 00:** 100 substances.. **FY 99:** 50 substances.	**FY 01:** **FY 00:** **FY 99:** 50 substances. **FY 98:** 0 substances.	Page 222
The number of states and major metropolitan areas with health sector dedicated communications systems to facilitate or expedite detection and response to terrorist events will be increased.	**FY 01:** 45-55 states/metropolitan areas. **FY 00:** 40 states/metropolitan areas. **FY 99:** 35 states/metropolitan areas.	**FY 01:** **FY 00:** **FY 99:** 35 states/metropolitan areas. **FY 98:** 0 states/metropolitan areas.	Page 222

Performance Measure	Target	Actual Performance	Ref.
Maintain a national pharmaceutical "stockpile" for deployment to respond to terrorist use of biological or chemical agents, including the ability to medically treat 1 million civilians from biological agents of anthrax, plague and tularemia and/or to medically treat 10,000 civilians from chemical attach using nerve or blistering agents.	**FY 01:** Maintain a national pharmaceutical "stockpile" for deployment to respond to terrorist use of biological or chemical agents, including the ability to medically treat 1 million civilians from biological agents of anthrax, plague, and tularemia and/or to medically treat 10,000 civilians from chemical attach using nerve or blistering agents. **FY 00:** Maintain a national pharmaceutical "stockpile" for deployment to respond to terrorist use of biological or chemical agents, including the ability to medically treat 1 million civilians from biological agents of anthrax, plague, and tularemia and/or to medically treat 10,000 civilians from chemical attach using nerve or blistering agents. **FY 99:** Create a national pharmaceutical "stockpile" available for deployment to respond to terrorist use of potential biological or chemical agents, including the ability to protect 1-4 million civilians from anthrax attacks.	**FY 01:** **FY 00:** **FY 99:** Created a national pharmaceutical "stockpile" available for deployment to respond to terrorist use of potential biological or chemical agents, including the ability to protect 1-4 million civilians from anthrax attacks. **FY 98:** No plan.	Page 222
Develop guidelines and certification process for respirators.	**FY 01:** 1 set of guidelines.	**FY 01:**	Page 222

2.12.1a National Electronic Disease Surveillance System (NEDSS)

CDC's vision is to build a national integrated surveillance system. This system will allow rapid reporting of disease trends to control outbreaks. It will create public and private health care sector linkages to increase the volume, accuracy, completeness, and timeliness of the data available for disease monitoring. Finally, this new system will provide local health departments with Internet access to permit rapid sharing of

information on infectious disease outbreaks or bioterrorist incidents.

Through NEDSS, CDC will: (1) Develop and implement national data standards for surveillance and reporting; (2) Provide technical infrastructure support for state and local communities; and (3) Establish local, state, and regional demonstration projects that will create linkages between the public health and health care systems. These efforts will increase the speed and reliability of data collection and, consequently, enhance CDC's ability to protect the public from infectious disease outbreaks and bioterrorist attacks. They will be planned and implemented in consultation with stakeholders in the process. In addition to ongoing discussions with the Council of State and Territorial Epidemiologists, CDC will continue to seek input from state and local stakeholders, including a meeting scheduled in October to discuss the overarching framework for public health data needs, as it plans and develops system components. Initial funding for NEDSS was appropriated in 2000 through the Public Health and Social Services Emergency Fund. Additional funding for electronic surveillance is requested in FY 2001 in the infectious disease budget activity.

2.12.2a Goal-by-Goal Presentation of Performance

Performance goal: Improve the public health surveillance infrastructure by developing national data standards for surveillance, providing technical infrastructure support to state and local communities, and establishing a demonstration project linking health care to public health

Performance Measure	Targets	Actual Performance	Ref.
Pilot projects will be conducted to develop and test electronic linkages between public health agencies and the health care sector (note: Projects funded under the Infectious Diseases line are reported there)	**FY 01:** 5 states with linkages to managed care, hospitals, or other clinical care providers. **FY 00:** 1 state with linkages to managed care, hospitals, emergency departments or other clinical care providers	**FY 01:** **FY 00:** **FY 99:** 0 projects.	Page 222
National data standards for surveillance and reporting will be developed including standard data definitions and a common user interface and system architecture; and a secure pipeline for reporting surveillance data.	**FY 01:** Common data standards will be pilot tested. **FY 00:** Common data standards will be identified and reviewed by partners	**FY 01:** **FY 00:** **FY 99:** Multiple systems which do not possess uniform standards or a common user interface.	Page 222
Increase the percentage of state-based CDC-developed surveillance systems which have implemented enhanced security measures for reporting the bulk reporting of surveillance data	**FY 01:** 80% of systems **FY 00:** 20% of systems	**FY 01:** **FY 00:** **FY 99:** 10% of systems.	Page 222

Increase the percentage of CDC-developed web-based surveillance systems which have implemented enhanced security messages for transmission of case-level data over the Internet.	**FY 01:** 80% of systems **FY 00**: 20 % of systems	**FY 01:** **FY 00:** **FY 99:** 10% of systems.	Page 222
Funding (Dollars in thousands)	**FY 2001: 148,500** **FY 2000: 154,680** **FY 1999: 121,750**		

Verification/Validation of Performance Measures: Performance for the target related to measuring toxic substances will be validated through the Clinical Laboratory Improvement Act of 1988 (CLIA), please see appendix A.2 for further details. Verification of the national pharmaceutical "stockpile" will be accomplished through a hard inventory of all antibiotics in the stockpile and a series of regular on-site inspections by CDC personnel of the stockpile inventory.

2.13 Eliminating Racial and Ethnic Disparities

2.13.1 Program Description, Context and Summary of Performance

The President has committed the Nation to the goal of eliminating by the year 2010, disparities in six areas of health status experienced by racial and ethnic populations while continuing the progress we have made in improving the overall health of the American people. The health status areas targeted in this initiative are infant mortality, cancer screening and management, cardiovascular disease, diabetes, HIV infection/AIDS, and child and adult immunizations.

Compelling evidence that race and ethnicity correlate with persistent, and often increasing, health disparities among U.S. populations demand national attention. Indeed, despite significant progress in the overall health of the Nation, as documented in *Health, United States*-the annual report card on the health status of the American people-there are continuing disparities in burden of illness and death experienced by African-Americans, Hispanics, American Indians and Alaska Natives, and Asian-Americans and Pacific Islanders, compared to the U.S. population as a whole. The demographic changes that are anticipated over the next decade magnify the importance of addressing disparities in health status. Racial and ethnic groups will increase in upcoming decades as a proportion of the total U.S. population; therefore, the future health of America as a whole will be influenced substantially by our success in improving the health of these populations. A national focus on disparities in health status is particularly important as major changes unfold in the way in which health care is delivered and financed.

Eliminating racial and ethnic disparities in health will require new knowledge about causes of health disparities, enhanced efforts at preventing disease, innovative methods of promoting health and delivering culturally competent and linguistically specific preventive and clinical services.
Accomplishing this goal will require obtaining new information, particularly the data to identify populations at high risk, and to monitor the effectiveness of health interventions targeting these groups. Research dedicated to a better understanding of the relationships between health status and different racial and ethnic minority backgrounds will help us acquire new insights into eliminating the disparities and developing new ways to apply our existing knowledge toward this goal. Improving access to quality health care and the delivery of preventive and treatment services will require working more closely with providers to deliver preventive and clinical services, and with communities to obtain community "consent" for community participation, identify needs, plan and conduct research.

As part of President's Initiative on Eliminating Ethnic Health Disparities, CDC leads interagency working groups charged with significantly reducing health disparities in health access and outcomes in the following areas: Cancer Screening and Management; Cardiovascular Disease; Diabetes; HIV Infection/AIDS; Infant

Mortality; and Child and Adult Immunizations.

2.13.1a Eliminating Health Disparities–REACH 2010

Members of communities of color comprise approximately 25% of the general population. Strong evidence suggests that there is persistent disparity in the health status of people of color as compared with the overall health status of the American people, and that race and ethnicity correlate with the continued and increasing health disparities in members of these communities. The demographic changes that are anticipated over the next decade magnify the importance of addressing disparities in health status. Groups currently experiencing poorer health status are expected to grow proportionately with the total U.S. population; therefore, the future health of America as a whole will be influenced substantially by success in improving the health of these ethnic populations.

Often the underlying causes of increased levels of disease and disability among these groups include poverty, lack of adequate access to quality health services, failure to receive preventive or "state-of-the-art" health care, and the need for effective prevention programs tailored to specific community needs. For example:

C Although African-American and Hispanic persons represent 21% of the country's population, more than half of the AIDS cases reported to CDC have been among these minority populations. Among children, the contrasts are more dramatic with African-American and Hispanic children representing 84% of pediatric AIDS cases in 1996.

C Cardiovascular disease is the leading cause of death for all racial and ethnic groups in the United States. In 1995, coronary heart disease mortality was 40% higher for African Americans compared with rates for whites.

C Vietnamese women in the United States have a cervical cancer incidence rate more than five times greater than white women (47.3 vs. 8.7 per 100,000). African-Americans have a cancer death rate about 35%t higher than for whites. The cancer rate for African-American men is about 50% higher than for white men.

C Among persons 65 years of age and older who had one or more physician visits in the past year, both influenza and pneumococcal vaccination levels among African-Americans and Hispanics are substantially lower than those of whites.

Partnerships and Links to DHHS Strategic Plan

These performance objectives are related to DHHS Goals 1: Reduce major threats to the health and productivity of all Americans. Development and implementation of the plan to Eliminate Ethnic Health Disparities is an inter-agency effort within DHHS. CDC will collaborate with other federal agencies, who will be determined later, in developing and implementing this initiative. Specific objectives for implementation of the initiative must be determined through a collaborative inter-agency process.

Performance Summary: Through a highly coordinated DHHS Departmental effort, CDC has launched the Racial and Ethnic Approaches to Community Health (REACH 2010) Program. Demonstration Projects are two-phase projects whose purpose is for communities to mobilize and organize their resources in support of effective and sustainable programs which will eliminate the health disparities of racial and ethnic minorities. These demonstrations require collaboration of both program and research experts for the purpose of identifying and/or developing successful community-based disease prevention and health promotion models that can be replicated for the ultimate goal of eliminating health disparities among racial and ethnic minorities. The six health priority areas being targeted by REACH 2010 in which racial and ethnic minorities experience serious disparities include: Infant Mortality, Deficits in Breast and Cervical Cancer Screening and Management, Cardiovascular Diseases, Diabetes, HIV Infections, and Child and/or Adult Immunizations. The FY 1999 budget included $10 million for CDC to support 32 communities for Phase I activities. The planning activities include establishing infrastructure for community-level data collection, establishing collaborative partnerships, establishing linkages with other state and local agencies, and working with federal agencies and other partners to identify "best practices" and program activities

which will underpin intervention activities. Results from these demonstrations will be important in shaping strategies to eliminate disparities, and for improving the focus and effectiveness of the Department's current programs.

REACH 2010 is a demonstration project, the goal of which is to contribute to the President's goal of eliminating health disparities experienced by racial and ethnic minorities by the year 2010. As a demonstration project, outcomes measures are critical in order to show that strategies developed can and did make a difference to communities served and to many other communities through technology transfer. Phase I activities includes the development of evaluation measures by each project. In addition, CDC will establish indicators at the program level to measure effectiveness across clusters of similar health priority sites.

CDC has provided funding through the Prevention Research Center at the University of South Carolina to establish a Blue-Ribbon Panel to develop evaluation measures appropriate to measuring the outcomes of REACH 2010 Demonstration Projects. The evaluation indicators developed by this Blue-Ribbon Panel will be useful in developing appropriate performance measures for GPRA. Performance measures will be developed in each of the six health priority areas that are included in REACH 2010: infant mortality, diabetes, cardiovascular diseases, HIV, deficits in breast and cervical cancer screening and management, and deficits in child and/or adult immunization rates. In fiscal year 2000, CDC anticipates working with an evaluation contractor to collect outcome data from REACH grantees. CDC will also select from several options for comparison communities.

2.13.2a Goal-by-Goal Presentation of Performance

Performance Goal: To achieve meaningful improvement in the lives of racial and ethnic populations who now suffer disproportionately from the burden of disease and disability. To develop the necessary tools and strategies that will enable the Nation to meet the far more challenging goal of eliminating these health disparities by the year 2010.

Performance Measure	Targets	Actual Performance	Ref.
CDC will fund selected communities to implement interventions based on community planning activities to eliminate racial and ethnic health disparities for following focus areas: breast and cervical cancer screening and management, cardiovascular disease, diabetes, child and/or adult immunizations, HIV/AIDS, and infant mortality.	**FY 01:** CDC will announce the availability of and provide continuation funding to Phase II grantees and through a competitive process fund former Phase I grantees to conduct Phase ll activities. **FY 00:** CDC will fund selected communities to implement interventions (Phase ll) based on community planning activities. CDC will also fund 4-6 additional Phase l grantees. **FY 99:** CDC will develop a community planning RFA & fund a community to conduct planning activities (Phase l) for community-based demonstrations of prevention and service delivery for the following focus areas: breast and cervical cancer screening and management, cardiovascular disease, diabetes, child and/or adult immunizations, HIV/AIDS, and infant mortality.	**FY 01:** **FY 00:** **FY 99:** 32 coalitions were funded for Phase l.	Page 218

Verification/Validation of Performance Measures: Grantees will report on the development of implementation and evaluation plans which will be reviewed by CDC staff. FY 2000 measures will also be evaluated by site visits. For FY 2001, data will be acquired by the CDC grant reporting system. No data lags are expected.

2.13.1b Eliminating Health Disparities in Syphilis

Syphilis is a sexually transmitted disease (STD) that has caused a heavy public health and economic burden in the United States since at least the early part of this century. The current epidemiology of syphilis, combined with its basic biologic characteristics, make it possible to eliminate this disease in the United States. Since the last epidemic peak in 1990, when the highest primary and secondary (P&S) syphilis rates in 40 years were recorded, P&S syphilis cases have decreased 83% to 8,550 P&S syphilis cases in 1997, the lowest rate ever recorded.

Most syphilis cases disproportionately affect a small percentage of the population, particularly African Americans living in poverty. During the syphilis epidemic in the early 1990s, disparity in rates between African Americans and whites rose from a rate ratio of 15:1 in 1984 to 64:1 in 1992 and currently are at a rate ratio of 34.2:1.

Syphilis elimination efforts focusing on populations and in areas where syphilis persists will help close on of the most glaring racial gaps in health status and improve adult and infant health by preventing HIV spread and congenital syphilis.

Performance Summary: Base funding for syphilis prevention and control is contained in the Sexually Transmitted Disease portion of the budget request. It supports, through grants, activities in each state to provide comprehensive STD prevention systems including medical and laboratory services, community and individual behavior change interventions, partner services, surveillance and data management, training and professional development, outbreak response, and evaluation activities.

