

Screening and Surveillance in Epidemiology

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1. Introduction

- Screening and surveillance are public health tools for early detection and ongoing monitoring of disease.
- Both support timely intervention and resource planning.

2. Screening

- **Screening:** testing apparently healthy people to detect disease or risk factors early.
- Effective screening targets diseases with a detectable early stage and available treatment.
- Examples include cervical cytology and blood pressure checks.

3. Test Performance

- **Sensitivity:** the ability of a test to correctly identify those with the disease.
- **Specificity:** the ability to correctly identify those without the disease.
- Predictive values depend on disease prevalence in the population.

4. Surveillance

- **Surveillance:** the continuous, systematic collection and analysis of health data.
- Passive surveillance relies on routine reporting, while active surveillance actively seeks cases.

5. Uses

- Surveillance detects outbreaks, tracks trends, and evaluates control programmes.
- It guides allocation of health resources and policy decisions.

6. Summary

- Screening detects disease early in individuals, while surveillance monitors disease in populations, together strengthening prevention and control efforts.