DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 46

MEDICAL EDUCATION, 1916-18

By N. P. COLWELL, M. D.
SECRETARY OF THE COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

[Advance sheets from the Biennial Survey of Education in the United States, 1916-1918]

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
5 CENTS PER COPY

▽

MEDICAL EDUCATION, 1916–18.

By N. P. Colwell, M. D.

Secretary of the Council on Medical Education of the American Medical Association, Chicago.

CONTENTS.—Entrance requirements of medical colleges—Coeducation in medicine—Medical education and the war—Medical education and the selective service—A national control of medical education—Improved standards of licensing boards—State requirements of preliminary education—Confusion from multiple boards—Simplifying medical licensure—Practical and clinical examinations—National Board of Medical Examiners—Premedical college work—Need of a list of approved colleges of arts and sciences—Items concerning medical education—Developing medical education in China.

In previous reports attention was called to the rapid improvements in medical education in the United States, secured through a campaign which was begun by the American Medical Association in 1904. At the beginning of the campaign, the number of medical schools in this country exceeded the total in all the rest of the world. There was clearly an oversupply of medical schools. Many of them were poorly equipped and adhered only to low entrance requirements, while some were conducted for profit and required for admission little or nothing in the way of educational qualifications. It was shown that in 1904 only four medical colleges were requiring any college work for admission, and only from 20 per cent to 25 per cent were actually requiring a four-year high-school education. Under the methods pursued, it is not surprising, therefore, that in 1904 the number of medical students reached the amazing total of 28,142, and that in that year 5,747 physicians were graduated.

The campaign for improvement successfully urged the merging of two or more medical colleges in each of our various cities or States. This resulted in a rapid reduction in the total number, but a material strengthening of the quality of the institutions remaining. At the same time higher standards of preliminary education were urged consisting, first, of the four-year high-school education, then one year, and finally two years of premedical college education. In 1916 the two-year entrance standard was made an essential for any medical school to be considered as acceptable by the American Medical Association. In that year 48 colleges had already put into effect

the higher requirement and also 16 State boards had made it the minimum essential of preliminary education of graduates who might seek licenses in those States. Attention was also called to the great improvements in the way of full-time salaried teachers, greatly improved laboratories, the closer relations with teaching hospitals, and the securing of greater endowments.

At the present time there are 90 medical colleges; the number of students during 1917–18 was 13,630, and the number of graduates in 1918 was 2,670.[1] These lower figures represent the normal decrease that was expected under the increased entrance requirements, and are not due to the war. The following tabulation shows the decided increase since 1904 in the number of colleges which have enforced higher entrance requirements and in the number of students and graduates who have held the higher entrance qualifications:

Entrance requirements.	Colleges.				Students.				Graduates.			
	1904		1918		1904		1918		1904		1918	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Four-year high-school education or less [1]	158	97.5	7	7.8	26,391	93.8	631	4.6	5,378	93.6	258	9.7
One year of college work	.....	.....	34	37.8	.....	.....	5,944	43.6	.....	.....	1,147	43.0
Two years of college work	4	2.5	49	54.4	1,761	6.2	7,055	51.8	369	6.4	1,265	47.3
Totals	162	.....	90	.....	28,142	.....	13,630	.....	5,747	.....	2,670	.....

[1] It is not probable that in 1904 more than about 30 colleges (20 per cent) were actually requiring a four-year high-school education as a minimum for admission.

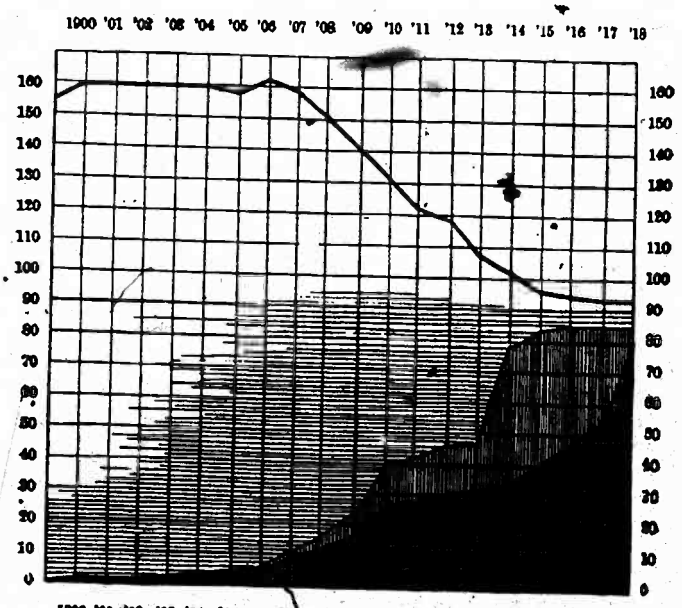
Instead of 4 (2.5 per cent) medical schools which in 1904 required any college work for admission, for the session of 1917–18 83 (92.2 per cent) medical schools required one or two years of such work; instead of only 1,761 (6.2 per cent) students enrolled in the higher standard colleges in 1904, during last year 12,999 (95.3 per cent) students were enrolled in the higher standard colleges; and instead of only 369 (6.4 per cent) graduates who were turned out by the higher standard colleges in 1904, at the end of last session 2,412 (90.3 per cent) graduated from those institutions. The 7 medical schools which still require only a high-school education or less for admission are also inferior in other respects, and are reported as not recognized by from 27 to 38 State licensing boards. The progress in medical education in respect to preliminary requirements is graphically shown in Chart 1. This general adoption by medical schools of the

[1] Altogether 2,807 students successfully completed the courses of the senior year. From 137, however, in the Universities of California and Minnesota and in Rush Medical College, the degrees have been withheld pending the completion of a hospital internship.

two-year standard of preliminary education and the other improvements made have brought medical education in this country to a par with that of leading countries of Europe and elsewhere.

(CHART 1.—*Medical schools and entrance requirements.*)

This chart shows (heavy line at the top) the total number of medical schools existing in the various years. The chart also shows the number of medical schools requiring for admission (horizontal shading, indefinite, estimated) a four-year high-school education; (vertical shading) one year of premedical college work and (heavy shading) two years of premedical college work.



	1900	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18
Totals	160	160	160	160	160	158	162	159	151	140	131	122	118	107	106	96	95	94	94
Totals (a)	158	158	158	157	156	153	156	153	145	116	91	80	72	60	24	12	10	9	9
Totals (b)	..	..	..	..	..	..	1	2	5	8	13	14	16	16	44	44	38	31	6
Totals (c)	2	2	2	3	4	5	5	9	11	16	27	28	30	31	34	40	47	54	79

Requiring for admission (a) a high school education *or less;* (b) one year of college work; (c) two or more years of college work.

