



# Advanced Epidemiology And Impact of Vaccines

**Duration:** 5 Days

**Language:** en

**Course Code:** IND5 - 151

## Objective

:Upon completion of this course, participants will be able to

- Understand the fundamental concepts of vaccine epidemiology.
  - Develop skills in evaluating vaccine efficacy and safety.
  - Analyse the impact of vaccination programs on public health.
- Learn about the latest research and developments in vaccine technology.
- Enhance their ability to design and implement effective vaccination strategies.

## Audience

:This course is intended for

- Epidemiologists
- Public health professionals
- Medical researchers specialising in infectious diseases
- Healthcare practitioners involved in vaccination programs
  - Policymakers in health
- Graduate students in public health and related fields

## Training Methodology

The course employs a blend of instructional methods, including

- Interactive lectures
- Hands-on data analysis sessions
- Group discussions and case studies
- Expert-led Q&A sessions
- Comprehensive course materials and resources

## Summary

This advanced course offers a comprehensive exploration of the epidemiology and impact of vaccines. Participants will delve into the principles of vaccine epidemiology, study the methodologies for evaluating vaccine efficacy and safety, and understand the role of vaccines in public health. The course combines theoretical instruction with practical applications, preparing healthcare professionals to conduct vaccine research and implement vaccination programs effectively.

## Course Content & Outline

### Section 1: Introduction to Vaccine Epidemiology

- Overview of vaccine-preventable diseases
  - History and development of vaccines
- Key concepts in vaccine epidemiology: herd immunity,  $R_0$ , and vaccine coverage

### Section 2: Evaluating Vaccine Efficacy and Safety

- Study designs for vaccine trials: randomised controlled trials, cohort studies

- Measuring vaccine efficacy: direct, indirect, and total effects
- Assessing vaccine safety: adverse events following immunisation (AEFI)

### **Section 3: Vaccine Impact on Public Health**

- Impact of vaccination programs on disease incidence and prevalence
  - Case studies of successful vaccination campaigns
- Vaccine hesitancy and strategies to improve vaccine uptake

### **Section 4: Advances in Vaccine Development**

- Novel vaccine technologies: mRNA, vector-based, and subunit vaccines
  - Challenges in vaccine development for emerging infectious diseases
  - Role of vaccines in pandemic preparedness and response

### **Section 5: Practical Applications and Case Studies**

- Designing vaccination strategies for different populations
- Evaluating the impact of vaccination programs through real-world data
  - Case studies and collaborative problem-solving
  - Course review and expert Q&A

### **Certificate Description**

Upon successful completion of this training course, delegates will be awarded a Holistique Training Certificate of Completion. For those who attend and complete the online training course, a Holistique Training e-Certificate will be provided.

Holistique Training Certificates are accredited by the British Assessment Council (BAC) and The CPD Certification Service (CPD), and are certified under ISO 9001, ISO 21001, and ISO 29993 standards.

CPD credits for this course are granted by our Certificates and will be reflected on the Holistique Training Certificate of Completion. In accordance with the standards of The CPD Certification Service, one CPD credit is awarded per hour of course attendance. A maximum of 50 CPD credits can be claimed for any single course we currently offer.

## Categories

Health, Safety & Environment HSE, Healthcare & Pharmaceutical

## Tags

Public Health, Vaccine Epidemiology, Immunity

## Related Articles

### **Epidemiology vs. Public Health: Careers, Roles, and Key Differences**

Explore epidemiology vs public health—key differences, career paths, and how they work together to prevent disease and protect population health