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# THE MARCH OF MEDICINE[1]

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WHAT is it that happens that brings about the development of hospitals, and eventually medical schools, in most of our larger communities? Communities have personality, ambitions and vision. How interesting it would be if we could have been in Geneva in 1834 when the parent institution of the College of Medicine of Syracuse University was established; or could have attended the meetings that led up to its transfer to Syracuse under its present title in 1872. Something stirs in our communities that leads to the birth of institutions where medical students can be trained. The idea generates among the forward-looking physicians and spreads to others. As we look over the United States we find that this form of community expression has been a very significant factor in medical education. In the days when a group of physicians could get together and organize a medical school that could be supported by the student fees too many such institutions appeared; but even now, with all the expense—and it is very considerable—of developing a medical teaching center, we find that most of the larger centers of population in the United States give strong financial support to training institutions for doctors of medicine. Communities, like persons, want to see the tangible results of their efforts. They show themselves at their very best in the public or government buildings which they erect and support—whether these are churches, schools, hospitals, medical schools, court houses—or even jails.

Medicine moves forward so rapidly that its day-to-day activities are necessarily educational. It is in no way *finished.* It is imperative that the young doctor and the nurse be brought into the immediate care of the sick. In no other way can medicine keep up with

[1] Address at the dedication of the Syracuse University College of Medicine building, November 22, 1937.

the constant flow of new information and the resultant new responsibilities of the profession. The patient-teacher relationship has been found to be essential. If medicine is to move forward, there must ever be new inquiring minds asking questions. In no other way can the steady stream of new medical knowledge, often muddy at first, be gradually cleared by further experience and experiment. Just as soon as one medical problem is solved, a new series is opened up by that solution. Each day in the hospital, or in the office, has its particular needs; and yet the experience of each day must be analyzed and understood in order to solve the difficulties of future days. A constant freshening of the stream of knowledge is imperative, and a constant recruiting of new men and women into the service of the sick.

Institutions are necessary; and these institutions must be developing and advancing with the changes in medicine. In the period when the prospective doctor was an apprentice, his education depended not only upon the doctor to whom he was apprenticed but upon the amount of laboratory, library or other equipment that physician had available and upon the experiences of a single practice. This was necessarily a simple and a very limited relationship. Dr. John Morgan, of Philadelphia, in the period of the Revolutionary War conceived the idea of the development in America of a school, instead of apprenticeships, as a basis of medical training. This made it possible to gather together libraries, dissecting rooms, museums and other facilities at one point and to help them to grow. In this way a great deal of time could be saved and breadth given to medical training. Advances were few for some decades, but in the last thirty years the growth has been startling and of high quality. In the complications that have come into the medical world with increased knowledge, even a general hospital with its variety of sick and its many departments has not been adequate for the training of the physician. We have had to make the hospital a medical center through the addition of the nurses training school, the physical therapy department, social service, laboratories and out-patient clinics—as well as adding special hospitals, particularly those in psychiatry and communicable diseases. We are here to-day to celebrate the adequate housing of such a center.

The greatest asset any city can have is security in the health of its citizens. A pure water supply, wholesome food, protection from malaria, typhoid fever, smallpox, scarlet fever and tuberculosis—indeed the control of as many factors as possible that are detrimental to health—are all essential in laying the basis for a sound community life. The security of health is really more important than the school; for there is no particular advantage in giving expensive educational training to children who are going to be allowed to die of typhoid fever, malaria or tuberculosis before they can become assets to the community.

For many years in our medical schools it was thought that the student could be trained in medicine largely through the lecture system. When the laboratory became an essential part of every medical school and hospital the most striking change in medical education took place. The laboratory took more student hours than the lectures. After some years of use of the laboratory there came a greater appreciation of the need of immediate contact between the patient and the medical student. This gave vitality to the medical course and was mutually profitable. The medical student gained in knowledge, and the patient gained in better and more intensive care. The best policeman for good medical service is a wide-awake medical student in the wards of a hospital. We still use the lecture system for parts of medical training; but there is such constant change with new research that lectures must be kept up to date to be satisfactory. Some years ago I suggested to the members of a faculty that if they had their lecture notes complete and just right to their own satisfaction the thing to do was to tear them up and start all over again. All the lecturer can do in the medical course is to provide summaries of known information and stimulate the interest of the student in going further. I know of no more pathetic thing to see in a medical school than students devotedly taking down the lectures of their professors with the idea that they will parrot back the results and will have acquired a medical education. In essence, medical education is purely personal. It requires the most rigid training of the body and the mind of an active, healthy, alert individual who can turn his full mental powers into a clear focus on the obscure complaints and ailments of a suffering human being. This can be learned only by *doing*—not by being told. "Doing" gets one down to fundamentals and away from theories. I like to tell the story that came out of this part of your state to us in Washington in the war days. During a period of active discussion of a pressing problem, with wide differences of opinion, a man rose and said, "Up in the part of New York State where I come from we have a theory that 'the man who sleeps on the floor can't roll out of bed.' Why not adopt that theory and get down to fundamentals on this question?"

