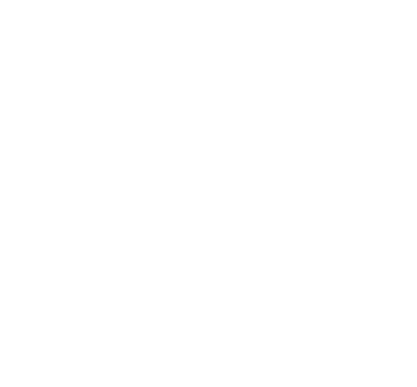
**UNIT 1**

**Introduction to Public Health Research**

# Introduction



### Welcome to the first Unit of *Public Health Research*, a Masters level Module which aims to help you to develop an understanding of the nature and scope of Public Health and the starting point for how to conduct research on a Public Health Problem.

At strategic points across the Module units we will ask you to consider questions related to your assignments. These will help you formulate ideas and skills for the first steps in developing a research protocol or proposal that you will develop further when you do either the *Quantitative* or Qualitative Research Modules next year.

There is one study session in this unit: What is Public Health?

Session 1: What is Public Health?

### Introduction

This Unit includes three readings. One of the readings (Detels *et al*., 1997) is included as extracts below and has accompanying tasks. You should complete these tasks as you reach each of them in the session below. You will find the feedback to the tasks integrated across the Unit.

Contents

1. Learning outcomes
2. Readings
3. What is Public Health?
4. Current scope and concerns in Public Health
5. Summary
6. References

Timing of this Unit

The Unit should take you about five hours to complete, depending on your reading speed. You should try to take time to engage with the readings thoroughly, however.

1. Learning outcomes

By the end of this Unit, you should be better able to meet the intended learning outcomes below:

* + Explore and define the concept of *Public Health*.

### Describe its current scope and concerns.

* + Identify critical Public Health activities within and outside the Health Sector.

1. Reading

The three readings for this Unit are:

**Extracts from Detels, R., Breslow, L., Walter, W., McEwen, J. & Omenn, G. S. (Eds). (1997). Current scope and concerns in Public Health. In *The Oxford Textbook of Public Health.* Oxford: Oxford University Press: 3-17. These are included below in this as part of this Unit.**

**Weeramanthri, T. S., & Bailie, R. S. (2015). Grand challenges in public health policy. *Frontiers in Public Health*. 3(29): 1-4.**

**Meyers, T., & Hunt R. S. (2014). The art of medicine. The other global South. *The Lancet*. 384: 1921-1922.**

1. What is Public Health?

Although it may sound simple, defining Public Health is in fact quite complex and difficult. This is because there is no universally accepted definition of Public Health. In addition, definitions of Public Health have changed over time. This means that within one time period, most Public Health practitioners would have accepted (even if grudgingly) a particular definition, but ten years later, that definition may not be acceptable to the majority. The implication is either that Public Health practitioners are a very confused bunch, or that Public Health is dynamic, fluid and constantly changing to meet the challenges of a given time period.

**3.1 Definitions of Public Health**

In the first reading, several definitions of Public Health through the ages are provided. Make a mind map in your notebook as you read, with the words Public Health in the centre. Jot down any key words you come across as you read which still seem relevant to your understanding of Public Health.

**Some Definitions of Public Health**

Below are a number of definitions of Public Health:

1. “Public health is the collective action taken by society to protect and promote the health of entire populations; in contrast, clinical medicine deals only with the problems of individuals. Public health is broad and inclusive, although it is often considered only from a narrow medical perspective” (Beaglehole & Bonita, 2001: xiii).
2. The American Public Health Association defines it as: “the practice of preventing disease and promoting good health within groups of people, from small communities to entire countries” (Baum, 2008: 587).
3. Even though slightly dated, Winslow’s 1920 definition is interesting because it emphasizes the rights of citizens and the responsibility of society, an element missing from the APHA definition. He frames it as the “... science and art of preventing disease, prolonging life and promoting health and efficiency through organized community effort for the sanitation of the environment, the control of communicable infections, the education of the individual in personal hygiene … and for the development of the social machinery to insure everyone a standard of living adequate for the maintenance of health” (Baum, 2008: 586).
4. Placing the responsibility with society, Satcher and Higginbotham (2008: 400) define Public Health as “… what we as a society do collectively, to assure the conditions for people to be healthy”. They note the importance of the social determinants of health at the heart of achieving such conditions, but emphasise the related imperative to remove disparities in health care provision.
5. Acheson summarizes Public Health as: “... the science and art of preventing disease, promoting health and prolonging life, through organized effort of society” (Lucas & Gilles, 2003: 2).

The essential elements of modern Public Health theory and practice are:

* + emphasis on collective responsibility for health and a primary role for the state in protecting and promoting Public Health;
  + a focus on whole populations that includes population-focused primary health

care actions emphasising prevention, especially population strategies for primary prevention, i.e. preventing illness or accidents from occurring, and promoting better health.

* + a concern for the underlying socio-economic determinants of health and disease, as well as more proximal risk factors;
  + a multi-disciplinary basis which incorporates quantitative and qualitative research methods as appropriate;
  + and a partnership with the populations served.
  + a concern with human rights and equity.

Weeramanthri and Bailie (2015: 2) state: “At its heart, public health is a conversation society has, and will continue to have, about the balance between individual rights and the “common good” or “public interest”. As such, it is as much a branch of public policy as a branch of medicine or health science. This conversation evokes questions like “ How might we discern the common good and who can speak for it? Is there a consensus about the right and benefits to which citizens should be entitled and the obligations of the citizens to society the state and one another?”

The variety of definitions of Public Health and the change in definitions over time, eloquently demonstrate that there are different perspectives as to what Public Health really encompasses.

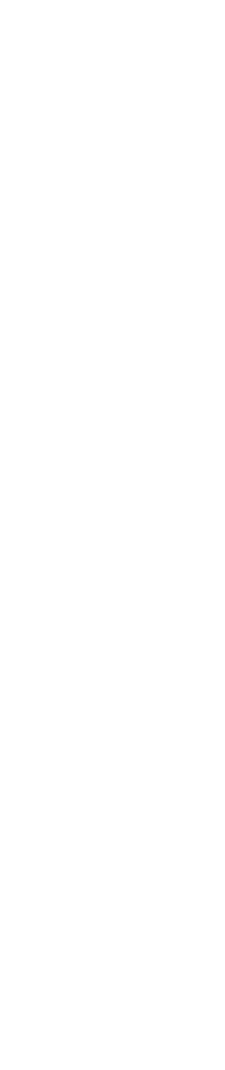
Read critically through the extracts from reading (Detels *et al*., 1997) in the next section, adding to your mind map, and then formulate your own definition of Public Health.

**TASK 1 – Clarify the concept of *Public Health***

Go to one of the two readings for this Unit (Detels *et al.*, 1997), which we have summarised for you on the next 16 pages, and while you read, take notes in order to develop your own definition of Public Health which would be appropriate for the 21st century. Include whom it serves, how it does so, its aims, and which sectors participate in it.

1. Current scope and concerns in Public Health

This edited chapter below containing extracts from Detels et al. (1997) provides a good and comprehensive introduction to Public Health. Nonetheless, it describes Public Health mainly from the perspective of wealthy industrialised countries. It does, nevertheless, occasionally compare conditions and Public Health issues in these countries to those in poorer, minimally industrialised, *developing* countries. However, over the past two decades the concept *developing* and *developed* countries has been contested, as it can be taken to mean less advanced and more advanced, denoting levels of civilisation that we know to be untrue. Terms that have come into use in attempts to move away from the terms *developed* and *developing* are the *global north*, imbued with greater power and the *global south.* The term *global south* includes countries in the Northern hemisphere such as India and is used to include areas of the world that enjoy less power in relation to countries in the *global north* in a host of spheres. Where we have drawn texts from the readings and they have used the terms ‘developed’, ‘developing’, ‘industrialised’, ‘minimally industrialised’ we have kept these as is. However, we do cast doubt on continued use of these terms and encourage you to think about them carefully and whether they capture the meanings we wish.



