Introduction
What is Public Health?

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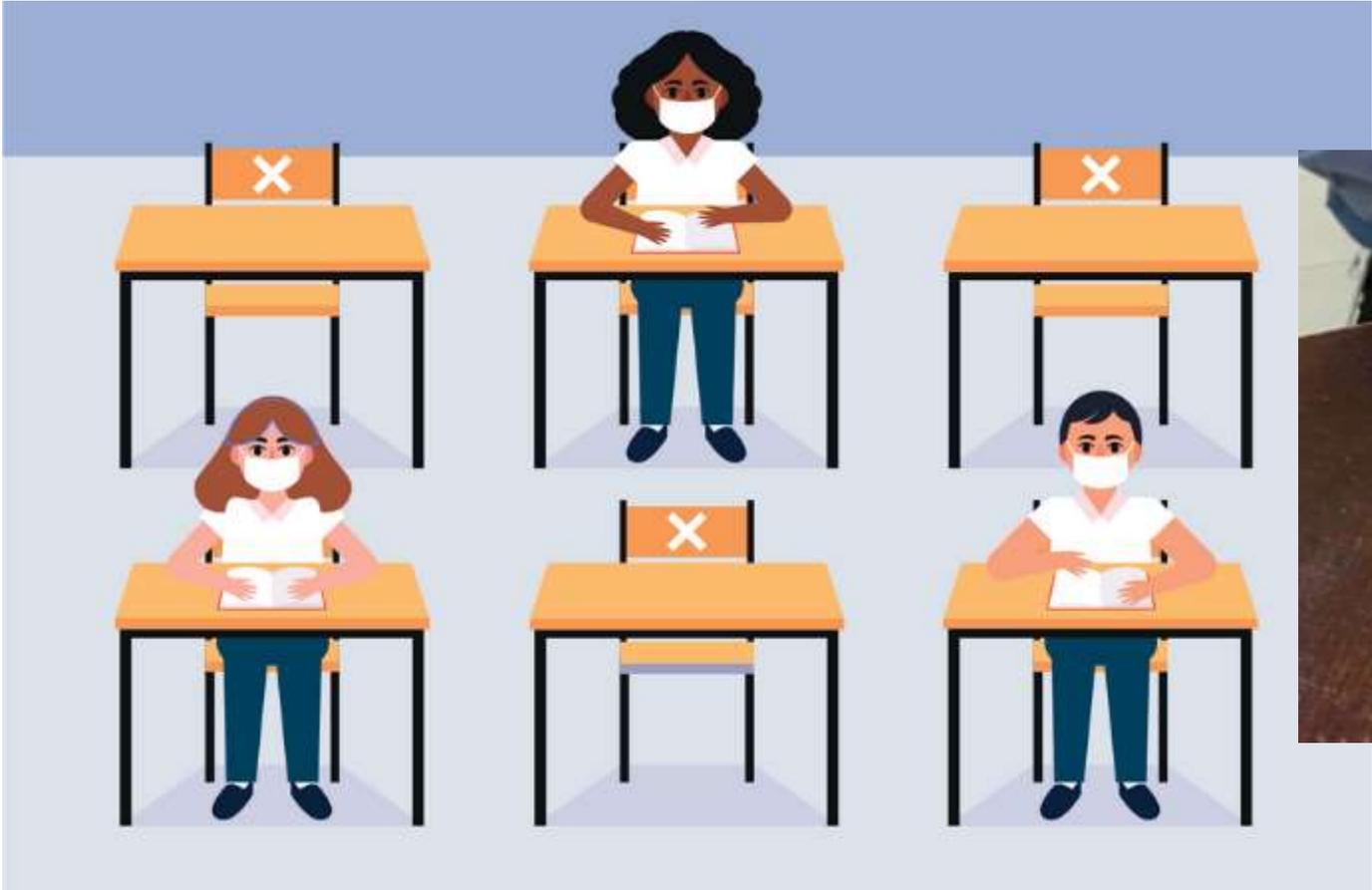
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Course title: Public health
Course code: 1506202
Credit hours: 2 hours

Welcome Back, Students!

The safe return to University instructions.

تركُ النفوسِ بلا علمٍ ولا أدبٍ تركُ المريضِ بلا طبٍ ولا آسِ

• It's Better to Have Learned and Have Lost, Than Never to Have Learned at All

"You don't have to be brilliant to be a doctor. You have to be hard working and have good character. That's what makes good doctors."

MEDICINE IS ONLY FOR THOSE WHO CANNOT IMAGINE DOING ANYTHING ELSE.

DR. LUANDA GRAZETTE, MD

Objectives of this lecture:

- **To identify concepts of health, disease, public health and other related concepts.**

- **How public health is different from clinical medicine?**

- **To get introduced to a brief history of public health.**

- **To acknowledge the importance of public health in a community.**

- **To identify how public health approach works.**

FIRST: WHAT IS HEALTH?

How are you doing?

Feeling healthy is core to our everyday lives

"A state of complete *physical*, *mental* and *social* well being and not merely the absence of disease or infirmity".