ENTRANCE REQUIREMENTS OF MEDICAL COLLEGES.

Eighty-one medical schools are now requiring, as a minimum for entrance, *two years* or more of work in a college of liberal arts in addition to a four-year high-school education. The years, respectively, when for each college the one-year and the two-year requirements became effective, and the rating of each college, are as follows:

	One year.	Two years.	College rating.
ALABAMA.			
University of Alabama School of Medicine	1914	1915	A
ARKANSAS.			
University of Arkansas Medical Department	1915	1918	B

	One year.	Two years.	College rating.
CALIFORNIA.			
College of Medical Evangelists	1914	1915	B
University of Southern California Medical Department	1914	1916	B
Leland Stanford Junior University School of Medicine		1909	A
University of California Medical School		1905	A
COLORADO.			
University of Colorado School of Medicine		1910	A
CONNECTICUT.			
Yale University School of Medicine		1909	A
DISTRICT OF COLUMBIA.			
Georgetown University School of Medicine		1912	A
George Washington University Medical School	1914	1918	A
Howard University School of Medicine	1910	1914	A
GEORGIA.			
Emory University School of Medicine, Atlanta	1914	1918	A
University of Georgia Medical Department	1914	1918	A
ILLINOIS.			
Chicago College of Medicine and Surgery School of Medicine of Loyola University	1915	1918	B
Hahnemann Medical College and Hospital	1914	1916	B
Northwestern University Medical School	1908	1911	A
Rush Medical College (University of Chicago)		1904	A
University of Illinois College of Medicine	1913	1914	A
INDIANA.			
Indiana University School of Medicine	1909	1910	A
IOWA.			
State University of Iowa College of Medicine	1909	1910	A
State University of Iowa College of Homeopathic Medicine		1910	A
KANSAS.			
University of Kansas School of Medicine		1909	A
KENTUCKY.			
University of Louisville Medical Department	1914	1918	A
LOUISIANA.			
Tulane University of Louisiana School of Medicine	1910	1918	A
MAINE.			
Bowdoin Medical School	1912	1916	A

	year. One	years. Two	rating. College
MARYLAND.			
Johns Hopkins University Medical Department		1893	A
University of Maryland School of Medicine and College of Physicians and Surgeons	1914	1918	A
MASSACHUSETTS.			
Boston University School of Medicine	1914	1916	A
Medical School of Harvard University		1900	A
Tufts College Medical School	1914	1918	A
MICHIGAN.			
Detroit College of Medicine and Surgery	1914	1918	A
University of Michigan Medical School		1909	A
University of Michigan Homeopathic Medical School	1912	1916	A
MINNESOTA.			
University of Minnesota Medical School		1907	A
MISSISSIPPI.			
University of Mississippi School of Medicine	1914	1918	A
MISSOURI.			
St. Louis University School of Medicine	1910	1918	A
University of Missouri School of Medicine	1906	1910	A
Washington University Medical School	1910	1912	A
NEBRASKA.			
John A. Creighton Medical College	1914	1918	A
University of Nebraska College of Medicine	1908	1909	A
NEW HAMPSHIRE.			
Dartmouth Medical School		1910	A
NEW YORK.			
Albany Medical College	1914	1918	A
Columbia University College of Physicians and Surgeons		1910	A
Cornell University Medical College		1908	A
Fordham University School of Medicine	1911	1918	A
Long Island College Hospital	1914	1918	A
New York Homeo. Med. Coll. and Flower Hospital	1915	1919	B
Syracuse University College of Medicine	1909	1910	A
University and Bellevue Hospital Medical College	1912	1918	A
University of Buffalo Department of Medicine	1914	1918	A
NORTH CAROLINA.			
Leonard Medical School		1914	B
Wake Forest College, School of Medicine		1908	A
University of North Carolina School of Medicine	1910	1917	A
NORTH DAKOTA.			
University of North Dakota School of Medicine		1907	A

	One year.	Two years.	College rating.
OHIO.			
Electric Medical College	1915	1918	B
Ohio State University College of Medicine	1914	1915	A
Ohio State Univ. Coll. of Homeopathic Medicine	1915	1916	B
University of Cincinnati College of Medicine	1910	1913	A
Western Reserve University School of Medicine	----	1901	A
OKLAHOMA.			
University of Oklahoma School of Medicine	1914	1917	B
OREGON.			
University of Oregon Department of Medicine	1910	1915	A
PENNSYLVANIA.			
Hahnemann Medical College and Hospital	1914	1917	A
Jefferson Medical College	1914	1917	A
Temple University Department of Medicine	1914	1918	B
University of Pennsylvania School of Medicine	1909	1910	A
University of Pittsburgh School of Medicine	1911	1913	A
Woman's Medical College of Pennsylvania	1914	1915	A
SOUTH CAROLINA.			
Medical College of the State of South Carolina	1914	1916	A
SOUTH DAKOTA.			
University of South Dakota College of Medicine	1908	1909	A
TENNESSEE.			
Meharry Medical College	1914	1918	B
Vanderbilt University, Medical Department	1914	1918	A
University of Tennessee College of Medicine	1914	1918	A
TEXAS.			
Baylor University College of Medicine	1913	1918	A
University of Texas Department of Medicine	1910	1917	A
UTAH.			
University of Utah School of Medicine	1909	1910	A
VERMONT.			
University of Vermont College of Medicine	1912	1918	A
VIRGINIA.			
Medical College of Virginia	1914	1916	A
University of Virginia Department of Medicine	1910	1917	A
WEST VIRGINIA.			
West Virginia University School of Medicine	1911	1917	A
WISCONSIN.			
Marquette University School of Medicine	1913	1916	A
University of Wisconsin Medical School	----	1907	A

COEDUCATION IN MEDICINE.

The world war has given added impetus to the tendency on the part of medical colleges to throw their doors open to women students. During the last three or four years this action has been taken by several of the largest medical schools in the United States and Canada: In 1914 by the Medical School of the University of Pennsylvania; in 1915 by the Tulane University of Louisiana; in 1916 by the Columbia University College of Physicians and Surgeons; in 1917 by the University and Bellevue Hospital Medical College, by the University of Maryland, and the Medical College of Virginia; and in the present year by Harvard University Medical School and by the Medical Faculty of McGill University. The idea of granting equal opportunities for the two sexes in medical schools, however, had already made rapid advancement before the world war. Over 40 years ago the University of Michigan made its courses in medicine coeducational and practically all State universities have followed the example. From the time of its organization in 1893, the Medical Department of Johns Hopkins University has admitted women students. In New York City the Women's Medical College of the New York Infirmary closed its doors only after Cornell University in 1898 had established its medical school and admitted women students. In 1902 Rush Medical College, which had formed a close affiliation with the University of Chicago, became coeducational. At the present time, therefore, of the 90 colleges existing in the United States 60 admit both sexes.

