19th Century Foundations of Scientific Medicine

- Surgery
- Diagnosis
- Nursing and the modern hospital
- Public health

19th Century Foundations of Scientific Medicine: Historical Setting

- French and Industrial Revolutions
- Changes in 19th century
  - wealth
  - nationalism & growth of government
  - new technology
  - continuing scientific revolution
  - education (universities)
19th Century Foundations of Scientific Medicine: Historical Setting

- French and Industrial Revolutions
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19th Century Foundations of Scientific Medicine: broad influences

- more demand for care;
- government regulation of services
- stimulation of demand
- new discoveries

Surgery & the Modern Hospital

- Surgery in 1800
- Anesthesia
- Antisepsis
- Surgery, hospitals & healthcare in 1900
Surgery & the Modern Hospital

• Surgery to 1800
  – Training
    • Elite
    • commoners
  – Operations
    • Broken bones
    • Lithotomy
    • “Bleeding”
    • warfare

Surgery & the Modern Hospital

• Surgery to 1800
  – patient's perspective
"it behooves them that make opium…to scarify about the asterisk [star on the head of the seed capsule] with a knife … and from the sides of the head make straight incisions in the outside, and to wipe off the tear that comes out with th finger into a spoon, and again to return not long after, for there is found another [tear] thickened, and slo on the day after." (quoted in John Mann, Murder, Magic, and Medicine, p. 175)
Who discovered Anesthesia?

- Anesthesia: “discoveries”
  - Anton Mesmer
  - Humphrey Davy
  - Crawford Long
  - Horace Wells
  - William Morton
  - James Young Simpson
Surgery & the Modern Hospital

• Antisepsis
  – Ignaz Philipp Semmelweis
  – Joseph Lister
Lister meets Pasteur, 1892

“the greatest occasion of my life was to meet M. Pasteur—from whose experiments my own work grew.”

—speech by Lister in 1898

Surgery in 20th century

- Billroth
- Surgery fads: appendectomy, tonsils, hysterectomy
- New areas: mastectomy and other cancers; brain and heart surgery

Operating room used at Johns Hopkins Hospital from 1892 to 1927
Acceptance of Lister

• Initially slow
• Lessons from Franco-Prussian War, 1870-71
  – French amputations: 13,200
  – Deaths from gangrene and fever: 10,000