The National Plan for the Elimination of Syphilis in the United States outlines the strategies for elimination including involving communities in the development and implementation of syphilis elimination plans, enhanced syphilis surveillance, outbreak response preparedness, efficient delivery of effective behavioral and biomedical interventions, and assessment of both quality and coverage of prevention and control services. This multi-systems approach to syphilis elimination will also build sustainable prevention capacity for populations at high risk for HIV, other STDs, TB, and emerging infectious diseases.

In FY 1999 grant funds were awarded to 28 High Morbidity Areas and 5 Potential Re-emergence Areas to support: (1) community outreach activities, in each of the counties that account for 50% of syphilis morbidity in 1998;(2) expansion of clinical and laboratory services in the 31 counties; (3) outbreak response teams in each of the high morbidity areas; and (4) program-relevant operational research projects, for example to develop noninvasive diagnostic tests for syphilis.

2.13.2b Goal-by-Goal Presentation by Budget

Performance Goal: To eliminate syphilis in the United States (indicated by the absence of sustained transmission at the national level and the absence of transmission of new cases locally within 90 days of report of an imported index case). To implement interventions in high morbidity areas that would reduce and control the number of syphilis cases and to implement enhanced surveillance in other areas that would prevent the re-emergence of syphilis. To strengthen community involvement and organizational partnerships and to improve biomedical and behavioral interventions that would address client and professional education, safe sexual behaviors, access to care, trust and other factors that lead to racial disparity. To provide grant funds to 28 high morbidity project areas and 6 potential re-emergence areas to implement strategies that will eliminate syphilis. At least 25% of the funds provided to each project area will be devoted organizations that represent and serve the affected communities.

Performance Measure	Target	Actual Performance	Ref.
CDC will publish and implement a national syphilis elimination plan. CDC will fund projects in 1) high morbidity syphilis areas to implement surveillance, community and biomedical strategies that would reduce syphilis within the community; and 2) potential re-emergence areas (large urban areas that previously had high rates of syphilis) to implement strategies to prevent its re-emergence. CDC will conduct meetings with other areas to determine the best way to prevent syphilis from being imported into new low morbidity areas. All of these interventions will depend heavily on the involvement of communities where syphilis occurs.	**FY 01:** Reduce by 15% to 20.9% **FY 00:** Reduce by 15% to 24.6% **FY 99:** Reduce by 15% to 28.9% Measure: Percent reduction in racial disparity.	**FY 01:** **FY 00:** **FY 99:** Data available June 2000 **FY 98:** 34.2.%	Page 218

Verification/Validation of Performance Measures: There is a period of time between when a person is

diagnosed with syphilis and the report reaches the CDC. This period (which varies from one month to one year, due to states being in transition from using STD aggregate hard-copy reporting forms to electronic line-listed data via the National Electronic Telecommunications Surveillance System (NETSS)) is known as a reporting delay The reporting delay also covers data processing time which includes data collection, delinquent reports, editing data and feedback to the field, corrections, and final release of the data for publication.

2.13.2c Improving the Health of American Indians and Alaska Natives

Healthy People 2000 progress reviews of the health needs of AI/AN identified disparities between this group and the general population in 14 priority areas and focused attention on the need for disease prevention and health promotion initiatives and strategies to reduce the health disparities. For example:

Infant Mortality is 1 ½ times higher for Native Americans compared to whites. SIDS deaths are three to four times as high for some AI/AN populations.

C Diabetes - Native Americans suffer at nearly three times the average rate, and at least one tribe, the Pimas of Arizona, have the highest known prevalence of diabetes of any population in the world. Rates of diabetes related complications are also higher among AI/AN.

C Cancer - Alaska Native men and women suffer disproportionately higher rates of cancers of the colon and rectum than do whites. AI/AN women also have low rates of screening and treatment for breast and cervical cancers.

C CVD - Rates for regular screening for cholesterol are very low – only 50 percent of AI/AN have had their cholesterol checked within the past 2 years.

C Unintentional Injury - Age-adjusted death rates from homicides, suicides, and unintentional injuries for AIs/ANs in IHS service areas are higher than the total population.

C Overweight prevalence (48% for AIs/ANs v. 29% for total population in 1993), and cirrhosis deaths (21.6 per 100,000 AIs/ANs v. 8 per 100,000 for total population further exemplify the serious health problems of this population.

In FY 2000, activities will be conducted in conjunction with the REACH 2010 Program (Racial and Ethnic Approaches to Community Health). A description of REACH 2010 is found in Section 2.13.1a.

On May 4, 1999, members of the Budget Review Board hosted the first budget consultation meeting with Tribal Leaders. Tribal representatives made specific budgetary requests of the Department and various OPDIVs. The CDC recommendations are related to surveillance and epidemiology, Preventive Health, HIV, STD, health promotion, hepatitis, diabetes, infant mortality, breast and cervical cancer, heart disease, violence and injury prevention.

Eliminating Health Disparities in AI/AN people will require enhanced efforts to prevent disease, promote health and assure appropriate care. CDC will support the Department's efforts to improve American Indians/Alaska Natives (AI/AN) access to federal programs to prevent disease, promote health and assure appropriate care. Core Capacity Grants ranging from $75,000 to $200,000 will be awarded to 8 - 10 AI/AN organizations to address health priorities, gaps in prevention, and service delivery interventions for their proposed communities. Funds will be awarded to the following AI/AN organizations: Tribal organizations representing more than one tribe; Tribal projects with three or more collaborating tribes; Urban Indian Health Programs; Indian Health Boards; and Inter-Tribal Councils. Applicants will be encouraged to apply for funds for at least one focus area where the disparity is 25 percent or greater between the general population and AI/AN. This approach will allow CDC and tribal leaders and organizations to prioritize health disparities throughout Tribal areas.

These grants are aimed at:

- Improving the lives and health status all AI/AN who suffer disproportionately from the burden of preventable disease and disability;

- Enhancing the collection of standardized data to correctly identify AI/AN populations and tribes and monitor the effectiveness of health interventions targeting these groups; and

- Develop strategies and tools to reduce health disparities AI/AN and the total population.

Partnerships and Links to DHHS Strategic Plan
These performance objectives are related to DHHS Goals 1: Reduce major threats to the health and productivity of all Americans. Development and implementation of the plan to Eliminate Ethnic Health Disparities is an inter-agency effort within DHHS. CDC will collaborate with other federal agencies, who will be determined later, in developing and implementing this initiative. Specific objectives for implementation of the initiative must be determined through a collaborative inter-agency process.

Performance Summary: Performance assessment will begin in FY 2001.

2.13.2c Goal-by-Goal Presentation of Performance

Performance Goal: To achieve meaningful improvement in the lives of American Indian and Alaska Native populations who now suffer disproportionately from the burden of disease and disability. To develop the necessary tools and strategies that will enable the Nation to meet the far more challenging goal of eliminating these health disparities by the year 2010.

Performance Measure	Target	Actual Performance	Ref.
CDC will support AI/AN organizations to address health priorities, gaps in prevention, and service delivery interventions for their proposed communities.	**FY 01:** CDC will fund 8-10 AI/AN organizations.	**FY 01:** **FY 99:** 0.	Page 218
Total Program Funding (Dollars in thousands)	**FY 2001: 34,985** **FY 2000: 30,000** **FY 1999: 9,997**		

Verification/Validation of Performance Measures: The measure will be verified by the CDC grant reporting system.

2.14 Office of the Director

2.14.1 Program Description, Context and Summary of Performance

The Office of the Director (OD) manages and directs programs of the Centers for Disease Control and Prevention (CDC) by providing leadership, advice on policy matters, development of goals and measures in the implementation of CDC's responsibilities related to disease prevention and control, and evaluates CDC's progress toward program goals and performance measures. OD provides direction and coordination to the epidemiologic activities of CDC and coordinates CDC's response to public health emergencies. OD provides overall direction to and coordination of the scientific/medical programs of CDC;

plans, promotes, and coordinates an ongoing program to assure equal employment opportunities in CDC; and promotes technology transfer to benefit the public's health. It provides leadership, coordination, and assessment of administrative management activities and oversees security for the CDC laboratory and office facilities. OD establishes, administers, and coordinates CDC's health communication and media relations policies in a manner to ensure that health communication efforts reflect the scientific integrity of all CDC research, programs, and activities, and that such information is factual, accurate, and targeted toward improving public health.

In addition, OD coordinates and manages programs on global health activities, minority health, and women's health relating to disease prevention and control.

The OD has developed goals and performance measures in the areas of health communication, program planning and evaluation, technology transfer, health and safety, and equal employment.

Health and Communication: Communicating public health information to practicing health care providers, public health professionals, health researchers, policy makers, legislators, and the general public is one of CDC's core processes that is common to all of CDC's public health areas. The overall federal policy to make information readily available to the public, the importance of providing information to individuals and health care providers to make better informed health and prevention decisions, and the rapid expansion of electronic access to information through the Internet and other means are driving factors for leveraging electronic communication avenues for health communications.

Program Planning and Evaluation: CDC's Office of Program Planning and Evaluation (OPPE) is responsible for leading and coordinating a diverse range of activities for the Office of the Director, as well as across CDC's CIOs, Departmental Operating Divisions, and with DHHS. These activities include:

- Leading CDC's efforts to implement the Government Performance and Results Act (GPRA),
- Managing the agency's one-percent evaluation program,
- Coordinating CDC's information collection activities and submissions to the Office of Management and Budget (OMB), and
- Setting CDC's budget priorities.

Technology Transfer: The Associate Director for Science manages CDC's intellectual property (e.g., patents, trademarks, copyrights) and promotes the efficient transfer of new technology forthcoming from CDC research to the private sector, to facilitate and enhance the development of diagnostic products, new research methods, vaccines, and other products, and methods that improve occupational safety.

Equal Employment Opportunity: The Office of Equal Employment Opportunity manages an accountability system for holding managers responsible for achieving agency equal employment objectives; identify and remove barriers at all levels of the work force; analyze program needs and monitor progress in resolving problems; prepare multi-year affirmative employment and people with disabilities program plans; conduct affirmative employment/diversity and training to prevent sexual harassment.

Minority Health: Continuing disparities in the burden of illness and death exist for the Nation's minorities: African Americans, Hispanic or Latinos, Asians, Pacific Islanders, American Indians, and Alaska Natives. Supporting evidence-based policy and public health action, enhancing effective internal and external partnerships, implementing disease prevention and health promotion initiatives, and enhancing internship and fellowship opportunities are some of the strategies undertaken to improve the health of these minorities and eliminate health disparities.

Performance Summary: In FY 1999, a broad range of activities were carried out by the Office of the Director. These activities included the provision of training and technical assistance for staff throughout CDC on GPRA implementation, technology transfer policies and procedures, and scientific ethics. The FY 1999 performance goal to develop mechanisms to support Historically Black Colleges and Institutions, Hispanic-Serving Institutions, and Tribal Colleges was achieved through the award of a cooperative agreement. The number of schools reached through this mechanism will not be available until June 2000. The FY 1999 target to enroll 57 students in three summer training programs (which are designed to

encourage minority students to pursue graduate careers in public health) was nearly achieved. Based upon the number of applications received and the funds available for this program, 55 highly qualified students were accepted to the programs.

2.14.2 Goal-by-Goal Presentation of Performance

Performance Goal: Provide leadership and coordination for a broad range of support activities across CDC.

Performance Measure	Target	Actual Performance	Ref.
Develop and provide technical assistance/consultation for CDC staff.	**FY 01:** Two training sessions for CIO GPRA staff provided annually. Training materials/manuals for OMB Clearance made available via OPPE Intranet site. Technical assistance provided to all recipients of 1% evaluation funds.	**FY 01:** **FY 99:** One training session provided for CIO GPRA staff. OMB Clearance materials developed, and available electronically via individual request. Guidance documents for development of statements of work revised and electronically available to requesters.	Page 212
Coordinate the development and timely submission of Reports to Congress and OMB Clearance packages.	**FY 01:** Reduce by 10% the number of outstanding Reports to Congress. Reduce OPPE review time for clearance packages to 10 days.	**FY 01:** **FY 99:** OPPE review time for OMB clearance packages 15 days. Inventory of outstanding Reports to Congress developed.	Page 212

Performance Goal: Ensure effective identification, evaluation, and protection of novel technologies.

Performance Measure	Target	Actual Performance	Ref.
Increase technology transfer education and awareness activities. This includes, but is not limited to, dissemination of CDC TTO policies, procedures, and guidelines that promote disclosure of inventions, appropriate patent protection, and potential public health benefits of licensing CDC technologies.	**FY 01:** Reach 80% of key staff with activities. **FY 00:** Reach 50% of key staff with activities.	**FY 01:** **FY 00:** **FY 99:** 2 education and awareness activities conducted.	Page 212
Increase the number of Employee Invention Reports (EIRs) filed per year.	**FY 01:** 45 EIRs filed. **FY 00:** 35 EIRs.	**FY 01:** **FY 00:** **FY 99:** 34 EIRs filed.	Page 212
Increase the number of patent applications filed per calendar year (includes both foreign and domestic).	**FY 01:** File 79 applications. **FY 00:** File 76 applications.	**FY 01:** **FY 00:** **FY 99:** Filed 73 applications.	Page 212
Increase the number of patents issued per year (includes foreign and domestic).	**FY 01:** 24 patents issued. **FY 00:** 23 patents issued.	**FY 01:** **FY 00:** **FY 99:** 22 patents issued.	

Performance Measure	Target	Actual Performance	Ref.
Review and manage CDC patent portfolio to maximize return for public health benefit.	**FY 01:** Less than 30 percent of unlicenced patents are being maintained by CDC beyond 4 years from the date of issue. **FY 00:** Less than 30 percent of unlicenced patents are being maintained by CDC beyond 4 years from the date of issue.	**FY 01:** **FY 00:** **FY 99:** 38% of CDC's unlicenced patents are being maintained beyond 4 years from the date of issue.	Page 212

Performance Goal: Encourage commercialization of unique technologies.

Performance Measure	Target	Actual Performance	Ref.
Market all available licensing opportunities for CDC's intellectual property, and update availability of new technologies on a quarterly basis.	**FY 01:** Conduct/publish 10 marketing update activities. **FY 00:** Conduct/publish 7 marketing update activities.	**FY 01:** **FY 00:** **FY 99:** 2 marketing update activities conducted/published.	Page 212
Increase in the number of patent license agreements (PLAs) executed annually by CDC.	**FY 01:** 3 PLAs executed. **FY 00:** 3 PLAs executed.	**FY 01:** **FY 00:** **FY 99:** 2 PLAs executed.	Page 212
New case evidence, at least annually, of CDC licenses providing a substantial basis for the development of commercially significant products and processes.	**FY 01:** 10% growth in royalties received from patent licenses. **FY 00:** 10% growth in royalties received from patent licenses.	**FY 01:** **FY 00:** **FY 99:** $110,000 received.	Page 212

Performance Measure	Target	Actual Performance	Ref.
Increase in CDC outreach activities through participation in national and international research, trade, and technology transfer meetings and conferences.	**FY 01:** TTO will participate in 5 events to market CDC technologies. **FY 00:** TTO will participate in 5 events to market CDC technologies.	**FY 01:** **FY 00:** **FY 99:** TTO participated in 2 major marketing events (i.e., AACC and BIO99).	Page 212

Performance Goal: Promote private sector participation and investment in applications of novel research discoveries.

