

Public Health 101 Series



Introduction to Public Health

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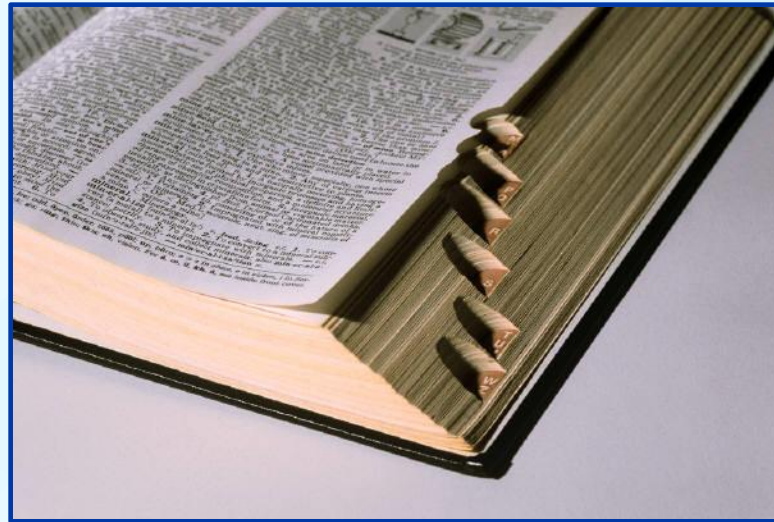
Course Topics

Introduction to Public Health

1. Public Health Definition and Key Terms
2. History of Public Health
3. A Public Health Approach
4. Core Functions and Essential Services of Public Health
5. Stakeholder Roles in Public Health
6. Determining and Influencing the Public's Health

Topic 1

Public Health Definition and Key Terms



Public Health Defined



Photo: IF Fisher and EL Fisk

“The science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals.”

—CEA Winslow

The Mission of Public Health



INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

“Fulfilling society’s interest in assuring conditions in which people can be healthy.”

—Institute of Medicine



World Health Organization

“Public health aims to provide maximum benefit for the largest number of people.”

—World Health Organization

Public Health Key Terms

clinical care: prevention, treatment, and management of illness and the preservation of mental and physical well-being through the services offered by medical and allied health professions; also known as *health care*.

determinant: factor that contributes to the generation of a trait.

epidemic or outbreak: occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related event clearly in excess of normal expectancy. Both terms are used interchangeably; however, *epidemic* usually refers to a larger geographic distribution of illness or health-related events.

health outcome: result of a medical condition that directly affects the length or quality of a person's life.