This solid line on the left reminds you that these are

extracts from the reading, Detels et al (1997)

***While you are reading the text from this Unit, think critically about these definitions and how it applies to you own country, regional and world contexts.***

Detels et al. (1997) define Public Health in terms of its presumed function, which is to provide the conditions that are likely to enable the population to be healthy. They believe that, given a particular set of health problems which exist within a particular physical, social and economic situation, it is the role of Public Health to pragmatically strategise how best to serve the population within the limits of resources available and within the prevailing political climate. To achieve this, they encourage Public Health workers to utilise the various theoretical and practical Public Health tools and where necessary to borrow tools from other disciplines. They then provide a comprehensive description of the functions and typical organisation of Public Health Services.

To help you focus your reading, we have posed some prompting questions and flagged some issues for you to think about. These appear in bold italics in shaded grey boxes with broken line borders. Remember that to read actively, it is helpful to preview the section, and to develop several questions for which you search for answers. Normally, you would have to develop those questions yourself, and to keep them in mind as you read. We have, in this instance, included questions (in a box) for each sub-section of the reading to help you to read in a more focused way. Try to make this strategy part of your normal reading habits.

**Reading**

Extracts from Detels, R., Breslow, L., Walter, W., McEwen, J. & Omenn, G. S. (Eds). (1997). In *The Oxford Textbook of Public Health*; Oxford: Oxford University Press: 3-17.

###### Introduction

What changes have we seen in health problems since the 19th century?

Public Health is the process of mobilizing local, state, national, and international resources to ensure the conditions in which people can be healthy. In the nineteenth and early twentieth centuries health problems reflected primarily faecal contamination of water supplies and the widespread under- nutrition, crowding, and exhaustion associated with early industrialization. These conditions resulted in a high prevalence of tuberculosis, enteric infections, infant mortality, and acute respiratory diseases. In response, communities, provinces, and nations developed successful ways of dealing with these important problems through public action to promote health. From the outset, Public Health embraced both social action and scientific knowledge. This partnership meant linking the anti-poverty (reform) movement with the findings from epidemiological and bacteriological investigations, for example, to combat such diseases as tuberculosis and typhoid fever.

Now, at the end of the 20th century, another set of health problems, including new infectious diseases and major non-communicable diseases, confront the United Kingdom, Japan, the United States, and other highly industrialized nations. These non-communicable diseases stem from an overly rich diet,

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cigarette use, excessive alcohol consumption, too little physical activity, and other life-style factors that typify the way that many people live in these countries. Communicable diseases are still a major cause of death in developing countries, and in fact are still the leading cause of death worldwide. However, increasing numbers of people in these countries are now encountering relative affluence for the first time and thus are beginning to suffer the same health consequences as people in developed countries. In this chapter we will present broadly the current scope and concerns of Public Health as well as issues that confront Public Health organizations in both industrialized and developing societies.

##### Throughout this Unit and this section, think about context that goes beyond the individual. Think about cultural factors and economic, social and political structures and how they represent influences and sometimes incorporate power relations and powerful interests – how do these affects what individuals, households, communities, countries and health services can do. Think about these power relations and interests in your own contexts and note down who they are and how and where they come into play in affecting individual and public health?

Which Public Health strategies are covered in this chapter?

This chapter outlines major health problems facing the world today, including infectious diseases, chronic diseases, trauma and mental health, key determinants of health such as nutritional problems, environmental hazards, and disorders resulting from life-style choices. It explores the scientific responses that Public Health uses to cope with the problems, including strategies basic to Public Health, such as epidemiology, and those that are borrowed and modified from other disciplines including the social, biological, and physical sciences. Five major Public Health strategies for influencing health, behaviour, and controlling the environment are presented along with the techniques for applying these scientific approaches to Public Health problems. The interaction between governmental and voluntary actions aimed at improving the health of communities is highlighted.

What is the influence of context?

Of course, Public Health is only one of the major influences on a community's health. The basic economic and social conditions of existence have a direct impact on people's level and mode of living, and thus constitute the foundation of health. These conditions limit and, to a considerable extent, determine the resources that can be devoted specifically to health promotion and disease intervention. Prevailing economic and social conditions also affect health in ways beyond the level of living and the concomitant ability of people to obtain the necessities of healthy life. Strong economic forces expressed in agriculture, manufacturing commerce, advertisement and politics, for example, may sway people to use tobacco and thus injure their health.

The magnitude and success of Public Health efforts will vary both in time and place in different areas of the world. Nevertheless, the principles of Public Health remain the same. The actions that should be taken are determined by the nature and magnitude of the problems affecting the health of the community. What can be done will be determined by the scientific knowledge and resources available. What is done will be determined by the social and political commitments existing at the particular time and place. These social, economic and political commitments often depend on vested interests and power relations.

##### While you are reading the section below on health problems, consider:

* ***Have there been any changes since 1990 in the pattern of deaths attributable to infectious diseases in any parts of the world?***
  + ***What could be the reasons either for changes or for things staying the same as they were in 1990?***

###### Health problems

Before 1981 it appeared that pandemics of infectious disease other than influenza had been eliminated as a major problem in developed countries. The decline in the incidence (new cases) of the traditional infectious diseases in developed countries had been controlled largely, through provision of safe drinking water, better handling of sewage, effective vaccine campaigns, improved personal hygiene, and improved nutrition, especially among children. However, the recognition of the worldwide Human Immunodeficiency Virus (HIV) epidemic and the onset of acquired immune deficiency syndrome (AIDS) illnesses dramatically emphasized the fact that infectious diseases are likely to remain an important problem even in developed countries, for many years to come (Mann *et al*.,1992). In fact, AIDS is not the leading cause of death due to infectious diseases in the world. Table 1.1 presents the major infectious diseases occurring in 1990 in the order of the annual number of deaths worldwide. The leading causes of deaths from infectious disease are still acute respiratory infections, which claim 4.3 million deaths per year, diarrhoea diseases, which cause 3.2 million deaths per year, and tuberculosis, which causes

3.0 million deaths per year. The first two still cause deaths primarily in developing countries; however, the rate of tuberculosis in the United States and in some other developed countries, as well as worldwide, is actually increasing, in part because of the increased number of susceptible people resulting from the epidemic of another infectious agent, human immunodeficiency virus (HIV). (Cantwell *et al*,. 1994)

##### The terrain with respect to HIV has changed dramatically since 1994. With availability of antiretroviral treatment, HIV can become a chronic but no longer life-threatening condition. Despite this too many people still die from AIDS in both the global south and in vulnerable communities in the global north. Reflect and note down for yourself to what structural factors (deeply embedded factors in the way things set up and accepted) at the level of society, culture, economics and politics make it difficult to eradicate this epidemic and other infectious diseases such as malnutrition, malaria, and so forth.

