

Section on the History of Medicine

The Effect of the Flexner Report on Medical Education in Nova Scotia, Part 1

Dr. David B. Hogan FRCPC, FACP* and Dr. T.J. Murray FRCPC, FACP

Introduction

Reformers may think that medical schools change slowly or not at all. George Miller commented that trying to change the curriculum had all the emotional overtures of trying to move a graveyard. Medical education was changing dramatically at the turn of the century in North America. Strong schools had developed at sites such as Harvard, McGill and Johns Hopkins. Proprietary schools were already in decline. These developments in medical education intensified and became widespread, leading to the establishment of medical schools as we now know them. A catalyst was the Flexner Report of 1910 entitled "Medical Education in the United States and Canada" issued by The Carnegie Foundation for the Advancement of Teaching (1). The report galvanized the developments then occurring in medical education, and had a major influence on the form of future developments.

Flexner's report was divided into two sections. The first dealt with the principles of medical education, while the second described each American and Canadian medical school based on information obtained on visits. They were evaluated with regards to entrance requirements, size and training of staff, financial resources, laboratories, and clinical facilities.

For his evaluation, Flexner pictured an ideal medical school. It had to be university-affiliated with proper laboratory space, associated with a teaching hospital, and partly supported by a large endowment fund. It had to admit academically qualified students, preferably

those with at least two years of college training. The faculty should consist of many full-time professors involved in original research. For Flexner, the ideal existed in the form of the Johns Hopkins School of Medicine. Against this model, he measured all medical schools.

Although Flexner visited every school mentioned in the report, the length of his visits drew criticism (2,3). Flexner countered by quoting Frederick T. Gates who said, "You don't need to eat a whole sheep to know it's tainted" (4). According to Flexner, a few hours were enough to assess a school. After visiting approximately six schools, Flexner would return to New York, and write his report or summary of the individual school. This would be sent to the dean with request for corrections.

The second part of the report was juicy reading, as it had a detailed section on each school. Names were given in the purple prose descriptions. Flexner looked particularly askance at what he thought were "proprietary schools" set up for profit. The report caused a sensation in the United States; the public uproar hastened the demise of proprietary schools.

It is not obvious why Canadian schools were included. The Carnegie Foundation was a non-governmental agency that made financial grants. Canadian schools may have co-operated in hopes of obtaining monies (4). At this time in Canada, there was no strong national body interested in medical education or licensure that might view with suspicion an extra-national body reviewing Canadian medical schools (5). Canada and the United States were



*Dr. Hogan received his MD degree from Dalhousie University in 1977. He is now an assistant professor in the Department of Medicine at Dalhousie University.

The Editor of the Section on the History of Medicine is Dr. William B. Spaulding, Research Associate in Medical History at McMaster University, Hamilton, Ont.

Address for reprints: Dr. D.B. Hogan FRCPC, Dept. of Medicine, Camp Hill Hospital, Halifax, N.S. B3H 3G2.

going through one of their periodic "coming together," for example, in 1911, the Canadian national election was fought mainly over a Reciprocity Treaty (or "free trade") with the United States (6). The main American motivation seems to have been related to the large number of Canadian physicians who crossed the border and practised in the United States (7).

Flexner wrote in his report that, "In Canada, conditions have never become so badly demoralized as the United States. There, the best features of English clinical teaching have never been wholly forgotten." Later, though, he summarized the situation in Canada as "(reproducing) the United States on a greatly reduced scale." The eight schools were a mixed bag ranging from Western (according to Flexner "as bad as anything to be found on this side of the line") to McGill and Toronto ("excellent") (1). In Table 1, there is a summary derived from the Flexner report of the eight Canadian schools.

Educators may have resented the way that it was said, but they agreed with Flexner's message (5,8,9,10,11,12,13,14,15,16). In the remainder of this article, we wish to explore the impact of the Flexner report on one Canadian medical school — the Halifax Medical College.

The Halifax Medical College

In 1818, the British government sanctioned the building of a college in Halifax. It was to be financed by a portion of monies collected as customs imposed during the War of 1812 at the port of Castine. This Maine town was taken and held by an expedition from Halifax. It was the suggestion of the Lieutenant-Governor of Nova Scotia, the Ninth Earl of Dalhousie, that the money collected be used in this way, and the new institution was named in his honor. The cornerstone of the College building was laid in 1820, but teaching only began in 1838 (17, 18).

