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AND PRESIDENTIAL
ADDRESSES

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FRANKLIN H. MARTIN, M.D.
PRESIDENT
AMERICAN COLLEGE OF SURGEONS

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FRANKLIN H. MARTIN, M.D.
PRESIDENT
AMERICAN COLLEGE OF SURGEONS

Reprinted from
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I.

INAUGURAL ADDRESS



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EVOLUTION OF CLINICAL MEDICINE AND SURGERY IN RELATION TO THE PRESERVATION OF HEALTH AND LIFE ¹

I. INTRODUCTION

NO greater honor can come to a surgeon than to have conferred upon him the presidency of the largest and one of the most influential surgical organizations of the world—the American College of Surgeons. My friends, from the bottom of my heart I thank you for this distinction, though I must confess I consider myself unworthy to occupy a position of such responsibility.

In my address I shall attempt to portray the present evolution of the ART and SCIENCE of medicine, and the part that our profession and the public should have in guiding its successful progress; I shall review the efforts the American College of Surgeons has put forth and will, I trust, continue to put forth, to aid progressive co-operation between the profession and the public in this important movement—the preservation of health, and the increased happiness of humanity.

II. THE AMERICAN COLLEGE OF SURGEONS

Those who visualized the American College of Surgeons, organized it, and have been responsible for its administration, realized from its inception that just to organize another surgical association, just one more academic society, was not a reason

¹Presented before the Clinical Congress of the American College of Surgeons, Boston, October 8, 1928.

to warrant its creation. The College, to justify its existence, would have to assume the responsibility of building for broader science, for more worthy practice, for interest in sustaining the traditions of the greatest profession; and by the example of its Fellows and through open discussion, impress upon the public the significance of scientific medicine as THE ONE AUTHORITY qualified to maintain the health, and insure the wholesome living of all people.

III. OUR CREED

It was a bold announcement—the declaration by the Founders of the College at its inception, that not only would the standard of surgery be elevated, but the public would be admitted into the confidence of the profession, and the aid of the public solicited to accomplish the ambitious program of the College. Conservatism and conventionalism, within and without the profession, asked in astonishment: “Is it possible that this group of men is actually serious in advocating so revolutionary a program?”

On this, the fifteenth anniversary of the existence of the College, I venture that the profession and the laity in the United States and Canada are prepared to answer that query in the affirmative, and to acknowledge that the American College of Surgeons is fully justified in assuming that its leadership is recognized, not only as progressive, but safe.

IV. THE AUTHORITY OF SCIENTIFIC MEDICINE

Among the learned professions, medicine has no equal in longevity, in continuity, in ideality, in disinterested service, and in accomplishments. For twenty-five centuries, medicine exhibits a clear history. Its spiritual and moral creed—the Hippocratic Oath—announced at that early beginning, has been and is as fundamental in the guid-

ance of the true physician as the Sermon on the Mount (first uttered five hundred years later) in the guidance of the true Christian. Spiritually, morally, and scientifically, in all civilized countries scientific medicine is outstandingly the recognized authority in the prevention and cure of disease. Like the great religions of the world, it recognizes no geographical bounds, but unlike the great religions, it has no division of authority.

A recital of the long chain of distinguished men of medicine, with many links centuries long, reveals an unmistakable continuity. To mention them individually, is to count the beads of a great rosary, one by one, each bead a jewel of rare worth and beauty. It is a record of singular interest. Every physician is assumed to have a knowledge of this history, but he should know it accurately; and for protective information, the cultural education of each person—man, woman, and child—should include facts of medical history.

V. WE SHOULD BE DEFINITE

For centuries the ART of medicine was paramount. This art was based on records which represented careful study of diseases, the effect of drugs, and the performance of operations in dire emergencies only. Familiarity with the action of drugs was discovered and developed to an astonishing degree of exactness; and the proficiency with which the experienced practitioner influenced the different shades of diseases would excite the admiration of the skilled practitioner of our present ultra-scientific age. Like a master musician, the physician of yesterday studied and knew his organ, and no note was too subtle for him to reproduce.

VI. SCIENTIFIC MEDICINE

The nineteenth century saw the development of the pure sciences. Rapidly these were absorbed by the medical profession, and now more than

ever we may say that we practice the SCIENCE as well as the ART of medicine. Long experience in recorded observation is not the only basis of our accomplishments; but as well the mathematical certainties of pure science and its instruments of precision.

During twenty-five years I have had an unusual opportunity to observe the rapid changes in the development and practice of clinical medicine and surgery. Besides the practice of surgery, this experience was gained in five activities: organizing and administering SURGERY, GYNECOLOGY AND OBSTETRICS; developing the Clinical Congress of Surgeons; founding and conducting the American College of Surgeons; responsibility of organizing the lay medical corps for service in the Great War; and reorganizing the Gorgas Institute of Tropical and Preventive Medicine. In the development of these five important activities, I have been intimately in touch with the profession; and as an innocent bystander, I have accumulated knowledge and not a few notions about the present evolution.

It is my purpose this evening to review some notable events from a mass of material that has been systematically compiled and placed in manuscript form, whose reading would be interesting, but whose presentation in an address would be appalling.

First and foremost are the scientific accomplishments that have definitely modified and controlled specific diseases, and incontrovertibly conserved life and health in a revolutionary manner: The work of Pasteur, and its adoption by Lister in the development of antiseptic surgery; the outstanding pursuits of Koch in modifying tuberculosis; the epoch-making researches by Behring, Roux, and Klebs in controlling diphtheria; the indefatigable labors of Ehrlich in furnishing a remedy for the spirochætal diseases; the achievements of Roentgen; of Eberth in well-nigh exterminating

typhoid fever; the painstaking accomplishments of Bruce in sleeping sickness; Ross and Laveran in malaria; our own Reed, Finlay, and Gorgas in yellow fever; Banting in diabetes; and the Dicks in scarlet fever. These specific accomplishments have resulted in saving more lives each year than were lost in the Great War.

VII. DEGENERATIVE DISEASES OF MIDDLE LIFE AND OLD AGE

There are certain other diseases that reap a large death harvest and a much greater disability. Though we have not a specific for each, we have definite proof that they may be modified or cured if discovered early. These include the degenerative diseases, insidiously begun in middle life and exaggerated in old age; notable among them: cancer, with a mortality of 115 in every 1,000 deaths, though if recognized early it may be cured; heart disease, that makes its deadly swath in individuals in the most productive period of life, 140 to every 1,000 deaths, may be modified if early recognized and appropriately treated; diseases of the kidneys and blood vessels, with their harvest in middle life of 110 in 1,000 deaths. Preventive medicine, or the early application of curative measures in these diseases, would save thousands of lives each year.

So to extend longevity to any material degree, we must first discover the cause of, and secure a remedy for, degenerative diseases. It is my prophecy that we are on the eve of solving the unknown problems which pertain to the diseases that cause unforeseen and unexpected tragedies in middle life, and that germinate and foster the dread of incapacity in old age.

The degenerative diseases cause one-third of our deaths. They are definitely influenced by concurrent incidents, as habits of living, strenuous mental activities, improper diet, excessive use of

stimulants, particularly alcohol, lack of proper exercise and recreation, and infectious diseases that thrive on a weakened resistance. They are the result of age or its equivalent—excessive work.

Within a year, at the Third Race Betterment Conference, President C. C. Little, of the University of Michigan, stated:

There seems to be little doubt that man's average duration of life is being increased. The majority of statistical and other observations point in that direction. . . . Making the average age of human life 68 or 70 or 72, as the case may be, is very different from increasing the upper age limit to 120 or 140. . . . To increase the upper age limit of life, that is, to make a new maximum age for human beings and to make it a fairly common thing to attain that age, would mean that we would have to extend or prolong a process known as senility. All of us know what it means to grow old. We should either have to prolong that process of growing old, making it more gradual, or we should have to extend it to a higher age, that is, postpone its start. Neither of those things is very easy to do. It is along that line, perhaps, that less progress has been made than the claims of many enthusiastic individuals would lead us to believe was the case. . . .

It is my belief that this statement was dangerous, as it was put forward by an influential teacher of men and women. It is an opinion of a pure scientist who bases his statements on accepted and established scientific facts; but we are reminded every day by the world's progress that so-called scientific facts are not necessarily permanent facts. Frequently they have been, are being, and will have to be revised as knowledge is augmented and experience advanced.

Diabetes is the result of degeneration of gland tissue in which is secreted a substance that aids in regulating the absorption of sugar in the circulation. Dr. Moses Barron, of Minneapolis, in an article in SURGERY, GYNECOLOGY AND OBSTETRICS revealed a method of isolating that secreting tissue. Barron's article was read by another (then

obscure) student, whose mind was not cluttered with scientific facts that dimmed his vision; he rushed across the Atlantic, placed his conclusions before his laboratory teachers in his Alma Mater in Toronto, and gave to medicine Insulin, a remedy for diabetes, one of the great discoveries of the age.

Would Edison, if he were told that the degenerative diseases were said by scientists to be unmodifiable, say: "Well, then we must give it up?" Wouldn't he say that many things are being wrought every day that seemed impossible of accomplishment in the light of science and tradition?

The science of chemistry, endocrinology, biology, physiology, clinical pathology, and basal metabolism, is tackling and solving new problems every day. Adrenalin, thyroxin, insulin, and pituitrin are examples of exact and progressive accomplishments. Undoubtedly the substances that will control the degenerative diseases are now in the making.

Scientists today are mining the materials; men of vision are fitting these materials into practicable theories; and practical men are straining at their leashes ready to utilize these materials and make great visions come true.

VIII. PUBLIC HEALTH

We know to a mathematical certainty the contributions of scientific medicine toward public health (in contradistinction to personal health) in comprehensive hygienic regulations and general sanitation. The findings of scientific medicine, through civic and other governmental authority, are applied to purify the water supply, to dispose of sewage, to protect and conserve the purity of food, to ventilate public buildings and places of amusement—gifts which the lay public has accepted almost unanimously; and all civilized

countries realize the extent to which life is protected and wholesome living insured through the provisions of scientific medicine.

IX. SUMMARIZED STATEMENT

Thus, briefly, the ever-lengthening list of impressive accomplishments reads like a romance. To physicians it is an old story with many sidelights, endless in their ramifications. To the layman and woman its history, written in popular style, would be not only intensely interesting reading, but it would be more valuable in stimulating race betterment and human happiness than any biography ever written.

X. THE HERITAGE EMPHASIZES OUR SINS OF OMISSION

Ours is an unique heritage from a most ancient and accomplished profession. Are we, as trustees, doing our utmost to perpetuate and extend these doctrines? Is the public unmindful of its legacy through ignorance, indifference, or false teaching? Whose is the paramount responsibility to supplant ignorance with knowledge, indifference with interest, and false teaching with truth? The practitioners of medicine themselves!!!

XI. SCIENTIFIC MEDICINE AND PERSONAL HEALTH

In my review I have endeavored to ascertain what would be the result if the doctrines of scientific medicine were applied in a maximum degree toward the conservation and preservation of personal health, and toward the alleviation and cure of existing disease. It must be obvious that the effect in prolonging life would be phenomenal; and in extending wholesomeness of living, and happiness in pursuit of life, inestimable. Our past and present methods have confined our activities to curative medicine, almost to the exclusion of preventive medicine.

