



# Public Health

**Title** : Introduction to public health

**Lec no** : Lecture 1

**Done By** : هبة الدرباشي و ملك عيسى

وَقُلْ رَبِّ زِدْنِي عِلْمًا



# Introduction to Public Health L 1

Associate Professor Dr. Eman A. Al-Kamil  
Dep. Of Community Medicine  
Collage of Medicine  
Hashemite University

Intro:

هلا أول اشي بدنا نعرف انه الطب مو بس كلينيكال اللي هو how to deal with patient, take history, examine patient, prescribe treatment  
هلا صار في distention of the role of doctors. Its not only to treat the patient in the clinic or hospital, they also concerned about the health of people in general in order to have healthy population  
ف صار عنا health programs لنحقق بعض الأهداف واللي هي improvement the health of people by promoting health and preventing diseases  
صرنا برضو نهتم بال environment لعلاقتها المباشرة بالصحة

So, we prevent the occurrence of the disease by preventing the occurrence of the risk factors

Public health is prevention, promotion and protection

# Public health course

## learning objectives

عنا كثير برامج صحية قد تكون على مستوى منطقة أو إقليم أو بلد كامل أو العالم. بطلت الصحة تخص بلد واحد وذلك بسبب سهولة التنقل بالتالي سهولة تنقل الامراض

- Provide students with the tools to think about the major concepts of public health. **As a physician we are concerning about planning of health care services (prenatal, maternal, child)**
- Public Health Program educates individuals for interdisciplinary, collaborative health care practice in local, regional, national, and global environments. **ولازم نطبق هاي البرامج ونعملها evaluation لحتى نشوف فعاليتها وبدها تعديل او لا**
- Public health physicians plan, implement, and evaluate health Programs to improve the health of vulnerable and diverse groups through organized community efforts.
- The program prepares students or enable them to carry out studies in different fields of medicine. **بدنا نتعلم نعمل بحوث لقدام وندرس شوية studies**
- prepares students to pursue careers in health services systems so that health is promoted, and disease is prevented at individual, family, professional, and community levels. **احنا كأطباء بنحتاج ناخذ قرارات يومية من نواحي كثيرة فلازم نتعلم ناخذ القرار الصح**
- public health education prepares students to contribute to the health of the public through positive decision-making and constructive action.

Upon completion of the Public Health course, students will be able to :

1. Explain the **history and philosophy of public health** as well as its core values, concepts, and functions.

تفريغ النقاط بالاسلايد الجاي

2. **Identify** the methods, and tools of public health **data collection**, use, analysis, and **plan services**.

3. **Identify** the basic processes, approaches, and interventions that identify and address the major **health-related needs and concerns of populations**.

4. **Plan** services for **promoting and protecting health** across the life course.

5. **Identify** the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities.

6. **Apply** public health-specific communication, including technical and professional writing and the use of mass media and electronic technology to promote public health.

بدى احكي نقطة قالتها الدكتوراة قبل النقاط والتي هي شو الفرق بين ال prevention وال protection  
ال prevention هو بكون by promotion يعني educate people عن الصحة والتغذية والخ  
اما ال protection بنقصد مثلا ال vaccines, wearing helmet, mask

1- explain what is public health, the history of public health, concept

2-As public health providers we are always dealing with numbers

لازم اعرف طرق تجميع ال data واعمل تحليل لهاي المعلومات مشان البحوث اللي بدى اعملها  
لانه مش بس توفير خدمات بدنا نشوف الخدمات شو أثرت على عدد إصابات وعدد وفيات وعدد اللي واصلهم  
العلاج لانه هاي الأرقام بتعكس الحالة الصحية للمجتمع

ومن أهم القيم هي ال infant mortality rate وبنستخدمها لنقارن الحالات الصحية للمجتمعات  
if we have healthy mother, we have healthy children, healthy population

3- its important to identify the health related needs

نحدد احتياجاتنا من good housing, clean water, food, sanitation, health services, good lifestyle