The World Health Organization (WHO), 1948

Recently this statement has been expanded to include the ability to lead a "socially and economically productive life".

Health **is multidimensional**

- The WHO definition mentions three specific dimensions (physical, mental, and social), some other dimensions are included.

- **Physical health-** anatomical integrity and physiological functioning of the body. It means the ability to perform routine tasks without any physical restriction. E.g., Physical fitness is needed to walk from place to place.

- **Mental Health-** is the ability to learn and think clearly and coherently. E.g., a person who is not mentally fit may not learn something new at the same pace in which an mentally fit person learns.

Health is multidimensional

- **Social health-** is the ability to make and maintain acceptable interaction with other people. E.g. to celebrate during festivals; to mourn when a close family member dies; to create and maintain friendship and intimacy, etc.

- **Emotional health -** is the ability of expressing emotions in the appropriate way, for example to fear, to be happy, and to be angry. The response of the body should be suitable with that of the stimuli. Emotional health is related to mental health and includes feelings. It also means maintaining one's own integrity in the presence of stressful situation such as tension, depression and anxiety.

- **Spiritual Health -** Some people relate health with religion; for others it has to do with personal values, beliefs, principles and ways of achieving mental satisfaction, in which all are related to their spiritual wellbeing.

- A few other dimensions such as philosophical dimension, cultural dimension, socioeconomic dimension, environmental dimension, educational dimension, nutritional dimension, and so on.

SPECTRUM OF HEALTH
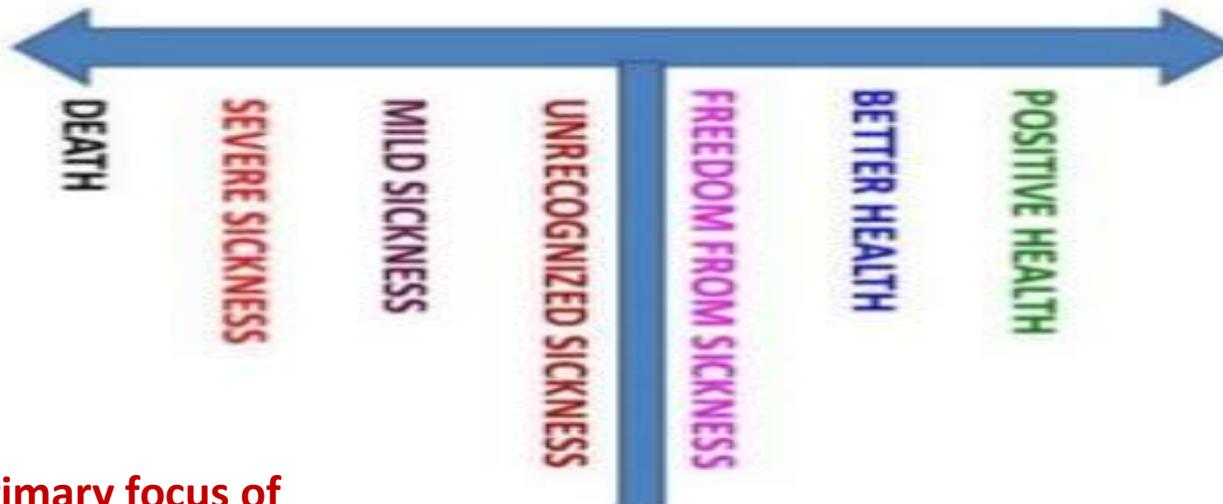
Dis-ease

Optimal Health

Dis-ease includes losing the ability to function with ease all the way to being afflicted with an actual disease

Functioning in an optimal health state within your individual genetic parameters

Health is a dynamic phenomenon

There is no single cut-off point.

DEATH | SEVERE SICKNESS | MILD SICKNESS | UNRECOGNIZED SICKNESS | FREEDOM FROM SICKNESS | BETTER HEALTH | POSITIVE HEALTH

The lowest point on the health-disease spectrum is death and the highest point corresponds to the WHO definition of positive health.

