The Health Research Council of New York City

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MUNICIPAL support for research attacking the roots of a city's public health problems was unprecedented when first discussed within the New York City Department of Health in 1955. The only near-counterpart was the British Medical Research Council, formed early in the century to study the health problems of the entire Commonwealth.

As recalled by the then commissioner of health, Dr. Leona Baumgartner, the concept of municipally funded health research began with a study of the city's needs, facilities, and problems which she and her deputy, Dr. Roscoe Kandle, began early in 1954. New York's health problems were monumental. On any given day its hospital population was 30,000, with an equal number ill at home. Public health services and research efforts were scattered, undermanned, and palliative. A half-million new residents from Puerto Rico and the rural South brought new health problems with them. An impact was being made on only 2 of the 20 leading causes of death, and little if any progress was being made on the mental and physical cripplers.

By 1955 Baumgartner and a small group of medical confreres had held informal discussions on methods of coordinating and stimulating fundamental health research. They agreed that New York's problems were so unique and so vast that private and Federal funds were not sufficient. If the city's medical schools and hospitals were to keep and attract high caliber teachers and clinicians, the research community had to be constantly refreshed. Research support funds were the only way to keep leading scientists in the public health field.

A 2-day planning conference was held in Westchester County in the spring of 1957. Nearly 100 scientists from government, industry, and universities attended and prepared a framework for the research-support program. An eventual goal of $1 per person per year was a rough rule of thumb for financing the city's contribution to the program. A first-year budget of $1.1 million was deemed sufficient to get an organization underway. Only $500,000 was actually spent in 1958–59. Since 1961, $8 million per year has been allocated to the council from the city's expense budget.

City officials, led by Mayor Robert F. Wagner, participated in the discussions and were briefed on the outlines of the program. In June 1958 a 42-member panel of scientists and laymen was appointed. All served without compensation under a new name, the Health Research Council of the City of New York.

Council Objectives

From its inception the avowed objectives of the council have been:

1. To foster, support, and assist the careers of young research scientists.

2. To stimulate medical and health research considered to be of particular relevance and importance to the city.

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3. To aid and encourage scientific education and training.

To achieve the objectives, the council set up a small executive committee, under rotating chairmanship, and appointed a scientific director to act also as executive secretary. A small full-time clerical staff handles the administrative machinery. Applications for grants and career support are invited from qualified scientists in the city. Six volunteer study panels and a review committee composed of leading scientists evaluate the applications, which have far exceeded available funds.

Career Scientists

The health research council has given priority to its career scientist program in support of mature scientists in research and academic positions in the community. The program strengthens local institutions by enabling them to maintain stable positions for highly qualified staff members and to create openings for able scientists who may be attracted to New York City.

Career scientist awards are intended primarily for young but well-developed scientists who have completed ordinary fellowship training. More mature individuals may be appointed under special circumstances. The university or other sponsoring institution is encouraged to provide partial salary for the career scientist. The health research council's award, averaging $14,000 per year, is applied against his salary. The career scientist is also eligible to apply for project grant support.

This program is a joint enterprise of the health research council and the individual research and academic institutions in New York City. Application to the council is made through the institution sponsoring the individual candidate, who is personally interviewed by members of the council's review committee. Those who are recommended for approval are appointed for periods up to 5 years, with the intention of long-term support.

In 1959–60, the first year in which awards were made, only scientists who had a medical school appointment and were working in research facilities in municipal hospitals were eligible. Scientists in any department of the medical school or at any faculty level were included in 1960–61. In the following year, 1961–62, the current eligibility requirements were established. Scientists with faculty appointment in any college or university or scientists in any municipal department may apply.

The council has committed approximately $10 million for career scientist contracts, some of which extend through September 1968. Approximately two out of three applications submitted to the council since 1959 have been accepted and 201 scientists have been appointed. At year end 1965, the council had 172 active career scientists on its roster.

An association of career scientists provides a forum for exchange of scientific information among the scientists and establishes the channels for two-way communication between the council and the career scientists, who in turn may be expected to interpret accurately the council's mission and objectives within their respective institutions.

Project Grants

In addition to "the support of scientists in pursuit of their own curiosities," another category of health research council financial aid is the institutional or project grant. This activity fosters research on health problems important to New York citizens. The subjects of the grants reflect the collective judgment of the council's study panels and review committee as to which health problems have priority and which lend themselves to attack through a massing of talents and facilities. Concerted attacks are being made on many of the health problems first pinpointed at the Westchester planning meeting: infant deaths, pulmonary diseases, chronic diseases of the aging, delivery of medical care, mental illness, arterial disease, alcoholism, and narcotics addiction. In mid-1965 the council had 214 project grants in effect, totaling $4.5 million for the year.

The term institutional, used for these project grants, describes the funds available to a medical school, hospital, or research institution for use within a prescribed and planned area or objective. A qualified scientist, who will act as principal investigator, makes the application for the grant, listing the number of associates,

assistants, and facilities required. The application is evaluated by the appropriate study panel and the review committee, who rate it by the twin criteria of scientific merit and appropriateness—to the objectives of the council. The highly recommended applications are further examined by the council's executive committee, with an eye on funds available, and those approved are submitted to the commissioner of health and the board of estimate. A formal contract is drawn up between the health department and the grantee institution. Payments are made according to an agreed schedule by the office of the city comptroller.