Topic 2

The History of Public Health



Sanitation and Environmental Health

500 BCE



Greeks and Romans practice community sanitation measures

1840s



The Public Health Act of 1848 was established in the United Kingdom

1970



The Environmental Protection Agency was founded

Pandemics

Influenza



500 million infected worldwide in 1918

Polio



Vaccine introduced in 1955; eradication initiative launched in 1988

HIV



34 million living with HIV worldwide; 20% decline in new infections since 2001

Preparedness for Disaster Response

Biologic Warfare



Plague used as a weapon of war during the Siege of Kaffa

September 2001



Public health surveillance conducted after the 9/11 attacks

Hurricane Katrina



Emergency services, public health surveillance, and disease treatment provided

Prevention Through Policy

Book of Leviticus



The world's first written health code

Tobacco Laws



Laws banning smoking in public places

Obesity



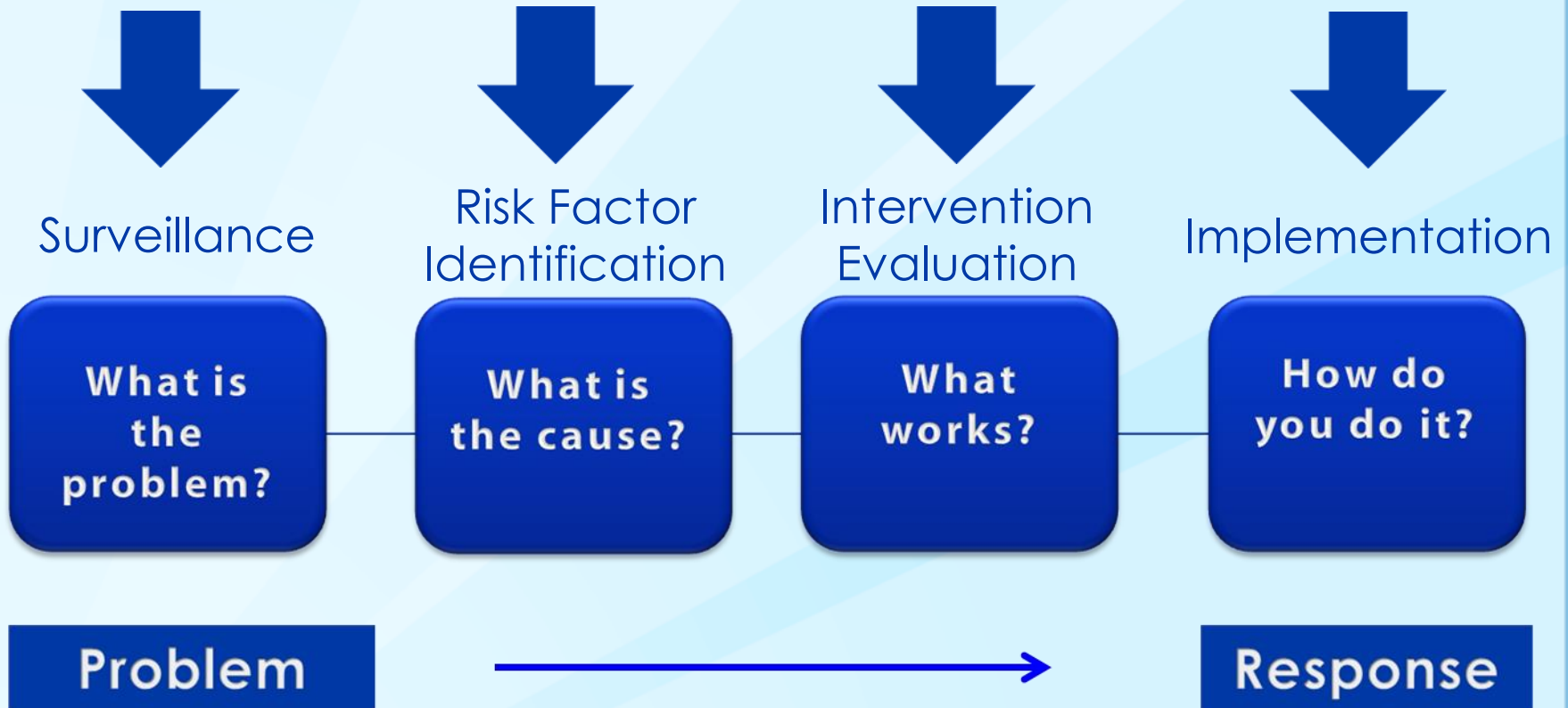
Food labeling and promotion of physical activity

