



Historical Profiles of Mayo

The Necessity of Cooperation in Medicine*

WILLIAM J. MAYO, MD

It is a pleasure as well as a privilege to welcome the members of the graduating class of Rush College to the medical profession. Yesterday you were students in the University, without personal responsibility and only such cares as may come with a prolonged course of study. Today you are independent workers in the profession; equal in rank with your teachers who, yesterday, were your superiors, for our profession knows no caste, no distinction, only that which we willingly bestow upon those who have been found worthy.

With this independence of thought and action for you, comes great responsibility. Errors of judgment in student days were made harmless by the care and attention of your teachers. From now on you will have no such check upon your actions, and your mistakes will be costly because they concern the health and happiness, if not the life, of individuals.

You have worked long and faithfully in this venerable school of medicine, which numbers among its alumni many of the brightest and best and most useful members of our profession. From its inception Rush Medical College has been one of the great schools of medicine. Its faculty has always contained eminent men, who were leaders in the medical sciences of their period. This is as true to-day as of any time in the past. The corps of teachers, the laboratories, the hospital facilities, and the clinics, leave little to be desired in the way of educational equipment.

When one considers the years of work in the lecture room, the hospital wards, the clinics, the laboratories, and all of the special branches of training, which you have been so fortunate as to accomplish, and compares it with the amount of training considered necessary in this and other schools twenty-five years ago, it may appear that your equipment has been relatively far beyond that which was given in the previous generation. In place of the high-school certificate and a two years' course in medicine most of you have taken a complete college course, followed by four years in the medical department. Yet each period of

training must be judged by a comparison with the standards of learning of the times, and this is true not only in medicine, but of the other sciences as well.

In spite of the scanty training and meager advantages afforded the medical student in the past, he was undoubtedly as well equipped, relatively, for the accomplishment of his work as you are, because the sum-total of scientific knowledge in medicine was then comparatively small.

In the twenty-five years which have elapsed since I was a student in college, the science and art of medicine has undergone a transformation in this country which you of the younger generation can scarcely appreciate. The essential facts as regards the etiology of disease have been revealed to us. Hypotheses, supposition, and fancies have been replaced by demonstrated facts. It is a remarkable tribute to the teachers and investigators of that earlier period that by their great earnestness, high probity, and splendid personal characteristics they were able to maintain the standing of the profession upon so high a plane with a foundation so feeble, and to hand down to us, followers along the paths outlined by them, so great and glorious a legacy.

Beyond the known facts of anatomy, chemistry, and the simpler problems in physiology and therapeutics, their equipment was based upon accurate clinical observations. They observed the smallest details with great fidelity, making deductions with a sagacity which, I regret to say, at present seems to be a lost art. As we have become more and more dependent upon the laboratory and special investigations in making our diagnosis, we have gradually lost that faculty of clinical observation which enabled these early clinicians to make an accurate diagnosis in the more common diseases almost with a glance at the patient.

The figure of the family physician as we knew him twenty-five years ago has necessarily passed away. In his earnestness, ripe knowledge, and experience he was learned among his contemporaries. By untiring industry he was able to keep abreast of the times, and he occupied an individual position, seldom asking for consultation or help. His colleagues were armed with the same knowledge, differing only in the interpretation of known facts, rather than possessing new and different ones.

*Delivered at the Rush Medical College commencement, June 15, 1910, originally published in the *Collected Papers by the Staff of Saint Mary's Hospital, Mayo Clinic*. 1910;2:557-566, and reprinted verbatim here.

The physician of the old school was a formalist. His dress, habits, and life were distinctive of his profession. Much that he practised and believed to be true we know to have been the unconscious appeal to psycho-therapeutics. His very appearance inspired confidence and his manner suggested relief. These forms and mannerisms were stage properties.

Sectarian medicine differed mainly in that it depended almost entirely upon the psychic appeal. To-day the physician is a business man. The frock-coat and the top-hat have been dismissed to oblivion. The curtain is up and all the scenery exposed to the public eye. The *isms* and *pathies* of sectarian medicine are passing away, and will not return, because they can only exist behind closed curtains, and because the public is no longer so credulous.

These old stage properties were not confined to the medical profession. Other professions suffered from the restricting influences of ignorance, cant, and charlatanism. The people have demanded things *sure*. Man has not been willing to conduct his life along the lines of prevention, but has chosen rather to live as he pleased, and, when overtaken with the results of his indiscretions, demands a guarantee of speedy cure. It has been this attitude of the public toward the medical profession which encouraged the growth of homeopathy, eclecticism, osteopathy, and so-called "Christian science," each of these cults having a small basis in fact and a very large amount of assertion. The idea of the specific nature of the remedies fell in with the natural desire of the human mind—a desire to achieve certainty with the least possible expenditure of effort and without sacrifice.

This same desire for specifics has characterized the demands made upon the theological profession, and as a result we have the various church denominations, all with their specific cures for moral ills and promises of certainty for the future, based upon specific beliefs.

In law the same ideas prevailed, and we have a specific law to cure each ill of the body politic, until we have accumulated upon our statute-books a mass of laws, conflicting, contradictory, and all too often a means of defeating the end which they were supposed to attain.