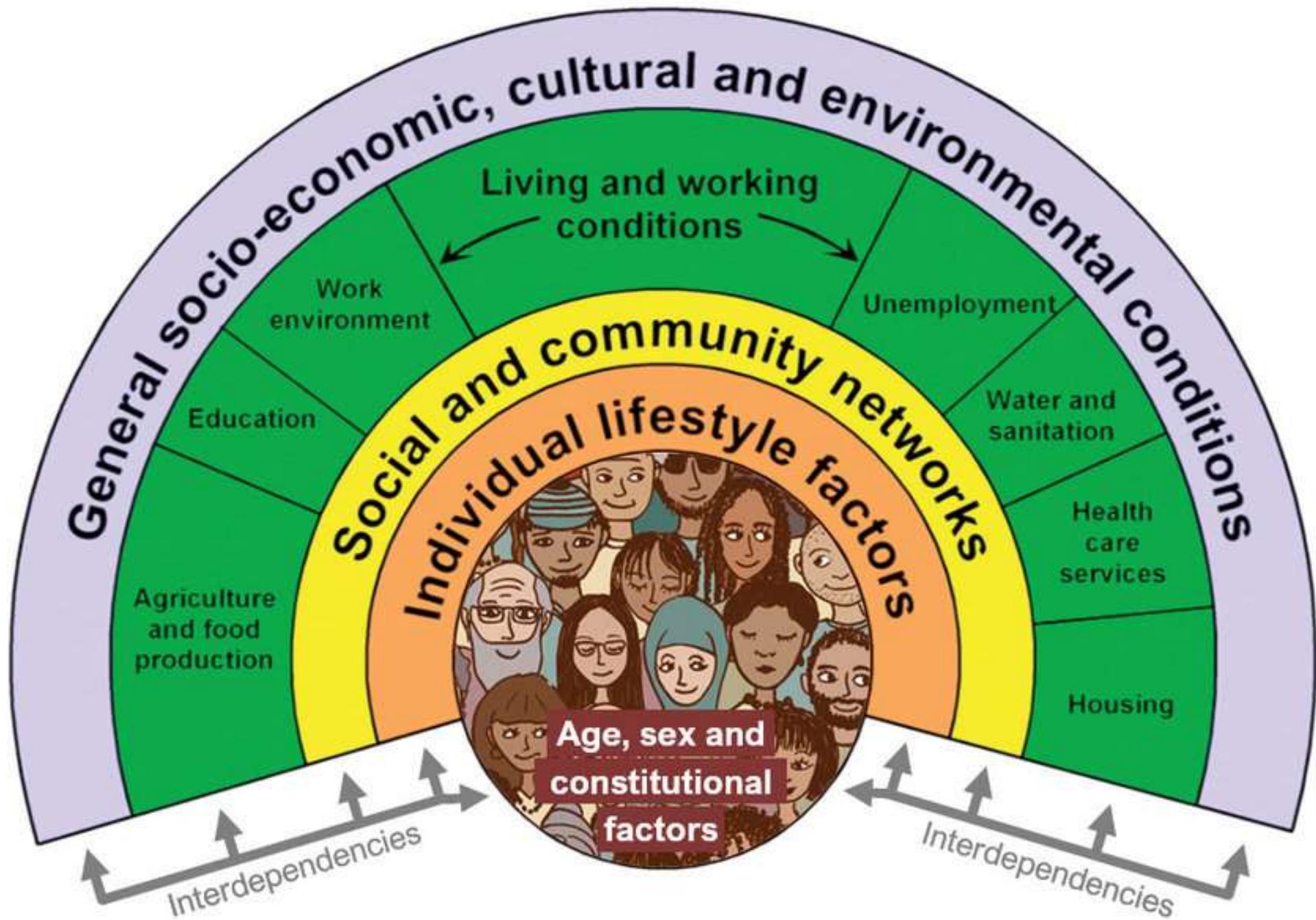There are degrees or "levels of health", as there are degrees or severity of illness.

The primary focus of today's medical care system is (sick)!

Health is a state, not to be attained once and for all, but ever to be promoted, preserved, and restored when impaired.

DETERMINANTS OF HEALTH

- They are the product of a complex interaction of different factors: this works at both individual and population levels.

- These can be grouped into categories:

General socio-economic, cultural and environmental conditions

Living and working conditions

Social and community networks

Individual lifestyle factors

Work environment

Unemployment

Education

Water and sanitation

Agriculture and food production

Health care services

Housing

Age, sex and constitutional factors

Interdependencies

Interdependencies

DETERMINANTS OF HEALTH

A. **Human Biology:** there are factors, which are genetically transmitted from parents to offspring. As a result, there is a chance of transferring defective trait. The modern medicine does not have a significant role in these cases.

✓ Genetic Counselling: during marriage parents could be made aware of their genetic component in order to overcome some risks that could arise.

✓ Genetic Engineering: may have a role in cases like Breast cancer.

B. Life style (Behaviour): is an action that has a specific frequency, duration, and purpose, whether conscious or unconscious. It is associated with practice. It is what we do and how we act. Recently life style received a great attention as a major determinant of health. Life style of individuals affects their health *directly or indirectly*. For example: Cigarette smoking, Unsafe sport practice ,Eating contaminated food, etc.

DETERMINANTS OF HEALTH

C. Environment: is all that which is external to the individual human host. Those are factors outside the human body that could influence health include:

✓ Life support, food, water, air etc.

✓ Physical factors, climate, Rain fall

✓ Biological factors: microorganisms, toxins, Biological waste,

✓ economic e.g. Crowding, income level,

✓ Chemical factors: industrial wastes, agricultural wastes, air pollution, etc

✓ Socio – cultural determinants include the beliefs, traditions, and social customs in the community.

D. Health care organizations resource in human power, equipment, money determine the health of people. It is concerned with the

✓ Availability of health service People living in areas where there is no access to health service are affected by health problems and have lower health status than those with accessible health services.