Performance Measure	Target	Actual Performance	Ref.
Number of executed CRADAs, Material Transfer Agreements, Clinical Trial Agreements, and other kinds of CDC-private sector research cooperation mechanisms.	**FY 01:** 5% increase from previous year. **FY 00:** 5% increase from previous year.	**FY 01:** **FY 00**: **FY 99:** 6 standard CRADAs executed.	Page 212
Increase the number of EIRs arising from cooperative research with the private sector.	**FY 01:** 5% increase from previous year. **FY 00:** 5% increase from previous year.	**FY 01:** **FY 00:** **FY 99:** 0 EIRs.	Page 212

Performance Goal: Increase knowledge and practice of human subjects protection in research among public health scientists.

Performance Measure	Target	Actual Performance	Ref.
Increase Institutional Review Board (IRB) approvals following no more than one report from the CDC IRB.	**FY 02:** Increase to 98% approval. **FY 01**: Increase to 97%. approval. **FY 00:** Increase to 96% approval.	**FY 02:** **FY 01**: **FY 00:** **FY 99:** 95% approval.	Page 212

Performance Measure	Target	Actual Performance	Ref.
Increase the number of states with assurances of compliance and IRBs.	**FY 02:** 50 states. **FY 01:** 40 states. **FY 00:** 30 states.	**FY 02:** **FY 01:** **FY 00:** **FY 99**: 13 states.	Page 212
Scientists at CDC will receive computer-based training in Scientific Ethics.	**FY 02:** All CDC scientists will pass the computer-based training on Scientific Ethics. **FY 01:** 80 % of all CDC scientists will pass the computer-based training on Scientific Ethics. **FY 00:** All CDC scientists engaged in research will pass the computer-based training in Scientific Ethics.	**FY 02:** **FY 01:** **FY 00:** **FY 99:** 18.5% of CDC scientists passed the computer-based training in Scientific Ethics.	Page 212

Performance Goals: Eliminate discrimination, identify and remove barriers through the following strategies:

- Develop an operating plan that includes objectives and initiatives to overcome the barriers to successful accomplishment of agency equal employment opportunity program goals;
- Increase management involvement in agency equal employment programs and activities, and establish management responsibility and accountability for accomplishment of program goals and objectives;
- Maintain and provide accurate workforce and applicant flow data;
- Develop and provide a “report card” of accomplishments to the CDC Director;
- Decrease the number of complaints in the inventory by 15% by September 30, 2000;
- Decrease the number of formal discrimination complaints filed through early resolution;
- Provide full support to the Alternative Dispute Resolution program to resolve complaints at the earliest stage possible;
- Build and expand internal and external partnerships;
- Enhance agency recruitment efforts to ensure the availability of applicant pools that include highly qualified minorities, women, and persons with disabilities;
- Increase the representation of minorities, women, and persons with disabilities at the GS-13 and higher levels;
- Provide mandatory EEO and sexual harassment training to managers, supervisors, and employees.

Performance Measures	Target	Actual Performance	Ref.
Increase the percentage of representation of minorities, women, and people with disabilities in the work force.	**FY 01:** Increase representation by 2%.	**FY 01:** **FY 99:** Representation at CDC/ATSDR 26.9%.	Page 212
Monitor the internal and external selection process.	**FY 01:** Develop a report on the process.	**FY 01:** **FY 00:**	Page 212
Decrease the number of complaints in the inventory.	**FY 01:** 15% reduction of complaints.	**FY 01:** **FY 98:** 75 complaints.	Page 212
Decrease the number of formal discrimination complaints filed through early resolution.	**FY 01:** 25% reduction of the number of complaints filed.	**FY 01:** **FY 98:** 43 formal discrimination complaints.	Page 212

Performance Goal: Administer minority student training programs that are designed to enhance the professional capacity of minority students and encourage them to pursue graduate level careers in public health.

Performance Measure	Target	Actual Performance	Ref.
Increase the number of minority students participating in three summer training programs: Project: IMHOTEP, Public Health Summer Fellowship Program, Ferguson Infectious Disease Fellowship Program.	**FY 01:** 59 students. **FY 00:** 57 students. **FY 99:** 57 students.	**FY 01:** **FY 00**: **FY 99:** 55 students. **FY 98:** 59 students.	Page 212

Verification/validation of performance measures: Demographic data are compiled for all training programs annually.

Performance Goal: Through grants and cooperative agreements, develop mechanisms to support Historically Black Colleges and Institutions, Hispanic-Serving Institutions and Tribal Colleges and Institutions.

Performance Measure	Target	Actual Performance	Ref.
Increase the number of funding mechanisms and number minority-serving institutions receiving support.	**FY 01:** 3 cooperative agreements and 30 schools. **FY 00:** 2 cooperative agreements and 27 schools. **FY 99**: 1 cooperative agreement and 22 schools	**FY 01:** **FY 00:** **FY 99:** 1 cooperative agreement. Data for the # of schools available June 2000. **FY 98:** 1 cooperative agreement and 20 schools.	Page 212
Total Program Funding (Dollars in thousands)	**FY 2001: 35,564** **FY 2000: 37,620** **FY 1999: 31,093**		

2.15 Program Support Goals

2.15.1 Program Description, Context and Performance Summary

Several management activities at CDC are important to assure the integrity of CDC processes and resources. For the purpose of accountability, CDC has included the following program support activities that are considered important to monitor. Additional major, short-term management activities that are monitored and reported through other mechanisms, such as Y2K activities, are not included in this section.

Information Security and Integrity: CDC is an information-intensive organization. Much of CDC's mission revolves around the collection, analysis, and dissemination of data on health events, vital statistics and other health determinants. Protection of the confidentiality, privacy, and integrity of sensitive data and information is of utmost importance to CDC, our data provider partners, and the individuals and organizations who entrust public health agencies with these data.

Financial Management Processes, Internal Controls, and Information Systems The Chief Financial Officers' Act requires federal agencies to have audits of their financial statements. This audit consists of a review of the agency's financial statements and of the underlying assessment and accounting principles used. In order to receive an "unqualified" auditor's opinion, the agency's financial statements must be determined to be presented fairly in accordance with the hierarchy of accounting principles and standards approved by the Federal Accounting Standards Advisory Board.

Recruitment and Retention of Qualified and Diverse Workforce: The CDC workforce is a critical strength of the agency. The recruitment and retention of highly qualified staff who represents the public that we serve is a top priority of the agency.

Performance Summary:
Information Security and Integrity: Data for FY1999 confirms that the target increase of 25% in activity over FY1998 for the CDC Internet was met. The number of monthly visitors increased. The dual fire walls provided access control, logging and restrictions to CDC networks from the Internet. The additional security measures that were implemented in FY1999, including network and host-based intrusion detection systems, has insured the protection of data and information through the Internet access. During FY1999

there continued to be no serious losses, alterations, or releases of data or information.

The activity for the CDC Voice/FAX Information Service (VIS) did not increase by the 10% earlier projected for FY1999. The Voice did meet the 10% target; however, the FAX portion of the system only increased 9%. While goals were achieved, there were several factors, both internal and external, that have impacted usage of the continued growth of the system at the same rate in past years. Internally, the VIS has reached a plateau in its marketplace. Almost all Centers/Institutes/Offices (C/I/O) divisions are represented on the system either in voice, fax or both. VIS management has recommended to some activities that the information should be made available only by fax due to content and presentation. However, in most cases, the standard is to have the information available in both formats. There are plans to expand some C/I/O applications to include additional topical information in FY2000.

The lower increase is also a result of the enormous growth in the use of Internet by the American public. This is a main external factor influencing traffic or usage on the VIS. In reality, the Internet has created a new audience for information and to some degree has pulled current users of the VIS to this new medium. The VIS has continued to hold its own on usage. Long-term projections lean to the electronic channels degrading use of both audio and written information. Another aspect is the competition with other electronic medical and scientific sites. The consumer now has the option to seek other sources of information. In the meantime, the consumer has gained the most by being able to access the information in the manner they want it delivered.

Financial Management Processes, Internal Controls, and Information Systems CDC received a qualified opinion on the FY 1997 Financial Statements. This was the first ever financial statement audit of CDC. Two items prevented CDC from receiving an unqualified opinion: validation of the beginning balances, which is a concern for all first time audits and will not affect future audits, and the grant accrual process, which is a department-wide issue.

Recruitment and Retention of Qualified and Diverse Workforce:

2.15.2 Goal-by-Goal Presentation

Performance Goal: Provide a variety of standardized and integrated means for health practitioner and public access to CDC information resources.

Performance Measure	Target	Actual Performance
Continually enhance CDC's Internet infrastructure and valued information content so that access to CDC information resources grows 25% per year.	**FY 01**: 25% increase. **FY 00:** 25% increase. **FY 99**: 25% increase.	**FY 01:** **FY 00:** **FY 99:** Mid FY 99, average monthly visitors to CDC's website was 1.7M with an average of 4 accesses of information content. **FY 98:** Baseline (based on first 7 months) Visitors to CDC's website was 662,000 with an average of 5.6 accesses of information content.

Performance Measure	Target	Actual Performance
Continue enhancing the CDC Voice/FAX Information Service (VIS) such that usage grows 10% per year.	**FY 01**: 10% increase. **FY 00:** 10% increase. **FY 99**: 10% increase.	**FY 01:** **FY 00:** **FY 99:** Average monthly (based on the first 9 months) calls to CDC (VIS) was 50,000 with 21,000 requests for documents to be faxed to the callers. **FY 97:** Baseline: Average VIS was 45,000 with 25,000 requests for information documents to be faxed to the callers.

Performance Goal: Enhance CDC's information security program.

Performance Measure	Target	Actual Performance
No serious losses, alterations, or releases of data or information occur in CDC's security program that are critical, highly sensitive, or are covered by privacy or confidentiality requirements**.**	**FY 01:** No serious losses, alterations, or releases of data or information occur that are critical, highly sensitive, or are covered by privacy or confidentiality requirements. **FY 00:** No serious losses, alterations, or releases of data or information occur that are critical, highly sensitive, or are covered by privacy or confidentiality requirements.	**FY 01:** **FY 00:** **FY 99:** There have been no losses, alterations, or releases of data or information. Have implemented added security measures, including network and host-based intrusion detection systems. **FY 98**: There have been no losses, alterations, or releases of data or information. However, with the higher degree of organization's vulnerability with Internet connectivity, additional security measures are required to increase prevention effectiveness.

Verification/Validation of Performance Measures: Dual fire walls provide access control, logging and restriction to CDC networks from the Internet. Additional security measures will increase the protection of data or information through Internet access. Intrusion software captures data necessary for monitoring and

assessing intrusion activity, and auditing software audits the web servers and network devices to insure compliance with established security policies and procedures. Public key encryption will protect sensitive data on network servers.

Performance Goal: Ensure that CDC's financial statements are properly prepared and presented.

Performance Measure	Targets	Actual Performance
100% audited financial statements with no qualifications.	**FY 01:** 100% with no qualifications. **FY 00:** 100% with no qualifications.	**FY 01:** **FY 00:** **FY 99:** 100% with no qualifications. **FY 98:** Qualified: Two items prevented CDC from receiving an unqualified opinion: validation of the beginning balances, and the grant accrual process.

Verification/Validation of Performance Measures: Audited financial statements are published annually in the Chief Financial Officers Report for CDC and ATSDR. The measure and goal will be validated and verified by the published report of the independent audit firm, Ernst & Young.

Performance Goal: Decrease the time it takes to refer candidates for vacancies and the time entailed in classifying positions.

Performance Measure	Targets	Actual Performance
Reduce the time it takes to classify positions and the time involved in referring candidates to fill positions by 25%.	**FY 01:** **FY 00:** 25% time reduction	**FY 01:** **FY 00:** **FY 98:** Time to classify jobs - 15 days Time to refer candidates - 80 days

Verification/Validation of Performance Measures: Data will be collected through the Staffing Tracking and Reporting System (STARS) in the Human Resources Management Office, CDC. This system is monitored monthly for system errors and data irregularities.

Appendix A.1

Approach to Performance Measurement

CDC and its partners are concerned with a wide spectrum of health issues including infectious diseases, chronic conditions, reproductive outcomes, environmental health, occupationally related health events, and injuries. This array of issues requires a variety of intervention strategies for populations, in addition to the need to provide clinical preventive services for individuals. To implement effective interventions, CDC engages in extensive dialogue with its partners, communities, and the public to identify and implement intervention strategies specific to the needs of diverse populations. Some examples include the provision of prophylactic measures (e.g., vaccination, post-exposure rabies prophylaxis), educational services (e.g., public health messages to diverse populations, counseling, and prophylaxis for contacts of persons with certain infectious diseases), inspection of food establishments, and control of outbreaks. For these activities, the rational development of public health policy depends on public health information.

In order to effectively respond to this variety of health problems and intervention methods, different types of information for action and a broad array of data collection methods are necessary. For example, information on the age of children with vaccine-preventable diseases has been used to establish policy on appropriate ages for having vaccinations. Information on the prevalence of elevated lead in blood has been used as the justification for eliminating lead from gasoline and for documenting the effects of this intervention, and information on the rate at which breast cancer is detected has led to new policies regarding the recommended ages at which to have mammograms.

As outlined in this section, CDC has a wide range of health data systems that provide the science base for identifying health problems, designing interventions, and monitoring program performance. These data systems face considerable challenges in addressing each of these three areas. For the most part, data systems that were designed to support scientific objectives are now becoming important for the monitoring of performance. Several specific challenges in providing data to monitor performance under GPRA are outlined below:

- As GPRA measures are refined over time, data systems will need to produce data on a more timely basis, and with a frequency relevant to the periods over which performance is being measured.
- As the health system itself changes, it can no longer be assured that historical data series will continue to produce needed data. For example, the move toward managed care may make medical information increasingly proprietary, making access for research and statistical purposes more difficult. Similarly, changes in relationships between different health care providers, as well as laboratories, may make public health surveillance based on case reports more difficult. At the same time, these changes present opportunities for new partnerships to obtain needed information.
- Data systems will need to produce information in sufficient quality and precision to detect what may be relatively small changes in key performance indicators. This may require investments in larger sample sizes for surveys, new technology for improving data quality, etc. Continuing research will be required to establish the data systems, as well as the underlying evaluation approaches, for assessing cause (program intervention) and effect (outcomes) for performance monitoring.
- Many of our current major national data systems are the source of GPRA measures for CDC and for other health programs. It is important to assure that these data systems are assessed and upgraded to remain current with the needs of our public health infrastructure. Resources to assure that these data systems are maintained and strengthened are included in the FY 2000 CDC budget request and need to be continued.
- Many CDC and HHS programs are implemented at the state and local level, and it will be increasingly important to obtain reliable, systematic data at these levels to monitor program implementation, performance, and outcomes.