XII. WHO RESISTS THE BENEFITS OF SCIENTIFIC MEDICINE?

Though it be impossible to speak with exactness, it is a safe assumption that of the 130,000,000 people in the United States and Canada, one-half of those of reasoning age have no familiarity with the simplest fundamentals of the laws of health. While this proportion of our population is ignorant of the importance of health laws, it is again a safe assumption that false teachings by propagandists, and one or another reasons have led at least another one-fourth of our reasoning population to develop a positive antagonism to scientific medicine, and definite resistance to its services. Those who oppose scientific medicine thrive more or less successfully according to the advertising zeal of their leaders; they represent the various sects, cults, and organizations of proprietary and patent medicines.

XIII. RESULTS OF THIS RESISTANCE

If it is true that one-fourth of our population of reasoning age represents active opposition to curative medicine, and succeeds in avoiding its ministrations, here is a sound basis on which to estimate the effect of this on the health and mortality of the whole population.

Thus our favorable showing is possible with non-resistance or indifference of one-half of the population of thinking age. Estimating that one of every four resisted the services of scientific medicine—refused vaccination for smallpox, anti-toxin for diphtheria, and appropriate prophylaxis in the other preventable diseases—a large proportion of the present death rate in these diseases is avoidable and may be attributed to this resistance. An ultra-conservative estimate (under accepted methods of statistical study and mathematical calculations) will attribute to this one sin of

omission 8,790.6 avoidable deaths in 1925, and 87,906 avoidable deaths in the ten years, 1915 to 1925.

With one-fifth of our population yielding to and accepting an annual health audit (as our figures indicate), with two-thirds of them sympathetic to curative medicine, and with two-thirds spiritually and morally in favor of the enforcement of the 18th Amendment, we need not wait until the next decade or the next century to reap the benefit in life extension.

XIV. EDUCATION IS NECESSARY

The remedy is but too obvious. There must be continuous education. The fundamentals of scientific medicine, its practicability and acceptability, should be taught in the primary classes of our public and private schools, as early as the seventh or eighth grades. The fundamental principles of scientific medicine should occupy the same relative position of importance in the grade schools as grammar, general and physical geography, lower mathematics and English literature. The influence of these principles on personal and public health should be emphasized and reiterated, and knowledge imparted of the laws of general hygiene and sanitation.

A number of experiences in addressing school children convince me that education in the basic principles of scientific medicine would be accepted by them with great enthusiasm; and the leaven there sown would be of incalculable aid in lessening the existing ignorance and indifference toward the maintenance and promotion of better health. Moreover, in a dignified and proper manner it would be a potent factor in combating misinformation, which, uncurbed, develops into opposition to the truths of scientific medicine.

The five million men who served in our armies in the Great War were quick to appreciate the im-

portance of the policy of our medical department to KEEP THEM WELL. The demonstration in the armies of our allies and enemies was even more impressive, as their men were under scientific medical surveillance for longer periods. So astounding were these demonstrations that practically every country engaged in the Great War (excepting of course the United States) was forced by public opinion of their soldiers to add to their respective cabinets a portfolio on medicine, under whose supervision curative medicine was made accessible to all people.

XV. PERIODIC HEALTH EXAMINATIONS

Preventive medicine and its counterpart, periodic health examinations, have been discussed since the earliest days of medical science. If scientific medicine has established its right to assume the responsibility of supervising and maintaining the health of the people, it is a foregone conclusion that it should examine each and every individual at definite intervals, and give advice based on the findings.

Resistance to this obviously significant policy is a sin of omission, due, primarily, to the short-sightedness of the physician who is educated in and practicing scientific medicine, and, secondly, to indifference of the public which is the beneficiary of such a policy.

This subject has been much in evidence in the last ten or more years. No one group of physicians, no one organization alone, can successfully influence this change.

I am indebted to James A. Tobey, Administrative Secretary of the National Health Council, for the following brief history of the movement:

Periodic examinations for life insurance companies were suggested about 1870 by a Dr. Dobell in England; and a Dr. Bares, a French hygienist, urged them some twenty years ago, though there is no record of either of these

recommendations having been adopted at the time. In the United States, Dr. George M. Gould, of Philadelphia, contributed a paper to the *Journal of the American Medical Association* as early as 1900 in which he advocated regular "personal biological examinations" of apparently well individuals.

A definite plan for life conservation, which included a recommendation by Dr. Burnside Foster for periodic physical examinations every five years, was submitted in April, 1909, to the Association of Life Insurance Presidents. The Provident Life Assurance Society, of which Dr. Eugene L. Fisk was then Medical Director and Mr. E. E. Rittenhouse, President, was the first to adopt this plan for its policy holders later in the same year. In 1911, Mr. H. J. Messenger, the actuary of the Travelers Insurance Company, urged life insurance companies to take up these measures. In 1914, Dr. S. S. Goldwater, Commissioner of Health of New York City, announced the establishment of the system among the employees of the City Health Department. The late Dr. H. M. Biggs, Commissioner of the New York State Health Department, was also an ardent advocate of such examination for a dozen years. In a masterful paper read before the National Conference of Social Work in Washington, D. C., on May 17, 1923, this distinguished sanitarian put the health examination first in a list of eleven objectives in public health for the next twenty years.

Health examinations in industry began about 1913, in which year Dr. W. Irving Clark published a paper on the subject in the *Journal of the American Medical Association*. The following year Drs. H. E. Mock and J. W. Scherschewsky reported on results of examinations in industry. Physical examinations for the general public have actually been offered on a self-supporting business basis since 1914 by the Life Extension Institute.

Practical work along this line has been enthusiastically developed by the Metropolitan Life Insurance Company.

Special semi-public organizations, conspicuously the National Tuberculosis Association and the American Society for the Control of Cancer, the former twenty-four years ago, the latter sixteen years ago, began to urge periodic health examinations so that the signs of the respective disease in which they were interested might be discovered early; and later their example was

followed by the American Child Health Association, the American Social Hygiene Association, the American Heart Association, et cetera. Naturally it soon became obvious that preventive medicine could be more systematically advanced if the public were educated to accept a comprehensive periodic examination that would reveal the early signs of any disease instead of some particular disease.

The Great War emphasized the wisdom of thorough physical examinations, as every country which entered the conflict arbitrarily exacted a medical examination of its soldiers. In some countries the examinations may have been too hastily and too superficially carried out, because of the rapid development of the conflict. But the United States, with its greater deliberation, included in its draft law a provision by which every soldier underwent a health examination conducted, not by one physician alone, but by a group of specialists.

This, no doubt, was the most impressive demonstration, and certainly the most extensive one, on the value of a comprehensive health audit of a large group of apparently healthy men.

The medical corps of the Army, under General Gorgas, alone accepted for service, medically, 4,500,000 of these fit men; and to secure this number it was necessary to examine approximately 7,000,000 young men. The difference in these figures represents those who were unfit.

These demonstrations, with examinations for special diseases, gave great impetus to the propaganda in favor of all-round periodic examinations. In 1919 and 1920 this organization, the American College of Surgeons, organized its sectional meetings, since which time we have held sessions in practically every state of the United States, and every province of Canada. The principal innovation is the carefully planned meeting

for the laity at which, in simple language, the layman and woman are given information on the fundamentals of scientific medicine, and especially the advantage of periodic health examinations. The Gorgas Memorial Institute of Tropical and Preventive Medicine was organized in 1921. As the activities of the Memorial have developed, it has more and more urged upon the public the importance of seeking an annual health audit by the family physician.

In May, 1922, the Trustees of the American Medical Association urged the members of organized medicine, through the county medical societies, to encourage such examinations. Blanks were developed by the Association for that purpose in May, 1923, and in 1925 the Association also prepared for the use of physicians a comprehensive manual which contains very useful hints on the method of conducting these examinations. Dr. William D. Haggard, in his Presidential Address before the parent organization, very eloquently advocated the periodic health examination; and Dr. Wendell Phillips made the subject an important theme of his Presidential Address.

XVI. EDUCATED PILOTS

The public should know what we know—that in a large number of our states, individuals are licensed to practice the healing art who are utterly ignorant even of the barest fundamentals of scientific medicine; cultists, some of whom have not even a rudimentary knowledge of the basic sciences, of anatomy, physiology, chemistry, bacteriology, pathology, diagnosis, or the other primary essentials of a medical education; cultists, some of whom utterly ignore or denounce the necessity of possessing any knowledge whatsoever of these indispensable requirements. The various cults, under sundry names, have gained the sym-

pathy of legislatures. By subtle sophistry, they have passed laws which require farcical examinations in one or another pathy or cult, authorized license to practice medicine or even surgery, and have caused them to be recognized as legal practitioners of the healing art, with all of the rights and privileges of the scientifically educated physician.

Of the forty-eight medical practice acts authorized by the individual states of the United States, only five require that an individual, to be licensed to practice the healing art, shall show by examination that he has a knowledge of the basic sciences upon which, obviously, the practice of the healing art should be grounded. This means that in the other forty-three states of the United States not requiring the basic science examination, only the graduates in scientific medicine meet these qualifications.

The new basic science law requires that every practitioner of the healing art shall pass successfully an examination in the basic sciences before he is eligible to present himself as a candidate to the state board of examiners for a license to practice medicine or the healing art in any form recognized in the medical practice act of the respective state. The law drawn up by Dr. William C. Woodward, Executive Secretary, Bureau of Legal Medicine and Legislation, American Medical Association, is, in my opinion, the simplest basic science law that has been suggested, and at the same time contains all essential protective requirements. The first section of the "Enacting Clause" reads:

BASIC SCIENCE CERTIFICATE REQUIRED. No person shall be eligible for examination or permitted to take an examination for a license to practice the healing art or any branch thereof, or granted any such license, unless he has presented to the licensing board or officer empowered to issue such a license, a certificate of ability in anatomy, physiol-

ogy, chemistry, bacteriology, pathology, diagnosis and hygiene (hereinafter referred to as the basic sciences), issued by the state board of examiners in the basic sciences.

XVII. A SOLUTION FOR THE PROMOTION OF SUCCESSFUL HEALTH EXAMINATIONS BY THE PERSONAL PHYSICIAN

In obtaining thorough health examinations, how can we insure the independence of the family doctor, the personal internist, and the favorite surgeon? How insist upon a thorough and complete health audit, save the public from the exploitation of unworthy groups, stock companies, or even the well organized clinics or well equipped dispensaries or hospitals, and yet not lose to the personal physician his control of his own legitimate clientele? On this point even the advocates of the health audit have been most apprehensive, and their consternation has led them almost to the point of abandoning the program, lest in spite of its advantages the independent practitioner be put out of business.

The American College of Surgeons is successfully working out a remedy, a supremely practical solution of the problem, that will be satisfactory equally to the laity, the independent practitioner, public health officials, and the hospitals. Obviously, the difficulty lies in the fact that no one practitioner, regardless of ability and eminence, can individually overcome the prohibitive difficulties and make a complete health audit, unless he has at his command competent aids, and intricate scientific apparatus and laboratories.

