The State of the Nation's public health services

Abridged reports from the 55th Conference of the Surgeon General of the Public Health Service and the Chief of the Children's Bureau with the Association of State and Territorial Health Officers, the State Mental Health Authorities, and the State Hospital and Medical Facilities Survey and Construction Authorities, November 2–10, 1956, Washington, D. C.

New Highways To Health

By Leroy E. Burney, M.D.
Surgeon General of the Public Health Service

Would that we health experts had the same precise knowledge in our field as the Nation's highway planners. For without it, we cannot plan new highways to health which would extend through all the States at the same rate of progress and standards of quality, and which would, by the very boldness and imaginativeness of design, capture public support.

I am not suggesting that we don't know what's going on in our own shops. Few public services have made as conscientious and unceasing an effort as public health agencies to collect and analyze reliable data pertinent to their statutory responsibilities.

But most of the facts that we have at our fingertips relate to the organizational structures, types of services, and ratios of professional personnel and facilities for a population of some 130 million in the social, economic, and physical environment of 20 years ago. Let's take a look ahead.

We need facts pertinent to a population of some 168 million today, 180 million in 1965, and 200 million by 1980. We need to see our organizations, services, personnel, and facilities

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for this larger and increasing population in entirely new settings: A rising standard of living, new patterns of urban and suburban life, larger families, more older people. Increasing automation, with consequent shift in the types of occupation and conditions of work. Emergence of entirely new industries. More cars, more trucks, more planes. Atomic power, much sooner than imagined. Increasing costs of hospital services, coupled with increasingly effective diagnostic and therapeutic techniques in the hands of the practicing physician. Increasing numbers of individuals and families seeking, but not finding, new types of health services in their communities.

We have some general concept of the gaps in our health programs. But a gap is not the sole measure of deficiency. We need to identify the causes of obsolescence and seek earnestly to remove them. It is not good business or good public health practice to hold on to obsolete procedures and activities.

We should address ourselves to this kind of appraisal, agonizing though it may be to some professional groups in public health practice. Our shortages of professional personnel are indeed vast. But, in our preoccupation with the estimated needs and no relief in sight, we have almost convinced ourselves that only more of the same will correct the deficiencies of our programs. On the contrary, we have at least two good alternatives: more effective use of professional public health personnel and the employment of other specialists and subprofessional groups.

Over the past 24 years, the American Public Health Association has sought earnestly to raise the standard of educational qualifications for the numerous specialty groups that make up the public health profession. In practice, however, too many of those who meet the qualifications are kept on outmoded activities which make no demands on their hard-won skills, have no use for their creativity, their burgeoning ideas. Too many are burdened with routine administrative tasks for which they have not been, nor should have been, trained.

Liberating Creative Powers

While pressing forward with every financial and educational resource at our disposal to increase the supply of professional public health personnel, let us henceforth put a high priority on liberating the creative powers of our present and future staffs. Their ideas and imagination, tempered in the fire of meaningful experience, are what we need to design and build the new highways to health.

How then to remove the burden from overworked people who can't think, simply because there is no time to think? I have no ready answers to the question; no one individual can produce the best answers.

For what it's worth, however, try this on for size. If you had one or more specialists in public administration to share your burden of organizational and administrative planning and execution, or even enough administrative assistants to deal with the details of fiscal and budget matters, personnel administration, and so on, how much more time would you have to meditate: To meditate on the incalculable present and future problems in your area? To work and plan with your counterparts in State programs such as welfare, education, rehabilitation, housing, rural and industrial development? To consider with your fellow State health officers in nearby jurisdictions the urgent regional health problems of common concern?

We have made a little progress in accepting the idea of using less highly qualified nursing personnel as a means of conserving the skills of our scant supply of public health nurses. Clinic nurses and practical nurses are being employed in local health departments with increasing frequency. But, nationwide, we haven't employed nearly enough, or nearly enough clerks and clinic aides to allow public health nurses to serve the community as widely as they could if they did not also have to be record clerks, receptionists, and housekeepers.

Is there a possibility that all local health departments could benefit by the help of a volunteer group, something akin to the Gray Ladies of the American National Red Cross?

Perhaps some of the other health department programs, besides public health nursing, could use the services of volunteers. We are urging community surveys to get the facts upon which to base the needed modernizing of our programs. There are many jobs in community

surveys for specially trained and disciplined volunteers. They would never lack work to do in a local health department, I warrant.