A typical example is a council grant to the Albert Einstein College of Medicine of Yeshiva University for a human heredity clinic and laboratory. In its first year the clinic studied 391 patients and kindreds suffering from 18 different inherited disorders, ranging from juvenile diabetes to congenital jaundice. The principal investigator is professor of genetics at Albert Einstein College of Medicine, and two physicians serving as co-investigators are associate professors. They are assisted by a cytogeneticist, a biostatistician, serologists, nurses, technicians, and laboratory assistants. The health research council helps support this model clinic and research center by a project grant of $100,000 per year for 5 years; the center also receives financial support from Federal and private sources. Hopefully, this investment will result eventually in a reduction of mental and physical crippling caused by inherited diseases.

More than half of the applications for research funds are not approved by the review machinery, or are approved but deferred for lack of funds. In many cases, investigators who submit meritorious research plans which cannot be funded are urged to seek support from other sources. Federal, private, and city funds are often jointly used to underwrite costly projects, and the city grant often serves as seed money to enable an institution to get other funds elsewhere.

One byproduct of the research projects is their influence on the teaching quality in our medical schools. Most investigators on council projects are professors or associate professors and often department heads at medical colleges. Their leadership of long-term searches for the causes and cures of specific diseases eminently qualifies them as teachers of tomorrow's physicans.

Simultaneously, the quality of medical care in our municipal hospitals is greatly improved by these research projects. In the words of Dr. Ray E. Trussell, former city commissioner of hospitals, "Research grants aid the education of future physicians in many ways. By stimulating the teaching staff and students to greater efforts, the advancement of medical knowledge is accelerated and results in better trained physicians to care for patients. When planning for their postgraduate hospital training, interns and residents seek out those institutions where research by the medical staff is encouraged, and where they can acquire greater skill in their chosen fields. This incentive spirit works to the benefit of patients in our municipal hospitals improving medical and nursing care."

Research Facilities

Almost of equal importance to the "why" and "how" of projected research is the question, "where?" Most of our municipal institutions, medical schools, and voluntary hospitals use every square foot of habitable space. Finding the well-lighted, ventilated space needed for research work is often impossible.

However, obsolete or half-forgotten storage space has been found. For example, obsolete basement mortuary rooms at Bellevue Hospital could be stripped of their old brine tanks and converted into air-conditioned animal quarters, releasing for laboratory use the former scattered animal quarters with windows. A ground-floor storage room—cleaned, painted, refloored, and relighted—could become a modern blood bank and serologic test center. Often space was found that needed only paint to make it livable.

Occasionally a research project may require an isotope radiation counter and scanner or other instruments at a cost of several thousand dollars. If equipment can be shared by projects housed in one building, such sharing is urged, but the growing complexity and specialization of scientific instrumentation makes pooling of facilities difficult.

Since 1960 the council's refurbishment pro-

gram has resulted in the creation of more than 100 new laboratories and research facilities without building any new structures. This is the equivalent of a major research center, yet it cost the city only $3 million. Facilities scattered from Coney Island to Washington Heights tend to avoid the ivory tower aspect of centralized research and put the laboratories close to the clinical and teaching sites which they nourish and in turn draw nourishment from.

Results of the Program

This research program has brought to New York City, or has retained here, a formidable force of research scientists, and it has focused their attention on our medical and health problems. More than 1,000 such investigators are receiving support and are working in scores of hospital, university, and research institute sites. It is estimated that more than a score of scientists moved to New York because of council support and that twice that number remain because of this support.

This use of municipal funds to start a research project almost always brings Federal and private funds into the city—the "seed money" effect. If the city grants $50,000 to refurbrish and equip a laboratory, the investigator may shortly be given another $100,000 from private or Federal sources to pursue his research. For a total of $1,337,086 granted to New York institutions by the Health Research Council of New York City, outside grants of matching money have totaled $5,768,656. Every dollar of tax money the city puts into research housing and equipment brings in nearly $5 in Federal or private funds.

Research projects supported by the council have made advances against disease on many fronts, from early diabetes detection to obesity, from cirrhosis of the liver to multiple sclerosis, from penicillin hypersensitivity to the management of the Rh sensitive pregnancies.

New York has learned much about the enzyme disorders which can cause mental retardation in children unless diagnosed and treated soon after birth. The detection and treatment center for such disorders at Bellevue serves the entire downstate area. A steady decrease in the population of shelters for retarded children can be expected.

Every child in the city can now be immunized against the insidious measles virus. Studies of narcotics addiction have produced significant findings. The incidence of respiratory illness is being coordinated with peaks in air pollution. Paths of water pollution around the city's shores have been charted, and dikes have been devised to prevent pollutants from fouling precious beachfronts.

One investigator has learned how to detect reading and writing disabilities in children as early as kindergarten level. She demonstrates how to correct these deficiencies or to apply specialized teaching methods before the children become discouraged and drop out of school.

A pilot study of total medical care for welfare families at a single neighborhood hospital has proved the feasibility of such centralization. Another council study has shown that many psychotics can be successfully treated in a neighborhood day hospital and still live at home with their families.

The long-range benefits of research support by a municipality were perhaps best summarized by Dr. Colin M. MacLeod, present chairman and a prime mover in the founding of the council, in April 1957 before its formal organization:

> To conduct research in clinical and basic medical sciences is per se a useful and important thing to do. To support such research, quite apart from its immediate relation to care or prevention of disease, is also a useful thing to do. Any scientifically established fact will almost inevitably find practical application in one or another area, and often this area cannot initially be foreseen. Support of mature scientists in pursuit of their own curiosities is perhaps the most rewarding investment that can be made in our social progress.