

Early Medical Education in Ireland

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Abstract

From Druidic times to the present century, Ireland has had a long tradition of healing and excellence in medical education. Education in medicine evolved from the Druid physicians to the medical schools of hereditary medical families of the tenth century to the famed medical schools of the Royal College of Surgeons in Ireland, Trinity College and the Catholic University which was incorporated into the University College of Dublin in 1909. This article describes the evolution of medical education in Ireland, from Druidic times to the nineteenth and twentieth centuries and forms a background to the Irish physicians and surgeons who achieved renown in Latin America and the Caribbean.



*Dian Cécht dressing the arm of King Nuadr after the battle of Mag Tuired, 487 BC
(Medicine in antient Erin, London: Burroughs Wellcome, 1909)
Special Collections, Mercer Library, Royal College of Surgeons in Ireland*

Early Irish physicians were of the priestly or Druidic caste, their traditions being handed down orally from remote antiquity. In many Irish and Welsh tales, Druids appear as healers. The Druid physicians, called *liaig* (2) or, if they were women, *banliaig*, were greatly skilled in surgery, trephination (opening the skull to reduce pressure or remove brain lesions) and amputations. They also healed through herbs, healing stones, medicated baths, sweat houses and thousands of secret verbal charms passed orally down through the ages. Centuries before the traditional stethoscope was invented, they used a horn for assessing the heart beat. Every Irish chieftain was accompanied into battle by his personal *liaig*, and not a few owed their lives - following near-fatal spear or sword injuries - to

the skills of their Druid physicians (Berresford Ellis 1995: 213-214).

In 487 BC, King Nuadr, the leader of the Tuatha de Danaan, lost his hand at the First Battle of Moytura (Mag Tuired) against the Firbolgs. He was given a silver replacement made by the silversmith Credne Ceard under the direction of Dian Cécht, who was believed to be the Irish god of healing (Fleetwood 1983: 2). (3) Dian Cécht's daughter, Airmid, was equally renowned for her prowess as a physician and is credited with identifying over three hundred healing herbs. His son, Miach, was reputed to be a better physician than his father, so much so that Dian Cécht slew his son in a fit of jealousy (Berresford Ellis 1995: 213).

In pre-Christian times little provision was made for the treatment of those who were sick and poor. Even in ancient Greece, the seat of democracy, there was no system of medicine and healthcare that was available to all, regardless of their position in society. In most European societies at the time the wealthy and powerful had their own physicians while the sick poor and elderly were often put to death as the ultimate solution to their ills.

The first hospital in Europe was founded by the Roman matron Saint Fabiola who died in 399 AD, near Rome as a hospice for the sick poor (Berresford Ellis 1995: 214). However, according to legend, the first hospital in Ireland was founded six centuries earlier, when Queen Macha Mong Ruadh (who died 377 BC) established a hospital called *Broin Bherg* (the House of Sorrow) at Emain Macha (Navan). Certainly, by the Christian period there were hospitals all over Ireland, many of which were leper houses, often in the monasteries that sprang up all over the island (Berresford Ellis 1995: 214-215).

Under the Brehon laws, the code of great antiquity now recognised as the most advanced system of jurisprudence in the ancient world, medicine began to be formalised into a sophisticated system. There were free hospitals for the sick poor, maintained free of taxation, with compensation for those whose conditions worsened through medical negligence or ignorance. Medical treatment and nourishing food was made available for everyone who needed it, and the dependents of the sick or injured were maintained by society until he or she recovered. Each physician was required by law to maintain and train four medical students and unqualified physicians were prohibited from practicing. It was also seen to be important that physicians had time to study or travel so that they might acquaint themselves with new techniques and knowledge, and that the clans to which they were attached made provisions for this. Under the Brehon laws, women were also eligible to be physicians (Bryant 1923).

