Measurement of Health & Diseases

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Introduction to Public Health

Session 1

Objectives

At the end of this chapter, the students are expected to:

- Define health
- Describe the different concepts and perspectives of Health.
- Discuss the history of public health
- Define public health and list its core activities.
- Be aware of the definition of key terms in public health
- Recognize the principal disciplines of public health
- Describe the difference and similarities between clinical medicine and community health.

Health (definition)

- Health is defined as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (WHO 1948).
- The WHO definition envisages three specific dimensions (physical, mental, and social), some other dimensions like spiritual, emotional may also be included.
- **Physical health**- is concerned with anatomical integrity and physiological functioning of the body. It means the ability to perform routine tasks without any physical restriction

Health cont'd…

- **Mental Health-** is the ability to learn and think clearly and coherently.
- **Social health-** is the ability to make and maintain acceptable interaction with other people.
- **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 congruent with that of the stimuli. 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 and ways of achieving mental satisfaction, in which all are related to their

Different perspectives on health

- Health is viewed as a right, as consumption good, and as an investment. Some view health as a right similar to justice or political freedom.
- The WHO constitution sates that “ . . . the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition”

Different perspective cont’d….

- Others view health as an important individual objective of material aspect i.e. as consumption good.
- The third view considers health as an investment, indicates health as an important prerequisite for development because of its consequence on the overall production through its effect on the productive ability of the productive force.
- These different views indicate differences in the emphases given to health by governments.

Definition of public health

- Public health is defined as the science and art of preventing diseases, prolonging life, promoting health and efficiencies through organized community effort.
- It is concerned with the health of the whole population and the prevention of disease from which it suffers.
- It is also one of the efforts organized by society to protect, promote, and restore the peoples' health.
- It is the combination of sciences, skills and beliefs that is directed to the maintenance and improvement of the health of all the people through collective social actions.

History of public Health

- 1700 BC The Code of Hammurabi – Rules governing medical practice
- 1500 BC Mosaic Law – Personal, food and camp hygiene, segregating lepers, overriding duty of saving of life (Pikuah Nefesh) as religious imperatives.
- 400 BC Greece – Personal hygiene, fitness, nutrition, sanitation, municipal doctors, occupational health; Hippocrates -clinical and epidemic observation and environmental health.

History of public Health cont'd …

- 500 BC to AD 500 Rome – aqueducts, baths, sanitation, municipal planning, and sanitation services, public baths, municipal doctors, military and occupational health.
- 500 – 1000 Europe – destruction of Roman society and the rise of Christianity; sickness as punishment for sin, mortification of the flesh, prayer, fasting and faith as therapy; poor nutrition and hygiene pandemics; antiscience; care of the sick as religious duty.
- 1348 – 1350 Black Death – origins in Asia, spread by armies of Genghis Khan, world pandemic kills 60 million in fourteenth century, 1/3 to 1/2 of the population of Europe.

History of public Health cont'd

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- 1300 Pandemics – bubonic plague, smallpox, leprosy, diphtheria, typhoid, measles, influenza, tuberculosis, anthrax, trachoma, scabies and others until eighteenth century.
- 1673 Antony van Leeuwenhoek – microscope, observes sperm and bacteria.
- 1796 Edward Jenner – first vaccination against smallpox.
- 1830 Sanitary and social reform, growth of science.

History of public Health cont'd

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- 1854 John Snow – waterborne cholera in London: the Broad Street Pump.
- 1854 Florence Nightingale, modern nursing and hospital reform – Crimean War
- 1858 Louis Pasteur proves no spontaneous generation of life.
- 1859 Charles Darwin publishes *On the Origin of Species*.
- 1862 Louis Pasteur publishes findings on microbial causes of disease

History of public Health cont’d …

- 1876 Robert Koch discovers anthrax bacillus.
- 1879 Neisser discovers gonococcus organism.
- 1882 Robert Koch discovers the tuberculosis organism, tubercle bacillus.
- 1880 Typhoid bacillus discovered (Laveran); leprosy organism (Hansen); malaria organism (Laveran).
- 1883 Robert Koch discovers bacillus of cholera.
- 1883 Louis Pasteur vaccinates against anthrax.

History of public Health cont'd

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- 1884 Diphtheria, staphylococcus, streptococcus, tetanus organisms identified
- 1890 Anti-tetanus serum (ATS)
- 1892 Gas gangrene organism discovered by Welch and Nuttal
- 1894 Plague organism discovered (Yersin, Kitasato); botulism organism (Van Ermengem).
- 1923 Health Organization of League of Nations
- 1926 Pertussis vaccine developed
- 1928 Alexander Fleming discovers penicillin

History of public Health cont'd

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- 1929 – 1936 The Great Depression – wide spread economic collapse, unemployment, poverty, and social distress in industrialized countries.
- 1946 World Health Organization founded.
- 1977 WHO adopts Health for all by the year 2000
- 1978 Alma-Ata Conference on Primary Health Care
- 1979 WHO declares eradication of smallpox achieved

History of public Health cont'd

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- 1989 International Convention on the Rights of the Child.
- 1990 W.F. Anderson performs first successful gene therapy.
- 1992 United Nations Conference on Environmental and Development, Rio de Janiero
- 1992 International Conference on Nutrition.
- 1993 World Conference on Human Rights, Vienna.
- 1994 International Conference on Population and Development, Cairo.

History of public Health cont'd

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- The new public health is compressive in scope.
- It relates to or encompasses all community and individual activities directed towards reducing factors that contribute to the burden of disease and foster those that relate directly to improved health.
- Its programs range from Immunization, health promotion, and childcare to food labeling and food fortification to the assurance of well managed, accessible health care service.
- The planning, management, and monitoring functions of a health system are indispensable in a world of limited resources and high expectations.

MAJOR DISCIPLINES IN PUBLIC HEALTH

- **Nutrition**
- **Reproductive health**
- **Environmental Health**
- **Health Education**
- **Epidemiology**
- **Health Economics**
- **Biostatistics**
- **Health Service Management**
- **Ecology**
- **Research**
- **Demography**

Core activities in public health

- Preventing epidemics
- Protecting the environment, work place ,food and water ;
- Promoting healthy behavior;
- Monitoring the health status of the population;
- Mobilizing community action;
- Responding to disasters;

Core activities in public health cont’d …

- Assuring the quality ,accessibility, and accountability of medical care;
- Reaching to develop new insights and innovative solutions and
- Leading the development of sound health policy and Planning

Community Health, Clinical Medicine and Public Health

- Community health refers to the health status of a defined group of people and the actions and conditions both private and public (governmental) to promote, protect and preserve their health.
- 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

Community Health cont’d…

- 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.
- The overall objective of both public health and clinical medicine is better health for individual and for society.
- Both of them are vital and interdependent to improve individual and public health