✓ Acceptability of the service by the community

✓ Quality of care that mainly focuses on the comprehensiveness, continuity and integration of the health care
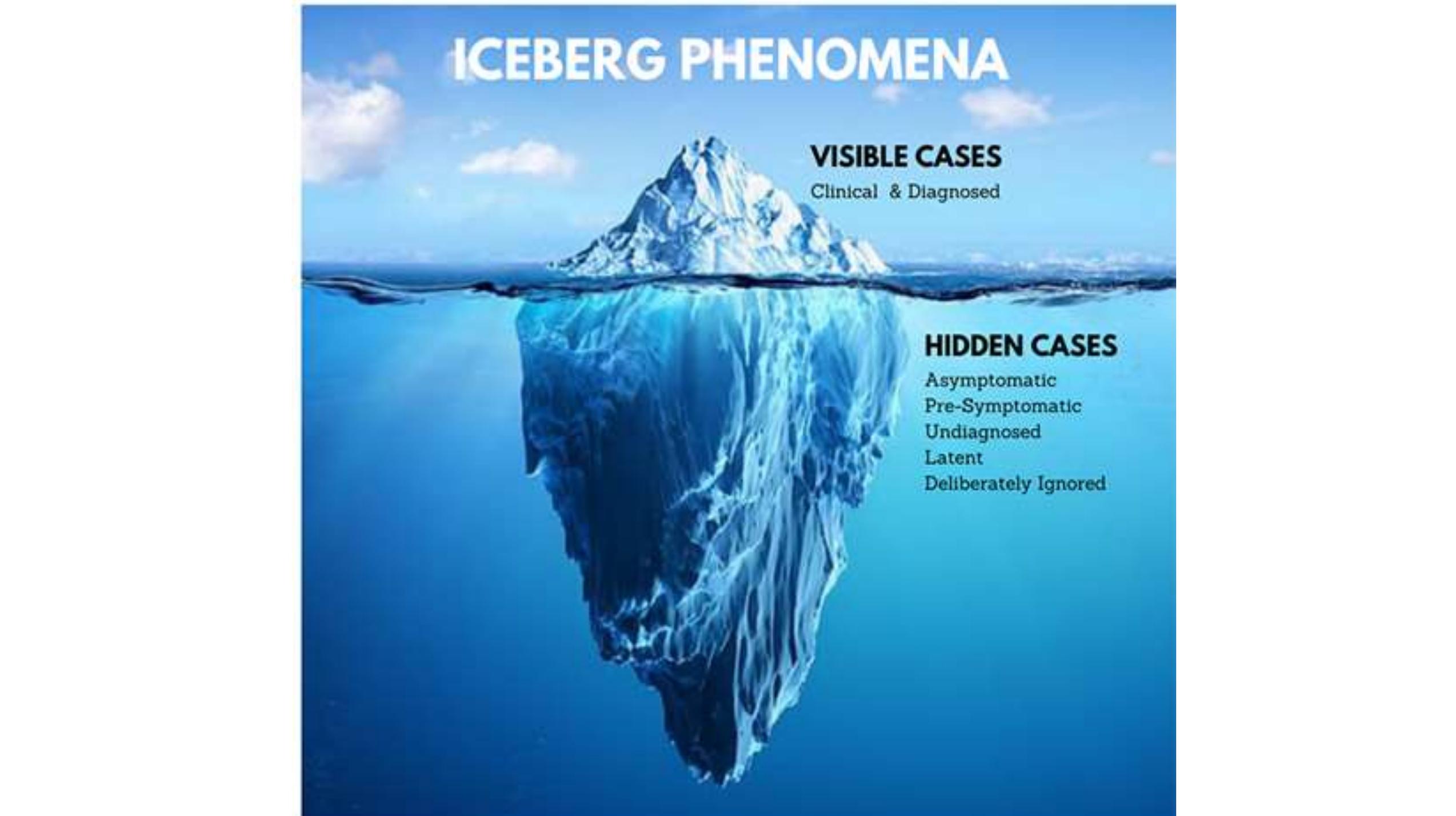
Now: What is Public Health?

Imagine yourself a clinician in your clinic:

▪ You make all you can to make the

<u>sick individual</u> in front of you better!

▪ You are committed to your job and

very busy <u>treating those who come</u> for help!

▪ You <u>have similar attitude for other patients</u> sitting outside

In the waiting room!

BUT, what about those who have not come to you?

Clinical Medicine and Public Health

- Clinical medicine is concerned with diagnosing and treating diseases in individual patients. It has evolved from primarily a medical and nursing service to involve a highly complex team of professionals.

- Public health refers to the health status of a defined group of people and the governmental actions and conditions to promote, protect and preserve their health.

Clinical medicine Vs Public health

| Items	Public health	Clinical medicine
Objective	prevent diseases	cure diseases
Customers	All community (healthy and diseased)	Individuals (diseased only)
Methods of diagnosis	Demographics Vital statistics Epidemiology	Individual data: History, clinical exam, laboratory investigations
Management	Community health programs	Medical/surgical treatment
Evaluation	Assessment of health programs and health status of a community	Follow up of patients
Branches	Epidemiology, environmental health, management, health services, statistics……	Internal medicine, surgery, pediatrics, gynecology…

Public Health Defined

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

—CEA Winslow

Winslow CEA. The untilled field of public health. Mod Med 1920;2:183–91.