The period from the fifth century until the coming of the Normans in the twelfth century was, in effect, the Golden Age of ancient Gaelic medicine, as noble Irish families surrounded

themselves with entourages of learned men, including physicians. Every Irish lord had his own physician. Physicians, like poets, historians and musicians, had a high status in Gaelic Ireland, the highest position being *ollamb leighis*, or official physician to a king, chieftain or Irish lord. They were awarded hereditary tenure of lands for the medical services they rendered. Medicine was the preserve of a select number of families, father passing his medical knowledge to son and sometimes to daughter or kinsman, forming renowned families of hereditary physicians (Nic Dhonnchada 2000: 217-220).

Among the famed medical families were the Ó Caisides (Cassidys) and Ó Siadhails (Shiels) of Ulster, Ó hÍceadhas (Hickeys) and the Ó Lees of Connaught, and the Ó Callanains (Callanans) of Munster, to name just a few. Their medical schools, such as that of Tuaim Brecaín (Tomregain in County Cavan) founded in the sixth century, Aghmacart (in County Laois), and the medical schools at Clonmacnoise, Cashel, Portumna, Clonard and Armagh were famed throughout Europe. (4) Famed hereditary physicians in Scotland, like the MacBeathas, or Beatons, who provided medical services to generations of Scottish kings, originated in Ireland, and Scottish students studied at the medical school at Aghmacart (Mitchell: 2008).

One of main functions of the ancient Irish medical schools was the writing and translation of medical texts into Irish, such as Galen's commentary on the *Aphorisms* of Hippocrates translated into Irish in 1403 by the Munster medical scholars, Aonghus Ó Callanáin and Niocól Ó hÍceadha. (5) A vast body of medical texts exists, written in Irish or translated from Latin into Irish. Some were of Arabic origin, thus making available to Irish physicians a wealth of new medical knowledge and techniques influential in new schools of Arabic medicine in Europe. These works, together with the books of the old medical families written in Irish and handed down to succeeding generations, such as the *Book of the O'Lees*, compiled in 1443; *The Lily of Irish Medicine*, compiled by the O'Hickeys, physicians to the O'Briens of Thomond, compiled in 1352; (6) *Book of the O'Shiels*, hereditary physicians to the MacMahons of Oriel, and the many manuscripts

written by the O’Cassidys, physicians to the chieftains of Fermanagh, constitute the largest collection of medical manuscript literature, prior to 1800, existing in any one language (Nic Dhonnchadha 2000: 217-220).

Irish physicians were famed throughout Europe and had connections to the great European medical schools of the time, such as those of Louvain, Paris, Montpellier, Bologna and Padua, forging links between Continental Europe and Ireland (Dunlevy 1952: 15). The ancient Irish medical schools existed from before the tenth century to the end of the sixteenth, when an Irish medical education and a continental one were regarded as equal. The Flight of the Earls in 1607 after the Battle of Kinsale marked the decline of the old Gaelic tradition. Along with the Brehon laws and the Irish intelligentsia, the medical schools of the ancient medical families of Ireland were abolished under English rule, and many of the Gaelic-speaking Irish physicians were forced to migrate to Europe where they were held in high regard.

Formal Medical and Surgical Education in Ireland to 1900

From the Middle Ages, medical practitioners in Europe organised themselves professionally in a pyramid with physicians at the top and surgeons and apothecaries nearer the base, with non-medically-trained healers, vilified as ‘quacks’, on the periphery (Porter 1998: 11). The sick, especially the sick poor, were treated in monasteries. Surgery, or ‘surgerie’, bloodletting and the extraction of teeth was delegated to the monastery lay servants, the *barbitonsores*, who attended to the tonsures, involving as it did the shedding of blood. Thus, surgeons became part of the medieval guild of barber-surgeons, whose emblem was the red and white pole still seen outside barber shops today. Only surgeons belonging to the guild had a right to practice (Widdess 1989: 3).

Formal medical education in Ireland dates from 18 October 1446 when the Guild of St Mary Magdalene, to which the Dublin barber-surgeons belonged, was established by charter of Henry VI, and was the first medical corporation in Great Britain and Ireland to receive a royal charter. (7) The second charter of the barber-

surgeons guild in Ireland was granted by Elizabeth I in 1577. In 1687 the third charter of the Dublin barber-surgeons was granted by James II, in which barbers, surgeons, apothecaries and wig-makers were united. Many surgeons in Dublin, however, did not wish to associate themselves with barbers. Finally, in 1704, surgeons who were independent of the barber-surgeons guild called upon the Irish parliament to separate surgeons from barbers, and apothecaries from wig-makers. In 1721 the independent surgeons of Dublin formed a society of their own. The apothecaries were incorporated separately as the Guild of St Luke by charter of George II in 1745 (Widdess 1984: 4-5).