MEDICAL EDUCATION AND THE WAR.

The reforms in American medical education were largely completed before this country was drawn into the world war. For the past six or seven years the majority of medical schools have not only been enforcing the higher entrance standards but also have been operating under greatly improved conditions in other respects. The majority of students graduating in the past several years, therefore, have received a medical training equal to that obtainable anywhere. Furthermore, it is these recent graduates who, in larger proportions, have entered the Government medical services and who will be largely responsible for the medical care of our American soldiers and sailors. It is evident, therefore, that those fighting for the preservation of America and American ideals now have as skilled medical care as is obtainable anywhere. That this can be said, is due to the energetic campaign to improve medical education that has been carried on during the past 15 years.

The war has affected the supply of physicians for civilian needs, even as it has reduced the supply of those in other technical occu-

pations. Statistics show that this country has one physician to every 739 people, as compared with one to every 1,500 to 2,500 people in the countries of Europe just before the war began. In recent years, however, the demand for medical graduates to fill positions as hospital internes, health officers, medical inspectors, medical teachers, and other positions of responsibility has been greatly increased. This increased demand is due, not to any scarcity of medical graduates, but to the improved qualifications of those now graduating from our medical schools. In earlier years this demand was not so great because few of the graduates then turned out were sufficiently qualified, educationally or professionally, to occupy the positions now open to them. The increase in the demand has been in direct proportion to the improvements in preliminary and medical education.

Even for the army there is a greater demand than in previous times for those of highly technical and special training. Educators are agreed, therefore, that present conditions call for the maintenance of the present entrance requirement of two years of college work; for further improvements in laboratory and clinical equipment; and, particularly, for improved methods of teaching in all medical schools. It is only by maintaining these fair standards that the demand will be supplied, since in the better medical schools, the number of graduates has steadily increased each year for the past five years, and the decrease in the total has been at the expense of the lower-grade colleges.

MEDICAL EDUCATION AND THE SELECTIVE SERVICE.

When the selective-service law was passed in May, 1917, it made no provision for the exemption of medical students. A study of the effect the draft would have on the enrollments of medical schools showed that from 50 to 65 per cent of the students would be taken in the first three calls, which would force the majority of medical schools to suspend. If the war lasted any considerable time, the result would be to seriously diminish or cut off the annual supply of medical graduates; hospitals would be without internes, and there would soon develop a serious shortage of physicians for both military and civilian needs.

The solution to the problem was found in the National Defense Act of 1916, which provided for the Medical Reserve Corps of the Army. Under the provisions of this law medical students were permitted to enroll in the Medical Enlisted Reserve Corps. This made them subject to call at any time should extreme emergency require it. It was the stated policy of the Government, however, to leave these students on an inactive status until they should com-

plete their medical course and secure their hospital training. It was believed that they could render the country a better service by finishing their training and becoming efficient medical officers than by entering at once on active service without that training. The provision for the Medical Enlisted Reserve Corps relieved the uncertainty in regard to the enrollment of medical students, so that medical classes have been retained at a normal status—the only loss being of those students who voluntarily enlisted for military service.

Provision was still necessary, however, for the students in the premedical classes who would arrive at draft age before becoming bona fide medical students. The calling into service of such students would prevent the medical schools from obtaining medical students and would eventually be as serious as if the medical students themselves were called to service. There also arose a serious problem as to medical teachers. Those in the draft age were being called into active service and others were volunteering, even though strong efforts were made to induce them to remain at their teaching duties. It appeared that many of the colleges would have to suspend because of the depletion of the ranks of their teachers.

In an effort to solve these problems, at the call of the Surgeon General, a conference of representatives of medical schools was held in Chicago June 11, 1918. At this conference an advisory committee on medical schools,[1] made up of representatives of medical colleges and licensing boards, was chosen to cooperate with the standing committee on medical education of the Medical Department of the Army, for the prompt solution of such problems as might arise in connection with medical education. At a meeting of the two committees on the day following the Chicago conference, attention was called to the provision made for the Student Army Training Corps, suggesting a solution for the exemption of premedical students. It was also urged that premedical and medical students as well as medical teachers be given Government recognition by being placed in uniform and that the teachers be granted suitable rank.

Another conference of the two committees was held in Washington, July 21, 1918. The arrangements for the Student Army Training Corps had made progress under the War Department's committee on education and special training. Through the Student Army Training Corps it was provided that all students enlisting be retained in

[1] This committee consisted of Dr. Ray Lyman Wilbur, president of Leland Stanford University, chairman; Dr. William J. Means, president of the Association of American Medical Colleges; Dr. Samuel W. Lambert, dean of Columbia University College of Physicians and Surgeons; Dr. J. Whitridge Williams, dean of Johns Hopkins University Medical Department; Dr. Theodore Hough, dean of the University of Virginia Department of Medicine; Dr. John M. Baldy, president of the Pennsylvania Bureau of Medical Education and Licensure; and Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association, secretary.

the colleges until their special training be completed. On arriving at draft age, the student would be required to register under the selective service law. When called by his local board, each student's record would be examined and it would be determined whether he would be called in active service. The stated policy of the Government, however, was that students who were making satisfactory headway in their studies would be retained in college until their training had been completed. The Students' Army Training Corps clearly provided for the training of medical officers as well as of engineers and officers in other special lines. As to the threatened dearth of medical teachers due to losses by enlistment, a solution of the problem was found in the rule providing for the exemption of those engaged in "essential industries." Each college was requested by the Surgeon General to furnish a list of its essential teachers who, it was planned, would not be called to active duty even though they should enlist, but should be left at their teaching duties on the ground that they were engaged in an "essential industry."

A NATIONAL CONTROL OF MEDICAL EDUCATION.

Through the Medical Enlisted Reserve Corps, a large majority of the medical student enrollment throughout the United States has come under the control of the Surgeon General of the United States Army. This control of the student body, coupled with the measures made necessary to retain in each college an adequate corps of medical instructors, brought the medical schools also to a large extent under the same national control. It became necessary, therefore, soon after a state of war was recognized, for the Surgeon General to designate what medical schools were worthy of recognition and to establish rules for the satisfactory conduct of such colleges. Since the legal control of medical education had previously rested solely with State medical licensing boards, it was determined to consider as "well recognized medical schools" those which were recognized by the majority of State licensing boards. Of the 90 medical colleges now existing, 81 are well recognized.