The Historical Development of Modern Public Health

- The history of public health goes back to almost as long as history of civilization.
- **1800s-1900s**: The Industrial Revolution--population growth—Insanitary conditions—infectious diseases—emergence of epidemics such as cholera-- low life expectancy-- key element in the emergence of the **Great Sanitary Awakening.**
- Edwin Chadwick: Public Health Act 1848-
- Dr. John Snow: The outbreak of cholera epidemic 1854 (The Broad Street pump)
- Louis Pasteur (The germ theory) 1864 .
- The beginning of the modern public health movement.
- **Early public health work focused on the prevention of infectious diseases.**

The Broad Street pump The outbreak
of cholera epidemic 1854
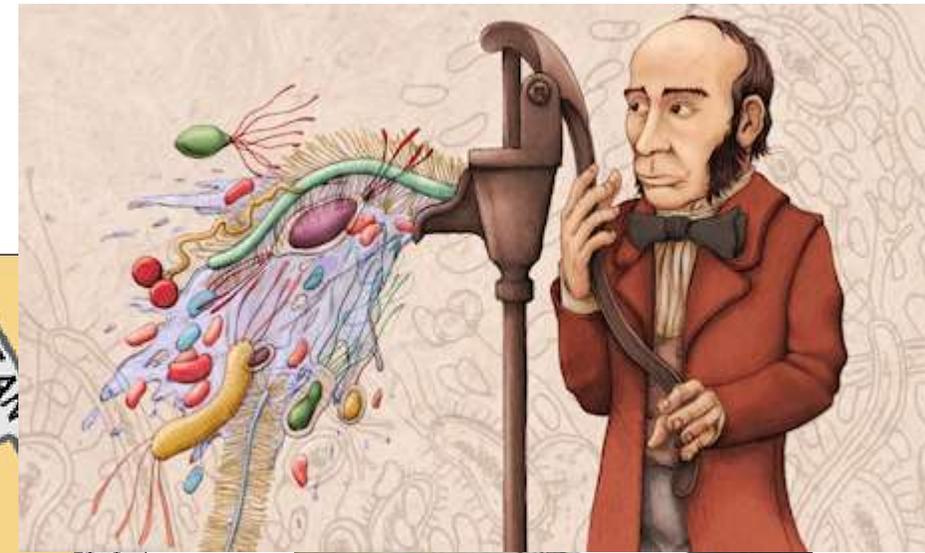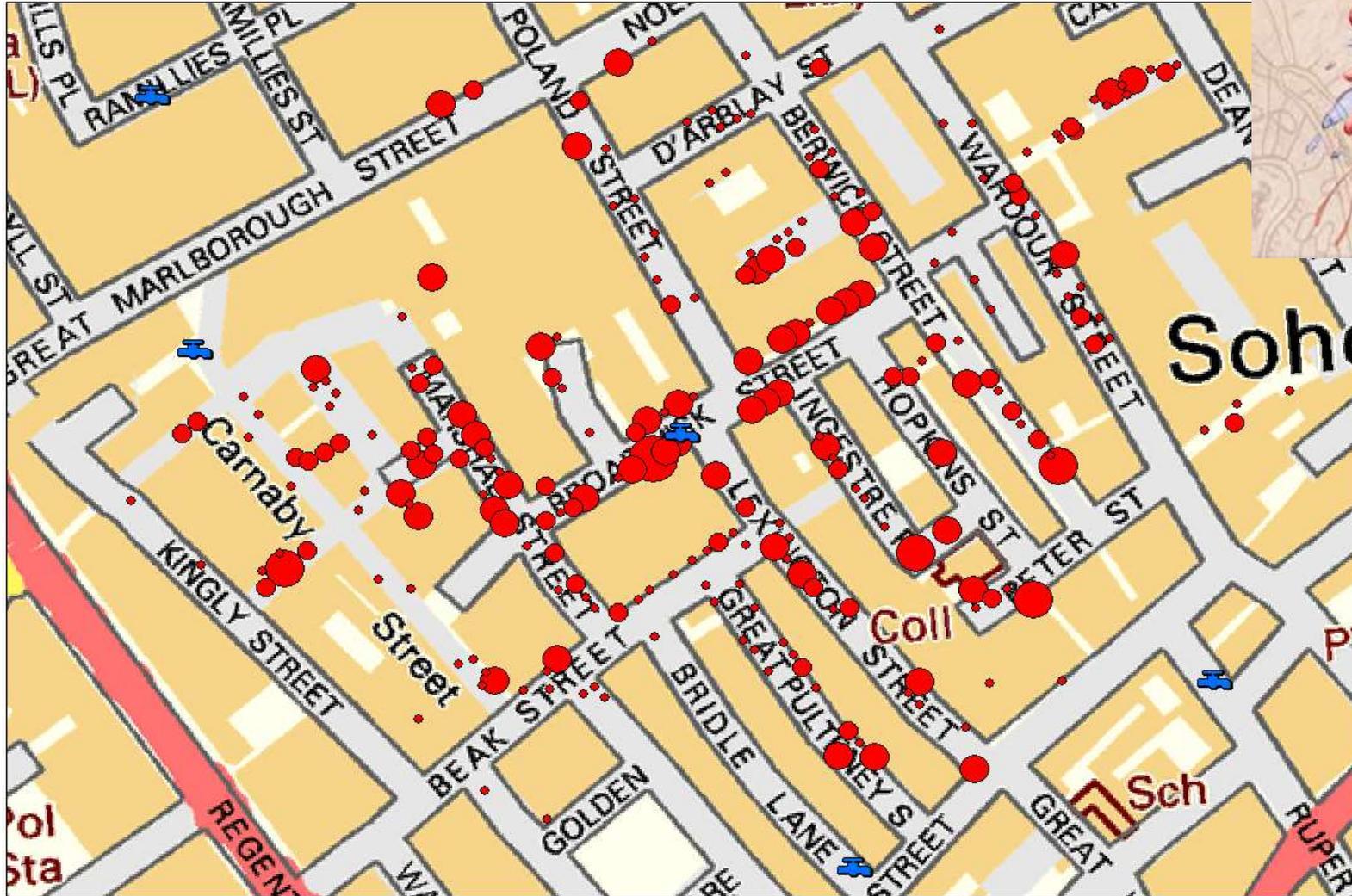
The Historical Development of Modern Public Health

