

COURSE GUIDE

COURSE CODE: HED 437

COURSE TITLE: INTERNATIONAL HEALTH AND CAREERS IN HEALTH

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HED 437: International Health and Career in Health

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Course Guide HED 437

International Health and Careers in health as a course of study is highly required for students' effective participation in the course. It unveils factual information on global health status, regulations through (IHR), of countries health orientations and processes as well as activities capable of impeding optimal health across the globe. Health Challenges and problems faced in the course of human daily living, conflicts, travels, natural human actions and disasters are explored. The impact of population spurt on entire global existence are x-rayed while vast health careers available for disease prevention, alleviation, cure, rehabilitation and health maintenance as well as health sustenance are presented. This all important information equips prospective health educators with informed options, decisions and skill acquisitions in the long run for impactful health Career globally.

Introduction

The need for international health attainment cannot be overemphasized. It makes for free and smooths international relationships and trade among nations of the world. As numerous countries deal with the burden of infectious disease prevention and control, the health threats from non communicable diseases and environmental health risks are also being addressed through implementation of international health policies. In the same vein, as economic and social conditions in developing countries change and their health systems and surveillance improve due to the global health policies, addressing non communicable diseases, substance abuse disorders, mental health and injuries (both intentional and unintentional) become matters of urgent concern. To attain this feat, various health personnels through clinical and non-clinical careers locally and internationally should collaborate and form a global health chain geared towards enhancing international health among nations of the world.

International Health is also called Geographical Medicine or International Medicine or Global health. It is regarded as a field of health care with emphasis on public health across national and regional boundaries. International health more often employs the use of health organizations or health personnels to provide direct health care or assist in health sector development of different regions from their native regions.

In order to achieve International health amongst nations, an International legal instrument is put in place in the form of International Health Regulation (IHR). Its major aim is to help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten peoples' lives worldwide. The IHR is binding on 196 nations across the globe plus all the WHO member states (WHO, 2020).

In the globalized world, diseases can spread wide and far either through peoples movements from one place to the other for business, vacations, medical treatments or simply for tourisms. These mean that any health crisis in one country can impact health, livelihood and even economies in other parts of the world. There may be emerging infections like Corona Virus Disease (COVID 19), Severe Acute Respiratory Syndrome (SARS), Ebola Virus or any new Influenza pandemic.

In achieving International Health, emergencies such as nuclear meltdown, chemical/oil spillage, leaks and dumping, wild fires amongst others are also observed. In all the health concerns and

problems, IHR averts global catastrophe by limiting interference with international traffic and trade while ensuring public health (WHO, 2020).

Course Competencies

This course is aimed at providing you with factual and relevant information as thus:

(i) To improve global or international health among nations, continents and the world at large through training prospective Health educators for the realization of such goal.

(ii) It is also aimed that the course would equip prospective Health educators with varying choices of health careers to take up on graduation with first or more advanced degrees.

(iii) Expectedly, through the Health educators' careers in health where they have mastered the policies, rules and International Health Regulations (IHR), WHO (2020) posited that global health threats and challenges emanating from the natural environment, population spurt and epidemics that lead to infectious diseases, natural disasters and insecurities can be contained or curbed.

Course Objectives

In achieving the aim of the course, the following specific objectives of the course will be met:

1. Students should understand the meaning of International Health
2. Students should know about International Health Regulations (IHR)
3. Students should understand the evolution of International Health Services (IHS)
4. Students should be aware of Port Health Services in Nigeria.
5. Students should be aware of Port Health Services Professionals.
6. Students should know of international health related NGOS
7. Students should understand the role of NGOs in attaining international health
8. Students should know the specific roles of some prominent NGOs in attaining international health
9. Students should know about the Multilateral Agencies and their roles in attaining international health
10. Students should know about the Bilateral Agencies and their roles in attaining international health
11. Students should be aware of International Labour Organization and its role in attainment of international health

12. Students should understand the relationship of international health with population Growth (expansion and explosion) vis-à-vis causes and effects.
13. Students should have knowledge of International health problems
14. Students should understand the relationship of Air travel with international health
15. Students should understand the relationship of Sea travel with international health
16. Students should understand the relationship of Land travel with international health
17. Students should be able to narrate the International/global death patterns
18. Students should know of the Diseases of the Poor and the Affluent
19. Students should have the awareness of the various careers in health vis-à-vis career opportunities, descriptions, preparations and special requirements for such careers.

Working through this Course

The course is presented in modules which contain units. Each unit has specific relevant sub-headings all leading to the achievement of the course objectives. At the completion of each unit of the course, few questions are asked to test the students' understanding of the unit. This exercise will enable the student to test himself/herself in relation to the objectives of the course. The course slide also provides the students with references to related texts and web addresses that can enhance their understanding of the modules and their units.

Study Units

There are 19 study units in this course divided into 9 Modules. The modules and units are presented as follows;

MODULE 1

- Unit 1: Concepts of International Health
- Unit 2: International Health Regulations (IHR)

MODULE 2

- Unit 1: International Health Services
- Unit 2: Port Health Services
- Unit 3: Port Health Service Professionals

MODULE 3

- Unit 1: International Health Related NGOs
- Unit 2: Role of the NGOs in International Health
- Unit 3: Specific Roles of Some Prominent NGOs

MODULE 4

- Unit 1: Multilateral Organizations/Agencies
- Unit 2: Bilateral Organizations/Agencies

MODULE 5

- Unit 1: The International Labour Organization's Role in International Health

MODULE 6

- Unit 1: International Health and Population Growth (Population Expansion and Explosion)

Unit 2: International Health Problems

MODULE 7

Unit 1: AIR Travel Relationship with International Health

Unit 2: Sea Travel Relationship with International Health

Unit 3: Land Travel Relationship with International Health

MODULE 8

Unit 1: Concepts of Global Death Pattern

Unit 2: Diseases of the Poor and the Affluent

MODULE 9

Unit 1: International Health Careers

APPENDIX

References and Further Readings

*(ctrl+ click) to open any of the links if it is a web address or get the text as stated.

<https://www.hilarispublisher.com>>.....

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[globalizationandhealth.biomedcentr.....](https://www.globalizationandhealth.biomedcentral.com/)

Assessment

There are three components of assessment for the course, HED 437: Self test exercises /assignments at the completion of each study unit, tutor-marked assignments and a written examination. The information you gathered in the course of the study will play a great role in doing the assignments.

How to get the Most from the Course

This course material provides you the opportunity of reading and learning at your own pace, time and location. To get the best of experience, you will need to work with the material in the following logical order:

How to get the Most from the Course

Follow these guides to get the most from this course:

1. The objectives of the course shall be well read in order to learn specifically expected outcomes by the time the course ends.
2. Each of the units shall be read as organized.
4. Try to memorize the contents of each unit by taking your eyes off the course material, then, meditate and assimilate what you have read.
5. Attempt to evaluate yourself in relation to the objectives of the course.
6. In any situation you forget any important point, go back to the text, read again and answer the question (s) you failed to answer correctly. This should be repeated until the correct answer is mastered.

Facilitation

Online facilitation would be made available to provide you with the opportunity to interact with your tutor and your colleagues across the world

Facilitators/Tutors and Tutorials

A specialist in the course who serves as the facilitator shall be the students' Guide in the course. She facilitates as well as answers questions as may be necessitated.

Course Information

Course Code: HED 437

Course Title: International Health and Careers in Health

Credit Unit: 2

Course Status: Non elective

Course Blub:

Semester: First

Course Duration:

Required Hours for Study:2

Course Team

Course Developer:

Course Writer: Dr. Nkiruka Edith Obande-Ogbuinya
Content Editor: Prof. Ernest Achalu

Ice Breaker

Hi everyone. This course has been packaged in such a manner that after passing through it, you will be very much equipped to work in any part of the world given to the vast information and positive attitude acquisition you shall be garnering in this course. Lucky you! Do have a great study session.

MAIN CONTENT/COURSE MATERIALS

STUDY UNITS

MODULE 1:

Module Introduction

Unit 1: Concepts of International Health

Unit 2: International Health Regulations (IHR)

Module Introduction

International health embraces both public and global health. It cuts across nations in preventing diseases and providing clinical care for various nations of the world using some disciplines careers. To achieve international health, government, organizations and agencies through their activities tend to promote people's health at community, national or global levels. World health organization (WHO) and some Non-Governmental Organisations (NGOs) collaborate to promote international health. They do this by upholding all the roles/functions bordering on public health.

Unit 1: Concepts of International Health

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- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
 - 3.1 Concepts of International Health
 - 3.2 World Health Organization roles in International health
 - 3.2 Self-Assessment Exercise(s)
- 4.0 Conclusion
- 5.0 Summary
- 6.0 References/Further Readings

1.0 Unit Introduction:

International health can be regarded as an area of research, study or practice which lays emphasis on the improvement of health and equity achievement in peoples' health globally or worldwide. It is an action fostering on health promotion for everyone but basically a transnational collaborative research. It involves cooperative efforts of WHO with its Organs for decision-makings. This they do through their distinctive roles and responsibilities.

2.0 Intended Learning Outcome

By the end of this Unit, you will be able to

1. Define International health
2. Distinguish International health from global and public health.

3. Explain the role of WHO as a governing body for international health.
4. Explain the World Health Assembly as an Organ for supreme decision makings on international health.
6. Explain the role of the Executive Board of the World Health Assembly.
7. Understand WHO's responsibilities and obligations towards international health.
8. Narrate the 6-point agenda used by WHO in addressing the health objectives that include two strategic needs and two operational approaches.

3.0 Main Content

3.1 Concepts of International Health

Definition of International Health: International health which is an aspect of public health has been defined as the health status of the global community and every action or activities geared towards promoting health among nations of the world. Achalu (2020) defined public health as the health status of people and governmental actions/activities to promote the health of its citizens. Winslow (1920) defined public health (PH) as science and arts of preventing diseases, prolonging life, promoting health and efficiency through organized community efforts (cited in Achalu, 2020).

International health also known as global health is the health of populations in the global context. It can also be referred to as area of research, study or practice which lays emphasis on the improvement of health and equity achievement in people's health globally or worldwide (Wikipedia, 2021). Beaglehole and Bonita (2010) conceptualized international health as an action leading to health promotion for everyone and basically a transnational collaborative research. Global health according to Koplan, Bond, Merson, Reddy, Rodriguez and Sewakambo (2009) has been described in various ways.

Global health focuses on transnational health issues as well as determinants of the health issues and proffers solutions. Also it promotes collaborations of various disciplines within and outside health sciences. Global health is also taken to be about synthesizing prevention strategies which are population-based at individual level care clinically. It could be seen in the various definitions that international health, global health and public health are interchangeably used. This goes to say that no common definition has been widely tagged to international health. Note that international health is an aspect of public health and as such PH cannot be synonymous with international health. Public health is broader than international health. In this regard, Koplan (2009) drew out basic distinctions among the three terms being used interchangeably.

	Geography	Cooperations	Populations	Access	Disciplines
Global health	Health issues that transcend national boundaries	Global	Prevention and clinical care	Health equity among nations	Highly interdisciplinary and multidisciplinary.
International Health	Focus on issues outside of one's own country	Bi-national	Prevention and clinical care	Help other nations	Embraces a few disciplines.
Public health	Focus on specific communities or countries	National	Prevention	Health equity within a nation or community	Multidisciplinary, particularly with health and social sciences

Source: Koplan JP et al, Lancet 2009, 373:9679 pp 1993-1995

Be it as it may, the truth remains that international health embraces both public and global health. It cuts across nations in preventing diseases and providing clinical care for various nations of the world using some disciplines careers.

In ensuring international health, all the components or dimensions of public health are captured in the bid to have a global health status that allows for smooth relationships in terms of economic, social, religious and all round supports amongst nations. It is also worthy of note that for global or international health to be achieved, the government, organizations and agencies through their activities tend to promote people's health at community, national or global levels. For example, WHO and some Non-Governmental Organisations (NGOs) collaborate to promote international health. They do this by upholding all the roles/functions bordering on public health. These according to Achalu (2020) include;

1. The assessment and monitoring of the health of communities and every population at risk in order to identify health problems and priorities
2. The formulation of policies designed to solve identified local and national health problems and priorities. The international health regulation (IHR) in 2005 was put in place as a treaty to guard and guide every action that can impact on health across the globe.
3. To assure that all populations have access to appropriate and cost effective care including health promotion and disease prevention services; and evaluation of the effectiveness of that care.
4. Surveillance, analysis and evaluation of populations' health status.
5. Develop policies and plans that support nation's health individually and communally.

6. Health promotion
7. Disease prevention
8. To develop effective programs and health facilities to protect health
9. Evaluation of public health policies, strategies and facilities.

Self-Test Exercises:

1. Define international health.
2. Distinguish international health from (a) global health and (b) public health

3.2 World Health Organization Role in International Health:

3.21 WHO As A Governing Body for International Health

The World Health Organization (WHO) is basically the international body responsible for governing and regulating health related practices and policies across the globe. WHO utilizes treaties and policies in addressing issues bordering on international health. However, it was criticized that many of their policies had limited binding power on the member states thereby forestalling compliance. The criticism eventually led to the proposal for Framework Convention on Global Health (FCGH) treaty to be enacted. It is to make use of stronger domestic accountability mechanisms such as incentives and sanctions to close global and national health inequalities. This also has attracted criticisms from some scholars who argued that FCGH would mean duplication of other global health governance efforts. In their words, FCGH lacks feasibility and have limited impact in regulating global health.

3.22 World Health Assembly (WHA) As a Decision Making Body of WHO

The World Health Assembly according to Amanze (2010) is the supreme decision making body for WHO. It generally meets in Geneva in May each year. It is attended by delegates from all 193-member States. Its main function is to determine the policies of the organization. The Health Assembly appoints the Director-General. The Assembly supervises the financial policies of the organization, reviews and approves the proposed programme budget. It also considers reports of the executive board which it instructs with regards to matters upon which further action, study, investigation or report may be needed.

The executive board is composed of 34 members technically qualified in the field of health. Members are elected for a three-year term. The main board meeting at which the agenda for the forthcoming health assembly is agreed upon and resolutions for forwarding to the assembly are adopted. This is held every January with a second semester brief meeting in the month of May immediately after the assembly for more administrative matters. The main function of the board is to give effect to the decisions and policies of the Health Assembly, to advise it and generally to facilitate its work.

The Secretariat of WHO is staffed by some 3,500 other health experts, and support staff on fixed term appointments, working at headquarters and in the six regional offices and in countries. The Organization is headed by the Director General, who is appointed by the Health Assembly on the nomination of the Executive Board (Amanze, 2010).

3.23 WHO's Responsibilities and Obligations towards International Health

WHO under 2005 International Health Regulations is tasked with obligations which include:

1. Directing and co-ordinating for health within the United Nations systems.
2. Providing leadership on global health matters.
3. Shaping the health research agenda, setting norms and standards.
4. Articulating evidence based policy options.
5. Providing technical assistance and support to member countries in response to public health emergencies.
6. Monitoring and assessing health trends.
7. Designating contact points
8. Conducting global surveillance and intelligence gathering to detect significant public health risks.
9. Supporting member states efforts to build and strengthen the core capacities for surveillance and response and at designated points of entry.
10. Assessing relevant events (including on-site assessment when necessary) and determining whether or not a particular event constitutes a public health emergency of international concern with advice from a committee of external experts.
11. Updating IHR (2005), its annexes and guidelines to maintain the scientific and regulatory validity.

For the fact that WHO operates in an increasing and rapidly changing ground, there seems to be no boundary any longer in public health actions. Existing boundaries if any have become blurred. It has extended into other sectors that influence health opportunities and outcomes.

In other to mitigate the challenges, WHO uses a 6 – point agenda which tend to address two health objectives. These include two strategic needs and two operational approaches (Amanze, 2010). They are discussed as thus:

1. **Promoting Development:** In its commitment to ensure health development through ethical principle of equity, access to lifesaving or health promotion interventions, WHO's activities give priority to health outcomes in vulnerable poor and disadvantaged groups. Some of its cornerstone health development agenda include the attainment of

health related Millennium Development Goals (MDGs), Prevention of diseases, treatment of chronic diseases and addressing the ignored tropical diseases.

2. **Fostering Health Security:** Due to increased urbanization, environmental mismanagement, unguarded food production and trading, use and misuse of antibiotics, there has been a global health threat to international health security leading to outbreak of emerging and epidemic diseases. The vulnerability to such health security threats can only be curbed by collective action. The world's ability to ward itself off disease outbreaks collectively was strengthened in June, 2007. According to Amanze (2010), that was when IHR came into force.
3. **Strengthening Health Systems:** This is needed in order to make it possible for health to operate as a poverty reduction strategy that will foster enablement and increased life expectancy through capacity building.
4. **Harnessing Research, Information and Evidence:** For the fact that evidence provides the foundation for setting priorities, defining strategies, measuring and evaluating results, WHO tends to gather authoritative health information. This they do by consulting leading experts that will set norms and standards, articulate evidence based policy options and monitors evolving situations of health globally.
5. **Enhancing Partnership:** WHO functions in collaboration with and supports from numerous partners. They include United Nations agencies and other International organizations, donors, Civil society and the private sector. WHO utilizes strategic power of evidence to encourage and motivate partners to implement programmes within countries and to align their activities with the best technical guidelines and practices as well as with the priorities established by the countries involved.
6. **Improving Performance:** In order to enhance its performance, WHO partakes in continuous reforms that aim for improvement in its efficiency and effectiveness within countries and international level. It ensures that its staff which happen to be its strongest asset work in an environment motivating and rewarding enough. WHO plans its budget and activities through result based management characterized by clear expected results that can measure country performance at both regional and international levels.

4.0 Self Test Exercises:

1. Explain WHO's roles with regards to (a) Being a governing body (b) As a decision – making body
2. State at least 3 WHO's responsibilities and obligations towards international health.
3. Discuss the 6-point agenda used by WHO in addressing the health objectives that include two strategic needs and two operational approaches.

5.0 Conclusion

Having studied this module and attempted the self test, it is acceptable to say that you have gained understanding of the meaning of International health and the roles played by the world health governing body (WHO) through its activities in achieving global health.

6.0 Summary

In this Unit, you have learnt the definition of international health. Also, roles played by the WHO, WHA as well as their responsibilities and obligations to ensure international health. There was also a Discuss on the 6-point agenda used by WHO in addressing the health objectives that include two strategic needs and two operational approaches.

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Unit2: International Health Regulations (IHR)

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3.2 World Health Organization roles in International health

3.2 Self-Assessment Exercise(s)

- 4.0 Conclusion
- 5.0 Summary
- 6.0 References/Further Readings

1.0. Introduction

The IHR is a legally binding instrument of international law. It is binding on 196 countries and aims for international collaboration amongst member nations in protecting, preventing and providing public health response to the spread of diseases. Always notifiable global diseases as recognized by the IHR include Smallpox amongst others while other potentially notifiable ones like cholera, West Nile fever amongst others that meet the criteria laid out by the IHR are immediately intervened upon once a country makes quick report within 48 hours. Since IHR (2005) was put into place, WHO has declared 4 Public health emergencies of international concerns (PHEICs). They include Polio, Ebola, H1N1 influenza amongst others. Once a PHEIC is declared, WHO coordinates an immediate response with the affected country and with other countries around the world.

2.0 Intended learning outcome

By the end of this Unit, you will be able to

1. Know the meaning of International health Regulations (IHR)
2. Explain the origin of IHR.
3. Understand rationales for IHR enactment
4. Understand IHR components
5. Narrate the benefits of the IHR member states
6. Explain criteria for which an event is PHEIC
7. Understand the Always Notifiable Diseases (AND)
8. Understand the Other Potentially Notifiable Events (OPNE)

3.0 Main Content

3.1 Meaning of IHR

The IHR was first adopted by the WHO assembly in 2005. It was regarded as a legally binding instrument of international law which aims for international collaboration in order to protect, prevent and provide a public health response to the spread of diseases in ways that commensurate with and restricted to public health risks and that also would avoid unnecessary interference with international trade and traffic. The IHR is regarded as the only international legal treaty that has the responsibility to empower the WHO to act as the main global surveillance system.

Following the 2002 – 2004 SARS outbreak in 2005, numerous changes were made to the previous IHRs of 1969. Precisely, the 2005 IHR came into force in June 2007. It has 196 participating countries that recognized that certain public health incidents, extending beyond disease, ought to be designated as public health emergency of international concern (PHEIC) as long as they pose a significant global threat. Its first full application was in response to the swine flu of 2009.

Self-Test Exercise

1. Define International health Regulations (IHR)
2. Explain the origin of IHR.

3.2 Rationale for IHR

i In today's interconnected society, it's more important than ever to ensure that all countries are able to respond and contain public health threats.

ii In 2003, SARS threatened global health indicative of how easily an outbreak can spread. Recently, the Ebola epidemic in West Africa, outbreaks of MERS-COV and the most recent COVID 19 have shown that we are only as safe as the most fragile state. It is expected that all countries show responsibility to one another by building healthcare systems that are strong capable of identifying and containing public health occurrences before they spread.

iii. Due to the fact that outbreak of diseases and other acute public health risks are often unpredictable and require a range of responses, the IHR (2005) provide an overarching legal framework that defines countries' obligations and rights in handling public health events and emergencies having the potential to cross borders.

iv. While previous regulations required countries to report incidents of cholera, plague, and yellow fever, IHR (2005) is more flexible and future-oriented. It requires countries to consider the possible impact of all hazards, whether they occur naturally, accidentally or intentionally.

v. Global health security is just not a health issue; a crisis such as SARS or Ebola can devastate economies and keep countries from developing economically. The World Bank Group estimated that Guinea, Sierra Leone and Liberia altogether lost \$1.6 billion at least in economic growth in 2015 as a result of Ebola virus epidemic. Such impact of economic devastation can reach farther and wider.

Self-Test Exercise

1. Explain using at least 5 points on the rationales for IHR enactment

3.3 Composition of IHR:

The components of IHR include the following:

- The IHR being an instrument of international law is legally-binding on 196 countries plus 196 WHO member states.
- The IHR grew out of the response to deadly epidemics that once overran Europe e.g Swine Flu in 2009.
- IHR creates rights and obligations for countries, including the requirement to report public health events.
- IHR outlines the criteria to determine if or not a particular event constitutes a public health emergency of international concern.

The IHR needs countries to map out a national IHR Focal Point (a centre of interest) to aid communications with WHO. This is to establish and maintain core capacities for surveillance and response at designated points of entry.

- Additional provisions in IHR address the areas of international travel and transport such as the health documents required for international traffic.

- The IHR avails important safeguards to protect the rights of travellers and other persons in relation to the treatment of personal data, informed consent and non-discrimination in the application of health measures under the Regulations.
- IHR (2005) includes specific measures countries can take at ports, airports and ground crossings to limit the spread of health risks to neighboring countries, and to prevent unwarranted travel and trade restrictions.

Self-Test Exercise

1. Explain your understanding of the IHR components

3.4 IHR Member States' Benefits:

While each country is fulfilling the obligations, it tends to enjoy the benefits of a respected partner in the International effort to maintain global health security. These benefits include:

1. WHO's guidance in building the core capacities necessary to quickly detect, report, assess and respond to public health emergencies, plus those of national and international concerns.
2. Technical assistance and possible funding support to meet these new responsibilities
3. WHO's guidance during the outbreak verification process
4. Access to privileged information gathered by WHO about public health threats in other countries that might affect you.
5. WHO's advice and logistical support when requested, to respond to disease outbreaks and other public health events.
6. Every country should have access to WHO's Global Outbreak Alert and Response Network (GOARN). A one-stop of global resources to help manage a public health emergency, including those of international concern.

3.5 IHR Basics to know

IHR (2005) requires that all countries have the ability to do the following:

- **Detect:** Make sure surveillance systems and laboratories can detect potential threats
- **Assess:** Work together with other countries to make decisions in public health emergencies
- **Report:** Report specific diseases, plus any potential international public health emergencies, through participation in a network of National Focal Points
- **Respond:** Respond to public health events/

3.6 IHR: Protecting People Globally

Under IHR (2005), a PHEIC is declared by the World Health Organization if the situation meets 2 of 4 criteria:

1. Is the public health impact of the event serious?
2. Is the event unusual or unexpected?
3. Is there a significant risk of international spread?
4. Is there a significant risk of international travel or trade restrictions?²

Once a WHO member country identifies an event of concern, the country assesses the public health risks of the event within 48 hours. If the event is always notifiable under the IHR, the country must report the health threat to WHO within 24 hours. Some diseases require being reported or notified under the IHR, no matter where or when they occur, while others become notifiable when they represent an unusual risk or situation.