Where is the environment that will remedy this difficulty? Where do Barker, Charles Mayo, Christian, or Cushing find satisfactory surroundings? The answer: In well organized groups; organized clinics; *the standardized hospitals*. Which of these could, without prohibitive confusion, furnish to the independent physician a place where

he could personally make a comprehensive scientific examination of his patient, retain his independence, and not lose control of his own business? A little consideration will answer this query in favor of *the standardized hospital*.

XVIII. THE HEALTH INVENTORIUM

The "Health Inventorium" is planned by the College to meet this exigency. The suggested plan was submitted to one-tenth of the 1,805 hospitals in the United States and Canada on the approved list of the College in 1927. Almost without exception the plan was accepted. Thereupon, the plan was submitted to all hospitals on our approved list in 1927, and finally there is a thorough discussion of the subject at our hospital conference during this session of the Clinical Congress. The fundamentals of the plan have met with almost unanimous approval.

The plan briefly summarized is as follows:

1. Every standardized hospital shall furnish an examining room or rooms, to which any legalized practitioner, who is a member in good standing of his respective county medical society and the American Medical Association, may bring a patient for examination. There shall be no charge for the examining room.

2. The hospital shall furnish to the practitioner every facility in the way of aids, consultants when necessary, laboratory tests, etc., as will insure a comprehensive audit of his patient's condition.

3. The charge for the required laboratory tests shall be nominal, and a maximum of actual cost.

4. The physician shall render to the patient a bill covering his fee for the examination, and where there is a charge for laboratory services, he shall be responsible to the hospital for its payment.

TABLE I.—SUMMARY

	1920	1922	1923	1924	1925	1927	Percentage of increase (in 8 yrs.)
Prudential Insurance Company of America	1,500					58,000	3,867 (in 8 yrs.)
The John Hancock Mutual Life Insurance Company					146	2,617	1,792.5 (in 3 yrs.)
Penn Mutual Life Insurance Company			568			1,651	290.5 (in 5 yrs.)
New England Mutual Life Insurance Company					Began	4,600	—
Equitable Life Assurance Society	4,554					25,030	549.5 (in 8 yrs.)
Metropolitan Life Insurance Company	10,904					92,361	847.04 (in 8 yrs.)
Life Extension Institute	13,233					105,366	796.2 (in 8 yrs.)
Cornell Clinic		147				645	438.7 (in 6 yrs.)

5. No hospital shall accord these facilities to any individual who is not accompanied by his or her doctor, or who does not carry a letter from his or her doctor in which certain services are requested.

6. An individual who applies for an examination and who has no physician should be referred to a duly appointed, disinterested committee consisting of a representative or representatives of the county medical society and the standardized hospitals of the community, and this committee shall advise the patient in the selection of a physician.

7. Except in dire emergency, no hospital shall treat a patient who was examined in the Health Inventorium, except by request or consultation with the referring physician.

XIX. THE DEMAND FOR HEALTH EXAMINATION AND ITS ACCEPTANCE

It is not surprising that life insurance companies should advocate and be ready to lend financial support toward popularizing periodic health examinations. This commendation only emphasizes their importance. They recognize the movement as a substantial business asset, as it will extend the life of their policy holders, reduce the cost of insurance, and incidentally substantially increase profits. Are not these facts, substantiated by business sagacity, evidence that you and I, as policy holders, too, will profit in longer life and better health?

Dr. Augustus S. Knight, of the Metropolitan Life Insurance Company, recently at my request gave me figures to indicate the increase of demand and acceptance by the policy holders of yearly examinations advocated and provided by several of the larger insurance companies.

The Prudential Insurance Company of America

reports 1,500 examined in 1920, and 58,000 in 1927, or an increase of 3,867% in eight years.

The John Hancock Mutual Life Insurance Company, 146 in 1925, 1,487 in 1926, and 2,617 in 1927, or an increase of 1,792.5% in three years.

The Penn Mutual Life Insurance Company reports 568 in 1923, 1,651 in 1927, or an increase of 290.5% in five years.

The New England Mutual Life Insurance Company did not offer examination until 1925. In 1927, approximately 4,600 examinations were given.

The Equitable Life Assurance Society reports: 4,554 in 1920, and 25,030 in 1927, or an increase of 549.5% in eight years.

The Metropolitan Life Insurance Company reports: 10,904 health examinations in 1920, and 92,361 in 1927, or an increase of 847.04% in eight years.

Life Extension Institute—13,233 examinations in 1920; 105,366 in 1927; 796.2% increase in examinations in 8 years.

Cornell Clinic—147 examinations in 1922; 645 in 1927; 438.7% increase in 6 years.

The approximate increase in demand for periodic health examinations with companies which give figures for 1920 and 1927, ranges from the encouraging figures of 549.5% to 3,867% (Table I).

Considering the short time occupied in the experiment, this is a showing that demonstrates a substantial interest by the people. Notwithstanding a reluctance on the part of not a few policy holders to accept the service on the ground that it is not an entirely disinterested activity, it is a movement that will develop incalculable health conservation.

XX. INDEMNITY COMPANIES

Our College has been asked by a number of the important indemnity companies and industries

who must provide protection to their employes to make a survey that will assist them to give the highest degree of protection to the employed in industry. As a result, through our Board on Traumatic Surgery, we made careful inquiry into the protective measures and health care that are provided to the great number of employes in large corporations. Our close contact with the hospitals of the United States and Canada makes this new survey dovetail very fittingly and economically with our yearly survey of the hospital field.

XXI. INDUSTRIES

While indemnity companies and state laws furnish protection to men who labor in the industries, in the last analysis, such indemnity protection is financed by the industries themselves. Wisdom and efficiency have led a considerable number of the larger corporations who employ labor to adopt methods of self-protection by furnishing to their men every facility that scientific medicine offers in the way of preventive and curative health measures; and similar facilities are provided also to their entire administrative force. The beneficent effect of this system in preserving health and furnishing the best surgical and medical aid in case of injury or illness is not of less importance because it results in a financial saving to the industries which furnish the aid; but it is the most substantial and effective commendation of scientific medicine and its relation to personal health.

Our survey indicates that this form of humanitarian service has increased enormously since 1920.

Questionnaires sent: 172

Replies received: 61 (which represent approximately 844,053 employes)

1. Medical service and periodic supervision:

- 27 report complete and compulsory service
- 5 report partial service
- 15 report service on employment only
- 1 reports service after 45
- 1 reports service for factory employees only
- 1 reports service for office employees only
- 6 report no medical service
- 3 report medical service optional
- 2 did not answer question
- 2. Attitude toward the service:
 - 31 report employees welcome it
 - 6 report employees tolerate it
 - 4 report prefer own physician
 - 20 did not answer question
- 3. Medical service extended to families of employees:
 - 5 report yes
 - 19 report occasionally
 - 22 report no
 - 15 did not answer question
- 4. Increase, 1920 to 1928, in number of periodic health examinations:
 - 1 reports 700%
 - 1 reports 300%
 - 1 reports 100%
 - 4 report 75 to 80%
 - 2 report 50%
 - 4 report great increase
 - 7 report 10 to 40%
 - 2 report no increase
 - 39 did not answer question
- 5. Estimated percentage unsuspectingly harboring some disease or physical defect:
 - 5 report 90%
 - 1 reports 75%
 - 4 report 50%
 - 5 report 35 to 45%
 - 4 report 15 to 25%
 - 6 report 10%

- 4 report 4 to 8%
- 1 reports many
- 31 did not answer question
- 6. Age when degenerative diseases manifest themselves:
 - 8 report ages 30-40
 - 18 report ages 45-50
 - 6 report ages 50-60
 - 1 reports all ages
 - 1 reports depends on individual
 - 27 did not answer question
- 7. Probable result in preventing, modifying, postponing or curing degenerative diseases:
 - 26 report much benefit
 - 10 report some benefit
 - 1 reports one-half ignore advice
 - 3 question the value
 - 21 did not answer question
- 8. Probable effect in increasing longevity:
 - 28 report great benefit
 - 6 report increase life from 4 to 10 years
 - 2 report increase life from 10 to 20 years
 - 4 report some help
 - 21 did not answer question

The above summary represents 61 replies from industries which employ 844,053 individuals.

XXII. LABOR

Labor has not been slow to recognize the importance of this movement. Samuel Gompers, outstanding statesman of labor, during his lifetime earnestly and continuously urged his great army of followers to ally themselves with scientific medicine. His worthy successor, William Green, the present President of the American Federation of Labor, is backing the program of our College to improve the status of industrial surgery and medicine. There is no power greater than organized labor to influence the advancement and extension

of scientific medicine. Following the demonstration of the care of men in industry, especially in the production of munitions and other materials for warfare, the average increase in yearly health audits among labor men, based on our survey, is approximately 95% since 1920. This favorable showing is possible because most of the industries surveyed had similar service in 1920.

XXIII. ARMY AND NAVY

As early as 1905, Theodore Roosevelt, with his alert mind, looked with appreciative vision upon this problem of keeping physically fit; and, characteristically, he acted. Why have weak links in the United States Army, Navy, Marine Corps, and Public Health Service when by proper medical supervision the unfit units could be weeded out? From that time to the present the United States soldiers, sailors and marines have been submitted to regular physical examinations. The benefits of that program are now extended to the members of their families. By this regulation alone, over one million citizens are examined yearly and receive the benefits of preventive medicine.

XXIV. UNITED STATES ARMY, NAVY, AND GOVERNMENTAL DEPARTMENTS

Questionnaires sent: 10. Replies received: 9

1. Are medical service and supervision provided:
 - 2 report compulsory service
 - 6 report service (entrance only)
 - 1 reports no service
2. Total number represented:
 - 5 replies represent 609,786 individuals
 - 4 did not answer question
3. Attitude toward the service and supervision:
 - 3 report welcome it
 - 6 did not answer question
4. Is service extended to families:

- 1 reports occasionally
- 8 did not answer question
- 5. Increase, 1920 to 1928, in number of periodic health examinations:
 - 2 report compulsory prior to 1920 and since
 - 7 did not answer question
- 6. Estimated percentage unsuspectingly harboring some disease or physical defect:
 - 1 reports 6%
 - 8 report no data
- 7. At what age do degenerative diseases manifest themselves:
 - 1 reports ages 38 to 40
 - 2 report age 45
 - 6 did not answer question
- 8. Probable result in preventing, modifying, postponing, or curing degenerative diseases:
 - 2 report prolong life
 - 1 reports reduce morbidity and mortality
 - 6 did not answer question
- 9. Probable effect of periodic health examinations in increasing longevity:
 - 1 reports 10% increase
 - 1 reports 25% increase
 - 3 report increase
 - 4 did not answer question

XXV. ELEMENTARY AND SECONDARY SCHOOLS

In the last ten years, in my travels, and talks at sectional meetings of the American College of Surgeons, I have found well organized educational departments in practically every state of the United States and every Province of Canada. With few exceptions primary schools, and authorities in higher education, are careful to note the physical well-being of pupils. It is an exception if the authorities do not insist upon vaccination against smallpox, examination of the throat, tonsils, hearing, and eyesight. As an authoritative

statement on this subject I herewith submit an analysis of our survey which summarizes the activities of the health authorities of eight cities of the United States with a population of not less than 250,000 each.