In the early years of the 19th century, there were approximately 60 physicians in Nova Scotia. Most were products of the apprenticeship system. During the first half of the century, it was fashionable to travel to the United Kingdom (especially Edinburgh) to obtain a medical education. Starting in the middle of the century, it also became popular to travel to the United States to receive a degree. It was only in the latter part of the 19th century that Nova Scotians received their medical education in Canada, mainly at either McGill University or Dalhousie-Halifax Medical College (19).

The first steps for the establishment of a medical school in Nova Scotia date from 1832, when the provincial legislature was petitioned to found one in Halifax. Nothing came of this. In 1864, the board of governors of Dalhousie resolved "that the secretary communicate with the Medical Society and enquire if they would be willing to co-operate with the Board in establishing a Faculty of Medicine" (17). This was initially turned down because of the lack of hospital facilities and the difficulties in procuring cadavers for dissection. These prob-

lems were rectified with the help of the premier of the province, Sir Charles Tupper, who was a practising physician (20). In late 1867 and early 1868, a group of local physicians approached the Dalhousie Board about the establishment of a medical school. It was now the Board's turn to be lukewarm. The minutes of the Board meeting reads: "The Board did not feel justified in refusing the offer of the gentleman who proposed to form a medical faculty in connection with Dalhousie University, and the faculty being ready and desirous to receive students in the ensuing spring, the Board saw no sufficient reason for postponing further action in the matter" (21).

The history of the medical school can be divided into four periods, based on its relationship to Dalhousie. From 1868 to 1875, the school was controlled by the board of governors of Dalhousie. Due to pressing needs for space and money, which Dalhousie could not satisfy, the medical faculty separated from the university in 1875. The provincial legislature passed an act incorporating the new institution and empowering it to grant degrees under the name Halifax Medical College. Unlike other Nova Scotian institutions of higher learning, it received an annual grant from the provincial government, initially \$800, but increasing to \$1,200. In 1885, an agreement was reached whereby Dalhousie taught chemistry, physics, and biology, set examinations and granted degrees. All other functions were carried out by the Halifax Medical College (Figure 1). There was a partially overlapping medical faculty in both institutions, with that of Dalhousie being called the "examining faculty" and that of the Medical College being called the "teaching faculty." This unusual arrangement continued

until Dalhousie again took control of the medical faculty and school in 1911.

There is doubt that the Halifax Medical College was a proprietary medical school. They called themselves a corporation, and used students' fees to pay themselves. But it is important to note that even at Hopkins, faculty members were paid and medical students paid fees. The College differed from those proprietary schools whose only thought was of commercial profit. When money was tight or there was a need for additional monies to improve the physical plant, the members of the corporation deferred their payments and sometimes even donated money to the school (22). Some faculty members were distinguished physicians, for example, Dr. John Stewart had been one of Lord Lister's house-surgeons. The school operated independently from Dalhousie University, but the affiliation with Dalhousie ensured that candidates for a medical degree had to pass stringent examinations.

At the time of Flexner's visit, the length of the course was being extended from four to five years. The four-year program (which graduates in 1911 took) consisted of the following courses, which are listed by the year in which the final examinations were given: first year — medical physics, junior chemistry, biology, junior anatomy; second year — anatomy, senior chemistry, physiology, histology; third year — materia medica and therapeutics, pathology, bacteriology; fourth year — surgery, medicine, obstetrics, clinical surgery, clinical medicine, medical jurisprudence, hygiene (23).

It is difficult to assess the quality of the teaching at the school. An unfortunate incident reflecting on this question was the resignation of Dr. N.E. MacKay as

TABLE 1

City and Province	Entrance Requirements	Attended	Finances	Laboratory-Clinical
Winnipeg, Man.	University matriculation	115	\$14,000 (\$122/student)	Good
Halifax, N.S.	Par with Dalhousie	63	\$6,200 (\$98/student)	Poor
Kingston, Ont.	Below required for arts	208	\$19,978 (\$96/student)	Limited clinical
London, Ont.	"Nominal"	104	\$11,590 (\$111/student)	Poor
Toronto, Ont.	Junior matriculation	592	\$64,500 + (\$109/student)	Good
Montreal, Que. (McGill)	University school leaving	328	\$77,000 (\$235/student)	Good
Montreal, Que. (Laval)	Indefinite	217	"Fees"	Not defined
Quebec, Que.	Indefinite	92	"Fees and appropriation"	Adequate



