Renaissance Medicine in Italy: The Seeds that Shaped Medical Practice in 2020

1 Fig.1 Doctor-drugs medical

A Research Task: Comparing the Organisation of Doctors' training in the Italian Renaissance with modern times

by Anna Burrows

2020. APA referencing.

[1] https://pixabay.com/vectors/caduceus-doctor-drugs-medical-2730761/

Introduction

Modern medical practitioners refer to the “art” and the “science” of medicine. These seeds germinated in Renaissance Italy. The gap between humanities and human biology was bridged.

Strikingly, organisation of the profession was key to university-trained doctors’ creation of a hierarchical structure within the guild’s branch, to subordinate other practitioners to their authority.

In Renaissance Italy, training to become a doctor was organised in a modern way.

Terminology

Medici, medicae

Fisici **–** a **physician** was highly regarded, possessing a university doctorate of Medicine. Derived from Latin ***Physica*** (philosophy), it relates to speculative and philosophical (scientific) theory. Italian scholars in 1300 embraced Aristotelian ideas and logic. The modern nomenclature is an **internal physician.**

Chirurghi **–** a **surgeon** treated **external** conditions: ailments, rashes, fractures and wounds and corrective operative interventions. Renaissance Italian surgery was an academic discipline (compared to the barber-surgeons of England and France).

Empirici – **empirics** were not formally trained, but possessed specialised skills (hernias, cataracts or bony injury treatment).

(Parke, 1985, pp. 8-9, 58)

The Modern Doctor - MBBS

There are two ‘arms’ to a medical degree, medicine and surgery. In Australia, MBBS is a Bachelor of Medicine and Bachelor of Surgery, paying homage to the traditional split between internal medicine and surgery.

Fig 2. Medic Pharmacy Cross [2]

Dr AnnaBurrows
medical specialist in gynaecology

Fig. 3 Dr Anna Burrows MBBS (Qld) FRANZCOG[3]

[2]https://pixabay.com/vectors/medic-pharmacy-cross-dentist-152458
[3] Anna Burrows

The Guild of Doctors, Apothecaries and Grocers - "The Guild"

The guild, defined primarily by a particular economic activity common to its members, was an 'exclusive institution with monopolistic intention' to control members' common interests Goldthwaite,1982, pp.242-243

Established by the **Ordinance of Justice** (1293), it was one of twenty-one corporations of masters governing licencing requirements, standards and regulations. Doctors were provided with an 'intangible group identity and cohesion'. Park, 1985, p.15

The 'greater guilds' governed spices, drugs, doctors, grocers, painters, stationers, barbers and gravediggers. By the mid fourteenth century it boasted 600 members. The 1349 Florentine revision governed and defined the corporate nature of the medical profession. Park, 1985, p.17

THE MODERN DOCTOR

The Australian Health Practitioner Regulation Agency, established by section 23(1) of the National Law (the 'Medical Board of Australia') functions like '**The Guild'**. The *Register of practitioners* confirms registration and permits medical practice.
https://www.ahpra.gov.au/Registration/Registration-Process.aspx

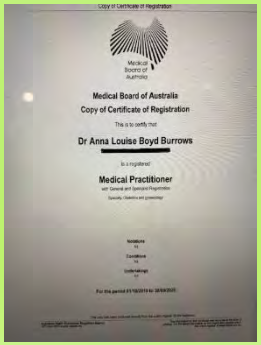

Medical Board of Australia
Copy of Certificate of Registration
Dr Anna Louise Boyd Burrows
Medical Practitioner

Fig 4. Medical Board Registration 2020 [4]

[4] Anna Burrows

Training pathways

In the **middle ages**, anyone could practice medicine; religion and medicine were intricately entwined. Disease was thought to be punishment for a sin. Islamic scholars kept the art and science of medicine alive by taking leads from Greece and Rome. Early in the Renaissance, Western medicine had spread in Europe. Parker, 2019, p.100

Fig 5. The eye according to Hunayn ibn Ishaq c 1200 [5]

5 https://en.wikipedia.org/wiki/Science_in_the_medieval_Islamic_world

Universities - ***Schola Medica Salernitana*** **(Salerno, Italy)**

This first recognised Medical School in Europe embraced medical works from Greece, Rome and Arabic practitioners, translated into Latin. Additional works from the library of *Monte Cassino*, an impressive Benedictine learning centre were added. By the 12th Century, training courses evolved for physicians, surgeons and apothecaries. Salerno was called ***Hippocratica Civitas*** (Town of Hippocrates). Parker, 2019. pp 108-109.

