

Epidemiology and Public Health

Epidemiology and Public Health Interventions

1. Introduction

- Epidemiology provides the evidence base for designing and evaluating public health interventions.
- Interventions aim to prevent disease and promote health at the population level.

2. Levels of Prevention

- **Primary prevention:** stop disease before it starts (e.g. vaccination, health education).
- **Secondary prevention:** detect and treat early through screening.
- **Tertiary prevention:** reduce complications and disability in established disease.

3. Designing Interventions

- Use epidemiological data to identify priority problems and at-risk groups.
- Set measurable objectives and choose appropriate strategies.

4. Evaluating Interventions

- **Process evaluation:** was the intervention delivered as planned?
- **Outcome evaluation:** did disease frequency change?
- Compare against baseline data and, where possible, a control group.

5. Summary

- Epidemiology informs the choice, targeting, and evaluation of interventions across the three levels of prevention.