Questionnaires sent: 13

Replies received: 8

1. Are medical service and supervision provided to students:

5 report compulsory with all students

1 reports optional with all students

1 reports compulsory (entrance only) with all students

1 reports optional (entrance only) with all students

2. Total number of students: 2,308,349

3. Attitude toward medical service and supervision:

7 report welcome it

1 $\frac{2}{3}$ report welcome ($\frac{1}{3}$ refuse, mainly Christian Scientists, chiropractors, etc.)

4. Increase, 1920 to 1928, in number of periodic health examinations:

41% average increase

3 did not answer question

5. Estimated percentage unsuspectingly harboring some disease or physical defect:

50% average

1 did not answer question

XXVI. INSTITUTIONS OF HIGHER LEARNING

Questionnaires sent: 13

Replies received: 4

1. Are medical service and supervision provided to students:

4 report yes

2. Total number of students: 51,370

3. Attitude toward medical service and supervision:

4 report welcome it

4. Increase, 1920 to 1928, in number of periodic health examinations:

225% average increase

2 did not answer question

5. Estimated percentage unsuspectingly harboring some disease or physical defect:

1 reports 50%

1 reports many

2 did not answer question

6. Probable effect in increasing longevity:

1 reports increase life 10 years

2 report great benefit

1 reports increase life 10 to 15 years

XXVII. EMPLOYES OF CITY AND STATE HEALTH DEPARTMENTS

Questionnaires sent: 26

Replies received: 16

1. Are medical service and supervision provided to employees?

9 report no medical service

7 report yes

2. Total employees: approximately 5,000

3. Attitude toward the service and supervision:

6 report employees welcome it

2 report employees tolerate it

1 reports employees prefer own physician

7 did not answer question

4. Is service extended to families:

9 report never

3 report only when requested

4 did not answer question

5. Increase, 1920 to 1928, in number of periodic health examinations:

1 reports 37%

2 report 100%

1 reports 500%

12 did not answer question

6. Estimated percentage unsuspectingly harboring some disease or physical defect:

- 1 reports 3%
- 1 reports 10%
- 1 reports almost all
- 13 did not answer question
- 7. At what age do degenerative diseases manifest themselves:
 - 1 reports ages 35-40
 - 4 report ages 40-45
 - 1 reports age 50
 - 1 reports ages 40-60
 - 1 reports ages 55-60
 - 8 did not answer question
- 8. Probable result in preventing, modifying, postponing, or curing degenerative diseases:
 - 1 reports questioned the value
 - 8 report beneficial
 - 2 report postpone
 - 1 reports 60% improvement
 - 4 did not answer question
- 9. Probable effect of periodic health examinations in increasing longevity:
 - 12 report great benefit
 - 4 did not answer question

XXVIII. ESTIMATED INCREASE OF DEMAND FOR EXAMINATION

A questionnaire was sent to several groups of leaders in the profession, and the replies were most impressive.

- 371 questionnaires to Fellows of the American College of Physicians (born 1881-1890);
- 276 questionnaires to Fellows of the American College of Physicians (born 1875-1880);
- 189 questionnaires to Active Members of the Association of American Physicians;
- 52 questionnaires to Emeritus Members of the Association of American Physicians;
- 25 questionnaires to Associate Members of the Association of American Physicians;

80 questionnaires to General Practitioners (selected at random) in towns of 10,000 or less.

Question No. 1: "In your own practice, what is the percentage of increase (between years 1920-1928) in the number of periodic health examinations of apparently healthy individuals?" There were 254 replies, the largest proportion from the younger group of physicians. A definite percentage of increase in number of examinations was reported by 189.

54 report from a slight to 15% increase

43 report from 15% to 40% increase

28 report from 50% to 90% increase

18 report 100% increase

25 report from 200% to 500% increase

5 report from 800% to 1000% increase

1 reports 2875% increase

15 report very much greater percentage

38 did not reply specifically

8 report not in practice. 19 report no increase

Question No. 2: "Among apparently healthy individuals thus examined, what percentage were unsuspectingly harboring some form of disease or physical defect?"

61 did not answer question

1 reports questionable

9 report none

10 report few

88 report from 1% to 20%

28 report from 21% to 45%

25 report from 50% to 70%

24 report from 75% to 95%

7 report 100%. 1 reports large number

Thus, to summarize these two tables, we discover that there is a growing interest in periodic health audits on the part of apparently healthy laymen, women, and children.

The questionnaire also exhibits our profession's wholesome interest in this subject. With better

facilities furnished to the general practitioner, through our Health Inventorium, and the increased demand for periodic health examinations on the part of the public, this preventive measure for conserving health and life will make notable progress in the next few years.

Briefly, we note by the questionnaire: Question 1, that there has been an increase, between the years 1920 to 1928, on a conservative estimate of reports, of approximately 1% to 1,000% in examinations of apparently healthy individuals. By Question 2, that of the individuals examined, who were apparently well, from 1% to 100% were harboring unsuspected disease.

XXIX. CURABILITY OF THE DEGENERATIVE DISEASES

The diseases of middle life and advancing age, already referred to, are now attracting the attention of scientific medicine. What are they? At what age do they manifest themselves? Can they be postponed by thorough periodic audits? If they exist, can they be influenced by curative measures? And can the average limit of old age be advanced by careful surveillance, and scientific management?

These questions are important, not only to the scientific practitioner of preventive and curative medicine, but to every person, whether of early, middle, or advancing life, 33% of whom, at the present time, succumb unnecessarily early, and in the interval between birth and death suffer needless ills that destroy the pleasure of wholesome and healthful existence. In the second part of our questionnaire to this same group of practitioners, this subject was dealt with most interestingly by 228 doctors who honored us with replies.

Question No. 1: "In your experience, at what

age do the degenerative diseases of old age manifest themselves?"

230 replies were recorded.

1 reports late teens

1 reports ages 15 to 45

2 report 30+

93 report 35 to 45

84 report 45 to 50

34 report 50 to 60

8 report 60 to 65

1 reports 75

1 reports questionable

3 report not matter of years

1 reports distinction between male and female, ages 40 and 50 respectively

1 reports distinction between whites and negroes, ages 46 and 40 respectively

The range of years for the development of degenerative diseases, from 15 to 75, with a large preponderance from 35 to 50 years.

Question No. 2: "What would be the probable result in preventing, modifying, postponing, or curing degenerative diseases of advancing age, if each individual would have a yearly or more frequent examination and supervision?"

216 replies were recorded

73 report much good accomplished

66 report modify and postpone (of these 30 included "cure" and 40 "prevent")

35 report prolong life, increase efficiency

6 report no benefit

15 report fair

13 report very little good

8 report questionable

These 216 replies from the same group, most of them the leading, picked physicians of the United States, indicate a very great interest in degenerative diseases, and a belief that their course could be modified and postponed through these examinations.

Question No. 3: "Probable effect in increasing longevity."

232 replies were recorded

79 report increase life 10 to 20 years

4 report excellent

1 reports excellent after one generation

79 report marked increase

57 report some increase

9 report question the effect

1 reports no increase

2 report inheritance important factor

Question No. 4: "Do you advise your patients to submit themselves to periodic health examinations?"

241 replies were recorded

220 report yes

13 report occasionally

8 report no

SUMMARY OF REPLIES FROM TWELVE ORGANIZED CLINICS

Questionnaires sent: 23

Replies received: 12

1. Percentage of increase in periodic health examinations, 1920-1928:

1 reports 500%

1 reports material

3 report 100%

3 report 25%

2 report 10%

1 reports none

1 did not answer question

2. Estimated percentage harboring some disease or physical defect:

1 reports astonishingly high

1 reports 100%

1 reports 85%

3 report 50%

2 report 20%

1 reports 10%

- 2 report 5%
- 1 did not answer question
- 3. Approximate age when degenerative diseases manifest themselves:
From 35-60; mostly 45
- 4. Probable result in preventing, modifying, postponing or curing degenerative diseases:
5 report prolong life
3 report prevent, modify, postpone
2 report fair
2 did not answer question
- 5. Probable effect in increasing life:
10 report prolong life from 4 to 10 years
1 reports prolong life many years
1 did not answer question
- 6. Does your clinic advise periodic health examinations:
9 report yes
1 reports occasionally
1 reports no
1 did not answer question

FINAL SUMMARY OF OUR INTERPRETATION OF THE FIGURES OF THIS INCONCLUSIVE SURVEY AND RESEARCH

(a) Estimated number of periodic health examinations of apparently healthy individuals—in 1920, 5,000,000; in 1927, 25,000,000; (b) One-third of the deaths in 1925 (or 502,083 deaths) are attributable to degenerative diseases of middle life and old age; (c) Degenerative diseases manifest themselves at average age of 45 years; (d) 236 replies from eminent internists, and 18 replies from general practitioners, indicate yearly examinations would modify and postpone the degenerative diseases, and increase longevity and the maximum old age limit; (e) 35% of apparently well individuals receiving periodic health examinations are found to harbor some form of unsuspected disease or physical defect;

(f) 90% of our replies from internists and outstanding clinics reveal that patients are advised to submit to periodic health examinations; (g) Labor in industry, employes in governmental and civic organizations, pupils in elementary and secondary schools, colleges, and universities, practically all receive and welcome some form of personal periodic supervision, advice and service, and at least 17,500,000 receive complete periodic examination service; and an estimated additional 3,000,000 men and women, not included in the above, brings the grand total to 20,500,000.

The above figures, while not conclusive, indicate the enormous interest that is developing in the subject of periodic health examinations. However, this is not a guarantee that all of these examinations now are to the highest degree comprehensive and efficient. The figures do indicate the lay public's receptivity to this important innovation. And their acceptance of the ministrations of scientific medicine places upon the profession a responsibility that should induce us to give a one hundred per cent service.

XXX. CURATIVE MEDICINE AND SURGERY

Each day elective surgery alone—with early operations for cancer; goiter; prostatic degeneration; appendicitis; spinal, cerebral, biliary, gastric and infectious diseases—is extending the lower limit of longevity and restoring invalids to healthful living.

Given opportunity to examine individuals before disease is suspected, curative medicine, with its aids in diagnostic precision and its therapeutic accuracy, is keeping people well, curing the sick, and daily adding to the wholesomeness of living and the span of life.

XXXI. THE INFLUENCE OF THE PHYSICIAN IN GAINING CO-OPERATION OF THE PUBLIC

A mistaken policy of silence, and a tradition of non-communicability in discussing the health problems of our patients, has militated against our full influence with the public. No profession, not even the ministry, can more effectually guide a large proportion of the community on a private or public policy. When we fail to exert this prestige, it is the fault of our profession and not of the public.

We have had three outstanding illustrations of this statement:

1. In 1920 the irregular practitioners of the healing art, the patent medicine venders in California, backed by subsidized newspapers, attempted to prevent animal experimentation in the teaching of medicine within the state. The scientific medical profession was aroused, the educated and sane people of that great state rallied to their support, and the antagonists of scientific progress were completely routed.

