## Introduction to Community Health

**The Science of Nursing in the Community**  
N5290  

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## 500 B.C.–A.D. 500

- **Greeks**  
  - Exercise in physical games of strength
- **Romans**  
  - Aqueducts  
  - Sewer system  
  - Refuse removal  
  - Hospital

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## A.D. 500–1500

**Spiritual era of public health**

- Belief of disease from supernatural causes
- Spread of communicable diseases  
  - Leprosy  
  - Plague (half the population of London, France; 1 in 10 survived)

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## Leprosy/ Hansen’s Disease

- Skin and nerve damage  
- Manifestations of disease  
  - Skin lesions, nodules, plaques  
  - Thickened dermis  
  - Involvement of nasal mucosa, epistaxis  
  - Necrosis of body parts  
  - Sensory loss, numbness  
  - Muscle weakness

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## Bubonic Plague

- Usually result of a bite from an infected rodent flea, or by handling infected animals  
- Does NOT usually spread person to person  
- Symptoms  
  - High fever  
  - Enlarged, tender lymph nodes, often in the groin  
- Incubation period: 2-10 days  
- Treatment: antibiotics

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## Pneumonic Plague

- Result of sufficient dose of bacterial organisms is inhaled; a small percentage of bubonic cases develop pneumonic plague  
- Can be spread person to person  
- Incubation period: 2-3 days  
- Bacillus viable one hour after attack
Plague

• Signs and Symptoms
  – Acute fulminate pneumonia with high fever
  – dyspnea
  – cough w/ blood tinged or purulent sputum
  – cutaneous manifestations:
    ■ livid cyanosis
    ■ ecchymosis
    ■ necrosis of digits and nose

Ring Around the Rosy

Ring around the rosy
(rose-colored purpuric lesions)
Pocket full of posies
(flowers carried to prevent the disease and cover the stench)
Ashes, Ashes
(death)
We all fall down
(we all die)

A.D. 1500-1700

Renaissance and Exploration

• Plague killed saints and sinners alike
• Environment played a role in disease

Eighteenth Century

• Overcrowded cities
• Poor water supply
• Poor sanitation
• Unsafe workplace

Eighteenth Century
communicable disease

• Small pox
• Cholera
• Typhoid fever
• Yellow fever
• Average age of death: 29

Smallpox

• Orthopoxvirus family, (variola major)
• Can spread from person to person, aerosolized
• Signs and symptoms
  – flu-like beginning with high fever
  – maculopapular rash usually starts on face and hands then forearms and trunk and legs
  – become vesicular and pustular (embedded in dermis)
  – all lesions occur at same level of development
  – leave pitted scar after separation from skin
<table>
<thead>
<tr>
<th>Cholera</th>
<th>Typhoid</th>
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<tbody>
<tr>
<td>• Infection of small intestine by <em>Vibrio cholerae</em>, ingesting contaminated food and water</td>
<td>• Infection by salmonella typhi in contaminated food, water</td>
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<tr>
<td>• watery diarrhea</td>
<td>• Diarrhea</td>
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<tr>
<td>• Severe dehydration</td>
<td>• Systemic disease, high fever, weakness, fatigue, delirium</td>
</tr>
<tr>
<td>– Review symptoms</td>
<td>• Rash &quot;rose spots&quot; abdomen and chest</td>
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<table>
<thead>
<tr>
<th>Yellow Fever</th>
<th>Eighteenth Century Advances</th>
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<tbody>
<tr>
<td>• Virus transmitted by mosquitoes</td>
<td>• 1790 George Washington ordered the first US census (done every ten years since)</td>
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<td>• Fever, jaundice, generally ill</td>
<td>• 1796 Edward Jenner demonstrated vaccine against small pox by injecting a boy with cowpox.</td>
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<tr>
<td>• 15% progress to intoxication period</td>
<td>• 1798 Marine health center (will become US Public Health Service)</td>
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<td>– Kidney failure, hemorrhage, brain disfunction, seizures, coma, death</td>
<td>• 1799 Municipal boards of health in major cities</td>
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<thead>
<tr>
<th>Nineteenth Century</th>
<th>Nineteenth Century Nurses</th>
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<tbody>
<tr>
<td>• 1849 Dr. John Snow</td>
<td>• Florence Nightengale</td>
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<tr>
<td>• 1850 Lemuel Shattuck, Massachusetts</td>
<td>– Military at home and in the Crimean War</td>
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<td>• 1862 Louis Pasteur’s germ theory disproved spontaneous generation</td>
<td>– Research, lobbying, health care</td>
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<tr>
<td>• 1876 Robert Koch: a particular microbe and no other causes a particular disease</td>
<td>• Lillian Wald</td>
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<td>• 1872 American Public Health Association founded</td>
<td>– 1895 Henry Street Settlement</td>
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<td>• 1890 pasteurization of milk</td>
<td>– Home health</td>
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<td>• 1895 septic tanks introduced</td>
<td>– First school nurse</td>
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<tr>
<td></td>
<td>• Mary Seacole</td>
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<tr>
<td></td>
<td>– Jamaican and other Caribbean populations</td>
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<td></td>
<td>• Dorothea Dix</td>
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<td></td>
<td>– Mentally ill</td>
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<td></td>
<td>• 1881 Clara Barton</td>
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<td>– American Red Cross</td>
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**Twentieth Century**

