

# Ch2. Expanding the Concept of Public Health

## In previous lecture (revision):

 $\circ\quad$  Dr. said that public health means prevention .

وتم اخذ مفهوم الوقاية (prevention) من من منظور ثلاثي او رباعي

- And we define prevention in terms of four levels ( primordial , primary , secondary , tertiary ) and he focused in important things .
- He told us about the examples of primary prevention (e.g. immunization, health prevention, water purification, sewer system)

#### **SECONDARY PREVENTION**

It can be applied only to diseases in which the natural history includes an <u>early period</u> when it is easily identified and treated so that progress to a more serious stage can be stopped.

## ■ 2 main requirements

- Safe and accurate method of detection
  - Effective method of intervention

- What do we mean by <u>early period</u>? That every disease has incubation period.
- When the 2ndary prevention began?
- عندما يدخل العائل الممرض (pathogen ) الى جسم الإنسان.
- After beginning of this type of prevention what we will do?

رح نحاول بكل امكانياتنا توقيف هذا المرض ومنعه من الانتشار

- یجب ان تکون هنالك أدوات قیاسیة معیاریة نمطیة نموذجیة حتی نعمل . detection of disease
  ولما عرفنا ماهیة العائل الممرض بنجیب antibiotic لفحص sensitivity test by using clarithromycin to
  - The microbiologist must commit with safety standards (e.g. scrub, gloves, goggles, etc.) why?
    - o خوفا من الاينتقل المرض له و الايحدث ما يسمى ب . cross infection

kill streptococcus, staphylococcus..etc.

 Cross infection: is the transfer of harmful microorganism, usually bacteria and viruses. the spread of infection can occur between people, pieces of equipment or within body. These infections can cause many complications so, medical professionals work hard to ensure equipment safety and a clean environment.

#### It is defined as

- Actions which halts the progress of a disease at its incipient stage and prevent complications
- Secondary prevention aims to cure patients and reduce the more serious consequences of disease through early diagnosis and treatment.
- هي الحدث او النشاط الذي يعمل على توقيف عمل المرض إما بالمطعوم أو بالمعالجة ب surgical intervention كيف يتم ذلك ؟ من خلال تعطيل عمل المرض من فترة البداية لتحول دون حدوث مضاعفات .

• The specific interventions are: <u>early diagnosis</u> (e.g. screening tests, and case finding programs....) and adequate <u>treatment</u>.





- Secondary prevention attempts to arrest the disease process, restore health by seeking out unrecognized disease and treating it before irreversible pathological changes take place, and reverse communicability of infectious diseases.
- It thus protects others in the community from acquiring the infection and thus provide at once secondary prevention for the infected ones and primary prevention for their potential contacts.

الدكتور قرأ الشكل كامل "Strategy for Prevention

إذا كان عندنا بعض programs موجودة وشغالة في المملكة وكان عندنا مرض ينتشر بشكل متسارع فلازم نشوف الاستراتيجيات المطبقة ونعمل على تغييرها من اجل ان تحول دون تسارع هذا المرض مثل تغيير المطاعيم , تغيير الإجراءات الوقائية , و تغيير المعقمات والمنظفات المستخدمة .

يقوم على تقييم تلك new intervention programs الاتي طبقن و نشوف هل المرض توقف انتشاره ؟ هل وجد للمرض