Always Notifiable Global Diseases: These may include Smallpox, Human influenza caused by a new subtype, Poliomyelitis due to wild –type poliovirus and severe acute respiratory syndrome (SARS).

Other Potentially Notifiable Events: These include cholera, West Nile fever, yellow fever, pneumonic plague, viral hemorrhagic fever as well as any others that meet the criteria laid out by the IHR, other biological, radiological, or chemical events that meet IHR criteria. Since IHR (2005) was put into place, WHO has declared 4 PHEICs:

1. H1N1 Influenza (Sub type Influenza A virus) e.g. Swine Flu pandemic (2009)
2. Poliomyelitis (2014)
3. Ebola (2014)
4. Zika Virus (2016)
5. COVID 19 (2019)

Once a PHEIC is declared, WHO coordinates an immediate response with the affected country and with other countries around the world.

4.0 Self-Test Exercise

1. Narrate the benefits of the IHR member states
2. Explain criteria for which an event is PHEIC
3. What do you understand by the Always Notifiable Diseases (AND)?
4. What do you Understand by the Other Potentially Notifiable Global Diseases (OPNGD)?

5.0 Conclusion

Having studied this module and attempted the self tests, it is acceptable to say that you have gained understanding of the entire unit in line with the objectives of the unit. You are encouraged to repeat the contents of the unit and try answering the self test questions in any failed attempt. Continue until you have mastered the unit.

6.0 Summary

The unit at its completion has unveiled the meaning of International health Regulations, rationale for its enactment, IHR compositions, the member states as well as IHR basics to know in protecting people, Always Notifiable Global Diseases and other Potentially Notifiable Events.

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MODULE 2:

Module Introduction

The evolution of international health services is uncertain. There has not been an exact date that can rightly be proffered as the commencement period. It has been a matter of controversy among public health professionals as well as other stake holders particularly in the Maritime and Shipping Industries. The Origin, aim and rationale of international health services as well as various eras of its evolution leading to overall global health among nations are discussed.

Unit 1: International Health Services

Unit 2: Port Health Services

Unit 3: Port Health Service Professionals

Unit 2: International Health Services

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
 - 3.1 Origin of International Health Services
 - 3.2 Aims and objectives of IHS
 - 3.3 Rationale for the IHS Evolution
 - 3.4 Active years of IHS Evolution
 - 3.5 Self-Assessment Exercise(s)
- 4.0 Conclusion
- 5.0 Summary
- 6.0 References/Further Readings

1.0 Introduction

International health service is a system of health institutions which provide health services to people in various regions, continents across the world. The major function of IHS is to make international public goods that transcends the borders of any country. The evolution of IHS from the active years era to the world war era and finally to the era of WHO formation all led to the enactment of International Sanitary regulation (ISR). The main rationale for the enactment was to maximize protection against international spread of diseases with minimum interference with world traffic.

2.0 Intended Learning Outcomes:

By the end of this unit, students should be able to:

1. Give an account of the origin of IHS
2. Understand the Aims and objectives of IHS
3. Explain the rationale for the IHS evolution
4. Describe (a) Active years of IHS evolution

- (b) World War era service formation
- (c) The era of WHO formation
- (d) Era of enactment of International Sanitary Regulation (ISR)

3.0 Main Content

3.1 Origin of International Health Service: The evolution of international health services is uncertain. There has not been an exact date that can rightly be proffered as the commencement period. It has been a matter of controversy among public health professionals as well as other stake holders particularly in the Maritime and Shipping Industries.

It was the belief of some historians that International Health Services came to be in the 12th century. It was assumed to be in the time of navigational activities of the Ancient Greeks, Crete, Babylonians and Mediterranean explorers.

Self-Test Exercise

1. When did IHS come to be?

- (a) 19th Century
- (b) 21st Century
- (c) 12th century

2. IHS is quite observable in

- (a) Maritime and Shipping Industries
- (b) Mining and Steel Industries
- (c) Airlines and Rail Cooperations.

3.2 Aims of International Health Services

1. To ensure maximum security against the international spread of diseases with minimum of interference with world traffic.

2. To strengthen the use of epidemiological principles as applied internationally to detect, reduce, or eliminate the sources from which infections spread.

3. To improve sanitation in and around sea ports, International Airports and land borders/crossings, to prevent the spread of vectors.

4. To encourage epidemiological activities the national level so that there is little risk of outside infection establishing itself.

Self-Test Exercises

1. Highlight at least 3 Aims of HIS

3.3 Rationale for the IHS Evolution

The international health services evolution theory postulated that the 14th century plague epidemic in Europe contributed to what can be attributed today as modern International Health Services. The Plague was characterized by high mortality claiming about one quarter of the European population. This in essence brought about the introduction of quarantine. It entailed detention and monitoring of ships, aircrafts and motor vehicles for a period of 40 days. The essence then was to watch for the death of human beings or rats on board. Any Ship with deaths on board was refused entry while those without deaths were allowed to berth. The practice exhausted much time with unreliable outcome.

3.4 Active Years of IHS Evolution

IHS was not accepted universally because of the delays experienced in Port Operations and at the frontiers. The situation was so pathetic and was further aggravated by periodic cholera epidemic in Europe between the years 1830 and 1847.

In order to proffer lasting solution to the problem, the first international sanitary conference was held in 1851 in Paris, France. Following series of international meetings, an agreement tagged international sanitary convention was reached in 1903. It was targeted at controlling quarantinable and related diseases. Another convention in 1907 in Rome inaugurated an Organization that was to deal with the practical application procedures in a charter signed by 12 countries. The organization was known as the international office of public health with headquarters in Paris. OIHP as initiated was charged with disseminating information relating to communicable diseases as well as measures adopted for their control to member states.

3.5 World Wars Era of Health Services Formations

At the end of the first World War in 1914, the League of Nations was established. The league thereafter discussed the possibility of forming another health organization that will form a merger with the OIHP. A formal proposal to that effect was made by the international health conference in 1920. It resulted to the formation of the league of nations health organization (LNHO) in the year 1921. The LNHO was highly functional in epidemiological intelligence service, disease control, technical studies and assistance to governments amongst others.

With the outbreak of the Second World War in 1945, the United Nations Relief and Rehabilitation Administration (UNRRA) was created by the war time allies to cater for social reconstruction in liberated countries. During the war period, International Health programmes became stagnated. Temporary measures taken at that time include the transfer of the remaining staff members of the league of nations epidemiological intelligence service from Geneva to United States to organize an epidemiological intelligence service in the UNRRA health division. By January 1945, UNRRA took over the activities of OIHP and other bodies following the revision of the old constitution in 1944 (Amanze, 2010).

3.6 IHS Era of WHO Formation

In 1948, the acclaimed world health body, World Health Organization was founded. Consequently, the entire activities of United Nations Relief and Rehabilitation Administration (UNRRA) merged with it. The WHO Constitution thereafter called for a new set of regulations to replace the quarantine regulations for international health matters. WHO then had about 170 member countries.

3.7 Era of Enactment of International Sanitary Regulations (ISR)

The outcome of the membership committee deliberations was the enactment of the international sanitary regulations (ISR) in 1951. It was to prevent the epidemic of communicable diseases such as cholera, plague, yellow fever, small pox, typhus and relapsing fever. However, among the diseases, only yellow fever is remaining on the current list, the rest have been eradicated through definite public health measures.

The main rationale for the revision was to maximize protection against international spread of diseases with minimum interference with world traffic. The regulations were further amended in 1973 and 1981 respectively. The latest edition of the IHR came into existence in 2005. However, it was approved for implementation by the world health assembly in may, 2007. The Nigerian quarantine act was retouched in 1996. The Act was meant to enforce Port related offences decree number 12. It covers port health operations in the nation in land borders/crossings, seaports and international airports (Amanze, 2010).

4.0 Self-Test Exercises

Give a brief account of the origin of international health services (IHS) in terms of

- (a) Active years of IHS evolution
- (b) World wars era of health services
- (c) IHS Era of WHO formation
- (d) Era of Enactment of International Sanitary Regulation stating the main rationale for the enactment.

5.0 Conclusion

Having gone through this topic and answered the self-test questions, you have to a great extent understood the contents of the unit in line with the unit objective. Where you have failed to provide correct answer to the unit, you are encouraged to repeat the reading, memorize and attempt the question again. You can do this repeatedly until the unit is mastered.

6.0 Summary

In this unit, It was made known to you the evolution of international health services. Also, the aims of the international health services, the rationale for the international health service

evolution, world wars era of health service formations, IHS era of WHO formation as well as era of enactment of international sanitary regulations (ISRs)

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Unit 2: Port Health Services

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
- 3.0 Main Content
 - 3.1 Origin of Port Health Services in Nigeria
 - 3.2 Administrative Set up of Port Health Service Division
 - 3.3 Objectives of Port Health Office
- 4.0 Self-Test Exercise
- 5.0 Conclusion
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- 7.0 References/Further Readings

1.0 Introduction

A major area affecting international health is Port Health Services. Port services in Nigeria began as an offshoot of the outcome of the deliberations of the International Sanitary Conference (ISC). The formal history of Port Health Service in Nigeria could be traced to the devastating outbreak of plague in Lagos Island in 1925. Some international health challenges emerge in the course of exposure to the services. They include health problems such as cholera, plague, diarrhea, amongst others. However, prevention through vaccination, treatment, medical consultation on return from travel has all been proffered.

Unit 1: Intended Learning Outcomes

By the end of this unit, students should be able to:

1. Understand the origin of Port health Services
2. Explain responsibilities which the administrative set up of Port health services divisions are saddled with.
3. Explain the objectives of a Port health office

3.0 Main Content:

3.1 Origin of Port Health Services in Nigeria

Port Health Services in Nigeria began as an offshoot of the outcome of the deliberations of the International Sanitary Conference (ISC). The formal history of Port Health Service in Nigeria could be traced to the devastating outbreak of plague in Lagos Island in 1925. The impact of the disease at Eko and its environs led to the creation of Port health Services in Nigeria. However, the services were limited to Lagos during the colonial period. During that era, Apapa Ports continued to be busy with trade between Nigeria and other countries. Public Health Services then were administered by British Colonial Medical Officers until Dr. I.C. Oluwole was appointed, the assistant medical officer of health for Lagos. Dr. Oluwole revitalized port health services and sanitary inspection of ships and Port premises. The impact was much felt during the control of Yaws of 1930 and Small Pox of 1970s. The Pioneer pre-independence indigenous staff include Mr. J. A. James, Chief Shoremekun, Chief O.E.E. Offiong, Mr. H. I.K. Okechukwu and Mr. K O. Ibidunni.

The first MOH (Port Health) Nigeria was appointed in 1962 in the person of Dr. Opara Nnadi. He intensified the recruitment and training of man power for port health services at the then School of Hygiene Yaba Lagos through in service training programmes. He was followed by other Port Health Administrators,-. Late Dr, D. F. A. Asheley Dejo mounted the saddle as the head, Port Health Division in 1978. Dr. Asheley Dejo's tenure heralded a lot of glad tidings for Port Health Services in Nigeria including the construction of the headquarters organization at Ikeja-Lagos. He equally opened and expanded many borders and seaports. Dr. Asheley Dejo worked closely with Dr, Edugie Abebe who worked as the Assistant Head of the Division. Dr. Dejo left the services of port health division in 1994. Between 1994 and 2009 port health services division was under the administratorship of Dr, (Mrs) A. O. Asagba, Dr. (Mrs) E.O. Ademuson and Dr. (Mrs) M. E Mosanya respectively.

The following personalities equally brought succor to the division during their tenures as national co-ordinators. They are Mr. A. O.Adeniran, Mr. E.O Egbedino, Mr. H, A. B. Oseni, Mr. E. O Shodunke, Alhaji L. Salami and Mr, B A. Akinyemi. It is important to note that Port Health Service is the oldest division in the Federal Ministry of Health. It is also referred to as mother division (Amanze,2010).

Self-Test Exercise

1. The formal history of Port Health Service in Nigeria could be traced to the devastating outbreak of plague in Lagos Island in the year

- (a) 1925
- (b) 1952
- (c) 1955

2. The first MOH (Port Health) Nigeria was appointed in :

(a) 1962

(b) 1926

(c) 1972

3.2 Administrative Set up of Port Health Services Division

Port Health Services is a division in the department of public health of the Federal Ministry of Health. The division also known as the division of international health is saddled with the responsibilities of implementing the following (Amanze, 2010).

1. The International Health Regulations (IHR) of the world Health organization/United Nations (UN).
2. The International Maritime Organization (IMO) Laws on Health related matters.
3. The International Civil Aviation Organization (ICAO) laws on health related matters.
4. The Nigeria Quarantine Act (Aircraft and ship).
5. The Public Health Laws of Nigeria
6. The National Policy on Port Health

The headquarters of the Federal Ministry of Health is at Abuja while the port health services division headquarters organization is at Ikeja-Lagos.

Self-Test Exercise

1. Mention at least 2 responsibilities which the administrative set up of Port health services divisions are saddled with.
2. The headquarters of the Port Health Services is located in (a) Abuja (b) Calabar (Abuja).

3.3 Objectives of a Port Health Office

- a) To improve the standard of sanitation in and around the ports and to control the vectors responsible for communicable diseases as well as all agents of contamination.
- b) To check the International spread of quarantineable diseases such as yellow fever, plague, cholera, etc.
- c) To manage the environment and ensure that International and local health laws and regulations are complied with at the nations exit and entry points and within its perimeters.

- d) To prevent the sale, importation or exportation of contaminated food items within the sea port, air port area and land border.
- e) To keep an up-to date epidemiological surveillance of quarantineable diseases as applied internationally and to notify the WHO of any outbreak as well as the control measures adopted.

Self-Test Exercise

1. Highlight at least 4 Objectives of a Port Health Office

5.0 Conclusion

Having gone through this unit, you have to a great extent understood the contents of the unit in line with the unit objective. You have also attempted the self test questions in line also with the objectives of the unit. If unable to give a correct response to the self-test question, you are encouraged to repeat the reading and attempting the questions. Keep doing this until you have mastered the unit.

6.0 Summary

In this unit, you have understood the origin of port health services, administrative set up of port health services division as well as objectives of port health service office.

References/Further Readings

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Unit 3: Port Health Services Locations in Nigeria

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- 1.0 Introduction
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- 3.0 Main Content 3.1
- 3.1 Port Health Services Locations in Nigeria
- 3.2 The Operational Units of Port Health Services.
- 4.0 Self-Test Exercise
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

1.0 Introduction

The Port health locations made up of 5 zonal divisions across 5 geopolitical zones of Nigeria are strategically posited to oversee smooth import and export of goods and services in strict compliance with international health regulations thereby eliminating disease spread from one country port to the other.

2.0 Intended Learning Outcomes

By the end of the unit, Students should be able to:

1. Know the zonal locations of Port Health Services
2. Name the operational units and their designated Port Services.

3.0 Main Content:

3.1 Port Health Services Locations in Nigeria

The zonal locations are as follows:

- (1) North West zone with Headquarters at Kano
- (2) North East zone with Headquarters at Maiduguri
- (3) North Central zone with Headquarters at Abuja
- (4) South West zone with Headquarters at Ikeja, Lagos
- (5) South-South (Delta) zone with headquarters at Port Harcourt

Self-Test Exercises

1. Write the headquarters of these Port health services:

- (a) North West Zone
- (b) North East Zone
- (c) North Central Zone
- (d) South West Zone
- (e) South-South Zone

3.2 The Operational Units of Port Health Services.

The operational units can be found in the following Locations

1.Five International designated Airport

- (a) Nnamdi Azikiwe International Airport, Abuja
- (b) Murtala Muhammed International Airport, Ikeja-Lagos
- (c) Aminu Kano International Airport, Kano

- (d) Port Harcourt International Airport, Omagwa, Port Harcourt.
- (e) Magret Ekpo International Airport, Calabar.

2. Five designated Seaports

- (a) Apapa Port Complex, Lagos
- (b) Tin can Island Port, Lagos
- (c) Warri Port Complex
- (d) Calabar Port
- (e) Port Harcourt Port.

(3) One Approved Port

Onne Ports Complex comprising two Terminals

- (a) Federal Ocean Terminal (FOT)
- (b) Federal Lighter Terminal (FLT)

(4) Land Borders and Ground Crossings The land borders/crossings include:

- (a) Seme, Krake, Owodeapa (Lagos State)
- (b) Idi-Iroko, Ijoun, Ijofm, Ajegunle, Alari, Ohunmbe, Obele, Imeko, Ilara, Tobolo (Ogun State)
- (c) Bukuro, Okuta, Babana, Budo-Aiki and Chikanda (Kwara State)
- (d) Gamburo Ngala, Banki, Kirawa, Baga, Darak, Duji and Daban-Masa (Borno State)
- (e) Mubi (Adamawa)
- (f) Maigatari, Malawa, Galadi and Dan-Gwanki (Jigawa State)
- (g) Gembu, Kan-lyaka, Abong, Bang-Dawn, Ghana and Tamiya (Taraba State)
- (h) Magama-Jibaya, Kongolam, Baban-Mutum and Mai-ada (Katsina State)
- (i) Saki, Ijio, Aiyegun, Igbojaye and Okeretedo (Oyo State)
- (j) Port Obasanjo (Tolu-Toluwa), Geidam, Kanama, Nguru, Gashua and Machina (Yobe State)
- (k) Ilela, Tangaza, Semia, Maje, Rofm-Duma Kamba, Kangiwa, Dole-kania, Lolo and Bagubo (Sokoto/Kebbi States)

- (l) Babana (Niger State)
- (m) Mfun, Ekang (Cross-River State)

(5) Three dry Inland Port

- (a) Ibadan (Oyo State)
- (b) Jos (Plateau State)
- (c) Kano (Kano State)

(6) Eleven Trans-Border Markets

- a) Seme (Lagos)
- b) Idi-Iroko (Ogun)
- c) Okeretedo (Oyo)
- d) Ilela (Sokoto)
- e) Saki (Oyo)
- f) Magama - Jibaya (Katsina)
- g) Gembu (Taraba)
- h) Nguru, Gashua (Yobe)
- i) Banki (Borno)
- j) Maigatari (Jigawa)

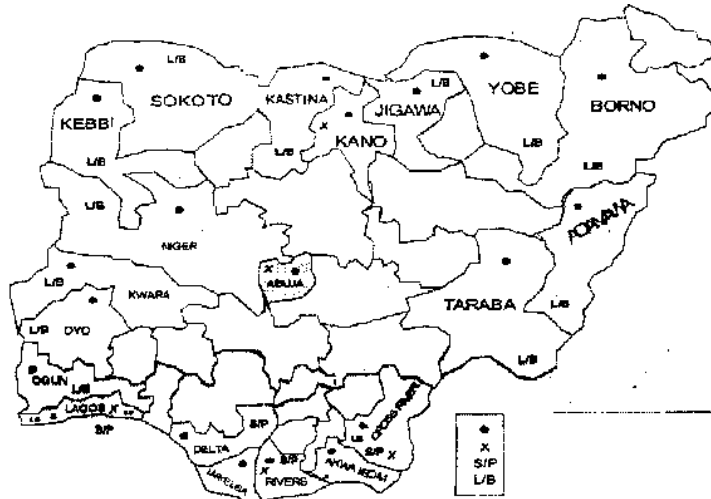


Figure 1: Map of Nigeria showing Port Health Services Operational locations (Amanze, 2010).

Self-Test Exercise

1. Mention 5 International Airports where Operational Units can be found
2. List at least 4 each of (a) Designated Sea Port (b) Land Borders and Ground Crossings (c) Trans-Borders Markets.
3. Mention 1 Approved Port

4.0 Conclusion

Having studied this unit, It is assumed that you have understood the contents in line with the stated objectives of the unit. In any area of conflict either in understanding or failure to answer correctly the self-test question, you are encouraged to go back, study again and attempt the self-test exercise once more until you have mastered the unit.

Summary

The Port health services observed in various countries locations are widely recognized in keeping up with day-to day update on disease surveillance across nations with much emphasis on protecting lives as well as goods coming in and out of the country from all kinds of disease invasion making use of professionals in disease detection and control.

The Unit has presented you with the various locations of Port Health Services in Nigeria vis- a-avis zonal locations, operational units comprising locations of 5 international designated

Airports, 5 designated Seaports, one approved Port, Land Borders and ground Crossings as well as 3 Dry Inland Port and 10 Trans-Border markets. The avenues serve as points of entries for both human and goods thus creating proper ground for health situational analysis.

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Unit 4: Port Health Services Team /Professionals

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
- 3.0 Main Content
 - 3.1 Members of Port Health Team
 - 3.2 The Vision and Mission of Health Service Division
- 4.0 Self-Test Exercise
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

1.0 Introduction

The Port health team is multidisciplinary in composition. The personnels are made up of a barrage of professionals who work as a team to actualize the objectives of international health through efficient Port health services delivery.

2.0 Intended Learning Outcomes:

By the end of the lesson, the students should be able to:

1. Name members of Port health team
2. Explain the roles of the members of Port health team
3. Understand the vision and mission of health service divisions.

3.0 Main Content

3.1 Port Health Team/Professionals:

Medical Officer: The Medical officer is by training the leader of the Port Health -team. He administers the day-to-day activities of the port health office.

Medical officers function as the Medical Officers of Health in their various locations.

Environmental Health Officer: The Environmental Health officer is the core health Professional in port health service delivery. The Environmental Health officer is at the forefront of various port health duties. In fact, he is the only officer authorized by the International Health Regulations (IHR) to board a vessel arriving from an international voyage for the purpose of boarding and clearing. The Environmental Health officer is equally a technical adviser to the Medical Officer.

Port Health Nurse: The Port Health Nurse performs clinical duties under the supervision of the Medical Officer. The duties include: Immunization of intending travelers screening of passengers including pilgrims

- Treatment of minor ailments
- Referrals/ Monitoring of quarantined/isolated cases
- Routine immunization services

Port Health Educator: The Port Health Educator performs Health Promotion, Education and Communication activities in the ports. In fact, the Port Health Educator is a resource person in Information, Education and Communication (IEC) component of port health services. His main activities include:

- Health and Safety Education of crew members andPort users.
- Training of students on port heath-related activities.
- Carrying out public health education on:
 - Port safety
 - Environmental sanitation
 - International immunization
 - Food hygiene, sanitation and food handlers training.
 - Solid waste management
 - Pest, vector control and HIV/AIDS Education/Counselling.

Scientific Officer (SO): The Scientific Officer performs the following functions:

Water Analysis (Microbial and chemical) Food Analysis (Microbial) Pollution Investigation

Pharmacist: The Pharmacist is in charge of the dispensing of essential drugs prescribed to patients at the seafarers clinic. He is equally in charge of the drug store, drug requisition and drug itinerary.

Medical Laboratory Scientist (Biomedical Scientist):The Medical Laboratory Scientist conducts clinical tests meant for the treatment of patients at the seafarers clinic. He is in charge of the Biomedical Laboratory section.

Other ancillary staff of the port health team include the following:

1. Health Record Technicians and Assistants
2. Health Assistants
3. Health Attendants
4. Ambulance Drivers

Self-Test Exercises

1. Which of the following is not an ancillary staff of Port health team?
 - a. Ambulance drivers
 - b. Health Educators
 - c. Health attendants
 - d. Health Assistants
 - e. Health record technicians and assistants
2. What is the role of the pharmacist in sea port services?

3.2 Vision and Mission of Port Health Service Division

Vision: To provide prompt and effective first class services in line with global best practices aimed at reducing morbidity, mortality and disability due to Communicable and Non-Communicable diseases using National and International accepted laws and principles.

Mission: A division that provides well co-ordinated and articulated services within a frame work that is driven by an efficient, effective and cohesive workforce .for the attainment of sustainable public health in Nigeria and contributing significantly to the global health security (Amanze, 2010).