Fig 6. Schola Medica Salernitana [6]

https://en.wikipedia.org/wiki/Schola_Medica_Salernitana

15th Century Italian Universities

Italian universities (Bologna, Ferrara, Florence, Naples, Padua, Perugia, Piacenza, Pisa, Rome, Salerno, Siena and Turin) provided humanists and scholars the equivalent of an apprenticeship. The disputation by means of which the bachelor became 'master of arts' was the equivalent of a craftsman's 'masterpiece'. Burke,2006, p.61

Appropriately, early 14th century, university student lecturers and doctors were addressed as ***maestro*** (abbreviated Mo).Parke, 1985, p.35.

Modern – bachelor of medicine

Current European universities adopt the system of Bachelor, Master and Doctor degrees- part of the ***Bologna Process***.

Ross et al., 2014, pp.314-321.

The 21 Australian university medical schools are accredited by the **Australian Medical Council**. Some medical schools have recently moved from **bachelor**, to a **doctor** of medicine (MD) program where graduates receive a master's qualification. All medical degrees offered by medical schools in Australia allow commencement of practice.

https://ama.com.au/careers/becoming-a-doctor

The University Course Structure

Burke, 2019, p.52.

LIBERAL ARTS – 3 years

1) ***Trivium*** – elementary, grammar, logic and rhetoric

2) ***Quatdrivium*** **–** the more advanced arithmetic, geometry, music and astronomy

HIGHER DEGREE – 4 years

Theology, Law or Medicine

MODERN MEDICAL DEGREE

1) In Australia, 9 of 21 medical schools have an **undergraduate degree**. After passing UMAT (Undergraduate Medicine Admission Test), like ***trivium,*** critical thinking, problem solving skills, understanding people and abstract reasoning are important to practitioners. **https://ama.com.au/careers/becoming-a-doctor**

2) Alternatively, the four-year **graduate entry medical degree** requires completion of a bachelor degree in any discipline, also parallel to the ***trivium***. Academic excellence in the humanities and social sciences is encouraged. Some graduate programs require first year anatomy, physiology and biochemistry.
https://ama.com.au/careers/becoming-a-doctor

Fig 7. UQ Herston
[7] https://www.flickr.com/photos/bertknot/8244534722

RENIASSANCE MEDICAL CURRICULUM

Medical training included practice of **internal medicine** with specialist physicians, **surgeons**, medical **herbalists**.
Students were instructed in **hygiene**, **ethics**, and physicians' behaviour.
In Salerno women were given instruction in **gynaecology, obstetrics**, and **general practice**. Parker, 2019,p.109
Bologna University (founded 1200) commenced the controversial practice of **dissection** which quickly spread to other universities. Parker, 2019,p.110.

NOTABLE PADUAN SCHOLARS

The University of Padua (founded 1222) was renowned for developments in anatomical and surgical instruction.

Andreas Vesalius (1514-1564) from Padua published ***De Humani Corporis Fabrica,*** renowned as the birth of modern **anatomical studies**.
Mondino da Cividale (1275- 1340) Medicine professor, wrote ***Synonyma medicinae*** (dictionary of medical terms)
Colombo (1516-1559) founded the Royal College of Physicians
Rolfnick (1599-1673) introduced Paduan anatomical theatres to Europe
Porzinato, 2012, p. 902.

Figure 8 De Humani Corporis, Andreas Vesalius[8]

[8]https://www.flickr.com/photos/liverpoolhls/10818477975

Modern medical courses

Medical degrees of modern university include content that mirrors renaissance subjects:

medicine , surgery, obstetrics, gynaecology, ethics, and pharmacology.