4- healthy behavior/ promotion by prevention of the development of risk factors لازم  
نعلم الناس يكونوا صحيين

5- unhealthy healthy والعوامل اللي بخلينا healthy واللي بتخلينا unhealthy

6- لازم نستخدم جميع الوسائل لنوصل ال health education to people من  
ملصقات في المركز الصحية او وسائل التواصل الحديثة

# Public Health

Winslow هو أول شخص حط مفهوم  
ال public health

## Winslow defined public health as:

The science and art of **preventing** diseases ,  
**prolonging** life and **promoting** health through  
organized efforts. (1920)

## Efforts include the following:

- **Control of infection** زمان كانت ال infections من أهم أسباب الوفيات لكن هلا بطلت بعد ال vaccines في حالات شافوها زمان هلا ما بنشوفها لانها اختفت
- **Sanitation** ال sanitation هون بنحكي على مستوى مجتمع مش بس فرد لأنه بال crowded areas تحديدا بنتشر كثير شغلات
- **Health Education** من قمل وجرب و skin infection (impetigo)
- **Provision of health care service.**



# Public Health

Deals with maintenance and improvement of sanitation , cleanliness and personal hygiene.

Sanitation includes:

في عنا كثير أنواع من ال waste اللي الها علاقة بال  
occurrence of diseases

❑ Disposal of waste (producing toxic and infectious material.)

- *organic domestic waste* منزلية
- *agricultural waste and (مبيدات) زراعة*
- *Industrial waste* معامل (air, water pollution)
- *Sewage* بالإضافة لل noise بالمطارات او الالات اللي صوتها علي بتعمل hearing problems

❑ Provision of safe water and food

❑ Provision of safe environment





# The Mission of Public Health

مفاهيم مختلفة لل public health

The Institute  
of Medicine

- has a simple definition for public health :  
collectively to assure the conditions for people to be healthy

WHO  
definition  
public health

- public health aims to provide maximum benefit for the largest number of people.

The Oxford  
Textbook of  
Public Health

“The process of mobilizing and engaging local, state, national, and international resources to assure the conditions in which people can be healthy” -

# Public Health Approach

## Public Health Model

- Population
- Diseases Prevention
- Health promotion
- Interventions
  - Environment
  - Human behaviors

## Medical Model

- Individuals
- Diagnosis
- Treatment
- Interventions
  - Medical care
  - Surgical



بدي احكي  
عنها بالاسلايد  
الجاي



Medical model: clinic, hospital

يعني الأطباء بتعاملوا مع individual patient كل واحد حسب حالته

Public health model: the population as a whole

لما صار زلزال مثلا قبل فترة ال health care services بتفكر أول اشي كيف لازم  
يوفروا ال essentials لانه بهاي الفترات بتنتشر كثير أمراض

Mental and social problems, infections, lack of water and food, lack of  
basic activities of life

- It is **concerned with threats to health** based on population health analysis.
- Public health incorporates the **interdisciplinary** approaches of :
  - epidemiology, The cause of disease (how), prevent in people at risk
  - biostatistics and health services, ندرس ال diseases بالارقام
  - environmental health,
  - behavioral health, Healthy and unhealthy behavior
  - health economics, Resources
  - health policy, Social distance, mask, seatbelt, helmet, vaccination
  - school health صحة الأطفال بعمر المدرسة والبيئة المدرسية
  - Maternal and child health (MCH) من أهم الأشياء اللي لازم نركز عليها بالصحة
  - control of communicable and non- communicable diseases. CVD, diabetes
  - occupational health ,are other important subfields.
    - Anxiety, infections, asbestosis, silicosis,
    - hearing problems

We are concerning about the effect of genetics

❑ Public health professionals analyze the effect on health of genetics, personal choice and the environment in order to develop programs that protect the health of the family and community.

Screening: premarital examination for hemoglobinopathies, hemophilia

في دول بتعمل فحوصات للطفل أول أسبوع لبعض الأمراض الجينية

❑ Overall, public health is concerned with **protecting the health of entire populations.**

لما احكي population يعني أي  
collection of people

شرط عدد كبير

❑ These populations can be as small as a local neighborhood, or as big as an entire country.