Figure 2: Organogram of Port Health Services Division,

Department of Public Health, Federal Ministry of Health

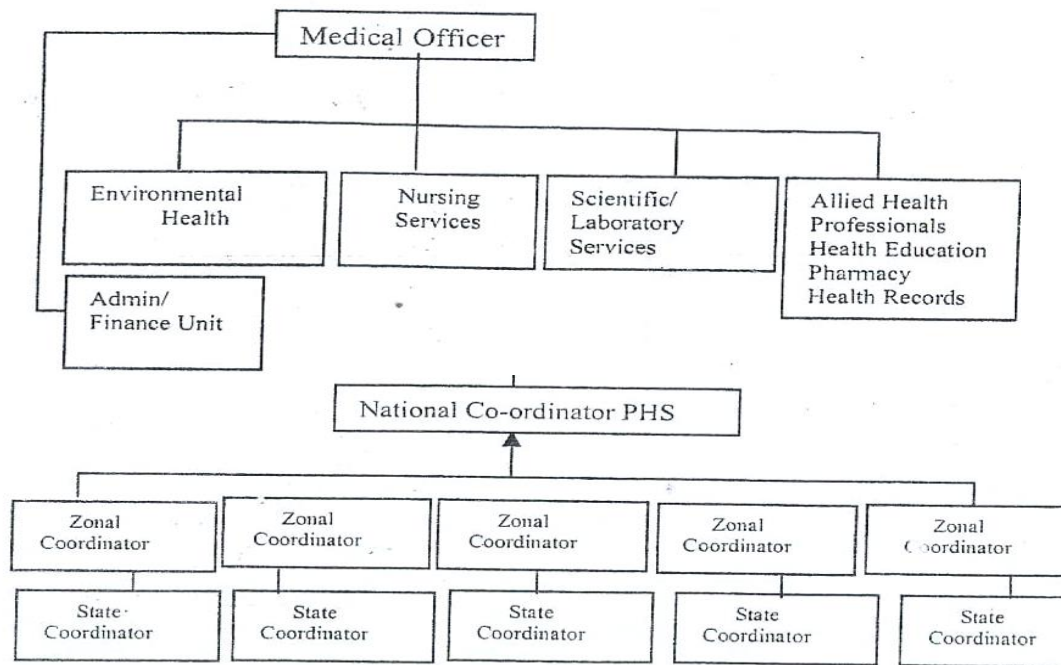


Figure 2: Organogram of a Typical Port Health Office (Amanze, 2010).

4.0 Self -Test Exercises

1. What is the vision of Port health service?
2. Give brief explanation on the Mission of Port Health Service Division.
3. Give brief explanation on the Mission of Port Health Service Division

5.0 Conclusion

Having gone through this unit, it is assumed that you have understood the contents of the unit in line with its objectives. Where you have failed to answer the self-test question, you are encouraged to repeat studying the unit content, try the question again until you have mastered the contents.

Summary

In this unit, you have been equipped with information on the Port health services performed by trained professionals known as port health service team. They work in collaboration with other

members of the team to bring about good port health service delivery. The roles performed by each of them as well as mission and vision statements with regards to port health service divisions were studied.

References/Further Readings

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MODULE 3

Module Introduction

A lot of work in international health is mostly performed by non-governmental organizations (NGOs). These include provision of community potable water, direct health care, mitigation of epidemic and endemic diseases, averting malnutrition and vitamin supplementation.

Unit 1: International Health Related Non-Governmental Organizations(NGOs)

Unit 2: Role of the NGOs in International Health

Unit 1: International Health Related Non-Governmental Organizations(NGOs)

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
- 3.0 Main Content
 - 3.1 Meaning of NGO and Examples.
 - 3.2 NGOs committed to International Health
 - 3.3 Roles of NGOs in International health.
- 4.0 Self-Test Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

1.0 Introduction

There are some NGOs committed to health services across regions globally. Non-governmental organizations are essential elements in the representation of the modern world. The general Director of WHO between 1973 and 1988 recognized NGOs ability to influence Policy makers. It was made known that NGOs mount strong pressure on WHO to proceed beyond disease –focused, techno management approach, expert-dependent to a system where community involvement and participation, intersectoral coordination and appropriate technology were recognized (Anbahagan and Surektia, 2016).

2.0 Intended Learning Outcomes (ILOs)

By the end of the study, the students should be able to:

- 1. Know the various NGOs committed to international health
- 2. Understand the NGOs Roles

3.0 Main Content

3.1 Meaning of NGO: This refers to non-profit organization which functions independently of any government assisting to address social or political issues as well as health needs and interests of populations where they exist. It can exist on local, national and international levels. It is basically established to act voluntarily in non-profit making activities. NGOs tend to further social and humanitarian missions around the globe (Candid Learning, 2021 and Folger, 2021).

Key Issues Addressed by the NGOs According to Anbahagan et al (2016):

- 1.Environment
- 2. Labour standard
- 3. Poverty

4. Globalization

5. Animal rights

Examples of NGOs Include Amnesty International, Mercy Corps, Doctors without borders, International Rescue Committee, Bill and Gates Foundation among numerous others.

3.2 NGOs committed to International Health

Some of the NGOs committed to health services include amongst others:

1. Philanthropic Foundations such as Bill & Melinda Gates, Atlantic Philanthropies, Caenegie, Rockefeller, Clinton Global Initiative, Carlos Slim, Josiah Macy, Jr., Kellogg, Ford, MarcArthur, Seva Foundations amongst others.
2. The Food Foundation
3. Medecins Sans Frontieres (Doctors without borders)
4. The International committee of the Red Cross
5. International Medical Corps
6. Oxfam
7. Partners in Health
8. Project HOPE
9. Save the Children
10. Doctors of the world
11. Medic Mobile
12. International Medical Corps
13. Mothers 2 Mothers
14. Mercy Ships
15. Hope International Services
16. Heart to Heart International
17. Health Horizons International
18. Health in harmony

19. Child Family Health International
20. Health Leadership International Seattle
21. AMOS health and Hope
22. Project World health
23. Seed Global Health
24. Shoulder to Shoulder
25. Volunteers in Medical Mission
26. Project Medishare.
27. Pakistan Heart Foundation
28. International Rescue Committee
29. Freedom from hunger
30. Doctors for Global Health
31. Faith-based Organisations for example Catholic Relief Services, Christian Aid, Lutheran World Relief, Unitarian Universalist Service Society

In Nigeria, some of the following NGOs can be found:

1. Action Health Incorporated
2. National Agency for the Control of Aids (NACA)
3. Poverty Alleviation for the poor Initiative
4. Health and Social Service Initiative
5. Afri-Growth Foundation
6. Society for Family and Health
7. Foundation for Promotion of Good Health
8. Challenged Children Foundation (3CF)
9. Women Environmental Programme (WEP)

10. Civil Society Advocacy Centre
11. Civil Society for Poverty Eradication
12. Pathfinder International
13. Female Leadership Forum
14. Grace Center
15. Initiatives for Basic Rights of Nigeria Citizens (IBRONC)
16. The Nigerian Foundation
17. Women of Vision Association

4.0 Self-Test Exercises

1. What is the meaning of NGO?
2. Mention at least 10 NGOs globally acknowledged in health services
3. State at least 4 key areas addressed by NGOs
4. Explain the role of Doctors without borders as a humanitarian organization

5.0 Conclusion

Having studied this unit and answered the self-test questions, it is assumed that you have understood the contents of the unit in line with the objectives. You are encouraged to keep studying and answering the self-test exercises until you have mastered the unit contents.

6.0 Summary

In the unit, you have learnt about NGOs globally and locally. Their visions and missions as well as roles played by the NGOs with regards to international health were studied.

7.0 References/Further Readings

Anbazhagan, S. and Surektia, A. (2016). Role of non-governmental organizations in global health. Doi:<http://dx.doi.org/10.18203/2394-6040.ijcmph20151544>. International Journal of Community Med Public Health 17-22.

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Unit 2: Role of the NGOs in International Health

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
- 3.0 Main Content
 - 3.1 some Major Roles of NGOs
 - 3.2 Roles of NGOs in Primary Health Care (PHC)
 - 3.3 NGOs Roles in Schools of Public Health
 - 3.4 Role of NGOs in Global Health Research
- 4.0 Self-Test Exercise
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

1.0 Introduction

In the last unit, the meaning and numerous NGOs were studied. The NGOs however, have definite roles they play depending on their missions and visions. Nevertheless, in the course of the roles, lives across nations, regions and globe are touched positively. The specific roles which these NGOs perform are addressed in detailed manner in this unit especially as it relates to primary health care (PHC), schools among other areas of life.

2.0 Intended Learning Outcomes:

By the end of this unit, students should be able to:

1. Explain the major roles of NGO in International health
2. Understand NGOs role in Primary Health Care
3. Explain the roles of some identified NGOs: Doctors without Borders, International Committee of the Red Cross, International Medical Corps, Oxfam among others.

3.0 Main Content

3.1 Some Major Roles of NGOs:

1. NGOs help in setting standards for training, practice and continuing education in order to define roles of health workers when it comes to national programs.
2. Some NGOs concentrate on certain diseases or activities such as on cardiovascular diseases, tuberculosis, leprosy, programs for the disabled among others.
3. The NGOs not directly involved in health care also add to health appreciation by contributing in one way or the other to total human development. For example, through projects to improve nutrition, housing, food production, provision of safe water, literacy promotion, provision of education and resources needed (e.g, instructional materials), more community development; provision of training by using broad range of skills, protection of the environment among others. Emphatically, NGOs help to create conducive conditions to the protection; promotion and health maintenance as well as the prevention of illness and diseases.
4. In recent time, there has been increasing capacity of NGOs to develop cooperations among themselves internationally, nationally and locally. This is to pave way for consultation and exchange of information necessary for joint actions.

Self-Test

1. NGOs set standards in the following with the exception of (a)training (b) practice (c) continuing education (d) terrorism.
2. Give reason for the NGOs recent collaborative efforts internationally, nationally and locally.

3.2 Roles of NGOs in Primary Health Care (PHC)

NGOs are effective in all levels of development of primary health care programs. They work for better and greater understanding and formation of positive attitude towards PHC (Anbazhagan and Surektia, 2016). This can be done through:

- (a) Promoting dialogues within and among NGOs.
- (b) Maintaining dialogue with authorities in government.
- (c) Providing information while creating new ways of explaining PHC to the general public.
- (d) NGOs tend to strengthen means of communication in order to accomplish information dissemination.
- (e) NGOs assist in national policy formation both in the areas of health care as well as integrated human development.
- (f) NGO scan identify and present communities health care needs based on their close contacts with communities.
- (g) They also can interpret PHC plans to relevant donor agencies.

- (h) NGOs can establish greater means for collaboration as well as coordination of PHC activities. Such can be done among the NGOs, between them and governments internationally, nationally and locally.
- (i) NGOs tend to contribute to PHC in many ways through implementation of programs by:
 - a. Providing assistance to develop and strengthen local NGOs' capabilities and activities focused on local communities and development groups.
 - b. Conducting reviews and assessment of existing health and development programs thus assisting various communities exercising their own roles in such reviews. A greater emphasis targeted on evaluation techniques will render the programs more accountable to community real needs.
 - c. Developing innovative programs by PHC in the context of comprehensive human development.
 - d. Ensuring that the NGOs existing programs and new initiatives promote active and full individual and community participations in programme planning, implementation, and control.
 - e. Expanding their training efforts in order to respond to the needs of primary health care programs. For example training of supervisors, health workers, administrators, planners and different agricultural development workers. There should be training schemes that would build on the skills of traditional healers and birth attendants.
 - f. Extending their efforts so as to develop locally sustainable health technologies and use of resources with special focus on water, energy, agriculture, medical care and sanitation.
 - g. Contributing to the formation of new and effective methods of health education that will enable individuals and communities to assume greater role for their health.
 - h. Recognizing the essential roles of women in health promotion within the communities.
 - i. Extending further their capacity to work with vulnerable poor, disadvantaged as well as remote populations thus enabling them to break poverty cycle of deprivation. This way, they can contribute to the search for social justice.

Self-Test Exercises

YES or NO ?

1. NGOs maintain dialogue with authorities in government in PHC matters
2. NGOs tend to strengthen means of communication in order not to accomplish information dissemination.

3. NGOs do not in any way assist in national policy formation both in the areas of health care as well as integrated human development.
4. NGO scan, identify and present communities health care needs based on their close contacts with communities.
5. They also can interpret PHC plans to relevant donor agencies.

3.3 NGOs Roles in Schools of Public Health (SPH)

Some organizations provide direct funding for the development and capacity building of SPHs. For example, Bangladesh Rural Advancement Committee (BRAC), the largest

NGO in the world helped in the establishment of the James Grant School of Public Health in 2004 in order to supply well trained public health workforce, NGOs accomplish this through direct involvement and funding. Nevertheless, more government and NGOs' funding is required to continue the establishment and expansion of schools and programs of public health education.

3.4 Role of NGOS in Global Health Research

NGOs tend to contribute at all levels of research cycle thus fostering effectiveness and relevance of research through setting of priorities and translation of knowledge to action.

NGOs have key roles in promoting, advocating, mobilizing for research resource, generalization, utilization of relevant global health research, resource mobilization for research, making generalizations, utilization, management of knowledge and capacity development for relevant global research. However, the involvement of NGOs in research is deficient in knowledge production. Often, it takes the form of partnership with universities or some dedicated research agencies.

4.0 Seft-Test Exercise

1. Distinguish NGOs role in Schools of public health from its role in global research

4.5 Conclusion

Having completed reading through this unit and making reference to links and tests available, it is assumed that you have learnt what you are expected to learn in the unit. Being able to answer some of the questions you were asked means the extent you have achieved in the unit. Where your performance is below expectation, go back to the text till you get it right.

6.0 Summary

In this unit, you got to know about NGOS locally, nationally and worldwide or internationally. Their major roles as well as their roles in schools, PHC and global research were studied.

7.0 References/Further Readings

Anbazhagan, S. and Surektia, A. (2016). Role of non-governmental organizations in global health. Doi:<http://dx.doi.org/10.18203/2394-6040.ijcmph20151544>. International Journal of Community Med Public Health 17-22.

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Unit 3: Specific Roles of Some Prominent NGOs in International Health

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
- 3.0 Main Content
 - 3.1 The Role of Medecines Sans Frontiere (MSF)
 - 3.2 The Role of International Committee of the Red Cross (ICRC)
 - 3.3 The Role o International Medical Corps (IMC)
 - 3.4 Oxfam Role
- 4.0 Self-Test Exercise
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

1.0 Introduction

NGOs perform essential roles in this modern day world. Apart from their major roles in international health, Primary health care and in global research, Some well known NGOs engage in roles and functions quite spectacular. They carry out their tasks ensuring full individual and community participations at all levels of their planning, implementation and control.

2.0 Intended Learning Outcomes:

By the end of this unit, students should be able to:

1. Narrate the role of Medecins Frontieres MSF (Doctors without Borders)
2. Understand the role of International Committee of the red Cross (ICRC)
3. Explain the role of International Medical Corps (IMC)
4. Narrate the role of OXFAM

3.0 Main Content

3.1 The Role of Médecins Sans Frontières MSF (Doctors without Borders)

Médecins Sans Frontières is an international and humanitarian medical non-governmental organisation (NGO). It is of French origin and one of the world's leading independent organizations. It exists merely for medical humanitarian aids. It offers quality medical care to people including those caught in crisis. Regardless of race, religion or political affiliation, MSF functions.

Established in 1971 by a group of doctors and journalists that aimed to establish an independent organisation that would focus on emergency medical care and voicing out about human sufferings and causes, MSF's work is founded on humanitarian principles of medical ethics. MSF field staff basically includes doctors, nurses and administrators as well as epidemiologists, technicians, laboratory and mental health professionals. Others are water, logistics and sanitation experts. Majority of MSF teams are of national field staff that are from the countries where crises are occurring with 10% made up of international field staff. It is mandatory for all MSF's members to agree to honour all principles set out by the MSF Charter.

Self-Test Exercise

1. Highlight any role performed by doctors without borders
2. Staff of Doctors without borders in all but one (i) Doctors ii) Nurses
(iii)Epidemiologists (iv) Mercenaries

3.2 The Role of International Committee of the Red Cross (ICRC)

The International Committee of the Red Cross ICRC was established in the year 1863. The NGO works globally so as to ensure humanitarian protection as well as render assistance to people. The ICRC is a humanitarian organization that is based in Geneva, Switzerland. It is a three-time Nobel Prize Laureate (Relief Web, 2020).

The ICRC functions basically on the Geneva Conventions in 1949. It is an independent and neutral organization which ensures humanitarian protection and also offers assistance to victims of war and armed violence. It responds to emergencies and carries out activities that promote respect for international humanitarian law as well as its implementation in national law.

In its mission statement, the ICRC is impartial. It is neutral and an independent organization whose exclusively humanitarian mission involves protecting lives and dignity of victims of armed conflicts and other situations of violence while providing them with assistance. The ICRC makes effort also to prevent suffering by promoting, strengthening, abiding with the humanitarian law as well as universal humanitarian principles.

Being the custodian of the Geneva Conventions, ICRC possesses a permanent mandate from international law to visit prisons, reunite separated families, organize relief operations and undertake other various humanitarian activities during wars. Also, ICRC functions to meet the

needs of Internally Displaced Persons (IDPs), raise public awareness on the dangers of mines as well as explosive remnants of war. ICRC trace people who may have gone missing in times of armed conflicts.

The organization has more than 12,000 staff in about 80 countries globally. About 30 per cent of the ICRC's activities are done with cooperation from National Societies. The ICRC is being funded by contributions from the States party to the Geneva Conventions. They also get financed from Red Cross, Red Crescent Societies and supranational organizations like the European Commission. Public and private donors also assist in funding the ICRC. Annually, the ICRC launches an appeal to enable it cover its projected costs in the field and also in its headquarters. Additional appeals are also made if the need arises in the field.

Self-Test Exercises

1. ICRC means
2. Highlight any role by the ICRC.
3. ICRC functions basically on 1945 (a) France Convention (b) Israel Convention (iii) Geneva Convention

3.3 The Role of International Medical Corps (IMC)

The International Medical Corps active in 30 countries of Asia, Africa and Middle East happens to be a global, nonprofit and humanitarian organization dedicated to saving of lives and offering reliefs to people suffering. This is done through health care training, providing developmental programs and reliefs. IMC was established in the year 1984 by volunteer doctors and nurses. It is a private, voluntary, nonsectarian and nonpolitical organization. It has a mission to improve quality of lives through health interventions and carrying out related activities that tend to build local capacity within underserved communities globally. It provides training and health care to local populations. IMC offers medical assistance to people in very high risk areas, and has the flexibility to respond rapidly to emergency situations. International Medical Corps carries out rehabilitation of devastated health care systems. It draws them back to self-reliance.

International Medical Corps worldwide is a global humanitarian alliance that consists of the resources and capabilities of two independent affiliate organizations. They are International Medical Corps UK and International Medical Corps. In unison, their mission involves saving of lives and relieving sufferings.

Other areas of priorities are well-being, mental health, clean water, sanitation and hygiene. Technically, they offer assistance for nutrition and food security programs and also surveillance as well as control and treatment of immuno-preventable and epidemic diseases. The IMC have 4,000 field-based staff with about 200 physicians and public health experts. They also have medical directors coordinating their activities at regional and national levels. They also have health technical unit comprising experts in nutrition and food security, HIV/AIDS, infectious diseases, livelihoods and agriculture, refugee populations, fragile states and pandemic preparedness (Devex, 2021).

Self-Test Exercises

1. Mention any 4 areas of IMC Priorities
2. How many affiliate organizations does IMC consist of ?

3.4 Oxfam Role

Oxfam, Founded in 1942 and a confederation of 20 independent charitable organizations, is a global movement of people working together to bring to an end injustice of poverty. In other words, Oxfam fights against inequality to end poverty and injustice, across regions from local to the global. In Nigeria, Oxfam plays great role in order to influence policy change that will favor the poor and the most vulnerable, thereby promoting food security by supporting small-scale farmers (Wikipedia, 2020).

Oxfam works on fair trade, trade justice, education, livelihoods, gender equality, HIV/AIDS, health, Livelihoods, debt and aid, conflicts, arms and trade, natural disasters, human rights, democracy, climate change and human rights. During various global crises, Oxfam has provided relief services including the Israeli-Pakistani conflict, 2011 East Africa drought, North Korean famine, 2012 Sahel drought, Yemeni crisis and Nepal earthquake (Wikipedia, 2020).

Suffice it to say that the NGOs and foundations in their bids to provide services to people who are affected by natural disaster or conflicts of various natures face a lot of difficulties. For instance, Medecins Sans Frontieres has lost its members in the area of Dafur. The Iraq Director, Margaret Hassan was brutally murdered for providing equitable services among Iraqis. (See Attacks on humanitarian workers.

4.0 Self-Test Exercises

1. Oxfam was founded in (a)1234 (b) 1942 (c) 1987
2. Identify any 3 areas that Oxfam works
3. Briefly explain Medecins Sans Frontieres (MSF) and International Medical Corps (IMC) in terms of (i) Year founded (ii) Number of countries where it is operating (iii) Focus area (iv) Personnel/Staff in its operation.

5.0 Conclusion

Having completed reading through this unit and making reference to links and tests available, it is assumed that you have learnt what you are expected to learn in the unit. Being able to answer some of the questions you were asked unveils the extent you have achieved in the unit. Where your performance is below expectation, go back to the text till you get it right.

6.0 Summary

In this unit, you got to know about the roles of some prominent NGOS such as Medecines San Frontiers (Doctors without borders), Oxfam, International Corps and ICRC).

7.0 References/Further Readings

Relief Web (2020). Careers at ICRC- International committee of the red cross. <https://reliefweb.int/organization/icrc>.

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MODULE 4

Module Introduction

Multilateral and Bilateral Organizations comprising WHO, World Bank, United Nations (UN), United Nations International Children's Fund (UNICEF), United Nations Development Program (UNDP), World food Programme (WFP), Coalition for Epidemic Preparedness Innovation (CEP), Global Fund to Fight AIDS, Tuberculosis and Malaria., the Global Vaccine Alliance (GAVI), the United Nation Population Fund (UNPF) amongst Others play a huge role in international health. They usually get financed from multiple governments to protect lives and interests of people across the globe.

Unit 1: Multilateral Organizations/Agencies

Unit 2: Bilateral Organizations/Agencies

Unit 1: Multilateral Organizations/Agencies

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
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 - 3.1 Meaning of Multilateral Organizations/Agencies (MLAs)
 - 3.2 Reasons Donor Countries Give Aids to MLAs
 - 3.3 Names of the MLAs
 - 3.4 Functions of MLAs
 - 3.5 WHO as a Multilateral Agency
 - 3.6 World Bank as a Multilateral Agency
 - 3.7 UNICEF as a Multilateral Agency
 - 3.8 UNDP as a Multilateral Agency
- 4.0 Self-Test Exercise
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

3.0 Main Content

3.1 Meaning of Multilateral Organizations or Agencies

These are agencies that provide loans and guarantees for investments that align with their developmental goals. They comprise WHO, World Bank, United Nations (UN), United Nations International Children's Fund (UNICEF), United Nations Development Program (UNDP), World food Programme (WFP), Coalition for Epidemic Preparedness Innovation (CEP), Global Fund to Fight AIDS, Tuberculosis and Malaria., the Global Vaccine Alliance (GAVI), the United Nation Population Fund (UNPF) amongst Others. They usually get financed from multiple governments. For instance, the USA can successfully make effective its commitments to UN sustainable development goals (SDGs). In turn, they meet overall strategic health objectives of the USA.

From the money generated, the multilateral Agencies fund projects in various continents and countries of the world (Unite for Sight, 2021). They are integral in nature, coordinate and mobilize global support in order to achieve global health objectives example UN (Global Health Council, 2021).

For people seeking for jobs in such multilateral agencies, it is expected that they have specialized trainings in such related fields as public health, behavioural or social science, business and economics. Prior experience in the related area is of great importance.

3.2 Reasons Donor Countries Give Aids to Multilateral Agencies

1. Multilateral aid is usually seen as less political form of aid than bilateral aid. It encourages international cooperation rather than commercial and strategic interests of the respective donor countries.
2. Multilateral agencies tend to pull resources together which makes possible, the implementation of large scale programs which are found beyond the capacity of each donor countries through bilateral aid offer.
3. Multilateral aid helps coordinate donors as to address regional and global issues and also harmonize efforts in reducing burdens of donor countries in the receiving countries.

Self-Test Exercises:

1. What does multilateral Organization mean?
2. Use at least 3 reasons to justify the aids they receive from Donor Agencies

3.3 Names of the Multilateral Organizations/Agencies:

The following are found to be the World's biggest and popular Multilateral Donors:

- African Development Bank (AFDB)
- Andean Development Corporation (CAF)
- Asian Development Bank (ADB)
- European Investment Bank (EIB)
- European Bank for Reconstruction and Development (EBRD)
- Inter – American Development Bank (IADB)
- International Fund for Agricultural Development (IFAD)
- International Bank for Reconstruction and Development (IBRD;part of the world bank group)

- International Monetary Fund (IMF)
- Multilateral Investment Guarantee (MIGA, a part of world bank group)
- International Organization for Migration (IOM)
- Organization for Economic Cooperation and Development (OECD)
- United Nations Children’s Fund (UNICEF)
- United Nations (UN)
- United Nations Conference on Trade and Development (UNCTAD)
- United Nations Environment Programme (UNEP)
- United Nations Development Programme (UNDP)
- United Nations High Commissioner for Refugees (UNHCR)
- World Bank Group (WBG)
- United Nations Industrial Development Organization (UNIDO)
- World Food Programme (WFP)
- World Trade Organization (WTO)
- World Health Organization (WHO) plus other numerous multilateral agencies mentioned earlier on this chapter. Their memberships are made up of member governments that collectively govern the organization. They are their fundamental and primary source of funds (Funds for NGOs, 2021).