In the same connection, can we use our personnel, facilities, and funds at the local level more efficiently by doing some of the essential jobs regionally and with more automation? Modern means of communication and our great new system of highways are leveling the roadblocks of time and distance. We should use these facilities to help break some of public health's traffic jams. I am thinking especially of local laboratory services and statistical programs. Perhaps we could have more specialists in local health services if we were willing to regionalize these activities.

Meantime, the Health Amendments Act of 1956, which became law (P. L. 911, 84th Cong.) on August 2, 1956, has made a good start toward increasing the supply of professional public health personnel, nurse educators, nursing supervisors and administrators, and practical nurses. By October 31, 32 schools of nursing and graduate schools of public health had applied for grants under title 1 of the act. The number of traineeships requested far exceeded our expectations, and even farther the resources, $1 million, available for this year. For example, we have been able to approve only 130 of 276 traineeships in public health nursing requested by the nursing schools, and only 47 of the 84 traineeships requested by the schools of public health. In addition, the Service has awarded 89 individual traineeships.

In the program for the advanced training of professional nurses under title 2, we have proceeded along the same lines. The 1957 appropriation for this program is $2 million; grants are made to schools only. By October 31, grants had been awarded to all 56 eligible schools, covering traineeships for 553 students. More than 400 traineeships requested could not be awarded for lack of funds.

The training program for practical nurses is administered by the Office of Education of the Department of Health, Education, and Welfare. Two million dollars has been appropriated for traineeships, which will be awarded in the form of grants to the States. For every $1 made available by a State in its expanded practical nurse training program, the Federal Government will grant $2 to provide traineeships, up to a total Federal expenditure of $2 million this year. A commissioned nurse officer of the Public Health Service has been detailed to the Office of Education as a consultant in the practical nurse training program. A citizens advisory committee is being assembled to help in the administration of the program, and nursing consultants are being employed to aid in expanding enrollments in practical nursing schools.

These new Federal programs to help augment the supply of health personnel by no means reduce, but possibly increase, the needs for inservice training at every level—national, State, and local. The simplest types of inservice training are those concerned with the use of new techniques and new equipment. The application of the cytologic test for preinvasive cervical cancer is a case in point. So also is the use of air pollution detectors and a host of other new techniques which could be widely applied if more subprofessional personnel were trained to do those parts of the procedure within their competence.

At professional levels, broad orientation in certain new problem areas must be provided on the job or in regional short courses for staff members who completed their academic training before the information now available had been developed. I have in mind such fields as radiological health, up-to-date civil defense and disaster relief, and regional development.

Understanding of Human Behavior

In all our tooling up to design new highways to health, we should recognize our public health profession's need for some orientation, some training in the behavioral sciences. The day will come soon when many State health departments will have a specialist or two from the fields of psychology and cultural anthropology on their permanent staffs or as frequently used consultants. The few that now have such specialists and we in the Federal agencies will learn to use their services more effectively. For it should be clear to all of us by now that the health programs of the future will lead nowhere if they are not based on a sounder understanding of human behavior than is af-

forded most of us by our good will toward man and our intuition.

The community is our field. Here we must demonstrate the value, and the very reason for being, of public health and preventive medicine, or we fail. And the community is not so many square miles of structures, so many sewer lines and water pipes, so many birth and death certificates and case reports. The community is people of all ages, of all sorts and conditions, and they all behave not only as individuals but as groups, bound in many and widening circles by common beliefs, attitudes, and needs.

We often draw an analogy between the role of the personal physician and the local health officer. We say that as the former is responsible for diagnosing and treating the individual patient, using the services of specialists when they are needed, so the latter bears a like responsibility to the community. If this be so, I would say the local health officer needs a consultant in behavioral science perhaps even before he begins to diagnose, and certainly before he institutes any form of therapy requiring the acceptance, consent, and action of any sizable part of the community. If some of you think I go too far along this line, there is a growing experience and literature to bolster my contentions. Take a look, for instance, at "Health, Culture, and Community," edited by Benjamin David Paul. You will find these studies, some drawn from our own American society, illuminating and stimulating.

Medical and Related Research

That mention of studies reminds me that I have said nothing so far about medical and related research as a prerequisite to modernizing our highways to health. Perhaps this is because so much has already been said that some of us begin to think that all the basic and applied answers to our major health problems must be found before effective changes in services and programs can be made. We want, and must have, research and application going forward shoulder to shoulder.

Let me say that the Public Health Service will do everything in its power to promote and assist the development of research in, by, and with State and local health departments.

