

This section looks back to some ground-breaking contributions to public health, reproducing them in their original form and adding a commentary on their significance from a modern-day perspective. This month, Charles Boelen reviews Abraham Flexner's 1910 report to the Carnegie Foundation for the Advancement of Teaching on medical education in the United States of America and Canada. Selected sections of the report are reproduced below.

A new paradigm for medical schools a century after Flexner's report

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Abraham Flexner's report, commissioned by the Carnegie Foundation, was a remarkable attempt to improve the quality of medical education in North America (1). It was based on sound principles, which may appear trivial today: medical schools should be university based and their educational programmes should have a solid scientific basis. Almost a century later, its influence on medical schools is still felt worldwide.

In his report, Flexner demonstrated both vision and courage. He was a strong advocate for the adoption of high standards in the preparation of future physicians. In suggesting that physicians should practise medicine with a critical mind, always searching for evidence for the appropriateness of their decisions, he broke away from the then-current approach of physicians, who displayed arrogance and ignorance. He had great hopes for physicians, expecting their function to become "social and preventive, rather than individual and curative".

In keeping with his principles, he suggested a drastic reduction in the number of medical schools in the USA from 155 to 31, arguing that those not meeting the proposed standards and not offering society the high-quality doctors it deserves should close down. He condemned "commercial" schools, which produced lots of ill-trained doctors and introduced the concept of social need, with the corollary that a school should be "a public service corporation".

Such observations and his suggested remedial actions were certainly relevant but were ahead of the current thinking. Nevertheless, his recommendations for the "reconstruction" of medical education have been generally applied to medical schools in North America and subsequently across the globe. Strict policies on student admission into medical school, a strong emphasis on basic sciences in the educational programme, the use of a university hospital for ample clinical exposure, and the availability of "laboratories" and appropriate facilities are some of Flexner's criteria which have been widely used to assess the quality of medical education. The essence of his recommendations is clearly perceptible in most of the evaluation and accreditation systems now in use throughout the world.

The value of the Flexnerian paradigm

Almost a century after the report, we may question whether the Flexnerian paradigm is still relevant to meet the challenges of today. Does it sufficiently prepare medical schools to respond optimally to society's needs and the requirements of health systems? Clearly, the report has stimulated generations of medical educators to design medical curricula based on a better understanding of the scientific foundations of life and disease. However, we need to acknowledge that its scope needs to be considerably widened if we are to understand better the basic determinants of health and expect medical schools and medical education in general to play a more proactive role in health development.

The emphasis on the biomedical and hospital-centred model of the Flexner report has contributed to shaping many medical educational programmes in a reductionist fashion. As a result, there is little room for the social, psychological, and economic dimensions of health and the better use of the wide spectrum of health resources beyond medicine and its physicians. Too many Flexner followers have regarded his thinking as exhaustive and have not questioned his recommendations. They should, however, have applied Flexner's own critical approach and considered a wider core of principles and approaches which could enable medical schools to fulfil their mission better in meeting people's health needs.

Although the recommendations in the report had the great merit of focusing on the search for excellence in the preparation of future physicians, they may have also diverted attention away from other aspects affecting the impact of educational strategies on the way physicians practise and health services are organized and delivered — the very things a reformed medical education system was supposed to improve. It may be that Flexner made the implicit assumption that good medical education is the beginning of a cascade of events that would eventually determine the quality of medical practice, the distribution of the medical workforce, the performance of health services, and eventually the health status of people. To

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my dismay, this assumption is still widely held today. Even if not openly expressed, the impression is too often given that medical education is a cornerstone in health, whereas it should be seen as one important part interacting with others in the health system. In my opinion, Flexner's report is at least partly responsible for sustaining the former view.