3.4 Functions of Multilateral Organizations/Agencies

They help protect lives and interests of people in various nations of the world for instance, USA by doing the following:

- They coordinate global response to infections and disease spread and related health emergencies
- They provide prevention, care services and treatment for AIDS, malaria, TB and non transmissible diseases (NTD).
- They work to ensure that every child around the globe have equal access to vaccines
- They improve maternal health outcomes and contraceptives access to women

- They catalyze investments that are from other countries of the world and partners to give support to every program that is focused on improving the health of women, children as well as adolescents.
- In USA in particular, they facilitate success of U.S. bilateral programs and also amplify the effect which the U.S. investments are having on global health.
- They collaborate with U.S. agencies that normally safeguard the security and health of Americans living abroad and home.

In Summary, multilateral agencies like WHO, UNICEF and UNFPA are uniquely positioned and have international credibility. They convene power and every necessary organizational mechanism that will aid in facilitating and coordinating health works worldwide. For instance, the U.S. agencies tend to rely on the wide extensive networks provided by these multilateral agencies involving also frontline health workers to access unstable or remote areas (Global Health Council, 2021).

3.5 WHO as a Multilateral Agency

The WHO was set up as a multilateral health organization after the Second World War. It is worthy of note that WHO has more than 8000 number of people working in its 147 offices across different countries of the globe as well as in its regional offices and in its Geneva, Switzerland headquarters (WHO, 2009). As a multilateral Agency, WHO has the sole responsibility of uniting various countries to achieve the common goals such as the fight against diseases and achieving better health for the entire global world.

In order to achieve the desired goals, WHO recruits experts such as medical doctors, researchers, epidemiologists, administrative staff (financial and information systems). They are recruited to help facilitate achievement of goals. In the same vein, Statisticians and economists are also recruited to help run impressive programs and projects worldwide. For the young professionals that have masters degree or higher and want to pursue global health, the WHO avails opportunities such as Junior professional Officer (JPO) program which serves as a starting point for the staff. However, The JPO shall be under the mentorship and supervision by the more experienced expert of WHO. The JPO are often involved in the planning and implementation of programs of WHO (Unite For Sight, 2020).

3.6 World Bank As a Multilateral Agency

The World Bank comprises 186 member countries. The agency was constituted due to the global burden of diseases which seem to be heavily affecting the poor developing nations of the world. This is because; poverty has been directly linked to ill health. This invariably results to inaccessibility to health care. To curb the difficulty in accessing care among the poverty stricken nations of the world, the World Bank carries out the following roles:

1. Give loan and credits on beneficial terms that are not available in the market. They do this to alleviate poverty amongst the affected nations.

2. They give grants to the poor countries in order to initiate varying developmental projects such as in health care, education, agriculture, natural and environmental resource management, infrastructure amongst others.
3. The world bank just as WHO, provides vast employment opportunities which includes training programs for young experts, internships as well as employment for lawyers, educators, economists and financial specialists (Unite for Sight, 2021).

3.7 United Nations International Children's Education Fund (UNICEF) as Multilateral Agency

The main focus of UNICEF is on the welfare of children globally. It is one of their primary objectives thus making them to devote most of their budget to achieving the goal. UNICEF actively implements healthcare projects in different countries of the world. These include projects such as immunization, HIV/AIDS education, oral rehydration for children with diarrhea, micronutrient supplementation. The UNICEF like other global health organizations avails various health-related careers as well as non-related ones (United for Sight, 2021).

3.8 United Nations Development Program as Multilateral Agency

A partnership is created by the UNDP between developing countries and experts with knowledge and experience in taking care of social issues such as HIV/AIDS and poverty. They help countries to incorporate best practices and resources globally into national efforts by building local capacity to combat local problems. As regards employment, UNDP offers opportunities for health related employment. This could be in the area of HIV/AIDS consultancy and also in non-related employment.

4.0 Self-Test Exercises

1. Give at least ten (10) of the world's biggest and popular Multilateral Agencies
2. State at least five (5) functions of the multilateral agencies
3. Give a brief explanation of (a) World Bank and (b) UNICEF(c)UN as Multilateral Agencies.

5.0 Conclusion

Having studied this unit and connecting with the web links, it is acceptable to say that you have understood the unit to a reasonable extent in line with the unit objectives. Where you have failed to answer the self-test questions correctly, you are encouraged to repeat the study and attempt the questions again until you have mastered the unit.

6.0 Summary

In this unit, you have studied the Multilateral Agencies vis-a- vis its meaning, names of the agencies, reasons they exist, their functions as well as specific roles of WHO, World Bank, UNICEF and UNDP as Multilateral Agencies.

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Unit 2: Bilateral Organizations/Agencies

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
- 3.0 Main Content
 - 3.1 Meaning of Bilateral Agencies
 - 3.2 Names of the Bilateral Agencies and their Roles
 - 3.3 United States Public Health Service (USPHS) as a Bilateral Agency
 - 3.4 CDC Role as a Bilateral Agency
 - 3.5 Distinctions between Bilateral and Multilateral Agencies
 - 3.6 Similarities existing in Bilateral and Multilateral Agencies
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1.0 Introduction

Having learnt about the Multilateral Agencies, their Counterparts the Bilateral Agencies render humanitarian supports also by giving aids which they receive from one government to the other. Some of these agencies and their roles are to be studied. Likewise, the distinctions existing between the bilateral agencies and the multilateral ones shall be studied in this unit.

2.0 Intended Learning Outcomes(ILOs)

By the end of the unit, students should be able to:

- 1. Understand the meaning of bilateral agencies
- 2. Know the names of the bilateral agencies
- 3. Explain the roles of the bilateral agencies
- 4. Differentiate bilateral agency from the multilateral agency
- 5. Generate the similarities in activities of the Bilateral Agencies and that of Multilateral Agencies.

3.0 Main Content

3.1 Meaning of Bilateral Agencies

Bilateral agencies are concerned with giving aids directly from one government to the other. The organizations usually obtain their financing from government in their home nations. Such funds are then used to help developing countries. Developed countries are best armed with the helpful organizations to assist the world in times of crisis. The bilateral organizations wield much influence and play key roles to major developments in health and wellness around the globe (Gomez, 2017). In Employment, their requirements seem the same as those of international organizations. However, more opportunities for internships and entry-level positions abound.

3.2 Names of the Bilateral Agencies and Their Roles:

1. **USAID (United States Agency for International Development):** It is taken to be the largest of all bilateral organizations. It works to improve global health through immunization, better nutrition and other similar programs. It is an independent agency providing development, economic and humanitarian assistance around the globe. This is in support of the goals of foreign policy of the United States (United for Sight, 2021). The following specific roles are performed by USAID:
 - (a) Provision of aids to countries in sub-Saharan Africa, Europe, Asian, Caribbean, Latin America and the Middle East. This is to enable the countries initiate development work in the area of education, poverty reduction, education, the environment and agriculture.
 - (b) With regards to global health, USAID facilitates HIV/AIDS prevention, treatment and care programs, fights against infections, strengthens health systems and endeavors to improve child and maternal health through such services as immunization and better nutrition.

3.3 United States Public Health Service (USPHS) Role as a Bilateral Agency

This is a Governmental Agency servicing country's public health needs. They also carry out research in order to prevent, treat and eradicate diseases. They also create partnerships with other agencies in order to address global health problems and challenges as well as to ensure timely and adequate effective response to diseases epidemics.

The USPHS in its bid to work effectively and efficiently, they higher US citizens that are nurses, pharmacists, physicians, dentists, dieticians, engineers, therapists, scientists, veterinarians and other health service providers (Development In Action, 2016).

3.4 Centre for Disease Control and Prevention (CDC) Role as a Bilateral Agency

This is a part of the United States department of health and human services. They implement public health initiatives in U.S (United Foresight, 2021). For the fact that global health security increases national and economic security for the United States, CDC fights diseases globally in order to avert health threats overseas before they could spread to the USA. To make this possible, CDC tends to maintain an effective and strong global health presence. This is to protect Americans from infections that can start anywhere in the globe. Their global programs run by CDC experts address more than 400 diseases and health threats. Such experts are found in

epidemiology, surveillance, laboratory systems and informatics. CDC Partners include:

1. Other U.S. government agencies
2. Foreign governments and ministries of health
3. The world health Organizations and other international organizations
4. Academic Institutions
5. Foundations
6. Non-governmental Organizations
7. Faith-based Organizations
8. Business and other private Organizations

Through such partnerships, CDC ensures the entire world is better and well prepared to respond to health challenges (CDC, 2021).

3.5 Distinctions Between Multilateral and Bilateral Organizations/Agencies

	Multilateral Organizations	Bilateral Organizations
1.	They are international organizations that involve several nations acting together.	Bilateral organizations fulfil the same missions but in a slightly different manner
2.	This is inter governmental	This is a one governmental agency.
3.	In order to carry out their activities, they rely on the monetary contributions of their members, share holders, and other stake holders.	It receives funds from its home country's government and use it towards a developing countries
4.	The aids may go through an international organization such as the United Nations.	It is more specifically targeted

3.6 Similarities Existing in Bilateral and Multilateral Agencies

1. Both multilateral and bilateral organizations whether small or big, have the sole purpose of aiding conflicts suffered by people. This ranges from unpleasant experience of drought to deadly diseases outbreaks.
2. They give aids by providing supplies for treatment, vaccines and water.
3. In addition to their aids in natural disasters, they also attend to nations societal needs.
4. Both multilateral and bilateral Organizations are non-profit making organizations.

4.0 Self –Test Exercises

1. What do you understand by Bilateral Agencies?
2. State at least 5 Bilateral Agencies/Organizations.
3. State at least 4 Similarities in activities of bilateral Agencies and Multilateral Agencies.

5.0 Conclusion

It could be deduced that this module and the units attached have unveiled your understanding of the Bilateral agencies, their descriptions and roles as it concerns aids and supports to the desiring

countries of the world. Having explored the contents of the units and being able to answer some of the questions you were asked unveils the extent you have achieved in the unit. Where your performance is below expectation, go back to the text till you get it right.

Summary

In this unit, you were made to know and understand the meaning of bilateral agencies and the roles played by the Bilateral Agencies with regards to international health. You were also made able to distinguish bilateral agencies from multilateral agencies as well as establish the similarities in the two.

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MODULE 5

Module Introduction

As industrialization spread from one country to another, according to Asogwa (2007) so also do diseases and ailments associated with different trades. Occupational health was being recognized as a distinct area of medicine deserving special attention in those countries that were the pioneers of industrialization in Europe and America. Many different approaches were followed in these countries but the final goal was essentially the same. The main aim and goal were to safeguard lives and ensure that the well-being of working people are protected, maintained and promoted. The oldest international bodies in modern times concerned with global health and safety of people at work are the International Labour Organization (ILO) and the World Health Organization.

Unit 1: The International Labour Organization (ILO)'s Role in International Occupational Health

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes(ILOs)
- 3.0 Main Content
 - 3.1 The Meaning and Role of International Labour Organization to International Health
 - 3.2 Factors Affecting International Labour/Occupational Health
 - 3.3 Labour/Occupational Health Problems in Health Institutions
 - 3.4 Factors that Contribute to Health Problems of Workers
 - 3.5 Preventive Measures to Labour/Occupational Health Problems
 - 3.6 Keys to Healthy Work places
- 4.0 Self-Test Exercise
- 5.0 Conclusion
- 6.0 Summary
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1.0 Introduction

The International Labour Organization (ILO) was founded in 1919 in Geneva, Switzerland under the League of Nations to promote International Labour standard and improvement of working conditions. With the role being played by ILO to ensure labour/occupational health globally, achieving health for all in the nearest future is more assured.

2.0 Intended Learning Outcomes

By the end of the Unit, students should be able to:

1. Know the meaning and role of International Labour Organization (ILO)
2. Explain the factors affecting international occupational health
3. Explain the rationale for international occupational health

3.0 Main Content

3.1 The Meaning and Role of ILO in International Health

ILO is best referred to as International Labour Organization. The ILO programmes as well as international labour Standards in the form of conventions and recommendations were approved and adopted by the annual international Labour Conference held in Geneva. The Conference consists of two governments, one employer and one worker representative from each member states (Reich and Okubo, 1992). Hence ILO is said to be a tripeptide body made up of representatives from governments, employers and employees (Asogwa, 2007). The International labour Office with regional offices in Africa, Asia, Europe, Latin America, the Middle East and a number of governing body execute the programmes under supervision of the governing body, half of whose members were elected from governments and a quarter from employer and worker groups (Reich & Okubo 1992).. ILO's health work included safety and health of all types of workers especially from chemical and other industrial risks, hygiene of seamen, social and medical insurance systems and workmen's compensation. In compliance with multidisciplinary approach, it collaborates with the World Health organisation (WHO) in holding a number of Joint Expert Committee meetings in the field of occupational health and safety and publishes inter alia International Medicine guide for slips and ship sanitation. The International Programme for the Improvement of Working Conditions and Environment (known as ILO/WHO/PTA/PIACT) activities, emphasized that the improvement of occupational safety and health and working conditions should be considered as a complex problem in which various factors are interrelated. Such factors as protection against risks in the working environment, adaptation of work processes to the physical and mental capabilities of workers, improvement of work schedules and job content.

Self-Test Questions

1. ILO means

- (A) International Labour Opening
- (B) International Living Organization
- (C) Interest of Labour Organization
- (D) International Labour Organization

2. Explain any three(3) roles by ILO

3.2 Factors Affecting Labour/Occupational Health

Many factors affect the successful outcome of Occupational Health especially in the developing world countries.

1. Lack of geographic accessibility of Occupational Health services adversely affects efforts to improve Occupational Health conditions of workers in majority of cases especially where the occupation is in a remote area.

2. The system of public roads and transport services in most developing countries are inefficiently provided especially in Nigeria. This situation makes it very difficult to reach workers located in rural or small towns far from big urban centers. Many of these workers operate in terrible conditions.
3. The quality and quantity of health services affect Occupational Health conditions.
4. The persistence of poverty in most countries remains a fundamental determinant of Occupational Health conditions. In majority of cases people in developing countries do not have access to essential necessities of food, housing, public services, clothing and safety required for survival.
5. Income is associated with level of education. The lower the educational level, the lower the wages.
6. Poor nutrition generally affects worker's health. Some workers find it difficult to fulfill their minimum nutritional necessities even if they spend their entire take home pay on food only. For example, some studies carried out in the Province of Colombia by Farcadas (1984), it was found that the caloric requirements for workers in textile industries and metal-working are 3,500kcal/day, for construction workers more than 4,500kcal/day, and for agriculture and mining workers 5,000kcal/day. Some 30 percent of the study population had caloric intake of less than 2,500kcal/day; 40 to 50 percent had an intake of about 2,700kcal/day; and the rest had an intake between 2,700 and 3,100kcal/day. Very few people had intakes over 3,100kcal/day. This created a vicious cycle; for malnutrition becomes reflected in both health and work output which in turn results in lower wages which make it more difficult to buy food.

Self-Test Exercise

1. In developing countries of the world, explain any five (5) factors affecting occupational health.

3.3 Labour/Occupational Health Problems in Health Institutions

Health workers in health institutions (hospitals, clinics, health centres etc) are faced with numerous health problems which impact seriously on their status. The hospital environment by its nature is full of hazardous problems. The problems could be classified into endogenous and exogenous (Asogwa, 2007).

- (a) Exogenous problems are such that were brought into the hospital environment by the health worker suffering from such a condition such as tuberculosis, Human Immunodeficiency Virus (HIV), chicken pox and other conditions that have long incubation period and cannot be diagnosed early for preventive measures to take place.
- (b) Endogenous problems are those acquired within the hospital from patients, patients' relations or even from workers. Example of such problem include hepatitis B, HIV, other blood sera (that is hazards due to exposure to infected blood and other body fluids), other problems include protozoa infections such as malaria parasites. The hazard could occur

through needle stick injuries, lacerations from razor or Lancet or scalpel blades that were infected and other sharp instruments.

- (c) Hazards resulting from radiation such as x-rays used for radiotherapy. This can result in radiation injuries like cancer. This is seen mostly in workers in x-ray departments where radio-active substances are used for therapeutic purposes.
- (d) Problems due to exposure to communicable diseases such as tetanus, chickenpox, and other blood borne pathogens. This is a major concern when caring for infected patients. The presence of resistant organisms causes extra concern and makes treatment difficult. Workers who have frequent contact with blood and blood products and those engaged in intravenous therapy have a special risk for exposure to hepatitis B.
- (e) Problems due to exposure to food and water borne diseases include diarrhea, gastroenteritis, caused by schistosomiasis, salmonella's organisms. These problems occur due to contamination of food and water within the environment of the health institution.
- (f) Problems resulting from hazardous chemical agents do occur. Anaesthetic gasses can increase the risk of spontaneous abortion in pregnancy; maternal illness and death in severe cases and the risk of foetal malformation or death in severe cases. Chemotherapeutic agents used in the treatment of cancer are extremely toxic. Contact with many drugs, especially antibiotics during preparation and administration may cause the health worker to develop sensitivity. This can cause transitory problems such as hand and skin rashes and other undesirable effects. Cleaning agents and disinfectants used in hospitals can cause some hazards if not properly used.
- (g) Back and joint injuries are common occupational problems among hospital workers. These problems interfere with the working life of people. They occur due to improper body alignment before and after lifting patients and equipment.
- (h) Other problems include occupational stress which may be due to pressure of work, shortage of personnel, interpersonal relationship with other staff or with supervisor or with patients or patients' relations or even with self. There could be physical attack from violent and emotionally unstable patients; burn outs due to pressure of work or other various psychosocial stresses at work.

Health workers mostly at risk of health problems include doctors, nurses, laboratory staff, radiographers, mortuary attendants, cleaners, physiotherapists, community health practitioners and many others. The major sources of the health problem could be hospital wards, hospital clinics, theatres, laboratory, mortuary and other areas where patients are being treated and blood and other body fluids and specimens are taken for investigation.

Self-Test Exercise

1. Differentiate the exogenous health problems from the endogenous health problems obtainable in health Institutions?

3.4 Factors that Contribute to Health Problems of Workers

The factors that contribute to worker's problems in occupational setting include: biophysical, genetics, psychological, social, behavioral and health systems (Clark, 1999).

Biophysical

Human biological factors are those related to maturation and aging, genetic inheritance, and physiological functions (Clark, 1999). Maturation and aging: The age compositions of workers in occupational settings do affect their health. If the employees are mainly adolescents and young adults, health problems likely to occur with some frequency included: sexually transmitted infections like syphilis, gonorrhoea, HIV; pregnancy, hepatitis, drug abuse, alcoholism and other social vices. They may also be at increased risk of injury due to their inability to settle down for work; limited job training, and skills, lack of experience, experimentation, impatience and inability to concentrate.

The health problems that may be noticed among the middle aged employees are: heart problems like hypertension, stroke, palpitations, renal problems and cancers in most cases. They may also be at increased risk of mental depression, anxiety, and other emotional problems due to pressure of work in the families, work environment and in the society.

Health problems that may occur in elderly employees over 65 years of age are reduced capacity to function, problems of musculoskeletal system, sensory impairment, poor coordination, frequent high risk occupational accidents and dementia. Factors that influence their continued desire to remain in the employment may be associated with economic constraints, loneliness and many personal problems. Another contributory problem is a situation where there is shortage of skilled manpower and inability of employers to enforce prohibition on retirement at specific age.

Genetic Inheritance

Genetic inheritance factors likely to be of great importance in the workforce are those related to race, gender and genetic inheritance like sickle cell disorder. For example, in a large African American Labour force, hypertension may be prevalent. In an Asian population particularly if large numbers are refugees, communicable diseases such as Tuberculosis and parasitic diseases may be common (Clark, 1999). In underdeveloped countries like Nigeria, labour force hypertension and mental stresses may be prevalent.

The sex composition of the employees do determine the types of health problems that may occur: For example, if large numbers of employees are women of child bearing age, there is need to

provide pre and post natal services, monitor more closely environmental conditions that may cause genetic changes or damage to unborn child causing malformations and death; monitoring for infertility, spontaneous abortion, low birth weight, pre and postmaturity, birth defects, chromosomal abnormalities, preeclampsia and an increased incidence of childhood cancers (Clark, 1999 cited in Asogwa, 2007). If an employee has genetic inheritance like sickle cell disorder, there is need to provide an environment that discourages precipitation of painful crises such as adequate ventilation, assignment of less strenuous jobs and environment free of dust, and fumes and smokes. Monitoring for conditions that can precipitate bone pain crisis and provision of facilities for treatment of crisis before reaching the clinic for management.

Physiological Functions

Conditions prevalent in occupational settings include traumatic injuries, lung diseases, cardiovascular problems, renal problems, neuro-toxic disorders, cancers, skeletal problems, injuries of all kinds, sensory impairments and many others. These health problems are related to the work environment, personal behaviours of employees within and outside the work environment. Other problems that may occur are the out breaks of dermatologic conditions that indicate the presence of hazards in the work environment that need control measures. They include: variety of rashes, pruritus, chemical burns and desquamation. These dermatologic problems affect seriously the production capacity and loss of income to the company. Psychological problems of anxiety and stress may manifest as a result of stressors associated with work overload, the organizational structure of the company/occupation, job insecurity, interpersonal and intrapersonal relationships with co-workers or employers or supervisors and attitudes of racial or ethnic discrimination in workplace. Other sources of stress most frequently identified by workers include: lack of control over the contents, processes and pace of one's work; unrealistic demands and lack of understanding by supervisors; lack of predictability and security regarding one's job and future; and the cumulative effects of occupational and family stressors. Employers most often perceive employee's lifestyles, and health habits as the primary contributors to stress.

The Physical Dimension

Physical environmental factors contribute to a variety of health problems employees face in the work settings. The categories of the health problems include: chemical hazards, physical hazards such as radiation, noise, vibration and exposure to extremes of heat and cold; electrical hazards, fire, heavy lifting and uncomfortable working positions, and potential falls (Clark, 1999).

With poor lighting or high noise levels, the employee may face the adverse effects of vision and hearing respectively. Heavy objects that must be moved may cause musculoskeletal injuries, hernia and potential for falls and exposure to excessive heat or cold in many workplaces.

Other factors related to physical environment is the use of toxic substances in work performance which may be in form of solids, liquids, gasses, vapors, dust, fumes, fibers or mists (Clark 1999 quoting California Occupational Health Programme, 1992 as Cited in Asogwa, 2007). The toxic substances can cause respiratory, dermatologic and other health problems. Heavy metals like lead can cause lead poison. Other metals of concern include mercury, arsenic and cadmium. Areas to be assessed for the presence of heavy metal potentials for toxic exposure in the work settings include substances used in setting and their levels of demonstrated toxicity, portals of entry into human body, established legal exposure limits, extent of exposure, potential for interactive exposures and the presence of existing employee health conditions that put the individual affected at greater risk of exposure-related illnesses.

The use of heavy equipment or sharp tools can cause occupational injuries. It can also cause hand-arm vibration syndrome especially in using tools that vibrate or visual disturbances related

to the use of computer display terminals. Another recent hazard discovered generated by widespread computer use is the potential for tendinitis and other similar conditions stemming from the use of word processors. Extreme or awkward postures have been associated with low back problems and repetitive or high force movements with carpal tunnel syndrome.

Social Dimension

The social environment of the work setting can influence employee health status either positively or negatively. The nature of the influence depends on the social interactions among employees, attitudes toward work and health and the presence or absence of racial, sexual or other tensions can all affect the health status of the employees and their productivity within the occupation.

Four spheres of influence in the workplace social environment do affect the health status of the employees. The first sphere of the influence is concerned with health related behaviours of employees; the second sphere of influence on health status occurs among groups of co-workers. The third sphere of influence is the management sphere such as attitudes toward health and health-related policies and the effects of the policies or their lack on employee's health status. For example, to value wellness and health promotive efforts they must perceive them to be valued by employers. The fourth sphere of influence involves legal, social and political action that influences the health of employees. An example of this is the regulation of conditions in the work environment by agencies such as occupational safety and health administration. Through legislations society can mandate that business and industry create specific conditions that enhance the health of employees; companies over a certain size should offer employees a health maintenance organization as one option for health insurance coverage. The final social dimension factor in the work setting that is not currently compensable but is drawing increasing attention is workplace violence (Clark, 1999 as Cited in Asogwa, 2007).

