Introduction
What is Public Health?

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خذ فكرة ولا تتعمق

Course title: Public health
Course code: 1506202
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Tips to kick-off the new academic year successfully

- **Reflect on previous year's mistakes and draw personal conclusions**
- **Plan time and set your goals**
- **Organise your study environment**
- **Ask for help**
- **Try new things**
- **Develop anti-stress strategies**
- **Attending classes is always better than copying notes from your peers, audio tracks..etc..**

Preparing for next semester like

I AM READY TO GET HURT AGAIN.

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?

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". هي ليست مجرد غياب الامراض.
تم التعديل

The World Health Organization (WHO), 1948

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

مُنتج

Health is multidimensional

- The WHO definition mentions three specific dimensions (physical, mental, and social), some other dimensions like spiritual, emotional may also be included.

انك تقدر تمشي من مكان لاخر
- **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.

انك تفكر صح وتقدر تتعلم
- **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 a mentally fit person learns.

Health is multidimensional

تتفاعل مع دائرتك
الاجتماعية

- **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.

ما بزعل كثير لانه
ضاع قلمي مثلا

- **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. It also means maintaining one's own integrity in the presence of stressful situation such as tension, depression and anxiety. Emotional health is related to mental health and includes feelings.

ربط الصحة
بالدين

- **Spiritual Health -**Some people relate health with religion; for others it has to do with personal values, beliefs, principles 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

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

Optimal Health

Functioning in an optimal health state within your individual genetic parameters

Health is a dynamic phenomenon

مصطلح متغير

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

ممكن يكون بس ما عندك امراض

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

Just because you're not sick, doesn't mean you're well.

There is no single cut-off point.

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

هناك شدة للمرض والصحة
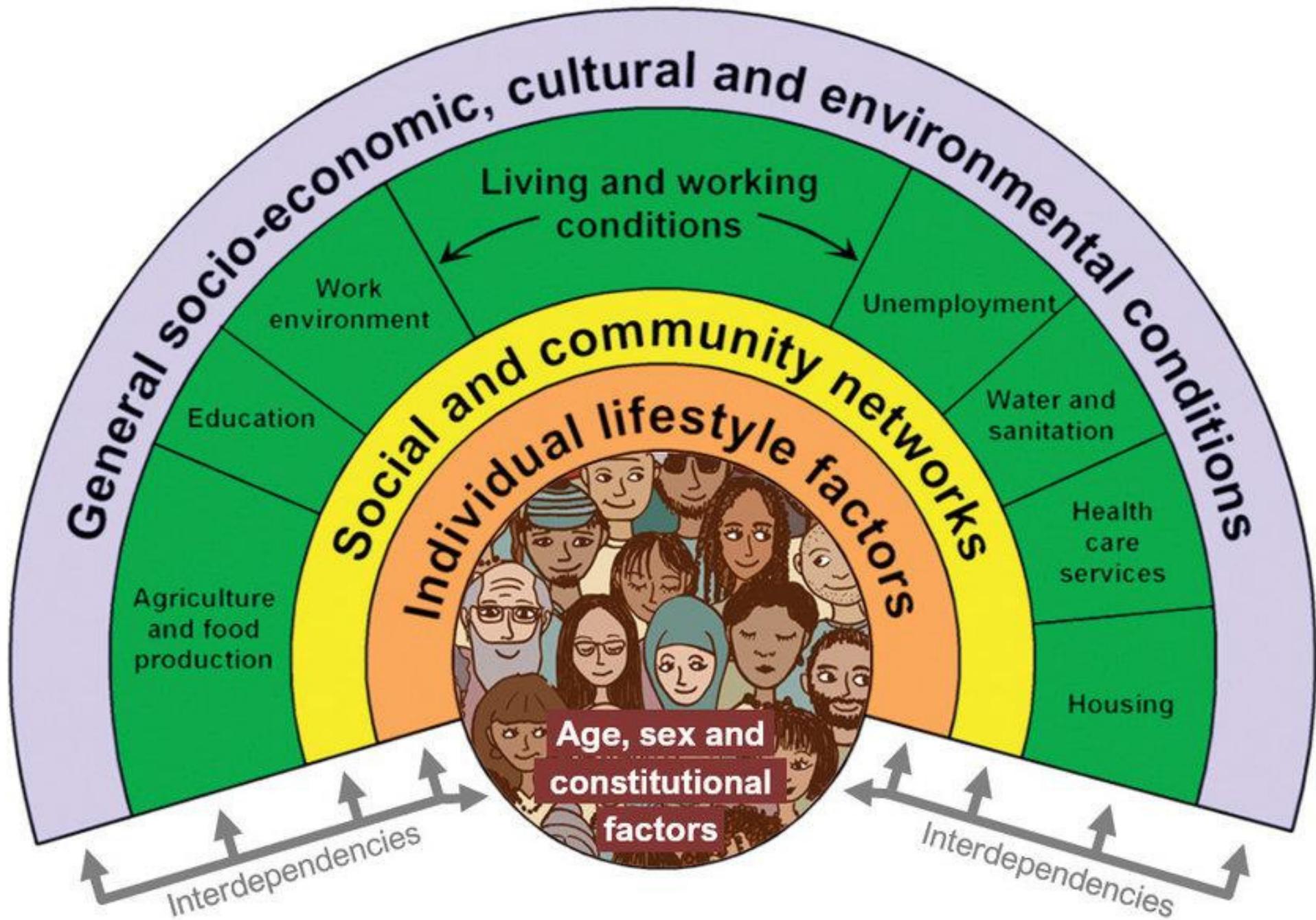There are degrees or "levels of health", as there are degrees or severity of illness.