Information Categories

Ascertaining what information is needed and how to collect it is a complex issue. Information for action must be useful to public health programs at local, state, and national levels. At least seven categories of information are used by CDC and its partners to understand and address disease, injury, and disability using the public health model. These categories of information include: a) reports of health events affecting individuals; b) vital statistics on the entire population; c) information on the health status, risk behaviors, and experiences of populations; d) information on potential exposure to environmental agents; e) information on existing public health programs; f) information useful to public health but obtained by organizations not directly involved in public health practice; and g) information on the health care system and the impact of the health care system on health.

Reports of Health Events. Reports of cases of specific diseases of public health importance serve as the basis of many of CDC programs. The National Notifiable Disease Surveillance System (NNDSS) seeks reports on all cases of more than 40 conditions in the United States. To minimize the burden placed on those who report the information, CDC limits the amount of information collected for each case. NNDSS data are used to monitor trends in disease, to evaluate public health programs, and to identify unusual occurrences of conditions that may require further epidemiologic investigation at the local level. For some public health purposes, effective action requires additional detail on each case.
For this reason, supplemental data collection systems have been developed for some of the diseases involved in the NNDSS. Such supplemental systems may be less comprehensive in terms of the population represented but provide more detailed information on characteristics of the occurrence of disease. For example, cases of hepatitis are reported weekly to NNDSS for publication in the *Morbidity and Mortality Weekly Report (MMWR)*. In addition, the Viral Hepatitis Surveillance Project collects data on specific risk factors for different types of viral hepatitis in selected geographic areas. These data have been used to document the importance of behavior associated with sexual activity and drug use as a risk factor for transmitting Hepatitis B and to target education and vaccination programs.

State public health laboratories currently analyze 41 million specimens annually. Some of the data from the analyses immediately enter the electronic Public Health Laboratory Information System (PHLIS) and are used in monitoring both short and long range trends in the incidence of disease.

Intervention and control of some conditions require more detailed information than can be obtained feasiblely from a large group of clinicians or institutions. As a result, networks of selected health care providers have been organized to meet these targeted information needs. For example, CDC's Sentinel Event Notification System for Occupational Risks (SENSOR) targets select groups of health care providers as a component of a comprehensive approach that uses multiple data sources to provide information used on directing efforts to prevent workplace-related morbidity. The National Nosocomial Infections Surveillance System (NNIS) receives reports from a selected group of hospitals on the incidence and characteristics of hospital-acquired infections; data from this system have been instrumental in alerting health authorities to the emergence of antibiotic-resistant strains of bacteria, which in turn has led to the development of specific recommendations regarding the use of antibiotics.

Vital Statistics. Vital records (e.g., births, deaths) are the primary source of some of the most fundamental public health information. Data on teen births, access to prenatal care, maternal risk factors, infant mortality, causes of death, and life expectancy are examples of the staples of public health provided by vital statistics. Vital statistics are often the most complete and continuous information available to public health officials at the national, state, and local levels; the timely availability of these data is critically important.

In the United States, the legal authority for vital registration rests with the States and territories. Therefore, CDC's National Center for Health Statistics (NCHS) produces national vital statistics by collecting data from the vital records of the states. NCHS works with the states to ensure a uniform national data base through the promotion of standard data collection forms, data preparation and processing procedures, and also provides partial financial support for the state systems.

Information on Health Status, Risk Factors, and Experiences of Populations Since the determinants of many important health problems are behavioral, environmental, genetic or from other causes, health agencies need information that is not readily available from medical records on the prevalence of various types of behavior and on access to care. Thus, regularly conducted surveys of the general population are needed for public health. These surveys may range from large-scale assessments of the general population to assessments targeted at high-risk (i.e., particularly vulnerable populations). This need is particularly acute at the state and local level. Surveys provide information on

- Baseline health status (e.g., the National Health and Nutrition Examination Survey, NHANES, and the National Health Interview Survey, NHIS)
- Morbidity (e.g., the National Ambulatory Medical Care Survey, NAMCS)
- Prevalence of specific behavioral risk factors (e.g., the Behavioral Risk Factor Surveillance System, BRFSS, and the Youth Risk Behavioral and Surveillance System, YRBSS) and medical risk factors (e.g., NHANES and Pregnancy Risk Assessment and Monitoring System, PRAMS)
- Use of health care services and identification of underserved populations (e.g., NHIS)
- Potential for exposure to toxic agents (e.g., the National Occupational Exposure Survey, NOES).

This information is used in developing prevention and control programs and in ensuring adequate delivery of health services.

Information on Potential Exposure to Environmental Agents. Information on exposures to environmental agents can be used in evaluating the risk to health represented by non-infectious diseases, injuries, and certain infectious diseases. For example, measurement of airborne particulates is useful in assessing risks related to certain pulmonary disorders (e.g., asthma and lung cancer). Information on vectors that may carry agents of infectious disease (e.g., ticks as vectors for Lyme disease, and Rocky Mountain spotted fever, mosquitoes as vectors for viral encephalitides, and raccoon as vectors for rabies) is important in evaluating the risk for having such infections.

Information on Programs. Data necessary to operate public health programs include such items as number of clients served and cost of services rendered. These data are useful to public health officials in assessing the effectiveness of public health programs, comparing different programs, documenting the need for continuing a particular program, and maintaining accountability for tax dollars spent.

Information from Other Organizations. Data useful for public health are currently or potentially available from organizations whose functions may not be related to those of CDC and of state and local health departments. Data from the Bureau of the Census, for example, are necessary both for the reliable computation or rates and for the proper adjustment of rates for comparison over time or in different geographic areas. The Environmental Protection Agency (EPA) compiles environmental air-monitoring data to assess compliance with standards for air pollutants established by the Clean Air Act. Data collected through this system are also used by public health officials for hazard alerts when pollutants exceed Federal standards and in studies of the effects of air pollutants on morbidity associated with respiratory diseases. The Occupational Safety and Health Administration (OSHA) and the Bureau of Labor Statistics compile data on the occurrence of work-related injuries and illnesses and exposure to hazards in the workplace, which can be used for surveillance and research purposes. The Department of Transportation operate the Fatal Accident Reporting System, used in public health to assess risk factors for motor-vehicle-related injuries and deaths. The Federal Bureau of Investigation (FBI) crime statistics assist in evaluating the public health impact of intentional injuries, and the Consumer Product Safety Commission collects data on injuries related to consumer products.

Information on the Heath Care System. Information is also needed on the health care system and the impact that changes in the system have on health. CDC provides a great deal of information to monitor the capacity of the personal health care system utilization of that system and access to health insurance and services by the American people. These data include: inventories of health care providers; surveys to determine patterns of utilization of health services such as hospitalization rate and uptake of new technologies tracking health insurance coverage on the part of the population and health insurance benefits provided by employers; and access to health care and barriers (both financial and non-financial) to access.

Appendix A.2

Data Verification and Validation Of Select Data Systems

Data verification and validation help to assure that the data CDC is using to assess performance is of sufficient quality. The following data systems have been referenced in the CDC Performance Plan as sources for data used in assessing program implementation and effectiveness. Information on data verification and validation will be obtained from systems managers responsible for quality assurance. It is anticipated that this information will be available for the Congressional Justification submission in January 2000.

Behavioral Risk Factor Surveillance System:

In 1984, the Behavioral Risk Factor Surveillance System (BRFSS) was established by CDC, with 15 states participating in monthly data collection. Although designed to collect state-level data, a number of states from the outset stratified their samples to allow them to estimate prevalence for regions within their respective states. By 1994, all 50 states and the District of Columbia were participating; as of 1998, Puerto Rico also was collecting monthly data and the Virgin Islands and Guam were conducting point-in-time surveys.

A standard questionnaire was developed at CDC for states to use to provide data that could be compared across states. The initial survey primarily included existing questions from national surveys such as the National Health Interview Survey. The basic questionnaire was designed to allow the opportunity to add their own questions. The BRFSS gathers information on health behaviors related to the leading preventable causes of death, including physical inactivity, injury, weight control, alcohol consumption, tobacco use, and HIV-AIDS. It also collects data on preventive health practices such as mammography use.

One important characteristic of the BRFSS is its flexibility. It permits states to add questions of their own design, but is uniform enough to allow state-to-state comparisons for certain questions. Participating states use these data for many purposes. Among these are to identify demographic variations in health-related behaviors, target services, address emergent and critical health issues, propose legislation for health initiatives, and to measure progress towards state and national health objectives. The system's broad network for information gathering also enables states to evaluate their disease prevention and health promotion efforts.

The questionnaire has three parts: 1) the core component, consisting of the fixed, rotating, and emerging core; 2) optional modules; and 3) state-added questions.

Core component. The *fixed core* is a standard set of questions asked by all states. It includes queries about current behaviors that affect health (e.g., tobacco use, alcohol consumption) and questions on demographic characteristics. The *rotating core* is comprised of two distinct sets of questions, each asked in alternating years by all states, that address different topics. The *emerging core* is a set of up to five questions that are added to the fixed and rotating cores. Emerging core questions typically focus on issues of a “late breaking” nature and do not necessarily receive the same scrutiny that other questions receive prior to being added to the instrument. These questions are part of the core for one year and are evaluated during or soon after the year concludes to determine their potential value in future surveys.

Optional CDC modules. These are sets of questions on specific topics (e.g., smokeless tobacco, arthritis) that states elect to use on their questionnaires.

State-added questions. These are questions developed or acquired by participating states and added to their questionnaires.

Each year, states and CDC agree on the content of the core components and optional modules. For comparability, many of the questions are taken from established national surveys. This allows the BRFSS

to take advantage of questions that may have been tested and allows states to compare their data with those from other surveys.

There have been more than 30 validity and reliability studies of the BRFSS, and they demonstrate that BRFSS collects high quality and valid data.

CDC Integrated Resources Information System:

Integrated Resources Information System (IRIS) is a management tool for use in budgeting and reporting. It is a highly sophisticated executive information system. It serves as both a project and financial management system for CDC and enables managers at all levels to define goals, objectives, and outcomes. It provides an automated budget management system that will enable FMO and CIOs to formulate and execute their budgets while linking resources to outcomes as required by GPRA. IRIS provides CDC with a mechanism to access information to produce reports or other ad hoc inquiries.

Clinical Laboratory Improvements Act of 1988 (CLIA):

The Clinical Laboratory Improvements Act of 1988 (CLIA) is designed to ensure that the development and revision of laboratory methods for various substances is conducted in a sound scientific manner. To accomplish this goal CLIA establishes a series of specific standards that must be achieved prior to the certification of a laboratory method for an individual substance. These standards include a strenuous series of internal and external evaluations of the laboratory method being developed.

Among the internal evaluations and controls that CLIA requires is the development of a detailed analytical procedures manual for each method that is developed. These manuals must be verified and approved by senior personnel in the laboratory who were not directly involved in the development of the method. CLIA also provides detailed specifications that must be maintained regarding quality control and calibration of laboratory equipment. Further internal control is provided through regular review from a designated Quality Assurance Officer. This officer is tasked with ensuring that the generally accepted international scientific standards are being followed in the development of the method for each substance.

External evaluation and control is provided through regular on-site inspections by statutorily approved independent CLIA inspection teams. These inspections are designed to review the internal procedures that the organization has established to ensure that CLIA standards are met. These inspections also review the individual components of numerous methods to further verify that all developed and refined methods have undergone the appropriate review. To date CDC has successfully passed all on-site CLIA inspections.

Group B Streptococcal Disease Surveillance, part of the Active Bacterial Core Surveillance (ABCs)

In 1989, active surveillance for group B streptococcal disease was initiated as part of an active surveillance system for several pathogens which cause invasive disease. Surveillance was conducted in five geographic areas which were awarded contracts following a competitive request for proposals. In 1994, active surveillance for group B streptococcal disease was included as a core activity of the newly established Emerging Infections Program (EIP) Network, a cooperative agreement program that addresses important public health issues related to infectious diseases. In 1999, the EIP network comprised 8 states; all participated in ABCs and conducted active surveillance for invasive group B streptococcal disease.

ABCs involves population-based active surveillance for laboratory-confirmed cases of invasive bacterial disease caused by group B streptococcus, group A streptococcus,*Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Neisseria meningitidis*. The purpose of ABCs data collection is to monitor the incidence of invasive disease due to group B streptococcus and the other pathogens in a large, diverse population and to characterize epidemiologic and clinical features of disease occurrence. The focus of the data collection system is disease occurrence data, with limited clinical details (e.g., anatomic site of infection; whether hospitalized, outcome of infection) and basic demographic information (e.g., age, sex,

race, ethnicity). GBS isolates from certain periods or areas are tested for serotyping and antimicrobial susceptibility. The population under surveillance for group B streptococcus in 1999 totaled 22.4 million, with approximately 318,000 live births per year. Surveillance officers in each state actively contact personnel in all microbiology laboratories which process bacterial cultures from sterile sites (e.g., blood) to find cases of group B streptococcus. Laboratory audits are also conducted semi-annually to detect possible underreporting. Standardized case report forms with basic demographic and clinical information are completed entered into EPI-INFO based software at each state. Data are transmitted electronically from the EIPs to CDC's ABCs team on a monthly basis. Annual surveillance reports on invasive GBS disease as well as the other pathogens are made available on the Internet at the ABCs website -- http://www.cdc.gov/ncidod/dbmd/abcs. Laboratory testing of isolates collected as part of surveillance is performed in reference laboratories (e.g., at the CDC or some of the state health departments). Electronic files containing results of laboratory testing of each state's isolates are fed back to that state on a monthly basis.

ABCs has documented substantial changes in the epidemiology of invasive group B streptococcal disease during the 1990s, a period of time in which increased use of preventive policies occurred at hospitals and obstetric practices.