- Health for All phase (1981 - 2000)
- Modern: A new concept of disease etiology **"multi-factorial** causation"
- Modern life and risk factors-Globalisation.

Important features of modern public health include the following characteristic features:

■ multidisciplinary;

■ multisectoral;

■ evidence-based;

■ equity-oriented.

What is a population/community?

- A social group determined by geographical boundaries and/ or common values and interest. Its members know and interact with each other. It functions within a particular structure and exhibits and creates certain norms, values and social institutions".

- Defined by:

A) An administrative area:

    - A health centre catchment area

    - A district

    - A governorate

    - A country

B) A specific population group:

    - Children

    - Mothers

    - Workers

    - Seniors

What is a population/community?

- C) A specific disease group

    - Tuberculosis

    - Diabetes Mellitus

    - Cancer…etc.

    Population: a group who have at least one common factor.

    Aim of public health: provide everyone, everywhere the best chance to live long, healthy, fulfilling lives from the beginning to the vey end!

Health promotion

- Is a guiding concept involving activities intended to enhance individual and community health well-being.

- It seeks to increase involvement and control of the individual and the community in their own health.

- **Health promotion is a key element in public health** and is applicable in the community, clinics or hospitals, and in all other service settings. Raising awareness informing people about health and lifestyle factors that might put them at risk requires teaching.

Prevention

There are *three levels* of prevention

- PRIMARY

■ *Target population*: entire population with special attention to healthy individuals

■ *Objective*: prevent onset of illness

■ *Methods*: education, immunization, nutrition, sanitation, etc.
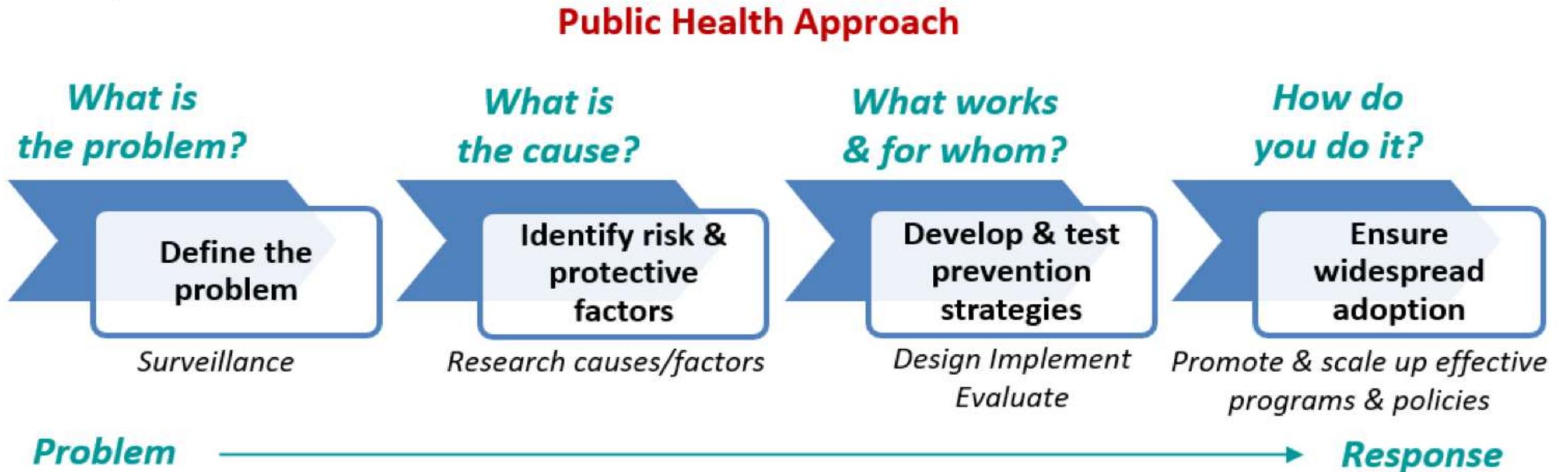
Prevention