Health is a state, <u>not to be</u> attained once and for all, but ever to be promoted, preserved, and restored when impaired.8

عوامل بتتعامل مع بعض ينتج عنها الصحة

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

Age, sex and constitutional factors

Work environment

Education

Agriculture and food production

Unemployment

Water and sanitation

Health care services

Housing

Interdependencies

Interdependencies

DETERMINANTS OF HEALTH

✓**Human biology:** includes all those aspects of health, both physical and mental, which are developed within the human body. For example, age, gender, genetic inheritance.

مثل الجغرافيا

✓**Environment** includes factors related to health which are external to the human body and the individual has little or no control on them. Examples : geography, climate, industrial development and the economy (income level, crowding, place of residence). Socio-cultural determinants include the beliefs, traditions, and social customs in the community.

بقدر اغيرها

✓**Lifestyle :** is made up of the habits and usual practices of human beings which affect their health. The individual can have control over them. For example people who smoke are at more risk of acquiring lung cancer. Other examples: Unsafe sport practice ,Eating contaminated food, etc.

✓**Health care organisation** consists of the arrangement and resources that are used in the provision of healthcare (the healthcare system)+ Quality of care. For example if someone is sick from a disease and there are no health facilities nearby to treat the patient, the patient is more likely to develop a severe complication and may even die.

في مستشفيات تتعالج فيها او لا

Risk factors

- Risk factors are those inherited, environmental and behavioural influences which are known or thought to increase the likelihood of illness.

- Risk factors are determined across a large population of people. However, not everyone will be equally affected. For example someone might drive dangerously and never have an accident, or smoke too much and never get lung cancer.

- نفس العوامل مرتبة بطريقة اخرى

- **Risk factors can be divided into two categories:**

ما بقدر اتحكم فيها

- **Non-modifiable (non-changeable or non-controllable) risk factors:** These are things that individuals cannot change or do not have control over (factors such as age, sex and inherited genes)

- **Modifiable (changeable or controllable) risk factors:** These are things that individuals can change and control . Example: their sedentary lifestyle, smoking, drinking alcohol ,unsafe behaviours or poor dietary habits..بقدر اتحكم فيها

- These two categories of risk factors can be interrelated and combined (example: If an old person (non-modifiable factor) smokes and eats unhealthy food (modifiable risk factors) the likelihood of become ill is higher than with individual risk factors.