By and large, the findings of the past decade have found swifter, more widespread application in medical practice and hospital care than in public health programs. There is a special bridge that needs to be built to give us the needed shortcut. And that bridge is the kind of operational research that health departments are eminently suited to undertake. Actually, many of the questions I have been raising can be answered only by careful studies.

Also, our health departments must take a much more important part in epidemiological research than they have been taking. Some of you may recall Dr. Joseph Mountin's statement: "The health department is the only place a young physician can study healthy people along with the sick." The same could be said of the medical research scientist. The study of human biology and pathology in its natural setting, the human community, is indispensable. The principles of epidemiology have been developed and applied to parts of that essential study by public health scientists as their profession's unique contribution. Our major contemporary health problems present a challenge to epidemiology, no less than to experimental and clinical research. Our health departments should join with their scientific colleagues in taking up that challenge.

Besides the unquestioned additions such studies will make to public health knowledge and methodology, we shall realize untold benefits in removing one of the major causes of obsolescence in our health programs. And that is the isolation of many State and local health staffs from the stimulus of scientific inquiry and fruitful contacts with academic and research institutions. I see cooperative research, involving health departments with universities, or schools of public health, or medical schools, or the Public Health Service, as an aid to recruitment such as we have not had in years.

The few issues I have discussed by no means cover the gamut of problems we face together nor the victories we have shared. They have seemed to me especially important at this point in time, when the future strength and competence of our Federal, State, and local health departments seem especially vital to our Nation.

Someone has said that "ideas are the life of a people." The effective planning and develop-

ment of our health services is no less dependent on ideas. And at the present time of transition, no idea is too simple to be unworthy of a trial. We cannot build health highways by talking, but only by putting ideas to work. This means that top level health officials must be receptive to ideas, even to ideas that suggest the abandonment of obsolete procedures and activities, the development of new programs and methods of organization and staffing.

NOTE: *The full text of Dr. Burney's address included a section on aging that appeared in the December 1956 issue of Public Health Reports, p. 1168.*

Training Mental Health Personnel

By Robert H. Felix, M.D.
Director, National Institute of Mental Health, Public Health Service

The serious need for trained mental health manpower is one matter that necessarily occupies much of our time and energies. This area of concern was uppermost as long ago as 1946, when State and Territorial health officers and State mental health authorities met in joint session for the first time in the history of the Public Health Service. We have struggled with the problem in the ensuing 11 years, and today it is still with us in greater proportions than ever before, in spite of the thousands of people who have been trained, because mental health activities on all levels are increasing.

The requirements for more trained people are evident in all parts of the Nation. Some specific information on the situation in one section of the country with regard to one class of personnel will help pinpoint the problem. I am referring to the data on the resources and needs in the 16 southern States, provided by the survey conducted in 1954 by the Southern Regional Education Board. The survey findings resulted in the estimate that the south needs 4,260 psychiatrists for all purposes, or more than 5 times the number it has now. The shortages of other workers are equally acute: 7 times as many clinical psychologists, 5 times as many psychiatric social workers, and upward of 5 times more psychiatric nurses than are available.

A closer look at the survey findings reveals that only 272 psychiatrists were expected to be trained in the entire south during the 3 years following the study. In other words, the south in 1957 will still be faced with a shortage of about 4,000 psychiatrists. At that rate of training, it would take many years to obtain the needed psychiatrists, and in the meantime the number required undoubtedly would increase considerably.

The comprehensive survey of the Southern Regional Education Board took into account the personnel required for public programs at all levels, as well as those for private practice and for training-center faculties. We have looked around us, and we know that, while the training centers and the urban areas have their problems with regard to shortages of personnel, they are relatively in a much better position than are other programs. By far the greatest number of staff vacancies exists in State programs, in the community mental health clinics, and in the mental hospitals. The teaching center, for example, may need only an additional man or two to round out its program. Many operating programs, on the other hand, may need one or more professional mental health personnel to initiate activities or to replace its part-time activities with full-time services.

Far too many mental hospitals are struggling along with grossly inadequate staffs. We estimate that the hospitals have only about one-half the number of psychiatrists they should have to provide adequate treatment for the patients under their care. The deficit of nurses, psychologists, and social workers is even greater.

Grants Program of Institute

The support and encouragement of training has been a vital phase of the National Institute of Mental Health's activities. Our approach has necessarily stressed support for the existing centers of learning. At the same time we have tried to stimulate the development of additional

training centers where it appeared that need existed. The universities and the teaching centers historically have served as bases for training people. At the outset, we found these centers, as a whole, needed improvement, both financially and programwise. Accordingly, the institute gave high priority to grants for this purpose.