Topic 3

A Public Health Approach



A Public Health Approach



Public Health Core Sciences



Cholera — A Public Health Approach

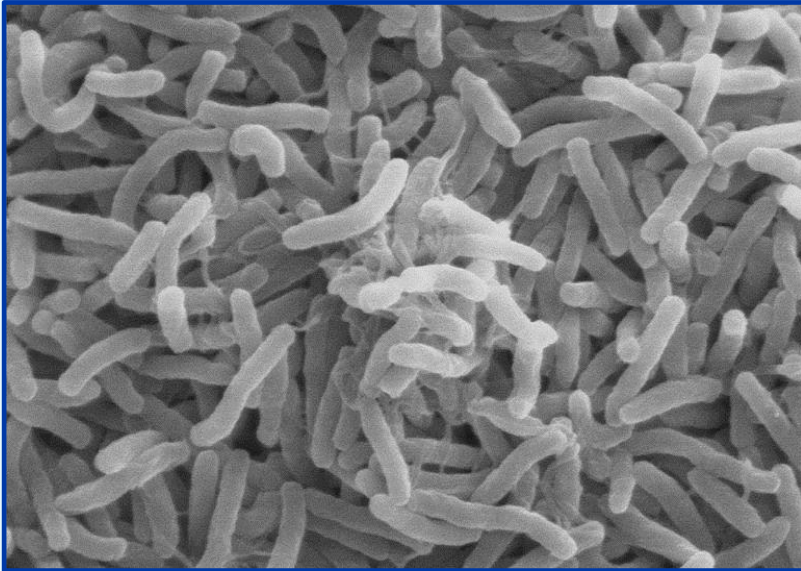


Photo: TJ Kirn, MJ Lafferty, CMP Sandoe, and R Taylor,
Dartmouth Medical School

Cholera, a fatal intestinal disease, was rampant during the early 1800s in London, causing death to tens of thousands of people in the area. Cholera was commonly thought to be caused by bad air from rotting organic matter.

John Snow, Physician



Photo: London School of Hygiene
and Tropical Medicine

John Snow is best known for his work tracing the source of the cholera outbreak and is considered the father of modern epidemiology.

Epidemiology — What is the Problem?

Cluster of Cholera Cases, London — 1854

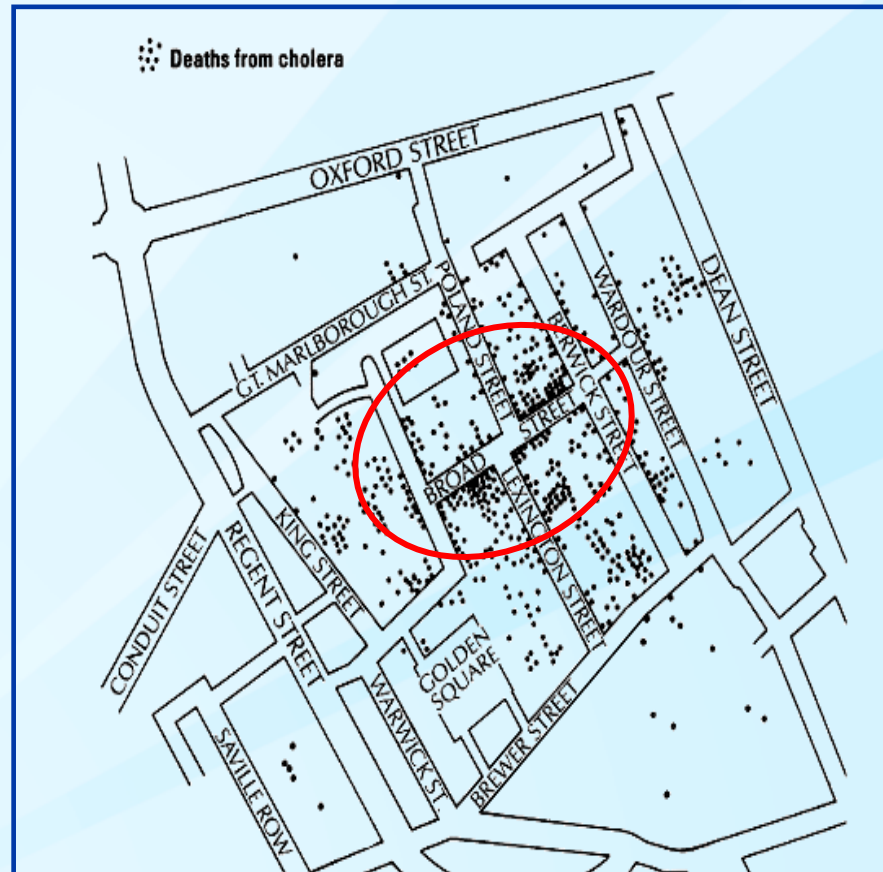


Image: The Geographical Journal

Risk Factor Identification — What Is the Cause?

