



Quelle

Abraham Flexner: Medical Education in the United States and Canada (1910)¹

When the work of the Foundation began five years ago the trustees found themselves intrusted with an endowment to be expended for the benefit of teachers in the colleges and universities of the United States, Canada, and Newfoundland. It required but the briefest examination to show that amongst the thousand institutions in English-speaking North America which bore the name college or university there was little unity of purpose or of standards. A large majority of all the institutions in the United States bearing the name college were really concerned with secondary education.

Under these conditions the trustees felt themselves compelled to begin a critical study of the work of the college and of the university in different parts of this wide area, and to commend to colleges and universities the adoption of such standards as would intelligently relate the college to the secondary school and to the university. While the Foundation has carefully refrained from attempting to become a standardizing agency, its influence has been thrown in the direction of a differentiation between the secondary school and the college, and between the college and the university. It is indeed only one of a number of agencies, including the stronger colleges and universities, seeking to bring about in American education some fair conception of unity and the attainment ultimately of a system of schools intelligently related to each other and to the ambitions and needs of a democracy.

At the beginning, the Foundation naturally turned its study to the college, as that part of our educational system most directly to be benefited by its endowment. Inevitably, however, the scrutiny of the college led to the consideration of the relations between the college or university and the professional schools which had gathered about it or were included in it. The confusion found here was quite as great as that which exists between the field of the college and that of the secondary school. Colleges and universities were discovered to have all sorts of relations to their professional schools of law, of medicine, and of theology. In some cases these relations were of the frailest texture, constituting practically only a license from the college by which a proprietary medical school or law school was enabled to live under its name. In other cases the medical school was incorporated into the college or university, but remained an imperium in imperio, the college assuming no responsibility for its standards or its support. In yet other cases the college or university assumed partial obligation of support, but no responsibility for the standards of the professional school, while in only a relatively small number of cases was the school of law or of medicine an integral part of the university, receiving from it university standards and adequate maintenance. For the past two decades there has been a marked tendency to set up some connection between universities and detached medical schools, but under the very loose construction just referred to.

Meanwhile the requirements of medical education have enormously increased. The fundamental sciences upon which medicine depends have been greatly extended. The laboratory has come to furnish alike to the physician and to the surgeon a new means for diagnosing and combating disease. The education of the medical practitioner under these changed conditions makes entirely different demands in respect to both preliminary and professional training.

¹ Flexner, Abraham, *Medical Education in the United States and Canada*. A Report to the Carnegie Foundation for the Advancement of Teaching, New York 1910, pp. vii-viii, x-xi, 14, 129f. A shorter abstract of the source is published in: Isabella Löhr, Matthias Middell, Hannes Siegrist (Hgg.): *Kultur und Beruf in Europa*, Stuttgart: Franz Steiner Verlag 2012, S. 194–196, Band 2 der Schriftenreihe *Europäische Geschichte in Quellen und Essays*.

Under these conditions and in the face of the advancing standards of the best medical schools it was clear that the time had come when the relation of professional education in medicine to the general system of education should be clearly defined. The first step towards such a clear understanding was to ascertain the facts concerning medical education and the medical schools themselves at the present time. In accordance, therefore, with the recommendation of the president and the executive committee, the trustees of the Carnegie Foundation at their meeting in November, 1908, authorized a study and report upon the schools of medicine and law in the United States and appropriated the money necessary for this undertaking. The present report upon medical education, prepared, under the direction of the Foundation, by Mr. Abraham Flexner, is the first result of that action. [...]

The striking and significant facts which are here brought out are of enormous consequence not only to the medical practitioner, but to every citizen of the United States and Canada; for it is a singular fact that the organization of medical education in this country has hitherto been such as not only to commercialize the process of education itself, but also to obscure in the minds of the public any discrimination between the well trained physician and the physician who has had no adequate training whatsoever. As a rule, Americans, when they avail themselves of the services of a physician, make only the slightest inquiry as to what his previous training and preparation have been. One of the problems of the future is to educate the public itself to appreciate the fact that very seldom, under existing conditions, does a patient receive the best aid which it is possible to give him in the present state of medicine, and that this is due mainly to the fact that a vast army of men is admitted to the practice of medicine who are untrained in sciences fundamental to the profession and quite without a sufficient experience with disease. A right education of public opinion is one of the problems of future medical education.