The grants program was initiated in 1947. In the years since, the institute has made grants to medical schools to improve or expand psychiatric instruction to the medical student. During fiscal 1956 alone, grants were awarded to 72 of the Nation's 84 medical schools. This aid means that 26,000 of the total 28,000 medical school students will receive more and better psychiatric instruction, to enable them to deal more effectively with the emotional problems of their patients.

Grants in another area have been directly responsible for the inauguration of mental health curriculums in 6 of the 10 schools of public health. Moreover, teaching centers for psychologists, psychiatric social workers, and psychiatric nurses have come in for their share of grants from the institute. Another technique sponsored by the institute to encourage well-rounded training is the series of regional conferences for professors of psychiatry in medical schools in the west and the south.

About 4,000 individuals have received stipend support for training during the 10 years the grants program has been operating. During fiscal 1957, 440 training grants, including 1,800 stipends, will have been made.

This, admittedly in brief, is the picture of support for mental health training at the national level. All of us, I think, can be justly proud of the progress and the accomplishments to date. At the same time, all of us know that the numbers already trained do not nearly approach the total need. The institute has never felt that it could or should singlehandedly take care of the vast training needs for the entire Nation.

The responsibility is a joint concern. It seems that the States recognized and acted on their training obligations a few years ago to a greater extent than they do today. In 1948, in the early days of the grants to State programs for mental health, the record shows that the States used no less than 14 percent of available funds for preservice training of personnel. But in 1955, only 2 percent of State funds were spent for this purpose. In actual dollars, State expenditures dropped from $840,000 in 1948 to $360,000 in 1955.

One conclusion to be drawn from these figures is that the States' outlays for training in recent years are negligible amounts when compared with 1948 records. Less and less money is being spent by the States for training people in spite of the fact that the need to give services has skyrocketed. The demands for services everywhere grow greater, mental health centers are planned and funds for personnel are available, but the mental health workers are not to be found at any price.

Need for Trained Workers

I appreciate the constant and continuing pressures you face. But we must keep training in proper perspective. When many of the State programs were getting started, people were trained because they were a sheer necessity. Without the trained workers, programs could not develop beyond a certain point. There are limits to how far workers can be stretched to cope with community mental health needs. For the improved programs the public is demanding, more and not fewer workers must be trained.

We can begin to come to grips with the need for trained workers by looking at the training centers and the areas which more nearly approach their manpower needs. What is it about certain training centers that attracts residents and well-prepared faculty members? Location of the center is high on the list of desirable characteristics. The individual should have access to adequate and ample reference material. He has opportunities for professional growth through participation in research, for work and contact with influential teachers in many fields of learning. The element of prestige in such an environment cannot be overlooked. The trainee's or the faculty member's working conditions are much more satisfactory. He has smaller patient loads, with all that this implies for adequate supervision. Time off for clinical work and for supervision in special

areas can usually be arranged. If he wishes, the individual may branch out into fields other than his own, and the total environment provides stimulating intellectual contacts.

Obviously, then, the answer to some of our manpower problems lies in bridging the gap between the training center and the State programs. Is it possible to initiate developments designed to create some of the same advantages the training centers have? You can do all in your power to influence the location of proposed new hospitals near universities. You can work to set up research units within your hospitals. Faculty arrangements and exchanges between universities and hospitals and mental health centers can be worked out. From time to time, opportunity can be given staff of these installations to take additional work at the university or under faculty supervision. Seminars can be arranged through the training centers and authorities from outside the State can be brought in periodically.

There is considerable advantage, both to the individual and to the program, for continuation of training on the job or on an intermittent basis after the period of formal preparation is completed. Professionals in the mental health field are usually trained in psychiatry, psychology, public health, social work, or nursing. Usually, these people come to the job as representatives and protagonists of their particular discipline, and with all of the biases and narrowness such training usually produces. What is needed in mental health work is not a collection of specialists brought together to practice their professions but rather a staff who bring a variety of skills which, taken together in proper proportions, will be much more likely to result in the best solutions. Unfortunately, this attitude is rarely developed in a training center, but the need for this point of view usually becomes apparent rather quickly once the worker begins to apply his training on the job. With the realization of this need, there is motivation for a broader and more useful type of training. When opportunity is provided to meet this need, one can look forward to a much better integrated and useful staff.

In addition to the advantages, inservice training has a byproduct which may be more valuable for the future than the original purpose of providing better preparation for people already employed. The training centers are brought to realize wherein they are falling short in preparing their students, and with continued pressure applied by the students and the agencies which employ them, it is much more likely that the centers will provide the needed training either in the regular curriculum or in special courses.

