

COURSE GUIDE

PHS 509 GERIATRICS, GERONTOLOGY AND CARE OF PERSONS WITH DISABILITIES

Course Team

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INTRODUCTION

PHS 509 is a two – credit unit elective course designed to be attempted at 500 level.

It is a course that attempts to improve the learner's knowledge on the concept of Gerontology, Geriatrics and Care of Persons with Disability. It exposes the learner to Gerontology, which is the study of aging and older adults, with a brief overview on its history.

The student is further exposed to Geriatrics, which is quite different from Gerontology. The different subspecialties of geriatrics will also be discussed, emphasising the multi – disciplinary nature of geriatrics. Thereafter, a few disease conditions that are common with the elderly will be discussed.

Finally, the student will be introduced to the concept of disability and the different types of disabilities that are found among the elderly, and how the disabled can be rehabilitated back into the community.

COURSE AIM

The broad aim of the course is to widen the scope of knowledge of the learner on issues surrounding growing old, so that the basic challenges of the elderly can be easily understood, with a chance at improving the standard of care that they receive, and ultimately improving their state of health and wellbeing as they age gracefully.

COURSE OBJECTIVES

In order to achieve the aims set, each unit has specific objectives which are usually stated at the beginning of the unit. You are expected to read these unit objectives before your study of the unit, and as you progress in your study of the unit you are also advised to check these objectives. At the completion of each unit make sure you review those objectives for self – assessment.

WORKING THROUGH THE COURSE

To complete the course, you are expected to study through the units, the recommended textbooks and other relevant materials. Each unit has a tutor-marked assignment which you are required to answer and submit to your facilitator through your counsellor at the specified time.

COURSE MATERIALS

The following are the components of this course:

- The Course Guide
- Study Units
- Textbooks

STUDY UNITS

Module 1

| | |
|--------|------------------------|
| Unit 1 | Meaning of Gerontology |
| Unit 2 | Aging Demographics |
| Unit 3 | Theories of Aging |

Module 2

| | |
|--------|--|
| Unit 1 | Meaning of Geriatrics |
| Unit 2 | Common Diseases of the Elderly |
| Unit 3 | Ethical and Medico – legal Issues in the Elderly |

Module 3

| | |
|--------|--------------------------------|
| Unit 1 | Concept of Disability |
| Unit 2 | Types of Disability |
| Unit 3 | Rehabilitation of the Disabled |

ASSESSMENTS

The two components of assessment for this course are the tutor-marked assignment and the end – of – course examination. The tutor-marked assignment is the continuous assessment component of your course which accounts for 30% of the total score; these tutor-marked assignments must be answered by you at a stipulated time which must be submitted at the Study Centre while the end of course examination concludes the assessment for the course which constitutes 70% of the total course. It is a two – hour written paper which covers all the units of the course. It is expected that you create quality time to study all the units properly in preparation for the end of course examination.

TUTOR-MARKED ASSIGNMENTS (TMAs)

Each unit contains self – assessment exercises and you are required to submit assignments. You are required to submit four assignments in

which case the highest three of the four marks will be counted. Each assignment counts 10% toward your total course work.

FINAL EXAMINATION AND GRADING

The final examination for course PHS 509 will be of two-hour duration and has a value of 70% of the total course grade. The examination will consist of questions which will reflect the type of tutor-marked problems you have previously encountered. All areas of the course will be assessed.

TUTORS AND TUTORIALS

There are 8 hours of tutorials provided in support of this course. You will be notified of the date, times and locations of these tutorials as well as the names and phone numbers of your tutor as soon as you are allocated a tutorial group. Your facilitator (as the tutors are called) will mark and comment on your assignments, keep a close watch on your progress and on any difficulties you might encounter. Do not hesitate to contact your facilitator by telephone if you need help.

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MODULE 1 GERONTOLOGY

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| Unit 1 | Meaning of Gerontology |
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UNIT 1 INTRODUCTION TO GERONTOLOGY

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| 4.0 | Conclusion |
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1.0 INTRODUCTION

Gerontology is the study of the aging process and the problems the elderly might encounter. This unit is the first unit of this course, and its lesson is intended to explore the topic of gerontology, including the different specialties that work together in the field of gerontology.