https://my.uq.edu.au/programs-courses/program_list.html?acad_prog=5578

Anatomical Training – (1) Early Reniassance

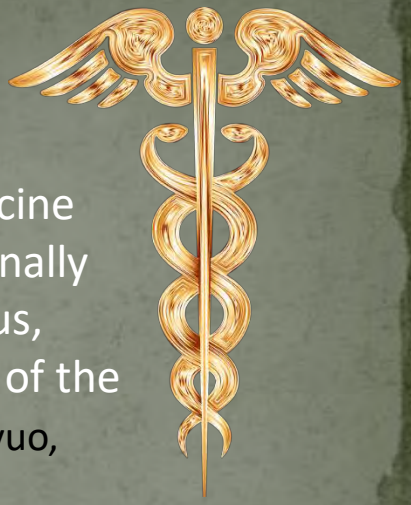
Mondino de Luzzi **(c1270- 1326)** Bologna, professor, anatomist, surgeon. In 1315, the Pope sanctioned dissection of executed criminals. Mondino's systemic anatomical teaching paralleled Arab commentaries on traditional Romans: Hippocrates, Aristotole, and surgeon Claudius Galen. He metaphorically mingled of the knife in one hand, and the classical treatise in the other. His 1316 publication ***Anathomic corporis humani*** (1316) was the anatomical text used in Europe for 250 years. Barnett, 2014, p.23; Cox, 2016, p.93 and Wilson, 1987, p.62-95.

The University of Florence statute of 1387 required medical students dissect at least one male and one female cadaver (criminals supplied by the ***podesta'***) to matriculate. Parke,1985, p60-61.

Fig 9. Mondino de Luzzi[9]

[9]https://en.wikipedia.org/wiki/Mondino_de_Luzzi

Anatomy Training (2) University 'rebirth' of teaching models



Andreas Vesalius came to Padua (from Brussels) in 1537, studied medicine and became a surgical lecturer. His anatomical innovation was to personally dissect the cadaver whilst providing instruction, contrasting the previous, hands-off 'quodlibetarian'approach. He confidently corrected mistakes of the previous anatomical authority, Galen. Porzinato et al, 2012, p. 904; Joutsivuo, 1997, p. 98-112; Toldedo-Pereyra, 2015, p. 127-130.

John Caius studied in Padua(1541). He introduced anatomical dissections and study to Cambridge.In 1552 he published English language anatomical textbooks. Porzinato et al, 2012, p.904.

Realdo Colombo, chair of anatomy and surgery in Padua following Vesalius (1544 to 1547), taught in Pisa and Rome, published ***De re anatomica libri XV*** (1559). Colombo introduced bedside teaching of students. Porzinato et al, 2012, p.905.

Heironymus Fabricus ab Aquapendente, (1594) built, in Padua, the first ever permanent theatre designed for anatomical dissection. The ***Palazzo Bo*** held over 300 students in six concentric galleries. It was utilised until 1872. Porzinato et al, 2012, p. 906.

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Figure 10. Theatro Anatomico

[10]https://commons.wikimedia.org/wiki/File:Teatro_Anatomico.jpg

Modern cadavers –

Anatomy of the human body has been taught to medical students by dissection of embalmed, donated cadavers for centuries. The appreciation of 'tactile gnosis' (how human tissues 'feel') and 'dissection heuristics' (tissue-handling techniques) are reasons that human dissection still exists in medical schools, albeit augmented by digital learning. Ramsay-Stewart, 2010, pp.668-671. MJA.

In 2019, Dr Young, *(Scientific American)* remarked:

'If you want to be truthful about anatomy education, it hasn't changed much since the renaissance.'

Gholipour, 2019, pp. 12 – 15.

Surgical Training at University

Maestro Iacopo da Prato, a Florentine renaissance surgeon, published ***Liber in Medicina de operatione manuali.*** His textbook emphasised a need for theoretical knowledge augmented by practical skills.

> ***"The surgeon must study anatomy …with great diligence , so he knows their composition, position and function….let him not attempt a difficult operation unless he has performed it before or seen it performed successfully, because in many cases the art [of surgery] cannot be written down or understood completely except through manual operation…..For this reason students must frequent the places where experienced surgeons operate and observe their operations carefully."*** Parker, 2019, p 63.

Surgical training in the renaissance provided a grounding in physiology,anatomy and specific training in the treatment of eyes, bones, sores and other particular conditions. Parker, 2019, p.63

MODERN SURGICAL TRAINING

*Maestro Iacopos' advice for safe surgery resonates in modern specialist surgical training programs.

*Gynaecology and Surgical training take up to six years over the initial medical degree.

*Rigorous requirements and approved case Log books are mandatory.