Behavioral Dimension

Life style factors to be considered include; the type of work performed, consumption patterns, patterns of rest and exercise and use of safety devices. The type of work an employee performs within the work setting can significantly influence the employee's health; determines the risk of exposure to various physical hazards and level of stress experienced; it influences the extent of the exercise employees obtain.

The consumption patterns of interest include those related to food and nutrition, smoking and drugs and alcohol use. The nutrition influence on the health status is well known. Smoking is harmful to health and may increase the adverse effects of other environmental problems particularly those that affect respiration. Over indulgence in substance abusers such as caffeine, may pose health problems to employees.

Rest and Exercise: occupational places do place many physical and psychological demands on the employees. These demands result to inadequate rest and recreation. Same problem is faced by employees who work constantly to ensure progress and those who keep other jobs in an attempt to make ends meet. Many occupations are recognizing that exercise provides physical and psychological relaxation, alertness and relieve muscle tension making it ready to work again. It reduces heart attack and injury and even sleep at work and accident. It causes better

coordination, reduces hazards, accidents and better work output. These benefits have made employers of labour to promote physical exercises by providing activities for recreation in work settings.

Self-Test Exercise

1. Factors affecting occupational health can be (a) Biological (b) Physical (c) Metaphysical (d) Biophysical
2. Explain the genetic inheritance as a contributory factor to occupational health problem

3.5 Preventive Measures to Labour/Occupational Health Problems

Preventive measures to occupational health problems include:

- ✓ Pre-employment medical examination of all employees to rule out presence of any health problems and potential for hazard in the job.
- ✓ Immunization of employees at risk of infections such as tuberculosis, hepatitis B and HIV, where applicable.
- ✓ Periodic monitoring of all employees in all occupations especially those in high risk areas e.g. periodic x-ray examination of staff working in x-ray units, or those working in lead producing industries, heavy metal industries.
- ✓ Regular inspection, of food preparation, servicing and storage facilities as well as inspection of food preparation environment.
- ✓ Ensuring the use of wholesome water for drinking and food preparation (pathogen free chlorinated water) to avoid water borne infections and making sure that water containers are free from contamination.
- ✓ General hygiene of the work environment especially that of the hospitals, schools and many others to avoid accidents and infection dissemination.
- ✓ Provision of safety devices such as eye gurgle, booth, helmet, lead apron and many others.

Self-Test Exercises

1. Highlight at least five (5) preventive measures against international occupational health problems.

3.6 Keys to Healthy Work places:

There are 5 keys to healthy work places according to WHO (2021). A healthy workplace is that in which managers and workers collaborate to utilize continuous improvement process as to protect and promote the safety, health and wellbeing of all workers and the workplace sustainability (WHO, 2021).

Key 1 : Leadership Commitment and Engagement:

- There is need to mobilize and gain commitment from major stakeholders (e.g. senior leadership and union leadership to accommodate healthy workplaces into the enterprise's business values and goals.
- There is need to get necessary resources, permissions and support.
- There is need for comprehensive policy that shall be signed by the enterprise's highest authority which clearly depicts that healthy workplace initiatives are part of the organization's business strategy.

Key 2: Involvement of Workers and their Representatives

- Workers and their representatives must not simply be informed or consulted. They must be actively involved in all steps of the risk assessment and management process from planning to evaluation bearing in mind their ideas and opinions.
- It is important that workers have some collective means of expression.

Key 3: Business Ethics and Legality

- One of the most fundamentals of universally recognized ethical principles is to harm no one and to ensure workers' health and safety.
- To adhere to employees' social and ethical codes as part of their role in the larger community.
- Enforce and implement occupational health codes and laws.
- Take responsibility for employees, their families and the public domain and also avoid undue human sufferings and risks.

Key 4 : Use a Systematic, Comprehensive process to ensure effectiveness and continual improvement.

- Mobilize a strategic commitment to a healthy place of work.
- Assemble the resources needed.
- Assess current situation and the needed future.
- Develop areas of priorities.
- Develop comprehensive overall plans and map out specific project action plan by learning from other people for example, Endeavour to consult experts from a local university or can ask experienced leaders of Unions to be mentors. Also visit other enterprises and establish contact with the virtual world.

- Endeavour to implement the plan.
- Evaluate the acceptance and effectiveness of the plan.
- Improve when situations and circumstances indicate they are needed.

Key 5 : Sustainability and Integration

- Gain senior management commitment to use a healthy, safe and well-being filter for every decisions.
- Integrate the healthy workplace ideas and initiatives into the enterprise's overall strategic business plan.
- Use cross-functional teams or matrices to reduce isolation of work groups and establish a healthy and safe committee as well as a workplace wellness committee.
- Evaluate and Endeavour to improve continuously.
- Measure not only the financial output but also customer knowledge and internal business processes as well as employees' growth and learning in order to develop long-term business success.
- Maintain comprehensive view to workplace health and safety plus examining every aspect to identify a broader range of effective solutions.
- Review external influences such as dearth of primary health care materials and resources in the community.
- Recognize and reinforce desired behaviour through performance management systems that set behavioural standards and output targets.

4.0 Self-Test Exercise

1. Highlight the Key number one (1) by WHO to a healthy Work place.
2. Explain the key: Sustainability and Integration.

5.0 Conclusion

Having read through this unit and succeeded in opening the links and reading the texts, it means that the objectives of the unit have been met and you have learnt that expected of you in the unit. The questions you answered satisfactorily will indicate to you the extent of your learning in the unit. You are encouraged to continue until you have mastered the unit contents.

6.0 Summary

In this unit, you have learnt about International Labour Organization, its role in achieving international health, factors contributing to workers health problems, health problems common in

health institutions where the bulk of health care delivery team are found. Finally, the unit also provided the preventive measures against the occupational health problems as well as the WHO (2021) Keys to Occupational health.

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MODULE 6

Introduction of the Module

By 2030, it is expected that the world population will rise up to 8.6 billion and will eventually reach 11.2 billion by 2100 (UN Report 2017). Many causative factors have been attributed to any typical population expansion and explosion. If not curtailed, there abound to be negative effects on the entire global population. Be it as it may, certain solutions are proffered to curb imminent and sudden population spurt.

Unit 1: International Health and Population Growth (Population Expansion and Explosion)

Unit 2: International Health Problems

Unit 1: International Health and Population Growth (Population Expansion and Explosion)

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1.0 Introduction

Over time, there may tend to be rapid and dramatic increase in global population. For instance, between 1959 and 2000 over the past few hundred years ago, the population of the world rose to 2.5 billion and continued to 6.1 billion people. The fastest growing country in Africa, Nigeria, is expected to become the third largest country in the world by 2050 thus exceeding USA population. These simply explained population growths consisting of population expansion and explosion (Over Population). A number of factors contribute to overpopulation with its consequential effects. However, if appropriate measures are put in place, the devastating effects can be averted.

2.0 Intended Learning Outcomes

By the end of the study, the students should be able to:

1. Define Population and population growth
2. Understand the Causes of Population Expansion and Explosion

3. Know the Effects of Over Population

4. Know the Solutions to Over Population

3.0 Main Content

3.1 Definition of Population

Population is defined as the number of people living in a particular geographical area at the same time with the capability of interbreeding. It could also mean the whole number of people or inhabitants in a country or region. Over time, there may tend to be rapid and dramatic increase in global population. For instance, between 1959 and 2000 over the past few hundred years ago, the population of the world rose to 2.5 billion and continued to 6.1 billion people. United Nations has projected that the world's population may rise between 7.9 billion and 10.9 billion by 2050.

A United Nations report (2017) put the world population at 7.6 billion people. By 2030 it is expected to rise up to 8.6 billion and eventually to 11.2 billion by 2100. With a handful of countries being primarily responsible for this growth, about 83 million people are being added to the population each year against expectation that fertility levels will decline. The fastest growing country in Africa, Nigeria, is expected to become the third largest country in the world by 2050 thus exceeding USA population. The UN report also has it that nine countries comprising India, Pakistan, Nigeria, the Democratic Republic of the Congo, Ethiopia, USA, the United Republic of Tanzania, Indonesia and Uganda will house about half of the world's population between 2017 and 2050. These simply explained population growths consisting of population expansion and explosion (Over Population).

Self-Test Exercise

1. What is population?
2. Establish the relationship of overpopulation with international health

3.2 Population Growth

This can be defined as the increase in the number of persons within a population. Global human population amounts to about 83 million (1.1%) annually. However, the world's population has grown and expanded from 1 billion in 1800 to about 7.8 billion in 2020.

Population Explosion/Expansion

Population explosion refers to a sudden and very fast increase or rapid growth of the world's population. It could also be defined as the geometric expansion of biological population. It could also be an unchecked growth in population of humans as a result of decrease in children's mortality and increase in longevity of life. Population expansion and explosion could result from difference between birth rate and death rate. It is estimated that the world may experience population explosion by 1 billion people in the next decade (Kinder, 2021).

Self-Test Exercise

1. Is there any difference between population expansion and explosion? Explain.

3.3 The Causes of Population Expansion and Explosion

There are a number of factors that contribute to overpopulation.

Poverty: Poverty is a leading cause of population expansion and explosion. Due to lack of educational resources, high death rates leading to higher birth rates, there is a large boom in population among impoverished nations. The enormous effect is so that the UN predicted that forty-eight poorest countries of the world shall likely be the biggest contributors to population growth. They estimated that the combined population of the poor countries is likely to explode from 850 million in 2010 to 1.7 billion in 2050.

Poor Contraceptives Use: Despite that there is widespread availability of contraceptives in developed nations, poor planning on Couples' parts can result to unplanned or unexpected pregnancies. It has been shown by Statistics that 76% of women in Great Britain between 16 and 49 years used at least one form of contraceptive. About a quarter is open to unplanned pregnancies. The situation is exacerbated among underdeveloped nations. The World Health Organization (WHO) study indicates that this usage figure decreases to 43% in countries that are blighted by poverty, which leads to higher birth rates.

Child Labour: As disheartening as it seems, child labor is still in existence in various parts of the world. It is estimated by UNICEF that approximately 150 million children are currently working in some countries with non or fewer child labour laws. This may result to children being seen as sources of income by very poor families. Consequentially, children that started working too young in life tend to also lose the educational opportunities they should have been granted. This particularly is worsened when there was no attempt to control births.

Reduced Mortality Rates: There seems to be improvement in medical technology. This has led to lower death rates from many serious infections. There has been a tremendous achievement in eradication of very severe viruses and infections like poliomyelitis, smallpox and measles by such advanced medical technology. This is a positive piece of news. It also means that people are living longer than ever before. The lingering in life and death cycle has led to birth rates outstripping mortality rates by more than 2 to 1 in modern times.

Fertility Treatment: In as much as it plays a minor role than the other causes of overpopulation, improvement in fertility treatments have led to increase in more people having children. Due to fertility treatment, the population of women using various fertility treatments has been on the rise. In recent time, most women now have various options of conceiving children against their incapacity to do prior to the fertility treatments.

Self-Test Exercise

1. State any four (4) causes of Population Growth

3.4 Effects of Population Expansion and Explosion

Malnutrition: A sudden and rapid growth in population can lead to strain on the environment due to the consequential difficulty in getting people fed. A (2005) WHO report explained that overpopulation portends a breakdown of ecological balance whereby the population exceeds the carrying capacity of the environment. This entails weakened food production that will lead to inadequate food consumption and eventually, malnutrition. It should be noted that malnutrition makes people more susceptible to life-threatening diseases. These include malaria and respiratory infections. Malnutrition increased by 37% from 1950 to 2007 and has been linked to six million child deaths a year. WHO (2011) cautioned that an increase in travel and the harmful strains of human-to-human viruses could cause more than 100 million mortality in future. This is because; many people will be weakened by malnutrition.

Ageing Population: A decline in fertility rates coupled with increase in life expectancy in various parts of the world can apart from reducing population growth but can also lead to an increase in older population. The United Nations report estimated that the number of people who are 60 years and above by 2010, will triple. This of course will account for about 3.1 billion people. The Global Health and Aging report by WHO attributes such increase in elderly population to a change in causes of death from infectious to non-communicable diseases. The treatment of these infections like hypertension, arthritis, high cholesterol, diabetes, cancer, dementia, heart disease, and congestive heart failure tend to add pressure to the system of health care.

Migration: Population growth can account for a struggle to get jobs which causes social and economic strain leading people to migrate to countries having greater and better opportunities. It was observed by Professor Mark Collinson of the South African Population Research Infrastructure Network (SAPRIN), that in the past 20 years, fertility rates in Africa have dropped and the working age population has risen. In his words, the dependency ratios i.e the numbers of dependents who are supported by the working age population have declined. This, he opined, means opportunity to spur economic development. His assumption is that monetary resources and others which would have been absorbed in raising children and catering for large families shall be invested in productive and also household savings. The phenomenon is described as a potential demographic dividend.

Immigration: Immigration into other countries if not checked may lead to overpopulation of the countries being migrated into. This may lead to those countries not having the required resources for their population. This is often seen in countries having problem of immigrants exceeding emigrants i.e those coming into the country. However, the fact remains that the immigrants in attempt to escape over population with its attendant problems in their own country, end up contributing the same issue in the country they are migrating to.

Overpopulation can also have specific number of negative effects as follows:

1. **Lack of Water:** Overpopulation can create higher demand on the fresh water demands of the world. It's only roughly about 1% of the world's water that is fresh and also accessible. This of course would create a major challenge. It is estimated that demand for fresh water amongst humans will stand approximately at 70% of what is on the planet

come 2025. What this entails is that those living in impoverished nations already having limited access to such fresh water would be at great risk.

2. **Lower Life Expectancy:** As higher life expectancy can lead to increase in population in developed Nations, lower life expectancy may be witnessed in less developed countries when such population explosion occurs. Statistics have it that greater proportions of the world's population growth happens in less developed countries of the world. This thus over stretches the resources of the countries resulting to less accessibility to medical care, food, fresh water and jobs all leading to consequential fall in life expectancy.
3. **Extinction:** The negative effect of population expansion and explosion on the world's wildlife is quite a major issue. As more land is being demanded, so also does the destruction of forests and other natural habitats. Scientists have warned that if trend persists, as many as 50% of the global wild life will be at risk of extinction. Statistics has shown that there is a direct link between human population increase and decrease in the number of species on the planet Earth.
4. **Resource Consumption/Depletion:** It is Ironical to say that the discovery of innumerable natural resources like fossil fuels contributed to conditions favorable to population growth. It has been shown by some studies that the world's ecosystem changed faster in the latter half of the 20th century than at any other time in history due to increased use of these resources.
5. **Increase in Intensive Farming:** As population has grown over the years, there has also been increase in farming practices. Agriculture has evolved to produce sufficient food that can feed greater number of people. However, intensive farming methods also could cause damage to local ecosystems which happens to be the land in this case. This may pose serious problems in the long run. Also, intensive farming is also regarded as a major contributor to climate change as a result of the machinery required. This particular effect may likely intensify as long as the population continues to increase at the current rate.
6. **Faster Climate Change:** Overpopulation can directly correlate with climate change especially as high densely populated nations like China and India continue to widen their industrial capacities. The two countries now rank as 2 of the 3 contributors to emissions globally alongside the USA. It has been agreed by 97% of the Scientific Community that human activities are changing global temperatures. Increased populations may speed up these climatic changes especially if nothing is done to reduce individual carbon footprints on a wide scale.

Self-Test Exercises

1. Identify four (4) general effects and three (3) negative effects of over population
2. Explain the relationship of population spurt with climate change.

3.5 Solutions to Over Populations

Better Sex Education: Deficient sex education and poorly implemented education has led to over population problems in many countries. The issue is so alarming that the United Nations Population Fund (UNFPA) is clamouring for improvements to be made in poorer nations of the world.

On the other hand, better education enables people to understand more about the consequences of having sex as they relate to child bearing. It will also dispel myths surrounding sexual acts and scientifically-proven methods of contraception shall be adopted and in use.

Access to Contraceptives: Access to birth controls ought to go hand-in-hand with improved sex education. Without adequate access to sex education, people cannot put what they have learnt into practice. WHO estimated that 225 million women living in the developing countries would prefer postponing child birth but not keen on using any method of contraception. The American Congress of Obstetricians and Gynecologists (ACOG) support improving accessibility to contraceptives.

Change in Policy: Many nations of the world offer rewards in form of financial incentives or increased benefits to women with more children. This may likely lead to couples having more children than they would otherwise have had if they were disturbed about the financial consequences. China's policy of "One-Child" was partly recently abandoned because of the restrictions it placed on freedom. It is most likely that similar policies would be considered restrictive equally.

Education on the Subject: As some organizations exist to provide schools with effective curricula and teaching materials in order to cover the subject of overpopulation, it is still not covered in schools as efficiently as it should be. The educational programme should go beyond discussing sex and rather into the consequences of overpopulation globally. There should be Dialog about the subject. It needs to be more open with relevant web sites offering useful resources that allow for the issues to be discussed rationally.

4.0 Self-Test Exercises

1. How can a change in governmental policy solve over Population?
2. Mention any 4 solutions to population explosion

5.0 Conclusion

Having gone through the contents of this module and having attempted the self-test exercises, it is worthy to say that you have learnt all there is to learn in the unit. Continue to answer the questions in the self-test exercises until you have mastered the correct answers.

6.0 Summary

In this unit, you have studied population, its meaning, causes, effects of population both the general and positive effects as well as solutions to over population.

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Unit 2: International Health Problems

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1.0 Introduction

According to the WHO, public or international risk or problem means a likelihood of an event that may affect adversely the health of human population with emphasis on the one which may spread internationally or may present a serious and direct danger. Diseases originally subjected to regulations include: cholera, yellow fever, plague, smallpox, relapsing fever, typhus and infective hepatitis (Type B) (Amanze, 2010).

2.0 Intended Learning Outcomes (ILOs)

By the end of the unit, the students should be able to:

1. Explain the situation of health problems globally
2. Know some international health problems and challenges

3. Understand the incubation periods and symptoms of some of the international health problems.
4. Understand the measures taken against some of the international health problems

3.0 Main Content

3.1 Concept of International Health Problem

Globally, the rate of deaths from non communicable causes, such as heart disease, stroke, and injuries, is growing. At the same time, the number of mortality from infectious diseases, such as tuberculosis, malaria and vaccine-preventable diseases is decreasing. Many developing countries must now deal with a dual burden of disease: they must continue to prevent and control infectious diseases while addressing also the health threats from non communicable diseases and environmental health risks.

As economic and social conditions in developing countries change and their health systems and surveillance improve, the major focus will be to address non communicable diseases, substance abuse disorders, mental health and injuries (both unintentional and intentional). Some countries are beginning to establish programs to address these issues. For example, Kenya has implemented programs for road traffic safety and violence prevention.

3.2 Some international Health Problems

3.21 Cholera

Cholera is an International notifiable disease. In other words, it is subject to the regulations of the World Health Organization (WHO). The disease is endemic in India-Pakistani Sub continent, South-East Asia, Near East, Africa, and South Central Europe. The disease is usually associated with high mortality especially in areas where there is low standard of environmental hygiene and lack of potable water supply.

Symptoms:

- Vomiting
- Profuse dehydrating (diarrhoea) characterized with rice water stools Toxemia
- Muscular cramps
- Suppression of urine
- Shock may occur later in untimely-managed cases.

Incubation Period:

The incubation period, according to the International Health Regulations, is five days. However, it may be as long as seven days. Article 3 of the International Health Regulation (IHR) (1969)

indicated that the following measures should be adopted by the Health Authority in a ship, aircraft, train, road vehicle or other means of transport where a case of cholera has occurred:

- Surveillance and or isolation of suspects, passenger and crew for a period of five days; from the date the passenger disembarked.
- Supervision of the removal and safe disposal of water, food (excluding cargo), and human deject (excreta), waste water, waste matter and other Suspected contaminated items.
- Disinfection of water tanks and food handling equipment. On completion of the above, Pratique is granted to the vessel and other means of transport. Other conditions applicable to cholera as contained in the IHR (1969) include:
 1. Non-subjection to bacteriological examination of food-stuffs carried as cargo by ship and other means of transport, except by the health authorities of the final destination country. Rectal swabbing may not be required but stool examination is mandatory for persons arriving from an international voyage from an infected area. This is even serious when the person (s) manifest symptoms indicative of cholera.
 2. Immunization against cholera lasts for six months. It starts 6 days after inoculation, and in the event of re-innoculation before expiration, it lasts for another 6 months.

Vaccination

Vaccination against cholera cannot prevent the introduction of the infection into a country. As a result of the above, the World Health Assembly in 1973 declared cholera vaccination non essential in international travel. The traditional parental cholera vaccine conveys incomplete and an unreliable protection of short duration and its use is therefore, not recommended. The vaccine gives a false sense of security to those vaccinated and feeling of accomplishment and complacency to health authorities, who subsequently neglect the more effective precautions.

Self-Test Exercises

1. Explain Cholera as an international health problem with relative to its incubation period, symptoms, vaccinations, measures to be adopted according to IHR in case of its emergence.

3.22 Tropical Malaria (Plasmodiasis)

Malaria is a serious and fatal disease. It is endemic in tropical and sub-tropical countries. There is no vaccination against Malaria. However, personal protection against the vector is of paramount importance. This can be achieved through the use of treated bed nets and repellants. The use of anti-malaria medicine may equally be useful for protection or kept in reserve for emergency treatment. The risk of infection and the response of the parasites to drugs are variable and changing.

Seafarers proceeding to a malarious region should take anti-malarial drugs one week before departure and continue for six weeks on their return. Absolute protection from malaria is not

guaranteed. Individuals who experience fever one week after exposure in a malarious region should seek medical attention.

Self-Test Exercises

1. Seafarers proceeding to a region with malaria should

- (a) Vaccinate against malaria
- (b) Use mosquito Nets
- (c) Take of anti-malaria drug 1 week before departure and continue 6 weeks on return.

2. Tropical malaria is called.....

- (a) Plasmodiasis
- (b) Plasmodium
- (c) Plasmolysis

3.23 Plague

The causative agent is *Yersinia* or *Pasturella Pestis* (a bacterium). The reservoirs of infection include rats and some species of non-domestic rodents. Transmission is by rat flea (*Xenopsylla cheopis*). There are three clinical types of plague. They are:

- Bubonic (Lymph Nodes)
- Pneumonic (Lungs)
- Septicemia (Blood)

Plague was among the diseases initially subjected to the regulations of World Health Organization as enshrined by the International Health Regulations, 1969(as amended in 1973). Plague has been a fatal disease since the dark ages when it was called "Black Death". The disease is common in the Indian sub-continent, South-East Asia, Middle East, South-America and African sub-region. The principal endemic foci are China Vietnam, Butma, Peru, Ecuador, Malagasy, Brazil and Bolica.

Clinical Features; Plague presents the following symptoms:

- Sudden severe fever
- Back pain
- Shivering
- Vomiting

- Protraction
- Convulsion

IHR Specifications for Plague

According to IHR, the incubation period of plague is six (6) days.

- Vaccination against the infection is not a condition for admitting a person to a territory.
- Regular examination of rodents and their ectoparasites by Port Health Authority
- Health measures applicable to an infected ship is as follows:
 - (a) Disinfecting of suspected materials.
 - (b) Surveillance for a period not more than six days from the date of arrival.
 - (c) Disinfection of baggage and other articles (fomites) assumed to have been contaminated.
 - (d) Deratization and issuance of ship sanitation control certificate to Ocean going vessels

Generally, in plague control, ships and aircrafts are fumigated if found rodent infested by the Port Health Authority. Live rats are caught by hand or trap with a view of retaining their fleas for identification and for evidence of plague.

During the colonial era in Nigeria, rats were caught alive from different parts of Lagos and other ports, brought to port health office at Apapa where they were killed, combed and dissected. For research purposes, they are sent to Ebute-Ero for further confirmation for the presence of plague germs.

Since the spread of plague from region to region is chiefly through rats in ships, rat proofing of ships and general maintenance of ship hygiene should be encouraged.

Port Health Authorities are responsible for supervision of ship rat proofing and maintenance. Plague is not common and has since been deleted from the list of regulated (Amanze, 2010).