|  |
| --- |
| ***Table 1.1 The world's deadliest scourges*** |
| **Infectious diseases (Cause) Annual deaths 1990** |
| Acute respiratory infections (Bacterial or viral - mostly pneumonia) 4 300000 Diarrhoeal diseases (Bacterial or viral) 3 200000  Tuberculosis (Bacterial) 3 000000  Hepatitis B (Viral) 1 000000  Malaria (Protozoan) 1 000000  Measles (Viral) 880000  Neonatal tetanus (Bacterial) 600000  AIDS (Viral) 550000  Pertussis (whooping cough) (Bacterial) 360000 |
| *Source: World Health Organization* |
| ***The above figures are from 3 and half decades ago. What has changed and what has not changed. Consider why.*** |

|  |
| --- |
| Poverty remains an important co-factor for infectious diseases in both developed and developing countries. Crowding and poor nutrition, which are common among the poor, increase both exposure and susceptibility to infectious disease agents. Furthermore, poor children are less likely to have been immunised and to be brought to medical attention early in the course of an infectious disease when intervention is most likely to be successful. For these reasons, the incidence of infectious diseases is appreciably higher among the poor.  While Public Health advances have resulted in dramatic reductions in the incidence of infectious diseases in most countries, Public Health professionals need to be alert to the emergence of new agents, new manifestations of previously known agents, and the presence of groups in the population that are particularly susceptible to disease through poverty or other factors. The control of infectious diseases in the future will call for the continued use of other difficult but proven Public Health strategies: improvement in living conditions, the implementation of new strategies such as the intensive use of mass media, the development of new technologies for identification of infection, and the development of new drugs and vaccines for cure and prevention. |
| ***While you are reading the section below on chronic disease, consider:***   * ***How do chronic diseases affect people in what the writings above refer to as developing countries and that we may refer to as the global south?*** * ***Are chronic illnesses an increasing problem in some global south countries? If so, among which groups of people and why?*** * ***What is the situation with respect to chronic illnesses in your country? What are the most common chronic illnesses, among whom in the population and why? What is being done to address this?*** * ***Think too about the comments earlier on considering what difference structural factors make in facilitating or hindering achieving health.*** |
| **Chronic Disease**  Beginning in the 19th century and continuing through the 20th century, industrialization has produced a vast change in the way people live and, correspondingly, in the nature of their health problems. This change becomes apparent on comparing the leading causes of death in the United States in 1900, 1950, and 1990 (Table 1.2). Coronary heart disease, the major epidemic of the 20th century in the heavily industrialised nations, reached a peak in about 1960. Although it has since been declining in the United States, it remains the leading cause of death in most developed nations. However, in the developing countries (or as we would rather call countries in the global south), where infectious diseases have predominated, coronary heart disease and other chronic diseases are now coming to the fore (Table 1.3)  ***Table 1.2 Leading causes of death in the United States (1900, 1950, 1990)*** |
| **1900 1950 1990** |
| Heart diseases 167 307 150  Cancer 81 125 133  Accidents 76 58 33  Cerebrovascular disease 134 87 28  Chronic obstructive lung disease - 42 0  Pneumonia and influenza 210 26 14  Diabetes 13 14 12  Suicide 11 11 11  Homicide 1 5 11 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| HIV infection | - |  | - |  | 9 |
| Chronic liver disease and cirrhosis | - | 9 | - |
| Tuberculosis | 199 | - | - |
| Diarrhoea and related diseases | 113 | - | - |
| All other causes | 775 | 195 | 94 |
| All causes | 1779 | 841 | 515 |
| *Age-adjusted, per 100 000. (Source: McGinnis and Foege, 1993)*  ***Table 1.3 Estimated and projected distribution of the major causes of death in developed and developing countries (1985, 2015)*** | | | | | |
| **Disease category** | **Developed countries** | | **Developing countries** | | |
|  | 1985 | 2015 | 1985 | | 2015 |
| Infectious (%) | 9 | 7 | 36 | | 19 |
| Neoplasm (%) | 18 | 18 | 7 | | 14 |
| Circulatory (%) | 50 | 53 | 19 | | 35 |
| Pregnancy-related (%) | 0 | 0 | 1 | | 1 |
| Perinatal | 1 | 1 | 8 | | 5 |
| Injury | 6 | 5 | 8 | | 7 |
| Other | 15 | 16 | 21 | | 19 |
| Total (%) | 100 | 100 | 100 | | 100 |
| **Total number of deaths (million)** | **12.0** | **14,5** | **37.9** | | **47.8** |
| *(Source:* Mosley *et al*., 1990*)* | | | | | |

##### While you are reading the section below on trauma, think about the main types of trauma in global south countries, including your own country - what are they and what do you think the causes of these may be?

###### Trauma

Unintentional injuries are a major cause of death. The Carter Centre estimated that

motor-vehicle-related deaths and injury could be reduced by 75 per cent, and injuries due to accidents occurring at home could be reduced by 50 percent by applying a broad-based mixed strategy for prevention. (Smith, 1985)

Suicide and homicide are another major cause of death. However, the rates of suicide and homicide are not evenly distributed within a population, tending to occur more among young males. Suicide is a major cause of premature death in most developed countries, especially in northern Europe and Scandinavia. It is rising, particularly in young males in Europe (Chief Medical Officer, 1993). The causes of suicide are not well understood and satisfactory predictors of who will commit suicide have not been developed, making the development of preventive strategies particularly difficult. Suicides among young people often tend to occur in clusters, prompting the United States Centers for Disease Control to issue recommendations for dealing with suicide in a community (O'Carroll *et al.*, 1988). Homicide has also become a major Public Health problem.

The Public Health agenda for the 21st century must address the issue of premature mortality due to trauma, including suicide, homicide, war, and natural disasters. As the advances in Public Health over the last decades have caused declines in many major diseases, injuries have become a major Public Health problem that must be resolved. Injuries are particularly important because they often affect mainly the young. Improvements in highways, seat-belt laws, and improved car design have reduced

injuries and death due to motor vehicle traffic accidents and improvements in the design of such everyday items as ladders have reduced accidents in the home. Providing an effective forum and process for resolution of international differences has prevented some conflicts, but more needs to be done. Better planning may not prevent disasters, but it has and can further reduce the death and injury from them.

The next section focuses on some of the factors that influence disease.

**Determinants of health**

**Nutrition**

Fifty years ago, the major nutritional problems throughout the world were lack of adequate, safe and affordable supplies of food, inadequate understanding of dietary needs, and widespread lack of information that can lead to knowledge, concerning the relationship of nutrition to health and disease. Large segments of the population in industrialized nations were not aware of the need for a balanced diet including components from several major food groups. Furthermore, essential foods were often not available owing to poverty or because of transportation and distribution problems. For example, fresh fruits and other major sources of vitamin C were often almost unobtainable in northern climates for major portions of the year. Finally, provision of safe foods - uncontaminated by parasites, bacteria, and viruses - was difficult in the absence of refrigeration and pest control.

What was the impact?

The high prevalence of infective and parasitic disease conditions led to under-nutrition and, in turn, made individuals more susceptible to infectious disease agents because of their compromised nutritional status. For example, individuals with ascaris worm infection could be undernourished in the face of what appeared to be an adequate diet, making them more susceptible to infections by other disease agents.

What is the current situation?

Most of the nutritional problems noted fifty years ago have been fairly well resolved in the developed countries. However, these problems persist in the developing countries and even amongst the poor people in developed countries.

The major nutritional problem in the developed countries now appears to be excessive consumption of fats, refined carbohydrates, and salt, and inadequate consumption of fibre and cereals. This situation promotes diseases such as coronary heart disease, diabetes, hypertension, and dental cavities. The United States National Health and Nutrition Examination Survey documented a startling increase in obesity among American adults aged 20-70 years during the 1980’s (Kucnarski *et al.,* 1994). The rate jumped from a prevalence of about 25 per cent, already very high during 1960-1980, to 33 per cent in 1990. The prevalence is even higher among older people and some other segments of the population, and carries profound chronic disease and medical cost implications. Other studies in the United States and the United Kingdom have disclosed similar increases. At the other extreme are food faddists who, out of a desire to lose weight or for other reasons, subject themselves to nutritionally unsound diets, which adversely affect their health. The resolution of several current health problems requires intensive additional research into the relationships between national factors, health and disease.