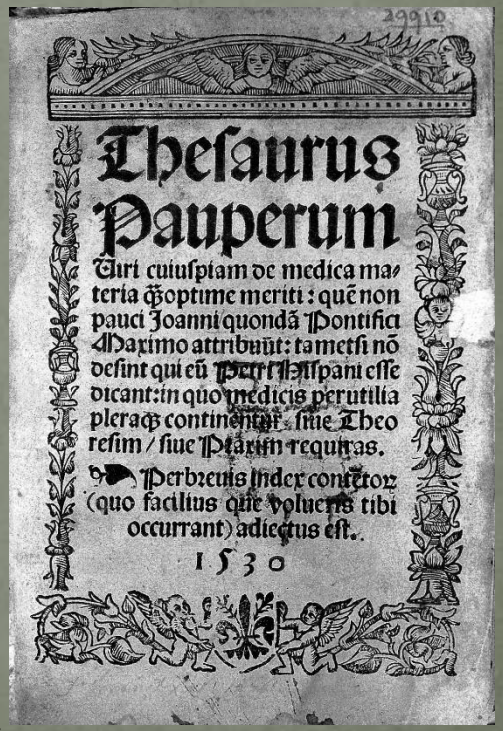
https://ranzcog.edu.au/training/specialist-training/online-portfolio-assessments/logbook-tar

Medicine, Apothecaries, and Pharmaceutical Training

Medicine were prescribed to 'strengthen humors and purge those in excess'.Shaw, 2011, p. 37. Common were 'cathartics, laxatives, emetics, diuretics and expectorants, to expel substances from the body' Cowen, 1988, p.67. Renaissance ***regiminia*** provided dietary regimes and advice on food, drink, exercise and sleep. Huguet-termes, 1992, p.229-239.

Medieval traditional recipes were refined in 1499 into the published Latin instructions manual ***Richetto fiorentino.*** Doctors prescribed and apothecaries dispensed medicines. This tome became the model for similar pharmacopoeias in the next century in Mantua, Bologna and other regions.

Fig 11.Thesaurus Pauperum[11]



By contrast, the ***Thesaurus pauperum*** was a 'vulgar edition' health manual written in simple Latin designed for regional practitioners and the poor. Shaw, 2011, p 236.

By 1515, hospitals (Santa Maria Nuova, Florence) and medical schools (Salerno) compiled their own versions Park, 1999, p. 217; Shaw,2011, p. 236.

[11]https://commons.wikimedia.org/wiki/File:Title_page_to_%27Thesaurus_Pauperum%27_Wellcome_L0027257.jpg

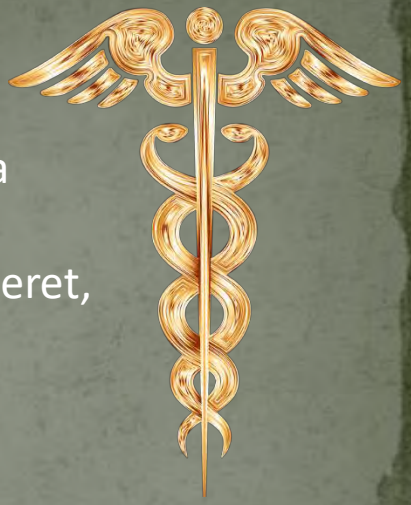
Modern day pharmacopoeia

MIMS Online is the Australian resource for pharmaceuticals information used by doctors which contains prescribing information, product images and consumer medicines information.

Like the renaissance **pharmacopoeia** (only able to be understood by doctors schooled in Latin) this modern **pharmacopoeia** similarly can only be accessed by registered practitioners and is not for public consumption.

https://www.mims.com.au/index.php

Graduation Ceremonies



Private Ceremony: ceremony comprising of an examination to receive a teaching licence ***Licentiatus.***
Public (Cathedral) Ceremony: the new ***maestro*** was presented with a beret, ring, doctoral insigna, long gown and ornaments. Siraisi, 2007, p.20.

Role of The Guild

A degree in medicine unambiguously constituted a professional qualification. Excepting Bologna, usually '**the Guild**' was responsible for approvals and licencing. The licence fee in 1404 was 100-400 florins annually. The ***MAESTRO*** was able to enter the medical workforce with a protected livelihood and reputation. Becker, 1967, p.98.

