Muir Comm. Report 18

EDUCATION FOR THE HEALTH PROFESSIONS

A comprehensive plan
for comprehensive care
to meet New York's needs
in an age of change

JUNE 1963

A REPORT TO THE GOVERNOR
AND THE BOARD OF REGENTS
FROM
THE NEW YORK STATE COMMITTEE
ON MEDICAL EDUCATION

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New York State Education Department,
Albany, New York

JUNE 19, 1963

The Honorable Nelson A. Rockefeller
Governor
State of New York

The Honorable Edgar W. Couper
Chancellor
Board of Regents
State of New York

DEAR GOVERNOR ROCKEFELLER AND CHANCELLOR COUPER:

On December 4, 1961, acting upon the recommendation of the Committee on Higher Education in New York State, you appointed a special New York State Committee on Medical Education, comprised of the undersigned members.

In your broad charge to the Committee, you said:

"The current shortage of physicians and nurses and other trained personnel in medicine and allied fields is a major barrier to providing the medical services which the people need. With an increasing population and a changing age limit within the population, particularly in the older age group, coupled with the continuing progress in medical sciences, and the greater awareness of the value of medical care, we shall face a situation of crisis proportions unless we take definite steps now to assure an expanded supply of qualified personnel."

Against this background you requested that the Committee, with the optimal health care of all New York citizens as its standard and the full spectrum of education for the health professions as its field of investigation, look ahead as far as 1980 and give its considered advice on:

(1) The number of health professionals of various categories and qualifications that expanding population and surging scientific knowledge will require in the next two decades.

(2) The means to educate such health professionals in adequate number and exemplary competence, whether through es-

tablishment of new facilities or expansion of existing ones, public or private.

(3) A satisfactory timetable for such expansion, and recommendation of appropriate sites for any new facilities considered necessary.

(4) Improved methods of recruiting and educating, in requisite numbers, the most desirable students for the health professions, with attention to the State's program of financial aid for students.

(5) Continuing research into problems of health profession education and patient-care, and continuing education of health profession practitioners.

The Committee approached this broad assignment in the conviction that before it could define the basic quantitative needs of a growing population, it must first define the subtler qualitative needs of a shifting population and a changing society. Its studies quickly demonstrated that, in an era of dynamic scientific progress and sweeping social change, today's standards of health care would not meet tomorrow's legitimate demands and expectations; that simple statistical projections based upon current practice would not suffice to establish future requirements. Ultimately it adopted, as the appropriate long-range goal of education in the health professions, the concept of comprehensive health care for everyone; and furtherance of progress toward that goal became the touchstone of its recommendations.

The accompanying report embraces all of the health professions, and health-related professions and vocations. But their number is so great that the Committee found it infeasible to deal separately, or in specific terms, with each of them. Naturally, the central health professions — medicine, dentistry, and nursing — commanded its first attention. In addition it selected certain of the major related professions for detailed treatment. These were chosen either because their problems were exceptionally urgent, or because they were so representative that solutions proposed for them would prove readily adaptable to other fields. The arguments and conclusions advanced in each field will be supported at greater length in a forthcoming supple-

ment, comprised of conference transcripts, position papers, and additional statistical data.

The specific recommendations of the report are urgent, if the State is to meet the needs of 1970; but there is nothing transitory in its philosophy. The Committee is confident that the goal of comprehensive health care will prove even more compelling in 1980 than it appears today. And unless this document serves as a useful and constructive master plan for health education during the next 15 or 20 years, the Committee will have fallen short of its own goal.

The Committee has enjoyed the services of a highly competent and dedicated staff, under the leadership of Dr. Lester J. Evans as executive director, and has received invaluable assistance from scores of special consultants and a distinguished Panel of Advisors, all of whose names are listed on pages 104-111. These men and women, recognized authorities in their varied fields, have given generously of their time and talents in individual and group conferences, and in the preparation of position papers. To all of them the Committee is deeply grateful. It is equally appreciative of the very cordial reception extended to the staff by educational, professional, and community leaders of the State.

Its special thanks go, as well, to the Commissioners and staffs of the Departments of Education, Health, Mental Hygiene, and Social Welfare of the State of New York, and to the officers and staff of the State University, and the Deans of all the medical schools in the State, for their warm and wise counsel and unfailing co-operation.

It is only because of the wholehearted support of these dedicated professionals that the Committee now has the honor to transmit the accompanying report.

Respectfully submitted,

Thomas Parran, M.D.
William R. Willard, M.D.
Malcolm Muir, CHAIRMAN

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Summary of Conclusions

THE PROGRAM OF CORRELATED ACTIONS that the Committee proposes in the following chapters as not only desirable but crucial to meet the projected needs of health profession education in New York State during the next 2 decades is an ambitious and demanding one. But there is no question that the State has the resources with which to undertake it successfully; so there should be no question that it has the will.

Summarized, the principal objectives of the Committee's program (specific means to their attainment are spelled out in the Summary of Recommendations, Chapter 14, beginning on page 76) require that New York:

(1) Expand State institutions and co-operate with the expansion of private institutions to educate physicians and associated health professionals in sufficient numbers to meet the quantitative needs of a rapidly-growing population. New York should be a creditor, not a debtor, State to the national and world pool of health professionals.

(2) Educate health profession personnel in the concept of comprehensive medical care to meet the qualitative needs of a population increasingly — and properly — anxious to enjoy the full potential of the rapidly-advancing health sciences. Comprehensive medical care is a national goal toward which New York, in its traditional role of leadership, should point the way.

(3) Appoint a disinterested Council for Health Profession Education to plan, integrate and co-ordinate, and recommend the allocation of State resources for, the multiplicity of activities entailed in this program among the many agencies involved in them.

(4) Be sensitive at all times to the invaluable complementary relationship of private institutions to public institutions, and work with them in an atmosphere of close co-operation.

(5) Encourage qualified youth to seek careers in medicine, nursing, social work, and other health professions with the realization that these professions provide incomparable rewards in terms of public service; and remove all barriers based on economics and prejudice from their path. Only then will the health professions be able to compete for the best available talent, regardless of racial, religious, or financial background.

(6) Foster at every opportunity, by suggestion and example, the principle that basic education in the health professions should be university education, and that the most propitious environment is that of a university medical center.

(7) Sponsor continuing research, experiment, and demonstration toward improvement of the methods and techniques of health profession education, patient-care, and institutional organization and administration — as well as in the natural and behavioral sciences. These purposes assume the steady expansion of opportunities for, and emphasis upon, graduate study.

(8) Provide facilities for the continuing education of professional practitioners throughout their active lives. Continuing education is an area that demands immediate, and itself continuing, attention, if the advances of medical science are to be passed on to all of the people.

(9) Take the initiative to form a New England–Middle Atlantic (NEMA) organization for interstate liaison and planning for regional health education requirements on a sustained basis. In mobile megalopolis, people and their needs are hardly more respecters of State boundaries than are viruses and bacteria.

New York should be a leader

All of the foregoing adds up to the vast challenge and the splendid opportunity that the State of New York faces today. It will accept the challenge promptly and seize the opportunity enthusiastically — to its honor and profit, and in conformity with its long tradition of leadership; or it will do so tardily and irresolutely — to its shame and tragic loss. The Committee is confident that those who control New York's destinies will agree that the latter course is unthinkable.

1

PLANNING FOR THE HEALTH OF NEW YORK CITIZENS

MEDICINE," said James Bryce in 1914, "(is) the only profession that labours incessantly to destroy the reason for its own existence." A year earlier, concluding a seven-year tour as British Ambassador in Washington with a fond critique of the United States,* the same statesman and scholar had written with Celtic intuition: "You have never sufficiently foreseen how enormously rich and populous a nation you are going to be."

Bryce was, as usual, right on both intimately-related counts. But even he could hardly have foreseen the paradox inherent in his observations: That the more dramatic the success of the medical profession in its apparent effort at self-liquidation, and the more that success reflected itself in increased population beyond the wildest surmise of his contemporary demographers, the more — not the less — need there would be for the health professional — *even in increasing proportion to the population.*

Two examples will explain the paradox in its simplest terms:

(1) It took only one horse-and-buggy doctor to diagnose (or misdiagnose) then "incurable" cancer. Today it takes a highly-skilled and specialized team of internists, surgeons, nurses, research scientists, radiologists, and laboratory technicians to diagnose, treat, and, hopefully, cure the same cancer.

(2) Where once, in the United States, childbirth was a family rite presided over by a general practitioner beside the four-poster, today it is generally a hospital production with a cast that likely includes an obstetrician, an anesthetist, nurses and perhaps a pediatrician; and five different sets — the labor room,

* "The Nation's Capital," in the National Geographic Magazine,

delivery room, mother's room or ward, smoky waiting room for nervous fathers, and aseptic infants' nursery.

Modern health and medical practice has necessarily become specialized, because the burgeoning volume of its knowledge and skills has outstripped the capacity of individuals to master, and keep abreast of, more than a portion of them. It has necessarily tended toward centralization at hospitals and clinics, because many of today's tools of diagnosis and therapy are hugely expensive and seldom portable, while today's population is highly mobile and can readily reach them.

The forces of social change

The dramatic advances of medical science have been attended in recent years by social changes of revolutionary force. Not only is the nation's population expanding — thanks in part to those advances — in what is approaching geometric progression, it is expanding with heavy proportionate increases in the numbers of children and old people — the two age groups requiring the most health care. And it is, more and more, an urbanized population, with rising income and educational levels, and the greater sophistication that these imply. Increasingly aware of the growing *potential* of the health sciences (and increasingly covered by prepaid medical care insurance*), this population is constantly expecting more from them.

The consequent, pressing need — in all 50 states, but particularly in large urban and industrial states such as New York — is planning for the future, foreseeing, in Bryce's words, "how rich and populous" we are going to be, and insuring that the growing demands of the population upon the health professions will be fully met.

The role of government in health planning

The only appropriate place to begin such planning is at the educational level, where professional training begins. And the appropriate agency to lead in the planning is State govern-

* On January 1, 1962, about 16 million New York residents out of a total population of approximately 17 million (93%) had some form of health insurance coverage. (Source book of Health Insurance Data, Health Insurance Institute 1962.)

ment, charged as it is not only with the general protection of the common welfare, but, through its licensing authority, with the specific supervision of standards in both educational and health practices. Even beyond these constitutional and statutory obligations the State of New York has immense vested interest, spending more than $400 million annually on health-related services, exclusive of $300 million more of tax money expended within its borders by other divisions of Government, and the nearly $2 billion that its citizens are estimated to pay out privately each year for health care. Clearly the State should see that its citizens, while paying for whatever they need, get full value for the immense sums they pay.

The needs of the future

In New York, as nationally, the most evident and emergent need (though by no means the only one) created by population growth and scientific advances is the expansion and co-ordination of educational opportunities for health profession personnel — physicians, osteopaths, dentists, nurses, social workers, public health and medical care administrators, medical technicians, physical therapists, podiatrists, and many others — who make up the increasingly varied ranks of the health professions.

National studies such as those made in 1958 and 1959 by the U. S. Department of Health, Education and Welfare, uniformly demonstrate the urgency; and one study points specifically to New York as the logical site for a substantial (nearly 10 per cent) portion of the expansion. Significantly, its recommendation that the equivalent of two new medical schools, each accommodating average entering classes of 100, be provided by 1980, was based more on the lack of opportunity to attend medical school in the State than on concern over the existing ratio of active physicians to the population.

The ratio, about 183 per 100,000 persons (a total of 30,700 physicians, excluding those in Federal service), is markedly greater than the national average of 118 per 100,000. Even so, there is a present shortage of some types of practitioners, such as psychiatrists, pathologists, and family physicians,* and there

* Only 30 per cent of the State's active physicians are in general practice, a decrease of 15 per cent since 1949.

is a maldistribution of personnel that is a cause of growing concern. Of greater concern is the fact that between 1940 and 1960, while the State's population increased slightly over 25 per cent, the proportion of active physicians per 100,000 population *decreased* from 191 to 183.

State Health Department projections, which are minimal estimates, indicate a population increase of an additional 29 per cent by 1980. If the past trend of falling physician-population ratio were allowed to continue, the resultant shortage could prove critical. The danger is even more apparent when two other facts are considered: (1) Since 1956, New York has drawn approximately 23 per cent of its new practicing physicians from the medical schools of foreign lands, and (2) in 1961 its own medical schools accepted fewer non-resident first-year students (299) than the number of New Yorkers enrolled as medical school freshmen outside the State (406).

New York should not be a debtor State

Obviously it would be regrettable if the nation's richest States, such as New York, permitted themselves to become debtor States, dependent upon poorer States and foreign nations for the education of their physicians. In an age of mobility, there is, of course, no reason why only persons trained in New York should practice in New York. But there is every reason why New York should educate the number that it requires for its own needs; so that it contributes at least as much as it draws from a national (and world) pool. This is its minimum obligation; not, by far, its maximum opportunity.

The resources of New York

A meaningful expansion of educational facilities will not be accomplished quickly, easily, or inexpensively, but New York approaches its task with enviable resources, not the least of which is a tradition of leadership that predates the Federal Union.

Among its physical assets are 476 hospitals with 228,162 beds to which 2.3 million patients were admitted in 1961. Within New York's hospitals, some of them among the nation's outstanding institutions, there are more internship and residency

programs for the advanced and specialized training of physicians than in any other State. New York's development of health and welfare services and its expenditures for these services are well above the national average.

The State has 10 of the nation's 87 medical schools. Together with their associated schools for related health professions, they constitute the largest, but by no means the only, component of New York's facilities for education of health personnel. Exclusive of the State University and the private universities with medical schools, fifteen private colleges offer programs in nursing, social work, physical and occupational therapy and medical technology, and some provide teaching toward advanced degrees. Community public health services, specialized clinics such as those for rehabilitation and mental health and welfare programs, both public and private, are used for field training in many health professions. The State Departments of Education, Health, Mental Hygiene and Social Welfare, with combined annual expenditures for education and service in the health field exceeding $400 million, all contribute to education, and employ a significant number of New York's 250,000 licensed professional health workers. They, along with their supporting forces at nonprofessional levels, represent at least 4.5 per cent of the State's total employed labor force. Included in the total are some of the nation's outstanding clinicians, public health experts, scientists, and educators. Beyond question New York boasts an extraordinarily rich vein of leadership, just as it enjoys unusual wealth of resources for health education and care at all levels.

The present excellence of resources is a tribute to the combined efforts of the State, the private educational institutions, and philanthropy. There remains, however, the need for further planning to bring unity to the over-all picture with the result that the full potential of the physical and human resources available becomes greater than the mere sum of its parts.

An educational partnership—private and public institutions

To take full advantage of existing resources for future, as well as present needs, it is essential that the State utilize to the maximum both public and private institutions and facilities.

Unlike many of the younger States, where most schools of higher education are public, New York has depended in the past primarily on private institutions. It is only in recent years that the State has begun to develop public resources for medical education through the State University of New York. The Committee believes that a closely co-operative relationship between the State and the private institutions is vital to the fullest utilization of existing educational resources.

Equal opportunity for all qualified youth

Such a program would, however, lose much of its value unless the State simultaneously utilized its human resources to the greatest advantage. To do this, the Committee believes, it must live up to the letter of the State University's motto — "Let each become all he is capable of being" — and guarantee that all qualified youth enjoy equal opportunity for education in the health professions. This implies the razing not only of any vestigial barriers based on prejudice, but of the perhaps even more formidable ones based on inadequate individual financial resources. Education for medicine and some of the related professions, unique in the burden of its length and cost, must be made more economically attractive and feasible through greater State scholarship and fellowship assistance, if these professions are to compete successfully with other professions and vocations in the rigorous contest for the best available talent, regardless of racial, religious, or economic background. This consummation is demanded not only by the abstract democratic principles by which we swear, but by enlightened self-interest. In the long run the best health professionals will prove by far the least expensive — in terms of lives as well as dollars.