There has been a great deal of discussion about the length of time consumed in the medical course, about the number of subjects required, the complexity of the medical curriculum, and so on. Within the limitations of human growth during the period of late adolescence and early maturity we can afford to take a considerable period of the time of a prospective doc-

tor. It is perfectly clear that the sounder the preparation the better the doctor. Up to a certain point we can learn much more and much faster in the medical school and hospital under guidance than we can learn outside of it. There is, though, the inevitable time when the medical student must start off on his own course, his own career and his own responsibility. His sensitiveness to new knowledge is markedly increased at that time. There is a limit to the amount of information that we can pack into the student or the amount of training which he can be given in an educational institution; but in the field of medicine we must go as far as we legitimately can. It is much better to learn under the guidance of an expert in a way that protects the patient than it is to learn through the tragedies that may follow learning to practice without sufficient preliminary training.

There has been a marked improvement in the quality of the medical students of America. This has not come about by chance. There has been the most careful selection of these students by most institutions and a very careful weeding out of incompetents. Fortunately each year there appear at the doors of our medical colleges sufficient numbers of well-prepared young men and women to enter the field of medicine. There is no reason why we should take into our medical courses students who have the attitude common in college which we call "getting by." Nobody wants a "get by" doctor. There is no reason for training this type of student in the medical school, with the very high cost of medical training to the student and to the public. Particularly is this not justified since there is the possibility of securing sufficient medical men for the needs of the nation without training those who fail to see the importance of giving their very best if they are to take on the responsibility of the care of the sick and of the injured. With improved public health and better facilities of all sorts, one doctor can do more in twenty-four hours than was ever possible before, and do it better. In medical education we need a blend of the highest form of scientific training, laboratory experience and clinical experience. Every medical faculty needs men upon it who represent the art as well as the science of medicine. While for a time the laboratory was given over-emphasis, we have learned to build our institutions so that there is greater opportunity for clinical experience. What the profession and its members have gained over the years in insight into disease and into the reactions of the human being, is often more valuable than anything that can be gotten out of a test-tube or seen under a microscope. This is particularly true as we become more effective in preventive measures and push out of the ordinary medical picture diseases that have ruled the earth for countless generations.

Medical education now requires the background of an extensive medical center where not only do we have doctors, nurses and laboratory technicians but also public health officials, social workers and others. It is just as important in these days for the young doctor to understand his patient's personal life, home responsibilities and community relationships as it is to be able to tell just what organisms are living in his lungs or invading his liver. In medical education we can no longer view disease an an entity. We must always take the patient as the unit and understand the relationship of pathological processes to his body, particularly to his nervous system, and his own reactions and relationships to the life around him. For centuries the doctor treated diseases. He still does so when these have specific causes that can be removed, or where there are conditions, such as in diabetes, where certain specific forms of treatment are possible. Dr. Osler once said that he could teach medicine on typhoid fever patients alone, and do it successfully. That now many of our best medical schools and hospitals have no such patients indicates the striking changes which have taken place in the incidence of certain diseases. The day-to-day work of the hospital has undergone as significant changes. The amount of practice in the home has been strikingly reduced. Health has become significant and well enough understood so that we are discussing in medical circles the question of understanding normality as well as we do abnormality. In fact, the doctor has now become more of a guide from babyhood to maturity than some one called in to help out in emergencies or to prevent tragedy.

