THE UNITED STATES CENTERS FOR DISEASE CONTROL

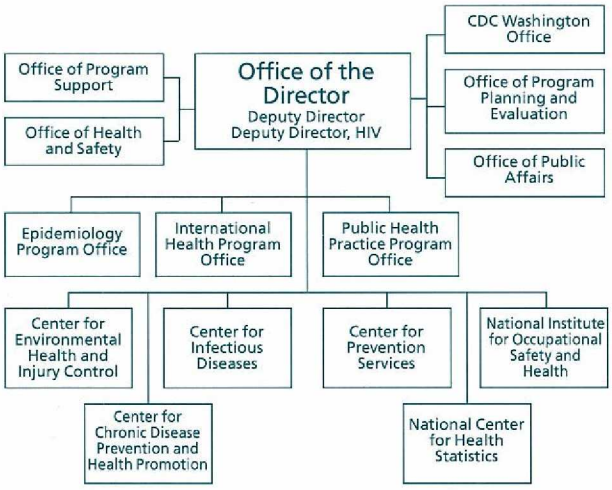
The Centers for Disease Control (CDC) was established as the Communicable Disease Center in 1946 in Atlanta, Georgia, to deal with malaria, typhus, polio etc. Malaria Control in War Areas (MCWA) had been established in 1942 to control malaria in military establishments. The CDC, an agency of the Federal Government Public Health Service, has led efforts to control diseases such as malaria, typhus, polio, rabies, sexually transmissible diseases, smallpox, toxic shock syndrome, Legionnaires' disease and acquired immunodeficiency syndrome (AIDS). Over the past two decades, CDC's responsibilities have expanded from the prevention and control of infectious diseases to address chronic diseases, injury, environmental and occupational hazards and behavioural risks.

The mission of CDC now is to prevent unnecessary disease, disability and premature death of US citizens and to promote healthy lifestyles. This mission involves the study and prevention of chronic diseases; controllable risk factors such as poor nutrition, smoking, lack of exercise, high blood pressure, stress and drug misuse; infectious diseases; and injury or disease associated with environmental, home and workplace hazards.

CDC comprises five Centers, one Institute and three Program Offices (Figure 1):

FIGURE 1

CENTERS FOR DISEASE CONTROL — ORGANISATION, 1991



Through these nine units, CDC provides national and international leadership; conducts applied epidemiologic, laboratory and behavioural research; develops public health by providing technical and financial assistance and training; sets standards and guidelines; conducts public health surveillance and reports health statistics, policy recommendations and investigation results through a variety of publications — perhaps most notably, the *Morbidity and Mortality Weekly Report (MMWR)*.

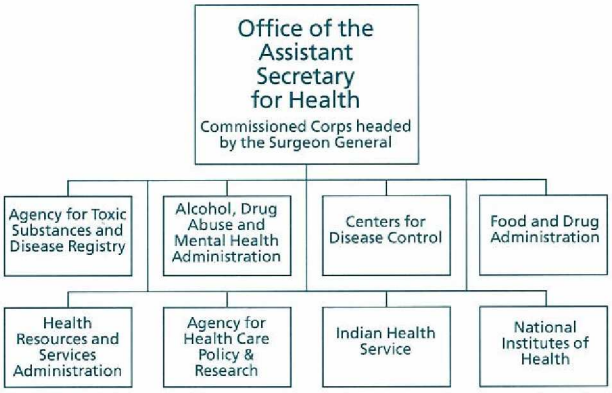
CDC is one of eight agencies of the Public Health Service (Figure 2) which in turn is one of the four administrations under the jurisdiction of the US Secretary for Health and Human Services — Children and Families, Health Care Financing, Social Security and the Public Health Service. The Assistant Secretary for Health presides over the Public Health Service.

In addition to being a key player in the network of federal health and social welfare agencies, CDC has extensive links with state and local health departments, academic institutions, professional and voluntary and community organisations.

CDC has a staff of 6,700 and a budget of $US1.4 billion (FY 1991) — 65 per cent for extramural work (co-operative

FIGURE 2

UNITED STATES PUBLIC HEALTH SERVICE



agreements and program contracts) and 35 per cent for intramural work (program operations, program support, research, buildings and facilities). Almost 40 per cent of the budget is spent on HIV/AIDS prevention. Other expenditure includes: infectious disease control including immunisation (28 per cent), chronic and environmental diseases and injuries (9 per cent), preventive health block grants (8 per cent), occupational safety and health (8 per cent), epidemic services (5 per cent) and health statistics (4 per cent).

Of its many major achievements, some stand out:

- establishing the Epidemic Intelligence Service and the *MMWR*;
- establishing the National Laboratory Improvement Program;
- spearheading national immunisation campaigns;
- identifying the organism responsible for Legionnaires' disease;
- identifying the AIDS epidemic;
- seminal studies in toxic shock and Reye syndromes and the health effects of toxic dump sites;
- motivating the development of national health objectives for the year 2000 and taking lead responsibility for more than half of prevention priorities; and
- establishing pilot breast and cervical cancer control programs in several states.

The Epidemic Intelligence Service (EIS) has attracted much professional admiration and public attention through the electronic media, books and journals including the prestigious *National Geographic* magazine. The service was established in 1951 by Dr Alexander Langmuir to prevent and control infectious diseases, to increase the number of field-trained epidemiologists in the US, to provide services to state and local health departments and to improve disease surveillance nationally. Today, with more than 1600 graduates, the program has broadened its scope to include all the areas of involvement of CDC. Under the supervision of practising epidemiologists in the US and overseas, EIS officers develop skills in applying epidemiology to address key public health issues. Officers have the opportunity to investigate disease outbreaks, conduct epidemiologic studies, teach, travel and present and publish their work.