What is a population/community?

- "Population" describes a group of people with a similar characteristic. That characteristic can vary: age (elderly, children, mothers..), geographic area (rural, urban..), similar diagnosis (Cancer, Diabetes, TB...), employees of the same company (workers, students...), disabled persons, or groups based on socioeconomic status or ethnicity are all examples of populations.

كلمة مجتمع بقدر اجمع الناس
with similar charchtric

Aim of public health: provide everyone, everywhere the best chance to live long, healthy, fulfilling lives from the beginning to the vey end!
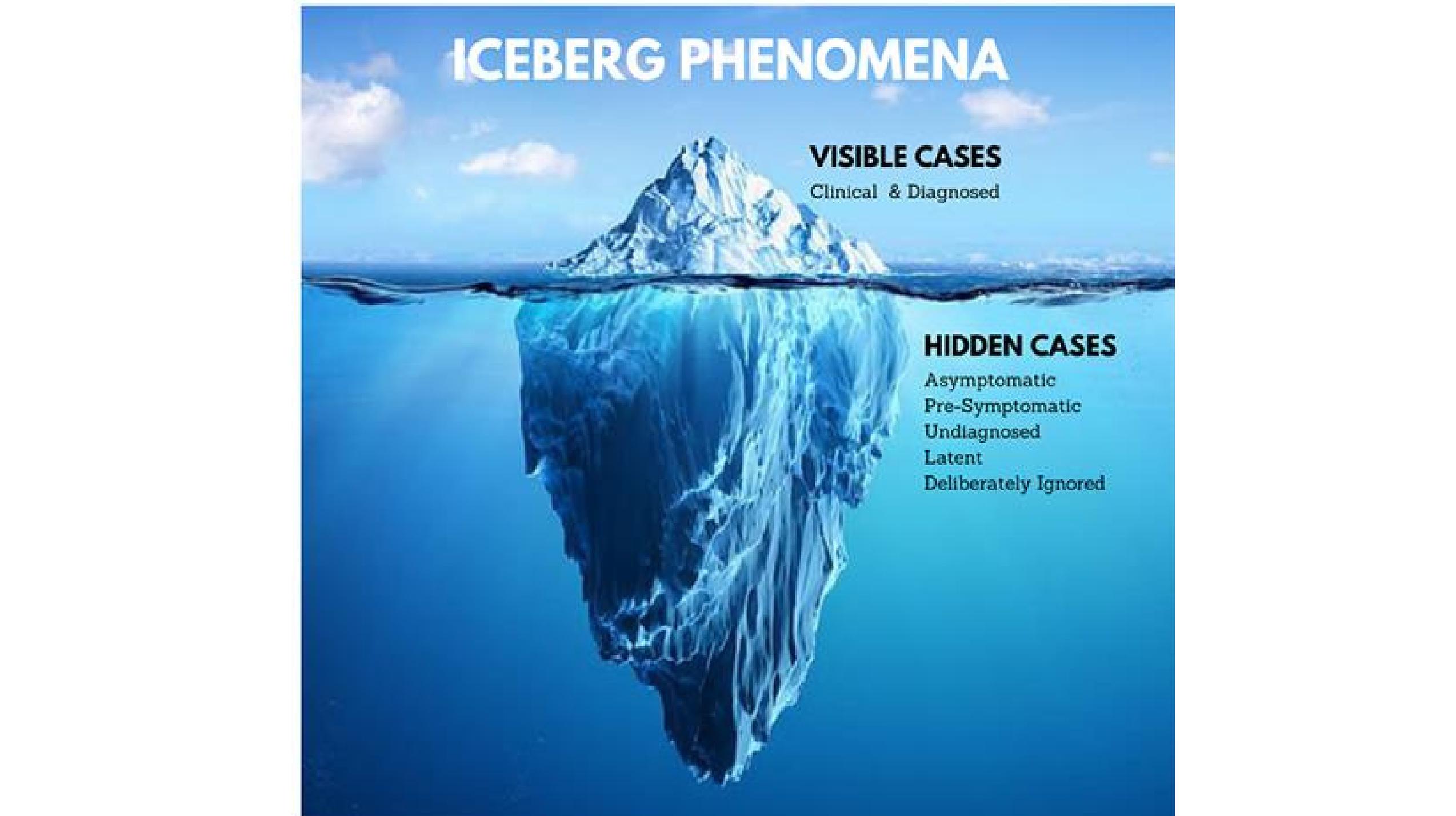
Now: What is Public Health?