Cluster of Cholera Cases and Pump Site Locations

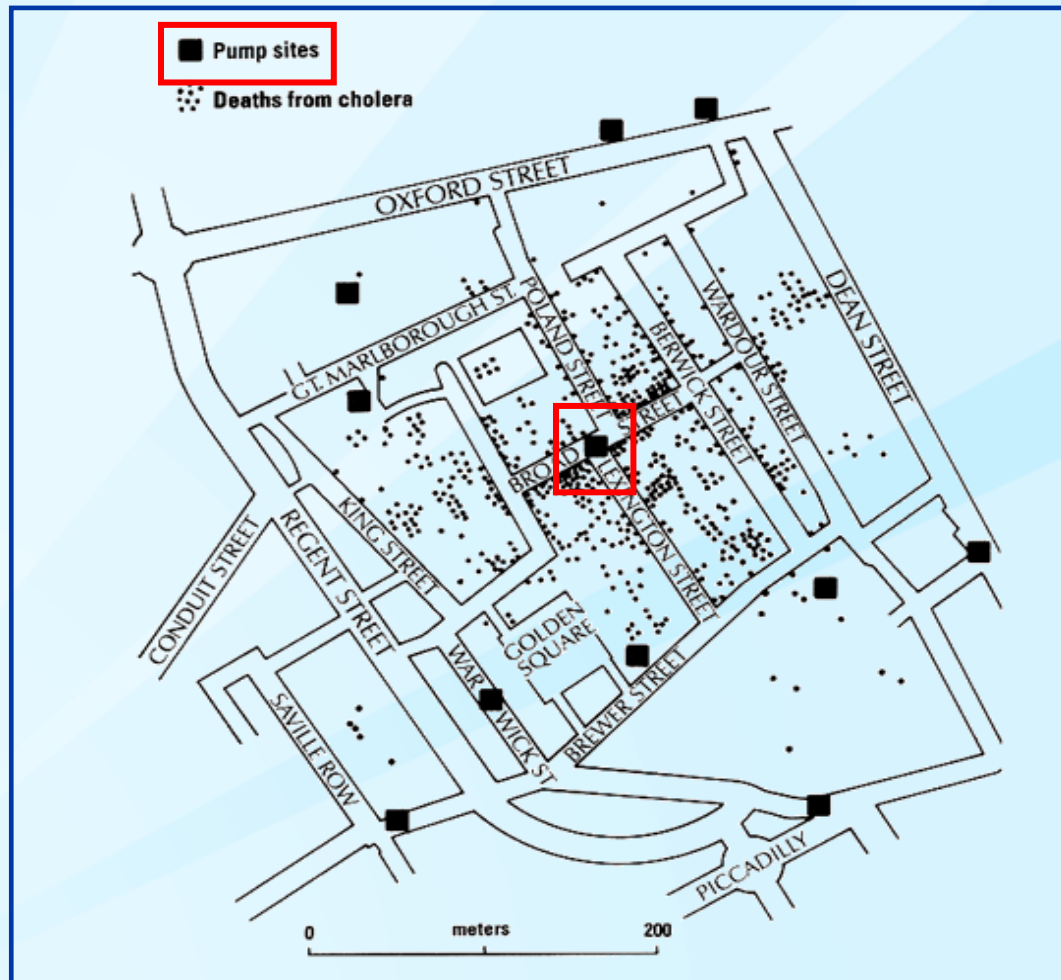


Image: The Geographical Journal

Intervention Evaluation — What Works?

Through continuous research, Snow understood what interventions were required to

- stop exposure to the contaminated water supply on a larger scale, and
- stop exposure to the entire supply of contaminated water in the area

Implementation — How Do You Do It?



Photo: Justin Cormack

John Snow's research convinced the British government that the source of cholera was water contaminated with sewage



Knowledge Check

Match each component of the public health approach with the questions they answer.

A. Risk Factor Identification

B. Surveillance

C. Implementation

D. Intervention Evaluation

B. Surveillance

1. What is the problem?

A. Risk Factor Identification

2. What is the cause?

D. Intervention Evaluation

3. What works?

C. Implementation

4. How do you do it?

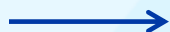
Topic 4

Core Functions and Essential Services of Public Health



Three Core Functions of Public Health

Assessment



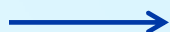
Systematically collect, analyze, and make available information on healthy communities

Policy
Development



Promote the use of a scientific knowledge base in policy and decision making

Assurance



Ensure provision of services to those in need

Ten Essential Public Health Services



1. Monitor Health
2. Diagnose and Investigate
3. Inform, Educate, Empower
4. Mobilize Community Partnership
5. Develop Policies
6. Enforce Laws
7. Link to/Provide Care
8. Assure a Competent Workforce
9. Evaluate
10. Research