The Guild (***Ciasca Statuti***,1349, 185-6) stated:
"no new doctor, whether physician or surgeon, who does not have a doctorate may practice the art of medicine or heal in physic or surgery…, unless he has been examined by those consuls who are doctors, along with four doctors selected for the purpose by the consuls who are doctors, and approved as competent by those consuls and the four other doctors in a secret vote conducted by the guild notary".
Siraisi, 2007, p. 21.

Modern

Fig. 12 College Logo [12]

Like the renaissance guild, modern General Practitioner and specialist Colleges charge entry (up to $6000) and annual ($4000) registration fees.

https://ranzcog.edu.au/members/fees
https://www.surgeons.org/about-racs/college-fees

[12](available only for Specialist use Dr A Burrows FRANZCOG)
https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Membership/FRANZCOG%20Logo/FRANZCOG-Full-Colour.png

College of Doctors (1)

In 1392, the **College of Doctors** was formed as a quick and determined reaction to the Black Death. Plague deaths decimated the medical workforce.

Boccacio worried - '*since the ...great plague and pestilence.....layman and people completely ignorant of the art and science of healing, who previously worked as smiths or in other mechanical trades'* practiced medicine. Boccacio (1351), proemium to *Decameron,* in Park, 1985, p.231.

Fig. 13 Boccaccio[13]

13 https://www.pinterest.com.au/pin/365424957237124901/

College of Doctors (2)

Aim:
Tighter discipline and standards, by eliminating poorly trained providers, with restoration of authority and reputation. By 1415 the medical monopoly and licencing powers of the guild was complete. Parke, 1985, p. 36
.

Strategies:
1- 1391 licencing to remove "idiots and mechanicals". University matriculation and approval by four doctors was mandatory.
2- regulation of behavioural conduct standards to boost public confidence in doctors. Doctors were forbidden" …. to frequent brothels, taverns, or to engage in improper *dishonesta* behaviour "
3-intellectual behaviour – disputations of medical questions sponsored by the guild twice monthly – without "brawls or scandals"
4-regular anatomical dissections Parke, 1985, p. 36.

Modern day – Same Strategies

1- Admission as a surgeon requires approval and examination by the College Council – ***'get rid of idiots and mechanicals"***
https://www.surgeons.org/become-a-surgeon/how-do-i-become-a-surgeon/admission-to-fellowship

2- The Australian Medical Association code of conduct, like ***dishonesta,*** is an ethics code that promotes a body of ethical principles to guide doctors' conduct in their relationships with patients, colleagues, and society.
https://ama.com.au/ausmed/code-ethics-revised-and-update

3- and 4 -Educational meetings for Continued Professional Development - is very similar to Italian renaissance regular disputations, ***without brawls or scandals,*** meetings and dissections.
https://ranzcog.edu.au/members/cpd/fellows

What "makes" a doctor?

Crucial is the ability to absorb and understand dense medical, surgical and anatomical principles and apply these to heal. **This is the science of medicine**.

The seeds planted in the ancient times, and sown in the renaissance, and evident in modern practice. The ingredient of a truly caring practitioner is the *fisici (* philosophical) component of medical care . This allows the complete healing by an empathetic, personable physician, no matter what the pathology or outcomes are. **This is the true art of medicine**.

Finalmente, una differenza!

Iacopo da Prato, in ***De operatione manual :***

"if you see a patient with no chance of recovery, tell everyone you are leaving town shortly and cannot take the case!" Park, 1985.p 202.

Tempting…….but not so practical these days!

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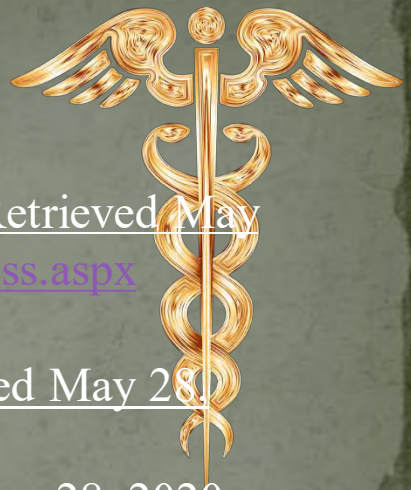

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Images

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Figure 12 College Logo
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Figure 13 Boccaccio

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