It seems that these are activities in which States and communities can properly and profitably invest money and energy.

Community Health Work

How are we going to get people to take training, and also, how do we obtain the necessary qualified people to do the training? The motivations, of course, are not necessarily the same in all disciplines within the mental health field. Also involved are the clinics and hospitals and whether they are motivated to provide adequate and acceptable training, or, if unable to do this, to provide training in certain areas which can better be obtained there than elsewhere. We must recognize that the hospital which is far removed from the training center may not be able to obtain many new residents in psychiatry, for instance; but, while the institution may not be able to provide all a student's necessary training, it may well be ideal for providing experience and supervision in special segments.

Where an institution carries on an active program of research in special areas, it can often develop a rather wide reputation, and if this program is really excellent, there will be demand for opportunities to spend some time there. Some such special areas are aging, mental retardation, alcoholism, rehabilitation programs, programs with the schools, and closely integrated hospital and community programs.

This is what is actually happening in some places where State and community hospitals and extramural programs are integrated with training centers. There are numerous possibilities to obtain training in a variety of settings. Students, for example, may wish to obtain some supervised experience in the penal system or in another type of institution such as the juvenile court although they might balk at spending the entire training period there.

The system of associated psychiatric faculties is employed to facilitate this integration of learning centers, hospitals, clinics, and other agencies for training. In many cases, the institution's staff helps out with didactic instruction in the training center's program.

The varied background which this kind of training provides is the kind of orientation State and community mental health personnel need. I wish I could report that all of our young people are receiving this kind of training, but we know all too well that they are not. Indeed, I am amazed and surprised at the vast differences in training one observes in one institution or another. Trainees in psychiatry, for instance, may be quite effective in working with psychotic patients but know little or nothing about working with schools and community agencies.

I am not, of course, opposed to highly specialized psychiatrists or other workers. We need this kind of personnel also. I am saying, however, that training is not equipping many people to do the community mental health work they have chosen. Their formal training does not give them the experience for the problems they inevitably meet. The omissions in instruction are understandable when we consider that some teachers are themselves handicapped in the same way. They, of course, pass their blind spots on to their students.

Both the trainee and the teacher, then, need a knowledge of the community's organizations and its institutions. I cannot help wondering how many psychiatrists have started careers in clinics, for example, only to become uncomfortable at finding themselves unprepared, and have turned to private practice instead. Integration of institution staffs and the training center faculties is one remedy for this situation, and each group will derive help from the other.

Regional Network

The States can derive tremendous benefits from such cooperation. I can think of one State hospital which until recently was a fairly typical mental institution, short of staff, training programs, and research projects. Now it has more applications for residencies than it has vacancies. The reason for this brightened picture is participation in a training network that embraces the State university, a good clinic, a Veterans Administration hospital, and other agencies.

Many of the States are equipped to develop fertile fields for training within their boundaries. All that is needed is a central plan and the establishment of the necessary cooperative relationships. One State has two medical schools, and one of these has a very good psychiatric unit. Each school is relatively near a mental hospital. Both hospitals, in turn, are good ones and one of them is new. Also, a good child psychiatric center offering residential treatment is located in the same city with one of the medical schools. This particular State could undoubtedly arrange for cooperation between its training centers and its institutions in the very near future.

I cannot tell you that the job will be a short or easy one, for the whole training problem is long range. Now is the time, however, for action on realistic training programs designed to meet our needs. I would strongly urge the establishment of a working group of this association, to consider specific plans for the development of cooperation between training centers and your operating institutions and agencies. The National Institute of Mental Health stands ready to provide all possible aid.

I envision the goal of your training activities as being the development of a central recruitment and employment source within the State. Communications between States and training centers by way of regional State groupings, such as the Southern Regional Education Board and the Western Interstate Commission for Higher Education, could speed the realization of such sources. Anyone within the State could turn to the central source for personnel needs, and the State would be prepared to refer to sources for trained workers.

We are not the only ones who are wrestling with the need for more mental health personnel. State legislators throughout the Nation are also searching for solutions. I have talked with many of them, and I know that they are looking to us for leadership.

The American Psychiatric Association, as well, is deeply concerned with our needs. At the fall meeting of APA's council, I pointed out

the obligation of organized psychiatry and teachers to provide the necessary stimulation and experience for public mental health workers.

Our States and the psychiatric faculties are dynamic entities, ever on the move to accomplish their objectives. Foremost among their more immediate goals should be the development of cooperative relationships for more realistic and appropriate training. The goal of fertile training soil for our mental health personnel-to-be is surely worthy of our best efforts.