##### Having read the above section on nutrition:

* ***Think about the recent findings on sugar and carbohydrates and their ill effects on nutrition and chronic conditions. What is being done around the world to address this – for e.g. in the form of sugar taxes, banning some drinks in schools etc. Do you think this will work? On the other hand people and groups in some countries continue to starve and suffer under-nutrition. In South African for example, rates of smoking overall have dramatically dropped since legislation curbing smoking and placing high taxes on cigarettes were introduced. However, smoking around the world continues to grow among vulnerable groups of young people and women. Cigarette companies for new markets have particularly targeted the global south. Alcohol also is a problem and the cause of much of the violence and trauma. What is the situation in your area, country region? What do you think will make a difference.***
* ***Why do you think the problems that existed fifty years across the world still continue to persist in global south countries and among poorer people in global south countries?***
* ***What is the current nutrition situation in your own country or region?***

Education about properly balanced diets and disease induced by poor nutrition should be expanded, particular to expectant mothers, children, and the elderly, in whom nutrition problems are more likely to occur. Finally, opportunistic interventions through nutritional fortification of common foods such as the addition of vitamin D to milk, growth hormone and antibiotics to beef and vitamins to bread, need continuing assessment.

##### Consider what you have read in the above paragraph on the importance of individual education in promoting proper nutrition.

* ***Do you think providing individual education to encourage proper nutrition is sufficient to address people’s poor nutrition problems?***

###### Environmental and occupational hazards

In the early part of the 20th century, the public professional was largely concerned with ensuring the provision of biologically safe water and food to the public, and the safe removal of sewerage and garbage. The hazards of even high levels of exposure to such substances as asbestos, lead, dust, and radiation were unrecognised.

Systems are now in place in most developed countries for the supply of biologically safe water and foods, and the removal of sewerage and garbage. The environmental problems of importance in the developed countries in the 1990’s are now due largely to the explosion of technology over the last five decades. For example, the production of chemicals in the United States has increased over 200-fold since 1940. This has been accompanied by a tremendous expansion in the variety of chemicals to which the public is exposed. It has been estimated that eight million workers in the United States alone are exposed to toxic chemicals. (US DHHS, 1987)

Recently, the issue of environmental equity has been raised in the United States and internationally. The poor, particularly minorities, are more likely to live in areas that are exposed to high levels of pollutants in the air, water, and soil (Rios *et al*). Further, developing countries have often sacrificed environmental concerns in order to compete successfully in the world market, thereby lessening the quality of life for their citizens.

The major current environmental threats arise from the typical pollution of the air, water, and land. The major threats to workers arise from exposure to substances not yet identified as hazardous and inadequate protective devices. Unfortunately health effects from such pollution may occur years after exposure and thus they are difficult to document.

Protecting the health of the public against environmental and occupational hazards in the future will depend on research into the acute and long-term health effects of the thousands of substances being released into the environment; surveillance of the occurrence of these hazards in the environment and the workplace; development and implementation of techniques for eliminating, reducing or neutralizing these hazards; laws to mandate the implementation of measures for controlling hazardous exposures.

##### If you have time, look up on the Internet the story of the town of Flint in Michigan in the U.S. Think about the terrible pollution of water supplies to the town that nothing was done about for nearly two years. This calls into question the effectiveness of regulations in the global north. It also speaks to power relations between rich people and poor people and in the U.S the issues of race and black Americans being predominantly poor and disadvantaged. This is not only the case in the U.S. Think about other countries in the global north. Think also about the situation of refugees and migrants to the global north.

***Think again critically about the terms ‘developing’, ‘minimally industrialised’, ‘developed’ and ‘developing’ countries and how useful this categorisation is. Read the article by Meyers and Hunt (2014) on iKamva and think about some of the points they make. Meyers and Hunt in their article on heath care in some areas of Detroit in the U.S say for example:***

*We are suggesting that a focus on specific forms of harm and their consequences is a valuable analytic starting point for broadening discussions and practices of global health, beyond ex-colonial worlds in the South to precarity throughout the globe. The theorist of colonial medicine par excellence—of the way medical encounters in such hierarchical milieus were skewed toward fearful, harmful incongruities—was Frantz Fanon. The types of harm he described, flowing through lives and clinics, remain germane to medical care in all kinds of global locations today. Whether or not Detroit belongs to a set of measures that make it part of the global South is an open question––one that should remain so. Indeed, combining the objective and the subjective enables an appreciation of how race, poverty, and history produce social injury, pathology, and political consciousness* (Meyers & Hunt, 2014: 1920-22)***.***

###### Growing recognition of life-style

Although environmental measures and health care measures have prevented much disease and improved health in recent decades, it is becoming increasingly apparent that individuals themselves play a substantial role in determining their own health. They do so through decisions about their diet, their use of tobacco and alcohol, and other aspects of living. Of course, these decisions are largely influenced by the socio-economic situation in which people live.

Far too many people in developing countries as well as in the urban slums of developed countries, still live in extremely restricted circumstances that limit their scope of life. However, most people in industrialized societies have access to possibilities of consumption that can generate serious health problems, particularly if followed to certain extremes. The choices that people make when exposed to cigarettes, excessive amounts of alcohol and calories, reduced physical activity, and similar situations exert a profound influence on whether they will suffer and die prematurely from lung cancer, coronary heart disease, diabetes, cirrhosis, chronic lung disease, trauma, or other current major causes of illness and death. Cigarette smoking alone is considered responsible for more than 400 000 deaths annually (about one-fifth of the total) in the United States (McGinnis & Foege, 1993). Obesity is another common and increasing factor (Kuczmarski, 1994).

Of course such health-related habits do not develop in a vacuum. The extent to which a person acquires them depends on circumstances such as the advertising and price of alcohol and cigarettes. Hence social policy on these matters becomes an important issue for Public Health.

A second aspect of life-style significantly associated with health embraces people's relationships with their social support systems. Considerable evidence links health to marital status, degree of closeness to friends and relatives, and social group involvement. Such social connections are strongly associated with reduced mortality, and this association is largely independent of physical health status, health practices, use of health services, socio-economic status, age, sex, and race. (Berkman & Syme, 1979).

##### Think about the section you have just read on the impact of life style on people’s health.

* ***To what extent are poorer people in the global south and global north countries able to make individual choices with respect to adopting healthier life styles?***
* ***Consider for example how the social determinants of health and the presence or absence of a good quality and equitable health services influence individual behaviours related to lifestyle and health status.***
* ***To what extent to people really have ‘choices’ as is mentioned above in paragraph 2.***

***This issue of choices and structural constraints on making choices applies to a number of other areas inside and outside of health.***

* ***As you read the section below on Population, think about what factors affect population growth issues in developing countries?***
* ***How have international perspectives on population growth issues changed over the past 20 years, since the section below was written?***
* ***How has this been influenced, for example, by the approaches taken in international forums such the United Nations International Conference on Population and Development in 1994 and the Fourth World conference on Women in 1995? If you have time look up these conferences on the Internet and read what they proclaimed.***

###### Population

Success in Public Health initiatives, particularly in controlling infectious diseases, reduced death rates worldwide with a resultant increase in life expectancy, yielding significant population growth. In developed countries this decline in mortality took place gradually, with a commensurate decline in birth rates as survival of infants increased. In developing countries the drop in mortality has occurred over a shorter time period without a commensurate drop in birth rates. This has resulted in rapidly expanding populations, often in those countries where food and other vital resources are most limited.