As many EIS officers assume leadership roles in public health nationally and internationally, the CDC seeks to attract the most highly qualified applicants from a diverse pool of health professionals. While the majority of EIS officers are medical practitioners whose specialties include internal medicine, paediatrics, family practice, preventive medicine, occupational medicine and obstetrics and gynaecology, others include

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veterinarians, nurses, dentists, doctoral-level epidemiologists, statisticians, nutritionists and behavioural and social scientists.

EIS officers spend two years learning and practising epidemiology with only a small proportion of time in the first year being occupied by formal training. Each July, a new EIS class begins with an intensive three- to four-week training course on the principles and methods of applied epidemiology and biostatistics. Additionally, in August, the first year officers gather in Atlanta for a week of training in public health surveillance techniques and epidemiologic methods. In April, all officers return to Atlanta for the EIS Conference which is a week-long professional meeting focusing on applied epidemiology.

The remainder of the two-year period is spent learning by doing — responding to inquiries, monitoring reports of diseases, investigating outbreaks and analysing epidemiologic data. Over the course of two years, each officer is expected to:

- participate in a field investigation of an acute health problem;
- analyse an epidemiologic data base;
- design, implement, revise or evaluate a surveillance system;
- prepare a scientific paper;
- deliver a presentation at the annual EIS conference;
- deliver an oral presentation at the weekly CDC Professional Staff Seminar; and
- respond to public inquiries.

After serving for one year, EIS officers who are medical practitioners or veterinarians are eligible to apply for a Preventive Medicine Residency program. This additional training component is recognised by the American Board of Preventive Medicine as fulfilling the certification requirements of one year of supervised training and field experience. About 18 officers are selected each year for this program. These officers begin their residency in the second EIS year and complete it after a third extension year. Of those graduating from the EIS program over the past five years, about 75 per cent remain in epidemiology and public health. The remainder take up university positions, do further training and enter private health practice.

A number of Australians — Julian Gold, Charles Guest and the author — have served in the EIS. Liz Sullivan and Jeremy McAnulty are now serving on the program.

Australian Public Health is forging further links with the Centers. First, the NSW Public Health Officer Training Program is modelled on the EIS. The NSW program differs in that it extends for three years, requires entrants have at least completed course work for a Masters Degree in Public Health, and offers rotation through training positions each year. Second, the Master of Applied Epidemiology Program offered by the National Centre for Epidemiology and Population emulates the EIS Program and offers training and experience in epidemiology and infectious disease prevention and control. Indeed Mike Lane, a representative of the Centers, is working in Australia to strengthen the program. Third, Australian public health professionals are in direct contact with CDC experts. Staff of the NSW Health Department recently contacted rabies experts at CDC about precautions to be taken with contacts of a young Vietnamese girl admitted to hospital with the disease. And finally, vast opportunities have been opened up with access to the Centers' massive US Public Health Information Network.

Those fortunate enough to visit or work at CDC find it to be the world centre of excellence at the crossroads of health surveillance, epidemiologic investigation, policy formulation and basic public health laboratory research.

George Rubin, Director,
Epidemiology and Health Services Evaluation Branch,
NSW Health Department
(The author served with CDC from 1978-1986)

RELEASE OF MAJOR HIV/AIDS POLICY

The NSW Health Department has announced the release of two major policies dealing with HIV infection:

- The **New South Wales Infection Control Policy for HIV, AIDS and Associated Conditions**; and
- **HIV and Hepatitis B infected Health Care Workers**.

The policies represent a package of procedures which will protect both patients and workers in the health system from the transmission of HIV and other blood-borne infections.

Chief Health Officer Sue Morey launched the policies, and said, "Patients in the health care system must be protected from the risk of acquiring life-threatening infections as a consequence of their treatment and health care workers have a right to a safe working environment.

"Transmission of HIV from health care worker to patient in the health care setting is extremely rare. There are no known cases of this occurring in Australia.

"The cornerstone of both policies is that strict adherence to universal infection control procedures provides the best protection for both patients and health workers," said Professor Ron Penny.

"The New South Wales HIV/AIDS Infection Control Policy has been developed with extensive consultation over a period of almost two years, and represents the most detailed and comprehensive reference on this subject yet developed in Australia. It expands on previous infection control guidelines issued by the Australian National Council on AIDS issued in New South Wales in 1991."

Professor Penny, Director of the Centre for Immunology at St Vincent's Hospital, chairs the Ministerial Advisory Committee on AIDS Strategy, an expert panel which convened a working party in April 1991 to advise the Department on the assessment and management of health care workers who are infected with HIV or hepatitis. This working party was chaired by Professor Tania Sorrell, Professor of Infectious Diseases at Westmead Hospital.

The report of the Sorrell working party identified certain procedures which HIV or Hepatitis B e antigen positive workers should not perform. These procedures have on rare occasions been associated with the transmission of Hepatitis B in health care settings.

Health workers who perform such procedures should know their HIV or hepatitis status by seeking routine testing. Mandatory testing of all health workers is not justified. Health workers who are infected with HIV or Hepatitis B should seek the guidance of their specialist physician in regard to their ongoing role in direct patient care. These assessment procedures will mean that HIV and Hepatitis B infected health care workers will be excluded from performing tasks that expose them to risk.

"With these policies the Department recognises the civil and employment rights of health care workers while also protecting patient safety," Professor Sorrell said.

Both these new policies have been issued as Department Circulars with extensive distribution throughout the Health system during July.

Any inquiries about the policies can be directed to Ross O'Donoughue in the AIDS Bureau on (02) 391-9255.