Perspectives In Child Health

By Martha M. Eliot, M.D., Sc.D.
Former Chief of the Children's Bureau

I am glad to be with you once more and to report to you on some activities of the Children's Bureau during the last year.

No one here has to be told what a long way we have yet to go before we attain that level of physical, mental, and social maturity that enables people to solve international problems without resort to armed conflict. Many of you would agree with me that we have made some progress, even though small, in recent years toward this goal. But may I say to you, who are the leaders in the field of health, that the contribution to that progress which you can make in the years ahead is tremendous.

If you ask me what you should do, my answer would be, look sharply and long at what each of you and your colleagues are doing to start a whole new generation of children on the road to healthy development, not just in body but in total personality. This calls for a generation of parents who understand more fully than most do now the meaning of their relationships with each other and with their children. It means a generation of parents who accept as fact what Dr. Brock Chisholm some years ago called "the most important business in the world, the one that outweighs all other values in the world," the business of rearing children.

Basically, it means that all professional persons coming in contact with parents will themselves require an understanding of what is meant by healthy personality development in a child and how it is brought about. Often, an early contact, even before the birth of a baby, may be made by a child welfare worker, a teacher, a minister, a lawyer, a nutritionist, or by other health and welfare workers. But the role of child health workers—physicians, nurses, and many others—is of primary importance, for it is usually they who, year after year, will have the opportunity to make the earliest contact with young parents who are new to this business of child rearing.

Support for Professional Workers

It is an important matter, then, that we should be constantly seeking ways to help professional workers understand the facts and the meaning of child growth and development and how each child is affected by the family environment into which he is born, by the biases and discriminations of the community in which he lives, by his physical and mental handicaps, and by many other factors.

If professional workers are to proceed in their activities with confidence that what they are doing and how they are doing it is based on up-to-date knowledge and experience, several moves are needed.

First, we must put the research information and clinical findings we have to better use. One of the most productive things we could do to promote healthy personality development and to prevent mental ill health would be to provide, to a variety of people, a continuous flow of information based on an evaluation and interpretation of research by workers well grounded in mental health concepts.

This kind of knowledge would be of value to professional workers, including those in operating programs, and the faculties of schools of medicine, public health, nursing, and social work. Such professional workers may often find it impossible to keep up with the great stream of knowledge flowing from research relating to children.

Parents, citizens groups, and others who

carry responsibility for children would have in a usable form the viewpoints, findings, and implications of studies of child rearing, child care, adult-child relationships, and of family and community provisions for children which appear to have a bearing on healthy personality growth and development.

Second, not only must we make more effective use of the research and clinical information we have, but we must broaden tremendously our knowledge about mental health, its cultural, personal, and environmental foundations, and its sources.

We need to know much more about the sources of emotional strength that help children withstand the inevitable destructive influences that make for mental and emotional disturbance. Greater understanding of these mainsprings of mental health is a crucial part of the equipment of professional workers serving parents and children, and only research can supply it.

At the same time that we advance along the path toward the prevention and cure of mental illness, we need to test the knowledge we have and the knowledge we gain by evaluative research that will tell us to what extent the programs and services offered in these fields are effective.

More evaluative research must also be undertaken to give us a better picture of our successes and failures in maternity clinics, child health conferences, and school health services, in the use of the group process for helping parents, in the methods used by private physicians, in the care of children in hospitals, in institutions or foster family homes. With new and clarifying guidelines that could be derived from such studies, our work could be greatly improved.

Third, ways and means must be found to include in the teaching programs of schools of medicine, public health, nursing, social work, and law much more theoretical and practical instruction in child growth and development than is now included.

Recently, a prominent child psychiatrist stated that, for about 80 percent of emotional problems of childhood, care from psychiatrically trained personnel would not be needed. He believes that pediatricians and public health personnel could handle most of these problems if they had adequate training in the development of children. In view of the continued overcrowding of child guidance clinics, it appears essential that nonpsychiatrically trained personnel learn to handle more effectively the more superficial problems.

What is needed to help bring this about is the introduction into schools of medicine, nursing, public health, social work, and other educational programs of an adequately supported teaching program covering the essentials of total child growth and development, and an understanding of interpersonal relations. Already some departments of pediatrics have begun to do this. Certain schools of public health nursing and schools of social work have also enriched their curriculums in this way. I regard such a training program as a vital undertaking and one that should have the support of all concerned with the business of child rearing.