Imagine yourself a clinician in your clinic:

▪ You make all you can to make the

sick individual in front of you better!

▪ You are committed to your job and

very busy treating those who come for help!

▪ You have similar attitude for other patients sitting outside

In the waiting room!
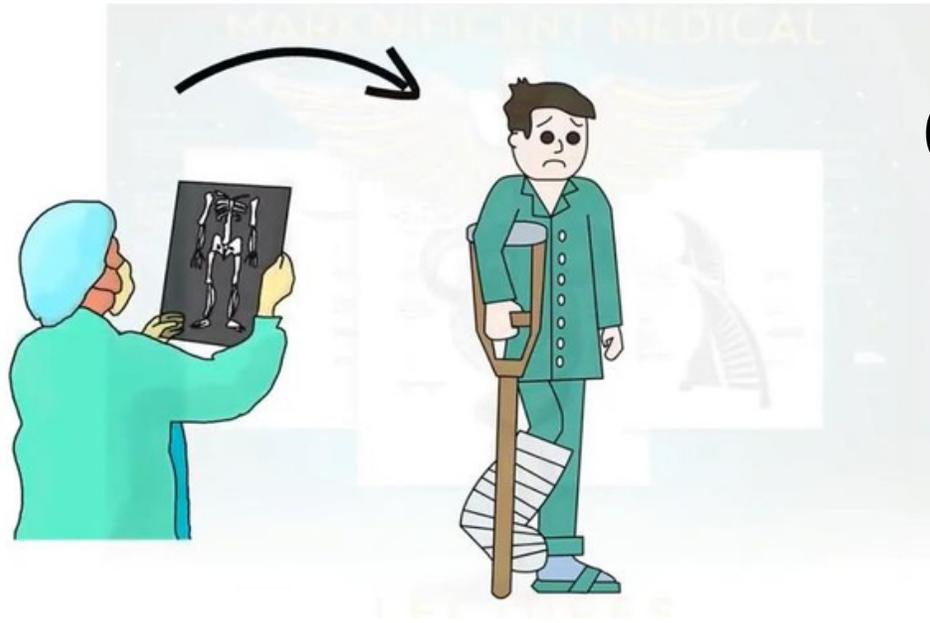
BUT, what about those who have not come to you?

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.

بتقسم صحة مجموعة من الناس

Clinical medicine Vs Public health

Ite ms	Public health	Clinical medicine
Objective	**prevent diseases**	**cure diseases**
Customers	**All community** **(healthy and diseased)**	**Individuals** **(diseased only)**
Methods of diagnosis طرق التشخيص	**Demographics.** **Vital statistiss** **Epidemiology** وبائية	**ndividual data: History, clinical exam, laboratory investigations**
Management	**Community health programs**	**Medical/surgical treatment**
Evaluation	**Assessment of health programs and health status of a community** تنظيم البرامج الصحية	**Follow up of patients**
Branches الافرع	**Epidemiology, environmental health, management, health services, gynecology… statistics……**	**Internal medicine, surgery, pediatrics,**