#### **TERTIARYPREVENTION**

o مرحلة الثالثة هي المتطورة وهي آخر نوع من أنواع prevention

#### Itis defined as

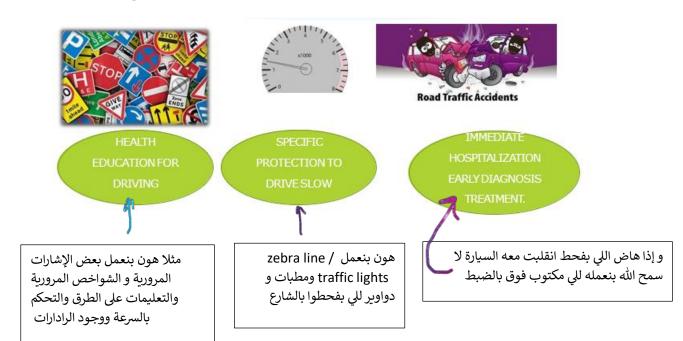
المعالجات السليمة ؟



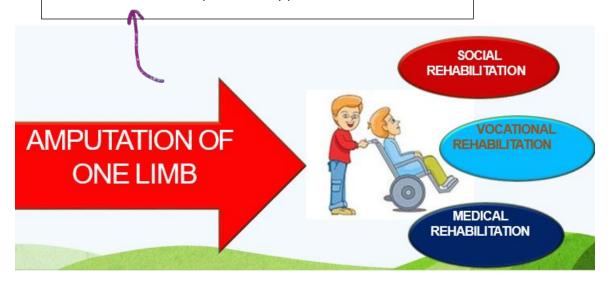
"all measures available to reduce or limit impairment and disabilities, minimize suffering caused by existing departures from good health and to promote patient's adjustment to irremediable conditions"

- The rehabilitation of patients with poliomyelitis, strokes, injuries, blindness is of great importance in enabling them to take part in daily social life
- إعادة تأهيل : Rehabilitation ■
- مثلا اجى طفل معاه شلل من بداية حياته ( السبب ممكن من الجينات او حادث أصابه ) وهدفنا هون نعمله إعادة تأهيله وهيكلة حياة المريض ليصبح فعال في المجتمع سواء من ناحية اجتماعية أو اقتصادية و يعتمد على نفسه لذلك نطبق عليه 3 أنواع من إعادة التأهيل : . medical , social and vocational rehabilitation
  - هسا كوزارة صحة لا يمكن ان تعطي لطبيب الرخصة وهو handicapped person إلا اذا تم إعادة تأهيله حتى لا يكون عالة على الدولة أو المجتمع لكن يشتغل فقط الأمور القادر عليها كتشخيص المرضى و إعطاء أوامر للناس كلا حسب حالته الصحية .
    - Handicapped person: a person who has some condition that markedly restricts their ability to function physically or mentally or socially.
    - Strokes: occurs when the blood supply to part of your brain is interrupted or reduced, preventing brain tissue from getting oxygen and nutrients. Brain cells die in minutes.
  - عشان هيك مريض الجلطة بنعمله physical exercises ليخدم نفسه بنفسه و يكون له القدرة على الذهاب لدورة المياه بنفسه وأيضا القدرة على الصلاة .

#### **PREVENTION: EXAMPLE**



- Amputation : بتر Amputation : بتر diabetic foot الله للشخص الذي تم بتر احد قدميه بسبب اصابته ب يكون في عونه و الطاقم الطبي لازم يعيد تأهيله عشان يرجع للشخص طبيعي وعادى .
  - As an example of medical rehabilitation is external fixation .
  - And this an example of tertiary prevention .



### **MODES OF INTERVENTION**

- > Health promotion (الارتقاء الصحى)
- > Specific protection ( الإجراءات الوقائية الخاصة
- > Early diagnosis and treatment
- Disability limitation Rehabilitation

# **Impact of Illness**

## (على اللي صار له إعاقة ) On the Client

- Behavioral and emotional changes
- Loss of autonomy
- Self-concept and body image changes
- Lifestyle changes

فقدان استقلالیته و غیر قادر ) • علی مساعدة نفسه

### On the Family

#### Depends on:

Member of the family who is ill Seriousness and length of the illness Cultural and social customs the family follows

## **Family Changes**

- Role changes
- Task reassignments >> changes in the patient's tasks in his family
- Increased demands on time >> this patient is at increased needed for care , help in daily life and must be under attention all the time
- Anxiety about outcomes >> whatever the outcomes are , is it the impact on the patient's health or even ends with death!
- Conflict about unaccustomed responsibilities >> conflict about the tasks assigned to the patient in his family
- Financial problems >> how much money must be spent on him
- Loneliness as a result of separation and pending loss >> this patient feels lonely and his self-confidence is always down
- Change in social customs

## Positive consequence of WHO definition of health:

- change of health care philosophy (medical and health definition)

## **Previous philosophy:**

Diseased person → doctor → diagnosis → therapy

<u>New philosophy</u>: the purpose is to create healthy and active person who represents the gross national products, in other words, productive person who supplies governments with money for example

\*Now, our target is not only to improve patient's health, instead we are promoting the public health as whole (healthy communities) (health promotion) (health protection) >>> so, as a result we will get prevention of diseases onset and development.