I have dwelt somewhat at length on the need for this training program because of its long-range implication for the health of children and youth and because of its significance in any and every effort to advance toward a real base for peace.

At this point I would like to refer briefly to a few items of interest that have importance for the future.

Radiological Health

A few months ago, a document of great significance to child development and to the population as a whole was published. I refer to the report of the National Academy of Sciences-National Research Council on "The Biological Effects of Atomic Radiation." The most striking aspect of this report is the relative importance for our population of cumulative exposure to X-ray and fluoroscopy. As you know, the human embryo, the fetus, infants, and children are especially sensitive to X-ray radiation. The results of radiation may range from genetic mutations in succeeding generations when the gonads are exposed, to embryonic damage when a pregnant woman receives excessive dosage on the pelvic organs, to damage to the blood-forming organs with resulting leukemia when radiation to the whole body is excessive.

The report is specific with respect to the maximum cumulative exposure to the gonads that is safe according to present knowledge. It recommends the adoption of a national standard of maximum exposure to radiation that is consistent with safety. The report also emphasizes the importance of reexamining current practices in the use of X-ray or fluoroscopy in providing medical services. Some of these appear to expose infants and children and prospective parents more than is necessary or wise.

Partly as a result of your interest and that of the Association of Maternal and Child Health and Crippled Children's Directors, and because of a recommendation of the United States National Committee on Vital and Health Statistics, the Children's Bureau is establishing a National Committee to Reduce Hazards to Inheritance and Child Development. Its members will represent a number of scientific disciplines and relevant programs in the maternal and child health field. This committee will give national leadership to planning for research and other activities designed to reduce reproductive wastage and safeguard normal fetal development.

A related committee on radiological hazards is being planned concurrently with the overall committee. It will develop proposals to promote good radiological techniques, particularly as applied to children and pregnant women. The work of both of these committees will be reported as they get under way.

Child Health Programs

The Children's Bureau has welcomed the passage of the National Health Survey Act and looks forward to working closely with the Public Health Service in order to obtain the best information possible about the state of health of our child population. We know of your interest in the problem of congenital malformations and in children who have other types of crippling or handicapping conditions. We are looking forward to joint special studies to give us better information on the numbers and needs of these children than we have been able to obtain for many years.

The interest State health departments are showing in planning programs for mentally retarded children portends a rapid and widespread development in this much neglected field. Congress, when it increased the maternal and child health grants from $12 million to $16 million, earmarked $1 million for special projects for mentally retarded children and requested that an additional $1 million be spent for this purpose. More than half the States are reported to be working on plans for programs for these children. Programs are already in operation in Arkansas, California, the District of Columbia, Hawaii, Idaho, and Washington; other requests are in the process of being approved. They are receiving fine support from parents and teachers as well as from the medical profession.

The rapidity with which the State crippled children's agencies expanded their programs last year when the grants were increased from $11 million to $15 million not only shows the need for services for children with chronic disease and handicapping conditions but testifies to your satisfactory administration of these programs. Otherwise such a rapid expansion would not have been possible.

A brief tabulation shows how these increased funds helped the crippled children's programs to grow last year. Thirty-nine States reported the increased funds were helping them to provide medical and hospital care for more children, and 19 States reported using the funds to help meet rising costs. The development of new and expanded programs, 20 of which were started in 16 States, includes the following:

	States
Cleft palate	9
Congenital heart disease	5
Rheumatic fever	8
Hearing impairment	15
Epilepsy	5
Arm amputations	2

The increasing child population and the mounting costs of these programs are in themselves basic problems. In 1955 the number of live births exceeded 4 million, a rate of 24.9 per 1,000 population and close to the highest in 30 years. The Nation's total child population under 18 years of age increased from 47 million in 1950 to 56 million in 1955, an 18 percent rise. The Bureau of the Census expects that between 1955 and 1965 the number of children under 18

years may rise by about 21 percent to a total of more than 67 million in 1965. This increase in child population will necessitate a continued expansion of the maternal and child health and crippled children's programs even if the only objective is the maintenance of the present rate of services.

The cost of providing health services continues to rise. The salaries of medical personnel in State health departments have increased 63 percent between 1947 and 1953. Salaries of public health nurses increased 74 percent. Hospital costs rose from an average of $16.89 per patient-day in 1950 to $22.78 in 1954, an increase of 35 percent. These are basic economic challenges which we must meet if our programs are to serve mothers and children even at present levels.