The unusual demand for physicians as medical officers for the tremendous armies being organized made it necessary carefully to ascertain the present supply of physicians, the future annual output which should be maintained from the medical schools, and the educational standards and other measures which should be enforced, at the same time guaranteeing an adequate supply of physicians for civil and military needs. One of the earliest decisions rendered, which has since been adhered to, was that the present reasonable standards of preliminary education, namely, two years of work in an approved college of arts and sciences or its actual equivalent,

should be maintained.[1] In fact, this standard of premedical qualifications was considered sufficiently important that all "well recognized" medical schools were instructed to enforce that requirement of all students admitted on and after October 15, 1918.

Careful consideration has also been given to the question of requiring continuous sessions in medical schools so they might promptly and intelligently be put into effect should the emergency demand it. Looking toward this possibility a few of the medical schools which were properly equipped to do so, have already put that measure into effect.

IMPROVED STANDARDS OF LICENSING BOARDS.

In previous reports reference has been made to the adoption by State licensing boards of higher requirements of preliminary education. A review of the various medical practice acts, published during the present year, shows when any requirement of preliminary education was established in each State, and when, respectively, a four-year high school education or higher standards were adopted. The accompanying chart (Chart 2) shows the progress made during the past 18 years. In 1900, it appears that only six States had made provision for preliminary education in their practice acts and in only one of these was the standard fixed at a four-year high school education or its equivalent. Since 1900, however, progress has indeed been rapid, following closely the progress in entrance requirements of medical colleges. At the beginning of its campaign in 1904, the Council on Medical Education advocated two standards, one for immediate adoption which recommended a four-year high school course and another—the "ideal standard"—which suggested one year of college work including physics, chemistry, and biology. The latter was urged for adoption by January 1, 1908, but the time was extended till January 1, 1910, and was made a requirement for the Class A rating January 1, 1914. The charts show more marked changes in these than in other years. By 1910 the number of States providing for preliminary education had increased to 36, in 28 of which a four-year high school course was required. By 1910 when the Carnegie Foundation for the Advancement of Teaching published its report on medical education, marked improvements had already been made both by medical schools and by State licensing boards, but that report did much to arouse public interest in the campaign for improvement.

[1] To provide against a resulting shortage of medical officers an intensive course of instruction for admission to the study of medicine was promulgated in October, 1918, by the committee on education and special training of the War Department. This course crowded into four quarters of three months each, or a total of twelve months, a quantity of work equal to that usually requiring six quarters of three months each. The continuation of this course was made unnecessary by the signing of the armistice.

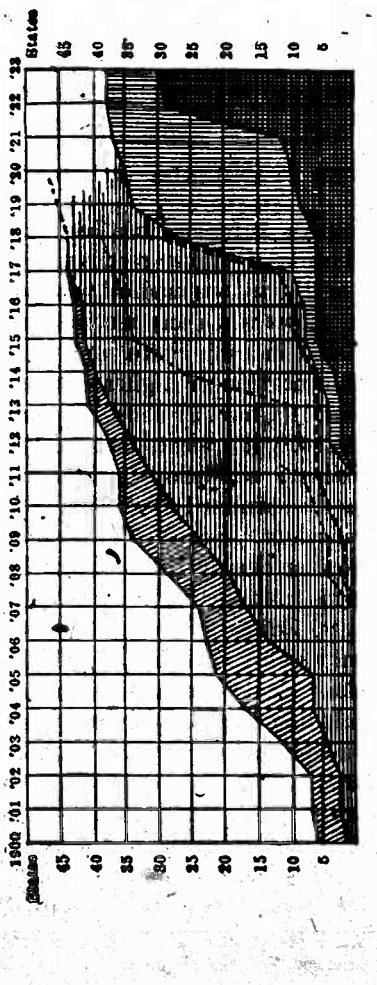
The light and heavy dotted lines indicate the number of boards each successive year which have *adopted* respectively one and two years of collegiate work in addition to a four-year high-school education as the minimum preliminary qualification for the license in those States. The increase in the number of States adopting the higher prelimi-

CHART 2.—*State requirements of preliminary education.*

As shown by Medical Practice Acts and Board Rules.

Showing by years the increased number of States requiring (diagonal shading) any preliminary requirement (horizontal shading): a four-year high school education (vertical shading); one year of college work, and (heavy shading) two years of college work.

The light and heavy dotted lines in the horizontal shading indicate, respectively, when the one-year and the two-year requirements were *adopted*—when they began to affect *matriculants* in medical schools. The requirements did not affect *graduates* until four years later, as indicated by the vertical and heavy shading. Each vertical line represents a year as indicated. (Compare this chart with Chart 1.)



	1900	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
Any req't less than h.s.	6	7	7	12	18	21	23	24	29	34	36	36	38	41	42	43	43	44	44	?	?	?	?	?
4 yr. h.s.	5	5	5	8	11	14	9	7	10	10	8	5	4	4	2	1								
1 yr. coll.	1	2	2	4	7	7	14	17	19	24	28	31	30	33	34	34	36	34	18					
2 yrs. coll.													2		3	2	2	2	4	20	25	25	9	8
													2	2	3	6	6	6	6	9	10	12	29	30

nary standards, as indicated by the dotted lines, corresponds quite closely with the increase in the number of medical colleges (see Chart 1) which had put those standards into effect. The dotted lines show when the requirements affected students matriculating in medical colleges; the increased requirements did not become effective for graduates until four years later; hence the portions of the chart

shown by the vertical and the heavy shading indicate for each year the number of States in which, respectively, one year and two years of college work were required of all applicants seeking licenses to practice in those States.

STATE REQUIREMENTS OF PRELIMINARY EDUCATION.

There are now 40 States which have adopted requirements of preliminary education in addition to a standard four-year high-school education. These States, the number of college years required, and the time the higher requirements became or become effective are as follows:

State requirements of preliminary education.

