Terms you should know:

- epidemiology
- epidemic
- public health
- pandemic
- reportable diseases

Questions you should be able to answer:

- What are some reasons why we don’t have good vaccines against all diseases?
- Why is it so important that everyone be vaccinated, and have their children vaccinated?
- How is epidemiology used in the prevention of disease?

Lecture outline:

I. Problems with vaccines:
   - A. Some pathogens don’t produce good immunity
   - B. For some diseases, no safe and effective vaccine has yet been developed
   - C. Diseases like AIDS attack the immune system itself, complicating vaccination
   - D. The many strains of cold viruses make immunization difficult or impossible
   - E. Rapidly changing flu viruses prevent a single, long-lasting vaccination

II. Vaccine facts and fallacies (see separate handout)

III. Epidemiology and public health:
   - A. Study of occurrence and spread of disease
   - B. Can be a major tool in fighting disease (example: John Snow and cholera)
   - C. Reportable diseases
   - D. Uses of epidemiology