Regionalization

It would be idle to discuss planning for the most effective use of educational facilities and manpower without recognizing that the planning must be regional as well as sectional, interstate as well as intrastate. In the vast megalopolis sprawling along the eastern seaboard from Washington (and even Norfolk) to Portland, the needs of New York and its neighboring States will become increasingly interdependent, and the action

planned by each to meet the future needs of health profession education must influence the planning of all. For example, four new medical schools currently planned in New Jersey, Connecticut, Massachusetts, and Rhode Island will relieve (but by no means eliminate) the pressure upon New York for crash expansion to whatever degree the plans fructify.

Because the Committee thought it essential to consider all such developments in the New England and Middle Atlantic States (NEMA) as a framework within which to assess the job ahead in New York, it retained Herbert H. Rosenberg, Ph.D., a special consultant, to make a thorough study of the NEMA region. His comprehensive report, entitled "Medical Education and Public Policy in the New England and Middle Atlantic States: Recent Trends and the Outlook for the Future," represents an important factor in the Committee's projections of New York's needs in subsequent chapters. It will be published in part in a forthcoming supplement to this report.

On the basis of the study, the Committee recommends that the Governor of New York call a conference of governors, university presidents, medical school deans, and other appropriate officials of the 11 NEMA States and the District of Columbia to form a liaison group. Such a group might be charged with continuing co-operation in all phases of planning for medical education and health services (including a reciprocal system of medical fellowship grants). It might also concern itself with qualitative, as well as quantitative needs and goals, and encourage the consideration of patterns of service best adapted to the health needs of megalopolis, as well as the unique health needs of rural pockets in an urbanized society and of distressed areas far from the centers of affluence. The Committee commends the NEMA report to the proposed conference as a fundamental guide to its organizational purpose and procedure.

2

COMPREHENSIVE MEDICAL CARE— THEORY, PREPARATION, PRACTICE

ALL OF THE PROBLEMS and phenomena discussed in Chapter I — dramatic scientific advances and enforced specialization in an age of bursting population, social revolution, and sprawling urbanization — combine to create a paradox: While health care in the United States today is the envy of the world, its performance threatens to lag seriously behind its potential. The reasons are clear: In recent decades, medical education and practice have preoccupied themselves with mastery of the physical and biological sciences. Their success has been the most brilliant in the whole history of medicine. They have — to cite only a few of their triumphs — reduced the death rate by 50 per cent; increased life expectancy by 40 per cent; virtually eliminated many once-dreaded infectious, nutritional, and other fatal or disabling diseases. But, ironically, in their intense concentration on acute and chronic organic illness, they have tended to become more disease-oriented and less patient-oriented at a time when their accomplishments result in fewer illnesses, and many more patients. Today's patient population, multiplied by modern medicine's gift of longevity, is primarily afflicted by chronic illness and emotional disturbance; not with the old killer diseases, now subdued where they have not been conquered completely. But the clinical preoccupation persists, and the organization of medical schools and health services, reflecting it, has tended to fall behind the changing trends and needs of society. Medicine, in brief, has not quite caught up with its own success.

The Committee is convinced that the redress of this growing imbalance between potential and performance lies in the adoption of comprehensive medical care as the ultimate goal of

modern education in the health professions – nationally, as well as in New York and its NEMA neighbors. There is nothing new or complicated in the concept. Basically, comprehensive medical care is the kind of compassionate, personalized birth-to-death attention – preventive, advisory, and rehabilitative, as well as diagnostic and therapeutic – that the ideal family physician used to give (and sometimes still gives), within the limits of his knowledge and facilities.

What is new and complicated is adapting the concept to the uses of urban society and specialized skills; so that medical care does not become increasingly an episodic, impersonal and even haphazard matter of a patient's shopping in bewilderment from specialist to specialist, none of whom may know the emotional or environmental problems interacting with his organic complaint. The aim should be to combine the concentrated knowledge and skills of the specialists with the broad understanding, wisdom and continuing care of the generalist to the end that the patient receives precisely as little or as much care as he requires. Two actual examples of good comprehensive medical care,* one simple, the other complex, will suggest its range:

(1) A 4-year-old child has been visited regularly by the family physician since birth. He has had the usual childhood diseases without complications or sequelae. Growth and development are progressing normally. There is no evidence of behavioral or emotional problems. Immunizations are current.

This is an instance of comprehensive care rendered solely by the physician working with the mother, with the perspective largely preventive.

(2) A 42-year old husband and father, employed in heavy labor, suffers a cerebral vascular thrombosis ("stroke") that results in paralysis of his right side and impairment of his speech. He receives good emergency care during the acute comatose period immediately following the attack. Soon after he regains consciousness and stability, an active program of physiotherapy and speech therapy is instituted, first at his bedside, later in the appropriate clinics. Recognizing that the patient will be unable

* As reported by Committee Consultants Drs. Isadore Levine and Robert L. Berg, of the University of Rochester School of Medicine and Dentistry.

to return to heavy labor, his physician calls upon the rehabilitation center for assistance. While the patient is still hospitalized, a rehabilitation team including a social worker, psychologist, occupational therapist, physical therapist, work evaluator, and vocational counselor, begin working with him, his family, his physician, and his nurses. Under the concentrated treatment of the various therapists, his afflictions yield to the point where he can walk with a leg brace and talk with only slight difficulty. After a vocational training course sponsored by the Department of Vocational Rehabilitation, he is placed in a full-time job as a time-keeper clerk. Today he travels to and from work unassisted, and has resumed his role as the family breadwinner.

This is an example of very comprehensive rehabilitative medicine — following proper diagnostic and therapeutic treatment — in which community resources, as well as the more conventional health services, are utilized to achieve maximum recovery.

In their clinical aspects both of these cases are commonplace. In their fortunate outcomes, they are not so commonplace as they could, or should, be. The converse of the two examples are:

(1) The normal child who, denied proper medical attention for whatever reason, develops pulmonary disease as an aftermath of measles, or contracts poliomyelitis because he has not been immunized.

(2) The "stroke" victim who, lacking the treatment and guidance to restore him to self-sufficiency, becomes an invalid, a ward of the State, and an agent of despair.

The cases cited here involve, immediately, only two patients and two types of medical problem. Even so, they implicate the health and happiness of entire families and the skills of many professional disciplines. It is quite conceivable that both cases could have been cited from the same family, or that in each of the actual families concerned there were other, simultaneous health problems, affecting the teeth, the eyes, the emotions, the skin, the feet — anything or everything from head to toe. The circumstances might call for the services (in addition to those mentioned above) of any or every type of specialist from

psychiatrist to podiatrist, from dentist to dermatologist, from osteopath to optometrist, singly or in combination, whether medical or paramedical. The goal of comprehensive care is that their services be available to the extent they are needed, and that their efforts be co-ordinated so that none works in isolation, but all as a team in the full knowledge of the patient's total health picture and what the other is doing to improve it. In many situations a medical administrator also is an essential, if unseen, member of the team.

Medical education trends

Few medical schools today are organized to teach comprehensive care, and the programs of those that do are still experimental. But the impact of modern psychiatry, psychology, and sociology is beginning to impress educators with the fact that medicine can not be considered only an application of the biological and physical sciences, now honed to a fine precision, but must encompass adequately the less exact social and behavioral sciences. There is also a renascence of the venerable belief that medicine is an art as well as a science, and that in dealing with the interacting organic and emotional forces that can induce illness (or help cure it), art is sometimes more effective than science. This reawakening has as its natural concomitant the restoration of the patient to the status of a whole person who lives in a society which he affects and is affected by, rather than the host of a diseased organ who lies in a sickbed, handy to the test tube and microscope. This change in attitude is the simple fundamental of comprehensive medical care.

The time is ripe, generally, for substantial revision of both concepts and curricula in medical schools, whose programs, while at variance with one another,* have seemed static in their relative emphasis since the revolution influenced by the Flexner Report half a century ago.

Whole new fields of research are emerging in such areas as genetics, and space and radiation medicine. The electronic computer and other technical innovations are revolutionizing research itself. The conventional boundaries of subject matter,

* See Appendix A, page 80.

and even entire academic departments, are crumbling, as each field applies the tools and techniques of the other. The biochemist and microbiologist, for example, often are indistinguishable; both are studying cellular life, frequently in the same kind of organism.

Traditionally, the curriculum of the medical school has helped shape the curriculum of the colleges. But now a major change is occurring. The high schools are teaching increasingly more advanced courses, and the colleges are having to respond with their own advances, which in turn affect (or should affect) the medical schools. Along with progress in the social and behavioral sciences, these advances are providing a better understanding of the nature of illness and health in relation to the life process, and of the forces that shape institutional and medical practices in every-day life.*

Expansion of curricula to embrace new developments — the common expedient of medical schools in the past — will not much longer suffice. Drastic revisions are imminent. The Committee urges that these revisions, when they are made, be oriented toward the teaching of comprehensive medical care. Meanwhile, the State should pioneer new approaches to this type of medical, as well as other health profession, education through research, practice, and demonstration in its own State University institutions.†

Medical education should be university education

Because medical education should include a broad background in the humanities (medicine as an art), as well as in the sciences; and because it should be taught in an atmosphere that invites and stimulates unfettered challenge and inquiry, the Committee is firmly convinced that medical schools should be integral components of universities. The university campus provides the greatest freedom of environment and diversity of resources, and the best opportunity to experiment with such matters as integration, length, and content of curricula. Beyond the gates, the proprietary interests of special groups tend to

* See Appendix B, beginning on page 81.
† For further consideration of related subjects, see Appendix C, beginning on page 84.

prevail, disposing education to preserve the status quo, rather than to anticipate the future and prepare students to meet its demands.

The ideal school for physicians and associated health professionals is the university-based medical center in which teaching, research, and service are integrated, and the medical school, the dental school, the nursing school, the teaching hospital, the research program, and the community health services are considered not as independent entities, but as inseparable components of a single entity.

Criteria for new medical centers

To assure adequate resources for medical education during the next two decades, New York State should, in the Committee's judgment, establish two new publicly-supported medical centers by 1980. (See Chapter 3, page 19). It should take advantage of these centers to develop leadership, new curricula, new educational methods, new patterns of patient-care. The Committee believes that the centers should place major emphasis on experimental approaches, and that this can be done without jeopardizing the established values of traditional teaching. Because of the relatively large amount of money available from the Federal Government and private sources for research in the life sciences and clinical medicine, the Committee feels that New York should concentrate State-sponsored research efforts on the comparatively neglected fields of patient-care and medical education. Otherwise the rare opportunity for a fresh start will be squandered.

The Committee recommends the following criteria for the establishment of new medical centers:

(1) The medical center should be an organic part of a complete and well-equipped university. Ideally, it should be located on the campus of the university and maintain continuous intercourse in all major academic areas.

(2) The medical center should be a complete *Center*, with the best possible educational programs for physicians and other health personnel, for graduate studies in the basic sciences, and for research in the sciences, education, and patient-care.

(3) The center should have complete facilities including (a) classrooms, teaching laboratories and student facilities, including housing; (b) offices and laboratories for the faculty and graduate students; (c) an adequate library, and (d) proper facilities for teaching and research in patient-care, as well as service.

(4) It should have access, for clinical teaching and research, to patients of all ages and conditions and of all social and economic classes in a teaching hospital which it controls. Any area in New York State which can support a strong university will have a sufficient number of patients. The availability of a university setting should override any claim that a large patient volume of an existing hospital should be the basic reason for the location of a medical center.

(5) The facilities should be designed so that the faculty and their programs of research, teaching, and patient-care will promote experimentation. Obviously, the clinical facilities should provide for more than the acute hospital patient. There should be provisions to accommodate the ambulatory, the chronically ill, the psychiatric, and persons of all age groups — infants, children, adults, and the aged. They should be adapted to such concepts as "progressive" patient-care (separate areas of the hospital for patients with varying degrees of illness); the "half-way house" for the mentally ill (a day or night hospital for outpatients); a child study center for emotionally disturbed children, and a full range of rehabilitation facilities for the emotionally and physically handicapped.

The Committee believes the State should insist on these criteria to the maximum extent feasible in the case of new centers financed with public funds, and urges their application where possible in the case of privately-financed institutions; but in neither instance should university standards of research in education, the sciences, and patient-care be sacrificed.

3
THE DEMAND FOR PHYSICIANS

THE FIRST CONSIDERATION in planning an educational program to meet the State's health needs in the next 2 decades is the provision of competent health profession personnel in adequate numbers. In this field, despite the increasing importance of other health professions to the practice of comprehensive medicine, the physician, of course, remains paramount.

The situation today

Today, as demonstrated in Chapter 1 (see page 4), New York State is losing ground in its favorable ratio of physicians to population. Unless this trend is reversed, or the time of physicians used much more efficiently and effectively, medical care during the next 20 years can hardly be expected to serve the people with its present level of adequacy, much less support the innovations and improved standards that the times demand.

To maintain the current ratio, the number of practicing physicians must be increased from 30,700 to 34,500 by 1970 and to 39,900 by 1980.

Even if the general picture were brighter than it is, there would be two special factors to discourage complacency:

(1) The fact that metropolitan New York City has twice the number of physicians per 100,000 population as the northern tier of counties—a serious imbalance, even considering that urban and suburban populations normally demand more medical care than those in rural areas. The imbalance may well be caused primarily by factors other than a shortage of physicians, but it certainly does not suggest a superfluity.

(2) The fact that approximately 23 per cent of the physicians newly licensed in the State each recent year were graduates of

foreign medical schools. While indications are that this helpful influx will continue, it would be unwise to depend heavily upon it in the future, under world conditions so parlous as those now prevailing.

The competition for qualified students

To insure a sufficient number of medical students in the future, two major problems must be faced:

(1) The stiff competition for qualified youth offered by other remunerative and prestigious professions and sciences. A young person today must be extraordinarily dedicated to choose a profession that requires 4 years of medical school after college, and 2 or 3 additional years of graduate training — even more, if he wishes to specialize — before he can begin practice.

(2) The difficulty of financing a medical career despite existing and currently projected scholarship and loan programs, remains discouraging and leaves untapped a reservoir of young people who could be attracted to medicine if more liberal financing were available — the bright sons and daughters of the less affluent families.

Growing population needs

These related problems of finance and competitive vocations (to be dealt with in detail in Chapter 9, beginning on page 46) would be serious enough if New York simply wished to preserve its present physician-population ratio. But the projected population increase of 29 per cent to 21,750,000 by 1980 will be accompanied inevitably by a demand for doctors in increasing ratio to the population. The reason is that the expanded population will include sharply increased proportions of persons 65 and over (2.2 million — up 29 per cent) and children under five (2.6 million — up 52 per cent). Both of these groups make unusually heavy demands upon medical services — older people because of the prevalence among them of chronic and disabling diseases; small children because of their susceptibility to acute illness and their greater need for health supervision. Care of the mothers of these children, through preg-

nancy, delivery, and post-natal convalescence will, of course, add further to the workload.

Under these circumstances, even if the supply of medical students proves adequate, the facilities to teach them will be inadequate unless they are expanded.

During the past decade, the State has enjoyed an increase of 602 places (18 per cent) in the total capacity of its medical schools, with a resulting increase in graduates from 736 to 946. (See Appendix D, page 86.) The creation of the Albert Einstein Medical School was largely responsible for this fortunate development. Major expansion of the State University Medical Schools, and a smaller increase in the capacity of The University of Buffalo Medical School, now also a part of the State University, contributed. Even so, the total enrollment of medical freshmen in the State today is little over 1,000 (See Appendix E, page 87); and it is the considered judgment of the Committee that the State must supply, as a minimum, an additional 325-first year places by 1970, and 425 by 1980 (See Appendix F, beginning on page 88). *It must be emphasized, furthermore, that these figures are based on the assumptions that immigration of foreign-trained physicians will continue at its present rate, and that the four new medical schools planned in the NEMA states will be completed as scheduled.*

Hopeful prospects

Granting these assumptions, it seems reasonable to hope that the recommended increase in capacity can be accomplished by a combination of expanded enrollment in existing schools, public and private, and the establishment of a new private school for which a charter application is pending and of two new State University schools.

