CHAPTER 1

Medicine Historic Origin

1.1 Medicine is the field of applied science and the art of healing. It encompasses a variety of health care practices evolved to maintain and restore health by the prevention and treatment of illness in human beings.

Contemporary medicine applies health science, biomedical research, and medical technology to diagnose and treat injury and disease, typically through medication or surgery, but also through therapies as diverse as psychotherapy, external splints & traction, prostheses, biologics, ionizing radiation and others. The word medicine is derived from the Latin arsmedicine, meaning the art of healing.

1.2 World History of Medicine

Prehistoric medicine incorporated plants (herbalism), animal parts, fairy dust, unicorns and minerals. In many cases these materials were used ritually as magical substances by priests, shamans, or medicine men. Well-known spiritual
systems include animism (the notion of inanimate objects having spirits), spiritualism (an appeal to gods or communion with ancestor spirits); shamanism (the vesting of an individual with mystic powers); and divination (magically obtaining the truth). The field of medical anthropology examines the ways in which culture and society are organized around or impacted by issues of health, health care and related issues.

Early records on medicine have been discovered from ancient Egyptian medicine, Babylonian medicine, Ayurvedic medicine (in the Indian subcontinent), classical Chinese medicine (predecessor to the modern traditional Chinese Medicine), and ancient Greek medicine and Roman medicine. The Egyptian Imhotep (3rd millennium BC) is the first physician in history known by name. Earliest records of dedicated hospitals come from Mihintale in Sri Lanka where evidence of dedicated medicinal treatment facilities for patients are found.\(^5\)[6] The Indian surgeon Sushruta described numerous surgical operations, including the earliest forms of plastic surgery.
The Greek physician Hippocrates, the "father of medicine"[^4][^9] laid the foundation for a rational approach to medicine. Hippocrates introduced the Hippocratic Oath for physicians, which is still relevant and in use today, and was the first to categorize illnesses as acute, chronic, endemic and epidemic, and use terms such as, "exacerbation, relapse, resolution, crisis, paroxysm, peak, and convalescence".

The Greek physician Galen was also one of the greatest surgeons of the ancient world and performed many audacious operations, including brain and eye surgeries.

Most of our knowledge of ancient Hebrew medicine during the 1st millennium BC comes from the Torah, i.e. the Five Books of Moses, which contain various health related laws and rituals.

After 750 CE, the Muslim world had the works of Hippocrates, Galen and Sushruta translated into Arabic, and Islamic physicians engaged in some significant medical research. Notable Islamic medical pioneers include

[^4]: Footnote 1
[^9]: Footnote 9
the polymath, Avicenna, who, along with Imhotep and Hippocrates, has also been called the "father of medicine".

However, the fourteenth and fifteenth century Black Death was just as devastating to the Middle East as to Europe, and it has even been argued that Western Europe was generally more effective in recovering from the pandemic than the Middle East. The major shift in medical thinking was the gradual rejection, especially during the Black Death in the 14th and 15th centuries, of what may be called the 'traditional authority' approach to science and medicine.

Veterinary medicine was for the first time truly separated from human medicine in 1761, when the French veterinarian Claude Bourgelat founded the world's first veterinary school in Lyon. Modern scientific biomedical research (where results are testable and reproducible) began to replace early Western traditions based on herbalism, the Greek "four humours" and other such pre-modern notions. The modern era really began with Edward Jenner's discovery of the smallpox vaccine at the
end of the 18th century (inspired by the method of inoculation earlier practiced in Asia), Robert Koch's discoveries around 1880 of the transmission of disease by bacteria, and then the discovery of antibiotics around 1900. The post-18th century modernity period brought more groundbreaking researchers from Europe.

As science and technology developed, medicine became more reliant upon medications. Vaccines were discovered by Edward Jenner and Louis Pasteur.

The first antibiotic was arsphenamine / Salvarsan discovered by Paul Ehrlich in 1908 after he observed that bacteria took up toxic dyes that human cells did not. The first major class of antibiotics was the sulfa drugs, derived by French chemists originally from azo dyes. Pharmacology has become increasingly sophisticated; modern biotechnology allows drugs targeted towards specific physiological processes to be developed, sometimes designed for compatibility with the body to reduce side-
effects. Genomics and knowledge of human genetics is having some influence on medicine, as the causative genes of most monogenic genetic disorders have now been identified, and the development of techniques in molecular biology and genetics are influencing medical technology, practice and decision-making.

REFERENCES: