



Introduction

What is Public Health?

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saved
YOU a
SPOT

NEW ACADEMIC YEAR & NEW BEGINNINGS



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

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





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”.

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 like spiritual, emotional may also be 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 a 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. 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.
- **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

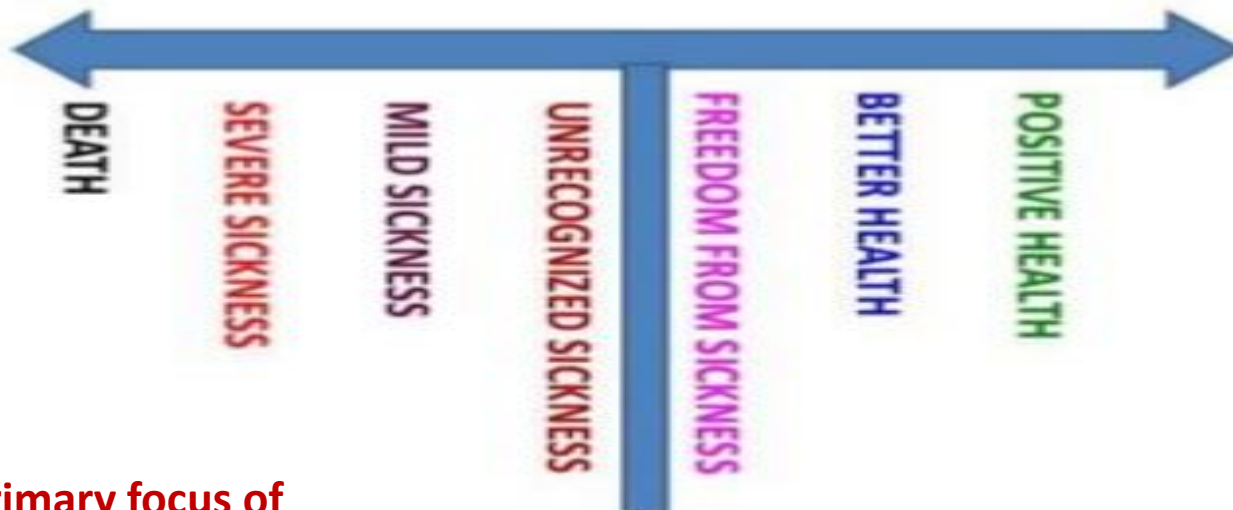
Dis-ease

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



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.



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

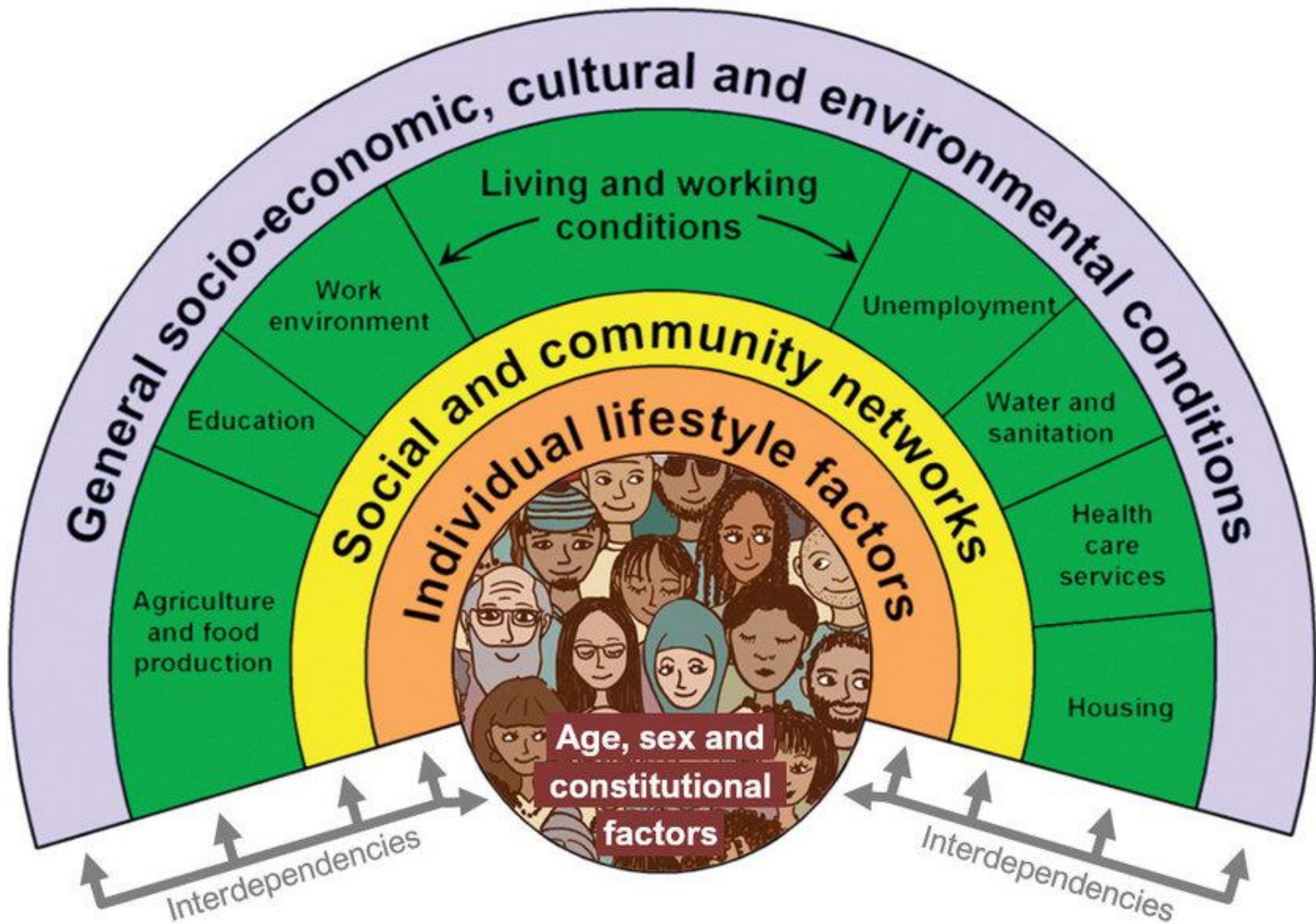


Health is a state, not to be attained once and for all, but ever to be promoted, preserved, and restored when impaired.



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:



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.
- ✓ **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.
- ✓ **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.

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

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

ICEBERG PHENOMENA

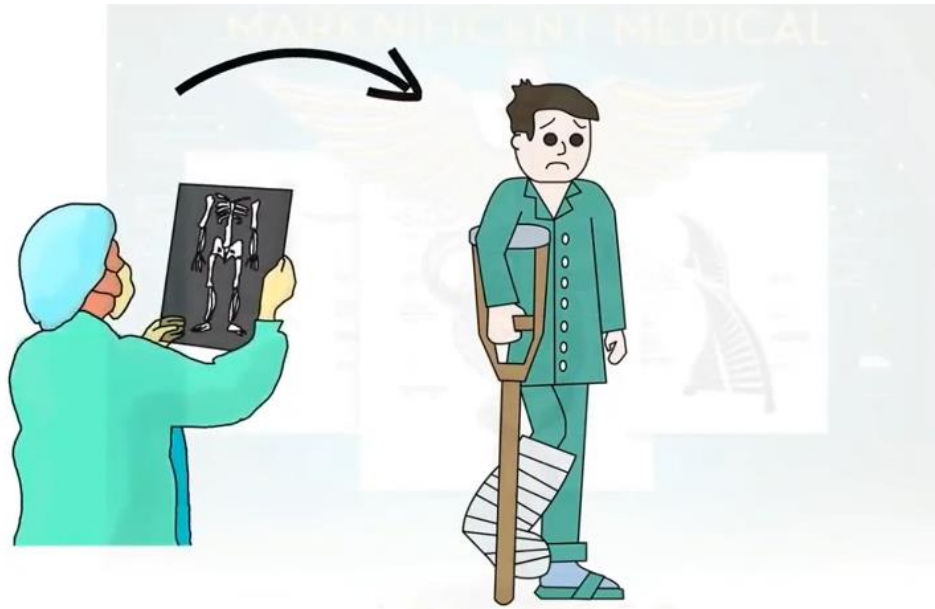


VISIBLE CASES

Clinical & Diagnosed

HIDDEN CASES

Asymptomatic
Pre-Symptomatic
Undiagnosed
Latent
Deliberately Ignored



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

PREVENTION

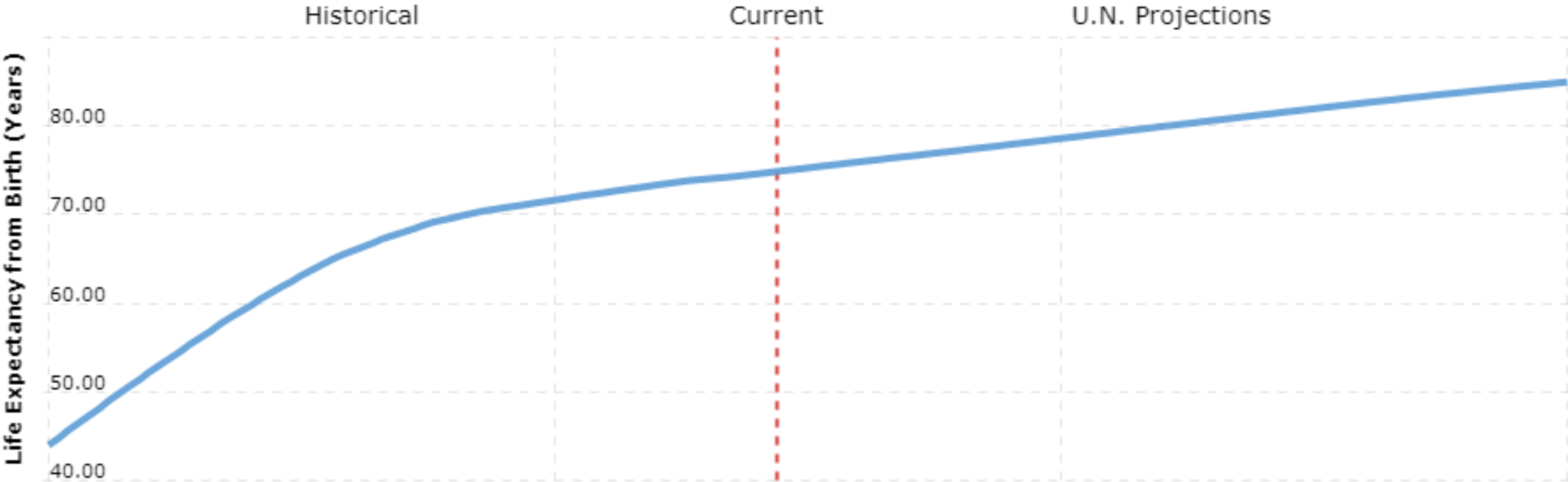
PROTECTION

PROMOTION

Jordan Life Expectancy 1950-2022

Improving the health of a population!

From: To: Zoom:



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 Historical Development of Modern Public Health

- 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.

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

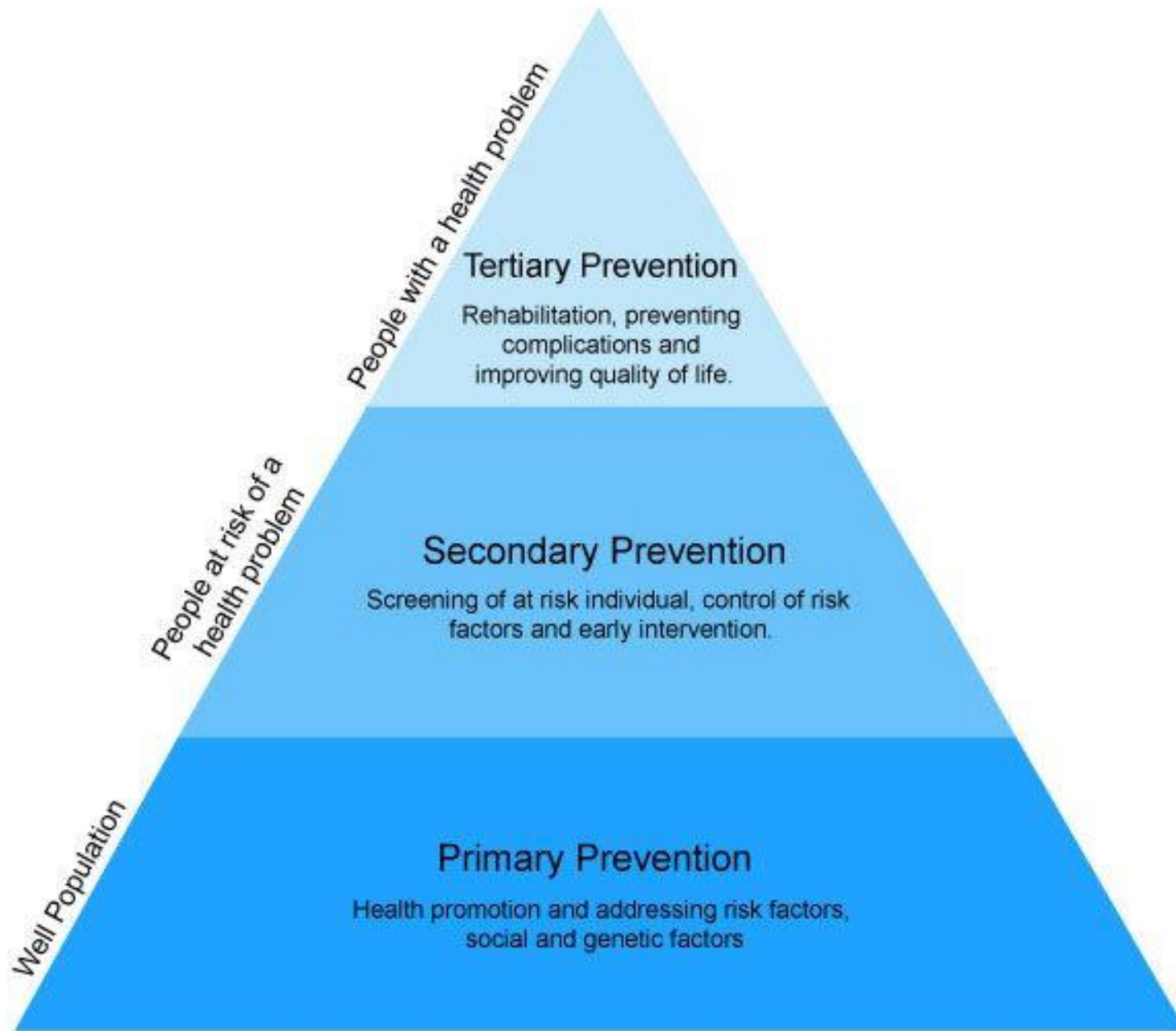
• **SECONDARY**

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

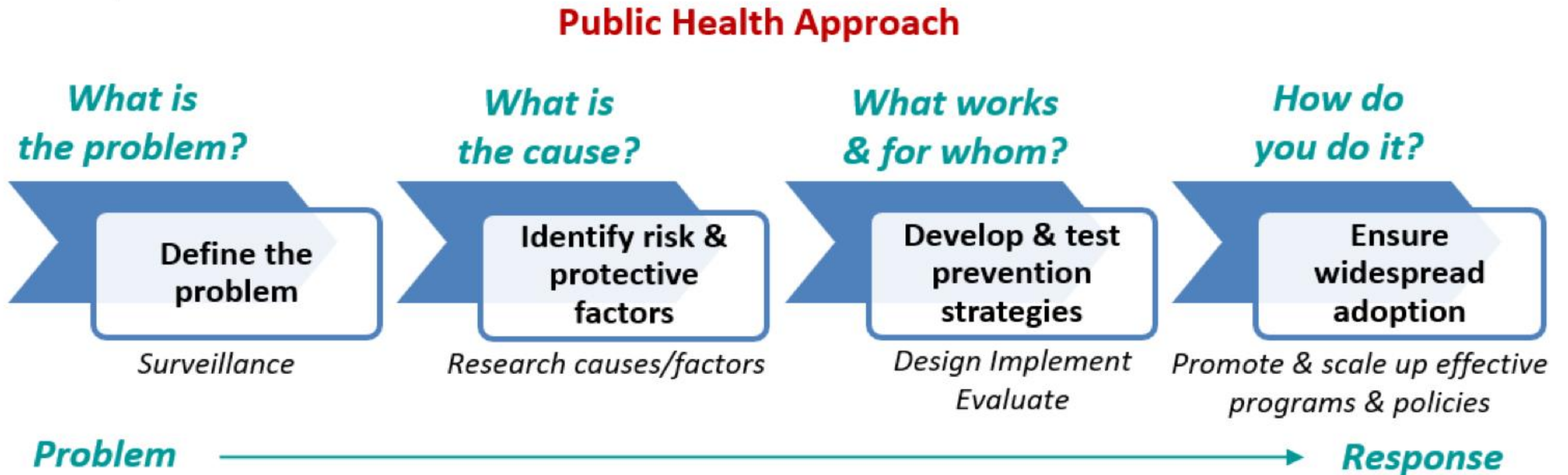
- *Target population*: sick patients
- *Objective*: reduce damage from disease and restore function
- *Method*: clinical care and rehabilitation