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Public Health Defined

علم وقت منع الامراض

"The science and art of preventing disease, prolonging life, and promoting health through the organised effort and informed choices of society,

organizations, public and private communities, and individuals."—CEA Winslow
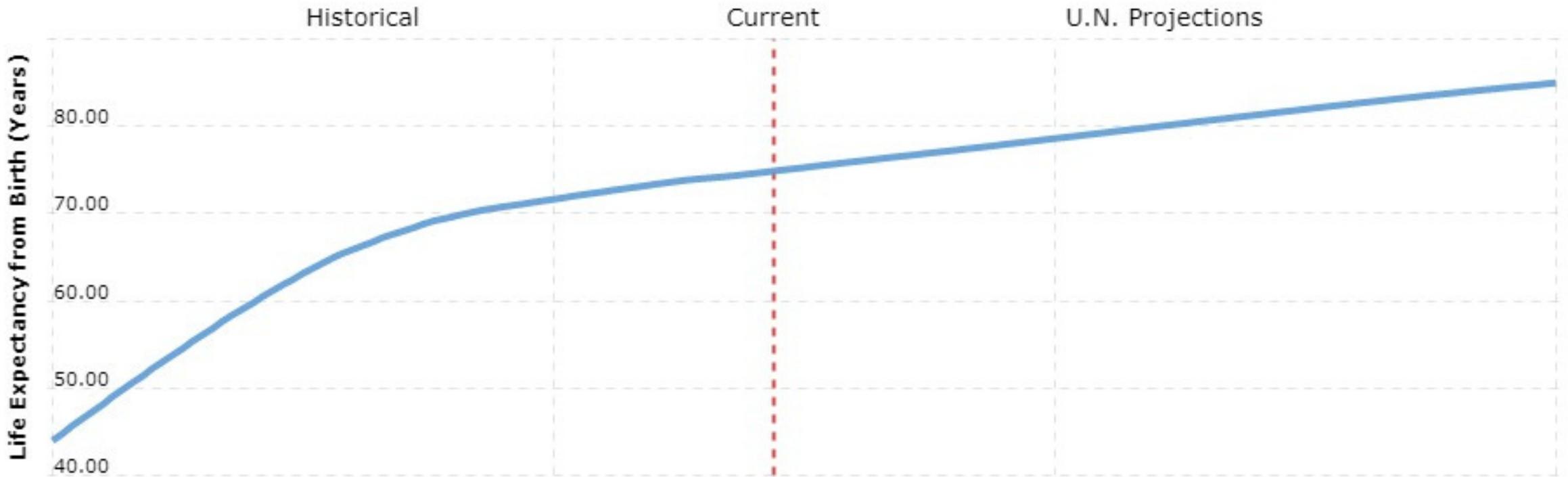
PREVENTION PROTECTION

PROMOTION

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

Jordan Life Expectancy 1950-2022

public health انجازات

Improving the health of a population!

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 low life expectancy--key element in the emergence of the**Great Sanitary** cholera-- **Awakening.**

- Edwin Chadwick: Public Health Act 1848-

- Dr.John Snow: The outbreak of cholera epidemic 1854 (The Broad Street pump) الناس بتتشارك في مضخةالماء

  Microbio

- 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 Historical Development of Modern Public Health

متعددة الاسباب

- 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; **Not one kind of science**

■Multisectoral; **متعددة القطاعات**

■Evidence-based; **لازم يكون مبني على دليل**

■Equity-oriented. **عدالة بتوزيع الخدمات**

Prevention

There are *three levels* of prevention

PRIMARY **well population**

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

■*Objective*: prevent onset of illness

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

Prevention

- **SECONDARY** **People at risk of a health problem**

■*Target population*: at risk and individuals at early illness

■*Objective*: early diagnosis and treatment to prevent

further damage to the individual and in cases of منع المزيد من الضرر
infectious diseases, spread to the community في المجتمع او الفرد

■*Methods*: screening of high risk groups e.g. Pap

smears, sputum examination for TB; monitoring تحديد الفئة الاكثر عرضة للمرض

of vulnerable groups –children, pregnant women **Children pregnant women**

مسح وتشخيص مبكر للمجتمعات

Prevention

TERTIARY **People with health problems**

■ *Target population*: sick patients

■ *Objective* تطبيق: reduce damage from disease and restore function

■ *Method*: clinical care and rehabilitation

Tertiary Prevention
Rehabilitation, preventing complications and improving quality of life.