The proposed new private school is a project of The Mount Sinai Hospital in New York City. The administrative officers and trustees of the hospital have satisfied the Committee that, if their present plans are implemented, they will meet the Committee's criteria for new, privately-financed medical centers. They are earnestly seeking an effective university affiliation; they propose experimentation and innovation in medical education, with essential emphasis on the social and behavioral

sciences, as well as the physical and biological; they already operate an approved teaching hospital in graduate and paramedical fields, and they prefer a university-oriented hospital to a hospital-oriented medical school. The Committee is gratified that the responsible officers of a major, established medical service and research institution are thinking in these terms. Their target is an entering class of 80 to 100 by 1967.

There are plans under way to increase enrollment at the three State University schools by a minimum of 50 at Buffalo, 25 at Downstate Medical Center, and 15 at Upstate Medical Center — for a total of 90. There is no reliable way to estimate what increases can be expected in the seven existing private schools by 1970. Each has limitations in its physical plant. Most place a high value on a carefully selected and limited enrollment to protect the quality and character of their programs. They will expend only if they are persuaded of the need for expansion, and if their finances and facilities are adequate for the job. (Enactment of the Federal Medical Education Bill, passed by the House in April and currently in Senate committee, probably would encourage some expansion.) Considering all these factors, the Committee believes that a total increase of 70 student places, or about 10 per cent of their present first-year enrollment, is not an unrealistic expectation.

If all these plans and hopes materialized, at least 240 of the 325 additional places considered essential by the Committee as a 1970 goal would be provided. That still would leave approximately 85 first-year places to provide by 1970, and 185 by 1980. And while it is not unreasonable to hope that everything works out to the best possible advantage — that the flow of foreign physicians continues unretarded; that the NEMA States proceed with their four new schools; that the projected Mount Sinai school is established; that private institutions can be encouraged to increase their capacities as much as 10 per cent — it would be imprudent to wager the public health on that happy outcome.

Minimum requirements for new schools

The Committee, therefore, is persuaded that the need for one new State University medical school by 1970 is beyond

question, and that, while the ultimate need for a second such school is certain, and its preliminary planning should be undertaken in the near future, the urgency of its actual construction and establishment can be reviewed periodically in the light of developments.

To provide the capacity for medical and related health profession education that prudence thus demands, the Committee recommends:

(1) The establishment of a medical school as part of a medical center by 1970 on the campus of the State University now being completed at Stony Brook, Long Island. (For details, see Chapter 11, page 63.)

(2) The establishment of a second medical school and center — tentative target date: 1980 — preferably in Westchester County (but only if the State carries out its plan to establish a University Center there). Planning should begin within the next 5 years.

4

DENTISTRY—AN ILLUSTRATION OF AN UNMET HEALTH NEED

"A nation of dental cripples"

There should be scant need to emphasize the importance of sound teeth to the nation's over-all health picture. The average American has been exposed to the principles of dental hygience since grade school, and everyone is continually admonished, through the mass-media advertising of the toothpaste manufacturers, to visit his dentist twice a year. It is generally understood that malformed tooth structures can impair appearance to the point of social and economic disadvantage and emotional disturbance; that a faulty bite may lead to detrimental dietary habits; that untreated oral infections may cause systemic poisoning, serious illness, and even death. What apparently must be stressed is the appalling extent to which such common knowledge is commonly ignored — and with such consequences that Dr. Donald J. Galagan, chief dentist of the U. S. Public Health Service, warns: "Ours is fast becoming a nation of dental cripples."

Some facts

It is, for example, a shock to most people to learn that:*

- *Military recruits have an average of more than 13 decayed teeth, and almost 4 teeth lost or requiring extraction.*
- *Every other American over 50 years old has lost all his teeth.*
- *Half of all school-age children have some degree of malocclusion, and one child out of five needs special orthodontic treatment for afflictions ranging from malocclusion to severe facial deformity.*

* Selected data from The Survey of Dentistry, American Council on Education, 1961.

— *There are an estimated 700 million unfilled cavities in American mouths, and the number is increasing.*

— *Twenty thousand Americans develop oral cancer annually; 2 out of 3 of them die within 5 years of diagnosis; 90 per cent could be saved through early detection and treatment.*

The irony of this condition is that the preventive potential of dental science makes it largely avoidable. But the sad truth is that only 40 per cent of the population receives adequate dental care. Among the neglected — or neglectful — 60 per cent, some simply can't afford it. Some don't consider it worth the expense. To a decreasing number, living in rural isolation, it seems too great an inconvenience. In many instances, fear, despite the relative painlessness of modern dental techniques, is an overriding consideration — at least until pain overrides fear. For whatever reasons, and despite the fact that individuals spend $2 billion a year for dental care, and various divisions of government millions more, the nation's performance in the field of oral health falls shamefully short of its capability.

Happily, there are clear indications that rising levels of education, income, and social consciousness are beginning to challenge the forces of apathy, fear, and indigence that lead to dental neglect. Unhappily, there is a simultaneous trend toward a declining ratio of dentists to population, even though the present ratio hardly would suffice if everyone heeded the exhortations to see his dentist twice a year.

Numerical needs

National studies by the Public Health Service and the American Dental Association indicate that if the supply of dentists is merely to maintain its present proportion to an expanding population, the nation's dental schools must increase their capacity 75 per cent by 1970. But merely keeping abreast will not suffice, if the national backlog of 700 million unfilled cavities and all its resultant ills are not to multiply. Although the dramatic success of fluoridation promises in time to minimize dental caries, that major problem of yesterday and today

is already being supplanted by the problems of tomorrow. Periodontal disease, frequently resulting in loss of teeth in adult years, is on the rise, and with it the need among the aging for false teeth and other prosthetic devices. At the same time, orthodontic treatment, where indicated, is becoming recognized as essential to basic health and correctional cosmetology.

In New York State the ratio of active dentists not in Federal service decreased between 1950 and 1960, from one to every 1,217 persons to one to every 1,387 persons. The total number of active dentists also decreased during this period from 12,244 to 12,134. As in the case of physicians, there is a serious maldistribution of dentists, with the New York City area having twice the number in proportion to population as the rest of the State.

The Committee's analyses show that in order merely to maintain the current ratio the State will need approximately 13,600 active dentists by 1970, an increase of about 1,500, or 12 per cent. By 1980 the required number will be 15,700 an increase of 29 per cent. Taking into account the death and retirement rate of practicing dentists and the number of new dentists licensed annually from schools within and without the State (this number has decreased slightly in the last 2 years), the Committee conservatively estimates a need for 75 additional first-year dental school places by 1970 and 95 by 1980. These figures presuppose continuance of the same rate of in-migration of dentists trained in schools out of the State. (New York is indebted to these schools for over 40 per cent of its dentists.)*

Existing facilities

New York State has three 4-year undergraduate dental schools — at Columbia University, New York University, and the State University of New York at Buffalo — with total enrollment of 1,031 and total entering classes of 276. In 1962 these schools graduated 236 students, only 12 more than in 1952. (See Appendix H, page 92.)

(Additionally, The University of Rochester has a unique School of Dentistry, which does not prepare practitioners, but

* See Appendix G, page 91.

offers outstanding post-doctoral courses toward careers in teaching and research.)

The New York University school has increased its enrollment during the last decade, is now the largest dental school in the country, and will be faced with problems should it consider further expansion. The State University already has plans, which the Committee endorses, to approximately double the capacity of the State University of New York at Buffalo school. The future of the small school at Columbia University is somewhat uncertain, but the Committee hopes to see it strengthened and enlarged.

Beyond the most hopeful expansion of existing facilities, however, a new school must be established, in part to keep up with numerical needs. The Committee strongly advocates that it be part of a new State University medical center (see Chapter 11, beginning on page 57) and that its unique opportunity for developing research in dental health, dental education, and the improvement of dental services through more efficient utilization of personnel be recognized and fully implemented.

A period of promise

Dentistry and dental education are entering a period of marked and promising change. In the past much of dental education has been oriented more to the training of a competent technician than a true professional man, and much of dental practice has been devoted to such routine procedures as cleaning teeth and filling simple cavities. Compared with medical schools, most dental schools have done little to advance scientific knowledge. In recent years, under the stimulus of grants from the National Institutes of Health, this situation has begun to improve, but limitations in both faculties and facilities still act as a drag on progress.

Although the dentist is an essential provider of health services, he generally has worked in the comparative isolation of his office as a solo practitioner. Relatively few dentists have been associated with group health practice or hospital staffs, where the interaction of problems and the exchange of ideas stimulate professional growth and improvement. Similarly, dental schools, despite nominal association with the medical schools of parent

universities, infrequently have shared with them a meaningful community of interest. To begin to provide for the nation's staggering volume of unmet dental needs, dental schools of the future should be integrated into medical center teaching complexes; so that their graduates emerge as full and active members of the professional health fraternity.

Auxiliary personnel

One field in which the dental profession can take initiative with substantial assurance of success is that of identifying the technical, as contrasted with the professional, components of its field, and training technical assistants to relieve the dentists of their time-consuming burden. It already has been demonstrated that technical assistants, properly employed, can increase a dentist's productivity by from 30 to 60 per cent.

The two categories of assistants with which this report is concerned are:

(1) The Dental Hygienist, licensed to scale and clean teeth, give instructions on oral hygiene, and perform a limited number of other patient-care tasks, varying widely with State laws. New York now has eight schools providing training for dental hygienists, generally in 2-year courses leading to an associate degree or certificate. These schools have a total enrollment of about 800, and graduate some 320 students a year. In 1962, there were only approximately 2,000 licensed dental hygienists active in the State, or about 1 for every 6 dentists.

(2) The Dental Assistant, a classification with few prescribed qualifications, and a variety of functions that may range from mixing amalgam and sterilizing instruments to answering telephones and emptying wastebaskets. Most of their training occurs on the job, although a number of 1- and 2-year training programs are now available throughout the country. There is none, however, in New York.

The Committee believes that training programs for these categories of ancillary personnel should be developed and expanded, with due attention to proper standards and curricula, and that the community colleges of the State and City Universities would provide an appropriate setting. It also feels that

dentists must be encouraged to make more effective use of such assistants. To this end, present State licensing regulations for dental hygienists should be scrutinized with a view to determining if they are, as many authorities believe, unduly restrictive. (Why, for example, should a dental hygienist who can successfully scale and polish teeth below the margin of the gingivae in Michigan be forbidden to do so in New York?) Certainly any employment of auxiliary dental personnel that can increase the efficiency of dentists by as much as 60 per cent will go far to relieve the looming shortages at the professional level and spur the nation toward realization of the rich opportunity for dental health that today so needlessly eludes it.

Recommendations

To meet the urgent needs outlined above, the Committee recommends:

(1) The establishment of a new dental school as an integral part of a medical center on the campus of the State University at Stony Brook, L. I., with an entering class capacity of 60. (See Chapter 11, page 63.)

(2) Sponsorship at the new school of an intensive program of research into improved preventive, therapeutic, and educational techniques in the field of dentistry; the more efficient use of dental auxiliaries, and better general organization of dental services, as examples to existing schools.

(3) Prompt implementation of plans to expand the capacity of the State University of New York at Buffalo School of Dentistry and encouragement of expansion of the private schools by the same means prescribed for private institutions in other health fields (see Chapter 11, beginning on page 57, and Chapter 10, beginning on page 53).

(4) The stimulation of expanded programs for the training of dental hygienists and dental assistants in community colleges, and student aid in these fields.

5
THE NEED FOR NURSES

WHEN FLORENCE NIGHTINGALE swept into the pesthole called a hospital at Scutari in 1854, the first thing she did was sanitize it to combat the infections that were taking more lives than volleying Russian cannon. Then she began her nightly rounds through the 4-mile rows of beds, with a smile and a word for each shattered survivor of Balaklava. "The lady with the lamp," the troops called her devotedly, and their morale rose as surely as their temperatures fell.

So, ever since, has the profession that Miss Nightingale founded given integrated balance and continuity to the basic elements of good medicine — fighting disease through the physical and biological sciences, and cheering patients through simplified application of the behavioral and social sciences. By 1900, nursing had become so respected a part of medicine that the wry "Mr. Dooley" observed that it didn't matter much whether you called a faith healer or a doctor —"if ye had a good nurse." But if good nurses were important in 1900, they are essential in today's far more complex medical practice. And the changing patterns of patient-care and of society, itself, are challenging the adequacy of their educational facilities, their services, and their numbers.

The background

The rapidly growing demand for nursing services, due in part to increased utilization of hospitals, has affected the fundamental role of the nurse. Even though the number of actively employed registered nurses has been on the rise, the increase has not been sufficient to satisfy the new and expanding needs of patients within (or without) the hospital.

The function of the nurse has been modified in response to these changes. Where once she was a housekeeper and general

assistant to the physician, today she is directly or indirectly engaged as a vital member of the health team in multiple and varying tasks often requiring highly sophisticated skills. She is responsible as a bedside nurse for the care and comfort of the patient while at the same time, she undertakes more and more tasks formerly performed by the physician. Paradoxically, as the patients' needs, both technical and psychological, have become more apparent, the professional nurse who is prepared to meet these needs finds herself increasingly removed from the bedside for supervisory and administrative duties. Her patient-care role then falls to the less trained practical nurse, aide, and attendant. Although the aim of today's patient-care should be integration and continuity of services, the nursing care of hospital patients becomes increasingly disjointed and intermittent.

Outside the general hospital, the need for highly skilled nurses is growing apace. More and more, the chronically ill and the aged need professional care in clinics, old-age and nursing homes, rehabilitation centers, and their own homes; likewise, public health, schools, and industry are calling for more nurses.

The growth in demand for nursing services has been coincident in recent years with a general shrinkage in the working hours of nurses toward the national standard of the 40-hour week. This trend, while eminently just and desirable, inevitably aggravates already existent shortages.

Shortages of nursing personnel

It is generally agreed that there is now an acute shortage of nurses in New York State. Recent surveys by the State Education Department indicate that in hospitals about 33 per cent of positions for general duty professional nurses are unfilled. In a few of these hospitals, as much as 80 per cent of the direct nursing care of the patients is given by practical nurses and nurses' aides rather than by registered nurses. In the municipal hospitals of New York City, 60 per cent of the budgeted positions for registered nurses are vacant. Public health agencies, nursing homes, and mental hospitals are urgently in need of trained professional nurses. Patients and their families, physicians, and hospital administrators all express dissatisfaction with the amount and quality of nursing service available in hospitals.

This situation exists even though the number of active registered nurses has increased by 40 per cent in New York State since 1950, from approximately 50,000, or 337 per 100,000 population, to approximately 70,000, or 416 per 100,000 population (see Appendix I, Table I, page 93).

Current shortages have resulted in various adjustments to the situation. To cope with the pressure, nurses have incorporated into their organization within hospitals and health agencies persons with less training — the practical nurse, the nurse's aide, and other auxiliary personnel. While this practice has eased some immediate pressures, it has resulted in an insufficiency of professional nurses to supervise the nonprofessional personnel involved. There is a desperate need for nurses with leadership qualifications, not only to supervise, but to administer and to teach. There is, additionally, a growing need for clinical specialists in nursing in such fields as psychiatry, surgery, obstetrics, and pediatrics.

Nursing education in New York State

In New York State today there are three basic kinds of educational programs* designed to supply the demand for professional nurses. Through any of the three a student may qualify for the State licensing examination and become a registered nurse. Generally, graduation from high school is a prerequisite for admission. The total includes:

(1) Nineteen baccalaureate programs, requiring 4 years of college work and leading to bachelor of science degrees.

(2) Eight associate degree programs, 2-year courses conducted under the auspices of junior or community colleges. In New York State the vast majority of these programs are taught in community colleges within the State University system.