Quality assurance and quality control:
The case definition for surveillance is isolation of the bacteria from a normally sterile site. GBS cases counted in the surveillance system are therefore laboratory-confirmed; however changes in diagnostic practices could potentially reduce detection of laboratory-confirmed GBS disease and in the future might impact the validity of this case-finding method. While reduced use of blood culturing may be a real problem for detection of disease in older age groups, the severity of neonatal GBS disease and the very high proportion of cases with onset prior to discharge from a hospital suggests that blood cultures continue to be used regularly by practitioners managing clinical illness likely to be caused by GBS. The laboratory audits conducted routinely as part of ABCs assure that the data are complete for the surveillance populations, and represent a tremendous strength of this system. Data review (for completeness and errors) is conducted monthly by CDC staff and potential errors transmitted to state personnel for evaluation. Performance standards for active surveillance have been established in each site, in order to permit aggregation of data collected via somewhat different approaches by specific states (e.g., information collection by infection control personnel vs. county health department personnel). Detailed instruction forms for completion of the case report form information have been developed to assure consistency across sites. Stakeholders--i.e., state-based surveillance officers and the CDC ABCs team--hold monthly conference calls to address logistical and technical aspects of the system, and hold an annual meeting during which protocols are reviewed and updated, special studies presented, and innovations to the system discussed. Site visits by epidemiologists and data managers from CDC's ABCs team to many of the EIP states have occurred during the past few years on an as-needed basis, and annual site visits are planned for the future.

Because the system represents population-based information, the timeliness of final reports each year are dependent on availability of information on the denominators -- i.e., census data or projections for race and age-specific populations at county levels. For perinatal conditions such as group B streptococcal neonatal disease, live birth data and natality data are used for denominators. Natality data from NCHS is available even later in the calendar year than census estimates.

Easy access to the data are provided through a website for ABCs developed during 1999, which includes the ABCs basic protocol and one page surveillance reports for each of the pathogens for each year. Additional information on GBS is also available on a website focused on that infection, with many materials targeted to pregnant women or health care providers and public health workers concerned with pregnant women (http://www.cdc.gov/ncidod/dbmd/gbs).

Limitations of the Data:
The principal limitation of group B streptococcal disease surveillance through the ABCs is that it is not conducted throughout the United States. Substantial geographic variation in incidence of invasive GBS disease has been noted, and it is unclear whether states outside of ABCs areas have experienced similar changes in the incidence of GBS disease as that evident within surveillance areas. Racial differences in

disease incidence have been marked in the past, with African Americans experiencing substantially higher rates of invasive GBS disease in all age groups compared with whites. However, from 1993 to 1998, the black-white gap in incidence of early-onset GBS disease (i.e., infection in infants <7 days of age) narrowed by 75%, during a time when incidence overall declined by 65%. The excess rates in blacks have remained constant in older age groups. One way of addressing the lack of information about incidence of invasive GBS disease in areas that are not part of ABCs is to make the methods and tools of ABCs available more broadly. Through our website and frequent publications (e.g., MMWR) we are attempting to provide other state health departments with information that can help them assess whether the efforts involved in conducting invasive GBS disease surveillance, particularly for early-onset disease in infants < 7 days of age, are feasible in their locales.

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National Health and Nutrition Examination Survey:

The National Health and Nutrition Examination Survey (NHANES) is a program of studies designed to assess the health and nutritional status of adults and children in the United States. Began in the early 1960's, NHANES established baseline data for blood cholesterol, blood pressure, cognition in children, height, weight, and other factors. The first national prevalence rates of cardiovascular disease, arthritis, and diabetes were estimated using these figures.

The NHANES is an ongoing program that allows crude annual estimates for the prevalence of topic areas included in the survey. For estimates of smaller population sub-groups, by various demographic characteristics, and for prevalent conditions and diseases, data must be accumulated over several years to provide adequate estimates. The survey screens 15,000 households per year and selects 3,500. From this sample, 5,000 people are interviewed and examined annually. Sample persons are recruited from 15 Primary Sampling Units (PSU's, counties or clusters of counties) each year, and the sample is chosen to assure sufficient sample sizes to provide reliable estimates by gender and age group for non-Hispanic whites, Mexican Americans, and African Americans.

NHANES data are collected by a health interview, a physical examination, and collection of biologic specimens, primarily blood and urine. The forty-five minute health interviews are conducted in respondents' homes. The physical examinations, which last from three to four hours, are performed in specially-designed and equipped mobile examination centers (MEC's) that travel to survey locations throughout the country. The examination survey team consists of a physician, dentist, medical and health technicians, and dietary and health interviewers, while a large staff of trained bilingual interviewers conducts the household interviews.

Data are collected on the prevalence of chronic conditions in the population. Estimates for previously undiagnosed conditions, as well as those known to and reported by survey respondents may be produced. Data are also collected on a range of risk factors, including health-related behaviors, socioeconomic status, and environmental exposures.

An advanced computer system using high-end servers, desktop PCs, and wide-area networking collects

and processes all the NHANES data, nearly eliminating the need for paper forms and manual coding operations. Household interviewers use notebook computers with electronic pens to conduct interviews in the field. Data collected in the MEC's are automatically transmitted data via a frame relay network into central databases. Survey information is available to the NCHS within 24 hours of collection.

Information from NHANES is made available through an extensive series of publications and articles in scientific and technical journals. Survey data are also available on CD-ROM and computer diskettes. In previous years, data were available for analysis approximately 31 months after collection. A major goal of the agency is to improve the expediency with which data are available. The new information system has already substantially improved access to the data from the field.

Quality Assurance/Quality Control

A comprehensive quality assurance program is instituted before data collection begins with appropriate training that requires significant practice time for the health examiners and interviewers. The training focuses on hands-on experience rather than on didactic methods. During data collection, meetings are held regularly between the health examiners and survey staff to discuss ideas related to the execution of the components, updates, or unusual situations encountered. Staff are retrained as necessary.

NHANES relies on both passive and active monitoring systems for operational and content related quality control. Passive quality control relies on automated computer procedures for detecting data anomalies. After careful analysis, appropriate activities can be undertaken to resolve any data collection issues. Active quality control will rely on examiner feedback to help identify, evaluate, and select remedies to problems and fine tune procedures. It also includes gold standard examinations and field observation and reporting by content matter experts from the CDC, the contractor and collaborators.

NHANES primarily relies on physical measurements which are well established biomedical procedures. In most instances these measurements represent the gold standard data against which self reported data might be validated for other subjective data collection modalities. When a new technology is considered for NHANES, it is evaluated to determine if it provides a valid estimate of the condition, risk factor or measurement for which it is being used. This may include a review of the scientific literature, conduct of an expert workshop or the undertaking of a validity study.

National Health Interview Survey:

The National Health Interview Survey (NHIS) is the principal source of information on the health of the civilian non-institutionalized population of the United States. Data have been collected continuously since 1957. Since that time, the survey has been updated with the newest version of the survey implemented in the field in 1997. The main purpose of the NHIS is to monitor the health of the United States population through the collection and analysis of data on a broad range of health topics. A major strength of the survey is the ability to display these health characteristics by many demographic and socioeconomic factors.

The NHIS data are used widely throughout the Department of Health and Human Services to monitor trends in illness and disability and to track progress toward achieving national health objectives. The data are also used by the public health research community for epidemiologic and policy analysis of such timely issues as characterizing those with various health problems, determining barriers to accessing and using health care, and evaluating Federal health programs.

The NHIS is a cross-sectional household interview survey. Sampling and interviewing are continuous throughout each year. Households chosen for interviewing are a probability sample representative of the target population. NHIS data are collected annually from approximately 43,000 households including about 106,000 persons. Survey participation is voluntary and the confidentiality of responses is assured. The annual response rate of NHIS is greater than 90 percent of the eligible households in the sample.

The NHIS has three modules, 1) a Basic module, 2) a Periodic module, and 3) a Topical module:

The Basic Module will remain largely unchanged from year to year and allows for trends analysis. Further, data from more than one year can be pooled to increase sample size for analytic purposes. The Basic Module contains three components: the Family Core, the Sample Adult Core, and the Child Core. Using these components, NHIS collects data on the family unit, and other, more detailed information from one randomly selected adult and child in the family.
The Periodic Modules collect more detailed information on some of the topics included in the Basic Module. These provide greater depth in certain areas while retaining key measures in all areas, providing rich data for multivariate analysis.
The Topical Modules respond to new public health data needs as they arise. These questions may be used to provide additional detail on a subject already covered in the Basic or Periodic Modules or on a different topic not covered in other parts of the NHIS.

Data are collected through a personal household interview conducted by interviewers employed and trained by the U.S. Bureau of the Census according to procedures delineated by NCHS. Field representatives who conduct the interviews are trained to increase the accuracy, consistency, completeness, and timeliness of the data collection. The NHIS questionnaire is conducted using a computer assisted personal interviewer (CAPI), in which interviewers administer the questions using a laptop computer and enter responses directly into the computer during the interview, improving timeliness of data and provides resolution of certain kinds of inaccuracies.

Quality Assurance/Quality Control:

NHIS are reviewed and analyzed extensively to ensure its validity and reliability. The survey sample is designed to yield estimates that are representative and that have acceptably small variation. Prior to the actual survey, cognitive testing is performed by the NCHS Questionnaire Design Research laboratory, and pretests are conducted of the questionnaire and instruments in the field. Once collected, data are carefully edited, and they are checked by calculating various statistics and comparing them to estimates from earlier surveys and/or independent sources to test accuracy. Staff members calculate descriptive statistics and perform in-depth analyses, which results in feedback on the analytic usefulness of the data.
In the past, it has taken approximately 26 months for the survey data to be released for a given year. Improving the timeliness of NHIS is part of the GPRA performance measures. In 1999, the target was to reduce the time lag by 20%; data was released 20 months after collection, an improvement of 23%. Only data that meets confidentiality requirements and are expected to yield reliable estimates are released. Once the data is released, Staff provide documentation and seminars to instruct users on the appropriate use of the data. Use of appropriate software for the analysis of the complex survey data is encouraged.

Every 10 years, after the decennial Census is conducted, a newly-designed NHIS sample is drawn based on the Census data. This ensures consistency of NHIS data and the distributions of corresponding Census data, as well as adequacy of the NHIS sample sizes. In between sample redesigns, newly-constructed households are identified so that they can be eligible for inclusion in the NHIS sample.

National Hospital Discharge Survey Data:

The National Hospital Discharge Survey (NHDS), which has been conducted annually since 1965, is a national probability survey designed to meet the need for information on characteristics of inpatients discharged from non-Federal, short-stay hospitals in the United States. The NHDS collects data from a sample of approximately 300,000 inpatient records acquired from a national sample of about 500 hospitals. The survey is designed to examine important topics of interest in public health and for a variety of activities by governmental, scientific, academic, and commercial institutions.

Two data collection procedures are currently used in the survey. One is a manual system in which the hospital staff or staff of the U.S. Bureau of the Census abstract the data from medical records. The other is an automated system in which machine-readable medical record data is purchased from commercial organizations, stat data systems, hospitals, or hospital associations. Approximately 40 percent of the hospitals provide data through the automated system.

Timeliness is being addressed as part of the GPRA effort. Data are generally available approximately 17 months after collection. Use of information technology has improved the release of data through the Internet and other electronic means. In addition, through NCHS Health E-Stats, significant findings are released before the usual release of public use data.

Quality Assurance/Quality Control

The NHDS provides national and regional estimates of U.S. inpatient hospital utilization by the demographic characteristics of patients discharged, conditions diagnosed, and surgical and non-surgical procedures performed. Approximately 95 percent of the eligible sample hospitals respond to the survey.

To insure the accuracy of the collected data, an ongoing quality control program is in place for the NHDS. All data received are reviewed for legitimate codes and format. Manual data abstracted from medical records by NCHS or Census staff are coded and keyed subject to an independent verification process. This process currently calls for 10 percent of the sample records to be recorded with discrepancies resolved by a chief coder. The overall error rate for records manually coded by NCHS is about 0.9 percent for medical coding and 0.2 percent for demographic coding.

Item non-response in the NHDS is low for most data elements, with the exception of the race and ethnicity items which have item non-response of 25 percent or more.

NHDS data are a good reflection of information found in the medical records. What is not known is the degree to which medical record information reflects actual performance.

National Immunization Survey:

The Childhood Immunization Initiative (CII) established a goal for 1996 of increasing vaccination levels for 2-year-old children to at least 90% for one dose of measles-mumps-rubella vaccine (MMR) and at least three doses each of diphtheria and tetanus toxoids and pertussis vaccine (DTP), oral poliovirus vaccine, and *Haemophilus influenzae* type b vaccine (Hib).[1] In addition, CII established a goal for 1996 to increase vaccination levels for 2-year-old children to at least 70% for three or more doses of hepatitis B (Hep B) vaccine.[1] During the first quarter of 1994, national vaccination levels for children 19-35 months were 89.6% for measles containing vaccine, 25.5% for three or more doses of Hep B, 70.6% for three or more doses of Hib, 87.0% for three or more doses of DTP, and 76.0% for three or more doses of polio vaccine.[2]

The National Immunization Program continues to work throughout the 50 states, the District of Columbia and the U.S. Territories and Commonwealths in ongoing efforts to raise early childhood vaccination coverage levels. In order to provide current baseline estimates of vaccination levels for children 19 through 35 months of age and to monitor change in these levels, the National Immunization Survey (NIS) is being conducted in 78 of these Immunization Action Plan (IAP) areas, consisting of the 50 states, the District of Columbia and 27 metropolitan areas. Beginning with the second quarter of 1994 and continuing through the fourth quarter of 1997, the NIS data collection effort will conduct independent quarterly surveys in each of the 78 IAP areas. This will make it possible to combine four consecutive quarters of survey data with a degree of precision sufficient for analytic purposes to provide annualized estimates of the coverage rates for five antigens (DTP, Polio, MMR, Hib, and Hep B) within each of the 78 IAP areas. For 1994, the first year of data collection, the estimates will be based on data collected over three calendar quarters, since the initial data collection activities did not begin until April of 1994.

Methods

The NIS uses two phases of data collection. The first phase uses list-assisted random-digit-dialing (RDD) methods to sample households and conduct computer-assisted telephone interviews (CATI). Screening for households with children 19 through 35 months of age is conducted through brief interviews. When an eligible household is identified, data on five types of vaccinations, including dates and/or numbers of immunization events, are obtained for each child in the target age range living in the household. In the second phase, health-care providers of the eligible children found in the surveyed households are contacted and asked for immunization records for the children. Procedures for 1994 call for this provider record check when household respondents do not refer to household records or when the household data

indicated children are not up-to-date on the combination of DTP (4 doses), polio virus (3 doses) MMR (1 dose) and Hib (3 doses). The 1994 provider data are collected retrospectively.

Use of a telephone-based sample design and data collection mode necessarily limits the target population to which inferences can be made to residents of households with telephones. Noncoverage bias in design is therefore a major concern. Although only approximately 7% of households in the U.S. do not have a telephone, the percentage of households with young children without telephones is significantly higher.[3] Other factors closely related to the vaccination status of children, such as family income, minority status and education of the mother, are also significantly correlated with telephone ownership. In addition, telephone coverage of the household population varies by geographic area. Detailed data from the 5% Public Use Microdata Sample (PUMS) files for the 1990 U.S. Census show that the proportion of households without a telephone ranges from a low of 1.2% for Santa Clara County (California) to 12.7% for New Mexico and Arizona.[4] The proportion of households that contain a two-year-old child but do not have a telephone is higher in every area of the country, ranging from 2.1% for Seattle/King County (Washington) to more than 25% for the state of Arizona. In general, households with a child two years of age are more than twice as likely not to have a telephone than U.S. households as a whole.