Self-Test Exercises

1. List at least 4 diseases originally subjected to regulations
2. Briefly explain the following international health challenges in relation to Incubation period, Symptoms/Clinical features and vaccination: (a) Cholera (b) Yellow Fever
3. State any 4 measures taken against yellow fever if it occurs in ship or air craft.
4. Define international immunization

5. Mention the features of international immunization form
6. Explain tropical malaria and plague using (a) causative organism (b) Clinical features (c) health measures applicable to infected ship
7. Explain IHRs 4 Specifications for plague

3.24 Yellow Fever

Yellow fever is one of the diseases subject to the regulations of the World Health Organization. This implies that persons embarking on international journey must present a valid yellow fever vaccination certificate. Yellow fever is the only disease specifically designated in the International Health Regulations (2005) for which proof of vaccination or prophylaxis may be required as a condition of entry to any member country.

Yellow fever is an acute infectious disease of sudden onset. The disease manifests with the following clinical features or symptoms:

- Fever
- Jaundice
- Hemorrhagic conditions
- Albuminuria

The disease is common in South-America, and Tropical Africa, It is endemic in Sudan, Ethiopia, Gambia, Senegal, Nigeria and Ghana. As stated by the International Health Regulations (IHR) 1969, the incubation period of yellow fever is six days.

Accordingly, the following conditions apply (Amanze, 2010)

1. Valid Yellow Fever Vaccination Card is essential for every international traveller.
2. Persons without valid certificate may be allowed to travel but such persons will be isolated until their certificates become valid. That is after 6 days.
3. Persons with a valid certificate of yellow fever vaccination are not suspects, even when they come from an infected area.
4. Only yellow fever vaccine approved by the World Health Authority must be used for vaccination.
5. Vaccination must be conducted at designated centers only.
6. Port employees must equally have yellow fever vaccination certificate.

7. Disinfecting of aircrafts leaving an infected area is mandatory.
8. The vaccination certificate must be signed in his own hand by a Medical Practitioner or other person authorized by the National Health Administration. His official stamp is not an acceptable substitute for his signature
9. Any amendment on the certificate or erasure or failure to complete any part of it may render it invalid.

Self-Test Exercises

1. Yellow fever disease manifests with the following clinical features or symptoms except

- (a)Fever
- (b)Seizure
- (c)Jaundice
- (d)Hemorrhagic conditions
- (e)Albuminuria

The disease is common in:

- (a)America
- (b)South-America
- (c)Tropical Africa

Measures taken against Yellow Fever in Case of Infected or Suspected Ship/Aircraft

On arrival of an infected and or suspected ship, the following health measures apply:

1. Isolation/quarantine of patients/contacts and suspects.
2. Moor ship at least 400 meters away
3. Carry out inspection to destroy yellow fever disease vector (Aedes Egypt Mosquito).
4. Any other measure as may be necessary by the Port health officer.

International Immunization

Immunization against vaccine preventable diseases including those subject to regulations constitutes a prerequisite for International travel. Among the diseases subject to regulation, yellow fever is the only remaining one on the current list.

Procedure for the Procurement of the International Certificate of \ Vaccination (Yellow Card)

The International Certificate of vaccination commonly known as Yellow Card is usually obtained at designated centres mostly from Port Health Offices. A prospective international traveller will be required to complete the International immunization form in duplicate. The features of the form include the following:

1. Name of the prospective International traveller
2. Address
3. Official stamp and signature of health authority must be authentic

Expiration- It lasts for another 10 years, beginning 10 days after re-vaccination.

4.0 Self-Test Exercises

1. Carefully extract the features of a yellow card
2. State any 3 measures that are applied if a ship is suspected to be infected with yellow fever.

5.0 Conclusion

Having gone through the contents of the units of this module, It is assumed that you have gotten deep understanding of the unit in line with the objectives. As much self-test exercises you succeeded in answering well reveals to a great extent your level of understanding. You are encouraged to keep studying and trying the questions until the unit is mastered.

6.0 Summary

You have been presented with the international health problems such as cholera, yellow fever and plague amongst others being experienced in some ports across the globe. Their incubation periods, symptoms, vaccinations, IHR regulations concerning some of them as well as their preventive and control measures were made available.

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MODULE 7

Module Introduction

International Travel is about travelling to a different country from your country of origin. Such travel is made through international airports and tends to make tourism and trade between two or more countries alive at the same time. It can mean travelling from USA to Nigeria or vice versa or from any other country to the other.

The number of people travelling internationally is rapidly increasing annually. Statistics of the World Tourism Organization revealed international tourist arrivals in the year 2006 exceeded 840 million. In the year 2006, majority (410 million) of international tourist arrivals were for holiday, leisure and recreation. Business travel accounted for some 16% (131 million) while 27% (225 million) represented travel for other purposes such as visiting friends and relatives, health reasons and religious purposes/pilgrimages. For some people, the purpose of visit was not specified.

International travel can pose various risks to health. This however may depend on the characteristics of the travellers and the nature of travel. Travellers may experience sudden and significant changes. It may be with altitude, microbes, humidity and temperature. This can result in sudden ill-health. Moreso, severe health risks may increase in areas of poor quality accommodations, where sanitation and hygiene are inadequate, undeveloped medical services and unavailability of clean water.

Unit 1: International Air Travel

Unit 2: International Sea Travel

Unit 3: International land Travel

Unit 1: International Air Travel

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Unit 1: Travel by Air

Contents

1.0 Introduction

Meaning of International Air Travel

It is about travelling to a different country from your country of origin using airplanes, helicopters, hot air balloons, blimps, gliders, hang gliding, parachuting or anything else that can sustain flight. The use of air travel has increased greatly in recent years. Globally, it doubled between the mid 1980s and the year 2000 (Educalingo, 2021). Such travel is made through international airports and tends to make tourism and trade between two or more countries alive at the same time. It can mean travelling from USA to Nigeria or vice versa or from any other country to the other.

Everyone planning to travel ought to know about the potential hazards of the countries they are travelling to. They should learn ways of minimizing their risks of acquiring the diseases.

2.0 Intended Learning Outcomes (ILOs)

By the end of the study, you should be able to:

1. Explain Air travel
2. Explain the factors determining traveller's risks to infections
3. Narrate medical consultation before travel
4. Explain special group of travelers
5. Describe insurance for travelers
6. Narrate medical examination after travel
7. know the contraindication to Air travel

3.0 Main Content

3.1 Air Travel

This is a form of travel done in airplanes, helicopters, hot air balloons, blimps, gliders, hang gliding, parachuting or anything else that can sustain flight. The use of air travel has increased greatly in recent years. Globally, it doubled between the mid 1980s and the year 2000 (Educalingo, 2021).

3.2 Factors Determining Travellers' Risks to Infections.

There are some key determining factors to risks which travelers may be exposed to. They include according to WHO (2010):

1. **Purpose of the Visit:** The purpose of the visit is critical in relation to the associated health risk. A business trip to a city where the visit is spent in a hotel and/or conference center of high standard, or a tourist trip to a well-organised resort involves fewer risks than a visit to a remote rural area whether for work or pleasure. However, behavior also plays an important role for example going outdoors in the evenings in a malaria-endemic area without taking precautions may result in the traveler becoming infected with the malaria. Infectious agents and contaminated food and water, combined with the absence of appropriate medical facilities make travelling in many remote regions particularly hazardous.

4. **Duration and Season of Travel:** The duration of the visit and the behavior and life style of the travelers are important in determining the likely hood of exposure to infectious agent. It will influence decision on the need for certain vaccination or anti-malaria medication. The duration of the visit may also determine whether the traveler may be subjected to market changes in temperature and humidity during the visit or to prolonged exposure to atmospheric pollution. To overcome some of the challenges that may crop up throughout the duration of the travel, sufficient medical supplies should be carried to meet all foreseeable needs. A medical kit ought to be carried to all destinations where there may be apparent health risks especially those in developing countries or where local availability of medications or specific medications is not certain. The kit will contain basic medications to treat common illnesses, first-aid tools and any special medical items that may be needed by the individual traveller. Some categories of prescription medicines ought to be carried together with a medical attestation which has been signed by a physician certifying that the traveller requires the medication for personal use. Some nations require a physician and also the national health administrator to sign such certificate. Toiletries should also be carried in sufficient quantity throughout the entire visit except if their availability at the travel destination has been assured. These will contain items such as eye care, dental including contact lenses, skin care and personal hygiene. In times of travel, basic medical kit First-aid items should include adhesive tape, bandages, emollient eye drops, insect repellent, nasal decongestant, antiseptic wound cleanser, insect bite treatment, oral rehydration salts, scissors and safety pins. Others are simple analgesic such as paracetamol, sterile dressing and clinical thermometer. Additional items based on destination and individual needs should contain antidiarrhoeal medication, antimalarial medication, antifungal powder, condoms, medication for any pre-existing medical condition, sedatives, sterile syringes and needles, water disinfectant and other items to meet up with unforeseeable needs based on duration and destination of the visit.
3. **Destination:** Where accommodation, hygiene and sanitation, medical care and water quality are of high standards, they pose relatively few serious risks to the health of travelers, unless there is pre-existing illness. Of utmost importance is knowledge about the epidemiology of infectious diseases in the destination country. Travellers and travel medicine practitioners should be aware of the occurrence of any disease out breaks in their international destinations. New risks to international travelers may arise that are not detailed in this group. Unforeseen natural or manmade disasters may occur. Out breaks of known or new emerging infectious diseases are often unpredictable. Emerging infectious diseases are commonly defined:
- They are diseases that have newly appeared in a population.
 - They are also diseases that have existed in the past, but are rapidly increasing in incidence or geographical range.

Self-Test Exercises

1. What do you understand by Air Travel?
2. Identify three(3) determining factors to travellers' risks to infections

3.3 Standard of Accommodation

If an accommodation is of poor quality hygiene and sanitation are inadequate, medical service does not exist and clean water is unavailable, These may pose serious health risks for the health of the travelers. This can be seen among personnel from emergency relief and development agencies or from tourists who venture in to remote areas. In these settings, stringent precautions must be taking to avoid illness.

3.4 Medical Consultation Before Travel.

When a traveler intends to visit a destination within a developing country, he should consult a travel medicine clinic or a medical practitioner before the trip. The consultation ought to occur at least 4-8 weeks before the journey. It can be done earlier if the travel is a long-term travel or working overseas is being envisaged. Nevertheless, last-minute travellers can equally benefit from a medical consultation as late as the day before travel. The outcome of the consultation shall determine the need for vaccination or anti malaria medications as the case may be or any other medical items that the traveller may need.

3.5 Special Group of Travellers

(A) Travellers visiting Friends and Relatives

According to the world tourism organization, approximately 26 % of the 800 million international journey in the year 2005 were for visits to friends and relatives and for religious purpose/pilgrimage. According to the United Nations, international migration elevated from 120 million in 1990 to 200 million in 2006. In various countries of the world, immigrants in recent time constitute more than 20% of the population. They increasingly move from their place of origin to visit relatives and friends. Visits to friends and relatives (VFR) recently have become major component of more than 800 millions of international journeys that happen annually.

Compared with tourists from the same destination, VFRs are at more increased risk of travel-related diseases. These include malaria, hepatitis A and B, typhoid fever, rabies tuberculosis. However, the diseases are normally preventable by routine childhood vaccination. It is estimated that VFRs is responsible for more than half of the total imported malaria cases in North America and Europe.

The greater risk for VFR is related to a number of factors. They include higher risks of exposure and insufficient protective measures. Such individuals are less likely to seek pre-travel advice or to be adequately vaccinated. They are more likely to stay in remote areas and have intimate contact with the local populations. They may consume high risk food and beverages. They can undertake last-minutes travel or make trips of greater duration. Certain situations may make access to vaccination by the VFR difficult. The cost of pre-travel consultation often not covered by health insurance programs may be onerous for VFRs especially those with large families thus making access to travel medicines services hard. Sometimes, the impediment may be from cultural and linguistic factors. To improve access of VFRs, special strategies are required to increase the awareness among VFRs of various travel-related health risks. Such awareness shall also be on the need to undertake pre-travels health advice, vaccination and malaria prophylaxis where it is indicated.

(B) Pilgrimage

During Hajj, about 2 million Muslims or more from all over the world gather to perform their religious rituals. The resulting overcrowding has been associated with stampedes, traffic accident and fire injuries. Cardiovascular diseases are the most common causes of death. Also frequent are heatstroke and severe dehydration are frequent when the Hajj season occurs in summer months.

Overcrowding has also contributed to the potential spread of airborne infectious diseases or infections associated with person-to-person transmission during the Hajj. In the year 1987, an extensive spread of meningococcal disease serogroup A among pilgrims had prompted the Saudi Arabian health authorities to introduce compulsory vaccination with bivalent A and C vaccine for all the pilgrims. As an offshoot of meningococcal disease serogroup W-135 in 2000 and 2001, every pilgrim must now be given the quadrivalent meningococcal vaccine which protects against serogroups A, C, Y and W-135. This time, Hajj visas cannot be issued without any proof of vaccination. Most times among pilgrims, the most frequent complaints are upper respiratory symptoms. Vaccination against influenza has been reported to alleviate influenza-like illness among pilgrims thus should be highly recommended for all Hajj Pilgrims. Pneumococcal vaccination should also be made available for those over the age of 65 and those with underlying medical conditions. Prior to Hajj 1989, cholera has caused Hajj-related outbreaks. However, there has been remarkable improvement to the water supply and sewage systems.

Vaccination against Hepatitis A is recommended for non-immune pilgrims and routine vaccinations against polio, tetanus, diphtheria, tetanus and hepatitis B should be up to date. Yellow fever vaccine is considered a requirement for pilgrims that are from areas or countries with risk of yellow fever transmission. From 2005 till date, the ministry of health in Saudi Arabia requires that all individuals below 15 years of age who travel for Hajj from polio infected countries should show proof of Oral Polio vaccine (OPV) 6 weeks prior to application for entry visa.

Moreso, irrespective of previous immunization history, every individual arriving Saudi Arabia will receive oral polio vaccine at border points. Since 2006, all travellers from Afghanistan, India, Pakistan and Nigeria irrespective of age and previous immunization history shall also receive additional dose of OPV on arrival in Saudi Arabia.

Health risks associated with travel are greater for certain groups of travellers, including infants and young children, pregnant women, the elderly, the disabled, and those who have pre-existing health problems. Health risks may also differ depending on the purpose of travel, such as travel for the purpose of visiting friends and relatives (VFR) or for religious purposes/pilgrimages, for relief work, or for business.

For all of these travellers, medical advice and special precautions are necessary. They should be well informed about the available medical services at the travel destination.

(C) Infants and Children

Infants and young children have special needs with regard to vaccinations and antimalarial precautions. They are particularly sensitive to ultraviolet radiation. Infants become dehydrated more easily than adults in the event of inadequate fluid intake or loss of fluid due to diarrhoea. Such child can be overwhelmed by dehydration within few hours of being on board. Air travel may cause discomfort to infants as a result of changes in cabin air pressure. Air travel is contraindicated for infants less than 48 hours old. Infants and young children are more sensitive to sudden change in altitude. They are also more susceptible to infectious diseases. Advanced age is not a contraindication for travel if the general health status is good. However, elderly people should seek medical advice before planning long-distance travel.

(D) Pregnant Women

Travel is generally not contraindicated in pregnancy until very close to the expected date of delivery. Provided the pregnancy is uncomplicated and the woman's health okay, she can embark on air travel. Some airlines impose some travel restrictions on late pregnancy and the neonatal periods.

Nevertheless, pregnant women risk severe complications if they contract malaria. If possible, travel to malaria-endemic areas should be avoided. Also, medication of any type during pregnancy should be adhered to in line with medical advice. In summary, travel to high altitudes or to remote areas is discouraged during pregnancy.

(E) Disabled Persons

Physical disability is not regarded as a contraindication for travel if the overall health of the traveller is good. Some airlines have laws guiding them on conditions for travel for disabled passengers that need assistance. Any relevant information should be obtained in advance from the airline.

(F) People with pre-existing illness

People suffering from chronic illnesses should seek medical advice before planning a journey. Conditions that give rise to health risks in times of travel include:

- cardiovascular disorders
- chronic hepatitis
- chronic inflammatory bowel disease
- chronic renal disease requiring dialysis
- chronic respiratory diseases
- diabetes mellitus

- epilepsy
- immune suppression due to medication or to HIV infection
- previous thrombo embolic disease
- Severe Anaemia
- severe mental disorders
- any chronic condition requiring frequent medical intervention.

Any traveller with a chronic illness should carry all necessary medication for the entire duration of the journey. All medications, especially prescription medications, should be stored in carry-on luggage, in their original containers with clear labels. With heightened airline security, sharp objects will have to remain in checked luggage. Recently, airport security measures have introduced a restriction on liquids in carry-on luggage; it is therefore necessary to check with current airport security measures. A duplicate supply carried in the checked luggage is a safety precaution against loss or theft.

The traveller should carry the name and contact details of their physician on their person with other travel documents, together with information about the medical condition and treatment, and details of medication (generic drug names included) and prescribed doses. A physician's letter certifying the necessity for any drugs or other medical items (e.g., syringes) carried by the traveller that may be questioned by customs officials should also be carried.

3.6 Insurance for Travellers

International travellers should be aware that medical care abroad is often available only at private medical facilities and may be costly. In places where good-quality medical care is not readily available, travellers may need to be repatriated in case of accident or illness. If death occurs abroad, repatriation of the body can be extremely expensive and may be difficult to arrange. Travellers should note the following;

- Should seek information about any possible health-care agreements reciprocal in nature between the country of visit and the country of residence
- Traveller is to obtain special traveler-health insurance for countries of visit where there is significant health risks and high cost of medical care not readily available.

The health insurance should cover changes in the itinerary, emergency repatriation for health reasons, hospitalization, medical care in case of illness or accident and repatriation of the body in case of death.

Most times, tour operators and travel agents usually supply information about travellers' health insurance. Worthy of note now is that some countries in recent time require proof of proper health insurance which is taken as a condition for entry into any country. Travellers ought to know the procedures to adopt in order to obtain assistance and reimbursement if need arises. A

copy of the contact details and insurance certificate should be carried with other travel documents in the hand baggage.

Self-Test Exercises

1. Give a brief explanation of Medical Consultation Procedure before travel
4. Mention at least 6 special groups of travelers by Air
5. Name six (6) conditions that may give rise to health risks in times of travel
6. State 2 relevant pieces of information to be noted by travelers prior to international travel with regards to insurance

3.7 Medical Examination after Travel

Travellers should seek for medical examination once they return from their journey.

- If they suffer from a chronic cardiovascular disease, diabetes mellitus, respiratory disease;
- If they experience illness in the weeks following their return to country of residence particularly If fever, vomiting, persistent diarrhoea, jaundice, skin disease, urinary disorders or genital infection occurs.
- If the traveler considers that he has been exposed to a serious infection while traveling and
- If the traveler has spent 3 months and above in a developing country.

Returning travellers should avail medical personnel with facts on recent travels, destination, purpose and duration of visit. Frequent travellers should offer details of all journeys taken in the preceding weeks and months. Note that experience of fever on return from a malaria-endemic area means a medical emergency and travelers ought to seek for immediate medical attention.

3.9 Contraindications to Air Travel

Air Travel is normally contraindicated in:

- Infants less than 48 hours old.
- Women after the 36th week of pregnancy (after 32nd week for multiple pregnancies).
- Those suffering from angina pectoris or chest pain at rest; any active communicable disease; decompression sickness after diving;
- Increased intracranial pressure due to haemorrhage, trauma or infections of the sinuses or of the ear and nose, particularly if the eustachian tube is blocked recent myocardial infarction and stroke (time the period depending on seriousness of infection and duration of travel);

- Recent injury or surgery where trapped air or gas may be present, especially abdominal trauma and gastrointestinal surgery, ocular or craniofacial injuries, brain operations and eye operations involving penetration of the eyeball;
- Severe chronic respiratory disease, breathlessness at rest, or unresolved pneumothorax;
- Sickle-cell disease;
- Psychotic illness, unless it's fully controlled.

4.0 Self-Test Exercises

1. Enumerate cases where Air travel is contra-indicated.

5.0 Conclusion

Having studied this unit with the links and having attempted the self-test exercises, It is assumed that you have met the objectives of the unit. You are encouraged to study further as well as test your retention capability by answering the self-test exercises. Continue until you can answer every question in the self-test exercises indicative of the unit mastery.

6.0 Summary

In this unit, you have studied travel related risks, problems and considerations vis-à-vis air travel, determining factors to travellers' risks, medical consultations before embarking on travel, Special groups of travellers, conditions that may give rise to health risks during travel and information of note for travellers concerning insurance for travelers.

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Unit 3: Sea Travel

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- 1.0 Introduction
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1.0 Introduction

In the previous unit, you learnt about air travel, problems, risks and considerations taken when the need arises on air travels. Sea travel, a component of travel shall be explored in this unit. The passenger shipping industry (Ferries and cruise ships) has considerably expanded in recent decades. 11.7 million Passengers in 2006, worldwide, went on ship cruise. Cruise itineraries could include every continent and areas not easily accessible by other means of travel. The duration of a cruise on average is about 7 days. However, cruise voyages can last from several hours to several months (for instance, round-the globe cruise).

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you should be able to:

1. Explain sea travel
2. know the precautions taken if exposed to any form of communicable and non communicable disease.
3. Explain water movements and necessary precautions in eventual emergencies
4. Understand how to treat diarrhea while on sea level using ORS.

3.0 Main Content

3.1 The Concept of Sea Travel

Sea travel refers to any movement of passengers /or goods utilizing sea going vessels on voyages that may be undertaken wholly or partly in the sea. It is any long journey that involves travelling by sea or in a space (Yun, 2002).

The revised International Health Regulation (2005) addresses health requirements for ship operations and construction. There are world standards regarding port and ship sanitation and disease surveillance as well as response to infectious diseases. Guidance is given provision of safe water and food, control of vector and rodents and on waste disposal. According to the International Labour Organization Convention Article 8, (No. 164) concerning health protection and medical care for Seafarers (1987), it is mandatory for any vessel carrying more than 100 crew members on an international voyage of three days or longer to provide a physician for care of the crew. The regulations is not applicable to passenger vessels and ferries that sail for less than three days although the number of crew and passengers may exceed one thousand.

The ship's medical chest must have contents in accordance with the international agreements for ocean-going trade vessels but there are no special requirements for additional drugs for

passenger ships. Industry-wide, the average traveller on a cruise line should be 45-50 years of age. Cruises of longer duration often attract more elderly travelers which are groups likely to have more chronic medical problems like heart and lung disease that may worsen during travel.

Due to extended periods away from home port, especially on days at sea, it becomes necessary for passengers to stock sufficient medical supplies. Prescription medicines should be brought in their original containers or packages together with a letter from a physician attesting to the traveller's requirement for those medicines.

Cruise ship travellers that have chronic diseases and who need more comprehensive facilities than are obtainable in the ship or who may require particular medical treatment should consult their health-care providers. Knowledge of the quality and type of medical facilities along the itinerary is essential to determine whether travellers or crew members can go ashore for more care or whether they need to be evacuated by air back to the home country port. It is relevant to view a ship's medical facility as just an infirmary and not a hospital. Although most of the medical conditions that arise aboard ship can be treated as they would at an ambulatory care centre at home, more serious problems may need the patient to be treated in a fully staffed and equipped land-based hospital after being stabilized in the ship.

The fast movement of ships from one port to another with the likelihood of wide differences in sanitation standards and infectious disease exposes passengers to risks which often results in the invasion of communicable diseases by embarking passengers and crew members. In a relatively closed and crowded environment of a ship, infections may spread to other passengers and crews. Diseases may also be transmitted to the home communities of passengers and crew members disembarking. A literature review by WHO identified more than 100 disease outbreaks associated with ships since 1970. This is probably an under estimation for the fact that many outbreaks are not reported while some also go undetected. Such spreads are of concern because of their potentially severe health consequences plus high costs to the industry. Epidemics of measles, rubella, varicella, meningococcal meningitis, hepatitis A, legionellosis, and respiratory and gastrointestinal illnesses among ship travellers have been reported. In recent years, noro virus and influenza outbreaks have been noted as public health problems for the cruise industry.

Self Test Exercises

1. Give a detailed explanation on Sea travel vis-à-vis duration of a cruise, IHR (2005) health requirement regarding port and ship sanitation, the contents of a ship medical chest, names of some reported diseases identified by WHO.

3.2 Precautions to be Taken During Sea Travels

Risk posed by communicable and non-communicable diseases among cruise ship passengers and crew members is difficult to quantify. This is because of the broad spectrum of cruise ship experiences, the variety of destinations and the limited available data.

