

General practice and the Edinburgh Medical School: 200 years of teaching, care and research

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NINETEEN hundred and eighty-three was a historic year for the University of Edinburgh, for medical teaching and for general practice. It was the quatercentenary of the foundation of the University of Edinburgh. It was also the bicentenary of the completion of the Royal Public Dispensary of Edinburgh, an institution which was to endure and give rise to both the first Department of General Practice and, in 1963, the first Chair of General Practice in the world.

Edinburgh and clinical teaching

Towards the end of the eighteenth century, during the period known as the Scottish Enlightenment, Edinburgh was a town of excitement, a town full of men of ideas. Philosophers, poets, scientists and artists congregated there, adding their talents to the rising affluence that had followed the Union of the Parliaments in 1707 and the failure of the two Jacobite rebellions.

The Medical Faculty, founded by the Town Council in 1726, had already established an international reputation for teaching. This was due as much to those who provided medical education outside the university—the extramural lecturers—as it was to the professors of medicine. Since status and monetary reward were closely linked, jealousies and rivalries were not uncommon among these early medical teachers.

The tradition of clinical teaching in Edinburgh owed much to the influence of Hermann Boerhaave. During the seventeenth and early part of the eighteenth centuries many young Scots studied at the University of Leyden—then the foremost medical school in Europe. There, Boerhaave had pioneered medical training based upon demonstration and observation of patients and not, as previously, upon traditional discourse and dissertation.

Each of the first four professors of medicine in Edinburgh had studied at Leyden and it was not surpris-

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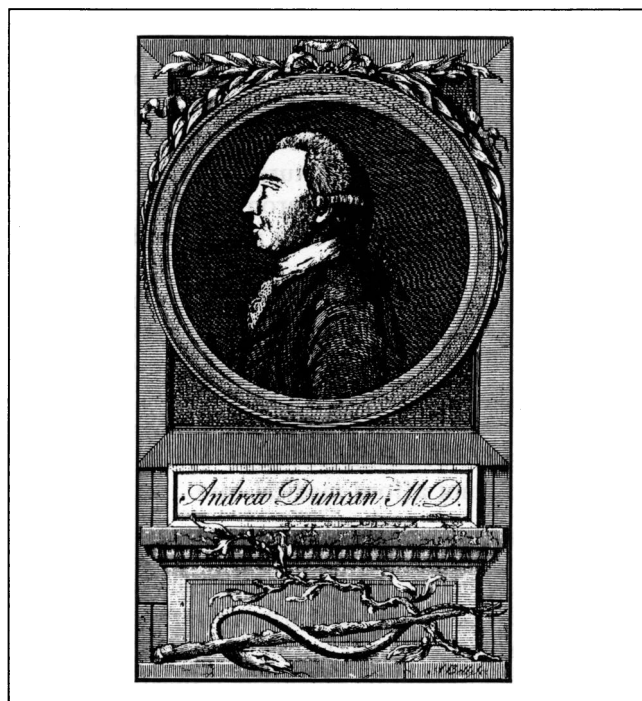


Figure 1. Professor Andrew Duncan.

ing that they used the teaching methods which they had learned from Boerhaave. Andrew Duncan (Figure 1), who had studied at both the universities of St Andrews and Edinburgh in the 1760s, inherited this new tradition of clinical teaching.

The Royal Public Dispensary of Edinburgh

In 1770 Andrew Duncan set out to establish himself in Edinburgh as a physician and as a teacher. In 1774 he was appointed to teach at Edinburgh University in the absence of the Professor of Institutes of Medicine. He lectured successfully in the university and in the wards of the Royal Infirmary, but he failed to be nominated



Figure 2. Royal Public Dispensary of Edinburgh.

when the professorship finally fell vacant two years later.

Deprived of both status and income, but having gained considerable reputation as a teacher, he re-established himself as an extramural lecturer. He started by giving a series of clinical lectures which he illustrated with patients suffering from chronic disease who were otherwise too poor to be able to afford medical attention.

By 1776 the medical needs of those in the affluent noble and merchant classes, who were moving north into the developing New Town, were well provided for by Edinburgh's physicians and surgeons. However, poverty and disease were rife among those who had crowded into the decaying tenements of the Old Town and who could not afford medical care.

Proposal of the dispensary

It was in the same year that Duncan proposed a dispensary to provide both charitable care for the sick poor and a new additional setting in which Edinburgh medical students could be profitably trained. Duncan's proposals did not meet with the universal approval of his medical contemporaries. In 1777 he built a house in Surgeon's Square near to the infirmary and to the university, but the College of Surgeons, who were his feudal superiors, prohibited the sick poor from attending Duncan's medical academy there. The Royal College of Physicians of Edinburgh eventually gave him temporary accommodation for his dispensary, when he was permitted to use part of the new Physicians' Hall in George Street.

