HSCC 311

Systems and Trends in Health Care Delivery

Milestones in Medicine and the Delivery of Medical Services

Objectives

- Upon completion of this section, the participant should be able to:
  - Recognize the events in history that guided the development of medicine
  - Recognize the individuals in history that guided the development of medicine

Pre-history

- Prior to 6,000 B.C.
  - Medicine
    - Magic
    - mystery

Primitive

- 6,000 B.C. and following
  - Trephination
    - Trepan
    - Cognitive function enhancement

Ancient Period

- 400 B.C. to 400 A.D.
  - Acts against the gods
  - Cultures of interest
    - Egyptians
    - Babylonians
    - Greeks
    - Romans

Egyptians

- "medicinal effects"
- Mummification
- Imhotep

Babylonians

- Code of Hammurabi
  - Earliest legal code
  - Legal procedures
  - Laws
  - "eye for an eye"

Greeks

- "hospitals"
  - Temples
  - Priests
  - Aesculapius
    - Medicinal snakes
  - Hippocrates
    - Hippocratic Oath

Romans

- 3rd Century B.C.
  - Roman domination
  - Borrowed Greek concepts
  - Planned civilization
  - Public health system
  - Galen
    - Diseases did not have supernatural cause

Dark Ages

- 400 A.D. to 1500 A.D.
  - Political and social upheaval
  - Diseases
  - Catholic Church and Christianity
    - nuns

Reformation & Renaissance

- 1500 A.D. and following
  - Relationship with environment
  - Rebirth
  - Medieval University
    - Master's degree
  - Bombastus
    - Cure, not just comfort

Scientification of Medicine

- 1530's and following
  - Specific advancements towards the scientification of medicine

Anatomy

- Andreas Vesalius, 1530s - 1540s
  - Father of Anatomy
  - Dissections and direct observation

Surgery

- Ambrose Pare
  - Physician who performed surgery
  - Speed of surgery

Microscopy

- Anton van Leeuwenhoek, 1670s - 1720s
- Provided first views of the body under a lens

Histology

- Marcello Malphigi
  - Lung capillaries

Scientific Method

- Sir Isaac Newton, 1680s
  - Philosopher
  - Invented calculus
- Pre-Newton “Truths
  - Revealed
  - Absolute
  - Universal
  - finite
- Newton “Truths”
  - Inductive reasoning
  - Truth is not finite

Pathology

- Giovnni Morgagni
  - Correlation of autopsy findings

Respiration

- Antione Lavoisier
  - Combustion
  - Oxygen's role in respiration
  - Created the metric system

Inoculation

- Edward Jenner (1780's)
  - Studied small pox vaccine
  - Milk maids with cow pox
  - Vaccinations

Anesthesia

- Crawford Long, Horace Wells, James Simpson, William Morton (1840's)
  - Nitrous oxide usage
  - Ether and chloroform

Cleanliness

- Ignaz Semmelweis (1847)
  - Handwashing policy
  - Asceptic technique

German Graduate School

- University
  - Faculty research
  - tenure
  - Scientific Method

Cell Theory

- Rudolf Virchow (Germany)
  - Cell reproduction
  - Normal life and disease of cells

Homeostasis

- Claude Bernard (France)
  - Milieu Interieur
    - Extracellular fluids
    - Functions to maintain life

Pasteruization

- Louis Pasteur (France)
  - Chemist
  - Introduced chemistry to medicine
  - Germ Theory
    - Bacteria's role in causation of disease
  - Sterilization techniques

Asepsis/Antisepsis

- Joseph Lister (England)
  - Father of antiseptic surgery
  - Carbolic acid kills bacteria

Anthrax

- Robert Koch (Germany)
  - Isolated the anthrax bacteria

X-ray

- Roentgen
  - found by accident
  - x-rays

Antibiotics

- Paul Ehrlich
  - Worked with dyes
  - Discovered aspirin
  - Salversan
    - Used to treat syphilis

Penicillin

- Alexander Fleming and Howard Florey (England)
  - Developed penicillin
  - WWII

Mycins

- Selman Waksman (America)
  - Mycins
  - Spectrums

In Conclusion. . .