Core Functions at Government Levels

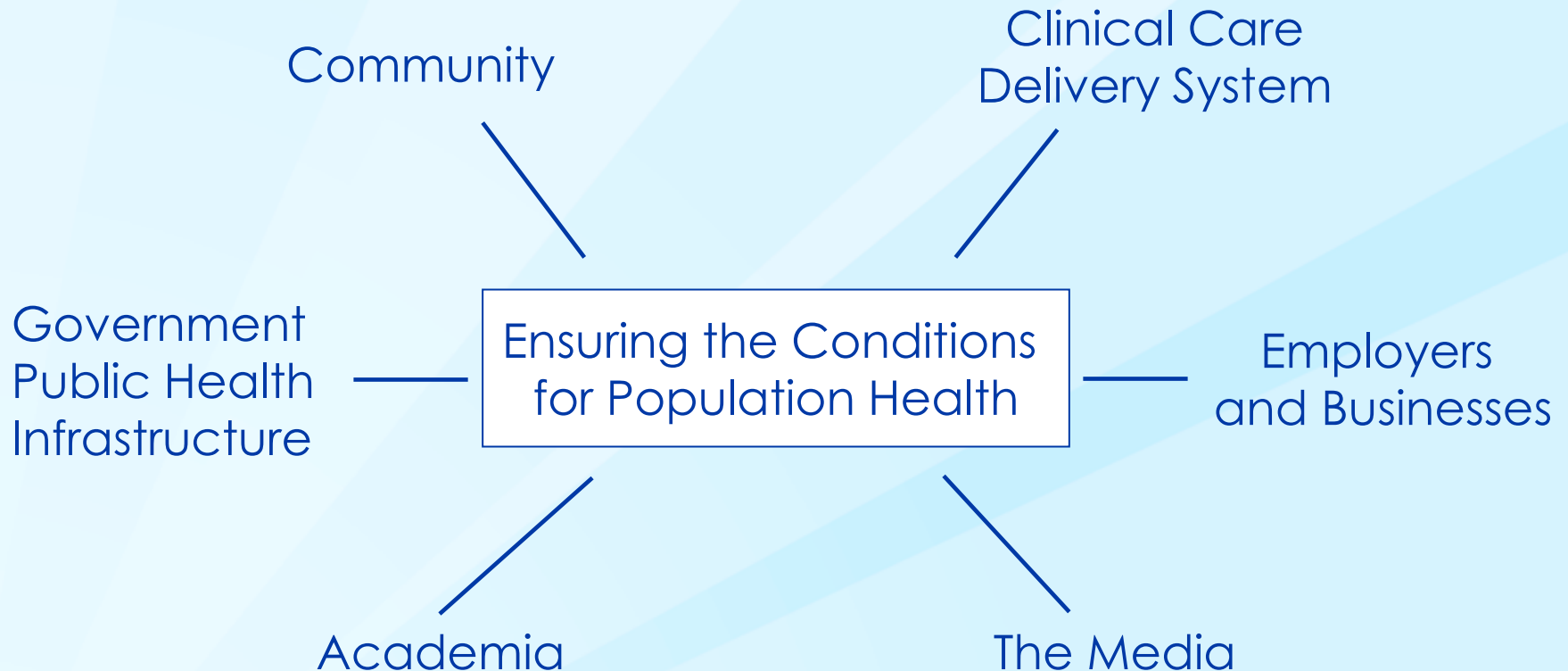
	Assessment	Policy Development	Assurance
Federal	National tobacco public health surveillance	Smoking ban on commercial flights	Federal grants for antismoking research
State	Monitor state tobacco use	Increase tobacco tax	Funding for campaign through Proposition 99
Local	Report on local tobacco use Reports on chronic disease prevalence	County laws prohibiting smoking in bars	Resources to help smokers quit in multiple languages Resources to help reduce morbidity & mortality from chronic disease

Topic 5

Stakeholder Roles in Public Health



Partners in the Public Health System

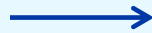


Health Care as a Partner in Public Health

Public Health	Health Care
Population focus	Individual patient focus
Public health ethic	Personal service ethic
Prevention or public health emphasis	Diagnosis and treatment emphasis
Joint laboratory and field involvement	Joint laboratory and patient involvement
Clinical sciences peripheral to professional training	Clinical sciences essential to professional training
Public sector basis	Private sector basis