Figure 1. Medical students in front of Halifax Medical College building, circa 1903.

chief of surgery in 1907. Dr. MacKay wrote a long letter to the Halifax Morning Chronicle outlining his reasons for the resignation (24). He stated that for the students of the college, "(there) existed a general dissatisfaction" in the education offered by the Halifax Medical College. This was reflected by a falling number of registered students at the college, and the fact that, at this time, McGill had twice as many Nova Scotian graduates as did the Halifax Medical College. Dr. MacKay thought that the key problems were the lack of power for department heads, and the neglect of merit in promoting faculty members. He advocated a return to Dalhousie University. The chief executive officer of the College replied by stating that Dr. MacKay had resigned in pique because he had not gotten his way and that the "Halifax Medical College will go on improving" (24).

This debate was noted in the Montreal

Medical Journal (26). In an unsigned editorial, it was written that the "teaching of medicine is impossible without a large subvention from the state or from private munificence" neither of which the Halifax Medical College had. It was thought that the only hope of survival for the smaller Canadian schools was in serving "students who will be content with second best." The Canada Lancet defended the school, stating that the "College was doing good work. . . . The students receive very good didactic teaching and the clinical facilities are all that could be desired" (27).

Two graduates of this era have different views about the quality of their education. Dr. K.A. MacKenzie (class of 1903) wrote a non-judgmental piece describing his education. He mentioned that the teaching of anatomy was good (28). In contrast, Dr. H.B. Attlee (class of 1911) stated that the Halifax Medical College of his student days was "the ab-

solute nadir of medical education here." Attlee was a dramatic, outspoken rebel whose words often roused controversy. In the obstetrics course, he witnessed only two deliveries, and both were hidden under a blanket. Attlee draws a damning picture, claiming that the inter-nists were "victims of alcohol" and the surgeons of "disrupting emotional immaturity." He viewed the teaching of physiology as "a waste" (29).

Flexner's Report

Flexner visited Halifax in September, 1909 (30). The Halifax Medical College had been warned about a visit by a letter from Dr. Pritchett, President of the Carnegie Foundation, which arrived in early September but gave no date for the visit. Flexner and Dr. N.P. Colwell, from the American Medical Association Council of Medical Education, arrived around 0100 hours on a Saturday morning unannounced. Later that morning, they met with President Forrest of Dalhousie and Dr. A.W.H. Lindsay (secretary of the medical faculty of Dalhousie and a member of the Halifax Medical College faculty). After this meeting, Flexner and Colwell made a "flying visit" to Dalhousie, the Halifax Medical College, the Victoria General Hospital (Figure 2), and the Halifax Dispensary. The inspection took four hours.

In February, 1910, President Forrest of Dalhousie received the draft of Flexner's report on the medical college. There were several glaring errors. Flexner thought that Dalhousie University gave physicians their licence to practise but this was the function of the provincial medical board. He stated that Dalhousie only gave one terminal set of examinations, whereas the university examined students every year. He failed to realize that the Dalhousie and Halifax medical faculties were independent. He thought that 75 per cent of all income was used to pay faculty members, but only income from student fees was used in this way. He missed the fact that the College had a museum and a library. Flexner stated that not all of the beds at the Victoria General Hospital were available for teaching, which was not the case. It was noted subsequently that all these errors tended "one way," putting the College in the worse possible light (30).

Flexner and the faculty members had a different view of the same institution. For example, Flexner described the

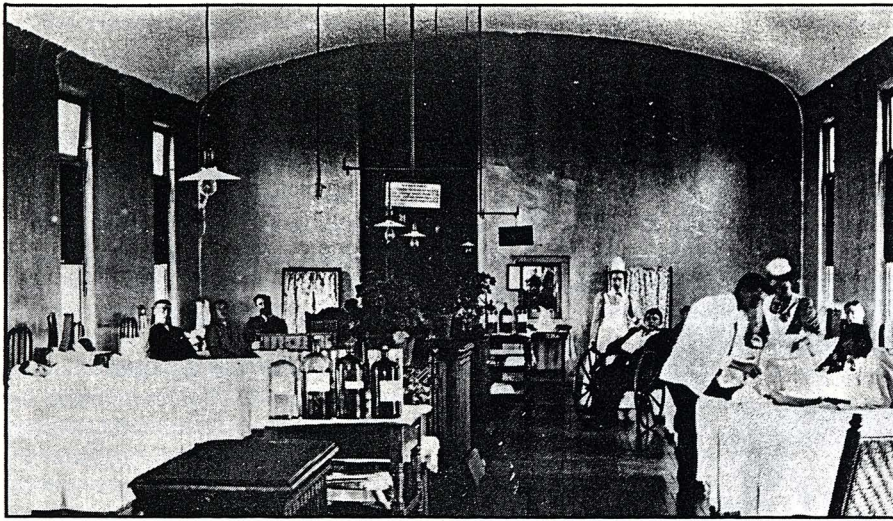


Figure 2. Hospital ward in Victoria General Hospital, circa 1900.