2. In 1922, a similar belligerent campaign against scientific medicine occurred in Colorado. For a time it appeared that the qualified doctors would have to forfeit those requisites which are indispensable to the teaching of their profession, and that the legislators of an important state were to turn thumbs down on the progress of civilization. Again, the scientific medical profession was aroused, exerted its influence, took the public into its confidence, told them the facts, obtained their co-operation, changed the tide toward sanity and common sense, and completely routed the opposition.

3. In 1921, Massachusetts, indifferent to the growth in its midst of the most subtle forms of irregular practices, found these same cults, who repudiated the conventions of civilization and

considered themselves strong enough to terminate the teaching of scientific medicine, were organized to stop animal experimentation in the teaching of medicine. Slowly, but eventually, the profession of scientific medicine was aroused—they gained the co-operation of their patients, and together they routed the Knights of Unrighteousness beyond redemption.

The profession of medicine exerts a powerful influence, and can, if it will, convince at least 75% of our people that it is their inalienable right to be kept well, and that the scientific medical profession is the one authentic, accredited, and competent agency equipped to keep them well so far as is humanly possible.

Lay people, in the majority, are waiting for us to take the lead in the practice of the healing art; to halt our mysterious methods, and give them face to face facts and guidance so that they may be maintained in good health.

XXXII. GENERAL SUMMARY

1. The profession of scientific medicine, organized before the advent of Christianity, is the eldest of learned professions. Spiritually, morally, and scientifically, in all civilized countries, it is outstandingly the recognized authority in the prevention and cure of disease. Like the great religions of the world, it recognizes no geographical or political bounds, but unlike the great religions, scientific medicine has no competitors. It is the one authority recognized by all civilizations.

2. For centuries scientific medicine was practiced as an art and every scientific truth employed to make its authority more worthy and reliable. With the development of the exact sciences, it has strengthened its art and made more definite its authority and accomplishment by appropriating the proved truths of modern science, until it is

now known, and properly so, as the science of medicine.

3. As we have shown, problems of disease, one after another, have been and are being conquered, and not only the trained physician has this knowledge, but the educated layman, too, is prepared to accept preventive and curative scientific medicine as the recognized authority; and rapidly the public is improving the opportunity to keep fit and submit to periodic surveillance by the practitioner of scientific medicine.

4. The thorough physical examination of millions of soldiers in the Great War, proved the value of scientific medicine, and convinced millions of men of the wisdom of a periodic physical audit, under the supervision of scientific medicine, to keep themselves well. Through systematic propaganda advocating preventive medicine to conserve personal health, the general public has become aware of the value of periodic health examinations; labor has been convinced of the value of keeping well; and the industries, as an economic asset, have been induced to establish scientific facilities to keep their employes to the highest degree in good health.

5. Change of opinion has been wrought in the minds of the laity, in their attitude toward the relative wisdom of periodic audits to preserve health, rather than to wait for illness to make evident a possibly incurable condition. A wholesome evolution in the practice of medicine is resulting, and it promises to become a boon that will preserve personal health to the maximum, and afford satisfaction to the scientific practitioner of medicine because of ability to practice his profession with greater precision and success.

6. The American College of Surgeons has occupied an important position in this movement, which must command the support of the teachers of medicine, the practitioners of medicine, the

authoritative societies of medicine, the journals of medicine, and through all dignified means of publicity, it must educate the public to the necessity of co-operation with scientific medicine if they are to be protected from illness, and if the happiness of their lives is to be enhanced.

7. Statistics show that 25,112,309 individuals in the United States are employed in industrial occupations. According to our limited survey, one-half of these individuals receive medical service and periodic supervision; conservatively we estimate that of the total employed only one-fourth receive this service, or 6,278,077.

In the U. S. Army, Navy, and Marine Corps 250,188 of their personnel receive this thorough service, which is extended also to the members of their families. On the basis of four members in each family, this brings the estimate to 1,000,752.

There are in the elementary and secondary schools, universities, colleges and professional schools (continental United States) 27,381,816 pupils and instructors. Our survey shows that three-fourths of these receive medical service and periodic supervision, but conservatively we estimate only three-eighths, or 10,268,181.

SUMMARY

Individuals in industrial occupations who receive complete medical service and periodic supervision (estimated).	6,278,077
U. S. Army, Navy, and Marine Corps, and members of their families (estimated).....	1,000,752
Pupils and instructors in elementary and secondary schools, universities, colleges, and professional schools of continental United States (estimated).....	10,268,181
Further, it is estimated that an additional 3,000,000 men and women, not	

included in the above, receive complete and thorough periodic health examinations	<u>3,000,000</u>
Total in these four classifications who receive medical service and periodic supervision (estimated)	20,547,010

8. Through our recent research and study with the industries, labor, insurance, indemnity companies, governmental, state, county, and civic authorities, our universities, colleges, high schools, and primary schools, and others in their preventive health activities, from our direct questionnaire to our most influential practitioners of medicine, there is convincing evidence that the public is rapidly accepting the policy of co-operation with scientific medicine, and the practitioner of medicine is more and more willing to do his part, all of which offers conclusive proof that within the next ten years, the momentum of this evolution will find 30,000,000 of our people accepting the program of yearly health audits to conserve personal health, as readily as they now accept the protection provided to the masses by public health activities.

9. The health inventorium—which brings into the strong trinity of co-operation the scientific medical practitioner, the standardized hospitals, and the laity—when thoroughly understood and accepted, will insure to every practitioner adequate facilities to make thorough examinations, and to the public a thoroughly reliable service.

10. The questionnaire to internists and general practitioners reveals a keen interest in observation and study of the insidious diseases of middle and advancing age—the degenerative diseases, and most of them have expressed the definite opinion that yearly or semi-yearly health examinations will reveal these diseases in their incipency, afford opportunity to modify and postpone

the progress of many of them, and definitely prevent the development of some of them. Inasmuch as one-half of our yearly deaths are attributable to diseases which reap their harvest in man's years of greatest usefulness, the significance of this authoritative information is apparent.

11. This review of the evolution of the progress of clinical medicine and surgery emphasizes our responsibility as practitioners of medicine. We must give service to the utmost of our ability, and with the lay public must rest the responsibility of accepting it. Volunteer acceptance of this program will:

- (a) Preserve rather than restore the health of 100% of the people, to the greatest degree possible through the sciences;
- (b) Require that practitioners of medicine be educated in the basic sciences before they may be licensed to practice the healing art;
- (c) Make readily available to medical schools all facilities necessary to teach scientific medicine, and to preserve modern research methods in the laboratories by animal experimentation;
- (d) Employ all dignified publicity methods, guided by scientific medicine, to enable the public to recognize the reliability of scientific medicine and to distinguish it from the subtleties of uneducated pretenders and imposters.

12. Alas, this review estimates that approximately one-fourth of the laity are now indifferent to the benefits of scientific medicine, and that approximately another one-fourth are antagonistic to it, the victims of sophists, quacks, and other unscientific practitioners. While this affects detrimentally the individuals of adult life whose wisdom should guide them to choose judiciously, and with whom it is futile to protest, unfortunately it also affects their innocent children and dependents, and results in much unnecessary sickness and

many premature deaths. The increased health rate, and the number of lives saved in 25 years of this century by the application of scientific medicine, proves that the refusal of this large proportion of our people to accept our aid without doubt accounts for much unnecessary illness and suffering, and at least 17,581.2 preventable deaths each year.

13. More than two-thirds of our people morally and spiritually favor the 18th Amendment to the Constitution of the United States. In spite of the injudicious administration of this 18th Amendment, which has resulted in an orgy of law-breaking, of self-indulgence, and ridicule on the part of the other one-third of our citizens, the foundation has been laid for a demonstration of race betterment and extension of life that will astonish the world.

14. It is my wish that this review may aid to convince the people that one-half day each year should be set aside for a comprehensive health audit of each member of every family. As physicians we know the essentials and the details of scientific medicine. We believe that the layman and woman from childhood should have a convincing knowledge of the essentials of preventive medicine. This knowledge must be imparted by dignified publicity methods; by teachers who are educated physicians.

15. Speculation, though not conclusive, is interesting. If this reasonable program is accepted and acted upon (and the present attitude of the people indicates that it is being accepted and adopted), based on our comprehensive survey, I venture to predict that accurate statistics will record an extension of longevity from an average of 58 years in 1920 to 65 years in 1930; extension of middle age (40 to 70 years in 1920), to from 45 to 80 years in 1930; and a postponement of senility, and extension of the average old age limit, from its present average of 90 years, to

100 years or more in 1940. And, what is of greatest importance, periodic health examinations, with the resulting decrease in preventable illness, will add immeasurably to the wholesomeness and happiness of more than 100 millions of people in the United States and Canada.

II.

PRESIDENTIAL ADDRESS

THE AMERICAN COLLEGE OF SURGEONS—THE PAST, THE PRESENT, AND THE FUTURE ¹

I. THE OLD GUARD VERSUS THE NEW GUARD

THE years 1885 to 1900 were a transitional period in American surgery, and brought us from laudable pus to the conception of aseptic surgery; from rapid, spectacular technique to deliberate and refined methods in operating.

We had been blind followers, and this was the beginning of our independence. Scientific medicine had given us facts, and we began to interpret these facts. Though they did not always agree with our procedure, based on traditions gained from foreign teachers and literature, we began to do our own thinking. The leaders of this renaissance were maturing. They had inquiring minds and they were not yet so sure of themselves that they had become provincial. They argued: "We may not be right. Let us see what our confrères are doing. In this way we may find something to imitate, or we may learn what not to do."

Meanwhile, there were pathfinders who were being watched and criticized. They were going too fast even for some of the most progressive. Senn had written into the history of surgery his initial chapter on the development of intestinal surgery; Fenger had coupled pathology with surgery; Murphy was altering traditions; the Mayos were building, if not better than *they*

¹Delivered at the Convocation of the American College of Surgeons, Boston, October 12, 1928.

knew, better than *we* knew. Thus miracles were in the making.

In substance, George said to Harvey: "Let us, as a group, get together and watch one another operate. Let us criticize, talk out in meeting, and each get the standpoint of the other. Let each of us know what all of us know, and let us take our knowledge at first hand from those who are doing things rather than from those who are talking and writing about them."

And thus the Society of Clinical Surgery was organized in July, 1903, an act that gave to the surgery of the world and to the conservation of surgical patients, the greatest impulse since the work of Pasteur and Lister. It taught a group of leaders the best methods current, not only in the United States, but in all civilized countries.

Such advantages could not remain exclusive. Other surgical specialists imitated. One clinic and another were established; they welcomed those who wished to observe the work of others, and became the mecca for aspiring surgeons.

II. STIMULATION OF CLINICAL LITERATURE

This was the soil that was being fertilized, a fallow field with possibilities of a great crop.

Your speaker became interested in this progressive movement as he sat one day at a popular clinic, the guest of the Society of Clinical Surgery. What a marvelous spectacle—the earnest interest of these leaders from all of our great clinical centers, their constructive criticisms, and the instructive replies; in the amphitheater the eager faces of a hundred other surgeons not members of this Society, men from the provincial towns of the United States and Canada, who were also welcomed to this clinic. Later, at the informal round table, all fore-gathered to review the work of the morning and to enter into free discussion.