(3) Ninety-four diploma school programs, usually 3 years in length, conducted under the auspices of hospitals.

Beyond these undergraduate programs (which graduate approximately 3,500 a year from a total enrollment of about

* See Appendix I, Table III, page 94.

12,000), 11 universities in the State offer graduate studies in nursing toward masters' degrees, and two toward doctorates. These programs, in which approximately 1,000 students are now enrolled, part-time or full-time, are of vital importance in the training of nurse administrators, clinical specialists, researchers, and faculty of nursing schools. They should receive every encouragement to develop new programs of patient-care, teaching, and continuing education.

At the other end of the training range are 48 practical nurse programs, which require 1 year of training. They are commonly conducted by local boards of education, often with Federal subsidy, as part of their vocational training programs. Some are operated by hospitals. High school graduation is not usually required for admission to these schools. Their present total enrollment is 2,303.

(Nurses' aides and other auxiliary personnel receive on-the-job training and require no formal education.)

Causes for concern

While this inventory of nurse-training resources is numerically impressive, there is solid evidence that it will not prove adequate either quantitatively or qualitatively in the next decade. Among major causes for concern are these:

(1) Nonaccredited status of many nursing programs. While all programs must be approved by the State Education Department, the National League for Nursing conducts a voluntary accreditation program with somewhat higher standards. Although nurse educators are generally agreed that accreditation by the League is desirable, only half of the State's programs have qualified for it.

(2) Quality and availability of faculty. The availability of faculty is a significant problem in the development of nursing schools, and in the expansion, and improvement of quality, of existing schools. While the State Education Department reports approximately 94 per cent of faculty positions filled in New York nursing schools, the educational background of the aggregate faculty is weak by accepted academic standards. For example, only 41 per cent of nursing faculty members have a

master's degree (or higher) — the desirable minimum acceptable standard for faculty appointment.

(3) Inadequacy of expansion plans. A study by the Education Department in 1957 (updated in 1961) concluded that the number of places for entering students in nursing programs should be doubled by 1970, from approximately 5,000 to 10,000. But expansion plans for that period, reported by the schools involved, provided for an increase to only 6,400 entering places. In short, while the projected need for increased first-year capacity was about 100 per cent, the planned increase was only 27 per cent.

(4) Declining attractiveness of nursing as a career. Another factor complicating the problems ahead is the *declining interest of high school graduates in nursing as a career in New York State.* There was an *absolute* increase in enrollment in nursing programs of only 4 per cent between 1957 and 1960, while enrollment in other post-high school educational programs was increasing 17 per cent — a clear indication that the appeal of nursing as a career is losing ground *relatively.* This conclusion is supported by the declining ratio of nursing freshmen per 100 female high school graduates — down from 7.3 in 1957 to 6.4 in 1960. A related problem is the high attrition rate (about 34 per cent) among nursing students, largely due to marriage or economic considerations.

All of these factors will require prompt attention and early remedial action by the State, if the nursing profession in New York is to keep abreast of the burgeoning demands upon it. Certainly increased financial aid to students is indicated to help meet the economic factor.

Goals for New York State

In the Committee's judgment, based upon population projections and the increasing nurse-population ratio demanded by modern society and medical practice, New York State should set as its goal the provision of 500 active nurses per 100,000 population by 1970 (a goal for 1980 will require additional, interim study). This figure compares with a present ratio of 416 per 100,000, and requires a total of 94,000 nurses, or 24,000

more than are currently employed, an increase of 34 per cent.* To reach this goal it will be necessary, because of student attrition and retirement of nurses, to double the State's present entering class capacity.

If existing schools expand sufficiently to account for half of the additional students needed by 1970, then the Committee calculates that 40 new schools or programs with an average enrollment of 60 students per freshman class will be needed before 1970 to meet the goal.

Because of the large number and varied types of schools involved, it is not possible at this time to designate specific institutions for expansion. Considering nurse training generally, however, the Committee attaches first importance to the baccalaureate schools. The development of such schools is essential if the nursing profession is to be supplied adequately with practitioners of the broad background in the social, behavioral, and physical sciences that is eminently desirable in the bedside nurse, and vital to the supervising and teaching nurse. They are the schools most heavily depended upon to supply leadership in the profession.

It follows that those few nurse training programs offering master's and doctor's degrees to selected, highly qualified students should be nurtured and enlarged. It is here that sorely needed faculty members, administrators and researchers in nursing and patient-care can be provided.

The Committee's enthusiasm for baccalaureate and advanced degree programs in no way diminishes its interest in the associate degree programs in community colleges. These are the fastest-growing programs in the State and should be given every encouragement, because, they, too, meet the major criterion that education for the health professions should be provided in an educational rather than a service environment.

Diploma schools of nursing, as Appendix I, Table III (page 94) clearly indicates, now produce the overwhelming majority of nurses in the State, and any realistic appraisal must accept this situation as certain to continue for many years. Therefore, the Committee would encourage strengthening of existing diploma schools of high quality, of which there are many, but

* See Appendix I, Table II, page 93.

it would withhold support from small unaccredited programs. Where they can not be improved, perhaps through consolidation, such programs should be eliminated.

In addition to more professional nurses, the State will require, in the Committee's judgment, a total of nearly 38,000 practical nurses, an increase of 50 per cent, plus an increase in the number of nurse's aides and auxiliary personnel (see Appendix I, Table II, page 93). These totals reflect the conviction of leaders in nursing that about half of direct nursing service to patients should be provided by professional nurses, 20 per cent by licensed practical nurses, and 30 per cent by nurses' aides and auxiliaries. Because programs for practical nurses, generously supported by Federal funds, are proliferating at a rate adequate to meet the goal, they should not require material State assistance. The problem here is one of careful quality control of curricula, faculties, and standards for graduation.

Recommendations

As steps essential to the attainment of the goals set forth in this chapter, the Committee recommends:

(1) A State program to encourage increased enrollment and maximum utilization of facilities in accredited schools of professional nursing, *particularly those offering bachelor's or higher degrees.* (For details see Chapter 10, page 55.)

(2) Initiation of baccalaureate programs in nursing at both the Upstate and Downstate Medical Centers; and establishment of associate degree programs in each new community college of the State University system which can provide adequate clinical training.

(3) Vigorous State support for patient-care and education research in nursing. The proposed Council on Health Profession Education (see Chapter 13, beginning on page 73) should be authorized to plan and initiate experimental projects for study of the various roles of nurses looking toward the development of a system of nursing education equipped to meet the needs in the broad spectrum of comprehensive medical service.

(4) The development of opportunities for *continuing education for the professional nurse*. Such programs should be included in an over-all statewide program of continuing education for all the health professions. (See Chapter 12, beginning on page 68.)

(5) Financial aid to students in nursing. Details of the Committee's proposals are discussed in Chapter 9, beginning on page 46.

6
SOCIAL WORKERS— TOO OFTEN THE MISSING LINK

The function of social workers in the health professions

The contribution of social workers* to community health, the well-being of patients and their families, and the successful practice of comprehensive medical care is perhaps the least understood of that of any of the health professions. This is partly because their functions are so various as to defy pat description and partly because their numbers are relatively so small that a large segment of the public is only vaguely aware of their existence.

Within the health professions, however, their services are highly valued and the shortage of their supply deplored. It is the social worker who is commonly depended upon to inform the health team of the social, economic and environmental factors bearing on a patient's illness, and to contribute to treatment and recovery by alleviating nonclinical problems. It is the social worker who promotes the morale of patient and family, helping each to adjust to the problems that illness imposes on all, and, when necessary, marshalling community resources to meet their needs. Social workers participate in preventive medicine by anticipating health problems before they become acute, and in rehabilitative medicine by guiding the convalescent and those who must care for him. Their work need not be limited to low-income groups. It can be invaluable to the affluent, as well, in such ways as providing counsel for the proper care of the chronically ill or disabled, helping the family to acquire insights into social and emotional problems that tend to disrupt normal

* This report deals only with social workers who specialize in medical or psychiatric, rather than general welfare, services.

family life, and providing psychological support through difficult periods of illness.

Social workers may work in a hospital or similar institution; a public health service, or a voluntary agency; they may be specially trained in either medical or psychiatric social work — the differences are only in emphasis. One role of all of them is that of interpreter and intermediary, bridging the gaps between institutions and individuals, therapists and patients, patients and their families, clinical and social environments, the sick and the well. Focusing always upon the patient as a person with a family and a place in society, rather than as a disease entity, they forge an increasingly vital link between the physical and biological and the social and behavioral sciences. Unfortunately that link is too often missing.

The shortage today

The shortage of professional social workers in the health field is acute today in New York State, as well as nationally. Unfortunately, there is no adequate statistical basis on which to project future needs.

Last year the State Department of Mental Hygiene reported that 158 (or 36 per cent) of 439 positions for psychiatric social workers in State Mental Hospitals were vacant. The New York City hospital system reports 168 vacancies in 370 positions, or 45 per cent. The New York City Department of Health has 14 vacancies in 36 positions, or 39 per cent. A still-unpublished survey by the National Association of Social Workers found 200 unfilled staff positions for medical social workers in non-mental hospitals within the State, with another 100 positions reported as needed. Another recent survey of 18 hospitals in western New York, made by the Western New York Hospital Association, disclosed 8 vacancies out of a total of 28 full-time, and 9 part-time positions. These hospitals estimated that by 1968 they would need a total of 54 full-time social workers, or almost double the number now available to them.

The vacancies tell only part of the story. Almost uniformly, health authorities report that additional positions for social workers are needed and would be budgeted, if existing positions could be filled.

. Not only is the shortage the most pronounced among all the health professions that the Committee has studied, but the situation is almost certain to grow worse, as the need for social workers multiplies along with chronic illness and disability in an aging population. Under the circumstances, it would be idle to attempt estimating numerical needs by 1970 or 1980. What will be needed will be all the State can reasonably hope to get through concerted efforts.

Present teaching facilities and enrollment

New York State now has eight accredited schools of social work, in which students must complete 2 years of graduate studies for master's degrees to qualify as professional social workers. Total enrollment increased from 657 in 1952 to 1,138 in 1962 (see Appendix J, page 95). These schools graduated 445 students in 1962, an increase of 64 over the previous year (see Appendix K, page 96). Continued increases, reflecting the growing pool of college graduates, of whom a percentage choose social work careers spontaneously, can be expected. But there must be an expansion of training facilities and faculty to accommodate them — and quickly — because the existing schools are operating at 98 per cent of capacity. The Committee believes that the State must, in addition to encouraging the expansion of existing schools, establish two new schools promptly as part of the State University.

Even assuming the necessary expansion, the natural accretion of professional social workers at today's rate never will suffice to close the widening gap between supply and demand. There is an urgent need for an aggressive campaign to attract a larger percentage of college graduates to the profession, and it should include the inducement of more liberal student aid.

Auxiliary personnel

There is also, in the opinion of a growing number of experts, need for experimentation and development of a training program for social work assistants, who would relieve the highly-trained professionals of some of their more routine duties and free them to employ their special skills more effectively. The Committee feels that the sponsorship of such programs, which

otherwise be overcome. He (or she) teaches the handicapped to employ prosthetic devices and mechanical aids, and to reorganize the routine of daily living so that it may be pursued despite the loss of normal capabilities. Under his tutelage, the paralyzed may learn to keep house, the legless to drive automobiles; the apparent invalid to become self-supporting. In cases of mental illness, birth defects, or the infirmities of age, he helps patients establish rapport with others and with their environment through the use of arts and crafts, and recreational and social activities.

These are the general distinctions between the two disciplines, although there is an inevitable area of overlap between them. In each instance, the training program requires a minimum of 4 years.

The need for recruitment

There is an acute shortage of both physical and occupational therapists in the nation and the State; the number of students entering the fields has been declining, and schools are operating at fractions of capacity. As a result the need for recruitment is exceptionally serious.

Although there are no dependable figures available for New York State alone, national figures suggest the magnitude of the problem. The American Physical Therapy Association estimates an immediate need for 3,000 more physical therapists than the 8,400 now active in the country, and 8,000 additional by 1970. If New York's share of this national need were 10 per cent (which approximates its percentage of the national population, but takes no account of the special demands made by its high level of urbanization and industrialization)*, it would total 300 immediately and 800 by 1970. By contrast, the nation's 41 schools of physical therapy, operating at only 77 per cent of capacity, graduated 689 students in 1962. The contribution of New York State's five schools, operating at a mere 52 per cent of capacity, was a meager 67, or about one-fifth of present State need.

* The Committee recognizes that the State, at least in the New York City area, has a higher proportion of physical and occupational therapists than the national average, but believes this is at least balanced by concentration of need.

In occupational therapy there are 7,000 practitioners now active in the country; job opportunities for about 14,000 more and an estimated need by 1970 of an additional 15,000. Using the same 10 per cent calculation, New York State's share of national need is 1,400 immediately, and 2,900 by 1970. But the nation's 31 schools of occupational therapy graduated only 302 in 1962, of which New York State's three schools, operating at 50 per cent of capacity, turned out 30, or little more than two per cent of present need.

The Committee considers all of these estimates as minimums. As in the case of social workers, it is impossible to make accurate projections of future needs for physical and occupational therapists, because their supply has always been so short that their potential usefulness has never been tested. It is obvious, however, that many thousands more will be needed than there is any likelihood of obtaining, unless youth is attracted to the professions in substantially greater numbers, and quickly.

Financial assistance for students undoubtedly will help in a field where tuition is high and pay relatively low. (Enrollment in both programs at The University of Buffalo — now the State University of New York at Buffalo — increased significantly when it became part of the State University and reduced tuition.)

The Committee feels that the State University should establish new programs in both therapies at the Upstate and Downstate Medical Centers, despite the fact that existing programs in the State are operating well below capacity. The new programs should not be large, but should be designed to improve professional standards by exemplary demonstration of the teaching, research, and practice of the therapies as integral parts of comprehensive medical care as it should be taught and practiced in university medical centers. These new programs should serve as guide lines to existing programs in their efforts to upgrade themselves. Improvement of the professional stature of the therapies through the development of broader educational programs, more extensive research, and better faculties and facilities should prove to be an important factor in attracting students to careers in these fields.

Therapist assistants

As in the case of other health professions in which fully educated professionals are in short supply, the training of competent auxiliary personnel is a hopeful avenue of relief. Recently two 18-week programs have been initiated in mental hospitals in the State to train certified occupational therapist assistants. They are graduating about 60 a year, and 228 are currently employed in the State. The Committee supports the development of such programs, and advocates similar ones for assistants in physical therapy.

Optometry

Optometry, a profession concerned with vision care, offers another valuable preventive and therapeutic health service. Like many others it suffers from lack of effective university affiliation (only 5 of the 10 optometric schools in the country already are associated with a college or university). The schools give 5-year courses leading to the doctor of optometry degree. Aside from engaging in private practice, their graduates are equipped through expert knowledge of the physics and physiology of the eye to participate in a wide range of vision care in schools, and public health and hospital clinics. Their practice includes the correction of visual disorders through lenses and exercises to strengthen eye muscles.

Although 2,190 optometrists are licensed to practice in New York, there is no school in the State, and in 1961, of 26 residents from New York State who studied elsewhere, only 14 planned to practice in the State. At that rate, the present availability of service could not long be maintained, although there is need for extended service. Aid toward the development of optometry schools is included in the pending legislation for Federal aid to medical education, and the long-range plan of the City University of New York suggests future consideration of such a school. This would meet a State need, further the Committee's aim of making education in the health professions university education, and contribute materially toward optometry's service in the health field.

Recommendations

The Committee's recommendations in the fields discussed in this chapter are as follows:

(1) Expansion of the State's student aid program to embrace the two therapies. (See Chapter 9, page 49.)

(2) Initiation of model programs in both occupational and physical therapy at the Upstate and Downstate Medical Centers, and upgrading of the courses at the State University of New York at Buffalo, and at existing private schools. (See Chapter 11, beginning on page 57.)