Other Partners in Public Health

Media



- Vehicle for public discourse
- Health education and promotion
- Health communication
- Social media as catalyst

Employers
and Businesses



- Employer-sponsored health insurance programs
- Wellness initiatives and benefits
- Healthy workplaces and communities

Government
Agencies



- City planning
- Education
- Health in all policies

Academia



- Education
- Training
- Research
- Public Service

Topic 6

Determining and Influencing the Public's Health

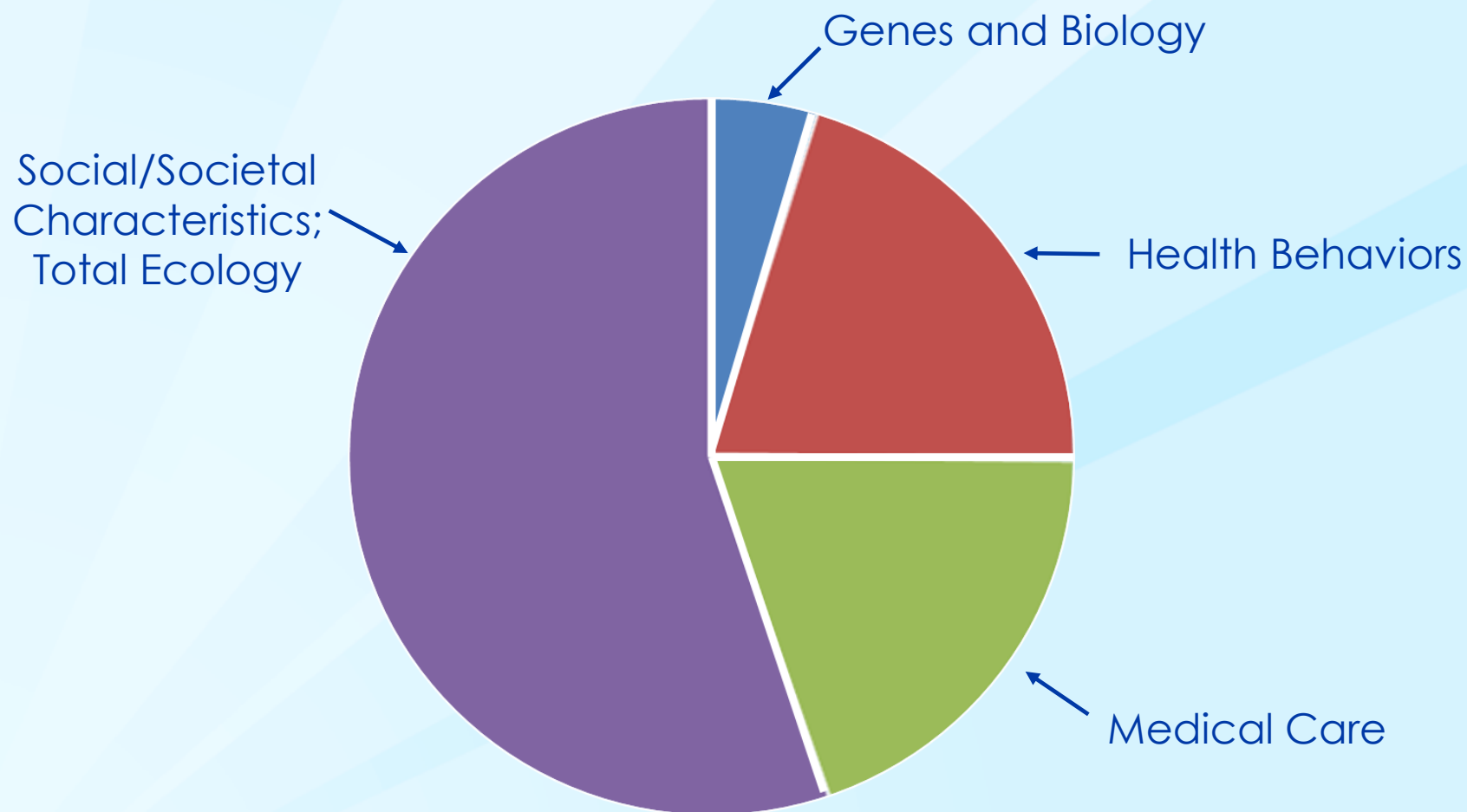


Health Determinants



- Genes and biology
- Health behaviors
- Social or societal characteristics
- Health services or medical care