- **SECONDARY**

■ *Target population*: sick individuals

■ *Objective*: early diagnosis and treatment to prevent further damage to the individual and in cases of infectious diseases, spread to the community

■ *Methods*: screening of high risk groups e.g. Pap smears, sputum examination for TB; monitoring of vulnerable groups – children, pregnant women
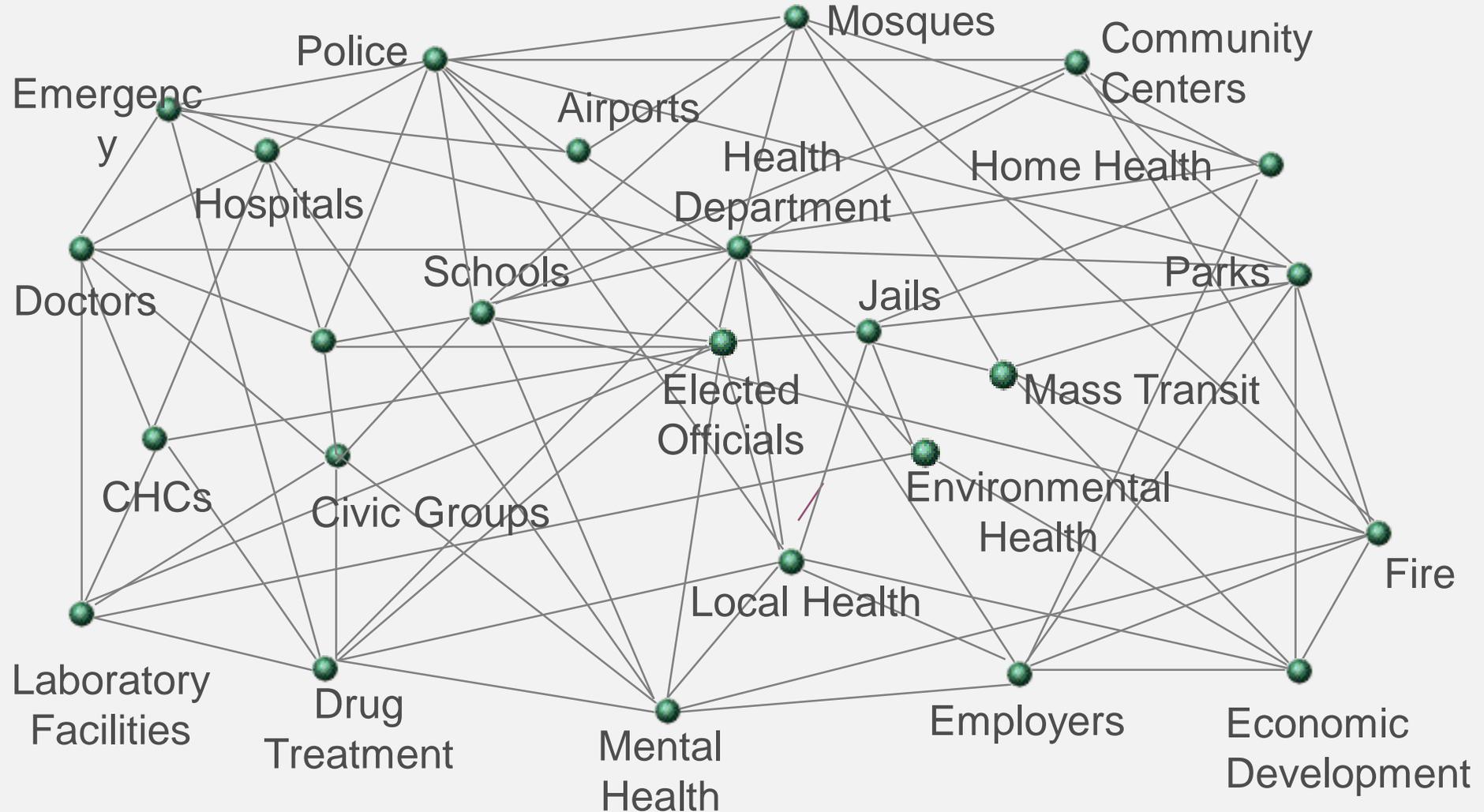
Prevention

TERTIARY

- *Target population*: sick patients
- *Objective*: reduce damage from disease and restore function
- *Method*: clinical care and rehabilitation

Public health approach

Public Health Approach

What is the problem?	What is the cause?	What works & for whom?	How do you do it?
Define the problem	Identify risk & protective factors	Develop & test prevention strategies	Ensure widespread adoption
Surveillance	Research causes/factors	Design Implement Evaluate	Promote & scale up effective programs & policies