(3) Grants through the proposed Council on Health Profession Education for research in the appropriate use of assistants in the therapies and the development of training programs for such assistants. (See Chapter 13, beginning on page 73.)

(4) Endorse the suggestion of future consideration of a school of optometry in the City University.

8
ADMINISTRATORS FOR PUBLIC HEALTH AND MEDICAL CARE PROGRAMS

ORGANIZED MEDICAL CARE, involving as it does the multiplicity of professions discussed in previous chapters, is not only an essential human service but is also big business today; and the more comprehensive it becomes in response to modern needs, the better organized it must become to provide efficient and effective services. Good organization is the province of capable administrators, thoroughly familiar with their field. The current demand for administrators professionally educated for the health fields far outstrips supply.

A new profession

Within recent decades the need for administrative officers, once largely confined to public health services and institutionalized medical practice, has grown rapidly with the growth of prepayment plans like Blue Cross, Blue Shield, and commercial insurance; labor-management programs for providing medical care; research and therapy programs of voluntary agencies concerned with specific diseases, and group practice. The result has been the drafting of a heterogeneous group of administrators whose training and experience were gained in fields as diverse as medical science, business management, and the labor movement. The consequence has been the spontaneous emergence of a should-be profession, largely devoid of academic standards or practicing criteria.

Although they have been surprisingly successful under the circumstances, most of the men and women thus arbitrarily recruited for administrative responsibility in the health services

are strong advocates of professional training for their successors. Generally, they recognize the tendency of the inadequately prepared to over-emphasize either the business or humanitarian aspects of their jobs, and agree with Dean Lenor S. Goerke, of the UCLA School of Public Health, that:

> *"Medical administrators of the future must be sensitive to the needs of people, understand the role of the community in meeting health needs, appreciate the aims and objectives of the medical profession and allied groups, be prepared to participate in community planning, as well as understanding the task of business administration."*

Obviously, such qualifications imply an academic background which is balanced in the biological, physical, and social sciences, and generously weighted with the humanities.

Supply and demand

Today the focal points of such academic programs are the nation's twelve schools of public health, one of them in New York State at Columbia University. In 1962 they granted a total of 715 graduate degrees (65 from Columbia). Only a minority went to students trained specifically in administration.

In addition to the public health schools, there are, nationally, 17 universities with programs devoted to hospital administration, and an indeterminate number of courses in various aspects of health-related administration, conducted by medical and nursing schools, hospital associations, private agencies, etc., of which no accurate listing or analysis is available. Most of these programs, in common with some of those in schools of public health, concentrate on internal institutional management, and may give scant attention to the principles and techniques of medical care administration.

Because of the variety of titles involved, there is no dependable census of the total of medical care administrative positions in the country (or the State), or the number of existing vacancies. The Committee is satisfied, however, that there are approximately 10,000 such jobs now filled in the country, a large majority of them by persons without appropriate training. And it is apparent that the need for qualified professionals will

increase rapidly, along with the growth of population and complexity of health services.

Recommendations

To help meet that need in New York; to provide leadership in the development of curricula, criteria, and standards for various types of health profession administrators; and to recruit students in the fields of public health and medical care, the Committee recommends:

(1) That the Council on Health Profession Education give immediate consideration to the desirability and feasibility of setting up specific programs in the appropriate New York State institutions designed to prepare persons for medical administrative posts.

(2) That the Council investigate the need for aid to students in public health and medical care administration for study within or without the State.

(3) That the Council promptly investigate the desirability of establishing a School of Public Health and Medical Care Administration dedicated to the development of experimental programs within the State University.

9
FINANCIAL AID TO STUDENTS

PRECEDING CHAPTERS have demonstrated an urgent need for New York State to attract more, and better qualified, students to careers in the health professions. The competition for promising youth is keen, and it is national. In the Space Age, of the graduate students in the arts and sciences who are helped through some form of Federal or other grant, 55 per cent receive at least $900 annually. The comparable figure for medical students is eight per cent.*

Meeting the competition

An obvious way to help meet this competition is to open the gates of the health professions to ranking students from the lower income groups through a liberalized incentive program of financial aid. It is no accident that 45 per cent of medical students and 33 per cent of dental students today come from the 12 per cent of the nation's families with incomes of $10,000 or more. The resultant loss of talent is incalculable — and fast becoming intolerable.

Economic barriers

Economic barriers to students differ between the health professions, largely because of the lengths of time required to prepare for them, but high tuition costs are common to almost all.

Physicians

Medical education is by far the most costly, because it requires 3 or 4 years of college, 4 years of medical school, and up to 5 years of graduate or specialty study. During the past

* Journal of Medical Education. Vol. 36—July 1961, page 750.

2 decades, tuition in the nation's private medical schools has increased 144 per cent, and in its public medical schools, 139 per cent. In 1962 the average annual tuition of all medical schools in New York State was $1,250; of its seven private schools, $1,450.

A study by the Association of American Medical Colleges in 1959 (and costs have risen since) showed that it cost the average student $3,000 a year for each of his 4 years in medical school, and that 33 per cent of students graduated with indebtedness averaging $4,258. For some, of course, it was much higher.

Many medical students must earn an appreciable amount of the money for their education, a necessity that often interferes with their studies.

A national trend toward early marriage further complicates the economic situation of many medical students. While it is true that wives often contribute significantly to their support, it is also true that they often have babies, who prevent them from working, and themselves must be supported.

Once he has earned his medical degree, the young physician still faces years of work as an intern and resident, usually at nominal stipends.

There is no question that these economic factors discourage many qualified students from entering the medical profession.

Dentists

The problems of dental students who spend 3 to 4 years in college and 4 years in dental school, with an increasing number serving internships, are comparable to those of medical students. The over-all cost of dental education averages about $15,000, and the Council on Dental Education estimates that 60 per cent of students need financial aid beyond what is provided by parents, wives (65 per cent of dental school seniors are married), and friends. But only ten per cent of dental students receive scholarships, averaging only $500 a year; so most contract debts comparable to those of medical students. What is more, they need between $7,000 and $8,000 worth of office equipment to establish practice.

Nurses

A survey of 871 nursing programs throughout the country made in 1960 by the National League of Nursing reported median costs to students for 4 years of baccalaureate training came to $3,250. Data on associate degree and diploma programs indicated costs of $500.

In New York State, tuition for baccalaureate and graduate programs of nursing ranges from $600 to $1,200 annually. Tuition charges for students in Community College programs in the State University is $300 per year.

While these costs are small compared to those of medical and dental education, so are the ultimate income expectancies. And the costs alone bar many good prospects from becoming nurses. The recently published Surgeon General's Report on Nursing reveals that in a recent sample survey "almost half of all degree programs reported that most of their students needed full or partial financial help. Approximately 25 per cent of the diploma programs stated that students needed some financial assistance. The need for financial assistance probably will be even greater among increased numbers of students whom we hope to attract into nursing. Of 1,200 students who were accepted by diploma schools in 1960 but did not enroll, 33 per cent gave lack of financial assistance as the reason."

Other professions

In the other professions for which the Committee is recommending State assistance, the basic cost factors are these:

(a) *Social work* — Average annual tuition, $1,100 for the eight schools of social work in New York State. The range is from $600 to $1,300; the length of the program 2 years.

(b) *Occupational and physical therapy* — Average annual tuition for physical therapy is $1,000; for occupational therapy, $1,150. Length of program is at least 4 years.

(c) *Dental hygiene* — Annual tuition, $300 per year in community colleges; $450 average in other schools. Length of program is 2 years.

In all of these professions, present shortages are severe.

Availability of assistance

State assistance to students in the health professions is now available through an unprecedented variety of programs with which New York has set an example for the nation. Chief among them are:

(1) Regents' Scholarship Awards, granted on the basis of competitive examinations, with amounts determined by need, including:

- *(a)* Approximately 16,000 grants annually for general undergraduate study, ranging from $250 to $700.
- *(b)* Six hundred grants annually for basic professional education in nursing, ranging up to $500.
- *(c)* One hundred annually to medical and dental students, ranging from $350 to $1,000.
- *(d)* Thirty scholarships to registered nurses for advanced training in teaching or administration in the amount of $750.

(2) The Scholar Incentive Award Program, available to all undergraduate and graduate students on the basis of modest academic requirements, not necessitating competitive examination, and offering grants between $100 and $300 for undergraduate study and $200 to $800 for graduate and professional study, with amounts determined by need. (Nursing students in diploma schools are not eligible for this program.) In the Spring Semester of 1962, 74,000 students received $7.5 million under this program. The recipients included 2,300 medical and dental students who shared almost $600,000.

(3) The New York Higher Education Assistance Corporation, which guarantees loans made by private lending institutions to New York State residents pursuing higher education. The loans up to $1,500 a year to a total of $7,500, are interest-free during the period of college and graduate study; bear 3 per cent interest thereafter. In 1962 approximately 1,500 medical students, 650 dental students, 600 nursing students, and 160 social work students obtained loans under the program.

There are also a number of other grants and loan funds for

which students may qualify* (likely to be increased, if the pending Federal medical education bill becomes law). But the availability of loan funds does not alter the fact that to accept a loan is to contract a debt, and that to accept a large loan is to contract a heavy debt. Many potential students of health professions are unwilling to saddle themselves with the debt that their education would require. Among those who *are* willing, some find that the burden of indebtedness during their early professional years overrides their special ambitions, and distracts them from any pursuit but the most immediately profitable — sometimes at a loss to society of services for which they are peculiarly qualified.

Effective as the State's incentive programs are, the Committee believes, as stated earlier in this chapter, that in the case of students in medical, dental, nursing, and certain other health profession schools, the grants should be liberalized because of the extraordinary costs involved over protracted periods of time.

Recommendations

(1) An expanded program of financial aid for students in the health professions who are New York State residents, studying within the State, and are not receiving adequate aid from State or other sources.

(a) Medicine and Dentistry — Awards varying with demonstrated need for $400† to the full tuition cost of any medical or dental school in the State, but not to exceed $1,500. To qualify a student must be certified by the Board of Regents to have indicated promise of successful completion of the courses of study for Doctor of Medicine or Doctor of Dental Surgery.

Because there is no School of Osteopathy in New York State, the conditions of awards in the preceding paragraph should apply to New York students studying osteopathy in accredited schools outside the State. Graduate osteopaths complete the same examination for licensure required of graduates of accredited medical schools.

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* See Appendix L, beginning on page 97.

† The minimum amount presently payable for the second and subsequent years under the Scholar Incentive Program.

(b) *Nursing* — Awards, varying with need, up to the following totals, which take into account differences in tuition cost for the several programs: master's degree program $1,500; baccalaureate degree, full tuition, not to exceed $1,500; associate degree, $300; diploma, $300. Like medical and dental students, nursing students would require certification by the Board of Regents that they had shown promise of successful completion of their chosen courses. In baccalaureate programs, students would qualify in the college year in which they become bona fide nursing majors.

(c) *Social work* — An award varying with need of the full cost of tuition up to $1,500, for study in the health fields.

(d) *Occupational and physical therapy* — Awards, varying with need, up to figures approximating full tuition costs of schools granting recognized degrees of certificates, but not to exceed $1,500.

(e) *Dental hygienists* — Awards, varying with need, substantially equal to the full cost of tuition at any approved dental hygiene school in the State. The maximum award should be $450 per year.

(2) *Medical, dental, and nursing honors fellowships*

(a) A medical and dental honors program which would award fellowships on the basis of competitive examination — to attract unusual talent to the profession. These honors fellowships should be sufficient, when received in addition to proposed tuition assistance, to cover fees and maintenance as well. The awards would replace the present Regents scholarships for medicine and dentistry.

(b) A nursing honors program for postbaccalaureate students which would award fellowships on the basis of competitive examination for students preparing for clinical nursing specialties as well as for teaching and

administration. These honors fellowships should be sufficient, in conjunction with proposed tuition assistance, to cover fees and maintenance as well. The awards would replace the present State scholarships for advanced professional education in nursing.

10
NEW YORK STATE AND ITS PRIVATE INSTITUTIONS

THE MOST CURSORY GLANCE at the inventory of New York's resources for educating health professionals will reveal the high proportion of private educational facilities for the health professions. Seven of its 10 medical schools, 2 of its 3 dental schools, and a majority of its schools of nursing and other health professions are private. As recently as 1960 nearly 90 per cent of the 2,805 baccalaureate and first professional degrees earned in health professions in New York were conferred by private colleges. Obviously, the most advantageous possible use of these great resources is fundamental to meeting the State's needs for more and ever-better health professionals. But despite the wealth they represent — both material and intellectual — private institutions seldom are wealthy enough to undertake public responsibilities on their own.

The keen competition for private endowment

Competition for private endowment is keen (and when it comes it may have strings attached as to its use) and only a few of the stronger universities have been successful in obtaining private money in amounts approaching their needs. As for hospitals with schools of nursing, usually they must pass on added costs to patients; so that those who are sick and therefore often least able to pay are forced to subsidize educational programs which are clearly in the public interest and so should be supported by society generally.

To help meet rising costs — even today, without particular planning for the future — most private universities have been forced to increase their tuition to the point where it raises serious economic barriers for talented youth. Even so, tuition

does not cover costs. It is therefore not a very realistic means of financing the expansions and improvements required to meet New York's demands.

Where Federal funds are going

The Federal Government is providing increasing amounts of money for research, research training, and construction of research facilities, but not for undergraduate education. Congress is considering the appropriation of additional funds for educational programs (including construction) in medicine and related health fields. The bill has been passed by the House and has fair prospects in the Senate. If the legislation is enacted, however, it will include a matching requirement, posing to the schools the problem of finding their matching money privately. New construction for voluntary hospitals can be financed in part from Federal funds under the Hill-Burton Act; but in New York State, the matching requirements are 2 to 1.

The State's opportunity for further utilization of existing voluntary institutions

In view of these considerations, the Committee believes that the State has a self-serving interest, as well as a promising opportunity, in encouraging the fullest possible utilization of the facilities of private education in the health fields.

The only real alternative is to try to develop all the additional resources needed under the auspices of the State University of New York. But the University is hardly ready to assume the entire responsibility, even if it were desirable that it did. And considering the vast investment by private institutions in their existing plants and programs, it is clearly desirable to work with private institutions to assure maximum utilization of their facilities rather than try to do the entire job through public institutions. In addition, the private institutions, as a group, have a special strength upon which the State should capitalize: they are free to innovate and to establish standards of quality; they contribute to the great diversity of educational resources which is one of our strengths in education. Our private schools have produced a high percentage of leaders in the health profession and in society generally. The State — and the Nation

— will be richer if the role and opportunities of the private institutions are improved.

For these reasons the Committee is recommending a program of State contracts with private institutions, taking advantage of all such existing resources as the State Dormitory Authority, as complementary to a program of expansion by the State University (see Chapter 11, beginning on page 57).

Recommendations

Specific recommendations for full utilization of private schools follow:

State co-operation in the expansion and improvement of private health profession schools, medicine, dentistry, nursing, social work, public health, and other

(1) *State contracts for specific new and additional health education services.* As a means of encouraging the maximum utilization and the maximum development of the potential for expansion in existing private institutions in the State and the establishment of new programs, the State by contract would agree to pay private universities and colleges to undertake specific expansion of their enrollment and specific improvements in their programs in the health professions. The authority to enter into such contracts, within amounts made available for this purpose by appropriations, would be granted to the Board of Regents acting upon the recommendations of the proposed new Council on Health Profession Education. It is recommended that contracts for the following State-sponsored health education services, among others, be authorized:

(a) *Medicine and dentistry* — State to contract with existing medical and dental schools to increase first year class enrollment by 10 per cent or more, provided at least ten new places in the first year class are created; and to pay for the increase on a per capita basis. The contracts would include amortization of equipment and necessary renovation of buildings, and added cost

of educational demonstrations and experiments, directly incident to such increase in enrollment.[1]

(b) *Nursing* — Increases in nursing school capacity of 15 per cent or more provided total enrollment is more than 100 except in the very occasional school of smaller capacity with unusual potential. The State to contract to pay, preferably on a per capita basis, as outlined in *(a)*.