- Malnutrition
  - Pellagra, rickets
- Communicable diseases
  - Influenza, pneumonia, tuberculosis, GI, polio
- Death associated with pregnancy & childbirth

**Pellagra**

- Vitamin deficiency, niacin or tryptophan
  - Manifestations
    - Skin sores
    - Diarrhea
    - Inflamed mucous membranes
    - Mental confusion

**Rickets**

- Vitamin D deficiency, phosphate
- Manifestation
  - Soft bones, bow legs, spinal deformities, fractures
  - Dental deformities
  - Bone pain

**Poliomyelitis**

- Poliovirus, person to person contact by infected secretions of nose or mouth, feces
- Worldwide epidemic 1840-1950’s
- Subclinical (95% cases)
- Nonparalytic
- Paralytic
  - Brain and spinal cord involvement

**Twentieth Century Advances**

- 1906 Food and Drug Act
- 1910 Workman’s compensation
- 1902 Rochester City Hospital School for Nurses
- 1918 Johns Hopkins School of Public Health
- Prohibition

**Roosevelt & WWII**

- 1935 Social Security Act
- 1937 National Cancer Institute
- Penicillin
- DDT
- CDC, Atlanta
Post war (1950’s)

• Polio Vaccine
• Eisenhower’s heart attack

1965

• Medicare
• Medicaid

1977

Eradication of smallpox

1970- present

The period of Health Promotion and Disease Prevention

• Diseases due to one’s lifestyle or health behavior
• Global Health

Organizations in Community Health

Governmental Agencies

• International
• National
• State
• Local
International Agencies

- WHO, 1948, Geneva
  - Six Regional Offices: AFRO, AMRO/PAHO, EMRO, EURO, WPRO
  - Funded by country members "sliding scale"
  - 1980 eradication of smallpox
- UNICEF, 1946

National Agencies

- Department of Health and Human Services (HHS)
- Department of Agriculture
  - WIC
- Environmental Protection Agency
- Department of Labor
  - OSHA
- Department of Commerce
  - Censuses

State Agencies

- Carry out core functions of public health
- Link between federal and local agencies
- Laboratory services
- Environmental health i.e. Water and air pollution

Local Agencies

- City or County Health Department
- School Health Program

Quasi Governmental Health Organizations

- American Red Cross
  - Federal responsibilities
  - Voluntary contributions

Non-governmental Health Agencies

- Voluntary Agencies
  - MADD, SADD
- Professional Health Organizations
  - American Nursing Association
- Philanthropic Foundations
  - Rockefeller, Robert Wood Johnson, Kaiser, Kellogg, Doris Duke
- Service, Social and Religious organizations
  - Rotary