By 1781 Duncan had gained sufficient influential support and charitable funding to allow an independent public dispensary to be built. By 1783 the Public Dispensary in Richmond Street (Figure 2) was completed, and the care of patients and instruction of medical students has continued there to this day.

Although the sick poor received free hospital treatment in the Royal Infirmary, the charitable funds which

paid for this could not provide for those requiring care outside hospital. So it was that the medical care and teaching that was provided within the dispensary complemented that already being provided in the Royal Infirmary and in the Medical Faculty.

Duncan's was the first dispensary in Scotland. He had started a movement that was to spread within and beyond Edinburgh, making important continuing contributions to health care and medical education. The dispensary movement also flourished in England. Indeed it appears likely that Duncan's dispensary was modelled on the General Dispensary in Aldersgate Street in London, which had been established in 1770.

Teaching role of the dispensary

At the Public Dispensary Duncan also began to teach *materia medica*. He edited the second edition of the *Edinburgh Dispensary*—a forerunner of the *British National Pharmacopoeia*. Medical and, subsequently, pharmaceutical students studied in the dispensary's laboratory, and by 1880 the Dispensary School of Pharmacy had been established.

The Public Dispensary of Edinburgh, often called the Old Town Dispensary, flourished. Physicians and surgeons were appointed as medical officers. They attended weekly, accompanied by their students whose fees contributed, in part, to the funds of the dispensary. So it was that the successful medical practitioners of Edinburgh came to contribute to the welfare of the poor in the community and to the education of medical students. Later, other branches of the dispensary opened in Edinburgh and in Leith. In 1801 it established a Vaccine Institute for the preparation and supply of lymph for smallpox vaccination.

In 1790 Duncan was at last appointed Professor of Institutes of Medicine at Edinburgh University and in 1818, through his friendship with Henry Erskine, the Lord Advocate for Scotland, Duncan sought and obtained a Royal Charter for the Dispensary—the Royal Public Dispensary of Edinburgh.

In 1815 the New Town Dispensary of Edinburgh was established. It introduced midwifery practice and the visiting of patients in their homes. Although the Royal Public Dispensary initially disapproved of such 'evils' it soon followed this new pattern of patient care and medical students were able to extend their experience in the community through these 'outdoor' cases.

Subsequently, the Provident Dispensary and the Livingstone Memorial Dispensary, were also established in Edinburgh. The importance of experience in dispensary practice for undergraduates was recognized by the Medical Faculty and from 1890 onwards compulsory attendance at one of the dispensary practices became part of the Edinburgh medical curriculum. The dispensary practices played an important role in combining medical care with medical teaching. Students learned, by precept and example, the application of medicine to the individual, to the family and to the community.



Figure 3. Professor Richard Scott.

The Department of General Practice

Most doctors worked as general practitioners until the latter part of the nineteenth century. From then, social changes and the growth of scientific medicine led to the emergence of the hospital specialist and the public health services. However, the separation of clinicians into these three distinct categories did not occur until the National Health Service was introduced in 1948. The early years of the new health service found general practitioners without adequate training and facilities for the task of providing comprehensive and primary medical care for all. Morale fell, and for a decade the future of general practice was in doubt.

The development of the Department of General Practice of the University of Edinburgh has run parallel with many of the remarkable changes that have taken place in the discipline since that time.

With the introduction of the National Health Service, the charitable medical care that was provided by the dispensaries became unnecessary. Professor Frank Crew of the University of Edinburgh's Department of Public Health and Social Medicine recognized that closure of the dispensaries would be an important loss in the education of medical students, and he encouraged Richard Scott (Figure 3), a member of his staff, to develop their speciality of Social Medicine as a hybrid of the clinical and social sciences. Together they sought to establish a 'laboratory in the community' which could be used both for teaching and for long-term research studies of illness within families.

In 1947 Scott had embarked on an ambitious project to explore the medical and social needs of families in

sickness and in health. He saw in the dispensaries the ideal setting for the continuation of his work as clinician, researcher and teacher.

General Practice Teaching Unit

In July 1948, on the first day of the National Health Service, Scott, together with a medical assistant, an almoner, a nurse and a dentist, set up a general medical practice within the premises, and with the support of the Royal Public Dispensary. Together, with the dispensary apothecary, they created a centre for the local community where health and welfare would be promoted, where patients would be treated, where medical students would learn, and where research would be undertaken. In this way, the Teaching General Practice of the University of Edinburgh was established.

By 1951 the Teaching General Practice unit was providing some 30 medical students each year with a three-month course of instruction. Whether in the consulting room or in patients' homes, students learned an approach to clinical medicine that emphasized the individuality of the patient and the effect of ill-health upon the family.