(c) *Social work* — Increases in the capacity of accredited programs of social work in the health professions, upon the application of schools of social work, and at the discretion of the proposed Council on Health Profession Education (see Chapter 13, beginning on page 73). Contracts thus negotiated would include reimbursement to the schools, on a per capita basis, for expenses incurred by such increased enrollment as the Council deemed appropriate in each instance.

(d) *Research in education and patient-care* — Approved projects of educational research and patient-care research, including utilization of professional and non-professional personnel, helpful for improvement of the quality of all health profession education programs and the planning of new educational programs for the future.

(2) *Utilization of State Dormitory Authority to finance construction for the designated health profession schools.* The State through the proposed new Council on Health Profession Education should encourage full use of the facilities of the State Dormitory Authority to finance on attractive terms the construction of new buildings and the expansion of exising buildings. Such financing is available from the Dormitory Authority not only for dormitories, but for classrooms, laboratories, libraries, and other academic buildings.[2]

[1,2] If the pending Federal Medical Education Bill is enacted, the details, although not the spirit, of these and other recommendations for aid to private institutions will require revision. The State might then consider assuming all, or part, of the matching obligations required to obtain Federal grants.

11

THE STATE UNIVERSITY OF NEW YORK

FOREMOST IN THE PUBLIC SECTOR of the State's health educational resources, the State University of New York was established in 1948 when the Legislature provided for a system of public higher education that would extend to all sections of the State. Headed by a Board of Trustees appointed by the Governor, the University is decentralized in location and integrated through its central administrative staff in Albany. The University system is composed of 53 units — three graduate centers, two medical centers, a graduate school of public affairs, 24 State colleges (18 four-year and 6 two-year), and 23 locally sponsored 2-year community colleges.*

Particularly pertinent to this report is the fact that every element essential for education in all the health professions exists at some place within the University system. With the recent transfer of The University of Buffalo, including its medical center, to the University, there are now three medical centers — the original two being the Upstate Medical Center at Syracuse, developed around the former Syracuse University College of Medicine, and the Downstate Medical Center in Brooklyn, developed around the former Long Island College of Medicine.

Aside from the medical and related health profession programs in the three medical centers, there are 8 nursing and 19 other health related programs in 16 institutions. The recent commitment of the University to expand graduate education in all the sciences — natural, physical, social, and behavioral — as well as the humanities and arts opens the way for advanced preparation of teachers and research workers in all the fields which are basic to health professional education and service. In the past academic year, there were 107,000 full-time and part-

* See Appendix M, beginning on page 99.

time students enrolled in undergraduate and graduate degree courses. Of these, 4,973 were in medical and related fields of study.

The role of the State University

There are approximately 425,000 students enrolled in all institutions of higher education in the State. Of this number, 195,000, or approximately 46 per cent, are in publicly-supported institutions, the State University of New York, and City University of New York. In 1959–60, approximately 90 per cent of the 2,805 bachelor's and first professional earned degrees in the health professions in New York State were conferred by private colleges. The strength of these private schools has sustained the State in the past, but the time has come for public institutions to assume a greater share of the burden. The State University in order to carry its future share of responsibility for higher education must be free to exercise, when necessary, its legal authority to enter into cooperative and contractual arrangements with other agencies and institutions. The State University thus can discharge its twofold obligation: to provide opportunities in higher education for qualified youth in the period of population increase in the years ahead, and to conduct its affairs in such a way as to augment and not compete with the equally essential private institutions of the State. These two groups of institutions, complementing and supplementing each other, hold in their hands an opportunity for forward movement rarely found.

Administrative organization of the State University

If the State University is to meet its obligations, it must function as an autonomous and independent institution of higher education, subject to the general provisions laid down for all educational institutions in the State by the Board of Regents. The necessity to function freely and independently is of special importance in the health field, if the educational programs of the University are to be in the vanguard of social and scientific advance in health and medicine. As a latecomer among State institutions, and the agencies of the State, the University has operated under rules and regulations developed

for other types of agencies or institutions, which are not adapted to the needs of a University.

The Heald Committee Report observed, for example, that the State University "should be granted a large degree of freedom from existing budgetary requirements for the establishment of individual positions and more leeway in shifting appropriated funds from one educational purpose to another and in the use of nonappropriated income. . . ." While some steps have been taken in this direction, especially by permitting the University to create its own authority for capital construction, much remains to be done. The Committee therefore advocates that further action be taken to the end that the University be given authority and held responsible — within established rules and regulations — for its own budgetary, personnel, and other operational policies. **It is essential that its authority match its responsibility.**

The medical centers

Although the State University has made real progress in the development of its medical centers during the 14 years of its existence, much remains to be done. With the recent addition of a third medical center, the State University of New York at Buffalo, the task becomes even greater. Originally, it was intended that these medical centers should include programs in medicine, dentistry, nursing, pharmacy, public health, and the allied health fields. Because physical plants had to be built, faculties increased in size and quality, and other developmental problems solved, the two original centers in Brooklyn and Syracuse only now have reached a point where they can develop some of the other educational programs originally contemplated.

The proposed expanded programs in the State University's three medical centers, within the next few years, in medicine, dentistry, pharmacy, nursing, social work, physical therapy, occupational therapy, and medical technology, will be equal in most instances to the creation of new schools or programs.

Downstate Medical Center

This medical center is located adjacent to the Kings County Hospital in Brooklyn. Disappointingly, it is not on a university

campus and does not have readily available the resources of a university; but the Committee is hopeful that proposed developments within the center (in co-operation with neighboring institutions and other units of the State University) will compensate in substantial degree for this lack. When the new university hospital, now under way, is completed, this medical center should have much of the variety and quality of clinical resources typical of a true university center.

The medical school's entering class enrollment is being increased from 175 students to 200 as rapidly as the new clinical facilities will accommodate a class of this size. In keeping with accepted standards, the Committee believes that under no circumstances should an entering medical class exceed this number. In addition to the undergraduate program, the Center conducts a large intern and residency training program and offers graduate work leading to the Ph.D. in basic medical sciences. Of unusual interest is the opportunity at this Center to capitalize on certain of its strengths, for instance, Downstate's unique program in psychoanalysis.

The Center's proposed plan of expansion includes the establishment of a School of Health Personnel. The first units, physical therapy and occupational therapy, are now ready for development as soon as they are approved. Later, programs in medical technology, X-ray technology, medical record librarianship, and other pertinent fields will be established. These programs, grouped within the Medical Center under the immediate direction of a Dean of the School of Health Personnel, will provide training leading to a bachelor of science degree — the first 2 years to be taken at a community or arts and science college, and the last 2 at the Center. They provide for 40 to 50 students in each of the 2 years. The Committee heartily endorses these steps toward expansion and also recommends the establishment of a baccalaureate program in nursing.

Upstate Medical Center

This Center is located adjacent to Syracuse University, one of the major private institutions of higher education in the State. It is now participating in collaborative programs with Syracuse University in some of the basic sciences and in nursing.

The medical school entering class enrollment is being increased from 85 to 100 students in anticipation of the completion of the University Hospital within a couple of years.

It is conceivable that if clinical teaching resources could be developed in other cities in central New York (such as at Utica and in Broome County), the basic science laboratories and the preclinical curriculum could be expanded to accommodate larger entering classes. The possibility of this kind of expansion where students would have their basic training in the Center, with some of their clinical training in University-controlled teaching facilities elsewhere, holds attractive potentialities for experimentation in the planning of the total 4-year medical curriculum, as well as in extending the health profession and medical care leadership of the Center to a natural regional area. The Committee suggests that the idea back of this proposal be given further study.

The Medical Center, like the Downstate Center, conducts an extensive intern residency program, as well as graduate work in the sciences leading to the Ph.D. For some time it has participated in an experimental associate degree nursing program which is now ready to be enlarged. Also, approval has been given by the Board of Regents for the granting of degrees in a baccalaureate nursing program. The Center is already co-operating with Syracuse University in the training of public health nurses at the bachelor's level, but it is now considering its own basic program. Developments such as this in the nursing field will call for further joint consideration by Syracuse University and other neighboring institutions and the Medical Center. The Center has already budgeted, and plans to initiate, baccalaureate programs in medical technology and physical therapy, as soon as approval is received.

In view of the urgent need for more personnel in these fields, and of the necessity for the Upstate and the Downstate Centers to encompass a wider range of health profession education, the Committee heartily endorses the present proposals and recommends their approval. The additions of these new activities in health profession education should add another 150 or 200 students to the present student body

Buffalo

Last year, for the first time, the State University of New York at Buffalo operated as part of the State University. At the Buffalo Medical Center, one of the most complete in the State in terms of the number of health profession programs, these important activities are now being brought under the administration of a Vice-Chancellor. The programs are medicine, dentistry, pharmacy, nursing, social work, physical therapy, occupational therapy, and medical technology.

As an initial step in the expansion of health profession education, the State University is asked to increase the 1963–64 health profession budgets. As new facilities are built, enrollments increased, and faculties enlarged, annual increases in operating expense may be expected for several years to come.

The Committee has reviewed the over-all plans for the health sciences at the Buffalo Center. As emphasized elsewhere in this report, it believes that a true medical center must have its own university hospital. At present, the undergraduate clinical teaching is done in the voluntary hospitals in the city. Undoubtedly some will continue to be done there, particularly in the highly specialized fields. The University anticipates increased collaboration with the Roswell Park Cancer Research Center — a valuable adjunct for University education where the graduate students and research fellows would profit by more intimate associations with all the science departments of the University. As at present, graduate instruction at the intern and residency level will be conducted in the community and public hospitals in Buffalo, as well as in the proposed university hospital.

The University Medical School has a long and excellent tradition of postgraduate medical education. Many years ago, it established a continuing program with the staffs of the smaller hospitals in the neighboring communities. This program is a natural nucleus for enlargement, under the aegis of the State University, as it fosters statewide continuing education activities.

The Committee freely endorses and approves of the State University of New York at Buffalo's Medical Center plans thus far developed, and urges that prompt action be taken to facilitate the contemplated expansion. (For enrollment at the Buffalo

Medical Center, as well as the Upstate and Downstate Centers, see Appendix N, page 101.)

New medical centers

In Chapter 3, beginning on page 15, it was recommended that a new medical center be established in the State University by 1970 and a second, probably by 1980. As already outlined in the criteria for a new medical center, these should contain not only a medical school, but, insofar as the needs of the State justify, programs in the other major health fields.

The first of these two medical centers in the State University, it would appear, should be on Long Island, serving Suffolk and Nassau Counties. The population in this area is growing more rapidly than in any other part of the State. According to projections of the Regional Plan Association, Suffolk County should have a population of 1,160,000 by 1970 and 1,685,000 by 1980. The corresponding figures for Nassau County are 1,450,000 and 1,500,000. In either county, the population would be more than adequate to support a medical center.

According to the criteria recommended by the Committee for new medical centers and in the light of the Master Plan of the State University, the location of the medical center should be on the Stony Brook campus. This assumes that it can become an integral part of a growing university to be devoted primarily to graduate education — thus fostering the common interests between the science and the health areas, and joint participation in educational growth. The construction of a University Hospital on the campus would in no way handicap affiliation with other excellent established clinical facilities on Long Island.

For example, Meadowbrook Hospital in Nassau County has been proposed as a site for major development in medical education. An affiliation of this hospital with the State University would be a natural one. The Committee envisions the possible development at the Meadowbrook Hospital of a new kind of teaching unit devoted to the demonstration, research, and practice of comprehensive medicine, serving principally the ambulant and clinic patient, and reaching into the homes of families. This unit could be planned as a part of the Meadow-

brook Hospital now organized principally around inpatient service. This, in no sense, should conflict with the University Hospital development on the Stony Brook campus which would cover all varieties of patient-care. The two would be complementary.

A glance at population projections for all Long Island leaves no doubt as to the availability of sufficient patients for teaching purposes in the projected center at Stony Brook. By visualizing this new center as one serving the two eastern counties of Long Island and by utilizing the available resources in both, the State would capitalize upon many assets which would be wasted if the center were projected for one county only.

With these considerations, the Committee recommends that a Medical Center located on the Stony Brook campus be developed to provide for:

College of medicine	100 students/class
College of dentistry	60 students/class
College of nursing with baccalaureate & graduate programs	100 students/class
School of social work immediately & other programs as needed.	
University hospital	400-500 beds

The Committee would like to re-emphasize the unexcelled opportunity which this new center would have for fresh approaches to medical education and patient-care, starting with a clean slate and with university colleagues who also are approaching graduate education in all the sciences and arts with fresh perspective. A center established in this manner possesses the potential for growth which is needed in the State.

When the time arrives for a second medical center in the State University, the Westchester County area should receive careful consideration. The final decision must await development during the intervening years, especially as to whether or not the State University establishes a full University Center in Westchester County. If this is the case, it would seem now that the Westchester County area is the optimal place for a second new State University Medical Center. Next to the Nassau-Suffolk County region, Westchester and its adjoining commu-

nities are among the most rapidly growing in the State. Like Long Island, it has knowledgeable and progressive community leaders interested in the possibility of a university development which would include a complete medical center. Since there is easy access to Westchester, a medical center in Westchester could also draw upon certain facilities, such as excellent voluntary hospitals, on the northern fringes of New York City.

A Vice President for program planning and policy (health affairs)

State University is a large and complex organization. In time, it will have a still larger student body and faculty, with ever greater organizational and operational problems, including capital development as well as day-to-day educational programming. The medical centers and the health profession education programs scattered throughout the University represent an unusually involved area for current development, let alone future expansion. The problems, scope, and magnitude of the State University operation, without the medical centers or the health profession programs in the colleges, are enough to tax the administrative capacities of any president. Lacking qualified help in the broad field of medical and health profession education, the president has an almost insurmountable task. Even though the medical centers have competent administrative heads, the task in the total health field throughout the University is tremendous.

Therefore, the Committee recommends the creation of the position and title of Vice President for Program Planning and Policy (Health Affairs) in the office of the President in the University. As indicated by the title, this would be a staff position to advise the president, but would not be in the administrative chain of command. The Vice President should be a highly qualified planning administrator in the field of education for the health professions. He should be paid a salary which will attract a person with the necessary skills in a highly competitive market. He would need a competent staff.

The Vice President should turn his first attention to the planning and coordinating of new programs involving the three medical centers; the new medical center at Stony Brook, a graduate school of social work in Albany, and nursing and other health

professional programs in the community colleges and other university units.

Many other urgent matters require early consideration.* Without planning and administrative help in the President's Office, State University educational programs in the health professions and in the medical centers might lack proper co-ordination, and suffer from lack of a firm sense of direction toward clearly defined over-all University goals.

The Committee believes that the creation of this office would be another step toward the development of the State University as an organic unity. Health profession education reaches, one way or another, into virtually all units of the University; especially so, with the growth of the sciences — natural, physical, social, and behavioral — and the humanities and arts as they contribute to the education of teachers, research workers, and administrators in all the health fields.

The Medical Center Councils

There is evidence that a single Medical Center Council for the Upstate and Downstate Medical Centers is not so effective as the Committee would wish. We believe that the original concept of a single Council for these two centers was in error, and that it will prove particularly so now that there is to be a separate Council for the Buffalo Center.

Each medical center serves a distinctive region of the State with its own special problems and unique characteristics. Each can best be served by its own Advisory Committee of citizens who represent the area in which the center is located, who know the workings of the center and its programs, and who are dedicated to its development. Of course, it would be well for the separate councils to have occasional joint meetings. But primary co-ordination can best be achieved through the Office of the University President, with aid of the Vice President for Health Affairs, and at the level of the Board of Trustees.