Several years earlier, in 1905, SURGERY, GYNE-

COLOGY AND OBSTETRICS was established to record the work of men who were actually doing surgery, a *practical journal for practical surgeons*; edited by *active surgeons* rather than by literary writers remotely connected with clinical work; the profits from the journal to be utilized in strengthening its influence, and not put into the pockets of business promoters. This journal had been welcomed and supported by wellnigh every surgeon in the interesting audiences of that day, and this experience with the journal influenced much the silent observer. What did it mean? Was there ever a greater manifestation of interest in surgical work, and were there ever more constructive discussions?

Did it not mean that these men, as practical practitioners, were demonstrating that there existed an unorganized demand for a new form of medical society, to supplement, not to displace, the time honored associations, a clinical rather than a purely academic body; a "show me" rather than a "tell me" society? The leaven had become implanted in the mind of the silent observer, and the leaven became insistent in its development.

A trip had been planned which involved a sea voyage to the Mediterranean. This individual took ship accompanied by an inspiring and brainy woman, rightfully ascribed as his lawful wife. The decks were broad, the leisure ample, and the ship afforded opportunity for miles of deck walking which was stimulated by the implanted leaven.

III. THE CONCEPTION

The question was: How could we make accessible to the many aspiring surgeons what was being enjoyed by the exclusive few, and how enable them to see not only a few clinics but to observe the work of the individual surgeons of these privileged groups?

The solution came suddenly like a flash of lightning. The initial problem was visualized, the technique approved, and plans formulated. The blue of the sea reflected no flaws; the soft tropical breeze brought forth no criticisms. The heaven at last had brought forth results, and these results were poured with enthusiasm into the ears of the often critical companion. The blue of the Mediterranean again approved, as reflected in sympathetic eyes; and no trace of criticism came to mar the scene. The highest court had approved. The Clinical Congress of Surgeons was conceived.

IV. THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA

This was February of 1910. There and then it was decided that the 3,000 subscribers to SURGERY, GYNECOLOGY AND OBSTETRICS should be invited to Chicago in November of that year, as guests of the journal, to observe at first hand the work of the leading surgical clinicians of that mid-western city.

On November 7th of 1910, the first day of the two-week session, we waited breathlessly and anxiously for the response. Many acceptances had been received—so many that it seemed too good. It was ominous. The first day 1,100 registered; 1,600 finally. Many were in attendance who did not register.

On November 19th, a notice signed by the late Dr. James B. Eagleson, of Seattle, was bulletined at headquarters which asked any who were interested to attend a meeting for the purpose of making permanent the organization. Several hundred of the visiting surgeons accepted the invitation, and a formal association was perfected, by name "The Clinical Congress of Surgeons of North America." John B. Murphy appeared on the floor, thrilled the audience by a rousing speech of

commendation, and nominated Albert J. Ochsner as the first President.

The informal meeting demonstrated beyond a doubt the demand for this new form of organization. Your orator was called to Philadelphia, on December 6, 1910, met a group of Philadelphia's leading surgeons at the residence of John G. Clark, and accepted the invitation to hold the 1911 Congress in that city.

V. DIFFICULTIES

The Philadelphia Congress was held in 1911 with a stipulated fee for those who attended, sufficient to pay expenses. Eleven hundred were registered, and the leaders of surgery in the Quaker City furnished a magnificent program of clinics. John G. Clark was chairman of the Committee on Arrangements, Edward Martin was elected President, and New York was selected as the host for 1912.

It had become apparent in these initial meetings that some means should be adopted to limit the attendance to the registered surgeons; some means of limiting accommodations at clinics to ticket holders; some means of enforcing the hospitals to recognize tickets as a requirement for admission; some means of establishing an authority that would include only acceptable clinics at each session of the Congress; some means of determining who, among the clinicians of the city acting as host, should be invited to give clinics. Standards, ethics, and the general acceptability of guests and clinicians were recognized as acute problems.

During the year there had been much discussion of our problem among those of us who were responsible for this movement. Some were sympathetic and others decidedly discouraging as to the wisdom of continuing this ambitious innovation.

VI. LOOKING TO PERMANENCY

Your speaker received many hints from the extensive discussion which, on careful study, offered a solution of the obvious difficulties, and gave promise of one more long advance in progress of organized surgery on our continent. The substance of this plan was dictated to the public stenographer of the Twentieth Century on a journey from Chicago to New York, preliminary to the 1912 meeting.

On arrival in New York, this plan was submitted with feverish enthusiasm to John B. Murphy who was routed from his morning bath to receive the impatient emissary. Dr. Murphy, clothed in a bath towel, reluctantly scanned the improvised plan. As he read, his expression grew more and more sympathetic, and as he finished, he enthusiastically asked the privilege of seconding and supporting the plan when it was submitted at the mass meeting of the Clinical Congress.

The prospectus was then submitted (not without fear and trembling) to our autocratic President, Edward Martin. Meanwhile, the document had been put into the form of a resolution, which provided for the appointment of a committee of twelve, with power to act, which should proceed toward the perfection of the new organization which was to be closely allied with the Clinical Congress and would aid it in controlling the personnel of its members, its clinicians, and its moral and ethical regulations.

Friday afternoon, November 15, 1912, the plan was presented by your speaker to two thousand of the surgeons in attendance at the Congress. Doctor John B. Murphy seconded the resolution which recommended a plan for the organization of an American College of Surgeons.

President Edward Martin lost no time in urging the importance of the movement, and with a few

choice words of warning against imitating all things of pomp and circumstance of the effete past, he commanded a rising vote in favor of the resolution. This vote carried with it the appointment of a committee of twelve on organization, a majority of whom were selected almost exclusively from among the old guard of progressive surgeons who comprised the Society of Clinical Surgery as follows: Edward Martin, Emmet Rixford, John B. Murphy, Rudolph Matas, Albert J. Ochsner, Charles H. Mayo, Frederic J. Cotton, George Emerson Brewer, John M. T. Finney, Walter W. Chipman, George W. Crile, and Franklin H. Martin.

During the succeeding six months, Franklin H. Martin, a member of this committee, visited the leading cities of the United States and Canada. He conferred with groups of surgeons, selected by sub-committees and called together local men of prominence to take part in the discussion. These amplified groups, numbering five hundred and fifty surgeons, were invited to a meeting on organization to be held later in Washington, D. C.

At the appointed time, May 5, 1913, 450 leaders in the surgical profession appeared in Washington to assist in or protest against the establishment of an American College of Surgeons. Under the skillful chairmanship of Edward Martin, enthusiasm was stimulated, criticism modified, opposition discouraged, a constitution and by-laws adopted, officers, a Board of Regents, and a Board of Governors elected, and November 13, 1913, appointed as the date for the first Convocation of the new College.

Again the surgeons of all America honored the group comprising the Society of Clinical Surgery, the old guard, with a majority among the officers and Board of Regents. The original Regents have become the veritable wheel-horses of the

College. They were as follows: John M. T. Finney, President; Walter W. Chipman and Rudolph Matas, Vice Presidents; Albert J. Ochsner, Treasurer; Franklin H. Martin, Secretary General; George E. Armstrong, George E. Brewer, Herbert Bruce, Frederic J. Cotton, George W. Crile, William D. Haggard, Edward Martin, Charles H. Mayo, Robert E. McKech-
nie, John B. Murphy, Harry M. Sherman, and Charles F. Stokes.

To these from time to time other surgeons possessing vision, and executive and administrative ability have been elected to aid in steering our course, among whom, I especially wish to mention Frank F. Simpson, William Crawford Gorgas, Harvey Cushing, William J. Mayo, Alexander Primrose, William C. Braisted, George E. de Schweinitz, J. Bentley Squier, James B. Eagleson, Charles H. Peck, Daniel F. Jones, Frederick W. Parham, Jasper Halpenny, Merritte W. Ireland, Allen B. Kanavel, Arthur A. Law, Frederic A. Besley, Herbert S. Birkett, John B. Deaver, Henry H. Sherk, Lincoln Davis, John G. MacDougall, Ernst A. Sommer, Charles E. Kahlke, Robert G. LeConte, Horace Packard, Charles E. Sawyer, George P. Muller, Frederic N. G. Starr, Robert B. Greenough, John S. McEachern, John G. Clark, George Henry Murphy, George David Stewart, Frank H. Mewburn, Irvin Abell, A. T. Bazin, G. A. B. Addy, C. Jeff Miller, Harvey G. Mudd, Eugene H. Pool, Clarence L. Starr, Charles F. Nassau, Truman W. Brophy, J. Chalmers Da Costa, John Osborn Polak, and Herbert P. H. Galloway.

Particularly do I desire to acknowledge the time-serving work that has been conspicuous for its loyalty and disinterestedness in our Directors, Associate Directors, and Secretaries, including John G. Bowman, M. T. MacEachern, E. I. Salisbury, Allan Craig, Judge Harold M. Steph-

ens, Bowman C. Crowell, A. D. Ballou, Marion T. Farrow, and Eleanor Grimm.

VII. EARLY ACTIVITIES

In initiating this new kind of society, there was little justification in the venture, unless something of outstanding value should come from it. The group of men who were in at the beginning were not politicians seeking personal prestige; they were busy surgeons who were occupied in the practice of scientific medicine. What was the idea? Why another society?

The purpose was to organize: 1. A comprehensive association of practical surgical specialists, and do on a large scale what the Society of Clinical Surgery was doing on a smaller scale, viz., enable visiting surgeons to see surgical confrères at work in their respective environments; discuss with them problems *based on practical surgical experience* rather than listen to literary treatises based on theoretical deductions.

2. A comprehensive association that would conscientiously enroll those surgeons of the American continent as in the opinion of their confrères were competent to do surgery, were morally and ethically reliable, and would support the ideals of our profession; an association which would welcome into its ranks any individual licensed physician whose credentials, under proper scrutiny, measured up to stipulated requirements, and through which the public by dignified means could recognize and obtain the services of such qualified men.

3. A comprehensive association that would with all of its resources oppose financial dicker-ing (commonly known as fee-splitting or the buying and selling of patients), between the medical practitioner and the surgeon, and so far as possible exclude from its ranks all offenders.

4. A comprehensive association that would

seek by every legitimate means to protect the public from incompetent, dishonest, and unnecessary surgery; that would assume leadership and co-operation with all resources of organized scientific medicine, toward the improvement of hospitals, laboratories, dispensaries, medical schools—in fact every environment in which surgery and medicine may be taught or practiced.

5. A comprehensive association that would co-operate with the people, obtain for them the benefits of scientific advice, furnish to them the services of preventive medicine, and educate them to distinguish between the reliability of scientific medicine and the false sophistries of quackery.

How well we have succeeded in fifteen years is a matter of history.

There is no doubt that our efforts have been a great factor in placing the science, technique, and administration of surgical practice in a supreme position of efficiency. Eight thousand eight hundred Fellows of the College of Surgeons are now pulling together to raise the practice of surgery to the highest degree of perfection. Many clinical organizations are following in the wake of this great movement. There is no longer provincialism in American medicine. It is unusual for doctors to be satisfied with their own efforts. We are traveling, observing, and learning to practice safe surgery.

The College is the accepted leader in bettering the hospitals of the United States and Canada, and its example has aided the hospitals of Latin America, Australia, New Zealand, and other countries of the civilized world. It has been a revolutionary movement of transcendent value to the public and to the profession.