The sum of all official or governmental efforts to promote, protect, and preserve the people's health.

❑ Public health professionals try to prevent problems from happening or re-occurring through;

ال education من الأساسيات ويعتمد عال problem وعال target population

**1. implementing educational programs,**

لازم البرنامج يناسب اللي بدى أطرحه الهم مثلا لو أطفال بدى أوصل المعلومة بطريقة بسيطة

**2. developing health policies,**

**3. regulating health systems and**

لازم أحط البرنامج وأطبق

وأستمر بالمتابعة والتعديل عليه

حسب الحاجة والنتائج

**4. conducting research.**

❑ It is also a field that is concerned with:

- limiting health disparities
- health care equity, quality, and accessibility.

موضوع ال public heath

صار موضوع عالمي خصوصا

بعد ما شفنا اختلافات بالمستوى

الصحي على مستوى الافراد

والمجتمعات والدول ومن هون

وجدنا ال global health لنقل

هاي ال disparities ونوصل

لما يسمى ال social justice

## Differentiation among PH, Community Medicine, Social Medicine & Preventive Medicine

GREAT deal of confusion exists with regard to the meaning of the terms "public health," "community medicine," "social medicine," and "preventive medicine."

The terms are often used **interchangeably**, a practice which adds to the confusion. **Two basic concepts are at issue:**

1. public health on the one hand, and
2. community/social/preventive medicine on the other.

The latter three terms have **different historical roots but reflect a more or less identical orientation.**

زمان كان عنا بس public health لكن مؤخرا صار في  
عنا مصطلحات جديدة بس كلهم بالآخر الهم نفس ال  
concept واللي هو improvement of the health  
of population by prevention, promotion,  
protection

● The key word: community, social and preventive medicine are considered to be, a **subdivision** of the overall discipline.

● The common **denominator** of all three of these terms is "medicine."

● Indeed, they constitute a very minor subdivision of medicine.

● The **concept of public health**, on the other hand, is that of a **major governmental and social activity**, **multidisciplinary** in nature, and **extending into almost all aspects of society**.

بال **public health** بنركز عال **health in general**  
بال **medicine** بنركز عال **diseases** اكثر بينما بال

● Here the key word is "health," not "medicine"



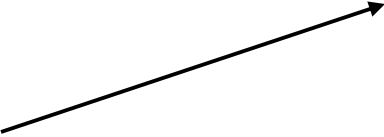
## Preventive medicine.

- “Art and science of health promotion and disease prevention”
- By definition preventive medicine is applied to “healthy” people.
- Its primary objective is prevention of diseases and promotion of health.

هون احنا بنتعامل مع healthy people  
يعني مثلا ال prophylactic drugs  
aspirin او اللي بسافر على مكان معرض  
للمالاريا بياخد دوا أو الناس اللي عندها  
endocardial diseases لما تروح طبيب  
الأسنان بتاخذ antibiotic



Healthy People in Healthy  
Community.



We study the behavior of people (one of the most important determinants of health)  
We are trying to modify unhealthy behavior to healthy behavior

## Social Medicine“

"Social medicine" is a product of France, Germany, Belgium and other European countries. Firmly based in the medical profession, it reflected a concern with the role of social factors in the etiology of disease, and the need for government action in the areas of disease prevention and medical care.

## "Community Medicine" اشي أوسع من ال social كبديل اله

"Community medicine" became prevalent in the United States as a substitute for "social medicine," since the latter term sounds too much like "socialism."

# How public health differs from other branches of Medicine?

Public health reaches out to people :

Vector control  
بتنقل ال الحشرات اللي  
snails او ال malaria اللي  
schistosoma ال بتنقل

1. to provide services for prevention of disease (such as immunization, pre-natal care, health screening etc.),
2. promotion of health (such as safe water supply and sanitation, vector control measures, tobacco control policy etc.) and
3. provision of primary medical care (treatment of common health problem such as diarrhea, pneumonia, TB, leprosy, malaria, hypertension etc.)  
As public health providers we are also able to provide treatment in primary medical care

Whereas other branches of medicine largely provide diagnostic and treatment services to patients who seek treatment.