In suggesting a reconsideration of the structure of the medical center councils, the Committee realizes that the councils will have little value if they are not given significant responsi-

* See Appendix O, beginning on page 102.

bilities. It is suggested, therefore, that specific responsibilities which are substantial and meaningful, be assigned to each council, so that these responsibilities can command the interests and services of informed and talented citizens. The tasks of the councils should be of sufficient magnitude to represent a strong delegation from the University Board of Trustees without, of course, causing any weakening of over-all University administration.

12
GRADUATE EDUCATION AND CONTINUING EDUCATION

AS HAS BEEN REPEATEDLY emphasized in this report, the quality of professional health services depends largely upon the quality of graduate education and leadership in the health professions. Graduate schools, including those for advanced education in the professions, are the source of research specialists, who roll back the limits of knowledge; practicing specialists, who apply the discoveries of research in refined skills and techniques; teachers, who pass along the advances and refinements, while instilling basic patterns of professional thinking among students that will color their entire careers; qualified administrators, who strive to see that the combined knowledge and skills of the other professions are put to their most productive uses. Graduate education, in short, is the source of leaders who determine how far, how fast, and in what direction the health services shall progress.

Exceptional facilities

New York State has an exceptionally rich supply of facilities for graduate education — particularly in the medical and related health professions — in its universities and research institutes as well as in its public and private hospitals. But while the educational opportunities of the universities and institutes are well utilized under supervision of competent faculties and staffs, the same cannot be said of all the hospitals.

The public and private hospitals of the State, and particularly those of New York City, represent, at their best, a concentration of clinical and scientific facilities and talent well above the national average. But in many instances they are not being used to full advantage.

Recognizing this situation, a distinguished advisory committee, appointed by the Mayor of New York City, has suggested the city as a logical site for one or more publicly supported medical schools. It concluded that these schools would serve a State and national, more than a municipal, need and should therefore be financed at State and national levels. While generally sympathetic to such objectives, this Committee feels, particularly in view of the likelihood of a new private medical school in Manhattan (see page 17) that the City's untapped wealth of clinical resources could best be employed in an expansion and strengthening of graduate education — intern, resident, and research fellow — within the public and voluntary hospitals, with emphasis on advanced clinical training and research in patient-care. Such a program, toward which the New York City Department of Hospitals has already taken steps, would contribute not only to State and national needs, but to the improvement of patient-care within the hospitals.

Recommendations

To this end, and in harmony with a national study of graduate medical education being conducted by a citizens' commission appointed by the American Medical Association, the Committee recommends:

(1) That the proposed Council on Health Profession Education study the desirability and feasibility of a statewide program of co-ordination of graduate medical education, to improve the quality of education by insuring the maximum use of available resources, especially in New York City.

(2) That it consider the creation of a "Dean's Committee," such as has proved successful with Veterans Administration Hospitals, as the co-ordinating agency for such a program.

Continuing education

Continuing education — obviously a form of graduate education — is increasingly necessary in an age of unprecedented scientific advances, if practitioners in medicine, dentistry, osteopathy, nursing, and all the other health professions are to keep abreast of developments in their fields. But while its need is

vital and self-evident, efforts to fulfill the need have been sporadic, disjointed, and largely unsuccessful. A partial list of current attempts at continuing education in the State will suggest the variety with which it is being approached:

(1) The State Department of Health is collaborating with the State Medical Society in attempting to reach some of New York's 32,000 practicing physicians with information on new techniques especially pertinent to preventive and public health practice.

(2) The department is also conducting short courses for selected professional groups among the more than 5,000 persons in the 21 county health departments and the nine full-time city health departments of the State.

(3) Occasional courses for nurses are sponsored by hospital or nursing organizations.

(4) One medical school is conducting a successful two-way radio program for hospital staffs, which extends beyond its section of the State to community hospitals of neighboring States.

(5) Another school is cooperating with its regional hospital council in the conduct of programs for several categories of professional auxiliary hospital personnel.

(6) The New York Academy of Medicine recently initiated an educational FM radio program for such physicians as will listen.

Despite the availability of these and other programs, it is estimated that no more than 25 per cent of practicing physicians participate in continuing education of any kind — even hospital staff meetings — with regularity.

To find out why, the Department of Health and the State Medical Society, with funds provided by the U. S. Public Health Service, have undertaken a detailed study of continuing education in the medical profession. It will include a poll of a cross-section of physicians and a canvass and appraisal of relative success of everything being done in the field today by the State's county medical societies, hospital staffs, professional specialty organizations, and similar groups.

Palpable as the need for continuing education is in all the health professions, the Committee believes that more should

be known about the motivations of those who take advantage of what is now available, and the reasons of those who decline to, before specific recommendations are appropriate. It has been suggested to the Committee that the situation might eventually become so acute as to require periodic examination for relicensing in the professions.

Recommendations

At this time, the Committee recommends:

(1) That the proposed Council on Health Profession Education, in co-operation with the State Departments of Health and Education, undertake an exhaustive study of continuing education in the health professions other than medicine, using the current study of the medical profession as a guide.

(2) That at the earliest practicable time after completion of this study, it propose a plan for effective, co-ordinated continuing education in the health professions on a statewide basis.

Education of foreign physicians

Another phase of graduate education — one in which the State has an unusual responsibility — is the education of foreign physicians to meet American standards of practice. Its responsibility is heavy, because it depends upon them to help fill a substantial share of its needs. During the past decade, their numbers have furnished 20 per cent of the physicians licensed in the State.

A relatively small and select group of well-educated foreign physicians comes to New York annually, specifically for advanced graduate study in the sciences and clinical specialties. Generally, they are accepted in advance by the research institutes, medical schools, or hospitals in which they seek to study. The majority eventually return to their homes, many to assume positions of leadership in the medical profession. Some remain here, not infrequently to accept positions on the staffs of the institutions in which they have studied. This group represents no problem.

A much larger number of foreign graduates, many of whom are less well prepared in the sciences and clinical medicine, arrive each year with the hope of entering practice. Before they may do so, they must meet the same requirements as all candidates – graduation from a school approved by the Board of Regents, and education in the sciences and clinical medicine equivalent to that required for an M.D. degree in this country. The majority require substantial additional education before they can hope to qualify. But until recently, although they were wanted and badly needed as practicing physicians, many institutions would not accept them as graduate students, others did not offer courses suitable to their special requirements, and there was no co-ordinated plan to help them become what everyone wanted them to become.

Within the past year, however, the Education Department in consultation with the deans of all the medical schools in the State has been developing an expanded program that gives promise of solving the problem. Under this plan, graduates of certain foreign medical schools who are required to complete additional studies in this country before being admitted to the licensure examination will be able to offer, in lieu of formal courses, graduate education obtained in various hospitals accredited for intern and resident training. The candidates still must pass the nationally-required examination of the Educational Council for Foreign Medical Graduates because every candidate must complete at least a year's internship in an approved hospital.

The Committee commends this progressive step, and urges that the Education Department and the schools and hospitals of the State continue their collaborative efforts to provide the best possible training for this substantial portion of New York's future practitioners.

Recommendation

At the same time, it recommends that the proposed Council on Health Profession Education review the program periodically with a view to bringing any developing shortcomings to the attention of proper officials, and recommending methods for their prompt correction.

13
COUNCIL FOR HEALTH PROFESSION EDUCATION

THE COMMITTEE is recommending a challenging program of interdependent action to meet the needs of New York State for the health professions during the next 2 decades. This program is consistent with the recommendations made in 1960 by the Committee on Higher Education. The program has been defined broadly. Its implementation will require the creation of a continuing body to make recommendations for specific actions and to co-ordinate the development of the program.

For this purpose, the Committee recommends the establishment of a Council for Health Profession Education. The Committee regards the Council as essential to provide an expert advisory group in State government to review programs of health profession education and, on a continuing basis, to recommend the specific actions required to assure that the needs in this area of State concern are met. Among its functions, the Council should:

(1) Formulate recommendations as to the health education services for which the State should contract promptly with private medical schools, schools of nursing, and other educational programs in the health professions, including:

(a) Approval of specific proposals for increasing medical school capacity to permit such proposals to qualify under the State's program;

(b) Approval of specific proposals for increasing nursing and other health professional school enrollments to permit such proposals to qualify under the State's program, and

(c) Approval of proposed projects of educational research and patient-care research in all health professions to permit such projects to receive State support.

(2) Stimulate, or itself initiate, the special studies recommended by this Committee or other appropriate sources from time to time. Among such studies recommended by this Committee for priority attention are the problem of attracting more women to medicine; the regional use of hospitals for medical education (as proposed for the Upstate Medical Center of the State University), and the need for a school for public health and medical care administration.

(3) Act as co-ordinator and initiator of recommendations relating to health profession education for inclusion in the Regents' plan for higher education, which is to be developed during 1964 and for inclusion in the periodic general revisions of the plan by the Regents (Education Law, section 237). To this end the Council should conduct continuing studies to provide a critical evaluation of existing programs in the State for the technical and professional education of health personnel.

(4) Unify and co-ordinate the efforts of the various State departments concerned with the education of health personnel and make recommendations through the Regents to the Governor and the Legislature with respect to State action for education in the health field through programs of the Education Department, the State University, the Department of Health, the Department of Mental Hygiene, and the Department of Social Welfare, as well as through the programs of the City University and private institutions.

The Council should be composed of citizens who provide a broad range of professional, institutional and community points of view. It should include some persons affiliated with private educational institutions. It is essential that the appointees be men and women of distinction, high competence, and dedication, who are well informed in the field of education for the health professions.

It is proposed that the Council be authorized to appoint such technical advisory committees and consultants as it feels are necessary.

Let no one be misled into believing that this Council is unnecessary or represents a duplication in the responsibilities assigned to the State University or other institutions or agencies of government. This Council must consider matters broader in scope and beyond those that are the responsibility of any one agency. Only with such a Council can planning and development at State level rise above the interests of special groups. The task to be done and the amount of money involved are so large, and the stake of the young people seeking an education in the health professions and all people seeking health services so great, that New York can no longer afford to be without an appropriate agency of government to do the job proposed for the Council — a job that includes implementing many key recommendations of this report.

14
SUMMARY OF RECOMMENDATIONS

THE COMMITTEE does not presume that this report anticipates all of the problems of the next 2 decades, or even that circumstances may not alter some of those that it has anticipated. It recognizes and, indeed, insists that a subject of such magnitude as education for the health professions demands continuing study and review.

It believes, however, that the report accurately identifies the social, scientific, and demographic forces shaping the health needs of the future, and that in comprehensive health care it defines a goal that is consistent with these forces, eminently desirable, and ultimately attainable.

The steps which the Committee believes New York State now must take to meet the immediate needs and predictable demands of the next 2 decades are, in summary, as follows:

(1) Institute a State Council for Health Profession Education to conduct continuous studies and critical evaluation of programs for professional health education, and advise the Governor and the Legislature through the Board of Regents on the most advantageous allocation of State resources for the purpose of health profession education. (See Chapter 13, beginning on page 73.)

(2) Establish a new medical center, including schools of medicine, dentistry, and other health professions, on the State University campus at Stony Brook, L. I., by 1970, and plan — within the next 5 years — the establishment of a second such school and center to be functional by 1980. The second school and medical center should be considered for Westchester County under the conditions stated in Chapter 11, beginning on page 57.

(3) Encourage private institutions, through contractual arrangements and otherwise, to expand and improve their existing capacities and develop new ones for teaching medical, dental, nursing, and other health profession students. (See Chapter 10, beginning on page 53.)

(4) Proceed promptly with present plans to expand the capacity of existing medical and other health profession education programs within the State University. (See Chapter 11, beginning on page 57.)

(5) Revise and increase the State's schedule of scholarships and fellowships to the point that economic considerations are no longer a barrier to qualified youth seeking an education in the health professions. (See Chapter 9, beginning on page 46.)

(6) Concentrate the State's research program on problems of education, patient-care, and administration in the field of the health professions and their facilities, and emphasize graduate study in the professions to supply teachers, research specialists, and administrators. (See Chapters 2, 8, and 12, beginning on pages 8, 43, and 68, respectively.)

(7) Adopt the necessary corrective measures to enhance the administrative efficiency of the State University, and create a new position of Vice President for Program Planning and Policy (Health Affairs). (See Chapter 11, beginning on page 57.)

(8) Set an example toward the goal of comprehensive medical care by practicing it in State University medical schools and centers; so that it may be taught by practical demonstration, as well as theoretical discussion. (See Chapter 11, beginning on page 57.

(9) Call a conference of governors and educators of the New England and Middle Atlantic States at an early date to form a permanent organization for the continuing study and cooperative solution of regional problems in education for the health professions. (See Chapter 1, beginning on page 1.)

Appendices

Appendix A
The disparity of medical school evaluations

"What happens when a student gets into medical school . . . seems to depend upon chance, or more precisely upon the doctrine of the faculty he has selected. For example, the scheduled hours in biochemistry (in representative U. S. schools) extend from a low of 144 to a high of 338; pathology ranges from 108 hours in one school to 462 in another; one institution reports 1,135 scheduled hours in surgery, while another reports 195; psychiatry claims 560 hours in one and 40 in another. In fact, if some magical reshuffling left all departments with a heavy teaching program in a single school and those with a light program in another, the students in the former institution working a 40-hour week and a 40-week year would require four years and seven months to complete the course of study, whereas those happy fellows in the latter would finish one week after the second year began."

— Miller, An Inquiry into Medical Teaching, The Journal of Medical Education, March 6, 1962.

Appendix B

Some inadequacies of medical education in teaching hospitals and some questions for study

THE CHARACTERISTICS of comprehensive medical care do not exist, by and large, in the teaching hospitals of today, where physicians and other health personnel are being trained. For example:

(1) Clinical services usually are conducted in the isolated framework of the prevailing specialties with the result that team work among specialists is frequently lacking, and the personal or family physician must assume a secondary role in the care of the patient. Hospitals are not organized to facilitate or encourage interprofessional and interspecialty collaboration, in the way described in this chapter, as a routine or normal way of practice.

(2) Continuity and co-ordination of services are lost for both the patient and the student as the patient is referred from specialty clinic to specialty clinic, from the inpatient to the outpatient service, from the outpatient service to the home, and as students and staff rotate in their assignments, from specialty to specialty or service to service.

(3) While professional students (medical, nurse, and other) receive their basic training in the same institution, they are often, in fact, isolated from each other with no formal contact or understanding of the education, background, roles, or proper relationship which might prevail among them. There is seldom demonstrated real team work in planning for patient-care management in treatment by the practitioners of the many relevant professions.

(4) Strange as it may seem the professional student is often isolated from the social and historical forces responsible for the role he will assume as a practicing professional. He may learn little about the relationship of public and private community health agencies and of the practicing professions to these agencies. The tradition of individual private practice remains strong, but how its values can be

retained within the increasingly complex organizational setting for medical care, indeed, used to shape this setting, is missing from his learning experience.

All these factors give rise to a number of questions that might profitably be studied in planning for a comprehensive medical program:

(1) What duties can a physician, dentist, or professional nurse or social worker delegate to a professional assistant so that his time can be used for the maximum benefit of the patient? How can these clinical assistants be trained?

(2) How are continuity of care and co-ordination of services to be achieved in a highly specialized hospital floor or ward? Might patients be admitted at random to a nonspecialized floor or ward? If so, can they receive equally good specialty care when needed as in a segregated specialty area? Who is in charge of the patient and under these conditions, where many specialists may see the same patient? How are both specialists and generalists to be trained adequately on either the non-specialized or specialized patient-care area?

(3) How practical is it to offer comprehensive care to everyone? By what process can the patient with simple injuries or illnesses be sorted from the patient with apparently similar, but with additional deep-seated problems, without subjecting all patients to the expense, time, and effort of intensive study?

(4) To what extent and in what kind of setting (inpatient, outpatient, or home) can the various professional responsibilities be best illustrated and taught? How can the relative effects or benefits of the services of one set of professional skills be compared and evaluated with those of another?