Currently, the less developed countries are expanding their populations four times as rapidly as the developed countries. These countries also have a much higher proportion of younger persons that means that the higher birth rates are likely to continue for at least the next several decades. This is because only women below approximately 45 years of age can give birth to children. However, the recent epidemic of AIDS, which affects primarily adults of childbearing age, may have some impact in areas of high prevalence such as Sub-Saharan Africa where as many as 20 to 30 per cent of women of childbearing age may be infected. Nonetheless, it is estimated that by the year 2000 nearly 80 per cent of the world's population will be concentrated in developing countries. (United Nations International Conference on Population and Development, 1994)

In the more developed countries, where population growth has declined to replacement levels or less, the proportion of elderly has increased as the proportion of those in the productive years has decreased, introducing new problems.

The next section focuses on approaches to understanding the prevalence of disease.

**Scientific Approaches**

Effective Public Health actions are based on information derived scientifically about factors influencing health and disease. The basic sciences of Public Health are epidemiology and biostatistics, but their effective use depends in turn on the knowledge and strategies derived from the biological and physical sciences, the social sciences, and the demographic sciences, including vital statistics.

What is epidemiology and what sort of information do epidemiologists need?

Epidemiology is the core science of Public Health and preventive medicine. It is the scientific method used to describe the types, distribution and determinants of disease and health in human populations. Although there are many definitions, the Greek root of the word epidemiology describes well the scope of the discipline: 'The study of that which is upon the people'. The epidemiologist seeks to identify those characteristics of people, the agents of disease, and the environment, which determine the occurrence of disease and health. In order to accomplish that objective, the epidemiologist describes disease occurrence (time characteristics); the population affected (person characteristics); and the nature of the environment in which the disease is occurring (place characteristics). These all contribute to knowledge about the natural history of the disease and ways of controlling it. For example, epidemiologists have observed that coronary heart disease occurs primarily among middle-aged and older people who overeat, have high blood pressure, smoke cigarettes, take little exercise, and have a family history of heart disease.

For the study of these matters, epidemiologists must have good information about the occurrence of disease, the relevant characteristics of the population, and the environment in which the disease is occurring. The need for this information has stimulated the development of health information systems for co-ordinating existing sources of data and guiding the development of essential new sources of information relevant to the health of the community.

Biostatistics is the science used to quantify relationships observed in Public Health and medicine. Advances in epidemiological methodology have been accompanied by rapid progress in biostatistics, particularly the development of computer technology.

What role do the biological and physical sciences play in Public Health?

The biological and physical sciences have long played an essential role in Public Health. Many of the new advances leading to the control of infectious diseases depend upon microbiology to provide new techniques to identify and isolate disease agents and to identify markers of prior infection or exposure. The rapid expansion of vaccines to prevent viral diseases reflects new procedures for isolating viruses using cell cultivation techniques that were developed in the late 1930’s. These cell culture techniques

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| facilitated the manufacture of live vaccines using attenuated viruses, i.e. viruses that have lost their virulence characteristics for humans but not their capacity for stimulating immunity. Recently, microbiologists have fragmented disease agents into specific components and selected those that are responsible for the protective immune response. Advances in the laboratory sciences can be rapidly translated into new techniques for identifying infection and disease, as well as environmental and occupational hazards. Further, these new advances often lead to new techniques and strategies for intervention and control of threats to Public Health.  Social sciences research has helped to illustrate choice of exercise, levels of personal hygiene, eating patterns, and alcohol consumption. Behavioural factors also determine the response to illness, particularly to subtle manifestations of disease. Thus they significantly affect the ability of the individual to live in a healthy way and to respond to disease. Therefore the role of the behavioural sciences (including psychology, sociology, and anthropology) in Public Health is increasing. Experience with HIV and AIDS over the past few years dramatically illustrates the need for changing behaviour that promotes disease occurrence. (Fineberg, 1988; Turner *et al*.,1988).  Behavioural science techniques have proved valuable in understanding influences on health. Psychological investigations of people's knowledge and attitudes yield insight into the habits and life-style practices that are related to health and often suggest ways of promoting health. Likewise, sociological investigation of group processes that determine a community's norms and values, and  adherence to them, leads to an understanding of how people behave and how they can be influenced to follow a healthy life-style. Anthropology elucidates the cultural traditions that affect what people do in everyday life and suggests approaches to health promotion specific for various cultural groups.  Within the field of Public Health, health education draws upon these disciplines to develop effective techniques for cultivating health-promoting behaviour. In large measure the social milieu determines the choices that people make. Economic and other social conditions of life profoundly impact on what people do about health-related actions. Life-style does not consist of behaviour elements selected by individuals in a vacuum but depends upon their circumstances of life. Hence Public Health must be concerned with the social conditions in which people live and direct substantial effort towards their improvement on behalf of health. |
| ***Hence increasingly there is recognition of the limits of individual change promotion. The social, economic, political and cultural determinants that are structural, need to be addressed for individuals and groups of people to be in a position to effect changes.*** |
| Demography focuses on population trends such as growth, i.e. the excess of births over deaths, and of immigration (leaving your country to settle elsewhere) over emigration (arriving in a country to settle). Public Health statistics are concerned with information about the health of populations. Both fields are devoted to satisfying social concerns about people. Mutual interest in factors such as those determining fertility illustrates the continuing interrelationships of Public Health and demography. |

##### Demography has also moved away in some circles to focusing on population growth and warning about the ‘explosion of population growth’ and more on development and realising that development in itself can reduce population growth.

Vital statistics important to Public Health include births and the rates of their occurrence in various segments of the population; fertility, i.e. the ratio of births to women aged 15-49 years; mortality, including deaths among infants and in subsequent ages as well as trends, specific causes, and determinants of deaths; migration patterns.

**TASK 2 - Clarify the concept of *Public Health***

At this point, complete your own definition of Public Health before reading our feedback below.

**FEEDBACK** (*Reinforcing a number of the issues covered in the PHD II Module in Semester 1)*

**Expanded definition of Public Health in the 21st Century**

Public Health is the use of all available resources for the identification of health needs, the modification of the physical, social and economic environment and the provision of a variety of services, including health services, to provide a population with the conditions which would allow and encourage them to be healthy, both as a group and as individuals. Public Health is concerned primarily with the group rather than the individual patient. This means that the Public Health worker is concerned not only with those people who attend the health facilities (clinics, community health centres and hospitals) but with all the people in the community surrounding the health facilities.

While Public Health includes curative and rehabilitative care, it focuses on preventive and promotive strategies. It attempts to promote health and prevent disease by actions that preferentially target groups of people, such as through modification of the environment, e.g. provision of clean water. It also includes actions that target individuals and groups, such as through health education and immunisation. The Social Sciences have made an important contribution to Public Health through recognising the importance of the social determinants of health in influencing whether populations are healthy or not. The effectiveness of Public Health is determined mainly by the commitment of the state and the community to human and health rights and equity, including gender equity and removing gross socio-economic differences between groups of people and providing a similar standard of living for everyone. Public Health is also influenced by health system related factors, for example, to what extent good quality health services are accessible and available to everyone. Actual Public Health services are provided by various sectors in the public service such as health, housing, sanitation, engineering, education, agriculture, transport, and social welfare. Providers in the private or non-governmental organisation sector may also deliver services that can improve Public Health.

***We return to the extract from Reading by Detels et al. (1997 below). Think about the ways in which Public Health practitioners address health problems.***

###### Programmatic scope of Public Health

**Goal setting**

Success in achieving the WHO's objective of eradicating smallpox throughout the world and, more recently, its initiative to eradicate poliomyelitis by the year 2000 (which has already been accom- plished in the western hemisphere) have inspired other efforts to set and popularise explicit goals in Public Health.