In the eighteenth and early nineteenth centuries, physicians and surgeons were educated separately, surgeons being considered of lower medical and social status than physicians who belonged not to a guild, but to a fraternity. The Fraternity of Physicians was formed in Dublin in 1654, and later incorporated into the College of Physicians of Ireland.

The Dublin University medical school was established in 1711. However, few medical degrees were conferred for the first thirty years of its existence and only medicine, or ‘physick’, was taught, no provision being made for the study of surgery.

In 1745 the Dublin Lying-in Hospital (now called the Rotunda Hospital) was opened. At the time midwifery was regarded by physicians as a degrading occupation which was practiced by surgeons who bore the title ‘surgeon and man-midwife’. The same year, a hospital was founded for the mentally ill, St. Patrick’s Hospital, by the will of Jonathan Swift, Dean of the St. Patrick’s Cathedral in Dublin and author of *Gulliver’s Travels*, who left his entire estate for that purpose (Widdess 1984:158). (8) Among the hospitals to emerge in Dublin in the nineteenth century were the Fever Hospital in 1804, Sir Patrick Dun’s and St. Vincent’s in 1834 and the Misericordiae founded by Catholic nuns in 1861. Also established were a number of new maternity and children’s hospitals, small hospitals for the diseases of the skin, and the Adelaide Hospital with its Protestant charter (Lyons 2000: 63).

Before 1765 there was no systematic training of surgeons except by apprenticeship. This was a form of indenture for an agreed number of years, normally from five to seven, the quality of which depended on the knowledge of the master, the degree to which he was willing to impart his knowledge and the degree to which the apprentice was willing to apply himself. There were no examinations or curricula of required courses. The apprentice was not paid during the years of his apprenticeship, but was required to pay a fee to his master who, in turn, provided him with lodging, usually in his own house, food and clothing. Sometimes sons were apprenticed to their own fathers, as was the renowned Dublin ophthalmologist of the nineteenth century, Arthur Jacob. (9)

Training in anatomy and other allied subjects in this period was haphazard or non-existent. Anaesthetics were unknown. If a patient survived a surgical procedure, his or her wound was in danger of becoming infected, and death from septicaemia often resulted. Surgery was confined to amputations, removing exterior tumours, extracting teeth and blood-letting. Little invasive surgery, except the extraction of bullets and kidney stones, was attempted, since death from septicaemia was almost always inevitable.

In 1780 the Dublin Society of Surgeons was formed, having finally broken away from the barber-surgeons guild to which Catholic Irish had been refused membership (Widdess 1989: 2). On 11 February 1784, it received its royal charter, and the Royal College of Surgeons in Ireland was founded under its first president, Sylvester O'Halloran. (10)

In its early years the Royal College of Surgeons granted two kinds of diplomas: the Letters Testimonial or Licence, and surgeoncies to the army, of which there were two grades: surgeons and surgeons' assistants. Later, in 1797, examinations for naval surgeons were instituted. It can be claimed that one of the chief motives for the foundation of the Royal College of Surgeons in Ireland was to provide surgeons for the British army or navy, a purpose which was, in fact, expressed in the original Charter (Widdess 1989: 50). Apprenticeship, by which a student was apprenticed to a member of the

College, was a requirement until 1828, after which it became optional, and ultimately was abolished in 1844 (Widdess 1989: 3).

A licentiate from the Royal College of Surgeons who wished to further his medical education had to take a post-graduate diploma in Medicine by going abroad to Europe or to Edinburgh or London, for it was not until 1886 that a joint diploma of the Irish Colleges of Physicians and Surgeons was established.

