

staff at all levels of research and management between our laboratories and other Federal and nongovernmental laboratories.

A close coordination of research efforts also exists between DHEW and non-Federal laboratories. The research grants awarded to academic and other nonprofit research institutes by the National Institutes of Health make the talents and resources of these organizations available to a concerted attack on health problems. Joint research programs are carried out by the National Institute of Mental Health and nongovernmental research laboratories. The same is true of laboratories in the Bureau of Disease Prevention and Environmental Control (now a part of the Health Services and Mental Health Administration).

There are, as well, studies made in DHEW laboratories for other Government agencies.

Examples of the effectiveness of these policies are apparent in the description of the functions and activities of our laboratories that follows:

NATIONAL INSTITUTES OF HEALTH

The National Institutes of Health, the principal research arm in the Public Health Service, is concerned with the extension of basic knowledge regarding the health problems of man and how to cope with them. Each of the eight institutes supports research in highly specific categories of disease such as cancer, heart, stroke, neurological diseases, and infectious diseases. Two of the institutes focus on such general problems as behavioral sciences, aging, human growth and development, surgery, anesthesiology, and mental retardation. Seven of the eight conduct programs in our own Federal laboratories by Federal physicians and scientists, but this represents an expenditure, including funds supporting contract research, of about 15 percent of the total \$1.2 billion budget.

The intramural programs, research conducted by Federal scientists in Federal laboratories located chiefly at Bethesda makes a significant contribution to the overall research effort, but can respond in only a limited way to the broad scope of the needs of our total programs.

A wealth of talent resides in academic and other nonprofit research institutes which can effectively engage in health research, and grants-in-aid have become increasingly the most significant part of the budget. This encourages close interaction between different sectors of biomedicine.

With the rapid growth of NIH after the war, attention was increasingly directed toward extramural activities. The growing extramural budgets also captured most of the time of each institute director. Two things happened: The concept of a scientific director was created, and each institute acquired a group of outstanding scientists to advise on the planning required because of the continually moving frontiers of science and medicine. Each of the scientific directors is in effect a laboratory director.

It is the duty of each research scientist at the NIH to report the results of his findings for the judgment of the scientific community as soon as the research is mature. The number of contributions to medical and scientific literature in 1967 was 2,302. In addition, we expect our scientists to participate in the activities of professional societies so that they engage in debate on general or more specific issues.