Secondary Prevention
Screening of at risk individual, control of risk factors and early intervention.

Primary Prevention
Health promotion and addressing risk factors, social and genetic factors

People with a health problem

People at risk of a health problem

Well Population

Health promotion

- 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 done in the community, clinics or hospitals, and in all other service settings (schools, universities,..etc.).

- Raising awareness: informing/teaching people about health and lifestyle factors that might put them at risk.

Public health approach

Public Health Approach

What is the problem?	**What is the cause?**	**What works & for whom?**	**How do you do it?** ضمان انتشارها
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**
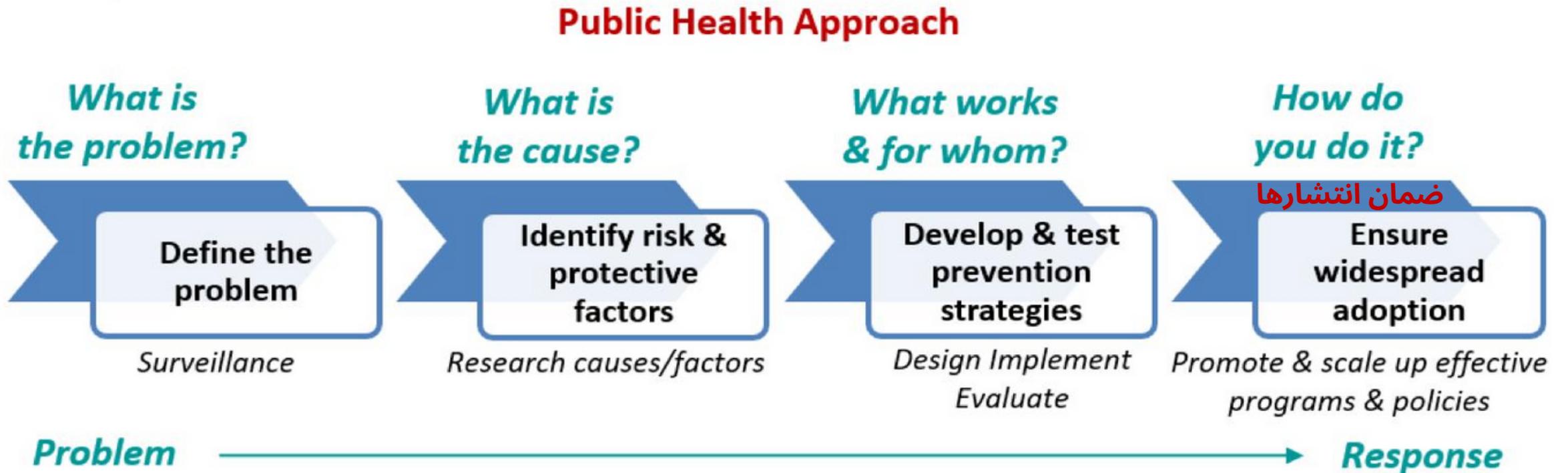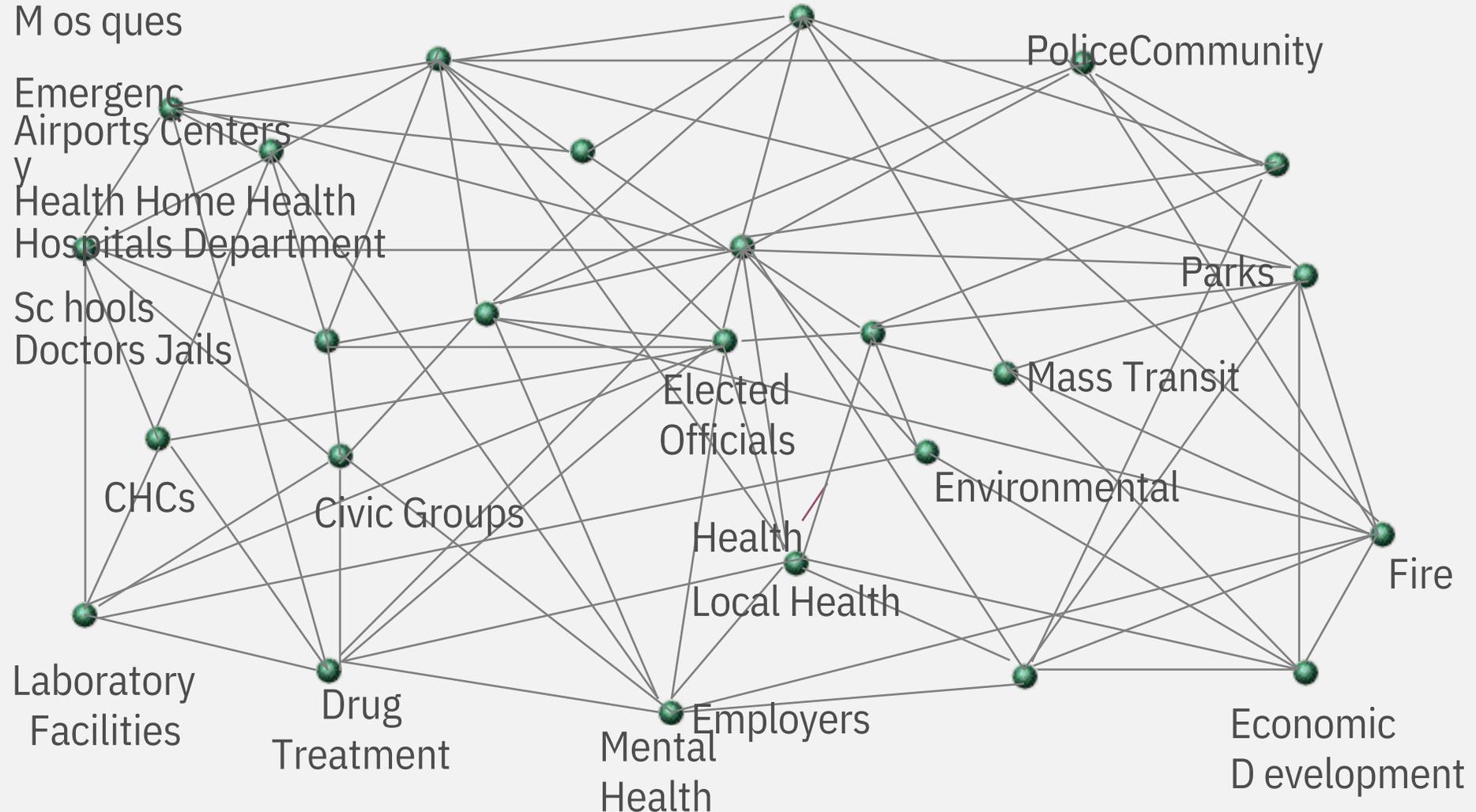
ثلاث مهام جوهرية في ال public health