While infant mortality in the country as a whole has been reduced to a new record low of 27 per 1,000 infants born alive, infant losses in the perinatal period continue at a relatively high level. In 1954, for the United States as a whole, about 36 infants per 1,000 reported pregnancies were born dead or died in the neonatal period.

On the incidence and prevalance of maternal morbidity, we have few epidemiological facts to guide us. We do know, however, that more than 300,000 mothers a year in the United States are unable to carry their infants to term. This impairment in maternal health is associated with very high perinatal mortality in the infant.

We are following with much interest the reports on the effectiveness of the hormone Releasin in halting premature labor. If early results are confirmed, health departments will have a new agent to apply in the programs to reduce premature births and fetal and neonatal deaths.

Shift in Pediatric Work

With the American College of Obstetrics and Gynecology and the American Academy of Pediatrics, the Children's Bureau is sponsoring a project to develop more effective analysis of maternity and newborn infant hospital records with a view toward improving the care of mother and child in hospitals. This project is planned as a 3-year study to be conducted in all hospitals in a cooperating community. The project will develop and demonstrate ways and means by which hospital staff can obtain maternity and newborn infant statistics useful not only to the individual hospital but also to the community as a whole in maintaining a high level of maternity and neonatal care. When the method is tested, we look forward to its use by many different kinds of hospitals, large and small, teaching and nonteaching, where the births in the United States take place.

Much progress has been made by the States in the past 20 years in the development of the crippled children's program with a major emphasis on orthopedics. Now, with the availability of specific therapeutic agents for many acute diseases, we are seeing a shift in emphasis in pediatric work. Throughout the country there is an increased interest among pediatricians in the care of children with chronic disease and handicapping conditions.

The long-range problem that I see ahead of us in the crippled children's program is to find the way to develop in each State adequate resources for the care of children who are handicapped and require long-term medical supervision and rehabilitative services. The number of children with handicaps other than orthopedic in nature are estimated to be nearly 10 times the number of orthopedically handicapped children. Yet they represent less than one-half of the children now receiving care under the crippled children's program. In developing clinics and other services for children with epilepsy, cleft palate, congenital heart disease, hearing impairment, limb amputations, and so forth, you have unusual opportunities for putting to work the knowledge that research is providing. Research makes it possible to treat or ameliorate much of childhood crippling, to rehabilitate children, and to prevent the progression of disability.

There are of course many more phases of your programs for children on which I could comment. I would like to make just one more point which has to do with the role State health departments play when the responsibility for health services or medical care for special groups of people rests in other State depart-

ments or agencies under either Federal or State laws or regulations.

As I see it, your minimum role is to make sure that preventive health services are included in all such programs and that the highest possible standards of care for the sick or disabled are set and adhered to. I am thinking of the new program of medical care for the dependents of men in the armed forces, especially the children among these dependents. I am thinking of what you can do to work with the State departments of public welfare in raising standards of medical care provided for the aged and for dependent children under the new amendments to the Social Security Act that will become effective next July.

The benefits for our children to be derived from all of the programs I have mentioned represent a real investment in the future of our country, indeed, in the future of the world.

Dr. Eliot Leaves Children's Bureau

Dr. Martha M. Eliot has resigned as chief of the Children's Bureau, the office she held the last 5 of her 30 years of Government service. She returns to her native Massachusetts to head the maternal and child health department of the Harvard School of Public Health.

In accepting Dr. Eliot's resignation, President Eisenhower noted her invaluable contributions to the "cause of better health and welfare of children, not only in our own Nation but around the world." In his letter he said, "I share with Secretary Folsom the hope that your new activities will be richly rewarding and that we may count upon your advice and help in the years to come."

Dr. Eliot was the first and only woman to be elected president of the American Public Health Association. For administrative achievement in organizing and operating a Government program that served a million and a half GI wives and infants in the Second World War, Dr. Eliot was given the Lasker Award.

From 1949 to 1951, Dr. Eliot was Assistant Director-General of the World Health Organization. She was chairman of its Expert Committee on Maternal and Child Health in 1949, having served in 1948 as a member of the United States delegation to the First World Health Assembly in Geneva.

A graduate of Radcliffe with her doctorate from Johns Hopkins, Dr. Eliot began her long and distinguished career in maternal and child health services at the Peter Bent Brigham Hospital, Boston. She joined the Yale University Medical School in 1921 as instructor in the pediatric department from which she came to Washington as director of the Division of Maternal and Child Health in the Children's Bureau. There she directed one of the Bureau's first research programs, the prevention and control of rickets in children.

She served on the Board of Editors of *Public Health Reports* from its reorganization as a monthly periodical in 1952 until 1956.