Generally, prospective cruise ship travellers should;

- ensure that they are updated with all routinely recommended age and medical condition specific immunizations;

- consider vaccination against influenza regardless of season, especially if they belong to groups for whom annual vaccination against influenza is routinely recommended;
- should follow immunization and prevention recommendations that is applicable to each country's itinerary;
- carry out frequent hand-washing with soap and water or in the alternative, use an alcohol-based hand sanitizer;
- consult a travel health specialist or physician who may avail prevention guidelines as well as immunizations according to the health status of the cruise ship traveller, travel duration, shore likely activities and countries to be visited
- consult a travel medicine specialist or physician about medication that work against motion sickness especially if they are prone to motion sickness;
- carry all prescription medicines in the original packet or container together with a physician's letter as the case may be.
- consult their health-care provider before embarking on a cruise if they have any health conditions that might increase the potential for illness on a cruise ship and finally,
- consult a physician so as to assess the individual risk of severe complications of influenza and the need to provide a prescription for anti-influenza medication, for prophylaxis or treatment.

3.3 Water Movements

Divers and Swimmers may be bitten by certain aquatic animals including moray, corger, moray els, weever fish, stingrays, scorpion fish, piranhas, stonefish, seals and sharks. It may be sting from venomous cnidarians-jellyfish, sea anemones and fire corals. It may be an octopus attack. Very serious, severe and often fatal injury results from attack by crocodiles which inhabit rivers and estuaries in many tropical countries like the tropical north of Australia. The Injuries from such dangerous aquatic animals may occur as a result of:

- Getting close to an organism with venom while in water for instance taking a bath or wading;
- Treading on a waver fish, stingray or sea urchin;
- Handling or toying with venomous animals during exploration of the sea-shore;
- Invading the environment or territory of large aquatic animals when at water edge or swimming.
- When swimming in water beings used by large predators as hunting grounds and
- Provoking or interfering with dangerous organisms living in water.

3.31 Precautions During Water Movements

- Obtain and make use of local advice on possibility of the existence of dangerous aquatic animals in the area.
- Adopt behaviour capable of provoking attack by predators,
- Wear shoes when walking nearby or on the shore or at the water edge.
- Avoid close contact with the dangerous jellyfish living in water or with dead jellyfish in the beach.
- Avoid swimming, walking or wading in crocodile-infested waters at all times of year.
- Always seek for medical advice in situations of poisonous animal sting or bite.

3.32 Treatment in Situations of Water Movement Injury

In an event of eventual envenomings by aquatic animal, any treatment to be given will depend on the nature of the puncture, wound or a localized skin reaction such as rash. Punctures that are caused by spiny fish need immersion in hot water followed by extraction of the spine. There should be a careful cleaning of the wound followed by antibiotic therapy then anti venom given in the case of stonefish. If the puncture was caused by an urchin or octopus, the treatment is basically identical but to be done without exposure to heat. In the event of rashes or linear lesions, closeness with cnidarians should be suspected and the treatment should be based on the use of about 5% acetic acid then local decontamination and application of corticosteroids which is an anti venom used for the box jellyfish *Chironex fleckeri* (Sea wasp) attack. Finally, there should be adequate follow-up for eventual sequel.

Self-Test Exercises

1. State at least 5(five) precautions to be taken by prospective cruise ship traveler
2. Mention at least four (4) ways injuries from dangerous aquatic animals may occur.
3. State at least five (5) precautions to be taken during water movements.
4. Describe the treatment to be given in an eventual envenoming by aquatic animal.

3.4 Treatment of Diarrhea During Travel

Most diarrhoeal occurrences are self-limiting with recovery happening in a few days. The treatment is very important especially for young children to avert dehydration. Immediately diarrhea begins, more fluids should be given such as water boiled, bottled or chlorinated. If diarrhoea uncontrollably continues for more than one day, oral rehydration salt (ORS) solution can be taken with continuation of normal food consumption.

3.41 Quantity of Oral Rehydration Solution (ORS) Solution to Drink

Children who are under 2 years should be given Vi-1/2 cup (50-100 ml) of the syrup after each loose stool that may be approximately 0.5l per day. Children who are 2-9 years can be given 100-200 mls on each loose stool that may be approximately 1L a day. Ten years or older patients can consume as much as they want up to 2 litres per day. If ORS solution is not readily available, a substitute with 6 level tea spoons of sugar and 1 level teaspoon of salt in 1L of pure drinking water can be used just as in the same quantity as ORS. Medical help should be provided if diarrhea lasts longer than 3 days or if there are frequent watery stooling or blood in the stools or repeated vomiting and fever.

In such situation, prophylactic use of antibiotics is not recommended. The use of anti diarrheal medicines for treatment is always contraindicated. If the child is still breastfeeding, it should not be interrupted or stopped, In case of development of other symptoms; medical advice should quickly be sought.

4.0 Self-Test Exercises

1. What do you understand by ORS?
2. Explain ORS with respect to Diarrhea during travel.
3. Explain how ORS can be used in the treatment of Diarrhea if the need arises in a 2 year old child in a ship cruise. What quantity of ORS is desired by the child in time of need?

5.0 Conclusion

Having gone through the contents of this unit, you have to a great extent understood the contents of the unit in line with the objectives set. Having answered the self-test exercises, you have mastered the unit also. You are encouraged to study once more any question you could not understand or answer very well. Continue trying until you have mastered the contents.

6.0 Summary

In this unit, you have been equipped with such contents as sea travel, the risks and challenges or problems as well as available considerations, precautions amongst others.

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Unit 3: Land Travels

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1.0 Introduction

Land travels or transport is the movement or transport of humans, animals or goods from one location to another through land. It may involve travelling through the deserts and forests and tend to attract certain forms of dangers to the travelers hence the need for every caution.

2.0 Intended Learning Outcomes (ILOs)

By the end of the unit, you will be able to:

1. Explain land travel
2. Understand precautions to take while on land travel
3. Explain treatment to be given in times of injury

3.0 Main Content

3.1 Land Travels and Perceived Dangers

Travellers to desert, tropical and subtropical areas ought to be aware of the possible presence of venomous scorpions, snakes and spiders. Advice should be sought about risks in areas to be visited. At night, most venomous species are particularly active. Venom from snakes and bites from spiders and from scorpion stings have dangerous effects and also cause tissue damage in the area of the bite. In the venom of both terrestrial and aquatic snakes are neurotoxins and also found in the venom of scorpions and spiders. Neurotoxins tend to cause weakness, paralysis and other symptoms.

Venom coming in contact with the eyes causes severe damage. It may result in blindness. Most snake venoms cause coagulation of blood which may lead to hemorrhage and reduction in blood pressure. Tarantula toxins in spider hairs may cause severe irritation if in contact with skin.

It calls for medical emergency if snake or spider injects its poison during bite by a venomous snake, scorpion or spider. The patient should quickly be taken to the nearest medical facility. First-aid measures involve immobilizing the affected limb with splints and firm. However, the bandage should not be tight. Bandaging to limit the spread of toxin in the body and the amount of local tissue damage is good enough but the bandage should not be so tight. Bandaging is not however recommended if there is local swelling and if tissue damage is present in the vicinity of the bite.

Other traditional first-aid measures such as incisions, tourniquets, an suction and compression are harmful and should not be used. Any decision to reuse anti venom should be done by a qualified medical personnel only. It should be administered in a medical facility. The antivenom ought to be given only if its stated range of specification includes the species of the animal responsible for the bite.

3.2 Precautions Against Wild Attacks

- Obtain local advice on possible existence of venomous scorpions, snakes, and spiders in the area.
- Avoid going on barefoot or in open sandals in the terrain of venomous snakes or spiders or scorpions. The dangerous animals may be present therefore, wear boots or closed shoes and long trousers.
- Avoid placing feet or hands where snakes, spiders or scorpions may be hiding.
- At night or outdoor, be particularly careful.
- Ensure examination of clothing and shoes prior to use to unveil hidden snakes, scorpions or spiders.

4.0 Self-Test Exercises

1. Land travels involve

(a) Traveling through the sea

(b)Traveling through the forest

(c) Traveling through the desert

(d) Traveling through the tropical and sub tropical areas

2. Enunciate at least four (4) precautions to be taken against wild attacks while on land travels.

3. Say true or False: traditional first-aid measures such as incisions, tourniquets, anasuction and compression are not harmful and should be used.

5.0 Conclusion

Having gone through the contents of this unit and attempted the self-test exercises, you have understood to a great extent the unit in line with the stated objective. You are encouraged more to continue studying and attempting the self-test exercises until you have mastered the contents.

6.0 Summary

In this unit, you studied air travels, travelers' risks to infections, medical consultations before travel, special groups of travelers and challenges they may face in the course of travel. Also studied are the role of insurance to travelers' health, conditions that may necessitate travelers to

embark on medical examination on return from a journey as well as contraindications to air travels, Sea travels vis-a-vis precautions to be adopted when on a ship cruise, land travel and water movements and lastly, ORS and its administration if the need arises during travels.

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MODULE 8

Module Introduction

International Travel is about travelling to a different country from your country of origin. Such travel is made through international airports and tends to make tourism and trade between two or more countries alive at the same time. It can mean travelling from USA to Nigeria or vice versa or from any other country to the other.

The number of people travelling internationally is rapidly increasing annually. Statistics of the World Tourism Organization revealed international tourist arrivals in the year 2006 exceeded 840 million. In the year 2006, majority (410 million) of international tourist arrivals were for holiday, leisure and recreation. Business travel accounted for some 16% (131 million) while 27% (225 million) represented travel for other purposes such as visiting friends and relatives, health reasons and religious purposes/pilgrimages. For some people, the purpose of visit was not specified.

International travel can pose various risks to health. This however may depend on the characteristics of the travellers and the nature of travel. Travellers may experience sudden and significant changes. It may be with altitude, microbes, humidity and temperature. This can result in sudden ill-health. Moreso, severe health risks may increase in areas of poor quality accommodations, where sanitation and hygiene are inadequate, undeveloped medical services and unavailability of clean water.

Unit 1: International Air Travel

Unit 2: International Sea Travel

Unit 3: International land Travel

Unit 1: International Air Travel

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Unit 1: Travel by Air

Contents

1.0 Introduction

Meaning of International Air Travel

It is about travelling to a different country from your country of origin using airplanes, helicopters, hot air balloons, blimps, gliders, hang gliding, parachuting or anything else that can sustain flight. The use of air travel has increased greatly in recent years. Globally, it doubled between the mid 1980s and the year 2000 (Educalingo, 2021). Such travel is made through international airports and tends to make tourism and trade between two or more countries alive at the same time. It can mean travelling from USA to Nigeria or vice versa or from any other country to the other.

Everyone planning to travel ought to know about the potential hazards of the countries they are travelling to. They should learn ways of minimizing their risks of acquiring the diseases.

2.0 Intended Learning Outcomes (ILOs)

By the end of the study, you should be able to:

1. Explain Air travel
2. Explain the factors determining traveller's risks to infections
3. Narrate medical consultation before travel
4. Explain special group of travelers
5. Describe insurance for travelers
6. Narrate medical examination after travel
7. know the contraindication to Air travel

3.0 Main Content

3.1 Air Travel

This is a form of travel done in airplanes, helicopters, hot air balloons, blimps, gliders, hang gliding, parachuting or anything else that can sustain flight. The use of air travel has increased greatly in recent years. Globally, it doubled between the mid 1980s and the year 2000 (Educalingo, 2021).

3.2 Factors Determining Travellers' Risks to Infections.

There are some key determining factors to risks which travelers may be exposed to. They include according to WHO (2010):

2. **Purpose of the Visit:** The purpose of the visit is critical in relation to the associated health risk. A business trip to a city where the visit is spent in a hotel and/or conference center of high standard, or a tourist trip to a well-organised resort involves fewer risks than a visit to a remote rural area whether for work or pleasure. However, behavior also plays an important role for example going outdoors in the evenings in a malaria-endemic area without taking precautions may result in the traveler becoming infected with the malaria. Infectious agents and contaminated food and water, combined with the absence of appropriate medical facilities make travelling in many remote regions particularly hazardous.

5. **Duration and Season of Travel:** The duration of the visit and the behavior and life style of the travelers are important in determining the likely hood of exposure to infectious agent. It will influence decision on the need for certain vaccination or anti-malaria medication. The duration of the visit may also determine whether the traveler may be subjected to market changes in temperature and humidity during the visit or to prolonged exposure to atmospheric pollution. To overcome some of the challenges that may crop up throughout the duration of the travel, sufficient medical supplies should be carried to meet all foreseeable needs. A medical kit ought to be carried to all destinations where there may be apparent health risks especially those in developing countries or where local availability of medications or specific medications is not certain. The kit will contain basic medications to treat common illnesses, first-aid tools and any special medical items that may be needed by the individual traveller. Some categories of prescription medicines ought to be carried together with a medical attestation which has been signed by a physician certifying that the traveller requires the medication for personal use. Some nations require a physician and also the national health administrator to sign such certificate. Toiletries should also be carried in sufficient quantity throughout the entire visit except if their availability at the travel destination has been assured. These will contain items such as eye care, dental including contact lenses, skin care and personal hygiene. In times of travel, basic medical kit First-aid items should include adhesive tape, bandages, emollient eye drops, insect repellent, nasal decongestant, antiseptic wound cleanser, insect bite treatment, oral rehydration salts, scissors and safety pins. Others are simple analgesic such as paracetamol, sterile dressing and clinical thermometer. Additional items based on destination and individual needs should contain antidiarrhoeal medication, antimalarial medication, antifungal powder, condoms, medication for any pre-existing medical condition, sedatives, sterile syringes and needles, water disinfectant and other items to meet up with unforeseeable needs based on duration and destination of the visit.
3. **Destination:** Where accommodation, hygiene and sanitation, medical care and water quality are of high standards, they pose relatively few serious risks to the health of travelers, unless there is pre-existing illness. Of utmost importance is knowledge about the epidemiology of infectious diseases in the destination country. Travellers and travel medicine practitioners should be aware of the occurrence of any disease out breaks in their international destinations. New risks to international travelers may arise that are not detailed in this group. Unforeseen natural or manmade disasters may occur. Out breaks of known or new emerging infectious diseases are often unpredictable. Emerging infectious diseases are commonly defined:
- They are diseases that have newly appeared in a population.
 - They are also diseases that have existed in the past, but are rapidly increasing in incidence or geographical range.

Self-Test Exercises

1. What do you understand by Air Travel?
2. Identify three(3) determining factors to travellers' risks to infections

3.3 Standard of Accommodation

If an accommodation is of poor quality hygiene and sanitation are inadequate, medical service does not exist and clean water is unavailable, These may pose serious health risks for the health of the travelers. This can be seen among personnel from emergency relief and development agencies or from tourists who venture in to remote areas. In these settings, stringent precautions must be taking to avoid illness.

3.4 Medical Consultation Before Travel.

When a traveler intends to visit a destination within a developing country, he should consult a travel medicine clinic or a medical practitioner before the trip. The consultation ought to occur at least 4-8 weeks before the journey. It can be done earlier if the travel is a long-term travel or working overseas is being envisaged. Nevertheless, last-minute travellers can equally benefit from a medical consultation as late as the day before travel. The outcome of the consultation shall determine the need for vaccination or anti malaria medications as the case may be or any other medical items that the traveller may need.

3.5 Special Group of Travellers

(A) Travellers visiting Friends and Relatives

According to the world tourism organization, approximately 26 % of the 800 million international journey in the year 2005 were for visits to friends and relatives and for religious purpose/pilgrimage. According to the United Nations, international migration elevated from 120 million in 1990 to 200 million in 2006. In various countries of the world, immigrants in recent time constitute more than 20% of the population. They increasingly move from their place of origin to visit relatives and friends. Visits to friends and relatives (VFR) recently have become major component of more than 800 millions of international journeys that happen annually.

Compared with tourists from the same destination, VFRs are at more increased risk of travel-related diseases. These include malaria, hepatitis A and B, typhoid fever, rabies tuberculosis. However, the diseases are normally preventable by routine childhood vaccination. It is estimated that VFRs is responsible for more than half of the total imported malaria cases in North America and Europe.

The greater risk for VFR is related to a number of factors. They include higher risks of exposure and insufficient protective measures. Such individuals are less likely to seek pre-travel advice or to be adequately vaccinated. They are more likely to stay in remote areas and have intimate contact with the local populations. They may consume high risk food and beverages. They can undertake last-minutes travel or make trips of greater duration. Certain situations may make access to vaccination by the VFR difficult. The cost of pre-travel consultation often not covered by health insurance programs may be onerous for VFRs especially those with large families thus making access to travel medicines services hard. Sometimes, the impediment may be from cultural and linguistic factors. To improve access of VFRs, special strategies are required to increase the awareness among VFRs of various travel-related health risks. Such awareness shall also be on the need to undertake pre-travels health advice, vaccination and malaria prophylaxis where it is indicated.

(B) Pilgrimage

During Hajj, about 2 million Muslims or more from all over the world gather to perform their religious rituals. The resulting overcrowding has been associated with stampedes, traffic accident and fire injuries. Cardiovascular diseases are the most common causes of death. Also frequent are heatstroke and severe dehydration are frequent when the Hajj season occurs in summer months.

Overcrowding has also contributed to the potential spread of airborne infectious diseases or infections associated with person-to-person transmission during the Hajj. In the year 1987, an extensive spread of meningococcal disease serogroup A among pilgrims had prompted the Saudi Arabian health authorities to introduce compulsory vaccination with bivalent A and C vaccine for all the pilgrims. As an offshoot of meningococcal disease serogroup W-135 in 2000 and 2001, every pilgrim must now be given the quadrivalent meningococcal vaccine which protects against serogroups A, C, Y and W-135. This time, Hajj visas cannot be issued without any proof of vaccination. Most times among pilgrims, the most frequent complaints are upper respiratory symptoms. Vaccination against influenza has been reported to alleviate influenza-like illness among pilgrims thus should be highly recommended for all Hajj Pilgrims. Pneumococcal vaccination should also be made available for those over the age of 65 and those with underlying medical conditions. Prior to Hajj 1989, cholera has caused Hajj-related outbreaks. However, there has been remarkable improvement to the water supply and sewage systems.

Vaccination against Hepatitis A is recommended for non-immune pilgrims and routine vaccinations against polio, tetanus, diphtheria, tetanus and hepatitis B should be up to date. Yellow fever vaccine is considered a requirement for pilgrims that are from areas or countries with risk of yellow fever transmission. From 2005 till date, the ministry of health in Saudi Arabia requires that all individuals below 15 years of age who travel for Hajj from polio infected countries should show proof of Oral Polio vaccine (OPV) 6 weeks prior to application for entry visa.

Moreso, irrespective of previous immunization history, every individual arriving Saudi Arabia will receive oral polio vaccine at border points. Since 2006, all travellers from Afghanistan, India, Pakistan and Nigeria irrespective of age and previous immunization history shall also receive additional dose of OPV on arrival in Saudi Arabia.

Health risks associated with travel are greater for certain groups of travellers, including infants and young children, pregnant women, the elderly, the disabled, and those who have pre-existing health problems. Health risks may also differ depending on the purpose of travel, such as travel for the purpose of visiting friends and relatives (VFR) or for religious purposes/pilgrimages, for relief work, or for business.

For all of these travellers, medical advice and special precautions are necessary. They should be well informed about the available medical services at the travel destination.

(C) Infants and Children

Infants and young children have special needs with regard to vaccinations and antimalarial precautions. They are particularly sensitive to ultraviolet radiation. Infants become dehydrated more easily than adults in the event of inadequate fluid intake or loss of fluid due to diarrhoea. Such child can be overwhelmed by dehydration within few hours of being on board. Air travel may cause discomfort to infants as a result of changes in cabin air pressure. Air travel is contraindicated for infants less than 48 hours old. Infants and young children are more sensitive to sudden change in altitude. They are also more susceptible to infectious diseases. Advanced age is not a contraindication for travel if the general health status is good. However, elderly people should seek medical advice before planning long-distance travel.

(D) Pregnant Women

Travel is generally not contraindicated in pregnancy until very close to the expected date of delivery. Provided the pregnancy is uncomplicated and the woman's health okay, she can embark on air travel. Some airlines impose some travel restrictions on late pregnancy and the neonatal periods.

Nevertheless, pregnant women risk severe complications if they contract malaria. If possible, travel to malaria-endemic areas should be avoided. Also, medication of any type during pregnancy should be adhered to in line with medical advice. In summary, travel to high altitudes or to remote areas is discouraged during pregnancy.

(E) Disabled Persons

Physical disability is not regarded as a contraindication for travel if the overall health of the traveller is good. Some airlines have laws guiding them on conditions for travel for disabled passengers that need assistance. Any relevant information should be obtained in advance from the airline.

(F) People with pre-existing illness

People suffering from chronic illnesses should seek medical advice before planning a journey. Conditions that give rise to health risks in times of travel include:

- cardiovascular disorders
- chronic hepatitis
- chronic inflammatory bowel disease
- chronic renal disease requiring dialysis
- chronic respiratory diseases
- diabetes mellitus

- epilepsy
- immune suppression due to medication or to HIV infection
- previous thrombo embolic disease
- Severe Anaemia
- severe mental disorders
- any chronic condition requiring frequent medical intervention.

Any traveller with a chronic illness should carry all necessary medication for the entire duration of the journey. All medications, especially prescription medications, should be stored in carry-on luggage, in their original containers with clear labels. With heightened airline security, sharp objects will have to remain in checked luggage. Recently, airport security measures have introduced a restriction on liquids in carry-on luggage; it is therefore necessary to check with current airport security measures. A duplicate supply carried in the checked luggage is a safety precaution against loss or theft.

The traveller should carry the name and contact details of their physician on their person with other travel documents, together with information about the medical condition and treatment, and details of medication (generic drug names included) and prescribed doses. A physician's letter certifying the necessity for any drugs or other medical items (e.g., syringes) carried by the traveller that may be questioned by customs officials should also be carried.

3.6 Insurance for Travellers

International travellers should be aware that medical care abroad is often available only at private medical facilities and may be costly. In places where good-quality medical care is not readily available, travellers may need to be repatriated in case of accident or illness. If death occurs abroad, repatriation of the body can be extremely expensive and may be difficult to arrange. Travellers should note the following;

- Should seek information about any possible health-care agreements reciprocal in nature between the country of visit and the country of residence
- Traveller is to obtain special traveler-health insurance for countries of visit where there is significant health risks and high cost of medical care not readily available.

The health insurance should cover changes in the itinerary, emergency repatriation for health reasons, hospitalization, medical care in case of illness or accident and repatriation of the body in case of death.

Most times, tour operators and travel agents usually supply information about travellers' health insurance. Worthy of note now is that some countries in recent time require proof of proper health insurance which is taken as a condition for entry into any country. Travellers ought to know the procedures to adopt in order to obtain assistance and reimbursement if need arises. A

copy of the contact details and insurance certificate should be carried with other travel documents in the hand baggage.

Self-Test Exercises

1. Give a brief explanation of Medical Consultation Procedure before travel
4. Mention at least 6 special groups of travelers by Air
5. Name six(6) conditions that may give rise to health risks in times of travel
6. State 2 relevant pieces of information to be noted by travelers prior to international travel with regards to insurance

3.7 Medical Examination after Travel

Travellers should seek for medical examination once they return from their journey.

- If they suffer from a chronic cardiovascular disease, diabetes mellitus, respiratory disease;
- If they experience illness in the weeks following their return to country of residence particularly If fever, vomiting, persistent diarrhoea, jaundice, skin disease, urinary disorders or genital infection occurs.
- If the traveler considers that he has been exposed to a serious infection while traveling and
- If the traveler has spent 3 months and above in a developing country.

Returning travellers should avail medical personnel with facts on recent travels, destination, purpose and duration of visit. Frequent travellers should offer details of all journeys taken in the preceding weeks and months. Note that experience of fever on return from a malaria-endemic area means a medical emergency and travelers ought to seek for immediate medical attention.

3.9 Contraindications to Air Travel

Air Travel is normally contraindicated in:

- Infants less than 48 hours old.
- Women after the 36th week of pregnancy (after 32nd week for multiple pregnancies).
- Those suffering from angina pectoris or chest pain at rest; any active communicable disease; decompression sickness after diving;
- Increased intracranial pressure due to haemorrhage, trauma or infections of the sinuses or of the ear and nose, particularly if the eustachian tube is blocked recent myocardial infarction and stroke (time the period depending on seriousness of infection and duration of travel);

- Recent injury or surgery where trapped air or gas may be present, especially abdominal trauma and gastrointestinal surgery, ocular or craniofacial injuries, brain operations and eye operations involving penetration of the eyeball;
- Severe chronic respiratory disease, breathlessness at rest, or unresolved pneumothorax;
- Sickle-cell disease;
- Psychotic illness, unless it's fully controlled.