Three Core Functions of Public Health

جمع المعلومات بطريقة منهجية

جمع المعلومات

Assessment

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

تحديد المشاكل ذات الاولوية

تطوير السياسات

Policy Dev elopment

→ **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**

لازم تكون مبني على دليل

Assurance

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

ضمان وجود الخدمات الضرورية ونشرها

Institute of Medicine. The future of public health. Washington, DC: National Academies Press; 1988.

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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

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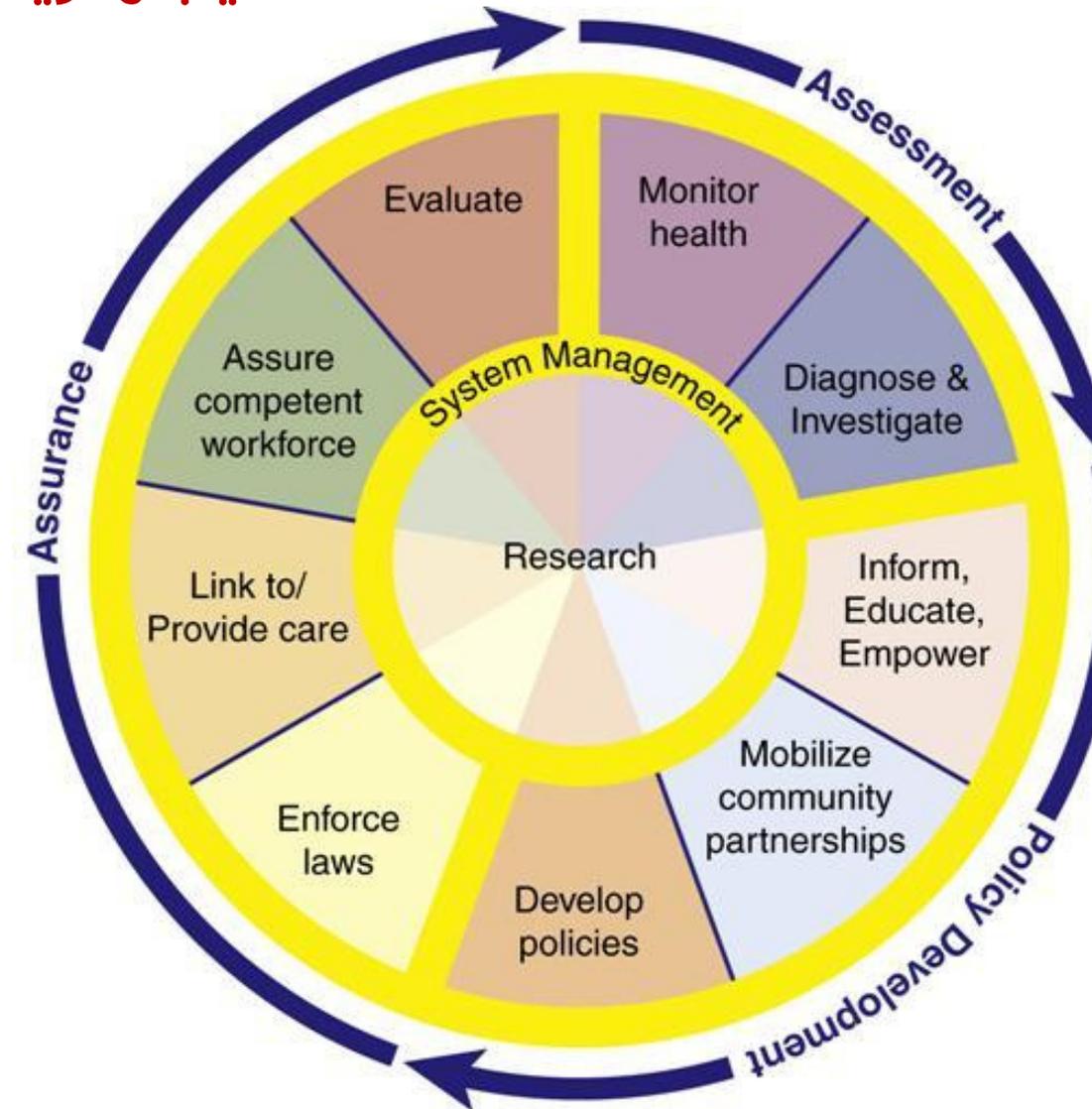
The great public health achievements

1900 to 1999

- Vaccination **تطعيم**
- Motor-vehicle safety
- Safer workplaces **توعية**
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water **الحد من تسوس الاسنان**
- Recognition of tobacco use as a health hazard

CDC, 1999

10 GREAT PUBLIC HEALTH ACHIEVEMENTS

Control of Infectious Diseases

Family Planning

Healthier Mothers & Babies

Motor Vehicle Safety

Tobacco as a Health Hazard

Declines in Deaths from Heart Disease & Stroke

Fluoridation of Drinking Water

Immunizations

Safer & Healthier Foods

Workplace Safety

Cancer screening
Improved Preparedness and Response to Global Health Threats.

Thank you