Most people have but little idea of how to care for their bodies, or use their brains or be well enough to be happy. Millions of them keep themselves under the partial influence of caffeine, alcohol, nicotine, aspirin and other drugs a good deal of the time. From childhood they never play fair with the finest machine on earth. The doctors themselves are not always good examples, and many of them care for their automobiles better than they do for themselves. The doctor who guides normal people to continued good health will have to look at his patient from the standpoint of sound hygiene, rather than as the receptacle of a disease that needs to be driven out. The doctor of the future can not play his part unless he understands all phases of the life of the human being. He must have similar understanding of the problems of human beings in groups or in the mass. The doctor who has not studied psychology and who can not acquire a knowledge of it, if he is to be successful will have to confine himself to work in the laboratory or be a pure technician. The understanding of personality is as vital as the knowledge of the various systems of the human body and of the ailments to which they are

subject. Science has been back of the march of medicine, and science has also made a complete transformation in the environment in which our people live. Science has not only changed the speed with which we go from place to place, and the way in which we light our homes; but it has compelled a reorientation of our hereditary thought processes in connection with religion and human conduct. Astronomy and geology have changed the mental attitudes of millions. Individually and in the mass we lack anchorage. This has given us a sense of insecurity, increased our difficulties in the domain of the mind and helped to fill our psychiatric institutions. In some ways many of the people of practically all the nations of the earth seem to be a little crazy at the present time. There could well be developed a better hygiene for world international relations. At any rate there is a good place for sound medicine and the stable sane doctor to guide not only the individual in the care of his body and his protection from disease, and the community in its various quarantine and other public health measures, but to assist in the broad understanding of human relations.

The medical school, too, now faces the problem of how it should handle the question of what is called "social medicine." The development of the social service, the increasing costs of hospitals, the changes from rural life to city life and a thousand other forces have impinged upon the whole easy, rather shabby organization of medicine with its illy defined relationships of the financial responsibility of doctor and nurse to the patient and to various governmental units. Since it is inevitable that there will be many social and economic changes in the future, the medical school must give the young physician the opportunity of knowing just what the forces are that lead to change. Unless he is trained to accept leadership in the field of the relationship of medicine to our economic life, he will be compelled by inevitable developments to take a secondary position—when he *should* lead, and where his help is vital if an adequate solution is to be discovered.

The medical schools of the country have for the most part been brought under the wings of the university by the simple and necessary process of evolution. The preliminary requirements for the study of medicine have naturally fallen to the universities. The laboratory led to the capture of the medical school by the universities. The broader training now required for the modern physician means that at least some of those who are going into medicine must not only understand biology but also anthropology and eugenics. Likewise they must have knowledge of sociology, including a broad consideration of man's environment. Modern physiology has developed relationships to chemistry and physics that require years of training if we are adequately to understand such questions as diet and nutrition and to treat many diseases. Almost any solid work is good preparation for medicine, since mental training is more important than the details of any subject learned. A usable mind that is disciplined can do the work; but it must be adjustable and have a good "universal joint" to meet the wide responsibilities entailed in the care of the sick.

It has been a difficult task to select some of the scientific and social subjects that are the core of the work which we call the medical curriculum. Even when this curriculum is once selected it can not be allowed to become static. Each year modifications must be met. The medical curriculum must not only be kept alive, but it must be modified with the same rapidity with which medicine grows.

There is no ease in the march of medicine. Thousands of ardent workers are pushing out into new fields; lives are to be saved, pain relieved. To keep the doctor up to date and bring the medical student abreast by the selected information he needs is both the function and the duty of such organizations as this. It is a delight to take part in seeing the city of Syracuse and this part of the state give support to such a medical center as we now have as a national possession in the College of Medicine of the University of Syracuse.

# THE FRUITION OF THE CLINICIAN[1]

By Dr. HENRY A. CHRISTIAN
HARVARD MEDICAL SCHOOL

To you, Chancellor Graham; to you, Dean Weiskotten; to you, members of the Faculty of Medicine of Syracuse University; to you, students and graduates of this School of Medicine and to you, friends of Syracuse University and its School of Medicine here assembled, I give greetings for and from the medical profession.

This splendid building to house your medical school, that to-day you dedicate, is one of a group which in the years to come will provide the soil whence will grow in varying perfection plants that will bear fruit of different sorts and of different qualities. The better

[1] Address at the dedication of the Syracuse University College of Medicine building, November 22, 1937.