State examining board of—	One year of college work.		Two years of college work.	
	Affects students matriculating.	Affects all graduates.	Affects students matriculating.	Affects all graduates.
Alabama			1915–16	1919
Alaska	1914–15	1918	1918–19	1922
Arizona	1914–15	1918	1918–19	1922
Arkansas	1915–16	1919	1918–19	1922
California	1915–16	1919		
Colorado	1908–09	1912	1910–11	1914
Connecticut	1911–12	1915		
Delaware[1]				
District of Columbia[2]				
Florida	1914–15	1918	1918–19	1922
Georgia			1918–19	1922
Idaho[2]				
Illinois	1915–16	1919	1918–19	1922
Indiana	1910–11	1914	1911–12	1915
Iowa			1911–12	1915
Kansas	1910–11	1914	1918–19	1922
Kentucky	1914–15	1918		
Louisiana	1915–16	1919	1918–19	1922
Maine	1915–16	1919		
Maryland	1914–15	1918	1918–19	1922
Massachusetts[2]				
Michigan	1914–15	1918	1918–19	1922
Minnesota			1908–09	1913
Mississippi	1915–16	1919	1919–20	1923
Missouri[1]				
Montana	1914–15	1918	1918–19	1922
Nebraska[1]				
Nevada[2]				
New Hampshire	1914–15	1918	1915–16	1919
New Jersey	1915–16	1919	1916–17	1920
New Mexico	1914–15	1918	1918–19	1922
New York	1917–18	1921	1918–19	1922
North Carolina	1914–15	1918	1918–19	1922
North Dakota			1908–09	1912
Ohio[1]				
Oklahoma	1914–15	1918	1917–18	1921
Oregon[2]				
Pennsylvania	1914–15	1918		
Rhode Island	1914–15	1918	1918–19	1922
South Carolina			1916–17	1920
South Dakota	1908–09	1912	1911–12	1915
Tennessee	1916–17	1920	1918–19	1922
Texas	1914–15	1918		
Utah	1913–14	1917		
Vermont	1913–14	1917	1918–19	1922
Virginia	1914–15	1918	1917–18	1921
Washington	1914–15	1918	1918–19	1922
West Virginia	1917–18	1921		
Wisconsin			1915–16	1919
Wyoming[1]				

[1] Require a four-year high-school education or its equivalent. [2] No fixed standard.

CONFUSION FROM MULTIPLE BOARDS.

Besides the increase in the standards of preliminary education already referred to, much progress has been made by medical licensing boards during the last 18 years. In regulating the practice of the healing art, however, much confusion exists in some States because the authority to license those who are to treat the sick has been divided between two or more separate and independent boards. After excellent practice acts have been adopted, providing for fair standards of preliminary and medical education in these States, other laws are passed allowing certain groups of practitioners to secure licenses on lower educational standards. Some of these laws were secured through the misapprehension on the part of legislators regarding the first essential for the practice of the healing art, namely, the necessity of making a diagnosis, which implies a thorough training in the fundamentals of medicine. It is evident that unless a practitioner knows the difference between normal and abnormal conditions and unless he knows what particular disorder the patient is suffering from he is not in position to apply any kind of treatment. The plea of certain healers that they were "not practicing medicine" led to the adoption of special laws providing for the licensing of such practitioners under lower educational qualifications than were required of physicians, although in some States they were granted full authority to practice as physicians. Some of these laws provided for special boards without mentioning educational standards; others provided for lower educational requirements, while still other laws (or amendments) merely exempted these practitioners from the requirements of the medical practice act. So many different boards have been established that at present in the 50 States, including Alaska and the District of Columbia, there are 94 separate and distinct boards having to do with licensing those who are to treat the sick! There are 20 States which are fortunate in having only one board each—the State medical board. Including both medical boards and boards representing various "systems" of healing, there are 19 States having 2 boards each; 7 having 3 boards; 2 having 4 boards each, and 1 State—Arkansas—having 6 different boards. It can be seen at once that with the authority so divided it is impossible to provide efficient protection of the public against uneducated and incompetent practitioners of the healing art.

SIMPLIFYING MEDICAL LICENSURE.

State governments, however, are now trying to avoid a multiplicity of boards and at the same time to guarantee that all who are to treat the sick shall have secured an adequate education. Several States,

by legislation, during the past few years, have placed the licensing of all practitioners under a single medical board. Some States demand that all practitioners alike be required to possess the minimum educational qualifications, after which they are given a physician's license and may practice as they please. The most recent scheme in the licensing of those who are to treat the sick is that adopted in Illinois, through the new consolidation law. The Department of Registration and Education in Illinois has in charge not only the licensing of physicians and other practitioners of the healing art, but also dentists, pharmacists, midwives, and those in other licensed occupations. More encouraging, however, is the fact that the enforcement of the new law in Illinois has been placed in the hands of educators of unquestioned ability. It is noteworthy that even poor laws administered by able men bring better results than the best laws administered by inefficient men. The chief point to be considered in measures similar to that adopted in Illinois is to see that, to enforce the laws, those are appointed who will keep in close touch with the progress and needs of general and medical education.

PRACTICAL AND CLINICAL EXAMINATIONS.

There has been much improvement in the character of the licensing examination in some States. A larger number of States have established an efficient examination (including practical laboratory and clinical tests) of those who are to practice the healing art, and in this way they are better protecting the public from ignorance and incompetence. Educational and technical efficiency can not be accurately measured by a written examination alone. A student's fitness to intelligently diagnose and treat human disorders can be brought out only by testing his ability to differentiate between normal and abnormal conditions, in the laboratory as well as at the bedside.

An agency has recently been established—the National Board of Medical Examiners—which has been demonstrating how these practical and clinical examinations should be conducted. This board is now holding its examinations at frequent intervals in prominent hospitals in various large cities throughout the country, and members of State boards have been invited to attend them. The spirit and purpose of the examinations, as well as the ease and facility with which they are conducted, are so evident, that State board members will doubtless be encouraged to adopt them in the regular examination for licensing physicians.

NATIONAL BOARD OF MEDICAL EXAMINERS.

The National Board of Medical Examiners, just referred to, was organized in 1915. It consists of 15 members, including the Surgeon Generals of the Army, Navy, and Public Health Services, and one other representative of each of those services; three representatives of the State medical licensing boards, and six members appointed at large. Its establishment on a high plane was made possible by the Carnegie Foundation for the Advancement of Teaching, which made an appropriation of $15,000 per year to cover the expenses of the board until such time as it might be placed on a self-supporting basis.

Six examinations have been held by the board, the first and second at Washington, respectively, in October, 1916, and in June, 1917; the third at Chicago in October, 1917; the fourth at New York City in January, 1918; and the fifth at Fort Oglethorpe, Ga., and Fort Riley, Kans., in April, 1918. At these five examinations altogether 93 applicants were examined, of whom 72 passed and 21 failed, the percentage of failures being 22.6 per cent.

Date of examination.	Where held.	Total examined.	Passed.	Failed.	Percentage failed.
October, 1916	Washington	10	5	5	50
June, 1917	Washington	12	9	3	33.3
October, 1917	Chicago	28	22	6	21.5
January, 1918	New York	20	18	2	10
April, 1918	Fort Oglethorpe / Fort Riley	23	18	5	21.7
Total		93	72	21	22.6

The educational requirements of applicants are: (*a*) A four-year high-school course; (*b*) two years of acceptable college work, including courses in physics, chemistry, biology, and a modern language; (*c*) graduation from a medical school rated in Class A by the American Medical Association; and (*d*) a year spent in an acceptable hospital as an interne or in a laboratory. These requirements apply to graduates of medical schools in 1912 and thereafter. The board may accept equivalent credentials of applicants who graduated prior to 1912. Credentials must be presented to the board prior to the examination sufficiently early to permit investigation. The only fee is $5 for registration. There is no examination fee.

