

# Ethical Issues in Population Based Health Research

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# Introduction

- Population-based health research focuses on groups, not individuals.
- Includes epidemiological studies, surveillance, and public health interventions.
- Ethics plays a critical role in protecting participants while ensuring data utility.



# Why Ethics Matters in Population Research

- Large-scale data may raise privacy concerns.
- Research impacts public policy and resource allocation.
- Vulnerable populations may be disproportionately affected.
- Protects rights and maintains public trust.



# Foundational Ethical Principles



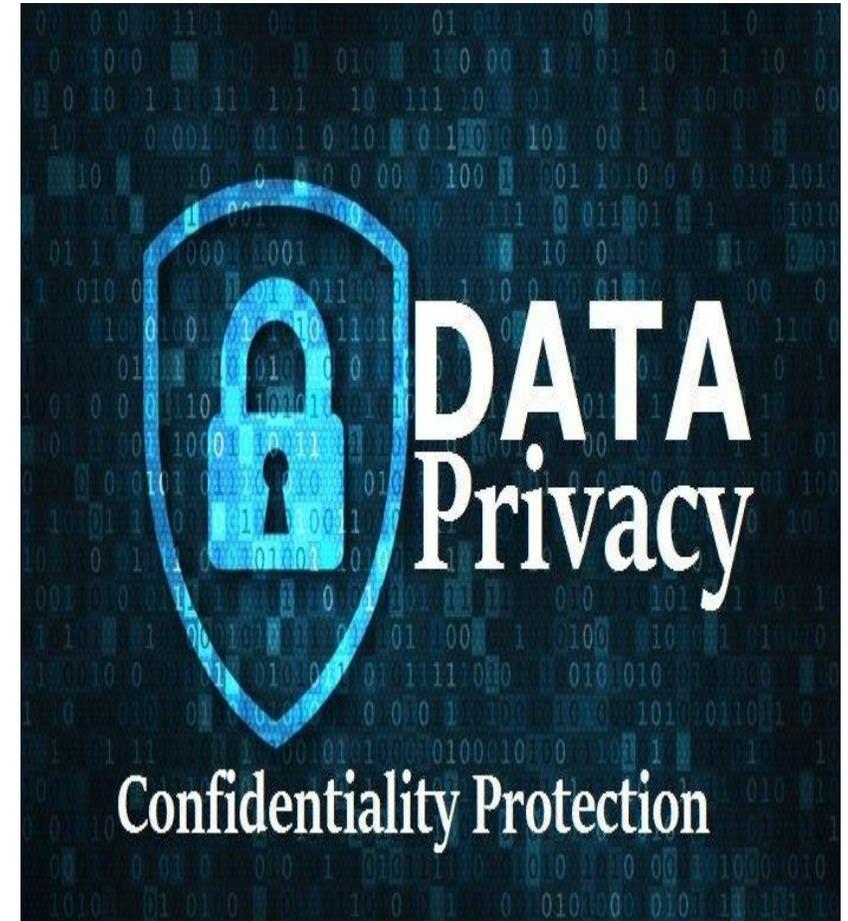
- **Respect for Persons** – informed consent, autonomy.
- **Beneficence** – maximize benefits, minimize risks.
- **Non-maleficence** – avoid harm.
- **Justice** – fair subject selection and access.
- **Confidentiality** – data protection and responsible sharing.

# Distinctive Challenges in Population Research

- Individual consent may not be feasible (e.g., secondary data, big data).
- Data may be reused or linked without re-consent.
- Group-based harms (e.g., stigmatization of ethnic or geographic communities).
- Blurred boundaries between research and public health practice.



- Large datasets increase re-identification risks.
- Ethical data management includes:
  - De-identification
  - Encryption
  - Controlled access
  - Example: Genomic data or mobile phone tracking during outbreaks.



# Vulnerable and Marginalized Populations

- Higher risk of exploitation or harm.
- Ethics requires extra safeguards:
- Equitable inclusion
- Context-sensitive consent
- Cultural competence
- Example: Indigenous communities, refugees, low-literacy populations



# Global Health and Justice

- Cross-border research must address:
  - Local capacity building
  - Benefit sharing
  - Avoiding “helicopter research”
  - Fairness in global data use and authorship.



# Ethical Oversight and Community Engagement

- Ethics Review Committees (ERCs/RECs) assess population-level risks.
- Community engagement improves:
  - Trust
  - Local relevance
  - Culturally appropriate methods
  - Ongoing dialogue—not one-time consultation.

# Case Examples

- **COVID-19 contact tracing:** Privacy vs. protection.
- **HIV surveillance studies:** Confidentiality and stigma.
- **Use of social media data:** Consent and algorithmic bias.