This narrowness of spirit is passing away and changing conditions in all the learned professions are everywhere manifest. In the theological profession we find a unity of purpose existing, and a general inclination of the various religious bodies toward a unity of church. We hear less and less of specific dogmas and a greater insistence upon actions rather than beliefs.

As to the legal profession: the President of the United States is urging reform in legal procedures, and he is being aided by members of the Supreme Court. Committees of the Bar Association are bringing in resolutions which are

unanimously adopted with a view to prevent miscarriage of justice, due to technicalities, delays, and subterfuge.

The medical profession has already made great progress. Within the last five years the number of medical colleges has been reduced at least one-half, and the best of the remainder have become associated with great teaching universities. This change has been a great blessing, as many of the defunct schools were an open scandal, filling the profession with illiterate, ill-prepared men of low ethical standards and often of commercial instincts.

The whole profession is undergoing reorganization and is rapidly becoming a united force. The American Medical Association now represents about 80,000 men, and 2,480 counties, out of something more than 2,800, have organized societies, showing a spirit of unity which was unknown to the previous generation.

As a result of general education and consequent advance in average intelligence, the laity are only a few steps behind the professions in their ability to grasp existing conditions. The demand for specifics with which to cure the troubles of man has been replaced by a better understanding of the problems to be solved.

As we grow in learning, we more justly appreciate our dependence upon each other. The sum-total of medical knowledge is now so great and wide-spreading that it would be futile for one man to attempt to acquire, or for any one man to assume that he has, even a good working knowledge of any large part of the whole. The very necessities of the case are driving practitioners into coöperation. The best interest of the patient is the only interest to be considered, and in order that the sick may have the benefit of advancing knowledge, union of forces is necessary.

The first effort made to meet the situation was in the development of clinical specialties. Man was divided for treatment into parts, as a wagon is divided in the process of manufacture. Each part of man was assigned to those who could devote special attention to their particular portion, giving the benefit of superior skill in treatment. Unlike a wagon, man could not be treated in parts, but only as a whole, and the failure to coördinate the various specialties quickly reduced their number. It became necessary to develop medicine as a coöperative science; the clinician, the specialist, and the laboratory workers uniting for the good of the patient, each assisting in the elucidation of the problem at hand, and each dependent upon the other for support.

Just now evidence of team-work is best seen in large hospitals, in the employment of various laboratories for the examination of the blood, secretions, and excretions, and for radiology, and, of still greater importance, the union of the physician and surgeon, not as an occasional event, but as a part of the daily routine.

The teach
in showing
may be app
seen patient
benefit of v
investigatio
tion by join

You wil
be procure
is, *by coop*
tory for spe
be allied w
thrown upo
delivery, to
quick com
help make

Within
itself mani
hospitals a
yet too mu
however, a
tion, about
The peopl
supply, ad
which mea
exist.

Throug
profession
their oath
but, after

In the
closely as
more imp
and health
soon appr
the medic

Our du
the future
services to
to be wel
health of
mous ben
such dise
etc., it ma

The de
been larg
rather tha
beer-drin
the Fren
To-day p
mental te
the prob

The teachers in your own school have ever been leaders in showing the profession how this immense knowledge may be applied to the individual case. Each day you have seen patients present themselves in the clinic and given the benefit of the united learning of laboratory workers and investigation by gifted specialists, and, finally, determination by joint consideration of the physician and surgeon.

You will ask, How are these facilities and advantages to be procured in a small town or in the country? The answer is, *by cooperation*. Every little center must have its laboratory for special examinations. The country physician must be allied with a group of associated workers and no longer thrown upon his own resources. By means of the rural free delivery, telephone, automobile, trolley, and steam-lines, quick communication will aid the new order of things and help make possible such association.

Within the past fifteen years the small hospital has made itself manifest in every community, and little by little these hospitals are becoming centers of influence, although as yet too much confined to the clinical branches. They are, however, a definite nucleus of coördination and coöperation, about which the new order of things may concentrate. The people will demand, the medical profession must supply, adequate means for the proper care of patients, which means that individualism in medicine can no longer exist.

Through custom we have come to look upon the legal profession, in a way, as officers of the government; indeed, their oath makes them such. Their function is a high one, but, after all, is only concerned with property.

In the future the medical profession will also become closely associated with the government, and with a far more important function—that which deals with the life and health of the people. It appears to me that the laity will soon appreciate the necessity of this work, possibly before the medical profession is ready to undertake it.

Our duty in the past has been largely to individuals; in the future the greatest benefits will be rendered through services to the masses. In the past the physician felt his duty to be well fulfilled when saving the life or improving the health of each patient, but when one considers the enormous benefits which will result from the suppression of such diseases as tuberculosis, typhoid fever, yellow fever, etc., it makes these individual efforts look small.

The decline and fall of the Roman Empire is said to have been largely caused by preventable disease; pestilence rather than war. Disease and death from impure water made beer-drinkers of the German nation and wine-drinkers of the French and Italians—by a process of natural selection. To-day pure water-supply for the people is making a Continental temperance movement possible. The Chinese met the problem, not by sanitation, but by developing a

pathologic resistance to unhygienic surroundings at the expense of intellectual development, with the result of the survival of those most fit to resist disease. It was the diseases of the white man, not bullets, which settled the Indian question in America.