This board is a voluntary organization, its object being to conduct examinations of physicians so thorough as to prove without a doubt their qualifications for the practice of medicine. The value of its certificate, aside from being a qualification of merit, depends on the recognition given to it by State medical licensing boards. Such recognition has already been given, or assured, by the licensing boards of the 12 following States: Colorado, Delaware, Florida, Idaho, Ken-

tucky, Maryland, New Hampshire, North Carolina, North Dakota, Pennsylvania, Rhode Island, Vermont.

When the permanency of the national board is established and the high character of its examinations is more generally recognized, its certificates will doubtless be recognized by the licensing boards of a larger number, if not all States. It will also furnish a credential by which reciprocity in medical licensure with other countries may be established. A successful applicant may enter the regular medical corps of either the Army or Navy without further professional examinations if his papers are passed and are satisfactory to a board of examiners of those services.

PREMEDICAL COLLEGE WORK.

Since, in 1916, two years of work in an "approved" college had been so generally adopted as a minimum educational requirement for admission to medical schools in the United States, it became important to prepare a schedule of the subjects taught in the first two years of recognized colleges which would best prepare the student for his subsequent medical work. A circular letter was sent out by the Council on Medical Education to presidents of one hundred or more of the leading universities, as well as to registrars and university examiners, who were skilled in the evaluation of credentials of work done in various educational institutions. In this way an abundance of data was collected. A special committee was appointed to study the problem and to develop a schedule of required and elective subjects which make up the 60 semester hours required, and to have this schedule conform as nearly as possible with the regular curricula of colleges of arts and sciences. The committee which was selected and began the work in 1916 and was ratified by the council in February, 1917, is as follows:

Dr. Kendrick C. Babcock, Urbana, Ill., chairman, formerly specialist in higher education of the United States Bureau of Education; now dean of the college of liberal arts and sciences of the University of Illinois and intimately identified with the work of the North Central Association of Colleges and Secondary Schools and the Association of American Universities in standardizing colleges of arts and sciences.

Prof. George Gailey Chambers, director of admissions, University of Pennsylvania, Philadelphia, representing the Association of American Universities.

Dr. W. F. R. Phillips, professor of anatomy of the Medical College of the State of South Carolina, Charleston, representing the Association of American Medical Colleges.

Dr. Theodore Hough, dean of the University of Virginia Department of Medicine, Charlottesville.

Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association, Chicago.

A preliminary report of this committee was prepared and published in August, 1917. It was presented for discussion at the annual

congress on medical education and licensure which was held in Chicago in February, 1918, following which the committee completed this report which, as finally adopted, is as follows:

I. HIGH-SCHOOL REQUIREMENTS.

(*a*) For admission to the two-year premedical college course, students shall have completed a four-year course of at least 14 units (15 after Jan. 1, 1920) in a standard accredited high school or other institution of standard secondary school grade, or have the equivalent as demonstrated by examinations conducted by the College Entrance Examination Board, or by the authorized examiner of a standard college or university which has been approved by the Council on Medical Education. Unless all the entrance units are obtained by examination, a detailed statement of attendance at the secondary school, and a transcript of the student's work, should be kept on file by the college authorities. This evidence of actual attendance at the secondary schools should be obtained, no matter whether the student is admitted to the freshman or to higher classes.

(*b*) Credits for admission to the premedical college course may be granted for the subjects shown in the following list and for any other subject counted by a standard accredited high school as a part of the requirements for its diploma, provided that at least 11 units must be offered in Groups I–V:

Schedule of subjects required or accepted for entrance to the premedical college course.

Subjects.	Units.	Required.
GROUP I, ENGLISH—		
Literature and composition	3–4	3
GROUP II, FOREIGN LANGUAGES—		
Latin	1–4	2
Greek	1–3	
French or German	1–4	
Other foreign languages	1–4	
GROUP III, MATHEMATICS—		
Elementary algebra	1	1
Advanced algebra	½–1	----
Plane geometry	1	1
Solid geometry	½	----
Trigonometry	½	----
GROUP IV, HISTORY—		
Ancient history	½–1	1
Medieval and modern history	½–1	
English history	½–1	
American history	½–1	
Civil government	½–1	
GROUP V, SCIENCE—		
Botany	½–1	----
Zoology	½–1	----
Chemistry	1	----
Physics	1	----
Physiography	½–1	----
Physiology	½–1	----
Astronomy	½	----
Geology	½–1	----

Subjects.	Units.	Required.
GROUP VI, MISCELLANEOUS—		
Agriculture	1–2	____
Bookkeeping	½–1	____
Business law	½	____
Commercial geography	½–1	____
Domestic science	1–2	____
Drawing, freehand and mechanical	½–2	____
Economics and economic history	½–1	____
Manual training	1–2	____
Music; Appreciation or harmony	1–2	____

NOTE.—A unit is the credit value of at least 36 weeks' work of four or five recitation periods per week, each recitation period to be not less than 40 minutes. In other words, a unit represents a year's study in any subject in a secondary school constituting approximately a quarter of a full year's work. A satisfactory year's work in any subject can not be accomplished under ordinary circumstances in less than 120 sixty-minute hours or their equivalent.

Both of the required units of foreign language must be of the same language, but the two units may be presented in any one of the languages specified.

Of the 14 units of high-school work (15 after Jan. 1, 1920), 8 units are required, as indicated in the foregoing schedule; the balance may be made up from any of the other subjects in the schedule.

II. PREMEDICAL COLLEGE COURSE.

(*c*) Beginning January 1, 1918, the minimum requirement for admission to acceptable medical schools, in addition to the high-school work specified above, will be 60 semester hours of collegiate work, extending through two years, of 32 weeks each, exclusive of holidays, in a college approved by the council on medical education. The subjects included in the two years of college work should be in accordance with the following schedule:

Schedule of subjects of the two-year premedical college course.

(Sixty semester hours required.)

	Semester hours.
Required subjects:	
Chemistry (a)	12
Physics (b)	8
Biology (c)	8
English composition and literature (d)	6
Other nonscience subjects (e)	12
Subjects strongly urged:	
French or German (f)	0–12
Advanced botany or advanced zoology	3– 6
Psychology	3– 6
Advanced mathematics, including algebra and trigonometry	3– 6
Additional courses in chemistry	3– 6

Other suggested electives:

English (additional), economics, history, sociology, political science, logic, mathematics, Latin, Greek, drawing.

