

Introduction to Epidemiology

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1. Introduction

- Epidemiology is the study of the distribution and determinants of health and disease in populations.
- It provides the scientific basis for public health action and disease prevention.

2. Core Concepts

- **Distribution:** describing who is affected by person, place, and time.
- **Determinants:** the factors that influence whether disease occurs, such as exposure and risk factors.
- The epidemiological triad links host, agent, and environment in causing disease.

3. Uses of Epidemiology

- Identifying causes and risk factors for disease in communities.
- Guiding prevention, control programmes, and health policy.
- Evaluating the effectiveness of interventions and services.

4. Types of Epidemiology

- **Descriptive epidemiology:** describes patterns of disease occurrence.
- **Analytical epidemiology:** tests hypotheses about causes using comparison groups.

5. Key Terms

- **Endemic, epidemic, pandemic:** describe usual, excess, and worldwide disease levels.
- Incidence and prevalence measure new and existing cases respectively.

6. Summary

- Epidemiology studies how and why disease is distributed in populations, providing evidence to prevent illness and improve community health.