Concept of health care approach has experienced a dramatic change.

Today health is not merely an absence of disease; it is related to quality of life .

Health is complete mental, social, physical wellbeing

Health is considered as means of productivity. →

الصحة صارت تقاس بإنتاجية هذول الناس هل هو قادر انه يوم بعمله و to  
contribute in the development of himself, his family, his community

Thus, health development is essential to socio-economic development as a whole.

Scope of medicine has extended from individual to community.

زمان كنا بس ندرس ال  
management of diseases

Study of health and disease in population is replacing study of disease in man.

في نقطة صغيرة بدي أحكيها هون لأنه ما الها مكان فوق  
واللي هي شو الفرق بين ال standard of life وال quality of life

هلا ال standard of life is determined by finance يعني فلوس هاد  
الشخص بتحدد مستوى حياته من ناحية الأكل للي بياكله من ناحية الخدمات اللي بقدر  
يستخدمها من ناحية البيت وكثير شغلات فهو اشي متعلق بالمادة

اما ال quality of life تعود للشخص نفسه وصحته شو بتخليه قادر يعمل ومن شو  
بمنعه يعني في ناس صحتها سيئة لدرجة بتمنعها تمارس نشاطات الحياة الطبيعية

■ Modern medicine is no longer solely an art and science for the diagnosis and treatment of diseases.

أغلب الدول هلا بتتجه لل  
modern medicine

■ It is also the science for the prevention of disease and promotion of health.

■ Today technical sophistication of modern medicine is not an answer to everyday common ailments of the vast poor in the country.

■ Appropriate technology and cheaper interventions like Oral Rehydration Solution (ORS), immunization, etc., are increasingly being applied as life saving measures and for disease prevention in community health care.

الأطفال من أهم أسباب وفياتهم هو ال dehydration that happens as a result of gastroenteritis لأنه بصير عندهم diarrhea and vomiting فبنعطيهم اشني اسمه ORS مغلف فيه أملاح وشوية سكر بنحله بمي وبشربوه وهو شي جدا بسيط لكن بنقذلا حياة الطفل واذا كان عنده طبعاً severe vomiting بنعطييه سوائل IV

■ Physicians' role is no longer confined to diagnosing and treating those who come to the clinic.

وظيفتنا مش بس نقدم خدمات للناس اللي بتيجي. وزارة الصحة عم بتحط برامج مشان نقدم خدمات للناس اللي مش قادرة توصل بنعملهم حملات تطعيم وبنطلعهم mobile units

■ He is also responsible for those who **need his service but can not come to the clinic.**

■ Health of the people is **not only the concern of health care providers.**

والموضوع بطل بس على عاتق ال health care providers لازم كامل المجتمع يتعاون لازم الأفراد يعرفوا يهتموا بحالهم ويتعاملوا مع مرضهم بالإضافة للمسؤولين عن المناطق اللي لازم يكونوا عارفين احتياجات الناس مشان يساعدونا نوصلها

■ It is the **responsibility of the community** also to **identify and solve their own health problems through their active participation.**

- ال social justice اللي حكينا عنها صارت موضوع كثير مهم
- ✚ The new ideas and concepts, for example:
    - increasing importance given to social justice and equity,
    - recognition of crucial role of community participation

called for the **new approaches** to make **medicine in the service of humanity more effective.**

ال alma ata لما اجتمعت الدول الأعضاء بالأمم المتحدة ب  
كازاخستان لحتى نوصل لل justice ونقل ال disparities

✚ **Alma-Ata declaration in 1978** specified that **Primary Health Care** approach was the way of achieving the goal of “**Health For All** “by 2000 AD.



Primary Health Care (PHC) approach stressed that “essential health care should be made **universally accessible** to individuals and **acceptable** to them, through their **full participation** and at a **cost** the community and the country can **afford**”.