NOTE.—A semester hour is the credit value of 16 weeks' work consisting of one lecture or recitation period per week, each period to be not less than 50 minutes net, at least 2 hours of laboratory work to be considered as the equivalent of one lecture or recitation period.

SUGGESTIONS REGARDING INDIVIDUAL SUBJECTS.

(*a*) *Chemistry.*—Twelve semester hours required (eight until January 1, 1920) of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work. In the interpretation of this rule work in qualitative analysis may be counted as general inorganic chemistry. The remaining four semester hours (required after January 1, 1920) may consist of additional work in general chemistry or of work in analytic or organic chemistry.

(*b*) *Physics.*—Eight semester hours required, of which at least two must be laboratory work. It is urged that this course be preceded by a course in trigonometry. This requirement may be satisfied by six semester hours of college physics, of which two must be laboratory work, if preceded by a year (one unit) of high-school physics.

(*c*) *Biology.*—Eight semester hours required, of which four must consist of laboratory work. This requirement may be satisfied by a course of eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany, but not by botany alone. The requirement may also be satisfied by six semester hours of college biology or zoology, of which three should be devoted to laboratory work if preceded by a year (one unit) of high-school biology or zoology.

(*d*) *English composition and literature.*—The usual introductory college course of six semester hours, or its equivalent, is required.

(*e*) *Nonscience subjects.*—Of the 60 semester hours required as the measurement of 2 years of college work, at least 18, including the 6 semester hours in English, should be in subjects other than the physical, chemical, or biologic sciences.

(*f*) *French or German.*—A reading knowledge of one of these languages is strongly urged. If the reading knowledge in one of these languages is obtained on the basis of high-school work, the student is urged to take the other language in his college course. It is not considered advisable, however, to spend more than 12 of the required 60 semester hours on foreign languages. In case a reading knowledge of one language is obtained by 6 semester hours of college work another 6 semester hours may be well spent in taking the beginner's course in the other language. If this is followed up by a systematic reading of scientific prose a reading knowledge of the second language may be readily acquired. When a student spends more than two years in college he may well spend 12 semester hours of his college work in the second language.

NEED OF A LIST OF APPROVED COLLEGES OF ARTS AND SCIENCES.

The most imperative present need in medical education in the United States is a reliable list of colleges of arts and sciences which has been approved by some competent standardizing agency. This

is especially needed if the present standards of education preliminary to the study of medicine are to be properly enforced. There are a thousand or more institutions in this country bearing the name of "college" or "university" which vary widely in their entrance standards; in the number and character of their teachers; and in the quantity and quality of their instruction. They range from the highest educational institutions to be found in any country down to the institutions which are entirely lacking in educational merit or which may be actually engaged in the sale of diplomas. Prospective college students at present have no reliable list to guide them in the selection of a college. They are frequently at the mercy of those who insert pretentious advertisements in popular magazines or flood the mails with circulars setting forth in glowing terms the merits of their respective schools when, as a matter of fact, such schools may have no moral right to be referred to as educational institutions.

Lists of approved colleges have been established by two prominent educational organizations—the Association of American Universities and the North Central Association of Colleges and Preparatory Schools which are fairly reliable so far as they go. The former association, however, has not taken into consideration a large number of colleges and "junior colleges" which are in position to furnish a satisfactory training in the subjects included in the first two years of college work. The latter does include such institutions, but, unfortunately, its jurisdiction covers only 17 States. The Association of Colleges and Preparatory Schools of the Southern States, which covers 14 other States, requires a minimum standard of the colleges in membership and is about to establish a list of approved colleges similar to that of the North Central Association. Then its list of approved colleges will doubtless include a much larger number than are at present indicated in its membership. There is need of reliable standardizing agencies which will establish lists of approved colleges in 7 Western States and in 10 North Atlantic[1] and New England States. It is hoped that such agencies will soon be inaugurated, that all the agencies will be affiliated or merged so as to establish uniformity of standards, and that a nation-wide list of approved colleges may be established. In the investigations to be made hereafter by all these standardizing agencies, in the interest of a better medical education, it is hoped that special attention will be given to the equipment and facilities available for the teaching of the essential premedical sciences, physics, chemistry, and biology, including both didactic and laboratory instruction.

[1] It is announced that the Association of Colleges and Preparatory Schools of the Middle States and Maryland has decided to establish a list of the approved colleges and junior colleges located in that district.

ITEMS CONCERNING MEDICAL EDUCATION.

Arkansas.—The new Isaac Folsom Clinic, clinical building of the University of Arkansas Medical Department, has been completed at a cost of $35,000. The old medical school building is being equipped as an isolation hospital at a cost of $6,000, this sum having been appropriated for the purpose by the State.

California.—The College of Physicians and Surgeons, Medical Department of the University of Southern California, Los Angeles, will require the hospital interne year for all students entering during 1918–19 and thereafter.

The College of Medical Evangelists during the last 12 months has established its clinical department in Los Angeles. A city block has been purchased on which five buildings including a 75-bed hospital, a dispensary, two dormitories, and a hydrotherapy building have been completed at a cost of approximately $100,000.

A school for the intensive training of medical officers for the United States Army was established in San Francisco, March 15, 1918, under the direction of the medical faculties of the University of California and Stanford University.

Colorado.—The Colorado Legislature voted a special appropriation of $150,000 a year for the next 10 years to be used on buildings for the University of Colorado. The school of medicine will secure new buildings from this fund.

Connecticut.—During the past year Yale University has secured an endowment of $2,500,000 for placing the departments of medicine, surgery, obstetrics, and gynecology on a full-time clinical basis. A contract with the New Haven General Hospital gives the medical school complete control of the public wards.

Yale University School of Medicine is doing its part in solving problems connected with the war. Its departments of physiology, pathologic chemistry and pathology, particularly, have been aiding the Government in providing gas masks for the American troops and in conducting experiments leading to the reduction of fatalities from gas warfare.

Georgia.—Emory University School of Medicine has received $5,000 by the will of J. B. White, Augusta, to establish a camp for the treatment of tuberculosis.

Illinois.—University of Illinois College of Medicine, Chicago, has adopted the quadramester system by which each 12 months is divided into terms of four months each. Under this arrangement students may begin the study of medicine at the beginning of any one of the three terms.

Indiana.—The Indiana University School of Medicine is erecting a new medical building on the property adjoining the Robert W.

Long Hospital, Indianapolis, at an approximate cost of $400,000. The new building will consist of four or five stories and be of material harmonizing with the hospital buildings. About $150,000 of this sum will be realized from the sale of the old medical building.

Maryland.—The Maryland Legislature, at its recent session, appropriated $25,000 annually for two years for the University of Maryland Medical School. The medical school has received as a gift the medical library and surgical instruments of the late Dr. Charles F. Bevan. The medical school has also voted to admit women students.