# Positive wellness (being health) involves:

1. being free from symptoms of disease and pain as much as possible; >> and governments have a huge role in achieving that

- 2. being able to be active able to do what you want and what you have to do at the appropriate time;
- 3. being in good spirits most of the time .. تكون الهمة دائماً عالية

### **Definitions of Illness and Disease**

**Illness ( discomfort )** is a reaction to a change in one's physical state. It is very individual and has social and physical connotations and is influenced by one's age, gender, education, experience, culture, mental state, and resources .

when describing someone as "ill" person, it's not important to observe signs and symptoms, maybe he's mentally ill because of stress, financial problems, familial problems, socially depressed ... etc. Also, it's very individual state, specific for each person.

It's the need to be loved by the community you live with (maslow's hierarchy of need)

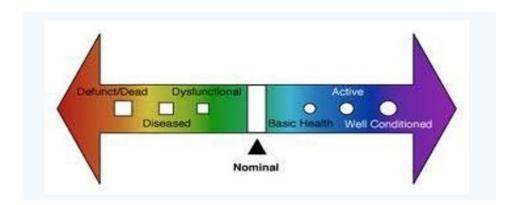
**Disease** is defined professionally, usually by a physician - physician is the only person allowed to define the "DISEASE" + each field has its own definition of the disease from its own point of view- .It is the basis for medical practice and therapy. It is also the framework for the organization of the health care system and its resources (resources in the health care system include: 8ms (material, management, manpower, methods, milieu, manufacturers, money and means)

#### Levels of Health and Illness:

- 1. Ideal Health
- 2. **Positive Health**
- 3. Average Health
- 4. In-Apparent Disease
- 5. Apparent Disease (clinical and subclinical cases)
- 6. **Disability**
- 7. Death



# Health-Sickness Spectrum (Levels of Health and Disease)



# "Concept of Disease"



## **Definitions**

**<u>Disease</u>** is a physiological/psychological dysfunction defined professionally.

**Illness** is a subjective state of the person who feels aware of not being well (Socially defined)

ما فهمت المثال بس رح أكتبه: المصارع لما ياكل بوكس يهر سنانه قدامه بيوقع ع الأرض دقيقتين وبقوم فهو يعتبر (إللنس) لكن ما ظهر عليه أعراض مرض .. عاد علمي علمكم إيش قصد الدكتور هون

**Sickness** is a state of social dysfunction based on professional and social agreement ....

- •For example :
- 1- pregnant woman at the morning suffers from vomiting and nausea >> it's called "morning sickness"
- 2- travelling for long hours by bus may cause vomiting >> " motor sickness "
- -3live away from family >>" family sickness " يشتاق لأهله
- وضحی وابن عجلان >> 4Love sickness-

- {If a person is diagnosed as patient by a health professional (Disease) or considered ill by family or community (Illness) is labeled as SICK such person has Two Rights associated with Two Obligations that is called Parsons' Sick Role}
  - Rights: حقوق غير مكتسبة
  - 1. Exempt from normal social roles e.g. Job
  - 2. Not responsible for their condition
    - بمعنى ان الناس والأطباء غير مهتمين بظروف هؤلاء المرضى وليس لديهم باع طويل في تحملهم ، وتحمل أحوال الغير يعتبر من الصفات القيادية المعيارية النموذجية عند المسؤول والطبيب وصاحب السلطة والعمل بشكل عام ، فلابد للطبيب من تحمل المريض والعطف عليه ومواساته قدر المستطاع اتباعاً لقدوتنا سيدنا محمد عليه أفضل الصلاة وأتم التسليم
    - And this is what known as ( Disturbance handler)

•

- Obligations: واجبات علينا تجاه المريض
- The sick person should try to get well >> we should encourage sick person to visit the hospital and get well
- 2. The sick person should seek technically competent help and cooperation. >> we should give sick people a special treatment and care
- The International Classification of Disease (ICD) is used to translate diagnoses of diseases and other health problems from words into an alphanumeric code.
  - It is based on the classification and indexing of diseases alphabetically (codification of the diseases)
  - So, in the future, instead of using the whole name of the disease, we'll use these abbreviations (symbols)
  - Certified by mobile health programs, electronic physician, electronic ICU ..E-Health (health informatics, nursing informatics.. etc.)

