EOH 3101
Lecture Topic:
Community Health and Relationship with Environmental Health
Lecture Outline

- Definition of Public Health
- Definition of Health
- Definition of Determinants of Health
- Some Examples of Determinants of Health
Lecture Outline

- Determinant of Health - Environment
- What Affects Health?
- Concluding Remarks
Definition of Public Health

“Defined by Winslow (1851), as the science & art of preventing disease, prolonging life and promoting health and efficiency through organized community measures such as control of infection, sanitation, health education, health services and legislation, etc.”
Organised Community Efforts

- The sanitation of the environment
- The control of communicable diseases
- The education of the individual in personal hygiene
The organization of medical and nursing services for early diagnosis and preventive treatment of diseases, and

The development of the social machinery to ensure everyone a standard of living adequate for maintenance of health
History of Public Health

- Public Health developed in England in the middle of 19th Century
- At that time, many towns in England were without proper water supply & drainage
- Back to back houses without sun & ventilation, foul streams & rotting garbage were common sights
• London had a severe cholera epidemic in 1831

• Worsened during the Industrial Revolution due to mobilization of a large population from villages to Industrial towns without sanitary arrangements.
History of PH

- This led to the spread of communicable diseases and high infant & maternal mortality rates especially in industrial areas
It was during this time, that Edwin Chadwick, the then Secretary of Poor Law Board, championed the cause of community health & the first Public Health Act was passed in 1848.
Preventive Medicine

- The concept of specific prevention of disease gained solid foundation in the 18\textsuperscript{th} Century.
- James Lind in 1753 – showed the efficacy of fresh fruits & vegetables in preventing scurvy;
- Edward Jenner in 1796 – efficacy of vaccination against small pox.
• Preventive medicine developed into a specialty after Louis Pasteur propagated in 1873 the germ theory of disease
• Followed by discovery of causative agents of typhoid, pneumonia, tuberculosis, cholera & diphtheria
WHO (1953) proposed development
Basic Health Services

- Maternal & Child Health
- Communicable Disease Control
- Environmental Sanitation
- Public Health Nursing
• Health Education of Public
• Maintenance of Record for Statistical purposes
• Medical care (Primary)
Public Health Goals

To prevent human disease, injury, and disability; protect people from environmental health hazards; promote behaviors that lead to good physical and mental health; educate the public about health; and assure availability of high-quality health services.
Public Health Services

- Family Health Services
- Environmental Health (Bakas)
- Communicable Diseases Control
- Non-Communicable Diseases Control
Cont..

- Drinking Water Quality Control
- Food Quality Control
- International Health
- Occupational Safety & Health
- Primary Medical Care
Essential Public Health Functions (WHO 2002)

- Set of fundamental activities that address the determinants of health & to protect population’s health & disease threat.
Cont..

- HEALTH SITUATION, MONITORING AND ANALYSIS
- EPIDEMIOLOGICAL SURVEILLANCE & DISEASE PREVENTION AND CONTROL
- PUBLIC HEALTH POLICIES AND PLANNING
Cont...

- STRATEGIC MANAGEMENT OF HEALTH SYSTEMS AND SERVICES FOR POPULATION HEALTH GAIN
- REGULATION AND ENFORCEMENT TO PROTECT PUBLIC HEALTH
- HUMAN RESOURCES DEVELOPMENT AND MANAGEMENT
Essential Public Health Functions (WHO 2002)

- ENSURING THE QUALITY OF PERSONAL AND POPULATION-BASED HEALTH SERVICES

- RESEARCH, DEVELOPMENT AND IMPLEMENTATION OF INNOVATIVE PUBLIC HEALTH SOLUTION
Essential Public Health Services

- Monitor health status to identify community health problems.
- Diagnose and investigate health problems and health hazards in the community.
- Inform, educate, and empower people about health issues.
Mobilize community partnerships to identify and solve health problems.

Develop policies and plans that support individual and community health efforts.

Enforce laws and regulations that protect health and ensure safety.
• Mobilize community partnerships to identify and solve health problems.

• Develop policies and plans that support individual and community health efforts.

• Enforce laws and regulations that protect health and ensure safety.
• Link people with needed personal health services and ensure the provision of health care otherwise unavailable.

• Ensure a competent public health and personal health care workforce.
• Evaluate the effectiveness, accessibility, and quality of personal and population-based health services.