PHC ,

- **essential**
- **accessible** Everybody can use it when they need it يعني متاحة للجميع
- **acceptable** female كثير نساء يفضلوا انه ال maternal care provider تكون
- **affordable** هي عادة بتكون for free أو بأسعار رمزية جدا
- **full participation** . زي ما قلنا انه لازم يكون بمشاركة وتعاون الجميع بداية من الفرد نفسه للمسؤولين

# The branches of public health include the following:

## **Behavioral Science / Health Education**

Behavioural sciences is the collective term given to a number of disciplines which focus on the study of the behaviour of humans.

Behavioural Science' is the study of human behaviour from a number of different subject (discipline) areas.

# Behavioral Science/Health Education focuses on ways that encourage people to make healthy choices.

Health care services  
determinate وحدة من اهم  
health of people تبعث

This includes the development of **community-wide education programs** that range from **promoting healthy lifestyles** in order to **prevent disease and injury**.

Good health service = healthy population

- *Stopping the spread of communicable diseases, such as herpes and HIV/AIDS.*
- *helping youth recognize the dangers of smoking, drug abuse & drinking; and promoting seatbelt use.*
- They also promote more efficient uses of health services, **adopt self-care practices**, and participate actively in the design and implementation of health programs.
- **Some examples** include **mental health, aging, health promotion and disease prevention, health education and behavior change, disability and health, and social research.**

# Biostatistics

- ✚ the application of statistics to biology, medicine, nursing, and other health-related professions.
- ✚ *Estimating the **number of deaths** from different health problems, looking at **trends in** different health problems by using math and science is the study of biostatistics.*
- ✚ Using biostatistics, one can identify **health trends** that lead to **life-saving measures** through the application of statistical procedures, techniques, and methodology.
- ✚ Identifying **health trends** within the community, explaining **biological phenomena**, as well as **determining the number & causes of disease and injury**, biostatistics are an integral part of public health.
- ✚ Biostatistics are often utilized in synonymous with **epidemiology**.

تفريغ سلايد 24 :

## Biostatistics : 1- collecting info. 2- analyzing 3-processing on computer

و هون هي بتعتمد حسب الشئ الي بدي ادرسه فرضا انا رح ادرس **infant mortality rate** في منطقة معينه ف قديش عندهم عدد اطفال رضع بعدين فرضا كانت نسبة **infant mortality** في منطقه معينه **7.5 thousand** و في منطقه اخرى **1.2 thousand** ف هون في اختلاف بين المنطقتين ف انا لازم اعرف شو سبب الاختلاف عشان نحسن الاوضاع الصحيه و نقلل **infant mortality** ،

**infant mortality** \*\*\* هي من اهم العوامل الي بتقيس الحاله الصحيه في المجتمعات لانه الاطفال سريعين التاثر في التغيرات الي بتصير في المجتمعات و العدوى الي بتنتشر فعشان هيك هي برضو **the most impo. And sensitive indicator to compare btwn different contries**

**Synonymous --} deal with number to study something**

تفريغ سلايد 25 :

**There is always an association btwn the environmental factor and the causes of disease**

*The **air pollution**; the safe **water**; radiation, noise , chemicals, the complex **interactions between human genetics and our surroundings.***

How do the **built and natural environments** influence our health and how can we reduce risk factors?

These environmental **risk factors** can cause diseases such as **asthma, cancer, and food poisoning.**

**Environmental health studies the impact of our surroundings on our health.**

## These areas are:

- air quality
- water quality
- food protection
- radiation protection
- solid waste management
- hazardous waste management
- noise control
- environmental control of recreational areas
- housing quality
- vector control

# Epidemiology

- ❑ When food poisoning or an influenza outbreak attacks a community, the "disease detectives" or epidemiologists are asked to investigate the cause of disease and control its spread.
- ❑ Epidemiologists do fieldwork to determine what causes disease or injury, what the risks are, who is at risk, and how to prevent further incidences.
- ❑ They spot and understand the demographic and social trends that influence disease and injury and evaluate new treatments.
- ❑ The initial discovery and containment of an outbreak, such as bird flu virus, often comes from epidemiologists.
- ❑ Some of the most important health-related discoveries in history are associated with epidemiology including the report on smoking tobacco stating its harmful effects.
- ❑ **Biostatistics** are often used in synonymous with epidemiology.