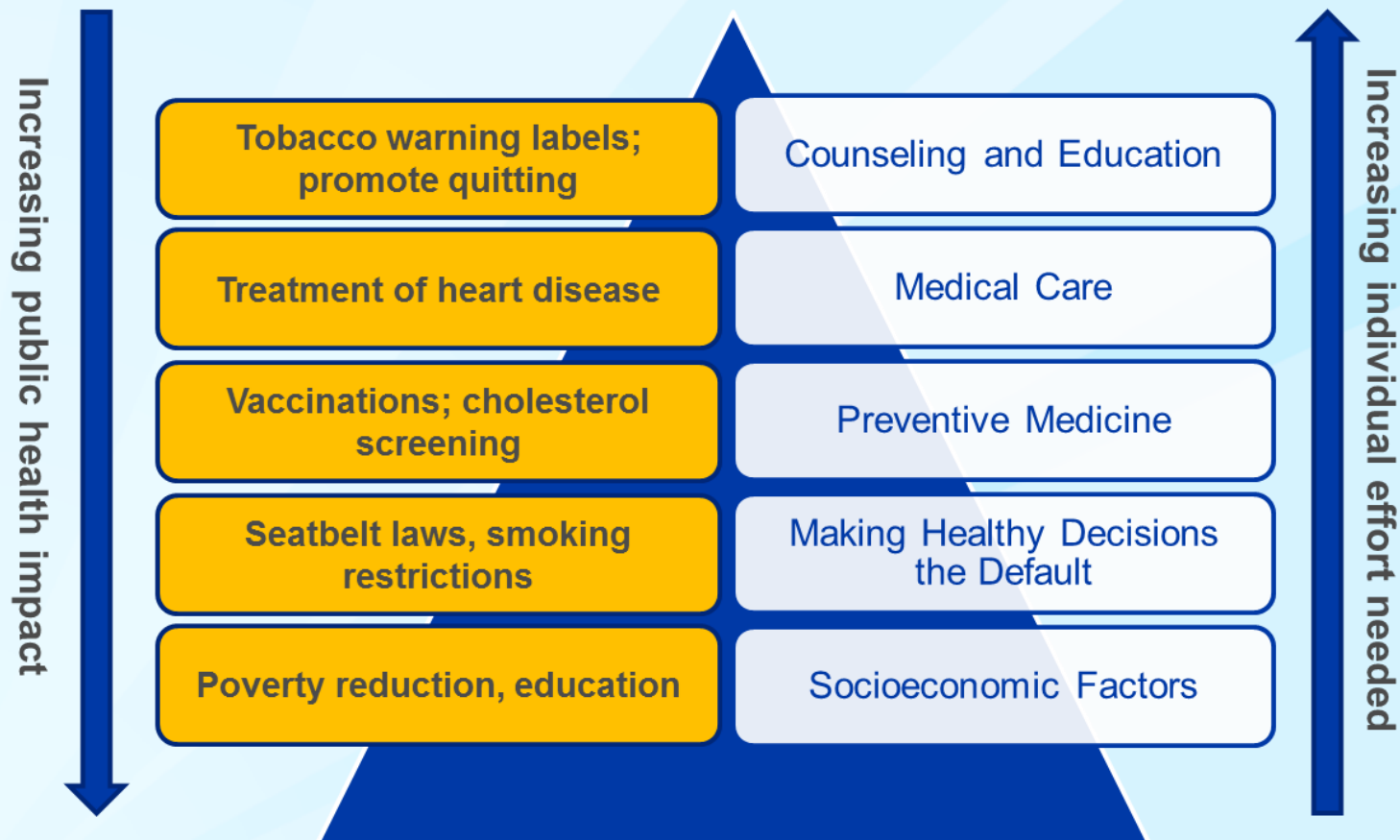
What Determines the Health of a Population?



Health Impact Pyramid



Health Impact Pyramid



QUESTIONS?

Resources and Additional Reading

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