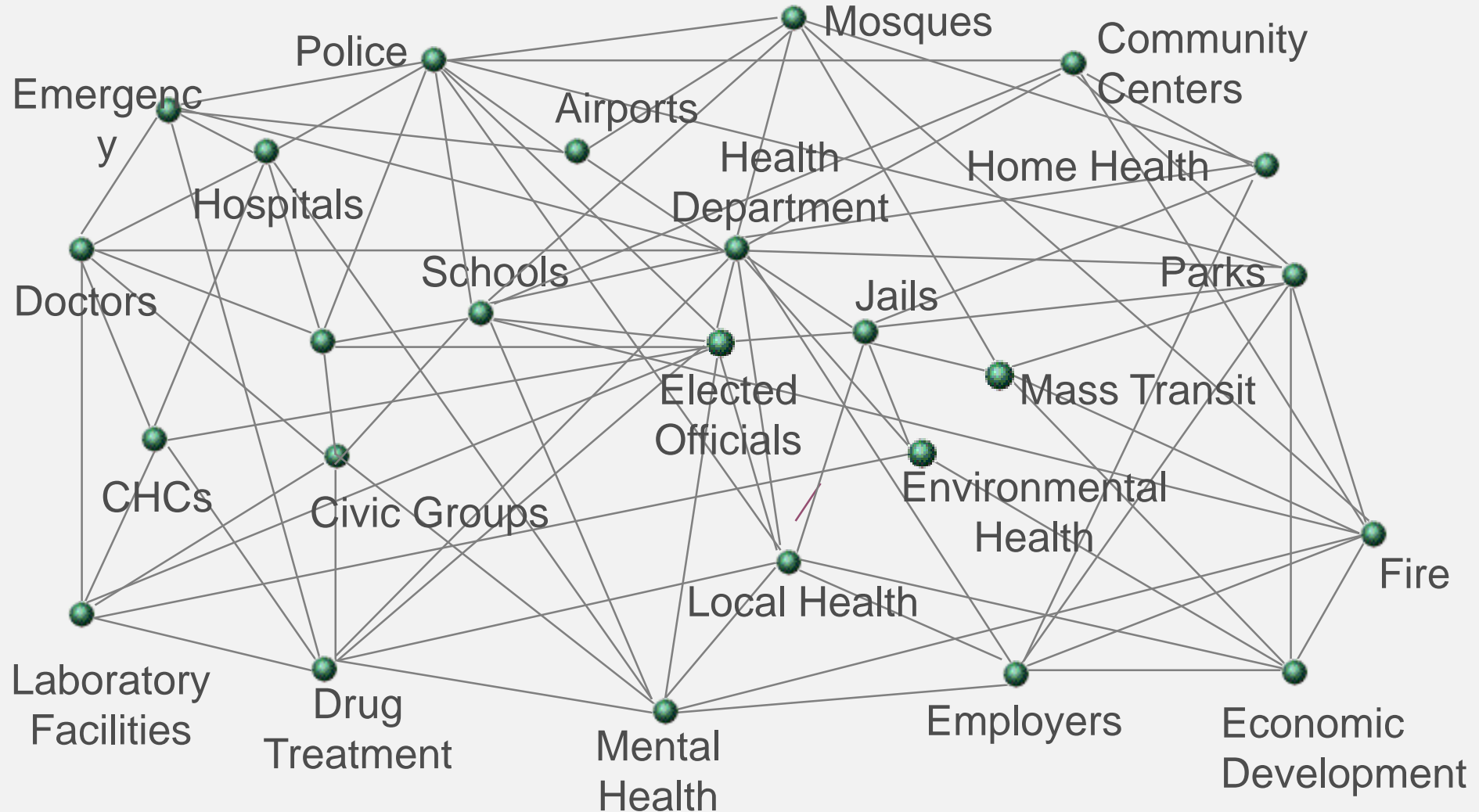
Health promotion

- 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



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

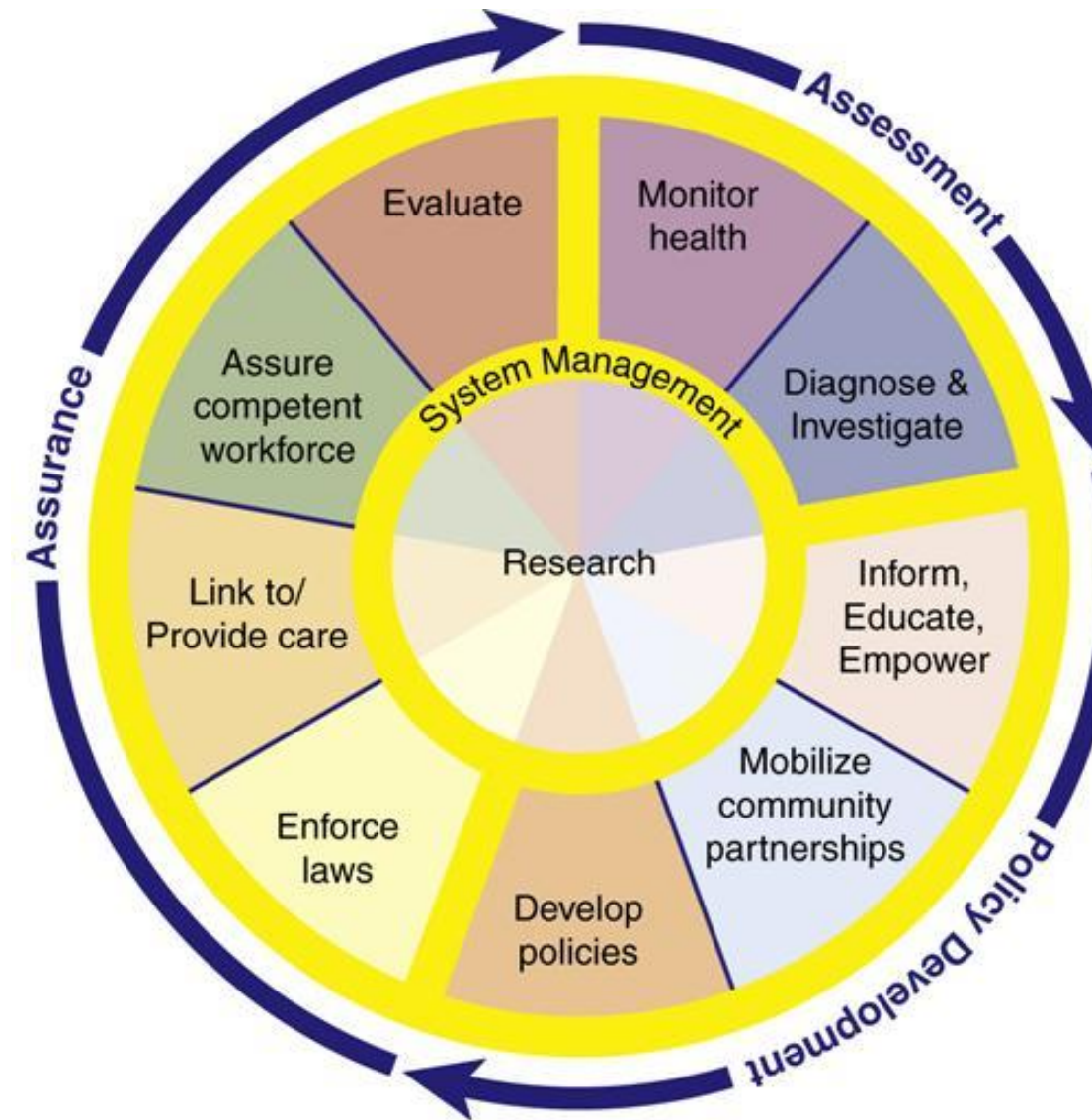
Assurance



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



The great public health achievements

- Vaccination
- Motor-vehicle safety
- Safer workplaces
- 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
- Recognition of tobacco use as a health hazard



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

