

Chapter 2

The Development of Scientific Medicine

A BRIEF HISTORY OF MEDICINE

- **Shifting character – supernatural to scientific**
- **Struggle for acceptance – lag in impact on patient cure**
- **Emergence of institutional processes – government, church, etc.**
- **Disease as a social issue – inevitability, social vs. self-care**

EARLY HUMANS

Supernatural Belief Systems

Bloodletting – drain the disease from the body

Trephination – release the evil spirits from the skull

The First Physicians

Shamans and “witch doctors” as practitioners

THE EGYPTIAN CIVILIZATION

Egyptian medical practices have been studied because of Egypt's reputation as an especially healthy civilization and the abundance of written material that exists

Codified guidelines for practice

Organization within religious structures

GREEK AND ROMAN SOCIETIES

Hippocrates – the “Father of Medicine”

- The principle of natural, rather than supernatural, explanations for disease

humoral theory of disease

- Teaching of human compassion and ethical standards

Hippocratic Oath

Roman Medicine

- **Beginning in the third century B.C. Greek physicians began filtering into Rome**

Ascleplades

- **Initiated a general increased regard for physicians**

Roman Contributions to Medicine

- **Public health concerns**
 - **Clean water**
 - **Public baths**
 - **Sanitation ordinances**
 - **System of hospitals**

Galen

The most pivotal figure of this era, his ideas dominated much of medicine for the next 12 centuries

- **Extensive contributions to the understanding of anatomy**

MEDIEVAL MEDICINE

Monastic Medicine

- **Beneficial disease – test of faith and commitment**
- **Presence of disease - God's punishment, satanic possession, witchcraft**

Arabic Medicine

- **Built famous teaching hospitals**
- **High prestige of private physicians**
- **Served as a link between Greek and Renaissance medicine**

Scholastic Medicine

- **Second half of Medieval Era**
- **Council of Clermont forbade monks from practicing medicine (too disruptive to monastic life)**
- **Medical practice became the province of secular clergy**
- **During this period: leprosy epidemics and the Bubonic Plague**

MEDICINE IN THE RENAISSANCE

Andreas Vesalius

- **Advanced anatomical study; discredited for heresy**

Paracelsus

- **Early pharmacological study**

Medical Specialization

Medical specializations became more pronounced.

- **physicians**
- **surgeons**
- **barber surgeons**
- **apothecaries**

MEDICINE FROM 1600 TO 1900

The Seventeenth Century

William Harvey

- Blood and the circulatory system

Clinical Medicine

- Evolution of physician-patient relationship
- and self-healing aspect of body

The Eighteenth Century

Development of Modern Concept of Pathology

- **anatomical concept of disease (Morgagni)**

The Emergence of Public Health and Preventative Medicine

- **Jenner's discovery of a preventive measure against smallpox (vaccination) was an important event in the history of preventative medicine**

The Nineteenth Century

Hospital Medicine

- Concentration of patients in central locations for observation, study and application of cures

Laboratory Medicine

- Examination and application of theory

Discovery of the Cell

The Germ Theory of Disease

Progress in Surgery

- The importance of *asepsis* - surgical cleanliness

THE ASCENDENCY OF MEDICAL AUTHORITY IN AMERICA

Early America

- **Native Americans relied on supernatural explanations for disease**
- **Treatment of the sick typically assigned to “medicine man”**

The Early Colonists

- **Difficult voyage followed by hardship upon arrival**
- **Epidemics and contagious diseases were the primary killers during the colonial years**
- **Colonists brought several contagious diseases (measles, smallpox, mumps) that were unknown to Native Americans, which decimated the native population**

The Revolution to the Mid-1800s

- **America's experience in the Revolutionary War highlighted the lack of accurate knowledge about disease causation and treatment**
- **Reluctance to test and experiment with new procedures, as evidenced in George Washington's death record**

1850 Onward

Three events combined to “professionalize” medicine:

- 1. The Civil War**
- 2. Medical Advancements**
- 3. The Organization of Professional Medicine**

The Civil War

- **618,000 deaths – 1/3 in battle, 2/3 from disease; 1/7 of all wounded in battle died**
- **Emergence of skilled nursing and ambulance corps**
- **Lead to future focus on antiseptic care and treatment**

Medical Advancements

- **Discovery by Pasteur that microorganisms cause disease is considered to be the single most important medical discovery**
- **1920s-1940s: peak years of pharmacological success**
- **Motivated organization of professional medicine and strengthened emerging AMA**
- **Lead to Great Trade of 1910**

The Organization of Professional Medicine

- **During first half of the 19th century, several localities and states formed professional medical societies**
- **Representatives of these societies met in 1847 to form the American Medical Association (AMA)**

Forces Stimulating Professionalization

Three pivotal events strengthened the position of the AMA in medicine:

- 1. Discovery of germ theory of disease**
- 2. Medical licensure requirements**
- 3. Medical education became subject to formal regulation**

Flexner Report

The Great Trade of 1910

Impact of the Great Trade

- **The rise of medical authority**
 - **Evolution from weak and poorly regulated to professional power and prestige**
 - **Concerted effort at autonomy (little or no government control)**

PERSPECTIVES ON THE ASCENDANCY OF MEDICAL AUTHORITY

Paul Starr

- **Concentration on autonomy has lead to corporatization, and to medicine as an economic model**

Vincente Navarro

- **Powerful social groups (government, wealthy, corporate structures) well served by transformation have guided evolution**