The significant facts revealed by this study are these:

(1) For twenty-five years past there has been an enormous over-production of uneducated and ill trained medical practitioners. This has been in absolute disregard of the public welfare and without any serious thought of the interests of the public. Taking the United States as a whole, physicians are four or five times as numerous in proportion to population as in older countries like Germany.

(2) Over-production of ill trained men is due in the main to the existence of a very large number of commercial schools, sustained in many cases by advertising methods through which a mass of unprepared youth is drawn out of industrial occupations into the study of medicine.

(3) Until recently the conduct of a medical school was a profitable business, for the methods of instruction were mainly didactic. As the need for laboratories has become more keenly felt, the expenses of an efficient medical school have been greatly increased. The inadequacy of many of these schools may be judged from the fact that nearly half of all our medical schools have incomes below \$10,000, and these incomes determine the quality of instruction that they can and do offer.

Colleges and universities have in large measure failed in the past twenty-five years to appreciate the great advance in medical education and the increased cost of teaching it along modern lines. Many universities desirous of apparent educational completeness have annexed medical schools without making themselves responsible either for the standards of the professional schools or for their support.

(4) The existence of many of these unnecessary and inadequate medical schools has been defended by the argument that a poor medical school is justified in the interest of the poor boy. It is clear that the poor boy has no right to go into any profession for which he is not willing to obtain adequate preparation; but the facts set forth in this report make it evident that this argument is insincere, and that the excuse which has hitherto been put forward in the name of the poor boy is in reality an argument in behalf of the poor medical school.

(5) A hospital under complete educational control is as necessary to a medical school as is a laboratory of chemistry or pathology. High grade teaching within a hospital introduces a most wholesome and beneficial influence into its routine. Trustees of hospitals, public and private, should therefore go to the limit of their authority in opening hospital wards to teaching, provided only that

the universities secure sufficient funds on their side to employ as teachers men who are devoted to clinical science. [...]

The experience of older countries is therefore suggestive [...] Professor Paulsen [...] reports that “the number of physicians has increased with great rapidity so that now there is, in Germany, one doctor for every 2000 souls, and in the large cities one for every 1000.” What would the amazed philosopher have said had he known that in the entire United States there is already on the average one doctor for every 568 persons, that in our large cities there is frequently one doctor for every 400 or less, that many small towns with less than 200 inhabitants each have two or three physicians apiece!

Overproduction is stamped on the face of these facts; and if, in its despite, there are localities without a physicians, it is clear that even long-continued -overproduction of cheaply made doctors cannot force distribution beyond a well-marked point. [...]

The budget of a department thus organized in a medical school of, say, 250 students, favorably situated, would assign \$3000 to \$5000 a year to its head, \$2000 to \$2500 to a first assistant, \$1000 to \$2000 to additional assistants, \$750 to a helper, and \$2500 to \$5000 to maintenance, including books, new apparatus, material, animals, etc. The total, ranging from \$9250 to \$15,250, still omits a proportionate share of the general overhead expense of administering the institution. A university department in one of the fundamental medical sciences, none too elaborately provided, cannot, then, on the average be effectively maintained for less than \$10,000 to \$15,000 per annum. At the moment, of course, the departments are not all equally expensive. Anatomy and pathology cost more than pharmacology and bacteriology. But the average is not thus seriously disturbed; for the former will extend above the line as much as the latter can be reduced below it. All of them, as they are developed, tend to cost more. Where the sum named has not yet been reached, the tendency towards it is unmistakable. It is, of course, true that fairly good instruction is at times furnished more cheaply. In the small two-year schools situated in small towns, the professors receive less, sometimes much less, than the sums stated; and the expense of maintenance does not at times exceed a few hundred dollars per annum. But these departments cannot continue on this makeshift basis: they are now manned by young men, who, finding themselves doomed to routine and sterility, begin fighting at once to get away. The teacher who is content under such circumstances will soon be out of date; and the instruction, however conscientious, will be decidedly limited in range. To live, these departments must be much more liberally supported; and in the small two-year schools where this has been the case notably at Cornell and Wisconsin the departmental budgets correspond pretty closely to our present estimate. The organization of a department of, say, physiology on the minimum basis of efficiency, for 25 students or less, would require, after providing the initial plant, \$3000 for the professor, \$1000 for his assistant, \$750 expense on the score of material for class use, \$250 to keep some little research going, \$300 for books and periodicals, \$600 for a janitor, a total of \$5900 for the routine teaching of a few students under undesirable limitations. As it is clear that there is no justification just now for the existence of medical schools that are incapable of greatly bettering the type, it follows that schools unable or indisposed to spend the requisite sums lack a valid reason for being. We may then assume that the five departments of a properly organized medical school, capable of handling 125 students, in its first two years can hardly be properly sustained on a total budget of less than from \$50,000 to \$75,000 annually. If, now, the student pays \$150 a year for tuition, there will be an annual deficit ranging from \$31,250 to \$56,250 a year. Not all the medical schools that are alive to their responsibility are, as we shall see, at this moment able to provide on this scale for each of the fundamental departments; but they are in no doubt that these departments need such support; and they are straining every effort to procure it for them.²

