Implementation

This plan provides a comprehensive strategy for the prevention and control of emerging infectious diseases. The strategy is based upon the premise that it is far less costly, in both human suffering and economic terms, to anticipate and prevent infectious diseases than to react with expensive treatment or containment measures to unanticipated public health crises.

The plan is a first step in addressing the threats to health in the United States posed by emerging infections. The need to rapidly implement this plan is made more urgent by a number of diseases that pose an immediate danger: methicillin-resistant *Staphylococcus aureus*, a common cause of hospital infections, may be developing resistance to vancomycin; penicillin resistance is emerging in *Streptococcus pneumoniae*; cholera is likely to be introduced into the Caribbean islands from the current pandemic in the Southern Hemisphere, and the new strain, *V. cholerae* O139, is spreading rapidly in Asia; changing food industry practices and dietary choices of the American people will bring new challenges to providing a diet safe from pathogens, such as *Salmonella* sp. and *E. coli* O157:H7; and ongoing investigations of hantavirus pulmonary syndrome document that the geographic distribution of this infection is much broader than the desert southwest. These infectious disease problems, which have already begun to affect the public's health, emphasize the need for expeditiously implementing this plan.

Some of the activities listed in this document are already in the planning stages and will be implemented soon. Most will require additional funds and personnel. Specific details of many of the proposed activities need further development in full cooperation with other federal agencies, state and local health authorities, academic institutions, professional societies, private industry, and others. With this document as a guide and a first step, implementation will proceed according to public health needs and resource availability. This process will be approached in stages, as a long-term endeavor to ensure sustainable impact, and will involve major extramural efforts (Table 6).

The Health Security Act of 1993 addresses the need for community-based public health strategies in addition to the need for universal health care coverage. *Prevention* of future cases of infectious diseases—of multidrug-resistant TB, influenza, Lyme disease, opportunistic infections, hantavirus pulmonary syndrome, cryptosporidiosis, AIDS, and many other emerging diseases—is a high priority. The health of a community is vital to the health of individuals and must be maintained through effective public health approaches. Through the efforts proposed in this document, the public health system in the United States will be better prepared to respond to the emerging infectious disease threats of the future.

Table 6. Implementation: High Priorities for 1994–1996

Goal I: Surveillance

- ➢ Strengthen notifiable disease surveillance at the state and local levels.
- ➢ Establish two physician-based Sentinel Surveillance Networks to detect and monitor emerging diseases, such as unexplained adult respiratory distress syndrome, multidrug-resistant pneumococcal disease, and childhood illnesses characterized by fever and rash.
- ➢ Establish four population-based Emerging Infections Epidemiology and Prevention Centers to conduct focused epidemiology/prevention projects emphasizing foodborne and waterborne infectious diseases and potentially vaccine preventable diseases.
- ➢ Strengthen and link four existing sites for a global consortium to promote the detection, monitoring, and investigation of infections emerging internationally that could affect the health of Americans.

Goal II: Applied Research

- ➢ Reestablish an extramural program to support emerging infectious disease prevention and control activities, such as evaluating the role of prescribing practices in the development of antimicrobial drug-resistant pathogens.
- ➢ Initiate prevention effectiveness studies to assess the impact of food preparation guidelines on the incidence of foodborne infections such as *E. coli* O157:H7 and *Salmonella enteritidis*.

Goal III: Prevention and Control

- ➢ Develop additional means to deliver laboratory and public health information informing health professionals about emerging infections and antimicrobial drug resistance.
- ➢ Develop and implement guidelines for the prevention of opportunistic infections in immunosuppressed persons.

Goal IV: Infrastructure

- ➢ Provide state-of-the-art training in diagnostic evaluation and testing for medical laboratory personnel to ensure the diagnosis and surveillance of emerging infections.
- ➢ Establish a public health laboratory fellowship in infectious diseases that will train medical microbiologists in public health approaches to diagnosis and molecular epidemiology.