



- **What are the sources of routinely collected data?**
 - **Census.**
 - **Vital records:** birth and mortality records.
 - **Morbidity records:**
 - ✓ Communicable diseases surveillance system.
 - ✓ Disease register (such as cancer registry).
 - ✓ Hospital discharge system.
 - ✓ Traffic data record system (traffic accidents and deaths).
 - ✓ Morbidity and Mortality Tracking System (MMTS).
 - ✓ Occupational injury Compensation System (GOSI).
 - ✓ Periodic surveys (General Household Survey).
 - **Health information system.**
- **What are the sources of mortality data?**
 - Death certificate.
 - Certificate of fetal death.
 - Medical examiners' cases.
 - Lay reporting.
- **What are the advantages of mortality data?**
 - Inexpensive and convenient.
 - Establish the fact of death with virtual certainty.
 - Population at risk is known.
 - Easy to study time trends.
- **What are the limitations of mortality data?**
 - Accuracy of diagnosis.
 - Accuracy in assessing the cause of death.
 - Accuracy in coding.
 - Completeness of recording.
 - Not all diseases are fatal.
- **Not-routinely collected morbidity sources:**
 - Surveys (Non-Communicable Disease surveys and family health surveys).
- **Record linkage:**
 - Is a process of linking different types of person's records that are significant for his health (CPR record, hospital record, cancer registry report and death certificate record) using unique personal identifying variables.
- **Principles of exposure measurement in epidemiology:**
 - **Definition of exposure:**
 - ✓ Exposure denotes any of a subject's attributes or any agents with which he/she may come in contact that may be relevant to his/her health. The definition includes agents that may:
 - ❖ Cause physiological effects.
 - ❖ Cause of protect from a disease.
 - ❖ Confound the association between another agent and a disease.
 - ❖ Modify the effects of other agents.
 - ❖ Determine the outcome of the disease.
 - **The measurement instrument.**
 - **Scope of exposure measurement:**
 - ✓ Nature:
 - ❖ *Specific:* tobacco, sheesha, pipes, cigar... etc.
 - ❖ *Sensitive:* includes all ways in which subjects may be exposed to the active agent.
 - ❖ *Route of exposure to agent.*



- ❖ *Behaviors that may protect against exposure.*
- ✓ Dose:
 - ❖ *Cummulative.*
 - ❖ *Average.*
- ✓ Time.
- **Classification of exposures:**
 - ✓ Personal attributes or environmental agents.
 - ✓ Subjective or objective data.
 - ✓ Present or past exposures.
- **Methods:**
 - ✓ Personal interview (face-to-face, telephone, internet).
 - ✓ Self-administered questioners.
 - ✓ Diaries.
 - ✓ Use of proxy respondents.
 - ✓ Observation of the subject by investigator.
 - ✓ Reference of records.
 - ✓ Physical or chemical measurements (on the subject; on the environment).
- **Choice of methods:**
 - ✓ Type of study.
 - ✓ Type, amount and detail of data required by the study's objectives.
 - ✓ Impact of the exposure on the subject's lives.
 - ✓ Sensitivity of the subject to questioning about exposure.
 - ✓ Frequency of exposure, variability in the frequency and level of exposure over time.
 - ✓ Availability of records of exposure.
 - ✓ Availability of physical or chemical methods for measuring the exposure.