###### Prevention of disease and promotion of health

The ultimate goal of Public Health has always been and remains the prevention of disease and the promotion of health in the community. Although great strides have been made towards that goal, many conditions still cause considerable unnecessary deterioration in quality of life, as well as premature death. Many people in both the developed and the developing world have not yet benefited from the Public Health achievements of the 20th century. Therefore a major goal of Public Health in the developed countries in the future, will remain the prevention of diseases such as cancer, heart disease, trauma, and AIDS, which are currently responsible for most premature mortality and diminished quality of life. Achieving that goal requires assurance that Public Health advances will reach those groups of people still suffering severely from morbidity and mortality that can be avoided using current knowledge and technology. These include the poor and those not adequately integrated into the mainstream of society. In developing countries, reduction of infectious diseases and malnutrition often still take priority, but, increasingly, reduction of chronic diseases, accidents and trauma, and environmental threats to health are becoming goals as well.

Prevention can be achieved by emphasizing preventive aspects of medical care, such as immunization, health education and behavioural modification, control of the environment for health and cultivating political will for Public Health initiatives.

###### Medical care

How does the Public Health perspective differ from the curative orientation?

Medical care can be examined from several perspectives from the medical or economic perspective for example, as well as from the standpoint of Public Health. The medical profession, reflecting both the centuries-old tradition of healing as well as recent advances in medical science, looks upon medical care as the principal means of relieving suffering and restoring health in individuals. Economists view medical care in terms of its cost, and therefore are concerned about the increasingly large expenditures on it. Public Health considers medical care to be one means of protecting and improving the health of people, but is also vigilant about its cost and financing, particularly in so far as that constitutes a barrier to health care for some groups. Public Health's focus on medical care emphasizes its potential for enhancing a community's health, with its cost being seen as a consideration in the same sense that environmental protection raises financial issues.

Public Health agencies have organized immunization activities and often maternal and child health services. In recent decades these efforts have contributed to spectacular achievements in the control of communicable disease and infant mortality.

Curative services, however, generally receive funding priority over preventive services on grounds of

urgency. Most physicians and medical care agencies adhere to what may be termed the

complaint-response system of medicine: patients are encouraged to recognize and bring their health complaints to the doctor, whose response is to diagnose and treat any illness that may be present. Prevention, if advocated at all, is usually a minor consideration.

A new system of medical care that gives priority to promoting health and preventing disease has slowly been emerging. The health of individuals is monitored through periodic appraisal geared to age and other factors that determine both current and future prospects of health. Thus infant care concentrates

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| on growth, appearance of defects, immunization status and any necessary corrective action to ensure the healthiest possible development. When a person has reached 50 years of age, the focus shifts to blood pressure, weight-to-height ratio, blood sugar, blood cholesterol, cancer detection, cigarette and alcohol consumption, and other physical and behavioural characteristics. Many industrial leaders in the United States have started to provide health risk assessment and health counselling services for their employees. Arrangement for these services at or in connection with work is one of the fastest growing aspects of medical care in the United States. (Fielding, 1989)  Another rising issue is the efficiency of medical service: how can the best possible quality of medical care be provided within a given amount of resources. Another cost-related issue is the extent to which medical resources should be used for highly expensive procedures and devices, such as heart transplants, which benefit only a few persons at great expense.  A major programmatic thrust of Public Health in the immediate future must be to achieve emphasis on medical care as a means of improving health, not simply as an element of the economy. The development of the discipline of balance needs shifting from curative or complaint-oriented services to health promotion and disease prevention. |
| ***As you read the next extract from Detels et al. (1997) on ‘Influencing behaviour, consider your own views are on what factors influence behaviours that impact on health status:*** Consider to what extent strategies to influence health behaviour that focus primarily on the individual, are likely to be effective? |
| **Influencing behaviour**  A prime responsibility for Public Health is to develop effective strategies to promote healthful conditions and life-styles. One approach is to convert the national and even international social and economic condition, to one that favours healthy behaviour, as in the various national and WHO campaigns against cigarette smoking and the worldwide struggle to promote breast-feeding of infants. However, such activities often result in confrontation with powerful entrenched economic interests. Therefore tactics in the struggle to turn public policy explicitly towards the side of health must be high on the Public Health agenda.  Another approach is the so-called medical model, i.e. using the doctor-patient relationship, through a one-to-one or sometimes a small group, to guide individuals toward healthy behaviour. It offers promise particularly when people have, or can be induced to have, concern about particular health problems such as cancer or heart disease and then are willing to undertake the indicated change in their habits. Physicians have often been reluctant to devote the effort needed, partly because they have been discouraged by the results. However, positive change can be achieved with adequate protocols (or guidelines for action). (Manley *et al*., 1991)  **Environmental control**  Attempts to control pollution of the environment, including the occupational setting, are complicated by the problem of identifying those pollutants that pose health hazards to humans. Pollutants, such as radiation, that have no apparent immediate effect on humans can cause disease after many years of chronic and persistent exposure.  A highly desirable approach to control is to obtain the voluntary co-operation of industry, as has been partially achieved in the control of air pollution. However, control mechanisms, which may be expensive, are seldom voluntarily adopted by industry, particularly in developing countries. Thus legislation is often required to achieve health-protecting environmental practices. |

In the 1990’s there have been serious challenges to maintaining and improving the quality of the environment. Innovative approaches … will be needed. An example of this is use of recycled wastewater to augment existing limited water supplies.

In summary, the programmatic scope of Public Health embraces preventive, medical, behavioural, and environmental measures designed to improve health at the community level. Although particular agencies and personnel address specific aspects of community health, Public Health embraces the whole range of the activities.

##### Think again about some of the environmental problems and disasters we have and are facing and the ways of trying to avert these, taking into account vested interests and power relations.

This next section from Detels et al. (1997), focuses on three kinds of strategies used in Public Health to achieve change: surveillance, intervention and evaluation.

###### Public Health strategies

**Surveillance**

Effective intervention in factors affecting community health depends upon reliable knowledge concerning the occurrence and distribution of these factors, as well as health, in the community. Thus the backbone of Public Health strategy is the development and maintenance of accurate and reliable health information systems upon which rational actions can be based. Such surveillance systems should include information on the occurrence of infectious and chronic diseases, environmental information, (including occupational exposures), behavioural characteristic the population, and availability of medical services. Information must be collected on a regular basis and reported rapidly, particularly for infectious diseases and hazardous environmental exposure. Tardy reporting of information about disease outbreak, sudden radiation hazards, for example, precludes the early implementation of effective intervention procedures when they are likely to be effective. Although most developed countries have a system of on-going surveillance for infectious diseases and environmental hazards, surveillance systems used by Public Health agencies in general do not fully meet the above criteria.

The most extensive experience in surveillance work has concerned the communicable diseases. There are fewer mechanisms reporting chronic diseases other than mortality. Currently, surveillance for environmental hazards and occupational exposures are less satisfactory than surveillance for either infectious or chronic diseases. Most urban areas have systems for monitoring the quality of air and quality of water for human consumption, although decisions for monitoring new contaminants such as lead are inadequate. Considerable attention also needs to be directed to surveillance of recreational waters, toxic dumpsites, and radiation exposures. In addition, workers continue to be exposed to unsafe working conditions, particularly in small industries that are more difficult to monitor and regulate. Until proper information systems are implemented, which are accurate, reliable, and report of all principal factors affecting community health, effective programmes cannot be fully realized.

###### Intervention

Effective intervention is the heart of Public Health efforts to protect communities from health hazards. These efforts include reducing the number of individuals susceptible to infectious diseases, treating people early in the course of disease, improving the environment and promoting healthy behaviour of both communities and individuals.