Data Collection

The data collection is conducted using CATI from centralized telephone interviewing facilities. During data collection, interviewers call the sample of randomly generated telephone numbers selected for each IAP area. If a number is residential, an interviewer administers a screening interview to determine whether the household contains one or more children age 19 through 35 months. When an eligible household is identified, the adult who is most knowledgeable about the vaccination history of age-eligible children in the household is asked to report the number and/or dates of vaccination events, using vaccination records. Only about one household in twenty five (4%) contains a child in the designated age range. The CATI data collection employs computer software that presents the questionnaire on computer screens to each interviewer. The computer program guides the interviewer through the questionnaire, automatically routing the interviewer to appropriate questions based on answers to previous questions. Interviewers enter survey responses directly into the computer and the CATI program determines if the selected response is within an allowable range, checks it for consistency against other data collected during the interview, employs automatic skip patterns as appropriate, and saves the responses into a survey data file. On-line help facilities are available to aid interviewers in administering the CATI questionnaire.

As part of the design, the sample telephone numbers are matched against electronic telephone directories that contain address information for listed residential telephone numbers. Where a match is found and an address is available, an advance letter is mailed to the sample household. This letter is designed to increase respondent cooperation, both by identifying on the letterhead the sponsoring governmental agency to further legitimize the study, and by describing the reasons for conducting the NIS.

Procedures designed to encourage respondents to obtain and use vaccination records are central to the study design. Interviewers are trained to encourage respondents to retrieve and use any vaccination records they may have available for eligible sample children. If vaccination records are not readily available for an eligible child during the initial telephone contact, an appointment is made for a callback interview to the household.

Sample Design

The need to collect vaccination data independently for each of the 78 IAP areas on a quarterly basis, combined with the small proportion of households in the United States that contain a child 19 through 35 months of age, requires a large initial sample of telephone numbers. In order to screen efficiently the large number of households required to obtain a sample of age-eligible children during each quarter within each IAP area, NIS relies on RDD sampling, a well-known sampling technique for generating probability samples of telephone numbers. The specific RDD technique, list-assisted RDD, uses information on the distribution of telephone directory-listed residential telephone numbers to eliminate banks of telephone numbers that are very unlikely to contain any residential telephone numbers. This sampling technique ensures that a representative sample of both listed and unlisted telephone numbers are selected within each IAP area. At the same time, it yields a sample for which a high percentage of the sample telephone numbers are residential as opposed to being business or nonworking numbers.

The desired level of precision of the four-quarter immunization estimates obtained from the data collection was set at a coefficient of variation of 5% for a survey percentage equal to 50%.[5] This means that 95% of the time, for a sample estimate of 50%, the interval of 45% to 55% will contain the average value of all possible sample estimates. The effective sample size for a *simple random sample* required to achieve this level of precision is 400 completed household interviews per four-quarter period. Additional specifications require that IAP area samples be distributed evenly across calendar quarters, resulting in an allocation of about 100 completed interviews per quarter, per IAP area. Employing the list-assisted RDD strategy, and the weighting methodology it requires, leads to small increases in sampling variance over a simple random sample. To account for this increase in sampling variance, the sample design targets 110 completed household interviews (instead of 100) per quarter in households with age-eligible children, in order to achieve the desired level of precision. Based on an initial estimated eligibility rate of 5%, an expected working number rate of 70% and target response rates of 90% for the screening interview and 85% for the immunization interview, an initial sample size of 4,108 telephone numbers is required, on average, in each IAP area per quarter. This sample size is needed to achieve 110 completed interviews in each IAP area per quarter with households containing at least one age-eligible child. The cumulative annual sample size of 440 (i.e., 110 x 4 quarters) completed immunization interviews per IAP area is designed to yield a coefficient of variation of .05 at the 95% confidence level for a survey proportion equal to .50.

This level of IAP area precision requires a total sample size across all 78 IAP areas of 25,740 eligible household interviews in the 3 calendar quarters of 1994. The number of sample children in the eligible age range will be slightly higher than these figures because a small percent of households contain two or more age-eligible children. This initial sample size of telephone numbers implies a total sample size of 320,424 telephone numbers per quarter across all 78 IAP areas. For the survey year 1994, containing three quarters, the total sample size was 1,177,140 randomly generated telephone numbers (see description of data collection outcomes below).[6]

Schedule
The schedule for designing, developing, and implementing the sample design, data collection and post-survey processing procedures for the 1994 NIS began on January 9, 1994. The survey and CATI system development was completed between January 9 and April 3, 1994. This included the development and testing of the survey instrument, design and programming of the CATI system, development of the final plans for the NIS sample, and designing the system of post-survey statistical weights.

While the data collection for Q2/94 began as scheduled, interviewing was not completed for Q2/94 until September 3, 1994. Interviewing for Q3/94 began the first week of July, 1994 and the final close of Q3/94 interviewing occurred as scheduled on October 16, 1994. Interviewing for the Q4/94 sample began on October 18, 1994 and proceeded until January 15, 1995. In order to complete interviewing for the first year, three additional telephone interviewing centers were brought on-line during Q3/94 interviewing. The CATI system was implemented on the computer systems at these sites and the standard interviewer training was conducted for the staff of these telephone interviewing centers. These alternative data collection sites processed sample for either whole replicates (independent, randomly selected subsamples) and/or in some cases random half- replicates.

Data collection for the 1994 Provider Record Check Study began in January 1995 (Q1/95) and was completed in March 1995.

Questionnaire Changes
Questionnaire development and enhancement was an ongoing process throughout 1994. Several CATI system enhancements were added. While the main screening questionnaire was used for Q2, Q3, and part of Q4, it was modified during Q4 in an attempt to improve the observed eligibility rate and to reduce the number of calls required to complete screening and interviewing.

Data Collection Outcomes
Table A shows the basic sample information by quarter for calendar year 1994. The total sample of telephone numbers for Q2/94, Q3/94, and Q4/94 combined was 1,177,140 telephone numbers, not including telephone numbers screened out by the sample pre-screening process[7]. The sample design specified that 3% of numbers would be unresolved. For Q2/94, Q3/94, and Q4/94, 6.7% of sample

telephone numbers were unresolved at the end of the interviewing period (Table A).[8] The unresolved number rate varied from a high of 9.6% in Q2/94 to a low of 2.6% in Q4/94. This improvement is attributable to the calling of telephone company business offices in Q4/94 and to increased calling within IAP areas with low household working number rates. Among resolved telephone numbers, 60.9% reached a residence, 13.8% were non-residential (primarily businesses), and 25.3% were non-working numbers.

Table A. NIS 1994 Basic Sample Frame Summary by Quarter

	Q2		Q3		Q4		All Quarters	
Final Case Status	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
All Sample Tele-phone Numbers	334,235	100.0	443,184	100.0	399,721	100.0	1,177,140	100.0
Unresolved Tele-phone Numbers	31,949	9.6	36,301	8.2	10,270	2.6	78,520	6.7
Resolved Tele-phone Numbers	302,286	90.4	406,883	91.8	389,451	97.4	1,098,620	93.3
Status of Resolved Telephone Numbers								
Non-working number	302,286	90.4	406,883	91.8	389,451	97.4	1,098,620	93.3
Working Number: Non-residential	39,620	13	55,531	14	56,200	14	151,351	14
Working Number: Residential	184,295	61	246,322	60	238,355	62	668,972	61

The initial design specifications for data collection called for a screening completion rate of 90% of households contacted and for an interview completion rate of 85% of the households with sample children. The NIS screening completion rate over the three quarters of 1994 was 96.2% and the interview completion rate among known eligible households was 95.4%.

The observed NIS household eligibility rate of 4.2% in 1994 was much lower than the 5% estimate based on 1990 Census data. This outcome suggested a concern about both the screening completion rate and the overall response rate (the product of the screening and interview completion rates). If the actual number of eligible households was higher than the number determined in the NIS, both rates would appear high. To address this concern, adjusted rates were calculated for both the screening response rate and the overall response rate. Using an estimated number of eligible households (based on the Census figure) as an adjustment factor, the adjusted screening response rate for 1994 was 72.9% and the adjusted overall response rate was 69.5%.

National Vital Statistics System:

The National Vital Statistics System produces the Nation's official vital statistics. Data on teen births, access to prenatal care, maternal risk factors, infant mortality, causes of death, and life expectancy are examples of the staples of public health provided by vital statistics. Vital statistics are often the most complete and continuous information available to public health officials at the national, state, and local levels; the timely availability of these data is critically important. The registration of vital events, (births, deaths, marriages,

divorces, and fetal deaths), is a state function. Since 1902, the Federal Government has obtained use of the records for statistical purposes through cooperative arrangements with the responsible agency in each state.

Standard forms and model procedures for the uniform registration of the events are developed and recommended for state use through cooperative activities of the states and the National Center for Health Statistics (NCHS). NCHS also provides training and instructional materials to the states as part of ongoing technical assistance.

The purpose of collecting the data is to monitor trends over time through vital life events. Vital records and reports originate with private citizens, such as the family affected by the events, physicians, or funeral directors. The following are procedures used for the collection of birth and death data:
Birth Data- By law, birth registration is the direct responsibility of the hospital of birth or the attendant at the birth (generally a physician or midwife). In the absence of an attendant, the parents of the child are responsible for registering the birth. While procedures vary from hospital to hospital, usually the personal information is obtained from the mother; medical information may be obtained from the chart or from a worksheet filled out by the birth attendant. Reporting requirements vary from state to state; in general, the completed certificate must be filed with the state or local registrar within 10 days of birth. Published data include all counties and places of 10,000 or more population. Electronic files include data for states, counties, large cities (population of 100,000 or more), and metropolitan statistical areas.

Death Data- By law, death registration is the direct responsibility of the funeral director or person acting as such. The funeral director obtains the data required, other than the cause of death, from the decedent's family or other informant. The attending physician provides their best medical opinion about the cause and manner of death; later this information is coded by the state or CDC/NCHS according to uniform codes. Demographic information is also recorded. If no physician was in attendance or if the death was due to other than natural causes, the medical examiner or coroner will investigate the death and provide the cause and manner. Reporting requirements for death also vary, but in general the completed certificate must be filed within 3 to 5 days of the death. Published data include all counties and places of 10,000 or more population. Electronic files include data for states, counties, large cities (population of 100,000 or more), and metropolitan statistical areas.

Fetal deaths are also reported through the National Vital Statistics System. All fetal deaths of 20 weeks or more gestation that occur in the United States are recorded. Further, a linked birth/infant death file allows for the analysis of demographic and health characteristics from certificates of live births in combination with causes of death and other data from death certificates of infants who died before their first year of life. The linked file set includes information on all the infants who died in the United States each year, as well as information on all live births. An additional file includes information on death records not linked to birth certificates. The match rate is about 97-98 percent. Data are organized by calendar year rather than birth cohort to expedite data release.

Provisional and final estimates of the number of marriages and divorces are obtained from each state able to provide these figures. Since data are not available from all states, national divorce rates are not produced. Currently 46 states and DC provide divorce counts. Detailed characteristics of marriages and divorces have not been available since 1996.

Other programs that are related to the National Vital Statistics System, such as the National Maternal and Infant Health Survey, the National Survey of Family Growth, and the National Death Index.

Quality Assurance/Quality Control

The data collected through the National Vital Statistics System represent all registered vital events in the United States and adequately represent the true rates of events. In order to more accurately record birth and death information, new birth and death certificates are being designed. These new forms have been designed through a collaborative effort with states, researchers and other interested parties. The revised certificates reflect changing data needs and emerging public health applications. The revised certificates and related data sets will be implemented in 2003.

Data are collected using uniform procedures and are accurate and consistent. The data are reported as soon as they are analyzed by CDC/NCHS staff.

Monthly provisional numbers and rates of births, deaths, marriages, and divorces are published in the *National Vital Statistics Reports.* These figures are based on approximate counts of the number of events that occurred in a given state. An estimation procedure is used to convert these occurrence estimates into state-specific estimates of the number and rate of resident events.

Preliminary data collected through the National Vital Statistics System are made available to the public approximately 10 months after the end of the collection year. Birth and death statistics are based on substantial samples of birth and death records weighted to the counts of records received in state vital registration offices, which are the same counts shown in the provisional statistics. Data are presented for a 12-month period and are published semi-annually in the *National Vital Statistics Reports*.

Final data are released about 18 months after the collection through publication in the *National Vital Statistics Reports*, public use data tapes, CD-ROM, Series Reports, the Internet, and journal articles. Special reports are also published based on this data set. Use of electronic products have greatly increased the accessibility of our data and reduced the costs to researchers and data users.

It is the goal of the agency to reduce the lag for this data system. The 1997 final mortality data was released in 18 months, representing a 30% reduction in time from 1993. The 1997 final birth data was released in 16 months, a reduction of 11% from 1994. For both data sets, the actual performance exceeded the target, 5%. The agency intends to continue to strive for improving the release time.

Sentinel Surveillance for Chronic Hepatitis C:

Chronic liver disease is the tenth leading cause of death among adults in the United States, and accounts for approximately 25,000 deaths annually. An estimated 8-10,000 of the these deaths occur among persons chronically infected with hepatitis C virus and HCV-associated end stage liver disease is the most frequent indication for liver transplantation among adults.

Although it is clear that a large number of persons in the United States are chronically infected with HCV and that many will develop chronic liver disease, the burden of disease has not been well characterized. There is no ongoing surveillance, and few population-based studies have been conducted from which to determine the incidence and prevalence of chronic liver disease and the relative proportion of cases attributable to viral hepatitis and other etiologies.

To begin to collect this information, a pilot chronic liver disease surveillance system was established by CDC in one site in 1998. In 1999, the pilot project was expanded to two sites, with a third identified and expected to begin enrolling patients in 2000. All patients with newly-diagnosed chronic liver disease are identified in a defined geographic area. Patients meeting a standard case definition involving specific radiologic, pathologic, or laboratory criteria are invited to participate.

Data are collected through the surveillance system in three parts:

1) A standard questionnaire, developed by CDC, is used by all sites in interviewing patients, so that data can be compared across sites and aggregated as appropriate. The questionnaire includes questions taken from other established surveillance systems and from previous studies of chronic liver disease. It gathers information on demographic characteristics, clinical information such as hospitalizations and other medical conditions, quality of life, and exposures and risk factors, such as alcohol consumption or use of prescription and non-prescription medications, that may cause chronic liver disease or affect its clinical course.