The reality is that the majority of forces acting on physicians' behaviours (e.g. career choices, establishment of practices, participation in quality-improvement programmes, existence of a reward system, conducive working environment, and general performance of a health system) are poorly correlated with the endeavours of medical educators. However, medical schools and medical educators could certainly play a significant role in ensuring that medical education contributes to a greater extent in meeting the priority health concerns of people, individually and collectively. To do this, they would need to have a strategic vision of the principal factors interacting in the health system, which influence people's health and the attitudes of health professionals. They would also need to be willing to take action related to these factors, going beyond their current educational strategies. This would require a fundamental shift in mindset in those responsible for the design or redesign of institutions as well as of action programmes. People's health needs need to be taken as a starting, and not as an end point.

Interestingly enough, in his report Flexner does hint at some important factors influencing the wider health context, presumably having been aware that they may affect the impact of the educational reforms he advocates. For example, he refers to concepts such as the "patriotism" of institutions, the role of the medical profession, the need for a fair geographical distribution of medical manpower, and general accountability to the public, but elaborates only briefly on them and only through the perspective of medical education. Obviously, his reflection on a reform process in medical education was not based on a rigorous approach to health systems. Although I consider this a serious drawback, I do not make this observation to diminish the merit of the report, recognizing that it was a remarkable achievement at the time.

Today, however, not only should we accept that educational strategies must evolve with time, but they must also be linked to — and ideally influence — changes in society and health systems. Our societies today should be tougher on their medical schools, by encouraging them to demonstrate their ability to have a sustainable impact on people's health. While the scientific foundation of the medical curriculum was seen in Flexner's time as a sufficiently promising end point, today it should be seen only as a means to enable medical schools to go further in their scientific enquiry and to review critically their potential to improve their social responsiveness (2).

A new paradigm of social accountability of medical schools

This paradigm implies that medical schools should to be held accountable for their products, be they medical graduates, research results, or models of health service delivery, and

should demonstrate how these products contribute to improving quality, equity, relevance, and cost-effectiveness in health services. The concept of "social accountability" can be defined as "the obligation [of medical schools] to direct their education, research and service activities towards addressing the priority health concerns of the community, region and/or nation they have the mandate to serve. The priority health concerns are to be identified jointly by governments, health care organizations, health professionals and the public" (3).

Medical schools could be grouped into categories according to their degree of social accountability. Consistent with Flexner's view, the setting of standards and informing the public how medical schools meet the standards are important issues. Standards should be established to help assess the levels by which medical schools respond to societal needs, by following up their graduates and ensuring that they perform as well as expected. This is now being seen as a natural extension of the educational mission of medical schools. It would imply that they will eventually engage in health system research — which is beyond their current educational activities — to influence the future working environment in which their graduates will function and that such research activities should be designed and implemented in partnership with other stakeholders, such as policy-making bodies and professional associations.

In reading his report, I think that Flexner would sympathize with this new approach. He refers to "educational patriotism" to depict the moral obligation of medical schools to do their utmost to serve the public interest. When applied to the medical profession, he calls this "medical patriotism". He therefore encourages both universities and medical associations to share a common vision and commitment in putting the social cause ahead of their private interests. His concerns for an equitable distribution of well-trained physicians in understaffed areas and for fair access of black citizens to medical education — with the hope that they would be best able serve their own and deprived communities — are further illustrations of his expectations of what excellence in medical education programmes could eventually lead to.

Frankly, my feeling is that although the educational strategies Flexner proposed in 1910 were daring for the time, they were not based on his personal convictions of how medical education could improve people's health status. Today, they need to be superseded by a more comprehensive set of standards to steer medical schools towards accomplishing their social mandate. This is a dream Flexner might have wished to make and is an opportunity we have to grasp today. ■

1. Flexner A. *Medical education in the United States and Canada. A report to the Carnegie Foundation for the Advancement of Teaching*. The Carnegie Foundation, Bulletin Number Four, 1910.
2. Improving the social responsiveness of medical schools. Proceedings of the 1998 Educational Commission for Foreign Medical Graduates/World Health Organization Invitational Conference. *Academic Medicine* 1999;74(8 Suppl): S77-viii, S1-94.
3. Boelen C, Heck JE. *Defining and measuring the social accountability of medical schools*. Geneva: World Health Organization; 1995. WHO document WHO/HRH/95.7.