Technological advances play a key role in developing effective intervention programmes, but often implementation of these programmes depends on the use of innovative epidemiological strategies, behavioural modification of individual life-styles, and the political will of the community. For example, a satisfactory vaccine for smallpox existed for centuries before eradication was made possible by changing from an untargeted mass vaccination approach to an active surveillance and containment strategy. Epidemiological research has identified many risk factors for cardiovascular disease, but implementation of intervention strategies to reduce these depends on convincing people to alter their basic habits, such as diet and exercise. Methods for prevention of most sexually transmitted diseases, including HIV are well known, and treatment of many of them [sexually transmitted diseases] has been available for decades. Nonetheless, efforts to reduce the incidence of these have been largely unsuccessful, because of the difficulty of modifying this most intimate aspect of life-style. The source of many of the pollutants plaguing the major cities of both the developed and the developing world are known, but techniques to reduce these pollutants involve major expenditure by both the public and industry, and often cause inconvenience for the public, e.g. using public transport rather than private vehicles. Until the political will has been achieved, it is unlikely that major reductions in pollutants can be accomplished.

In summary, successful Public Health intervention is the result of technical advances coupled with the use of innovative epidemiological strategies, implementation of effective behavioural modification techniques and induction of the political will. Thus Public Health intervention requires a combination of many different disciplines to achieve promotion of the health of the public.

###### Evaluation

An essential component of Public Health strategies is evaluation. The effectiveness of surveillance and intervention programmes changes over time owing to changes in the incidence of disease, the development of new health hazards and the development of new technologies for measurement and control. Thus evaluation should be an on-going integral part of all Public Health surveillance and intervention programmes. In summary, surveillance, intervention, and evaluation are the backbone of Public Health strategies to prevent disease, eliminate health hazards, and promote health in the community.

**TASK 3 - Identify critical Public Health activities within and outside the Health Sector**

As you read the next section, concentrate on relating this information to your own district and country, identifying Public Health activities that you and other departments undertake. Answer the following questions:

1. How are Public Health activities (private and public sector) organised and structured in your country at a district and national level?
2. Describe the Public Health activities being performed by the health sector in your community or district using practical examples.
3. Briefly list some Public Health activities being done by other public sectors or departments in your community or district.

###### Organization of Public Health

**Government structure**

Organization of health services, both public and private, tends to be conditioned by the cultural, political, and organizational patterns of the countries in which they are located. Thus in the United

Kingdom and many European Countries, a national health service covers preventive, community, and clinical health services.

In the United States the tendency has been towards state and local governmental autonomy in environmental and health education services and medical care for the indigent. Clinical services for most of the population have been left in the private sector, with national governmental payments only for certain segments of the population. Most Public Health programmes have been conducted at the local level, under state regulation, with only broad directions or incentives being provided by the national government. Thus the local authorities typically have undertaken communicable disease surveillance and control, maternal and child health services, environmental surveillance and control, and other traditional Public Health activities.

In the European nations the philosophy of central control of Public Health has predominated, perhaps because of their smaller size and more homogenous populations. The majority of the European nations have a national health scheme that is administered nationally.

However, the presence of a national health scheme has not guaranteed more effective Public Health programming. Often the agencies within these federal governments do not command the respect and resources accorded to the clinical components and therefore are not as effective as they could be (Evans, 1982). Also, many European countries lack schools of Public Health or their equivalents to prepare professionals for Public Health careers. Nonetheless, access to medical care and equity have often been greater in the European systems than in the United States.

Whatever the government structure for Public Health, the need for good management is increasingly recognized. The responsibility for handling budgets that are often substantial and complex, in organisations involving many different categories of people, and maintaining effective relationships with a wide array of health agencies, as well as other bodies, requires great managerial skill. In fact, the inadequate preparation in management skills of many health professionals who have occupied Public Health administrative posts in the past, has induced some governing authorities to call upon 'managers' rather than Public Health experts to staff the key positions in Public Health. Too often, then, Public Health administration has been reduced to budget control or complying with laws and regulations, which have already been adopted. As a result little attention is given to analysing health problems or devising innovative solutions. Of course, the ideal is to combine the talent for leadership in Public Health with managerial skill.

In summary, the organization of Public Health in various countries appears to be determined at every level, local, state, and national, largely by cultural and historic factors, resulting in a wide array of often- complex organizational arrangements.

###### Non-governmental Public Health agencies

Voluntary health agencies have flourished in the United States and to a somewhat lesser extent in Europe. They tend to be organized around specific entities, for example the American Cancer Society, the American Heart Association, and the American Lung Association. Their success has encouraged the development of many more such groups, devoted to practically all the major diseases and several lesser ones. Their programmes usually include support of health research, professional education, public education, and demonstration services devoted to the particular category of disease with which the organization is concerned. These voluntary health agencies have become a considerable force in Public Health. They are able to operate with fewer constraints than governmental departments in the developed nations and thus have often broken new ground in the field.

###### Summary

The scope of Public Health in the last part of the 20th century has expanded greatly. Not only have the number of recognised health hazards to the public increased, but also the strategies available to solve them have grown commensurately. Public Health has borrowed and adapted knowledge from the physiological, biological, medical, physical, behavioural, and mathematical sciences, and been quick to recognize the potential of new fields such as computer sciences for improving, safeguarding, maintaining and promoting the health of the community.

As the major communicable diseases have been brought under control through Public Health measures, more effort has to be directed at chronic disease control, production of a safe environment, reduction of accidents, violence and homicide, and promotion of healthy life-styles in developed countries. Although developing countries must continue to address persisting infectious diseases, they increasingly suffer from the ills of developed countries as well. Although the biological sciences remain an important underpinning of Public Health, the contributions of the mathematical and behavioural sciences are recognized increasingly. As in the past, improvements in the health of the public in future will be achieved by inducing public awareness and concern, which results in the introduction and passage of effective legislation and regulations, that adhere to the principles of Public Health. The effectiveness of such efforts in the past and the realisation of the cost-effectiveness of preventive strategies for promoting and maintaining health, have brought renewed attention to Public Health and have set the stage for a new Public Health revolution.

### Well done – you have completed the reading! Think for a moment about your experience of reading it. Did you manage to keep active, making notes or mind-maps, or answering the questions in italics or the boxes? It is very important to keep your mind active and to ask yourself questions while you read. This helps you to understand and to take in new information and is a useful study skill, which you should develop. The *SOPH Academic Handbook* gives more guidance on reading actively and taking notes. .

Here is the feedback on Task 3. Compare it with the situation in your own context.

**FEEDBACK**

The last section of the reading includes comments and suggestions on critical Public Health activities within and outside the Health Sector. You may well have come up with some other or additional ideas.

1. **Public Health Activities of the Health Sector**

What distinguishes the Public Health worker from the clinical health worker is that the Public Health worker is concerned not only with those people who attend the health facilities (clinics, community health centres and hospitals) but with all the people in the community surrounding the health facilities. While Public Health includes curative and rehabilitative care, it focuses on preventive and promotion strategies. It attempts to promote health and prevent disease amongst preferentially

targeted groups of people in terms of equity, by actions such as modification of the environment, e.g. provision of clean water.

It includes actions that target the individual as well as populations, such as health education and immunisation, which Public Health workers typically are involved in, but also those that operate at a structural level of social determinants. A range of Public Health activities performed in the health sector are discussed below.

1. **Removing or modifying factors which negatively affect health**

Poverty, unemployment, malnutrition, inadequate housing, repressive governments, social decay, illiteracy, dangerous transport etc. all contribute to ill health. Either removing or decreasing the severity of these factors can greatly improve the health of the population. These factors can be modified by changes in economic systems, political systems, legislation, fostering community cohesion, improving infrastructure, improved education, etc. However any changes to these factors require profound political and economic change before they are likely to occur.