There is no doubt that clinical surgery has been

stimulated in the different localities, and the people aroused to a knowledge of the ideals which motivate the Fellows of the American College of Surgeons, through the sectional meetings of the College, inaugurated in 1920 for the purpose of bringing a miniature Clinical Congress into the states and provinces, and carrying to large groups of laymen and women the story of scientific medicine.

There is no doubt that our practical examination for admission to the College, which requires the filing of 100 case records, has impelled recognition of the value of records, and has been the means of educating our profession to write better case histories, to improve their literary ability, and critically to observe scientific facts.

VIII. THESE ARE IDEALISTIC ACTIVITIES— WHAT ABOUT THEIR ADMINISTRATION?

After the sessions of this meeting in Boston, in which each department of the College has been reported upon and discussed, it is needless to review them in the brief time at my disposal.

Our program and leadership in the betterment of hospitals is now accepted by the national and international hospital associations, and by their great journals; by the departments of the United States government: the Army, the Navy, the Public Health Service, the Veterans Bureau, and the National Homes for Disabled Volunteer Soldiers. The South- and Central-American republics, Australia and New Zealand have studied and in many places have adopted our standards.

The most convincing evidence of the acceptance of our standards and leadership is the fact that our eleven surveys have stimulated great improvement in hospitals. In 1918, 12.9% of the hospitals with 100 beds and over met our standard; in 1928, 93.1%; 50 to 99 bed hospitals: 41.3% in

1922, and 62.2% in 1928; 25 to 49 bed hospitals, 15.9% in 1924, 18.1% in 1928. Government hospitals have advanced from 90.0% in 1925, to 100% in 1928.

In many instances these surveys, when first instituted, were considered an interference; now they are sought after and welcomed. Any community deems it a tragedy to possess a hospital that is not on the approved list of the American College of Surgeons.

IX. CLINICAL RESEARCH

Clinical Research has been organized as a distinct department, with an Associate Director in charge. It comprises:

- a. Committee on the Treatment of Malignant Diseases with Radium and X-Ray, Robert B. Greenough, Chairman;
- b. Committee on Bone Sarcoma (historically known as the Ernest Amory Codman Registry), Dallas B. Phemister, Chairman;
- c. Board on Traumatic Surgery, Frederic A. Besley, Chairman;
- d. Committee on the Treatment of Fractures, Charles L. Scudder, Chairman;
- e. Standardization of Clinical Laboratories.

These Committees consist of strong boards of clinical practitioners and administrators who seek to furnish through their activities an annual report of the consensus of opinion of leading clinicians on their respective problems.

X. RESEARCH OF LITERATURE

Our Literary Research Department is making available to clinicians an organized and authoritative means of obtaining through trained workers what they desire in medical literature—either in the form of an abstract, of a bibliography, or of extensive research of the literature in all languages. Service of this type, accessible to all

clinicians, whether members of the College or not, takes that important work out of the hands of unorganized commercial individuals, or unsatisfactorily financed organizations, and offers reliable, censored service at less than actual cost; and the expense is gradually diminishing because of our ability, through proper organization, to accumulate valuable material.

XI. MEDICAL MOTION PICTURE FILMS

Motion picture films can and will occupy an important place in the teaching of medicine. This fact is conclusively proved by the very great interest which has been manifested in the program of medical motion picture films which the American College of Surgeons is fostering in co-operation with the Motion Picture Producers and Distributors of America, Inc., and the Eastman Kodak Company; a movement which gives greater promise than any other program that the College has undertaken, a movement that will result in the development and distribution of the highest grade of medical motion pictures.

The preliminary survey of films already produced conducted by the College, reveals an astonishing amount of effort, principally by individuals, with many commendable results. However, there is opportunity for an epoch-making advance in education in general and in medicine in particular; and this opportunity is being utilized by our affiliated organizations.

XII. FEE SPLITTING

It was a bold stroke when the American College of Surgeons at its initial meeting declared against the division of fees between practitioners of medicine and surgeons. It requires courage to discuss the abominable practice, which reduced to its ultimate terms, is simply a traffic of patients between these two groups; the buying and selling of

patients, with the highest bidder the purchaser, regardless of his ability. It requires courage to discuss the subject because in so doing we must acknowledge that there are unworthy men in our own profession. It is a menace, however, that can be eliminated only through frank recognition by the profession, and education of the public.

This vicious practice will cease only when every member of the profession has the courage and the honesty to present his individual bill for services rendered, and when the public will insist upon paying each, the practitioner and the specialist, for his individual service.

One of the qualifications for Fellowship in the College requires each and every candidate to sign a declaration against the practice of the division of fees either directly or indirectly in any manner whatsoever.

Each one of the five or more individual references named by a candidate in support of his application, must state in writing over his signature that to his knowledge and belief the candidate does not practice the division of fees.

Each State of the United States and each Province of Canada has a Credentials Committee, elected by ballot by the Fellows of the College in the respective State or Province. When an applicant's name comes before his respective Credentials Committee, the acceptability of the candidate from the standpoint of division of fees must be voted upon.

The Central Credentials Committee of the College makes a careful scrutiny of the candidate's environment and methods of practice, and especially of the standing of the hospital in which he does his surgery.

Finally any charge against a candidate, or a Fellow of the College, is carefully followed up by the central office, and evidence sought upon which proof may be based. For obvious reasons it is

difficult to secure positive proof of fee splitting which would be accredited in court of law. When such proof is obtainable, the Fellow is given an opportunity to appear before the Board of Regents and make his defense. Seldom will a guilty man appear. The alternative is acceptance of his resignation or summary dropping of his name.

The most effective safeguard against fee-splitting is the standardized hospital. It is difficult for a Fellow on the staff of an approved hospital to divide fees unknown to the officials of the institution, or at least without their suspicion. When we receive rumors or charges that an individual practicing in one of our accepted hospitals is dividing fees, we inform the authorities of that hospital that such rumors have come to us, that the hospital will be resurveyed, and that the resurvey must satisfy us that the charges are unfounded. Through this procedure we immediately obtain co-operation not only of the hospital authorities, but of every honest member of the staff. Resignations from staffs, for reasons outlined above, are frequently reported.

However, the American College of Surgeons includes in its membership only 8,800 of the 164,000 doctors of medicine in the United States and Canada. Our jurisdiction extends only to our own Fellows, and to 1,919 standardized hospitals. In organizing a protest against the practice of the division of fees, and deliberately accepting the responsibility of attempting to eliminate it from our own organization, we must accept, also, the responsibility of becoming the mark for criticism by those who have reason to resent our exposure of so criminal a practice.

I am in a position to know, however, that fee-splitting is very rare in the ranks of the College of Surgeons, and that our publicity campaign has caused much discomfiture to those outside or within our ranks who continue its practice.

At one of the Credentials Committee meetings in an important state, with 30 men present to consider a long list of candidates, a member of the Committee, rather more belligerent than informed said: "Until you revise your whole plan of selecting candidates, you will fail. Practically every member of the College in this state, excepting myself and one other individual (mentioning him by name), is splitting fees." He got the retort for which he was playing. Practically every other member of the Committee honestly and indignantly resented with emphasis this unjust accusation.

There is but one procedure when loose insinuations are made, and that is to ask: "How do you know?" The College insists on proof, and proof is difficult to obtain unless the accuser acknowledges that he is a party to the transaction.

XIII. SUCCESSFUL LEADERSHIP IS MAINTAINED BY MAKING GOOD

An undertaking cannot be successful without appealing ideals; ideals cannot be realized without a sane program which will make them come true; and a sane program cannot be successfully executed without sound financing and wise administration.

To advance clinical surgery, to pursue a sound program for the improvement of hospitals, to make a drive against unworthy financial dickerings, to assume active interest in the standardization of surgical methods and the elimination of unnecessary operating, to aid literary, clinical, and industrial research—in a word to accept progressive leadership in the teaching and practice of medicine, in educating the lay public in the value of scientific medicine—it was obvious that a business like plan of financing would be necessary.

Our financial arrangement at the beginning was based on the custom current in the old societies;

a twenty-five dollar initiation fee and five dollars a year dues. After two years we realized that this would leave our program without financial support. The founders of the College, represented by our Board of Regents, were not satisfied to back another national organization in medicine if it did not possess the financial resources necessary to carry forward reforms that it had undertaken.

At the June, 1914, meeting in Philadelphia, the Regents started a movement that would eventuate in a permanent endowment fund. A new society regardless of its worthy ideals, could not expect to interest outside financiers in an endowment on the basis of paper aspirations. The Regents, at their morning session, sold the project to themselves, and decided to take it before the Fellows at a meeting that afternoon, and ask the support of volunteers.

The desire was to secure one thousand \$500 pledges from such members of the College as were willing and able to subscribe. As the interest on \$500 would represent the amount of the annual dues, it was suggested that this amount would constitute a life membership contribution. Every dollar pledged to the endowment would be invested in trust securities, and no part of the principal, it was stipulated, should at any time be expended.

One Hundred and Thirteen Thousand Dollars were subscribed at that first meeting, and by December, 1915, the subscriptions totaled \$526,000. Later the Regents allocated a portion of the initiation fees to the endowment, and unexpended surpluses from annual dues. The endowment fund today, invested in gilt-edged trust securities, which yield slightly over five per cent, has reached \$802,600.

At the 1916 meeting in Philadelphia, our By-Laws were revised, the initiation fee increased to \$100.00, and the annual dues to \$25.00.

XIV. A PERMANENT SITE

From the beginning a friendly contest ensued in the selection of a permanent home. Washington, New York, Philadelphia, Chicago and Cleveland were the principal contestants. It was easy to reach a decision, but who would finance the site? Washington, as the capital of the United States, led as the ideal location in the East; Chicago was a close second, because it is the geographical and population center. The untimely death of one of our beloved founders, John B. Murphy, led his lay and professional friends to ask the College if it would accept a permanent site in Chicago, upon which a home for the College would be builded and presented to the institution as a memorial to Doctor Murphy. This plan failed because of the sudden death of two of its principal lay supporters.

The effort, however, had crystallized opinion, and caused the Fellows of the College to vote in favor of Chicago as an acceptable location for the permanent home. This decision resulted from the assumption that a completed home on an acceptable site would accrue to the College without cost.

At a meeting of the Board of Regents in June, 1919, with President William J. Mayo in the chair, the question of site became acute. Chicago had made a promise and on that basis she had received the favorable vote. Chicago must satisfy the Regents that a site in that city was available, or the contest for permanent home would be reopened. The arbitrary Chairman would brook no delay. This was June 25th. If Chicago did not produce by August 15 satisfactory legal evidence that an appropriate site would be presented, the Regents would look elsewhere. The Chicago contingency recognized the futility of argument with the relentless power, the presiding officer, and realized that immediate action was necessary.

Within three days a site was selected which had upon it a stately building that would make a satisfactory administrative headquarters. The President was called upon to approve. "Take that," was the laconic reply. In one month the business men of Chicago had subscribed three-fourths of the purchase price, and members of the profession and Fellows of the College in Chicago the additional one-fourth. On May 1, 1920, the administrative offices of the American College of Surgeons were transferred to the permanent location.