2) A standard form is used to abstract clinical and laboratory information from the patient's clinical chart. This information, collected consistently across sites, includes data needed to determine underlying etiology of disease, treatment history, medication use, and other relevant clinical information not readily available from the patient.

3) A serum sample is collected and sent to CDC for determination of the presence of serologic

markers for viral hepatitis.

An important characteristic of this pilot project is its comprehensiveness. This is the first time that all patients with chronic liver disease in several defined geographic areas are being identified using a common methodology, and where consistent information is being collected in all sites. It is hoped that, ultimately, the methodology and data collection instruments can be used in multiple sites throughout the United States to develop a comprehensive picture of the occurrence and characteristics of chronic liver disease, and to monitor trends over time.

Quality Assurance/Quality Control: As a new pilot project, quality assurance and quality control instruments are still under development. Nonetheless, several kinds of validation studies have already been conducted. To assess the completeness of reporting, two supplementary studies have been conducted: a survey of primary care practitioners and a review of all first-time liver biopsies. These studies indicated that overall surveillance was quite comprehensive, and was successful in identifying the vast majority of patients in the target population. To validate the accuracy of chart abstraction, a review of a randomly-selected subset of charts was conducted, and failed to reveal any significant errors. To assess the overall validity of the study, early preliminary results have been compared to the few existing relevant data. This evaluation, demonstrating that the incidence of newly-diagnosed chronic liver disease has increased in recent years, is already contributing to CDC's efforts to more accurately estimate the burden of illness from chronic liver disease.

U.S. Sentinel Physician Surveillance for Influenza:

The national sentinel physician surveillance system for influenza was established in 1982. National influenza surveillance data is the cornerstone for U.S. Public Health efforts to control and prevent influenza. The information is used to make public health recommendations during influenza season, make recommendations to FDA and WHO regarding vaccine strain selection, monitor annual influenza activity and examine long-term trends in influenza epidemiology, and rapidly detect unusual influenza strains including those with pandemic potential. Active US influenza surveillance is conducted from October through May of each year. Influenza-like illness (ILI) is reported weekly by physicians recruited as sentinel sites. The information in the national database is updated daily for use by State Health Departments and summarized weekly for public dissemination.

In 1996, a collaborative process was started with the Council of State and Territorial Epidemiologists (CSTE) and representatives of the Association of Public Health Laboratories (APHL) to enhance U.S. influenza surveillance. The overall goal was to improve national influenza surveillance to provide better information during annual influenza epidemics and adequate warning and monitoring of the next pandemic. Continuous improvements have been implemented over the last several years.

During the 1997-98 influenza season, 27 states and the District of Columbia elected to participate in a pilot program to upgrade the sentinel physician surveillance system. The pilot program merged CDC's national sentinel surveillance system and the state-based systems into one integrated system, which is based on common methodologies and standards. During the 1998-99 influenza season, the enhanced sentinel physician surveillance system was expanded to include 40 states and the District of Columbia and an Internet reporting system was developed which allows sentinel physicians to enter weekly morbidity data via the Internet. During the current year, modifications to improve the automated system that displays sentinel physician data on the Internet were implemented. An automated system to create and display summary WHO virologic data was also begun and is in progress. All system components have been recently upgraded and modules have been modified to satisfy user requirements for logging and reporting specimens.

States are responsible for establishing, recruiting, and maintaining a state-based sentinel physician group. The states are also responsible for ensuring that data are collected and transmitted regularly to a central data repository at CDC, which is updated daily. The information (raw data) is accessible through the Internet to state coordinators in participating states. Analyses ofthe data are available to state coordinators before the general public. CDC is responsible for coordinating the system nationally, maintaining the reporting systems, processing and analyzing the data, and maintaining the Internet site. Efforts to improve the system are continuous.

In FY 1999, approximately 880 physicians from 48 states and the District of Columbia are enrolled in the sentinel physician system, but only about 300 of these report data regularly in any given week. Physicians report the number of patient visits per week and the number of those patients seen for ILI by age group. Sentinel physicians can report data by three methods: 1) Internet reporting; 2) touch tone phone reporting; and facsimiled transmission of data with manual entry of data. A program developed by CDC integrates the three sources of data and uploads the data to the Internet site. Data is available daily to each State Coordinator. A summary of influenza activity is available to the general public each week.. The percentage of sentinel physicians using the Internet to report weekly data increased from 8 to 17 percent in the last year.

Quality Assurance and Quality Control Information:

The process of improving the US Sentinel Physician Surveillance program to make it user friendly, to offer clear case definitions, and to allow multiple options for input and access, has been continuous. With daily updates and weekly summaries the information is extremely timely and pertinent for decision making. Epidemiologists in the Influenza Branch routinely analyze the data for outlying information and perform routine checks to ascertain that the data is coherent. State coordinators routinely check to see if physicians are reporting in a timely manner and troubleshoot problems in each state. Guidelines are provided to sentinel physicians for optimal timing of specimen collection for virologic testing on certain patients. While these results will not be useful to the physician for confirming individual cases of influenza, these specimens will provide information on whether influenza has entered the local community. There is no way to ascertain that the data on influenza like illness is free of error, but as the number of participating sentinel physicians increases, the potential consequences of error decreases. Given that sentinel surveillance provides an index of current influenza activity, consistent reporting by a stable group of physicians is imperative for data reliability. Increasing sentinel physician sites and sentinel physician participation in each state would greatly increase the validity of the data.

Limitations:

The Influenza Branch has proposed to increase US sentinel sites to approximately 680 sites that routinely report for the year 2001. Large increases in the number of reporting physicians and retention of physicians from year to year, would allow for comparison between years, minimize the impact of incorrect data and give an even better indication of US influenza activity. Currently, the database is not geographically representative. Again, increasing the number of reporting sentinel physicians and targeting certain areas could solve this problem. Retention would be enhanced if sentinel physicians and state coordinators derived greater benefit from participation.

Youth Risk Behavior Surveillance System:

In 1990, the Youth Risk Behavior Surveillance System (YRBSS) was established by CDC. One of the components of the YRBSS is a national school-based survey that was first conducted in 1990 and has been repeated biennially since 1991. The national Youth Risk Behavior Survey (YRBS) measures six categories of priority health risk behaviors that contribute to the leading causes of mortality and morbidity among youth and adults in the United States: behaviors that contribute to unintentional and intentional injuries; tobacco use; alcohol and other drug use; sexual behaviors that contribute to HIV infection, other sexually transmitted diseases and unintended pregnancy; dietary behaviors; and physical activity.

The YRBS questionnaires contained 89 multiple-choice questions in 1999 and is designed for self-administration using a computer-scannable questionnaire booklet. The YRBS questionnaire has been modified several times since 1990 to address emerging public health problems in a timely manner.

The national YRBS is administered during the spring semester to nationally representative samples of students in grades 9-12 attending both public and private schools. Professional data collectors, trained specifically for the YRBS, are used as field staff to ensure standard survey administration procedures. The national YRBS uses a three-stage cluster sample to select schools and classes of students within schools. African American and Hispanic students are oversampled to provide accurate estimates for these subgroups of students from each survey cycle. By combining data from multiple survey cycles it is also possible to obtain accurate estimates for Asian and Native American youth. The sample size totals approximately 12,000 students each

survey. The school response rate averages 76%. The student response rate averages 88%.

Quality Assurance/Quality Control:
A reliability study of the YRBS questionnaire conducted in 1993 demonstrated that students reported health risk behaviors reliably over time. Psychometric work on the YRBS questionnaire also has demonstrated that it produces accurate and high quality data. Standardized data editing and cleaning procedures further improve data accuracy and consistency. Data are released within 12 months from the completion of data collection and are made available to the public via the internet (www.cdc.gov/nccdphp/dash/yrbs). A new psychometric study of the YRBS questionnaire is planned for the spring of 2000.

Appendix A.3

Key Improvements in the CDC FY 2001 Performance Plan

The CDC FY 2001 Performance Plan includes key improvements over the FY 2000 Performance Plan. The most significant improvement is the new standardized format that is consistent across the Department. The new standard format provides for the display of three to five years of performance information, including the projection of targets, reporting on progress, and observing trends in the performance of CDC's programs. The new format provides a page reference that links CDC's performance information to the supporting budget activities. CDC Is able to report on 72% of its performance measures in January 2000.

The integration of performance management throughout CDC is reflected in the improved statements of performance and organization of the plan. Examples where CDC programs have edited and reorganized their performance information are with the Health Statistics Program and the Prevention Research Program. Each program's revision for FY 2001 provided greater specificity and clarity in presenting their performance goals and measures.

CDC programs are continually updating performance information to ensure that their projections are based on the most recent and accurate data. The Immunization Program used FY 1997 provisional data for baselines in the Immunizations performance plan. This year, they included final FY 1997 data rather than the FY 1998 provisional data.

Overall, CDC performance management system is becoming more integrated with the business practices of the organization as a whole. Coordination across programs, with financial management, information management, and planning and evaluation staff continues to improve.

Appendix A.4

Performance Measurement Linkages with Budget, Cost Accounting, Information Technology Planning, Capital Planning and Program Evaluation

Clinger-Cohen Act

CDC is currently implementing the requirements under the Clinger-Cohen Act of 1996 (CCA) for information technology (IT) capital investment planning, monitoring, and performance measurement. The Information Technology Investment Review Board (ITIRB) process has been established and was released CDC wide on January 5, 1999 via the CDC Intranet. CCA compliance became a component of the CDC budget planning process for the FY2001 budget. Major IT investments associated with budget initiatives required responding to the "Raines Rules" as part of the submission.

Also in compliance with CCA, CDC has developed several components of the agency's information technology architecture, such as certain health data standards, networking and telecommunications architecture, information security, and the majority of the agency's administrative procedures. More extensive work on other core business processes, information flows, process and data models is ongoing.

In addition to efforts in the implementation of CCA, CDC has a well integrated GPRA and IRM Strategic Plan that aligns IT products and services with CDC's ever-changing mission needs and directions. The IRM strategic goals, strategies and performance measures support the mission, mission goals, and CDC's GPRA performance plan.

Appendix A.5

Government Performance and Results Act:

FY 2000 Change Chart for Goals and Performance Measures

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Emerging Infections	Develop and strengthen epidemiologic and laboratory methods for detecting, controlling, and preventing infectious diseases.	Assays to detect HIV mutations that are resistant to commonly used therapeutic agents will be developed and optimized.	**Deleted:** It is not outcome oriented and the endpoint would be hard to recognize.
Emerging Infections	Develop and strengthen epidemiologic and laboratory methods for detecting, controlling, and preventing infectious diseases.	Assays for assessment of duration, severity, and prognosis of HIV infection will be developed, optimized, and evaluated.	**Deleted**: It is not outcome oriented and the endpoint would be hard to recognize.
Emerging Infections	Develop and strengthen epidemiologic and laboratory methods for detecting, controlling, and preventing infectious diseases.	Develop baseline data to better estimate the number of occupationally acquired bloodborne infections.	**Deleted**: It is not outcome oriented and baseline data is insufficient.
Emerging Infections	Strengthen domestic and global epidemiologic and laboratory capacity for surveillance and response to infectious disease and bioterrorist threats.	6 State Health Departments will be electronically linked with CDC to provide TB results from overseas screening and U.S. follow-up assessments of both immigrants and refugees.	**Deleted:** Not outcome-based.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
HIV/AIDS	Through the implementation of HIV prevention programs, reduce the number of AIDS cases: acquired heterosexually; related to injecting drug use; associated with male-to-male homosexual contact; and acquired perinatally.	The number of heterosexually-acquired AIDS cases will be decreased from the 1997 based if 11,500 AIDS cases diagnosed.	**Baseline Revision:** Baseline measures were changed in FY 2000 from the 1995 base of 9,300 AIDS cases to the 1997 base of 11, 500 AIDS cases. This change reflects adjustments in AIDS case definitions, and availability of more accurate data.
HIV/AIDS	Improve the Nation's HIV/AIDS surveillance system to identify incidence and prevalence of HIV infection.	Percentage of states that will begin to adopt recommended confidentiality standards.	**Revision of Measure:** Percentage of states that will begin to adopt recommended security and confidentiality standards.
HIV/AIDS	Improve the Nation's HIV/AIDS surveillance system to identify incidence and prevalence of HIV infection.	Baselines will be established for measuring incidence in selected high-risk populations. (Monitor trends for incidence in selected populations to determine effects of new medications on disease.)	**Revision of Measure:** Measure HIV incidence in selected high-risk populations.
HIV/AIDS	Improve the Nation's HIV/AIDS surveillance system to identify incidence and prevalence of HIV infection.	CDC will provide technical assistance to all states to help them develop reliable minimal estimates for HIV prevention.	**Revision of Measure:** Number of states that will monitor trends in HIV incidence with CDC's technical assistance.
HIV/AIDS	Improve the Nation's HIV/AIDS surveillance system to identify incidence and prevalence of HIV infection.	Trends in long-term survival and rates of transmission of new infections will be measured.	**Revision of Measure and Targets:** Refine methods for measuring long-term survival. Targets changed from developmental to measurable outcomes.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
HIV/AIDS	Through the implementation of HIV prevention programs, reduce the number of AIDS cases: acquired heterosexually, related to injecting drug use, associated with male-to-male homosexual contact, and acquired perinatally.	Through the implementation of HIV prevention programs, reduce the number of cases of HIV infection and AIDS: acquired heterosexually, related to injecting drug use, associated with male-to-male homosexual contact, and acquired perinatally.	**Goal and Supporting Measures Revised:** Revisions relate to AIDS case reporting.
HIV/AIDS	Through the implementation of HIV prevention programs, reduce the number of AIDS cases: acquired heterosexually, related to injecting drug use, associated with male-to-male homosexual contact, and acquired perinatally.	Through the implementation of HIV prevention programs, reduce the number of cases of HIV infection and AIDS: acquired heterosexually, related to injecting drug use, associated with male-to-male homosexual contact, and acquired perinatally.	**New Measure:** Reduce annual incidence of new infections.
HIV/AIDS	Through the implementation of HIV prevention programs, reduce the number of AIDS cases: acquired heterosexually, related to injecting drug use, associated with male-to-male homosexual contact, and acquired perinatally.	CDC will provide technical assistance to states to help evaluate HIV prevention programs.	**Measure Revised and Targets Refined:** Specific, expanded technical assistance activities described in targets for FY 00 and 01.
HIV/AIDS	Through the implementation of HIV prevention programs, reduce the number of AIDS cases: acquired heterosexually, related to injecting drug use, associated with male-to-male homosexual contact, and acquired perinatally.	CDC will provide technical assistance to states to help evaluate HIV prevention programs.	**Targets Revised:** Targets revised to be more ambitious, consistent across DHHS.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
HIV/AIDS	Among persons counseled and tested for HIV infection in CDC-supported sites, improve the percentage of persons who return for their results and post-test counseling.	Increase the percentage of persons who return for their results and post-test counseling.	**Revision of Targets:** Targets revised based upon analysis of baseline data.
HIV/AIDS	Among persons counseled and tested for HIV infection in CDC-supported sites, improve the percentage of persons who return for their results and post-test counseling.	Reduce the percentage of currently sexually active high school students who engage in sexual intercourse without a condom.	**Revision of Targets:** Targets revised based upon analysis of baseline data.
Health Statistics	Better anticipate the future directions of the health care system and health behaviors in order to design effective public health policy by: 1. Monitoring trends in the nation's health through high quality data systems addressing issues relevant to decision makers; 2. Reducing time lags for release of core data systems; 3. Making data more readily accessible to decision makers; Making data more readily accessible to decision makers and researchers.		**Revision of goals and organization of charts:** The organization of the measures have been revised for greater clarity and understanding.
Breast and Cervical Cancer	Increase early detection of breast and cervical cancer by building nationwide programs in breast and cervical cancer prevention.	Excluding invasive cervical cancers diagnosed on an initial screen in the NBCCEDP, the age adjusted rate of invasive cervical cancer in women aged 20 and older is not more than 24 per 100,000.	**Revision of Targets:** More ambitious targets and a new baseline for breast and cervical cancer performance measures are a result of clarification of data issues: Targets changed from 24 per 100,000 to 22 per 100,000.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Prevention Research	Increase collaboration among academic health centers, public health departments, managed care and other public health organizations to develop, implement, and evaluate the effectiveness of community-based public health interventions.	CDC will provide periodic briefings to members of CDC Advisory and Scientific Committees on opportunities to increase partnerships between academic health centers, managed care organizations, and the public health networks in the Nation's communities.	**Measures were deleted and replaced with the following measures:** Narrow the gap between funded and unfunded, but approved investigator-initiated proposals submitted to RFAs supported through the PRI. Increase the number of organizations receiving notices of availability of PRI funds.
Prevention Research	Disseminate research findings and other relevant information from prevention research programs to public health practitioners, managed care organizations, and consumer groups.	Prevention research and demonstration centers will disseminate information on candidate interventions for health problems and results of field tests of interventions. Investigators conducting community-based research receiving supplemental or initial financial assistance through the Prevention Research Initiative will be required to disseminate information on candidate interventions broadly to communities as well as through publications.	**Reworded measures to avoid redundancy and revised to better assess strategies to enhance research findings dissemination:** Research findings will be disseminated by investigators receiving PRI funds. Distribute information on availability of research findings.
Block Grant	Reduce preventable morbidity and mortality and improve quality of life of people within the framework of Healthy People 2000 by improving the assessment capacity of prevention programs.	At least 80% of total required data from all programs funded by the Preventive Health and Health Services Block grant will be reported to CDC annually.	**Revision of targets:** More ambitious targets based upon FY 98 results. Targets changed from 80% to 85% for FY 2000 and 2001.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Injury	Reduce the incidence of violence against women.		**New Measures:** Establish innovative programs to address prevention of violence against women. Establish a research program that address the understudied aspects of violence against women. NCIPC will establish a biannual survey of the incidence and prevalence violence against women by the year 2001.
Injury	Reduce the incidence of violence against women	Fund over 70 state and community-based assault projects	Target changed based on final appropriation.
Injury	Reduce the incidence of violence against women.	Establish at least one system for collecting intimate partner violence surveillance data representative of an entire state, by the year 2000.	**Process measure is revised for FY 2001:** Establish at least one system for collecting intimate partner violence surveillance data representative of an entire state, by the year 2000. Analyze the surveillance data in 2001 and beyond.
Injury	Reduce the number and severity of injuries related to bicycle-related head injuries by increasing the use of bicycle helmets by children in CDC-funded projects.	The number of bicycle-related emergency department visits will be reduced by 5% per year from 123,475 in 1995.	**Deleted in FY 2000 and 2001 due to CDC's funding priorities.**
Injury	Reduce the number and severity of injuries related to bicycle-related head injuries by increasing the use of bicycle helmets by children in CDC-funded projects.	The number of bicycle-related emergency department visits will be reduced by 5% per year from 123,475 in 1995.	**NCIPC put this measure back in when funds became available. The data will be available in June 2000.**