The project aroused interest and support; it reflected the aspiration of many who saw the need for general practice to develop both as a clinical and as an academic discipline.

In 1952 the Rockefeller Foundation offered to support this innovative scheme. Through a generous grant, a second practice, that based on the Livingstone Memorial Dispensary in the Cowgate district of Edinburgh, joined with the Royal Public Dispensary to form the General Practice Teaching Unit.

In 1956 the Faculty of Medicine recommended that the teaching of the unit should be expanded as rapidly as possible to provide instruction for all Edinburgh medical students. Experienced Edinburgh general practitioners were recruited to the staff and the General Practice Teaching Unit became the first independent Department of General Practice in the world.

Almost all medical schools in the United Kingdom and many others throughout the developed world have followed the University of Edinburgh in introducing the teaching of general practice into their undergraduate courses.

Educational programmes for young doctors entering general practice and for established general practitioners were created in subsequent years. Whether as Director of the 'GPTU' or as a founder member of the Royal College of General Practitioners, Richard Scott's advice was eagerly sought by those who followed his lead.

Chair of Medicine in Relation to General Practice

Sir James Mackenzie graduated in medicine from Edinburgh University in 1878. While working as a general practitioner in Burnley he established an international

reputation for his work in clinical research. After a period of practice in London, he returned to Scotland and established his Institute for Clinical Research in St Andrews. In 1963 his daughter endowed a chair of Medicine in Relation to General Practice in her father's memory. In 1963 Richard Scott was appointed the first Professor of General Practice in the world.

A new discipline has both the opportunity and the responsibility to advance medical knowledge through research in its field. In the period from 1948 to 1983 the clinical, behavioural, operational and educational researches of members of staff associated with the department have contributed to more than 400 publications in scientific books and journals.

In 1963 the trustees of the dispensary donated the premises and the remaining funds of the dispensary to the university. The Royal Public Dispensary, which had been sited at 34 West Richmond Street since 1937, was refurbished as a modern general practice teaching centre. It was renamed Mackenzie House, and in 1969 the two departmental practices were merged in this building.

The present department

In 1978 the University of Edinburgh revised the medical curriculum. Each student is now attached to a teaching

practice on a full-time basis for some four weeks. The department has expanded, recruiting additional teaching practices, not only within Edinburgh, but also in West Lothian and in the Borders. Students still learn to value personal, primary and continuous care for the patient and for the family. This experience complements that gained in the laboratories and lecture theatres of the Medical School and in the wards of Edinburgh's teaching hospitals.

This history of the Royal Public Dispensary of Edinburgh and the Department of General Practice of Edinburgh University has traced the local development of one branch of medical care—general practice—perhaps the oldest art and the newest science. Chance has dictated that in 1983 a new building, Levinson House, and new opportunities should coincide. The combination of developing technology and decreasing resources provides a true challenge to the second generation of academic general practitioners. As they look to the future, it is with the heritage of Boerhaave, Duncan, Mackenzie and Scott—a heritage of teaching, care and research, a heritage of 200 years.

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Erratum

In the November 1983 issue of the Journal an important table of demographic data was indecipherable due to a fault during printing. This table is now reprinted below, in its complete form.

Table 1. Demographic data for the whole elderly population, showing any significant differences of the 11 risk groups from the whole sample.

Risk group	Number of cases (%)	Age (years)		Sex		Marital status			Social class	
		60-75 (%)	Over 75 (%)	M (%)	F (%)	Widowed (%)	Currently married (%)	Other (%)	Middle (%)	Working (%)
Living alone	216 (35)	59.5*	40.5*	19.7*	80.3*		NS		NS	
Childless	123 (20)		NS		NS		NS		55.8*	44.2*
Poor	93 (15)		NS		NS	45.1*	37.3*		26.4*	73.6*
Very old	86 (14)			25.9*	74.1*		19.5*		40.5*	59.5*
Recently moved	85 (14)		NS		NS		NS		24.2*	75.8*
Recently discharged	83 (13)		NS		NS		NS		NS	
Never married	70 (11)		NS	24.0*	76.0*				49.0*	51.0*
Recently widowed	37 (6)		NS		NS				NS	
Isolated	54 (9)	51.9*	48.1*	21.9*	78.1*		NS		45.9*	54.1*
Social class V	51 (8)		NS		NS		NS			
Divorced/separated	23 (4)	85.0*	15.0*	22.0*	78.0*				48.0*	52.0*
Whole sample	619 (100)	70.3	29.7	39.3	60.7	32.6	52.2	15.2	35.0	65.0

* $P < 0.05$ compared with the whole sample. NS = not significantly different from the whole sample (actual percentages not shown).