Problem ⟶ Response

A Public Health System Is Complex

Three Core Functions of Public Health

Assessment

→ **Systematically collect, analyze, and make available information on healthy communities and Identify problems related to the public's health, and measure their extent**

Policy Development

→ **Prioritize problems, find possible solutions, set regulations to achieve change, and predict effect on the population using of a scientific knowledge base (Evidence based Public Health) in policy and decision making**
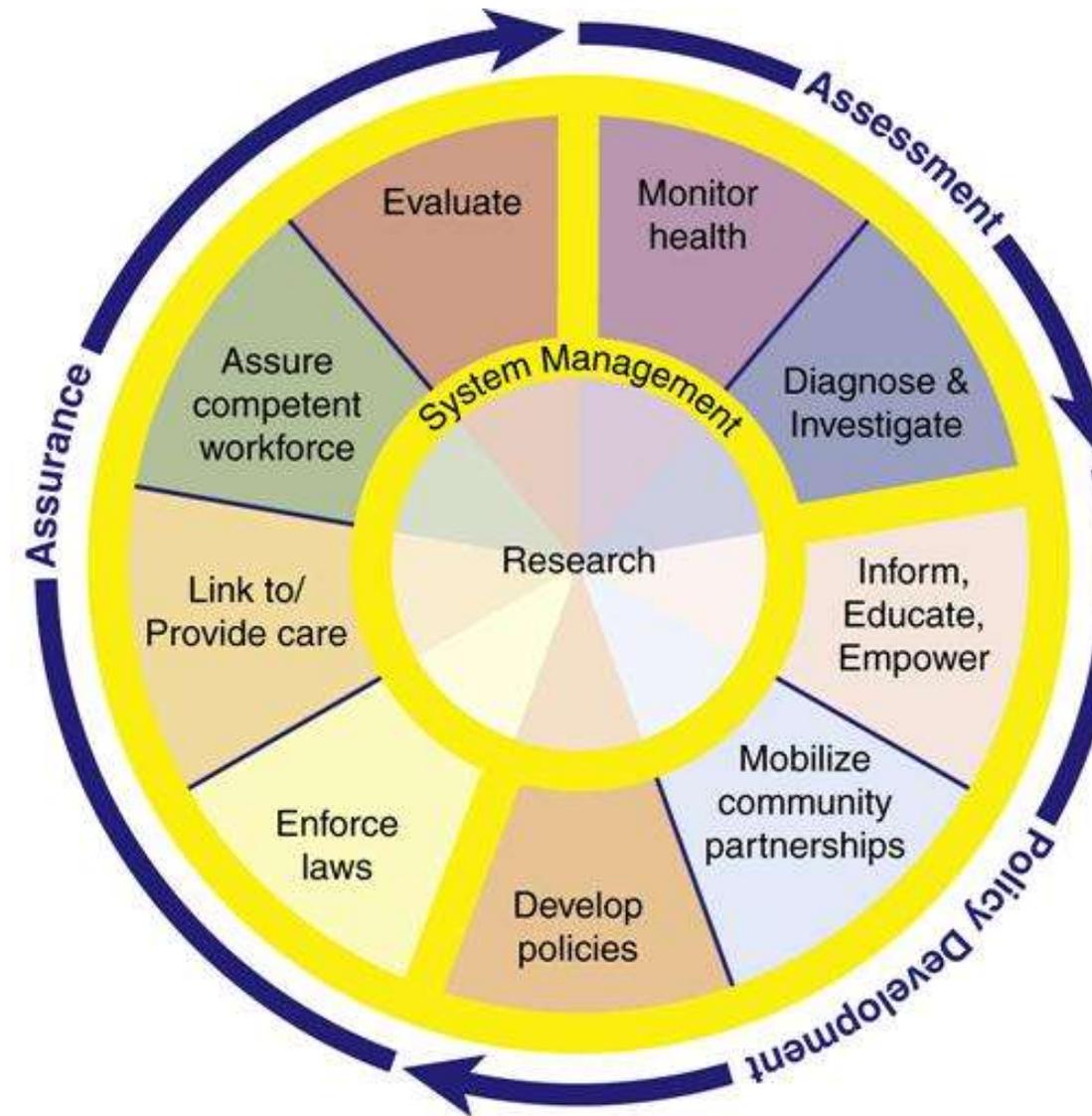
Assurance

→ **Ensure provision of services to those in need, widespread adoption and dissemination.**
Ensure provision of technical assistance and evaluation.

The 10 Essential Public Health Services describe the public health activities that all communities should undertake:

1. Monitor health status to identify and solve community health problems

2. Diagnose and investigate health problems and health hazards in the community

3. Inform, educate, and empower people about health issues

4. Mobilize community partnerships and action to identify and solve health problems

5. Develop policies and plans that support individual and community health efforts

6. Enforce laws and regulations that protect health and ensure safety

7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable

8. Assure competent public and personal health care workforce

9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services

10. Research for new insights and innovative solutions to health problems

Thank you