² A comparison of the estimates above given with corresponding budgets in German universities is highly suggestive. Despite the fact that the cost of apparatus, supplies, etc., is much lower in Germany than here, the sums spent in various universities on laboratory maintenance are as follows :

	Königsberg (170 medical students)	Breslau (189 medical students)
Anatomy	16,349 marks	26,618 marks
Pathology	9,860 "	14,932 "
	Berlin (1107 medical students)	Göttingen (189 medical students)
Anatomy	57,436 marks	19,850 marks
Physiology	89,766 "	9,606 "

(From Etat des Ministeriums der Unterrichts- und Medizinal Angelegenheiten, 1909, Beilage 6.)

Still more significant is the ratio between expenditure for salaries and that for laboratory maintenance, and the steady encroachment of the latter: out of every 100 marks spent in German universities, there went in

	marks to salaries	marks to laboratories
1868	45.95	37.07
1878	41.94	40.46
1888	36.00	47.18
1902	29.46	53.77
1906	27.93	55.45

(From Preussische Statistik, 204: Statistik der preussischen Landes Universitäten, 1908, p. 7.)

Finally, the actual sums spent on salaries and laboratories respectively tell the same significant story: Total expenditure in Prussian universities in

	marks for salaries	marks for laboratories
1868	1,786,108	1,440,955
1878	2,959,187	2,959,103
1888	3,305,125	4,331,649
1898	3,499,785	6,094,316
1906	4,308,980	8,554,581

(Ibid., p. 14.)

That is, in 38 years, total salaries have increased 141 per cent, total laboratory expense, 490 per cent. In the same period, the total attendance of medical students in the same universities has risen 113 per cent (from 2771 in winter semester, 1868, to 5903, winter semester, 1906).

Paulsen (German Universities, translated by Thilly, p. 219, note) quotes from the Rector's Address of Adolph Wagner in 1896:

"Expenditures for salaries and institutes in the University of Berlin show the following growth:

Year	Salaries	Institutes
1811	116,550 marks (71.8 %)	39,294 marks (24.0 %)
1834	193,650 " (64.6 %)	78,434 " (26.2 %)
1880	321,000 " (52.8 %)	267,000 " (40.1 %)
1896-7	865,000 " (30.9 %)	1,481,000 " (52.9 %)

All the seminaries in the mental sciences (there are 18) cost 17,650 marks annually; the 15 natural-scientific institutes and collections cost 379,798 marks; the 10 medical-scientific institutes 190,054 marks; the 10 clinical institutes, 617,691 marks."

The publications of the Prussian government mentioned above are models, which we would do well to adopt. They enable us to follow in minute detail the educational developments of the last seventy-five years, with their social implications. The American student of similar problems deals with chaos. It is difficult to obtain definite and complete statements from any one institution; and quite impossible to compare data from several institutions without exhaustive inquiry by way of ascertaining whether they cover the same ground. The German statistics prove clearly, however, the point at issue, i.e., the rapidly increasing cost of properly organized medical education.

Abraham Flexner: Medical Education in the United States and Canada (1910). In: Themenportal Europäische Geschichte (2013), URL: <<http://www.europa.clio-online.de/2013/Article=596>>.

Auf diese Quelle bezieht sich ein einführender und erläuternder Essay von McClelland, Charles E.: The German Model for American Medical Reform. In: Themenportal Europäische Geschichte (2013), URL: <<http://www.europa.clio-online.de/2013/Article=597>>.