Johns Hopkins Hospital has received $100,000 from the will of Jennie Gillender and $300,000 from the estate of James Buchanan Brady.

Massachusetts.—Harvard Medical School has voted to admit women students. This has been due to the heavy draft of the war on the medical profession.

Boston University School of Medicine announces that it has become nonsectarian and will offer courses in regular materia medica, therapeutics, and practice.

Michigan.—The Detroit College of Medicine and Surgery has been taken over by the city of Detroit and placed under the control of the board of education. It will hereafter be maintained as a municipal institution.

Minnesota.—A Navy Hospital Corps Training School has been established in connection with the University of Minnesota Medical School. It was formerly opened on October 29, 1917, with an initial attendance of 100 men.

Nebraska.—The University Hospital, erected on the campus of the College of Medicine of the University of Nebraska, was formerly opened in October, 1917. It consists of 120 beds and was erected at a total cost, for the building and equipment, of $210,000. A new library building, an exact duplicate of the present library unit, is being erected on the medical campus which will house the department of physiology, pharmacology, and biochemistry. The funds were provided by the legislature which also appropriated $100,000 for maintenance for two years.

New York.—Columbia University College of Physicians and Surgeons has added a fifth clinical year to the medical course, to be required of all students matriculating in and after September, 1918. The college has also opened its doors to women students. This was made possible by a gift of $50,000 from George W. Breckenridge, San Antonio, Tex., and a gift of $5,000 from an association of women physicians, and $18,000 from other donations. A new building for the use of women students will be erected and additional laboratories provided.

Cornell University Medical College has established a clinic for the functional reeducation of disabled soldiers, sailors, and civilians. This constitutes practically a new branch of medicine.

Long Island College Hospital, Brooklyn, has received $265,000 from the estate of Charles W. West.

University of Buffalo Medical Department has begun a campaign for funds for a new medical building and laboratories. A gift of $10,000 has been obtained to go toward current expenses for the year.

Ohio.—University of Cincinnati College of Medicine formally dedicated its new medical college building on March 25, 1918. Subscriptions were raised for this building aggregating $555,000.

On January 1, 1918, under the new charter for Cincinnati, all of the medical and scientific nursing work of the Cincinnati General Hospital was placed under the direction of the University of Cincinnati. The staff will be made up of members of the medical school faculty and secures for teaching purposes the facilities of the hospital.

Oklahoma.—The legislature appropriated $200,000 for a State hospital at Oklahoma City, to be under the control of the Oklahoma University School of Medicine. The building is rapidly approaching completion. The school of medicine has completed a new chemistry building at Norman, which has now been completed at a cost of $33,000.

Oregon.—The University of Oregon Medical School dedicated Mackenzie Hall, the first unit of the new group of medical buildings, on May 1, 1918. The building was erected at a cost of $117,000. It is on the new campus of 21 acres which provides space not only for other medical school buildings, but also for hospital sites.

Pennsylvania.—The University of Pennsylvania has received $50,000 from the will of Dr. William C. Goodell. The board of review has awarded damages of $714,000 to the University of Pennsylvania for the old Medico-Chirurgical College and Hospital property taken by the city. The Medico-Chirurgical property had been transferred to the University of Pennsylvania with the merger two years ago.

The University of Pittsburgh School of Medicine is receiving $100 annually from the Pennsylvania Association for the Blind to be used as a prize to the member of the senior class who writes the best essay on the prevention of blindness.

Tennessee.—Meharry Medical College dedicated the new Anderson Anatomical Hall on October 19, 1917. The $10,000 used in its erection was the gift of Dr. John W. Anderson, of Dallas, Tex.

Texas.—During 1917 an attempt by Gov. Ferugson to secure political control of the University of Texas and its medical department

aroused a vigorous protest. A special session of the legislature was called; Gov. Ferguson was impeached; an appropriation of $1,629,407.17 for the university, including $197,500 for the medical department, which Gov. Ferguson had vetoed, was again passed; and three regents of the university named by Gov. Ferguson were replaced by those selected in the interests of the university.

Virginia.—The Medical College of Virginia has voted to admit women students. A new three-story hospital building is to be erected as a part of the new group of buildings for the Memorial Hospital. This first building will cost about $40,000 and will be used for contagious diseases. The money was donated by Maj. James H. Dooley.

Wisconsin.—The University of Wisconsin has received gifts amounting to $100,000, which, with an appropriation of $50,000 from the legislature of 1917, will be used to construct a new infirmary for the medical school.

Marquette University School of Medicine is conducting a campaign to raise $1,000,000 for endowment. Andrew Carnegie has agreed to give one-third of this sum provided the university raises the balance. The first evening of the campaign $175,000 was raised. A gift of 1,000 volumes to be added to the library has been received from the late John L. C. Cronyn, of Buffalo.

DEVELOPING MEDICAL EDUCATION IN CHINA.

In the spring of 1914, the China Medical Commission, representing the Rockefeller Foundation, was sent to China "to inquire into the condition of medical education, hospitals, and public health in China." This commission recommended Peking as the place where the first medical educational work should be organized. The China Medical Board was then organized, which took over the property of the Peking Union Medical College. The terms of the transfer provided for a board of trustees consisting of 13 members, one to be appointed by each of the six missionary organizations previously maintaining the college, and seven by the China Medical Board. Full support of the college was assumed by the China Medical Board on July 1, 1915.

The Peking Union Medical College was founded early in 1906 by various American and English boards of missions, following the Boxer outbreak. Substantial contributions toward the building fund were obtained from the Empress Dowager of China. The Chinese language was the medium of instruction. The college rendered valuable service in 1910–11 in connection with the serious outbreak of pneumonia and the epidemic of the plague. As a result of their work three members of the college staff were decorated with the Order of the Double Dragon. The college staff also rendered valu-

able military surgical work with the Imperial forces during the revolution of 1911.

The announcement of the new Peking Union Medical College, Peking, China, for the session of 1918–19, has recently been sent out. It contains a perspective view of the new medical school and its group of hospital buildings. These, when completed, will consist of 17 buildings, connected by covered corridors, and will occupy the space of about four city blocks. All but four of these buildings and two prospective wings of the medical school have already been completed. A premedical school was opened in September, 1917, and the medical school will be open for students in September, 1919. Graduation from an approved middle school of China, or its equivalent, in addition to 108 credit (semester) hours of college work, is required for admission. The premedical work includes courses in English, Chinese language and literature, algebra through quadratics, plane geometry, biology, chemistry, physics, Chinese and universal history, and drawing. The teaching year begins September 17 and will end June 20 of the following year. The announcement contains floor plans of the various college and hospital buildings.

○