Unit II – Problem 8 – Epidemiology: Public Health Surveillance

- **What is public health surveillance?**
  - It is the ongoing, systemic collection, analysis and interpretation of health-related data essential to planning, implementation and evaluation of public health practice, closely integrated with timely dissemination of these data to those responsible for prevention and control.
- **What is the goal of public health surveillance?**
  - To provide information which can be used for health action by public health personnel, government leaders and the public to guide public health policy and programs.
- **What are the uses of public health surveillance?**
  - Estimate the magnitude and scope of health problems.
  - Measure trends and characterize the disease.
  - Detect epidemics, health problems and changes in health behaviors.
  - Assess effectiveness of programs and control measures.
  - Develop hypotheses and stimulate research.
- **What are the types of public health surveillance?**

Passive Surveillance	Active Surveillance
• Diseases are reported by health care providers • Simple and inexpensive • Limited by incompleteness of reporting and variability of quality	• Health agencies contact health providers seeking reports • Ensures more complete reporting of conditions • Used in conjunction with specific epidemiologic investigation

- **What is the process of public health surveillance?**
  - **Data collection → data analysis → data interpretation → data dissemination → link to action.**
  - **Keep in mind that before collecting data, you have to decide on the overarching goal of the system:**
    - ✓ What will you monitor?
    - ✓ Who will collect the data and how it will be collected?
    - ✓ Who is the target population.
    - ✓ Will the system be active or passive.
  - **Data collection:**
    - ✓ What are the sources of data?
      - ❖ Reported diseases or syndromes.
      - ❖ Electronic health records (e.g. hospital discharge data).
      - ❖ Vital records (e.g. birth and death certificates).
      - ❖ Registries (e.g. cancer).
      - ❖ Surveys.
    - ✓ Internationally notifiable diseases (reporting to WHO is required for cases of):
      - ❖ Smallpox.
      - ❖ Poilomyelitis (wild type).
      - ❖ Human influenza caused by any new subtype.
      - ❖ Severe Acute Respiratory Syndrome (SARS).
  - **Data analysis:**
    - ✓ Who will analyze the data?
    - ✓ How often will they analyze the data?
    - ✓ What methodology will they use?

- **Data dissemination:**
  - ✓ <u>How to distribute information to those who need to know?</u>
    - ❖ Health agency newsletters, bulletins or alerts.
    - ❖ Surveillance summaries and reports.
    - ❖ Medical and epidemiologic journal articles.
    - ❖ Press releases and social media.
  - ✓ <u>Data dissemination target audiences:</u>
    - ❖ Public health practitioners.
    - ❖ Clinicians and other health care providers.
    - ❖ Policy and other decision makers.
    - ❖ Community organizations.
    - ❖ The general public.
- **Link to action (for example: after doing an influenza surveillance, what actions are you going to take to prevent it?):**
  - ✓ The foundation of flu prevention is an annual vaccination.
  - ✓ Make sure to wash your hands regularly and gargle every day.
  - ✓ If you feel even slightly unwell, do not forget to wear a mask.
  - ✓ Other preventive measures include getting adequate sleep and proper nutrition, and generally paying more attention to daily health during the flu season.