4.0 Self-Test Exercises

1. Enumerate cases where Air travel is contra-indicated.

5.0 Conclusion

Having studied this unit with the links and having attempted the self-test exercises, It is assumed that you have met the objectives of the unit. You are encouraged to study further as well as test your retention capability by answering the self-test exercises. Continue until you can answer every question in the self-test exercises indicative of the unit mastery.

6.0 Summary

In this unit, you have studied travel related risks, problems and considerations vis-à-vis air travel, determining factors to travellers' risks, medical consultations before embarking on travel, Special groups of travellers, conditions that may give rise to health risks during travel and information of note for travellers concerning insurance for travelers.

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Unit 3: Sea Travel

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1.0 Introduction

In the previous unit, you learnt about air travel, problems, risks and considerations taken when the need arises on air travels. Sea travel, a component of travel shall be explored in this unit. The passenger shipping industry (Ferries and cruise ships) has considerably expanded in recent decades. 11.7 million Passengers in 2006, worldwide, went on ship cruise. Cruise itineraries could include every continent and areas not easily accessible by other means of travel. The duration of a cruise on average is about 7 days. However, cruise voyages can last from several hours to several months (for instance, round-the globe cruise).

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you should be able to:

1. Explain sea travel
2. know the precautions taken if exposed to any form of communicable and non communicable disease.
3. Explain water movements and necessary precautions in eventual emergencies
4. Understand how to treat diarrhea while on sea level using ORS.

3.0 Main Content

3.1 The Concept of Sea Travel

Sea travel refers to any movement of passengers /or goods utilizing sea going vessels on voyages that may be undertaken wholly or partly in the sea. It is any long journey that involves travelling by sea or in a space (Yun, 2002).

The revised International Health Regulation (2005) addresses health requirements for ship operations and construction. There are world standards regarding port and ship sanitation and disease surveillance as well as response to infectious diseases. Guidance is given provision of safe water and food, control of vector and rodents and on waste disposal. According to the International Labour Organization Convention Article 8, (No. 164) concerning health protection and medical care for Seafarers (1987), it is mandatory for any vessel carrying more than 100 crew members on an international voyage of three days or longer to provide a physician for care of the crew. The regulations is not applicable to passenger vessels and ferries that sail for less than three days although the number of crew and passengers may exceed one thousand.

The ship's medical chest must have contents in accordance with the international agreements for ocean-going trade vessels but there are no special requirements for additional drugs for

passenger ships. Industry-wide, the average traveller on a cruise line should be 45-50 years of age. Cruises of longer duration often attract more elderly travelers which are groups likely to have more chronic medical problems like heart and lung disease that may worsen during travel.

Due to extended periods away from home port, especially on days at sea, it becomes necessary for passengers to stock sufficient medical supplies. Prescription medicines should be brought in their original containers or packages together with a letter from a physician attesting to the traveller's requirement for those medicines.

Cruise ship travellers that have chronic diseases and who need more comprehensive facilities than are obtainable in the ship or who may require particular medical treatment should consult their health-care providers. Knowledge of the quality and type of medical facilities along the itinerary is essential to determine whether travellers or crew members can go ashore for more care or whether they need to be evacuated by air back to the home country port. It is relevant to view a ship's medical facility as just an infirmary and not a hospital. Although most of the medical conditions that arise aboard ship can be treated as they would at an ambulatory care centre at home, more serious problems may need the patient to be treated in a fully staffed and equipped land-based hospital after being stabilized in the ship.

The fast movement of ships from one port to another with the likelihood of wide differences in sanitation standards and infectious disease exposes passengers to risks which often results in the invasion of communicable diseases by embarking passengers and crew members. In a relatively closed and crowded environment of a ship, infections may spread to other passengers and crews. Diseases may also be transmitted to the home communities of passengers and crew members disembarking. A literature review by WHO identified more than 100 disease outbreaks associated with ships since 1970. This is probably an under estimation for the fact that many outbreaks are not reported while some also go undetected. Such spreads are of concern because of their potentially severe health consequences plus high costs to the industry. Epidemics of measles, rubella, varicella, meningococcal meningitis, hepatitis A, legionellosis, and respiratory and gastrointestinal illnesses among ship travellers have been reported. In recent years, noro virus and influenza outbreaks have been noted as public health problems for the cruise industry.

Self Test Exercises

1. Give a detailed explanation on Sea travel vis-à-vis duration of a cruise, IHR (2005) health requirement regarding port and ship sanitation, the contents of a ship medical chest, names of some reported diseases identified by WHO.

3.2 Precautions to be Taken During Sea Travels

Risk posed by communicable and non-communicable diseases among cruise ship passengers and crew members is difficult to quantify. This is because of the broad spectrum of cruise ship experiences, the variety of destinations and the limited available data.

Generally, prospective cruise ship travellers should;

- ensure that they are updated with all routinely recommended age and medical condition specific immunizations;

- consider vaccination against influenza regardless of season, especially if they belong to groups for whom annual vaccination against influenza is routinely recommended;
- should follow immunization and prevention recommendations that is applicable to each country's itinerary;
- carry out frequent hand-washing with soap and water or in the alternative, use an alcohol-based hand sanitizer;
- consult a travel health specialist or physician who may avail prevention guidelines as well as immunizations according to the health status of the cruise ship traveller, travel duration, shore likely activities and countries to be visited
- consult a travel medicine specialist or physician about medication that work against motion sickness especially if they are prone to motion sickness;
- carry all prescription medicines in the original packet or container together with a physician's letter as the case may be.
- consult their health-care provider before embarking on a cruise if they have any health conditions that might increase the potential for illness on a cruise ship and finally,
- consult a physician so as to assess the individual risk of severe complications of influenza and the need to provide a prescription for anti-influenza medication, for prophylaxis or treatment.

3.3 Water Movements

Divers and Swimmers may be bitten by certain aquatic animals including moray, corger, moray els, weever fish, stingrays, scorpion fish, piranhas, stonefish, seals and sharks. It may be sting from venomous cnidarians-jellyfish, sea anemones and fire corals. It may be an octopus attack. Very serious, severe and often fatal injury results from attack by crocodiles which inhabit rivers and estuaries in many tropical countries like the tropical north of Australia. The Injuries from such dangerous aquatic animals may occur as a result of:

- Getting close to an organism with venom while in water for instance taking a bath or wading;
- Treading on a waver fish, stingray or sea urchin;
- Handling or toying with venomous animals during exploration of the sea-shore;
- Invading the environment or territory of large aquatic animals when at water edge or swimming.
- When swimming in water beings used by large predators as hunting grounds and
- Provoking or interfering with dangerous organisms living in water.

3.31 Precautions During Water Movements

- Obtain and make use of local advice on possibility of the existence of dangerous aquatic animals in the area.
- Adopt behaviour capable of provoking attack by predators,
- Wear shoes when walking nearby or on the shore or at the water edge.
- Avoid close contact with the dangerous jellyfish living in water or with dead jellyfish in the beach.
- Avoid swimming, walking or wading in crocodile-infested waters at all times of year.
- Always seek for medical advice in situations of poisonous animal sting or bite.

3.32 Treatment in Situations of Water Movement Injury

In an event of eventual envenomings by aquatic animal, any treatment to be given will depend on the nature of the puncture, wound or a localized skin reaction such as rash. Punctures that are caused by spiny fish need immersion in hot water followed by extraction of the spine. There should be a careful cleaning of the wound followed by antibiotic therapy then anti venom given in the case of stonefish. If the puncture was caused by an urchin or octopus, the treatment is basically identical but to be done without exposure to heat. In the event of rashes or linear lesions, closeness with cnidarians should be suspected and the treatment should be based on the use of about 5% acetic acid then local decontamination and application of corticosteroids which is an anti venom used for the box jellyfish *Chironex fleckeri* (Sea wasp) attack. Finally, there should be adequate follow-up for eventual sequel.

Self-Test Exercises

1. State at least 5(five) precautions to be taken by prospective cruise ship traveler
2. Mention at least four (4) ways injuries from dangerous aquatic animals may occur.
3. State at least five (5) precautions to be taken during water movements.
4. Describe the treatment to be given in an eventual envenoming by aquatic animal.

3.4 Treatment of Diarrhea During Travel

Most diarrhoeal occurrences are self-limiting with recovery happening in a few days. The treatment is very important especially for young children to avert dehydration. Immediately diarrhea begins, more fluids should be given such as water boiled, bottled or chlorinated. If diarrhoea uncontrollably continues for more than one day, oral rehydration salt (ORS) solution can be taken with continuation of normal food consumption.

3.41 Quantity of Oral Rehydration Solution (ORS) Solution to Drink

Children who are under 2 years should be given Vi-1/2 cup (50-100 ml) of the syrup after each loose stool that may be approximately 0.5l per day. Children who are 2-9 years can be given 100-200 mls on each loose stool that may be approximately 1L a day. Ten years or older patients can consume as much as they want up to 2 litres per day. If ORS solution is not readily available, a substitute with 6 level tea spoons of sugar and 1 level teaspoon of salt in 1L of pure drinking water can be used just as in the same quantity as ORS. Medical help should be provided if diarrhea lasts longer than 3 days or if there are frequent watery stooling or blood in the stools or repeated vomiting and fever.

In such situation, prophylactic use of antibiotics is not recommended. The use of anti diarrheal medicines for treatment is always contraindicated. If the child is still breastfeeding, it should not be interrupted or stopped, In case of development of other symptoms; medical advice should quickly be sought.

4.0 Self-Test Exercises

1. What do you understand by ORS?
2. Explain ORS with respect to Diarrhea during travel.
3. Explain how ORS can be used in the treatment of Diarrhea if the need arises in a 2 year old child in a ship cruise. What quantity of ORS is desired by the child in time of need?

5.0 Conclusion

Having gone through the contents of this unit, you have to a great extent understood the contents of the unit in line with the objectives set. Having answered the self-test exercises, you have mastered the unit also. You are encouraged to study once more any question you could not understand or answer very well. Continue trying until you have mastered the contents.

6.0 Summary

In this unit, you have been equipped with such contents as sea travel, the risks and challenges or problems as well as available considerations, precautions amongst others.

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Unit 3: Land Travels

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1.0 Introduction

Land travels or transport is the movement or transport of humans, animals or goods from one location to another through land. It may involve travelling through the deserts and forests and tend to attract certain forms of dangers to the travelers hence the need for every caution.

2.0 Intended Learning Outcomes (ILOs)

By the end of the unit, you will be able to:

1. Explain land travel
2. Understand precautions to take while on land travel
3. Explain treatment to be given in times of injury

3.0 Main Content

3.1 Land Travels and Perceived Dangers

Travellers to desert, tropical and subtropical areas ought to be aware of the possible presence of venomous scorpions, snakes and spiders. Advice should be sought about risks in areas to be visited. At night, most venomous species are particularly active. Venom from snakes and bites from spiders and from scorpion stings have dangerous effects and also cause tissue damage in the area of the bite. In the venom of both terrestrial and aquatic snakes are neurotoxins and also found in the venom of scorpions and spiders. Neurotoxins tend to cause weakness, paralysis and other symptoms.

Venom coming in contact with the eyes causes severe damage. It may result in blindness. Most snake venoms cause coagulation of blood which may lead to hemorrhage and reduction in blood pressure. Tarantula toxins in spider hairs may cause severe irritation if in contact with skin.

It calls for medical emergency if snake or spider injects its poison during bite by a venomous snake, scorpion or spider. The patient should quickly be taken to the nearest medical facility. First-aid measures involve immobilizing the affected limb with splints and firm. However, the bandage should not be tight. Bandaging to limit the spread of toxin in the body and the amount of local tissue damage is good enough but the bandage should not be so tight. Bandaging is not however recommended if there is local swelling and if tissue damage is present in the vicinity of the bite.

Other traditional first-aid measures such as incisions, tourniquets, an suction and compression are harmful and should not be used. Any decision to reuse anti venom should be done by a qualified medical personnel only. It should be administered in a medical facility. The antivenom ought to be given only if its stated range of specification includes the species of the animal responsible for the bite.

3.2 Precautions Against Wild Attacks

- Obtain local advice on possible existence of venomous scorpions, snakes, and spiders in the area.
- Avoid going on barefoot or in open sandals in the terrain of venomous snakes or spiders or scorpions. The dangerous animals may be present therefore, wear boots or closed shoes and long trousers.
- Avoid placing feet or hands where snakes, spiders or scorpions may be hiding.
- At night or outdoor, be particularly careful.
- Ensure examination of clothing and shoes prior to use to unveil hidden snakes, scorpions or spiders.

4.0 Self-Test Exercises

1. Land travels involve

(a) Traveling through the sea

(b)Traveling through the forest

(c) Traveling through the desert

(d) Traveling through the tropical and sub tropical areas

2. Enunciate at least four (4) precautions to be taken against wild attacks while on land travels.

3. Say true or False: traditional first-aid measures such as incisions, tourniquets, anasuction and compression are not harmful and should be used.

5.0 Conclusion

Having gone through the contents of this unit and attempted the self-test exercises, you have understood to a great extent the unit in line with the stated objective. You are encouraged more to continue studying and attempting the self-test exercises until you have mastered the contents.

6.0 Summary

In this unit, you studied air travels, travelers' risks to infections, medical consultations before travel, special groups of travelers and challenges they may face in the course of travel. Also studied are the role of insurance to travelers' health, conditions that may necessitate travelers to

embark on medical examination on return from a journey as well as contraindications to air travels, Sea travels vis-a-vis precautions to be adopted when on a ship cruise, land travel and water movements and lastly, ORS and its administration if the need arises during travels.

7.0 References/Further Readings

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MODULE 9

Introduction of the Module

Career opportunities for graduates include health systems administration and management, policy development, education, community outreach, research, community healthcare planning, program planning and evaluation and infectious disease management. Employers may include, hospitals, local health agencies, government, non-governmental organizations (NGOs) locally and overseas, the private and non-profit sectors. A degree in global health can serve as a pre-professional degree for programmes like medicine, physiotherapy, nursing, health administration and health law or any relevant graduate degrees.

Unit 1: International Health Career

Contents

- 1.0 Introduction
- 2.0 Intended Learning Outcomes
- 3.0 Main Content
 - 3.1 Concepts of International Health
 - 3.2 Specific Examples of How Graduates May Contribute to Public Health
 - 3.3 Competencies in Health Education as a Career
 - 3.4 Job Opportunities /Careers in Health
 - 3.5 Health Education Career Opportunities in Developed World
 - 3.6 Tabulated Summary of Health Education Careers and Opportunities
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

1.0 Introduction

Careers in global health are more often clinical and non-clinical. Both opportunities tend to be addressing issues of epidemiology and public/global health or work in leadership roles overseas. They can be found in agencies such as WHO and UNICEF. Non-clinical graduates can take responsibilities in valuable positions addressing policy development for infectious diseases, nutrition, and health care management.

2.0 Intended Learning Outcomes (ILOs)

By the end of the unit, you should be able to:

1. Explain the concept of international health.
2. Understand how graduates may contribute to public health
3. Know competencies in health education as a career
4. Understand job opportunities/careers in Health
5. Know health education career opportunities in developed world

3.0 Main Content

3.1 Concept of International Health Careers

Careers in global health are more often clinical and non-clinical. Both opportunities tend to be

addressing issues of epidemiology and public/global health or work in leadership roles overseas. They can be found in agencies such as WHO and UNICEF. Non-clinical graduates can take responsibilities in valuable positions addressing policy development for infectious diseases, nutrition, and health care management.

3.2 Specific Examples of How Graduates May Contribute to Public Health

There are specific examples of how graduates may contribute to public health through global/International health policy regionally, nationally and globally. These may include:

- Identifying and promoting the benefits of exercise. This is to help the public to understand the effect of exercise in lessening stress and the dangers of chronic diseases.
- Promoting healthy environment which can be done by monitoring levels of air pollution so that people with lung infections can take the necessary steps to ensure safety. By developing programs and making public the health effects of air pollution, it will encourage public officials to develop programs that will offset emissions. Drivers are motivated to use cycles or public transit or to walk to their work destinations.
- Graduates can help to lower the diabetes incidence in vulnerable and high risk immigrant communities. They can mount diabetes awareness, its complications and prevention through healthy eating and developing a non sedentary lifestyle.
- Identifying and mapping out strategies for non-profit community-based health agencies in order to maximize use of available resources.
- Enhancing disease prevention and control through programs. This can be done by collecting, analyzing, interpreting and information dissemination concerning various conditions and diseases.
- Optimizing utilization of public health care. This can be done by monitoring health trends and determinants of health by providing evidence-based information that will aid decision making.

Self-Test Exercises

1. Explain the concept of International health careers
2. Using three (3) points, State how you may contribute to public health policy implementation locally, nationally and internationally

3.3 Competencies in Health Education as a Career

Health education can happen in schools, colleges, other work places, medical care settings, educations of the community among others.

Health Educators should be able to take up the following responsibilities:

1. Assess individual and community needs
2. Plan and develop health education programmes
3. Implement health education programmes
4. Manage health education programmes and personnels
5. Evaluate health education programmes according to goals and objectives
6. Write grants for project execution
7. Identify resources and make referrals when and where necessary
8. Develop mass media campaigns for public enlightenment
9. Organize and mobilize communities for action as the case may be.
10. Conduct research using appropriate design and methods
11. Write scholarly articles and contribute to knowledge.

Self-Test Exercises

1. Identify areas/locations that health education as a carrier can take place. Mention responsibilities/competencies that health educators can take up in the identified locations.

3.4 Job Opportunities /Careers in Health

Employment Opportunities and descriptions in Health Education According to Achalu (2020) Health educators may work in a variety of settings. Most common ones are listed as schools, hospitals, health centers, industries, media houses and international settings.

Job Opportunity in Government/Community Settings: Health education professionals can be employed in state or federal government, in state and local health departments. Their job skills include planning, coordinating health education activities, identifying and assessing target populations, conducting teacher in-service workshops, counseling in health lifestyle topics, developing curricular/media campaigns, conducting pre-program and post-program surveys, doing follow-up evaluation with participants, providing services for blood pressure, cholesterol and body fat measurement, making presentations, implementing community awareness programs, creating curricular and materials for dissemination, in-servicing teachers, recruiting, training volunteers, fund raising and special events.

Job Opportunity in Clinical and Health Care Settings: Health educators can work in clinical settings. Their job requirement includes patient education individually and in groups, having needs assessment skills, developing programmes, having skills to implement and evaluate. Here, having a clinical background is of essence here.

Job Opportunities in Corporate Settings: Health educators can be found in corporate settings to work with other employees. They mount health promotion programmes which have been

found to decrease absence from work, improved attitudes, improved productivity and has reduced health care costs. Apart from large in-house programmes, health educators indulge in outside consultancies providing services to smaller companies. They can provide both corporate and individual needs assessment and can services like health screenings, stress management, nutrition, cessation of smoking, control of chronic diseases, prevention of drug abuse, weight management and recreational and fitness services.

Job Opportunities in Emergency Medical Services: Health educators can be found in hospitals, ambulance, fire service, law enforcement and clinical care.

The skills needed by them here include improved patient care, illness and accident prevention, publicspeaking, programme planning and evaluation plus needs assessment.

Job Opportunity as a Community Health Educator: A community educator has the responsibility of educating the public on the causes and prevention of diseases as well as other health problems. He plans and develops health programmes to meet the needs of the community. His job opportunities avail in hospitals, government agencies, voluntary health agencies, local, state and federal agencies and primary health care, etc.

As a Food Inspector: A health educator can inspect industries and firms where foods are produced to examine and identify anything capable of making the food unhealthy for consumption. He discusses his findings with the firm manager. He also prepares written reports and gathers evidence to be used in case of any court or legal issue. Job opportunities of this sort abound in health agencies, food and drug administration agencies plus food producing industries.

As a School Counselor: A health educator helps students to select their subjects and counsels them in career selection. He counsels them with health and adjustment problems. On this, they can be found in schools, colleges, drug problems and behavioural problem centres.

As a Nutritionist or Dietician: Health educators educate people about nutrition in relation to health maintenance. He counsels them on nutritional needs and requirements among the aged, pregnant women, high school athletes as well as those with limited money for food. Job opportunities include working in hotels, hospitals, food processing companies, etc.

Job opportunities in Schools in School Settings: School health educators can teach in primary and secondary schools. They can carry out research assess, plan, market and evaluate. Those with higher degrees can work in tertiary institutions as university, polytechics, monotechnic, colleges of education as lecturers as well as working in research institutions.

Self-Test Exercises

1. Explain job opportunities available for Health Educators in the following Settings:

A. Clinical and Health Care Setting

B. Corporate Settings

C. Emergency Medical Services

D. Community Health

E. Food Inspection

F. School Counselling

G. Nutrition and Dietics

H. School Setting

3.5 Health Education Career Opportunities in Developed Countries

There are some positions and health education carriers available in more advanced and developed countries. In essence, some of them might not be found in less developed countries. This include amongst others; Aids Educator, Alcohol Educator (Counselor), Cancer information Specialist, Case Manager, Cardiac Rehab Specialist, Community Health Educator, Community outreach Coordinator, Community Organizer, Community Service Director, fitness Coordinator, Corporate Fund Raiser, cultural competency trainer, Drug Counselor, Environmental educator, Grant writer, Health Advocate, Health Educator, Health media consultant, Lactation Consultant, Health Resource Specialist, Health marketing Cordinator, Communicable disease Analyst (Achal, 2020).

3.6 Tabulated Summary of Health Education Careers and Opportunities

Careers and Employment Opportunities	Job Descriptions	Career Preparations	Special Requirements
1. Health Educator - School - Hospital - Private Settings - Universities - College of education - Industries - Community Programme	Teaches various classes in health and conveying health topics e.g. Consumer health, occupational health, family health, sex education, etc.	Majors in health education at diploma, bachelors or postgraduate levels. Subjects taken include; biological sciences, social sciences, behavioural sciences	Interested in teaching and behavior moulding as well as in health of human beings.
2. Public/Community Health Educator - Hospital - Government Agencies - Voluntary Health Agencies - NGOs	Educate Public on causes and prevention of diseases as well as immunization programmes. Also helps to plan and develop health services to meet up with community needs.	Advanced diploma or postgraduate diploma in public health or community health education	
3. School Counsellors - Schools - Universities	Helps Students select subjects in chosen careers, counsel students	Completion of series of relevant training after bachelors, masters and	

- Colleges	with health and adjustment problems	doctoral levels.	
4. Nursing - Hospital - Private Clinics - Schools	Provides professional care for the sick at schools and hospitals. Assisting the Physicians with health appraisals, and participates in immunization programmes. Coordinates school health programme with other public health programmes.	Completion of series of relevant training on after basic/general nursing diploma. Subjects taken include Anatomy and in physiology, Communicable and non-communicable diseases, etc	
5. Public Health Nursing - Hospitals - Private Clinics - Voluntary health agencies.	Visiting homes of people with specified health problems. Helping people learn to care for family members who are ill. Advising family members about nutrition and child health.	Completion of series of relevant training after the basic nursing programme.	
6. Social Work - Hospitals - Social welfare agencies - Schools - Prisons - Refuge Camps	Providing activities that group, groups of people of same of same age can do together. Providing counseling services that help people understand themselves better.	Bachelor's degree in social work or social welfare. Subjects taken include: sociology, Psychology, economics, political science.	
7, Rehabilitation Cousellor - Pschiatric hospitals - Rehabilitation centres	Helping individuals and families solve social problems.	Bachelor's degree or masters degree in biological sciences, behavioural sciences	

<p>8. Occupational Therapist</p> <ul style="list-style-type: none"> - Schools for mentally retarded. <p>Psychiatric hospitals</p> <ul style="list-style-type: none"> -Rehabilitation centres. 	<p>Helping drug addicts plan rehabilitation programmes for themselves or funding a home or job that matches his interest. Liasee between addicts and medical professionals.</p> <p>Directing activities of and or helping students overcome their disabilities.</p>	<p>Degree of bachelor or masters in any of biology, Health, social sciences.</p> <p>A bachelor's degree before taking appropriate professional examination, classroom and on the job training is also receiving.</p>	
<p>9. Food Inspector</p> <ul style="list-style-type: none"> -Food and drug administration - food making factories 	<p>Helping students with self-care skills. Teaches creative skills. Directs games and other recreational skills.</p> <p>Travelling throughout a certain area of jurisdiction.</p> <p>Checking firms that produce and store good.</p> <p>Looking for evidence of anything that could make a product unhealthy.</p> <p>Discusses findings with managers.</p>		

Self-Test Exercises

1. Mention at Least (10) Health Education career opportunities in Developed countries of the world. Write on job descriptions, career preparations and special requirements of the chosen career opportunities you identified.

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APPENDIX

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WESTERN PACIFIC

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