From 1804 on, in the time of the Napoleonic Wars, some seventeen privately-owned medical schools in Ireland were founded to meet the demand for medically-trained men. At most of these establishments facilities for teaching were minimal and in the absence of conventional dissecting and lecture rooms, stables were used. Many of the schools existed only for a short time, the need for surgeons for Wellington's army diminishing at the end of the Napoleonic Wars (Widdess 1989: 101).

For all students of medicine or surgery, knowledge of anatomy was deemed the font of medical knowledge and this knowledge was acquired through dissection of human corpses. Following hangings, bodies of criminals would be carted straight to the dissecting rooms of medical schools, normally by a back entrance. Despite the high crime rate in Dublin, there were not sufficient bodies to satisfy the demand, and a brisk trade in grave-robbing emerged. The grave-robbers, or 'resurrection men', working at night at burial grounds of the poor and destitute, dragged the recently-buried corpses from smashed coffins, removed the grave clothes which they replaced in the empty coffin and put the body in a sack for delivery to the designated medical school. (11) Soon the 'resurrection men' were supplying the medical schools in London and Edinburgh with bodies illegally exported in crates as 'Pianos' or 'Books' (Widdess 1989: 34-38). With the passing of the Anatomy Act in Britain in 1832, permitting the medical profession access to 'unclaimed bodies' - in effect, the poor and destitute without families who died in workhouses - grave-robbing came to an end (Porter 1998: 318).

The Académie Royale de Chirurgie, Paris

Medical education in Ireland was influenced by medical institutions in France, one of which, the famed *Académie Royale de Chirurgie* in Paris, was founded by the son of an Irishman. Georges Mareschal was born in Calais in 1658. His father, John Marshall, was an Irish émigré who arrived in France in the mid-seventeenth century serving as an officer in a cavalry regiment until his sword arm was amputated following a serious wound. Orphaned at twelve years of age, Georges Mareschal was befriended by a local barber-surgeon which decided his future career. In 1677 he entered the *Collège de St. Cosmé* in Paris, the first College of Surgeons in Europe, which had been in existence since 1255. His skill as a surgeon was quickly recognised and he became first surgeon to Louis XIV. Under Louis XV, the *Académie Royale de Chirurgie* was founded, becoming the prototype for all future surgical colleges, including the Royal College of Surgeons in Ireland, with Georges Mareschal as its first President (Widdess 1989: 12-13). One of its future graduates was Michael O’Gorman who became the one and only *protomédico* of the Viceroyalty of the Río de la Plata and the father of modern medicine in Argentina.

The Catholic University Medical School

In 1845, under the administration of Robert Peel during the reign of Queen Victoria, the Queen’s colleges were founded in Cork, Galway and Belfast with view to placing higher education on a secular basis. They were known throughout Ireland as ‘the Godless colleges’. The Catholic hierarchy viewed such a system as dangerous to faith and morals and held that Ireland’s future doctors should have access to a medical education in a Catholic medical school and not be compelled to enter non-denominational schools or study abroad. Despite the fact that the founder of the Royal College of Surgeons, Sylvester O’Hallaran, was Catholic, as well as eleven of its presidents, by far the majority of the licentiates, judging by their names, were Protestant. The only way to obtain a medical degree in Ireland was from Trinity College which until 1793 discriminated against Catholics. When Catholics were admitted in 1845, they were not eligible for scholarships.

In 1854 the medical school of the Apothecaries’ Hall in Dublin was purchased in the name of Andrew Ellis, a licentiate and fellow of the Royal College of Surgeons - and a Catholic. Thus, the Catholic University Medical School was founded with John Henry Newman, an Englishman and a recent convert to Catholicism, as rector. Smaller than the medical faculties of each of the Queen’s Colleges in 1880, by 1900 the Catholic University Medical School outperformed all other Irish medical schools, even Trinity College and the Royal College of Surgeons, to become the largest medical school in Ireland. It was eventually incorporated into University College Dublin when the National University was founded in 1909 (Froggatt 1999: 60-90).