تفريغ سلايد 27 :

## **Epidemiology : 1- occurrence of disease 2- distribution of disease 3- determination of disease 4- how to prevent the disease**

مثل كورونا اول ما انتشر بالصين صار ينتشر بعدها لكل العالم ف شو هي طرق العدوى و كيف يمكن السيطرة عليها زي لبس المامه و التباعد الاجتماعي

تفريغ سلايد 28 :

اهتمام عالمي بالمشاكل الصحيه حيث انه هاد مرض انتشر بسرعه عاليه بين الدول نتيجة السفر

تفريغ سلايد 29 :

بنعمل متابعه للام **before during after pregnancy** بنعمل متابعه للام خلال فتره الحمل عشان نتأكد انها رح تولد بشكل طبيعي و كمان

بنعطي للفل كرت من خلال **internal health care center** عشان نتابع فيه طول و ووزن الطفل و هل هم خلال الحد الطبيعي و اذا صار عنا

مثلا **drop** في الكيرف ف هيك انا بدور شو هي المشكله و بعرف شو سببها

مين هم النساء الي بصير عندهم **high risk** :

**DM – Hypertention – previous down syndrome – age**

و بنميزهم عن طريق انا نحطهم حرف **R** كبير و احمر

# International / Global Health

- *Addressing health concerns from a global perspective and encompassing all areas of public health (e.g., biostatistics, epidemiology, nutrition, maternal and child health, etc.).*
- **International health** professionals address health concerns among different cultures in countries worldwide.
- **Globalization** has linked our health more closely to one another than ever before.
- The **rapid movement of people and food across borders** means that a **disease can travel from a remote village to an urban center quickly.**
- Global public health meets the **rising health challenges that transcend national boundaries.**
- This **international field** encompasses virtually all specializations in **public health.**

## Maternal and Child Health

- ✚ Providing information and access to birth control (*family planning*).
- ✚ promoting the *health of a pregnant woman and an unborn child*; and
- ✚ dispensing *vaccinations* to children are part of maternal and child health.
- ✚ Detection of "*High risk pregnancy*".
- ✚ Professionals in maternal and child health improve the public health delivery systems for women, children, and their families through advocacy, education, and research.

# Nutrition

- Promoting healthy eating and regular exercise; researching the effect of diet on the elderly; teaching the dangers of overeating and over dieting are the responsibility of public health nutritionists.
- this field examines how food and nutrients affect the wellness and lifestyle of population.
- Nutrition encompasses the combination of education and science to promote health and disease prevention, i.e. prevention of malnutrition, vitamin deficiency, obesity, anemia .

تفريغ سلايد 30 :

علاقة nutrition- disease

Malnutrition : over – under

Obesity – anemia

Education يبيلش من المدرس و يستمر ل جميع

مراحل الحياه

Public health laboratory

في بعض المختبرات تابعه ل وزارة الصحة لغرض

فحص الوافدين

## Public Health Laboratory Practice

Public health laboratory professionals such as bacteriologists, microbiologists, and biochemists test biological and environmental samples in order to diagnose, prevent, treat, and control infectious diseases in communities.

In order to ensure the safety of our food and water, to screen for the presence of certain diseases within communities, and to respond to public health emergencies, such as bioterrorism, public health laboratory practice is essential.

# Public Health Policy

*Analyzing the:*

- *impact of seat belt laws on traffic deaths;*
- *Implementation of smoking prevention policies,*
- *advocating for funding for a teen anti-smoking campaign.*
- *Iodization of salt and fluoridation of water.*
- Professionals in public health policy work to **improve the public's health through legislative action at the local, state, and federal levels.**



*Thank You*