Colonel Gorgas has made the Panama Canal Zone a white man's country; Reed lost his life that yellow fever might be eliminated from Cuba and our southern States; Ricketts, of your own University, has given his life to the same work.

We are now hearing the word *conservation* used on every hand—conservation of forests, water-power, public lands, and coal; all very important, but only secondary when compared to the importance of conserving the vigor and life of the people.

In sanitation lies the great opportunity of modern medicine: our mission is not merely the art of healing, but the art of preventing disease. The time is ripe for action in the medical profession; the people are ready, we must furnish leadership.

How shall we meet the imperative demand which is before us for the care of public health? By coördinated medical effort; by extension of small beginnings already in existence in each community; beginnings which center about the local health office. The State has at last assumed certain long neglected duties to their citizens in preventing disease by controlling the water- and food-supply, and by other important health measures. The details of carrying out these various reforms can only be properly accomplished under the leadership of members of our profession. Our universities are waking up to this need of service to the public, and are offering under-graduate courses in sanitation. The time will come, shortly, when the graduate will have to be equipped for these duties, and as a result the establishment of departments for training health officers will follow.

Almost without encouragement or public notice, the health officers of the various States and communities are already superintending these matters. Note their methods of effective coöperation in the manner in which they are furnishing an early diagnosis in cases of contagious sickness and in the distribution of antitoxins, vaccines, etc. The consequent saving of the lives of the citizens and the general productiveness for the State is enormous.

In view of the fact that the medical profession must take such an important part in this work of sanitation, the physician should take an interest in politics. There has been a feeling, both within and without the profession, that the physician should not take part in the political issues of the day, and a certain stigma has been attached to the physician who held a State or municipal office. This prejudice has not been confined to the physician, however, and many worthy

citizens have avoided political life, thus enabling minority to rule, and too often to its own personal advantage. That our political world has contained the most pernicious elements cannot be denied, but if in the future we all do our duty, the part played by this element will be reduced to a harmless point. In France this duty of the profession to the public has been met manfully: the French parliament includes among its members some of the most talented and scientific of the French physicians.

American physicians should no longer evade their citizenship. Their obligation to the community which has enabled them to acquire their knowledge should be paid in public service.

What must you as individuals do to justify the training you have received? Many of you have received this training through sacrifices of your parents and your families. Certainly you cannot justify their sacrifice in the matter of dollars and cents, as no one in the medical profession can be pointed out as having accumulated great wealth, as estimated by commercial standards. The justification must lie in the devotion to the work and the fulfilment of obligation, not only to the patient, but to the public.

Commencement is in truth what the word implies—a beginning. Your studies have not ended, but only just begun. The many branches, and the abundance of knowledge concerning each one of them, will force you to cultivate some part of medicine, rather than attempt to cover the whole. Naturally you will gravitate into one of three fundamental branches. Many of you will take up clinical medicine in some of its aspects; others of you will choose the growing field of laboratory work, with all of its possibilities in the way of research; while an increasing number will find employment in public service, poorly paid but rich in opportunities for good to humanity.

It is perhaps trite and commonplace to say—you must work. However, I believe that work and the manner of its accomplishment will make your success or your failure in the years to come.

Cultivate methodic habits of study. Remember that study is a part of your business and must be habitual and daily. I would suggest the plan of reading not less than one hour a day. If, when taking a vacation, or for any other cause you should lose some hours of study, keep a credit and debit ledger; a week means seven hours to make up. Never allow yourself to borrow from the future; not that you should confine yourself to one hour a day, but three or four hours' reading in one day should not be used for credit in advance.

Take frequent vacations from active work, to attend clinics and walk hospital wards. See things for yourself; reading alone is not enough. The Clinical Surgical Association and the Physicians' Interurban Club represent the idea in coordinated form.

Write papers; they will do you much good, although at first they may not benefit any one else. In order to write papers you will institute a wider range of reading and investigation, you will learn to crystallize your thoughts and expressions, and, finally, to produce work worthy of your efforts.

Attend your medical societies and take part in the discussions. The best man in your local society naturally takes a place in the district society; from the district to the State, and from the State to the national organizations.

I would admonish you, above all other considerations, to be honest. I mean honesty in every conception of the word: let it enter into all the details of your work; in the treatment of your patients and in your association with your brother practitioners. Should you have no stronger incentive, be assured that, to be other than fair, generous, and sincere, will ultimately spell ruin and not success. Jealousy in the medical profession is proverbial and it has done more to retard development than all other restricting influences combined.

In conclusion, I wish you a genuine success; not judged by commercial standards, but by the ideals which have ever been held by the long line of worthy men of medicine who have preceded you.

The
#

PRIOLOSEC is
maintenance of
combination w
The most frequ
therapy does
patients treat
Since June 1998,
Before prescribing
Reference: 1. Da
Please visit our
©1999 AstraZen
PRIOLOSEC is a tr