anatomy room as "an ordinary ill-smelling dissecting room"; "Elsewhere, dissecting rooms are indeed found, but the conditions in them defy description. The smell is intolerable; the cadavers now putrid, as at . . . the Halifax Medical School" (1). The corrections suggested by the College read: "In the Halifax Medical College, there is an ordinary, well-lighted dissecting room. There is an ample supply of material for dissections and for operative surgery class, the result of a satisfactory Provincial Anatomy Act. Formalin with arsenic and glycerine are used as the preservatives. There is an appointed time (two hours) each day for dissecting, during which the professor and his assistants are present aiding students or examining them on their work. Every student is supplied, free of expense, with a set of bones for use at home" (30).

Flexner did not incorporate all the suggested changes. In the published report, the Halifax Medical College is mentioned on several occasions:

page 19: "The school catalogues abound in exaggeration, mis-statement, and half-truths . . . a few instances may be cited at random: . . . Halifax Medical College: 'First class laboratory accommodation is provided for histology, bacteriology and practical pathology.' One utterly wretched room is provided for all three."

page 86: ". . . Halifax Medical College provides one utterly wretched laboratory for bacteriology and pathology."

page 122: "Halifax Medical College requires attendance at a City dispensary that possesses little equipment for treatment, still less for teaching . . ."

page 139: "At Halifax, the fee income is \$5,000 a year and the government makes an appropriation of \$1,200, a total of \$6,200. The faculty apportion this sum as follows: three-quarters of the fees are divided among the teachers; one-quarter of the fees plus the government subsidy must carry all other expenses — heat, light, janitor service, laboratory maintenance: the disgraceful condition of the premises follows as a matter of course."

page 141: "Among endowed institutions that lend their names to proprietary medical schools, for which they can hope to do nothing and which they cannot possibly control as long as they do nothing . . . Dalhousie Universities (sic)."

page 170: "Halifax and Western University candidates pass in Canada side by side with students from McGill and Toronto, though not in an equal proportion; for even in the written examination, better opportunities tell in the long run."

Flexner's review of the medical school is in addition to these comments. In the review, he seems to plead for the re-incorporation of the medical school in

Dalhousie University. His assessment was that the Halifax Medical College was "feeble." He states that the "needs of the nation could be met by the four better English schools and Laval in Quebec" (1). It is obvious that he included Toronto and McGill as two of the four better English schools. The third school appears to have been the University of Manitoba. Western University, according to Flexner, was "as bad as anything to be found on this side of the line." He seemed to view Kingston as a stronger school than Halifax, but, in his summation, states that the "future of Kingston is at least doubtful," because of his belief that "the clinical years require much more than the town now supplies." We think that Halifax was one of the four, which, according to Flexner, should survive. This is partially confirmed by the map included in the report, which showed the suggested locations of medical schools in North America. One of the Canadian schools is situated in Halifax (1). In conclusion, notwithstanding his negative comments about the Halifax Medical College, we believe that Flexner thought that the school should continue to exist mainly because of geographic factors.

Summary

The Flexner report of 1910 contributed to the rapid changes then occurring in medical education throughout North America. This report included a section describing each medical school in Canada and the United States. His comments about the Halifax Medical College were critical, but Flexner stopped short of suggesting the closure of the school. Instead, he seemed to advocate a return of the medical faculty to Dalhousie University.

Sommaire

Le rapport Flexner de 1910 a contribué aux changements rapides qui ont marqué la formation médicale à travers toute l'Amérique du Nord. Il comprenait une section décrivant les forces et les faiblesses de chaque école de médecine au Canada et aux États-Unis. Les commentaires de Flexner sur le Collège de médecine de Halifax furent sévères, mais n'allèrent pas jusqu'à recommander la fermeture de l'école. Il parut plutôt recommander le repatriement de la faculté de médecine à l'Université Dalhousie. □