The site also contained a suitable plot of vacant ground upon which the friends of Doctor Murphy asked the privilege to build the belated memorial and proffer it to the College as one of its administrative units. This offer was accepted. The corner stone was laid on October 23, 1923, and on June 10, 1926, the Murphy Memorial building was presented to and accepted by the College. This useful structure contains assembly halls, library, and temporary museum space. It was built at a cost of \$500,000, and involved no outlay on the part of the College.

In the meantime the ground value of our property has advanced, and with its buildings it is conservatively appraised at \$1,250,000.

XV. OUR BUDGET

Our budget for 1928, divides itself as follows:

Hospital Department.....	\$65,000
State and Provincial Sectional Meetings.	20,000
Credentials Committee Meetings.....	25,000
Clinical Research.....	25,000
Library.....	20,000

The funds for this budget come from the dues paid by Fellows of the College.

XVI. LATIN-AMERICAN ACTIVITIES

As to the financing of Latin-American activities.

Our actual surveys in Latin America followed vacation trips that were made in 1920 by Dr. W. J. Mayo and his family, and Mrs. Martin and myself; and in 1921 by Dr. and Mrs. Thomas J. Watkins, Mrs. Martin and myself. Several surveys were made: In 1921 and 1922, by Dr. Francis P. Corrigan, of Cleveland; in 1922, 1924 and 1925 by Dr. Edward I. Salisbury. These surveys, together with expenditures, incident to literature and correspondence, were met by a surplus which accrued from exhibit charges at the annual meetings of the Clinical Congress, funds which belong to the College but which are in no way contributed toward from our investments or the dues of the Fellows. For convenience of book-keeping these funds have a separate ledger account in the College books, as the Regents have always felt that the Clinical Congresses, which are attended at any one time by not more than one-third of the Fellows, should be self-supporting. The Congress is self-supporting, and its surplus is available for expenses of an extraordinary nature, which would not come within our stipulated budget for academic activities.

One cruise was arranged for individual members of the College, their families and friends. This cruise was conducted without one cent of expense to the College. It was financed by the individuals who participated in it.

XVII. OUTSIDE FINANCIAL AID

A new enterprise will not draw financial support from business or philanthropic sources, regardless of the extent of its program and worth of its ideals. It must first make good. Its activities and accomplishments must attract the attention of the public. It must create an impelling sales power before gifts can be successfully solicited, or voluntary contributions offered.

This has been the experience of the College.

With the exception of donations from our own Fellows, or appropriations obtained through special friends for specific purposes, until recently we have not attracted business or philanthropic contributions. Within the last two years a change is noted in the attitude of the public. In that period we have received moneys to be used in special work in our departments as follows: From three individual sources, for special hospital activities and research, \$15,000, \$5,000 and \$10,000. The Board on Traumatic Surgery is receiving \$20,000 and \$500, which we have reason to believe will be duplicated. Our backing and our program are being recognized.

XVIII. BUSINESS METHODS

Much planning, successful persuasion, and many refusals, polite and occasionally otherwise, have resulted in building our still youthful organization on a sound basis financially.

No organization can be considered on a sound financial foundation if it does not have the backing of a watchful and thrifty administration; and no foundation can be so unstable as a financial one. We may compliment ourselves on our satisfactory financial progress. But as an interested bystander, who has experienced the difficulties of accumulation, I tremble to anticipate what will happen to our \$2,000,000 assets if an orgy of administrative mismanagement should ensue even for a brief period.

From the beginning of our work the Regents, with disinterested persistence, have supported the idea that they were administering a public trust. They have held sacred that trust.

It is not always an easy task to instill that same attitude into the minds of half a hundred employees. Associates in our work are selected for their ability in a particular line, for their initiative, for their independence, and for their enter-

prise and industry. These qualities must be molded so that each may realize that while he is expected to perform a specific task, he must also fit into and co-operate with the comprehensive program which involves the labors of several other individuals who are responsible for different tasks in the same organization. In other words, an *esprit de corps* must be developed which makes each one loyal to the entire program of work in hand.

Furthermore, it is incumbent on each department to live within its stipulated budget. It is indeed gratifying to find one of these enthusiastic individuals exerting every effort to remain within the financial bounds that he himself has helped to arrange. It indicates commendable enterprise. However, year by year he plays the game in the hope that his important work will draw a larger portion of the budget and thus make possible even greater accomplishments the succeeding year.

To get the very best from our individual associates, it is necessary for each to regard the whole. An uncensored, undiplomatic letter, written by an indignant associate to a Fellow who has been accused of a misdemeanor, may involve unpleasant consequences. To be cautious and discreet are among the chief injunctions to every one engaged in our activities.

From the beginning the management has insisted upon conducting the routine administration of the College on the strict principles of business. While ours is an educational institution, each one of us is made to realize that he is dealing with trust funds. It may be old fashioned, but if a telegram can express its meaning in ten words, eleven words are not allowed. Nor is a telegram sent in place of a letter if the letter will accomplish the same end.

Time, too, is considered a financial asset. The loss of half an hour by a careless or indifferent aid,

when multiplied by forty, the number in service, would result in the loss of twenty hours, three and one-half days' work. The careless one is not allowed to go uncensured in this breach of fair play. And it is gratifying to testify that our great family is in entire sympathy with these reasonable requirements.

XIX. REQUIREMENTS FOR FELLOWSHIP

Important as are these administrative regulations, the most difficult policy to establish was one that would enable us to select for Fellowship only the qualified surgeons and surgical specialists. This involved a study of measures adopted and in use by the time honored Colleges of Surgeons of England, Ireland and Edinburgh. It was found that almost without exception their requirements and tests were formulated before modern surgery came into existence. They are similar to those which are now exacted of internes and hospital aids to ascertain the candidate's knowledge of academic facts instead of his practical ability to apply such knowledge toward the accomplishment of deeds.

After thorough and careful study of the whole problem, there was no reason why we should begin by adapting obsolete plans to a 20th century program.

What requirements, then, should the medical practitioner meet that we may recommend him to the public as a reliable surgeon?

First: He must have graduated from a Class "A" medical college (or its equivalent); and he must have served at least one year as interne in a creditable hospital and two years as surgical assistant, or he shall give evidence of apprenticeship of equivalent value.

Second: Five to eight years after graduation in medicine, devoted to special training and to practice, are normally the time-requirement for eligi-

bility to Fellowship, so the candidate may prove that he has the proper temperament, and is mentally and mechanically adapted to do surgery.

Third: The moral and ethical fitness of the candidate as a physician and as a citizen shall be determined by reports of surgeons whose names are submitted by the candidate himself, and by such other reports and data as the Credentials Committee and the administration of the College may obtain.

Fourth: The professional activity of the candidate shall be restricted to study, diagnosis, and operative work in general surgery or in special fields of surgery. His specialization in surgery or one of its specialties must be not less than 85% in communities of more than 50,000 inhabitants, and 50% in smaller communities.

Fifth: He shall do his work in a hospital or institution that will give him the benefit of scientific facilities and the aid of competent assistants, nurses, and associates.

Sixth: He shall make formal application for Fellowship, which will record full data regarding his educational opportunities, his medical training and post graduate work, and his literary efforts; and he shall give the names of not less than five personal references.

Seventh: This information and the replies from his references are referred for careful scrutiny by his State or Provincial Committee on Credentials, which is a committee of Fellows of the College ranging in number from eighteen to thirty-six. Full information is sought, and each member of the committee is required to vote to accept, postpone, or reject the applicant. Candidates are considered with such care that not more than one of every four is accepted at any one meeting.

Eighth: Not until the candidate is accepted by his State or Provincial Committee is he required to file with a committee of competent surgical

specialists a sufficient number of case records of major operations which he has performed himself that the committee may definitely determine his surgical judgment, his diagnostic accuracy, his technical skill, acceptable environment, his dependence on laboratory findings, his acceptance of consultations, and his immediate and remote results. These records are carefully scrutinized by a committee of practical surgeons, teachers in the four Class A medical schools of Chicago. This examination is thoroughly and consistently conducted. Great care is exercised, and the standards of the examiners are very high. From 25% to 51% of the records are not accepted as sufficient evidence of qualifications for membership.

This careful surveillance, from the filing of the original application until the routine of investigation is successfully completed, consumes from two to four years of time. The applicant's record is finally submitted to the officials of the College for consideration, and as a last act to the Board of Regents.

We are proud to submit this program as one that will reveal the qualifications of a surgical practitioner, and when successfully negotiated the candidate may be recognized as a real surgeon, spiritually and morally worthy of Fellowship in the American College of Surgeons.

Briefly, these are the qualifications that have been met by this fine group of men who have been received into the College this evening, for which occasion you have honored us with your presence. The majority of our candidates have been in practice since graduation from medical school, much longer than the required seven years.

We believe that our requirements possess advantages over the purely academic. Imagine asking William Mayo or Edward Martin to submit to an academic examination to prove their ability to qualify as surgeons! Not only

would it be difficult for them to pass such an examination, even after months of cramming, but in the meantime the world would lose their services as practical operators.

XX. JUNIOR CANDIDATE GROUP

The Junior Candidate Group forges another strong link in our propaganda against unworthy financial practices. Through it, the College purposes to accept these candidates, when qualified, and place them on a probationary list (unpublished) as early as two years after graduation. They are required to fill out and sign the same application blank and anti-fee-splitting pledge as is required of all Fellows of the College. Annually their names, if approved, are reconsidered by the respective State or Provincial Committee on Credentials.

Seven years after graduation, if they desire to apply for regular Fellowship, they must submit another application, again sign the anti-fee-splitting pledge, be reconsidered by the respective State or Provincial Committee on Credentials, and if approved submit the necessary case histories.

The Junior Candidate group furnishes a young surgeon a tie of great importance in the formative days of his career.

XXI. APPRECIATION OF OUR EFFORTS

In these short, but strenuous years, we have been rewarded by the appreciation of organizations, and of many loyal and eminent men of vision and accomplishment. The Royal College of Surgeons of England honored us at our first Convocation by sending to us its distinguished President, the nephew of Lord Lister—Sir Rickman Godlee. In appreciation of our efforts in the Great War (for which 90% of our distinguished Fellows enrolled for service to support the efforts of our allies), the Consulting Surgeons of the

Armies of Great Britain presented to the College the Great Mace, which now and for all time to come will lead our ceremonial processions.

Of transcendent importance, our ideals and standards have been accepted by 1,919 hospitals of the United States, Canada, Central and South America, Australia and New Zealand. These ideals and standards are enthusiastically welcomed by surgeons, internists, and specialists; and they have commanded also the recognition of medical schools, medical associations, and nurses. Of greatest importance, they have secured the recognition and following of the great lay public.

XXII. THE HERITAGE

This is the heritage that our new Fellows receive from the old. It is the gift of the Old Guard to the New Guard; this New Guard—of which you who have but just now received your Fellowship are a part—must begin to assume the obligations that were so well maintained by the Old Guard, who sit about me, and who have honored you and me by their presence on this fifteenth anniversary. They are still reluctant to release their responsibilities until they are convinced that younger minds have caught the vision, appreciate their opportunities, and are willing to labor—and fight if necessary—for the honor of the American College of Surgeons.

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