• Conduct research to produce new insights and innovative solutions to health problems.
Core Areas in Public Health

- Health Care Management
- Epidemiology & Biostatistics
- Family Health (maternal and child health)
- Environmental Health
- Occupational Safety & Health
- Health Education & Promotion
Description of Area
-Environmental Health
Environmental Health
Public Health Threats & Challenges
The Impact of Globalisation on Health
Public Health Threats

Global health situation has improved:
- Eradication of Small Pox
- Reduction in Childhood Mortality
- Longer Life Expectancies

But with some major reversals:
- Increase adult mortality cause by HIV/AIDS
- Non Communicable Diseases
Travel & migration: The spread of disease become very fast
Occupational Diseases

Exposure to:
- Asbestos
- Arsenic
- Solvents
- Chromium
- Iron Oxide
- Petroleum Product
- Radiation
- Non ergonomic working conditions
Motor Vehicle Accidents

Nahas ragut empat nyawa

Kemalangan maut di KM 89.5 Jalan Kuantan - Kuala Lumpur

Empat maut, 6 cedera pulang kenduri kahwin

16/06/2005
Natural Disasters
Man-Made Disasters – wars, radiation
Other Public Health Challenges

- Poverty
- Poor nutrition
- Poor environmental sanitation
- Poor health care infrastructure
- Lack of medical technologies
- Inequitable access to basic health services
- Low workforce capacity
Health is defined as “a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity”

(WHO, 1948)
Physical Well-being

- Physical well-being deals mainly with the anatomical, physiological and biochemical functioning of the human body.

- Therefore the attributes of physical health depend to a large extent on how normal is the body structure, organs and their proper functioning.
Cont..

- It must also be understood that what is normal to an Asian may not be normal to the European.
As man progresses, what used to be the normal limits 1,000 years ago may not be normal currently.

Eg. anatomical or body structure of the stone-age man may not be normal if compared to the body structure of man in the new millennium.
Physical Well-being

- Physical health can be measured by height, weight, body mass index, head circumference (in infants less than 1 year old), blood pressure, temperature, blood haemoglobin level, chest x-ray and other laboratory investigation findings.
Social Well-being

- More difficult to define social well – being.
- Social health means the level of health which enables a person to live harmoniously with his or her surroundings.
Mental Well-being

- Most abstract perspective of health is mental well-being.

- A positive mental health state means that an individual is able to enjoy his or her routine without undue conflicts, nor frequent outburst of emotions such as depression or mood elevation.
Mental Well-being

• The individual also develops harmonious relation within his or her family and community spheres. There may however be transient deviation from the normal state especially under the influence of stress or duress.
In today’s world where there are datelines to meet and the pace of living is on the fast track it is not surprising that our state of mental health is affected to a certain extent.
Mental Well-being

- This is particularly true for women, particularly those married ones as they have multiple roles to play being wives, mothers, and employees.
Definition of Determinant of Health

“Any factor, whether event, characteristic, or other definable entity, that brings about change in a health condition or other defined characteristic.”

(Last, 1995)
Some examples...

- Individual Factors
- Housing
- Environment
• Educational level

• Accessibility to Health Services

• Cultural Influences

• Socio-economic Status
Cont...

- Transport
- Food & Agriculture
- Waste
- Urbanisation
Individual Factors

- age,
- gender,
- size,
- appearance,
- personality,
- physical & emotional state)
Housing

- Types of Housing
- Some Issues  - Overcrowding
  - Number of Rooms
  - “Sick Building Syndrome”
  - Surrounding environment, for eg. Near land-fill
  - Water & Electricity supplies
Cont..

- Improvements in housing and improved mental health and general health
- The possibility of improved housing leading to rent rises, impacting negatively on health.
- Movement of original tenants after housing improvement and therefore not benefiting from the improvements.
Cont..

- Housing tenure, outdoor temperature, **indoor air quality**, **dampness**, housing design, rent subsidies, relocation, **allergens and dust mites**, home accident prevention, and fire prevention.

- Homelessness.
Environment

• All that which is external to the individual human host.

• Can be divided into physical, biological, social, cultural, etc

• Any or all of these can influence health status of populations
Other Environmental Factors

- Weather
- Population density
- Pollution of the habitat,
- Housing
- Public transport and health facilities
Educational Level

- Most research studies reveal that there is a direct relationship between educational level and positive health outcomes

- Explanation
Other Educational Factors

• Formal

• Informal including education into a religious, ethnic or professional sub-culture
Accessibility to Health Services

- Plays an important part to ensure accessibility to medical care especially when people are sick for curative care
- Can be public or private health care facilities
- Current policy ensures health services is easily available except for those in remote areas for eg. The Orang Asli Community and those in Sabah & Sarawak
Transport

- Accidents between motor vehicles, bicycles and pedestrians (particularly children and young people)
- Pollution from burning fossil fuels such as particulates and ozone
- Noise from transportation
Concluding Remarks

- Public Health/Community Health is an integral part of Medicine
- Environmental Health is part or a sub-discipline of PH
- Environment is also a Determinant of Health
Student Centred Learning - Activity

• Divide yourself into 10 Groups

• Identify 1 (ONE) Environmental Issue that contributes to a Public Health Threat/Challenge

• Outline how you would address this Environmental Issue so as to upkeep the health of the Public