

Introduction to Epidemiology

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1. Introduction

- Epidemiology is the study of the distribution and determinants of health-related states in populations.
- It informs disease control, prevention, and public health policy.

2. Key Concepts

- **Incidence:** number of new cases over a period.
- **Prevalence:** total existing cases at a point or period in time.
- **Endemic, epidemic, pandemic:** describe baseline, excess, and widespread disease occurrence.

3. Scope and Uses

- Identifies causes and risk factors of disease.
- Evaluates interventions, screening programs, and health services.
- Guides resource allocation and outbreak response.

4. Descriptive Epidemiology

- Examines disease by person, place, and time.
- Generates hypotheses about patterns and possible causes.

5. Analytic Epidemiology

- Tests hypotheses about exposure-disease relationships.
- Distinguishes association from causation using established criteria such as strength and consistency.