#### ICD-10

Intestinal infectious diseases (AOO-A09) A00 Cholera

A01 Typhoid and paratyphoid fevers A02 Other salmonella infections A03 Shigellosis

A04 Other bacterial intestinal infections A05 Other bacterial food-borne intoxications A06 Amoebiasis

التوجهات المستقبلية بحيث تصبح الخدمات الطبية عن بعد The doctor mentioned an example ,a Jordanian patient post his symptoms online "he got abdominal pain" A finish doctor starts asking him questions in order to Online health, E-health, Mobile health, hE -coverage diagnose him E-pharmacy, E-clinic, E-emergency room E- disaster plan \*Is it in the upper part of the abdomen? So we can exclude ال معلوماتية Informatics Angina, chest pain, Pulmonary aortic aneurysm, reflex esophagitis دمج الطب والإحصاء والرباضيات والإدارة للحصول على أمثلا ICD \*Is it in the middle? **Vomiting?** To know if there is gastrointestinaitis المعلوماتيّة Medical informatics, Medical informatics Nursing informatics, الطبيّه \*Is vomiting with coffee ground shape vomiting هل مع الاستفراغ فيه مواد كالبن المطحون معلوماتية إدارية \*If the pain was at right side > appendicitis, Peptic ulcer **E-metric organization Duodenal ulcer** التنسيق الأفقى الرأسي بين الأقسام \*Lower part > urinary tract infection , pregnancy Horizontal vertical organization between different هذا المريض بكون عنده departments " chip" بجسمه عليها جميع المعلومات الطبيه الخاصة به مع معلوماته الحيوية القديمة Classical organization وجميع ملفاته الصحية وهذا ما يعرف ب Organizational chart الهيكل التنظيمي E-medical record Made Depending on community needs By inserting a chip inside human body

Classical organization classified as

1.Open system 2. Metric organization 3.Informal system

For contemporary problems We have

\*Virtual organization structure

Pharmacies are also linked

So an app can choose the nearest pharmacy

And you can take the drugs that your physician had prescribed it online, Antibiotics like doxycycline, Pain killer like paracetamol

"By this technology treatment is done online"

"post bureaucratic paradigm" استراتيجيات التنظيم الحديثه

Virtual patient bank

**Virtual banking** 

Virtual patient bank:

No hospitals Software contains all diseases with their details And reporting cases as groups and sub groups

استراتيجيات التعليم الحديثه

- 1. Groups and sub groups
- 2.Case studies

## **MODES OF INTERVENTION**

**Health promotion** 

- 2. Specific protection
- 3. Early diagnosis and treatment
- 4. Disability limitation
- 5.Rehabilitation

### 1. HEALTH PROMOTION

- **♦** HEALTH EDUCATION
- **\*** ENVIRONMENTAL MODIFICATIONS
- **❖** NUTRITIONAL
- **❖** INTERVENTIONS
- **❖ LIFESTYLE AND BEHAVIOURAL CHANGES**



#### **HEALTH EDUCATION**

It is defined as

"the extension to all people of the benefits of medical, psychological and related knowledge is essential to fullest attainment of health "

### **Health education**

 مثال عليها انه تم طلب بلازما من بريطانيا لطفل بالأردن لكن ما فحصوها وتبين انه البلازما فيها فايروس الايدز مل يدل على أهمية الوعي الصحي

> ولازم ننتبه انه ما ننبذ الأشخاص المصابين بهذه الامراض وانما معرفة الطرق الصحيحة للوقاية

من المرض وعدم الإصابة به:modes of transmission for AIDS

- . blood "injections
- .sexually
- .pregnancy

نفس الاشي يطبق على مرضى ICU مناعتهم قليله لازم نراعي إجراءات خاصه عند زيارتهم

ومرضى الزهري والسيلان لأنه الإصابة بتكون بالتلامس

## **ENVIRONMENTAL MODIFICATIONS**

Like Exhaust discharges controlling Can reduce bronchial asthma cases

A comprehensive approach to health promotion requires environmental modifications such as:

- Safe water :Purification of water from chemicals, ionizing materials an acidic rain That may cause cancer and sterility
- Installation of sanitary latrines : الاهتمام بنظافة المراحيض وذكر الدكتور مثال اهتمام كوريا بهذا المجال
- Control of insects and rodents
- Improvement of housing: By provide safe, healthy and clean