(5) In what manner and by what means can patients' needs (emotional, social, psychological, and physical) best be studied? What is known of the motivation of patients who seek help from medicine? To whom do they first turn and why? What are their expectations? What are the barriers that prevent them from seeking or accepting medical care?

(6) The present pattern of institutional health and medical service is likewise in need of fresh examination. Through what steps will the hospital become more a health center? What are the economic forces which determine patient, practitioner, and institutional habits and attitudes? What is the relation between public and private or-

ganized community services and private practice of general physicians and medical specialists? How can the traditional habits and attitudes of an institution built around the treatment of acute conditions be adapted to the changing needs of chronic illness?

Appendix C
Curricular questions

In evaluating the new demands that will be made upon the curricula of medical and other health profession schools, what follows are some questions that might well be considered:

(1) At what stage in his education, and what factors determine a student's choice of professional career? Is there a tendency to make choices too early or too late, or within too narrow a range (a limited specialty as opposed to a more general program)?

(2) What influence can be anticipated from the newer curricula in high schools, and concurrently better instruction in college, on the student's subsequent progress in professional education when he must synthesize his scientific, technical and clinical knowledge and experience into a working philosophy and pattern of performance in professional practice?

(3) Is there loss of time in the present "lock-step" system of progress from high school to graduate study or can some phases be telescoped in such a way as to save time as well as to facilitate more effective learning?

(4) In professional school, are the most effective methods being used to help the student in the integration of basic sciences and clinical experience? Is the emphasis on the natural and physical balanced properly with the essential knowledge and experience to be derived from the social and behavioral sciences?

(5) With health and medical service moving more and more in the direction of preventive and rehabilitative services, the care of the chronically ill, and health supervision of the well, can the student's interest be focused on these nondramatic areas of service in contrast to the more dramatic, as illustrated by acute and exotic disease phenomena?

(6) Is it true, as some believe, that it requires more knowledge, skill, and judgment for family practice than specialty practice?

(7) To what extent and in what circumstances are generally accepted "favorable" attitudes of students toward professional behavior and conduct developed or distorted? Assuming favorable attitudes can be developed in an educational setting focused on comprehensive patient-care, will these attitudes survive the hurly-burly of everyday professional practice in a wide range of clinical settings (university or non-university) and, more particularly, under the forces of current social and economic systems of health service?

Appendix D

Total enrollment and graduates, New York State medical schools—1951/52 and 1961/62

	TOTAL ENROLLMENT		GRADUATES	
	1951/52	*1961/62*	*1951/52*	*1961/62*
Albany Medical College of Union University	209	245	47	61
Columbia University College of Physicians and Surgeons	458	475	105	117
Cornell University Medical College	329	335	80	84
Albert Einstein College of Medicine of Yeshiva University	...	364	...	88
New York Medical College	486	509	109	126
New York University School of Medicine	510	506	114	120
University of Rochester School of Medicine and Dentistry	279	277	70	72
State University of New York Downstate Medical Center College of Medicine	537	590	103	136
State University of New York Upstate Medical Center College of Medicine	254	314	44	71
State University of New York at Buffalo School of Medicine	270	319	64	71
Total	3,332	3,934	736	946

Appendix E

Enrollment of first year medical students in New York State—1961/62*

	Enrollment	Residents	Non-Residents
Albany Medical College of Union University.....	64	49	15
Columbia University College of Physicians and Surgeons	120	67	53
Cornell University Medical College	85	37	48
Albert Einstein College of Medicine of Yeshiva University	96	68	28
New York Medical College	128	88	40
New York University School of Medicine.....	128	104	24
University of Rochester School of Medicine and Dentistry	71	27	44
State University of New York Downstate Medical Center College of Medicine	177	156	21
State University of New York Upstate Medical Center College of Medicine	84	72	12
State University of New York at Buffalo School of Medicine	99	85	14
Total	1,052	753	299

* Total New York residents admitted to medical schools in the U. S., 1,159.

Appendix F

Physicians

Projections for future needs — the methods employed

There are various accepted methods used in projecting the future needs of physicians. They may be summarized as follows:

(1) An evaluation of the present adequacy of physicians based on indices of need and factors of demand, such as vacancies in established positions and the inability to attract practitioners. Also an evaluation of changes in the practice of medicine in demands for health services and other relevant social changes is important.

(2) Calculation of projected needs. Several methods have been developed for doing this: It should be noted that some of these are directed toward determining the number of students who should graduate from medical schools in the State, thus helping to determine the educational requirements of the State, rather than the actual number of physicians required.

(a) The present number of physicians per 100,000 population in the State projected for the anticipated future population. The use of this ratio implies that the physicians per 100,000 population now available represent a satisfactory standard for the future.

(b) The current ratio of graduates of medical schools within the State per million population in the United States as projected in the future; the use of this ratio recognizes the existing contribution of the State to the national pool of physicians and assumes that this ratio should be maintained.

(c) The graduates of medical schools per 1,000 licensed physicians within the State: The use of this ratio, when applied to the projected need for physicians in the future, presumably helps define the responsibility of the State for educating physicians and recognizes that a number of physicians trained elsewhere will practice in the State. This calcula-

tion is based upon the assumption that the percentage of physicians who are trained out of State will and probably should continue as at present.

(d) The percentage of all graduates of medical schools in the United States who graduate from schools within the State of New York: Assuming that the current percentage is to be maintained, the projections are based on the number of graduates required nationally for a given year.

(e) The number of State residents entering medical school within the State per 1,000 students graduating from colleges and universities within the State: The use of this ratio takes into account the potential demand for educational opportunities by the youth of the State.

In some cases, complicated formulae have been developed utilizing more than one of the above methods and assigning weights to each method used.

The results of these methods give at best only gross figures which are not refined for variations in the geographic distribution of personnel within the State and do not recognize shortages or surpluses of various specialty categories within the profession. They can be no more valid than the assumptions upon which they are based.

Thus, it is possible to make at best only approximate projections of the need for additional personnel in the 2 decades ahead. Advances in medical science, changes in the methods of providing services including the greater use of ancillary personnel to extend the ability of professional workers to serve more people are among the factors which may tend to reduce the number of physicians needed per 100,000 population.

On the other hand, the population is growing and changing and this in itself indicates the need for more personnel. As life is extended, the need for medical services increases; it does not decrease. Furthermore, the demand for health service is increasing and the ability to finance these services is improving as our economy expands and as various kinds of prepayment plans for financing services develop. Also, the increasing number of hospitals, specialized clinics and insurance plans, medical schools and other schools for health personnel, research laboratories and overseas responsibilities, all call for more personnel and offer increasing opportunities for professional workers, apart from those in private practices.

. The weight of evidence suggests that in proportion to population, there is likely to be a need for more rather than for less qualified health personnel than we have at the present time. Therefore, it is likely that any calculation of need, based on a formula related to the present picture, will underestimate rather than overestimate the need.

Finally, the number of New Yorkers who are enrolled in colleges, both in and out of the State will markedly increase from 211,000 full-time students in 1960 to an estimated 540,000 in 1980. From this group, a certain number will be seeking opportunities for education in medicine, and New York State should make adequate provision for those who are qualified.

Calculations to determine the need for additional first-year medical school places by 1970 and 1980 were based on the formulas described above. There were variations in the results obtained, depending on which formula was used – a range of 250–330 by 1970 and 385–440 by 1980.

The Committee therefore weighted the inconclusive statistical evidence with two critical considerations: The unprecedented demands that will be placed upon the supply of physicians; and the uncertainties in the future supply of foreign physicians, plans for new medical schools in the NEMA States and New York City, and the degree of expansion which the private medical schools of New York will be willing and able to achieve. It thus arrived at figures of an additional 325 first-year places by 1970 and an additional 425 by 1980 as *minimum* requirements.

Appendix G

New dentists, New York State 1957-1960

Year	*Total number of new dentists in New York*	*Number of new dentists from New York dental schools*	*Number of new dentists from out-of-State dental schools*	*Per cent of new dentists from out-of-State dental schools*
1957	373	201	172	46%
1958	438	233	205	47
1959	402	236	166	41
1960	430	241	189	44
1961	397	247	150	38
1962	389	223	166	43

Appendix H

Total enrollment, first year enrollments, graduates; dental schools, New York State 1952, 1962

	Total Enrollment		*First year enrollment*		*Graduates*	
	1952	*1962*	*1952*	*1962*	*1952*	*1962*
Columbia University	150	135	41	41	25	38
New York University.....	609	660	150	167	144	152
State University of New York at Buffalo....	238	236	66	68	55	46
TOTAL	997	1031	257	276	224	236

Appendix I
Nurses, New York State

TABLE I

Nursing personnel, New York State
1950 and 1960

	1950		1960		
		Ratio per 100M pop.		*Ratio per 100M pop.*	*Per cent increase*
Active professional nurses	50,000	337	70,000	416	40%
Active practical nurses	16,000	108	25,000	148	50%
Auxiliary personnel		...	55,000	327	....

TABLE II

Nursing personnel, New York State
1960 and Goals for 1970

	1960	1970	*Per cent increase*
Active professional nurses.....	70,000	94,000	34%
Active practical nurses.....	25,000	37,600	50%
Nurses' aides and auxiliary personnel	55,000	56,400	3%

TABLE III*

Number of nursing schools or programs
Number of admissions
Number of graduates
New York State 1961-62

	Number of schools or programs	*Number of admissions 7-1-61 to 6-30-62*	*Total enrollment 6-30-61*	*Number of graduates 7-1-61 to 6-30-62*
Professional				
(a) Baccalaureate programs	19	970	2,488	605
(b) Associate degree programs	8	463	496	175
(c) Diploma programs	94	4,232	9,289	2,702
TOTAL	121	5,665	12,273	3,482
Practical nurse programs	48	2,303	2,163	1,441

* Annual Report of Secretary, Board of Examiners of Nurses, State Education Department, July 1962.

Appendix J
Social work

Number of full-time graduate students enrolled in New York State schools of social work 1952, 1957, 1962

School	*1952*	*1957*	*1962*
Adelphi	59	66	93
Buffalo	61	35	80
Fordham	129	163	236
Hunter	...	...	65
Columbia	408	313	390
New York University	...	103	158
Syracuse	...	...	73
Yeshiva	...	...	43
TOTAL	657	680	1138

Appendix K
Social work

Number of students receiving degrees during the academic year 1961–62 schools of social work — New York State

School	*Graduates*
Adelphi	48
Buffalo	23
Fordham	85
Hunter	29
Columbia	163
New York University	58
Syracuse	27
Yeshiva	12
TOTAL	445

Appendix L
Current award and loan programs—Federal and voluntary

(1) Federal grant programs

(a) Mental Health Training stipends in social work

Since 1948, The National Institute of Mental Health has been granting stipends for the training of social workers in mental health. These stipends have been available basically for students with career goals in psychiatric social work. Grants to students cover full cost of tuition and fees, plus $1,800 for first-year students, and $2,000 for second-year students. In New York State, in 1962, a total of 125 social work students received this assistance.

(b) Vocational Rehabilitation Administration training grant

This Federal program is designed to provide training grants for students in the health professions necessary for the development and growth of rehabilitation programs. At present cost of tuition is not covered. Stipends to students range from $800 to $2,000 a year. In New York State in 1962, 19 occupational therapy students, 35 physical therapy students, 36 social work students, and 31 students of rehabilitation nursing received traineeship grants through this program.

(2) Loan programs

(a) The National Defense student loan program

This is a program sponsored by the Federal government which makes Federal loans available to institutions of higher education for the purpose of providing loan funds to student borrowers. Up until July 1962, 329 medical students in New York State borrowed $234,000, 128 dental

students borrowed $92,000, and 60 nursing students, $25,000.

(b) *The American Medical Association Loan Guarantee Program*

The American Medical Association has recently initiated a loan guarantee program which is available to medical students and interns and residents. Up until December 1, 1962, 32 students studying in medical schools in the State borrowed approximately $41,000 under this program.

(c) *American Dental Association Loan Guarantee Program*

The American Dental Association has recently initiated a loan guarantee program for dental students similar to the American Medical Association Plan. During 1962, a small number of students made loans under this program.

(3) Scholarship and loan funds of individual schools

(a) These are derived from private sources such as alumni, foundations, and other channels. There is great variation in the amount of money in each.

Appendix M
State University of New York

Graduate Centers

State University of New York at Albany
State University of New York at Buffalo
State University of New York at Stony Brook

Medical Centers

Upstate Medical Center at Syracuse
Downstate Medical Center at Brooklyn

Graduate School

Graduate School of Public Affairs at Albany

Colleges

College at Brockport
College at Buffalo
College at Cortland
College at Fredonia
College at Geneseo
College at New Paltz
College at Oneonta
College at Oswego
College at Plattsburgh
College at Potsdam
Harpur College
College of Forestry at Syracuse University
Maritime College at Fort Schuyler (New York)
College of Ceramics at Alfred University
College of Agriculture at Cornell University
College of Home Economics at Cornell University
School of Industrial & Labor Relations at Cornell University
Veterinary College at Cornell University

Two-year colleges

Agricultural and Technical Institute at Alfred
Agricultural and Technical Institute at Canton
Agricultural and Technical Institute at Cobleskill
Agricultural and Technical Institute at Delhi
Agricultural and Technical Institute at Farmingdale
Agricultural and Technical Institute at Morrisville

Community colleges

(Locally-sponsored 2-year colleges under the program of State University)

Adirondack Community College at Hudson Falls
Auburn Community College at Auburn
Bronx Community College at New York City
Broome Technical Community College at Binghamton
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Erie County Technical Institute at Buffalo
Fashion Institute of Technology at New York City
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson County Community College
Mohawk Valley Technical Institute at Utica
Monroe Community College at Rochester
Nassau Community College at Mineola
New York City Community College of Applied Art & Sciences at Brooklyn (New York)
Onondaga Community College at Syracuse
Orange County Community College at Middletown
Queensborough Community College at New York City
Rockland Community College at Suffern
Staten Island Community College at New York City
Suffolk County Community College at Selden
Ulster County Community College
Westchester Community College at Valhalla

Appendix N

State University medical centers—enrollment (all students)

	*Undergraduate & graduate — part-time & full-time**		
	Downstate	*Upstate*	*Buffalo*[xx]
Medicine	600	334	319
Dentistry	...	...	230
Grad. med. science	44	40	30 (estimated)
Pharmacy	...	...	98
Psychoanalytic	18	...	...
Nursing	...	[x]60	
		120	234
Medical technology	...	[x]80	116
Occupational therapy	[x]50	...	47
Physical therapy	[x]50	[x]	91

* — Excludes approximately 1,500 interns & residents

[x] — New programs (existent and planned)

[xx] — All programs to be expanded to approximately twice present size as rapidly as facilities are built and faculties enlarged.

Appendix O

State University—responsibilities of Vice President for Health Affairs

The Vice President for Health Affairs should be the presidential advisor principally responsible for activities such as:

(1) Planning for new medical centers recommended in this report, including programs for medicine, nursing, social work, dentistry, and allied fields.

(2) Establishing criteria and standards for all State University nursing programs, and providing leadership for the development of more associate degree programs in community colleges.

(3) Fostering the integration of programs which involve two or more State University institutions, as in the proposed baccalaureate nursing program at the Upstate Medical Center, and the proposed programs in physical therapy and occupational therapy.

(4) Developing policies for the collaboration of State University programs in education for the health professions with private institutions, when this is feasible and desirable.

(5) Developing policies for postdoctoral research training in all the sciences, and for the administration of the whole medical research program in all the units of the State University. This will become an increasingly important task as larger amounts of Federal and private money become available for research.

(6) Assuming leadership in planning policies and programs for new areas of University education, such as public health and medical care administration and research in educational and patient-care methods as they apply in the State University.

(7) Assisting in the development of uniform policies for the operation of the State University medical centers to the extent that uniformity is possible or desirable, but allowing for variations in the plans for each center in keeping with unique local problems and circumstances.

(8) Conducting continuous evaluation of programs.

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