The Golden Age

Dublin was reputed to be the second city of medical importance in the then British Empire, second only to Edinburgh. The reign of Victoria marked the Golden Age of medicine in Ireland. Physicians and surgeons such as Abraham Colles (1773-1840), Robert Adams (1791-1875), Arthur Jacob (1790-1874), John Cheyne (1777-1836), William Stokes (1763-1845), Robert Graves (1796-1853) and Sir William Wilde (1815-1876) were pioneers in their fields, giving their names to symptoms and diseases such as Stokes-Adams syndrome, Graves’ disease, Jacob’s membrane, Colles’ fascia and Cheyne-Stokes respiration (Lyons 2000: 63-7).

Conclusion

There were, until the latter years of the twentieth century, Catholic hospitals and Protestant hospitals where the medical and nursing staffs were of one religion or the other, just as schools and universities were separated along religious lines. Happily, that situation has ended as Ireland has moved towards secularisation in medicine and education. In recent years Ireland has been enriched by the mingling of many diverse cultures, philosophies and religions. Nowhere is this internationalism more strongly reflected than in its medical schools where more than half the student body is from abroad, both from developing and developed countries. These schools have

formed links with many countries of the world in medical training.

Many of the graduates from the Royal College of Surgeons in Ireland and Trinity College were surgeons of renown in the armies that fought for South American Independence. In their own way they contributed to the birth of the new republics now forming Latin America. Still more, throughout the nineteenth century, offered their expertise to the new republics of Latin America, some preferring to practice in small towns and communities where doctors were desperately needed, while others attained renown in cities. Many of the early *boticas*, or pharmacies, were established by men such as the Carlow-born brothers Edmund and William Cranwell, who had studied at the famed Apothecaries' Hall in Dublin. Others, like the nineteenth-century physician Robert S.D. Lyons, who obtained his medical education at the

Catholic University Medical School, also in Dublin, risked their lives in the study of epidemics like yellow fever that periodically ravaged Iberia, Latin America and the Caribbean. All formed a valued and respected part of the medical community at large, giving their knowledge gained in Ireland, Britain or Continental Europe to the benefit of their adopted countries.

Because of the Irish doctors and pharmacists who, for various reasons, went to Latin America and the Caribbean in the eighteenth and nineteenth centuries, present-day physicians in the region and the hospitals and academies that Irish physicians helped to found can rank with their counterparts all over the world.

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Notes

1. Without the help of Mary O'Doherty, Medical Essayist and Senior Librarian (Special Collections and Archives), of the Mercer Library at the Royal College of Surgeons in Ireland, much of the research for this article could not have been easily obtained, if at all. I wish to thank her for her help and suggestions in writing this article and for the insight she gave me into many of the Irish physicians and surgeons, past and present, whose names are forever linked with Ireland's medical schools.
2. The word *liaig* means 'leech', an archaic term for a doctor or healer. The term is often used for a Druidic doctor in ancient texts.
3. This is the earliest reference to the fitting of an artificial limb in Western European literature.
4. For a list of hereditary medical families and the ancient Irish medical schools, see 'Medical Writing in Irish, 1400-1700' by Aoibheann Nic Dhonnchadha, *Irish Journal of Medical Science*, 169 (2000), pp. 217-20.
5. Trinity College Dublin MS 1318, cols 487.1-499a24.
6. *Practica seu Liliium medicinae*, comprising seven volumes of diseases of the body, was written by the French physician Bernard of Gordon in 1305, and was one of the best-known medical texts of the Middle Ages.
7. The barber-surgeons of London and Edinburgh were not incorporated until some years later.
8. This was an entirely enlightened approach to treating mental illness, as the norm at that time was to incarcerate the mentally ill in lunatic asylums.
9. The Jacobs were a famous medical Quaker family in Ireland for four generations. After his apprenticeship, Dr Arthur Jacob, born in 1790, studied in Edinburgh, London and Paris before returning to Ireland where he eventually taught at the Royal College of Surgeons.
10. Sylvester O'Halloran (1728-1807), was a distinguished Limerick surgeon and a Catholic, who studied at the Universities of Leiden and Paris. He was one of the few Irish Catholics to reach the top of the medical profession in eighteenth-century Ireland.

11. To steal a body was a misdemeanour, while the theft of garments was a felony, punishment for which was transportation or hanging.

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