1. **Promoting factors which are beneficial to health**

Just as there are economic and societal factors that contribute to ill health, so

there are factors that encourage good health. Examples are: good infrastructure, good public transport systems, recreational facilities, employment opportunities, safe work environments, regulation of pesticides and food additives, gun control, tobacco control etc. The Ottawa Charter outlines Health Promotion strategies for groups rather than individuals that avoid any victim blaming. Health Promotion and the Ottawa Charter are discussed in greater detail in the MPH Module *Health Promotion II.*

1. **Comprehensive personal health care**

Personal health care services are composed of Health Promotion activities,

health prevention activities to prevent people developing disease or injury, curative health activities to cure disease and injury when it arises and rehabilitative activities to enable improvement by those with residual disease or injury. Personal health care services can be provided in various settings: in the community (community level care), at basic health facilities such as small hospitals and clinics (primary level care), at relatively large diversely equipped hospitals staffed by various health specialists (secondary level care) and at highly specialized, high technology hospitals (tertiary level care).

1. **Social or community health care**

This is the provision of health care to groups rather than individuals. This is often done using the Primary Health Care approach, which emphasises real (rather than token or paternalistic) community participation in health service provision, encourages an inter-sectorial approach and ensures comprehensive provision of health services. Ideally these services should be prioritised, provided as efficiently as possible, in adequate amounts, with an appropriate

mix of level of services. Of particular concern is that the services are accessible to everyone i.e. everyone should be able to get to and use them, and that they are provided in an equitable or fair and just manner.

This includes environmental and occupational health care services. Environmental health care is concerned with ensuring that people live in an environment that is safe and likely to promote health as well prevent the spread of disease. This in essence means that attention must be given to housing, sanitation, water supply, refuse removal, food production and preparation, road safety, infrastructure, communications, pollution, insect and rodent control. The environment also includes the social, economic and political situations in which the population live and the ways in which different classes are susceptible to different levels and types of ill health, because of different degrees of poverty. Occupational health services are concerned with ensuring that work environments, (where people usually spend eight hours of the day and often more), are safe and unlikely to promote disease. This is important as workplaces are dangerous places where heat, cold, chemicals, machinery, dust and biological agents can contribute to injury and disease. Increasingly as people work in informal work sector environments, their health and safety needs require greater attention.

1. **Health Management** (of categories 1 – 4 above)

### Public Health workers assume the role of health managers when they put these plans into practice and monitor and guide health care implementation to ensure that the population’s health needs are optimally provided for.

1. **Developing policy and planning for health activities** (in categories 1 – 4) With the knowledge gleaned above, the Public Health worker is then able to provide the most appropriate mix of services. This is done by formulating health policy and developing strategic plans.
2. **Legislation and regulation** (relating to categories 1 – 6 above)

### One of the most effective ways of implementing important policies is by

making them legally binding on health departments and private health providers. This is done via legislation in parliament. Providing legislation to support the implementation of important policies is however not sufficient. Some form of assessment must be done to ensure that policies have been properly implemented and where necessary (usually as a last resort) enforced. This is best done via specific regulatory mechanisms sanctioned by parliament. Examples of legislation and regulation to improve Public Health in South Africa are:

*The Tobacco Products Control Act of 1993 and its amendments over the past 20 years have* made smoking indoors in most public areas illegal, banned advertisement of tobacco products, banned sponsorship by tobacco companies and prohibited sale of tobacco to minors in order to deter people from starting

### smoking, promote smoking cessation and reduce non-smokers’ exposure to smoky environments.

*The Choice of Termination of Pregnancy Act* of 1996 made abortion in early pregnancy legal and provided for widespread access to regulated and safe abortion services in order to reduce the high levels of mortality and morbidity that were occurring from unsafe abortion.

*The Medicines and Related Substances Control Amendment Act* of 1997 allowed universal substitution of much cheaper generic drugs for patent drugs and allowed the removal of patents in the event of a national medical emergency to allow public access to essential medicines.

##### Think of efforts in your own countries and regions. What have they been? What is needed? What would be the barriers and facilitators to these occurring?

1. **Advocacy** (addressing categories 1 – 7 above)

### To increase the chances that key Public Health activities or policies are planned

for and implemented, it is useful to develop a strategy to advocate that this be done. Advocacy can be done via:

* + raising awareness of a particular topic;
  + ensuring that particular topics are placed on agendas of key people or groups;
  + lobbying politicians and health managers around particular topics;
  + publicising aspects of a particular topic in reports, journals, mass media etc.;
  + addressing various types of health service groups on the particular topics;
  + addressing general community and niche groups on the particular topics;
  + promoting health equity as a key component of health policies and service

provision.

##### Active civil society engagement is critical to the success of advocacy efforts. Think about efforts in your own areas, countries, and regions for civil society engagement in advocacy and what effects they have had.

1. **Evaluation of health activities** (relating to 1 – 8 above)

### Evaluation plays a role in assessing the effectiveness of various activities such as:

* + what services are needed and acceptable;
  + what are the most effective services;
  + what is the best (most useful) way to provide those services;
  + how to make the services accessible to everyone;
  + how to provide those services at a cheaper cost;
  + how to prioritise service provision.

1. **Information systems which provide information on health activities** (relating to 1 – 9 above)

### To provide effective services to all residents of a particular area, one needs to know several things such as:

* + how many people there are;
  + how many infants, small children, adolescents, adults and elderly people

there are;

* + how fast the area is growing in numbers due to people coming into the area and children being born;
  + the number of women who become pregnant each year;
  + the common types of diseases in the area;
  + the death rate and the causes of death;
  + the range of socio-economic groups, from very poor to very wealthy;
  + the transport and communications infrastructure;
  + the type and amount of health care facilities;
  + the type and amount of health services currently being provided;
  + the type and amount of health personnel available;
  + the cost of providing health services;
  + the political and social system, which is in place.

1. **Research**

If governments, institutions, organisations and society in general are to

effectively tackle Public Health problems, it is important that their decisions and actions are based on *evidence*. Research can provide information that can help analyse and find better solutions to address health problems. Research can also play an important role in advocacy. It can help make a case through strengthening arguments, providing information, and outlining cost benefits.

Research in Public Health is conducted, drawing on a number of disciplines, such as:

* + demography (the study of populations and changes in populations);
  + epidemiology (the study of which factors affect disease and which factors

prevent or cure disease);

* + biostatistics (the measurement of the statistical likelihood with which factors affect, prevent or cure disease);
  + systems research (which studies the effectiveness of service provision);
  + economics (equitable allocation of resources; efficiency of service provision)
  + and social sciences (the study of the organisation of and the relationships within society);

The description of Public Health activities presented above is typical of the viewpoint of most professional health staff that work within the broad Public Health sector, providing direct health services to the community. Other groups may have a very different view of what Public Health activities should include. Examples of these groups are the community in general, civic organisations, specific patient groups,

political groups, social pressure groups and academic groups**.**

1. **Public Health activities of other public sectors or departments include:**

Examples of Public Health activities by other departments in your district are likely to be:

* Education: general education and specific health education;
* Civil Engineering: mains sewerage pipes or other efficient forms of sanitation, piped clean water;
* Agriculture: production of sufficient and cheap food, sustainable use of land.
* Transport: reliable, safe, cheap public transport, safe roads, efficient traffic control;
* Social services: financial support, job training and job placement of the

unemployed.

You have probably come up with other departmental and sectorial activities that are specific to your region. Hopefully you have recognised that Public Health is the responsibility of a broad group of people with a range of skills and functions, which contribute to the increased holistic well being of a community.

1. Summary

You have reached the end of a fairly long reading in this Unit, which has hopefully given you a broad overview of what Public health is, how it has developed over time, its current focus and what it aims to achieve. You should also have a fair idea of who is active in Public Health processes and programmes, and the range of activities available to Public Health practitioners. This is important in understanding some of the issues critical to its implementation, so that you can a bit later in the module identify a relevant public health problem and begin to formulate an appropriate research question, aim and objectives.

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