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Injury	Reduce the number and severity of injuries related to bicycle-related head injuries by increasing the use of bicycle helmets by children in CDC-funded projects.	Increase the use of bicycle helmets by child bicyclists in CDC-funded project areas.	FY 99 will not be available until April of 2000. It was originally stated as December of 1999.
Epidemic Services	As a long-term objective, CDC will implement accessible training program to provide an effective work force for staffing state and local health departments, laboratories, and ministries of health in developing countries.	90% of the first class of Public Health Prevention Service (PHPS) will remain in public health and 50% will be working in state and local health departments.	Reworded for clarity: Provide for an effective workforce for staffing state and local health departments and in other public health-related organizations.
Epidemic Services	Maximize the distribution and use of scientific information and prevention messages through modern communication technology.		New Measure: Based on established criteria, continue to publish the Morbidity and Mortality Weekly Reports (MMWR) series of publications including Reports and Recommendations, Surveillance Summaries, and the Annual Summary to communicate major public health events to the media, public policy makers and health professionals through multiple media channels - print, television, radio, interactive World Wide Web.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Epidemic Services	Maximize the distribution and use of scientific information and prevention messages through modern communication technology.	Complete the pilot study of the Multimedia *Morbidity and Mortality Weekly Report* (*MMWR*) project in which information from the *MMWR* series of publications is distributed to the media, public, policy makers, and health professionals through multiple media channels-print, television, radio, interactive World Wide Web. Evaluate market penetration by analyzing data collected through Nielson's Sigma encoding; reports of market area, air date, time, estimated viewing audience, and estimated advertising value; Internet hits; audio/video down loads; media contacts; and CIO-specific communications evaluation.	**Replaced with new measure based on the pilot study and market penetration analysis:** The *MMWR* will refine communication efforts through a Center-wide communications plan to provide a framework for current activities and maximize communicating public health messages through print and the World Wide Web.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Epidemic Services	As a long-term objective, CDC will implement accessible training program to provide an effective work force for staffing state and local health departments, laboratories, and ministries of health in developing countries.	By 2000, develop a plan to address needed changes in training methodologies identified in the 1999 evaluation study. Continue to evaluate the impact of selected training program on practices of laboratorians.	**Revised to incorporate the continued evaluation of selected training programs**: By 2000, develop a plan to address needed changes in training methodologies identified in the 1999 evaluation study. Continue to evaluate the impact of selected training program on practices of laboratorians. The impact of laboratory training on the adoption of improved laboratory methods will be evaluated.

Program Activity	Goal	FY 2000 Original Performance Measure	FY 2000 Revised Performance Measure
Epidemic Services	**New Goal:** Improve the public health surveillance infrastructure by developing a national data standards for surveillance, providing technical infrastructure support to state and local communities, and establishing a demonstration project linking health care to public health.		**New Measures:** Pilot projects will be conducted to develop and test electronic linkages between public health agencies and health care sector. National data standards for surveillance and reporting will be developed including standard data definitions and a common user interface and system architecture; and a secure pipeline for reporting surveillance data. Increase the percentage of state-based CDC-developed surveillance systems which have implemented enhanced security measure for reporting the bulk of surveillance data. Increase the percentage of CDC-developed web-based surveillance systems which have implemented enhanced security messages for transmission ov case-level data over the Internet.
Epidemic Services	As a long term objective, CDC will implement accessible training programs to provide an effective work force for staffing state and local health departments, laboratories, and ministries of health in developing countries.	By FY 2000, develop a plan to address needed changes in training methodologies identified in the 1999 evaluation study. Continue to evaluate the impact of selected training programs on practices of laboratories.	**Delete the sentence "Continue to evaluated the impact of selected training programs on practices of laboratories"** This sentence was inadvertently included in the previous version. The Epidemiology Program Office does not work directly with laboratories.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Environmental Disease Prevention	**New Goal:** Increase assessment of the U.S. population's exposure to priority toxic substances that a representative sample of 1,500 Americans can be tested for exposure to 100 toxic substances.		**New Measure:** Population exposure will be assessed for 25 priority toxic substance and issue a national report card on the results
Environmental Disease Prevention	By 2011, there will be virtually no children with blood lead levels that exceed 10 micrograms per deciliter, which is the level at which children's health may be damaged (baseline data from 1991-1994 NHANES III for the period 1991-1994 indicates that there were 890,000 children with blood lead levels greater than 10 micrograms per deciliter.)		**New Measure:** Increase the percentage of CDC supported states with a system to determine the number of children enrolled in Medicaid who are screened for lead poisoning.
Occupational Safety and Health	Conduct a targeted program of research to reduce morbidity, injuries, and mortality among workers in high priority areas and high-risk sectors.	In FY 2000, baseline bibliometric amounts for all NORA areas will be completed.	**Updated Revision:** In FY 2001, continue bibliometric tracking to measure impact of NORA on research activity since establishment of baseline.
Occupational Safety and Health	Ensure safe and healthful working conditions by developing a system for surveillance for major occupational illnesses, injuries, exposures, and health hazards.	In FY 2000, NIOSH will collect, analyze, and disseminate information on selected occupational illnesses and health hazards.	**Updated Revision:** In FY 2001, NIOSH will collect, analyze, and disseminate information on selected occupational illnesses and health hazards to target and evaluate intervention and prevention effectiveness.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Buildings and Facilities	Implement the scheduled improvements, construction, security, and maintenance as specified under the FY 2000 schedule of the Clifton Road and Chamblee Master Plans. Continued...		**New Measures:** Begin design of new infectious disease lab, Building 18, at Clifton Road Campus, to vacate and modernize existing Building 1 South, house Bioterrorism, and additional Biosafety Lab (BSL) 4 capacity. Begin design of Scientific Communications Center to replace existing Building 2, and vacate Building 3, Clifton Road Campus. Complete construction of infectious disease lab Building 109 to replace existing buildings 4, 6, 7, 8, and 9, Chamblee Campus. Complete construction of infrastructure project in Security Buffer Zone, Clifton Road Campus. Continued...

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Buildings and Facilities	...continued. Implement the scheduled improvements, construction, security, and maintenance as specified under the FY 2000 schedule of the Clifton Road and Chamblee Master Plans.		...continued. Begin design of Environmental Health Lab Building 110 to replace existing buildings 17, 25, 31, and 32, Chamblee Campus. Continue construction of Phase II of Building 17, Infectious Disease Research Lab. Clifton Road Facility.
Eliminating Racial and Ethnic Disparities	To achieve meaningful improvement in the lives of racial and ethnic population s who now suffer disproportionately form the burden of disease and disability.	CDC will fund selected communities to conduct planning activities for community-based demonstrations of prevention and service delivery interventions. Grantees will collaborate with interagency content workgroups and community. leaders to develop implementation and evaluation programs for selected community demonstration programs whose mission is to eliminate racial and ethnic health disparities for following focus areas: cancer, cardiovascular disease, diabetes, and infant mortality.	**Revised:** CDC will fund selected community coalitions to implement interventions. Grantees will collaborate with interagency content workgroups and community. leaders to develop implementation and evaluation programs for selected community demonstration programs whose mission is to eliminate racial and ethnic health disparities for following focus areas: cancer, cardiovascular disease, diabetes, child and/or adult immunizations, HIV/AIDS, and infant mortality.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Eliminating Racial and Ethnic Disparities	**New Goal:** To eliminate syphilis in the United States.		**New measures**: CDC will publish and implement a national syphilis elimination plan. CDC will fund projects in: (1) high morbidity syphilis areas to implement surveillance, community and biomedical strategies that would reduce syphilis within the community; and (2) potential re-emergence areas (large urban areas that previously had high rates of syphilis) to implement strategies to prevent its re-emergence. CDC will conduct meetings with other areas to determine the best way to prevent syphilis from being imported into new low morbidity areas. All of these interventions will depend heavily on the involvement of communities where syphilis occurs.
Office of the Director	**New Goal:** Provide leadership and coordination for a broad range of support activities.		**New measures:** Develop and provide technical assistance/consultation for CDC staff. Coordinate the development and timely submission of Reports to Congress and OMB Clearance packages.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Office of the Director	Ensure effective identification, evaluation, and protection of novel technologies.		**New measures:** Increase technology transfer education and awareness activities. This includes, but is not limited to, dissemination of CDC TTO policies, procedures, and guidelines that promote disclosure of inventions, appropriate patent protection, and potential public health benefits of licensing CDC technologies. Increase the number of Employee Invention Reports (EIRs) filed per year. Increase the number of patent application filed per calendar year (includes both foreign & domestic). Increase the number of patents issued per year (includes foreign & domestic). Review and manage CDC patent portfolio to maximize return for public health benefit.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Office of the Director	**New goal:** Encourage commercialization of unique technologies.		**New measures:** Market all available licensing opportunities for CDC's intellectual property, and update availability of new technologies on a quarterly basis. Increase the number of patent license agreements (PLAs) executed annually by CDC. New case evidence that CDC patent licenses are providing a substantial basis for the development of commercially significant products and processes. Increase in CDC outreach activities through participation in national and international research, trade, and technology transfer meetings and conferences.
Office of the Director	**New goal:** Promote private sector participation and investment in applications of novel research discoveries.		**New measures:** Increase the number of executed CRADAS, Material Transfer Agreements, Clinical Trial Agreements, and other kinds of CDC-private sector research cooperation mechanisms. Increase the number of EIRs arising from cooperative research with the private sector.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Office of the Director	**New goal:** Increase knowledge and practice of human subjects protection in research among public health scientists.		**New measures:** Increase Institutional Review Board (IRB) approvals following no more that one report from the CDC IRB. Increase the number of states with assurances of compliance and IRBs. Scientists at CDC will receive computer-based training in Scientific Ethics.
Office of the Director	**New Goal:** Eliminate discrimination, identify and remove barriers through specified strategies.		**New measures:** Increase the percentage pf representation of minorities, women and people with disabilities in the work force. Monitor the internal and external selection process. Decrease the number of complaints in the inventory. Decrease the number of formal discrimination complaints filed through early resolution.
Office of the Director	**New goal:** Administer minority student training programs that are designed to enhance the professional capacity of minority students and encourage them to pursue graduate level careers in public health.		**New measure:** Increase the number of minority students participating in three summer training programs: Project IMHOTEP, Public Health Summer Fellowship Program, Ferguson Infectious Disease Fellowship Program.

Program Activity	Goal	FY 2000 Original Performance Measure	Revision and Explanation
Office of the Director	**New goal:** Through grants and cooperative agreements, develop mechanisms to support Historically Black Colleges and institutions, Hispanic-Serving Institutions and Tribal Colleges an institutions.		**New measure:** Increase the number of funding mechanisms and number of minority-serving institutions receiving support.