2.0 OBJECTIVE

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

- state the meaning of gerontology
- discuss how the gerontology had evolved over the years.

3.0 MAIN CONTENT

3.1 Introduction to Gerontology

In previous times, many people used to regard Gerontology as a study concerning old people only. This thinking is now gradually changing, as the science of this study has evolved with time. Many definitions of gerontology exist today, emphasising its non – exclusivity to old people. Gerontology is the study of aging and older adults. It has also been described as the study of the maturing and development through middle

age and later life. It integrates the biology of aging, the psychology of coping, and the social science of living in an environment that is unique for each individual.

Gerontology is a multi – disciplinary field, which contains specialists from different fields such as medicine, nursing, biology, public health and so on.

Gerontology is different from geriatrics, which is a branch of medicine which only specializes in the different diseases that occur in old age. It only deals with the treatment of these diseases, whereas gerontology focuses on the physical, social, and mental aspects and implications of aging. Although gerontology and geriatrics have different emphases they both share the similar objective of attempts at understanding the aging process in order to present people with a higher quality of life.

3.2 Brief History of Gerontology

As early as the medieval times, many physicians have written about issues concerning the elderly. These issues covered topics such as remedies for aches, constipations, instructions on the care of the elderly, and so on. In the past, when the life expectancy of humans tended to increase, largely due to large advances in health care, the care of the aged and elderly was simply left to the immediate family and care – givers. It was not until the eighteenth century during the Industrial Revolution, that society began to assume the role of care – giver for the elderly. Scientists began to ask fundamental questions as to why do humans grow old in the first place, and whether the effects of growing old could be reversed. The quest to find answers to these basic questions led to the birth of gerontology, the study of the aging process.

The study of gerontology began as far back as in the 1800s, when the compound microscope was used to study the structure and function of individual cells, especially those of bacteria and other microbes. Then, scientists tried to find the association between microbes and disease process. However, this method used to study gerontology was later abandoned, when it was discovered that instead of growing old and die, bacteria simply divide into new cells and multiply, thereby leaving scientists with not much evidence to work with, as the bacteria scenario was quite different from that which obtains in humans.

Later on in that century, scientists developed the use of staining techniques that were used to study in detail the nucleus, cell division, and cytoplasmic organelles. This was the period that birthed histochemistry and histology in the early years of scientific research.

It was not until the mid – twentieth century that a significant breakthrough was made in gerontology, when the genetic code and protein synthesis processes in DNAs were discovered. This, to a large extent, helped to provide further theories that were used to test the hypothesis of the aging process. The theories essentially suggested that aging was due to errors in biosynthesis, leading to an accumulation of abnormal proteins that disrupted the normal functioning of the cells, thereby leading to cell damage. Again, this was not fool proof as scientists later discovered that the data containing the available DNA sequence was inadequate. More complete genomic sequence for humans was needed.

With time and further technological advancements, scientists have been able to have deep insights into the process that controls aging. Attention has now been directed in identifying and isolating longevity genes in organisms. However, at the present time, further tests are still needed to fully understand the complete mechanism surrounding the aging process, after which it is hoped that the aging process can then be successfully reversed.

4.0 CONCLUSION

In conclusion, it can be seen that gerontology is not merely the study of aging process in old people only, but it encompasses age groups from the middle – aged towards the aged. It is multi – disciplinary in nature, involving experts from numerous fields of human endeavour.

5.0 SUMMARY

This unit has essentially discussed the modern meaning of gerontology to be the study of aging across the life course, which encompasses mostly the physical, mental, and social aspects of the aging process. It is different from geriatrics which is a branch of medicine that deals with the study of diseases among the aged.

6.0 TUTOR–MARKED ASSIGNMENT

What do you understand by gerontology?

7.0 REFERENCE/FURTHER READING

P.V. Sergiev, O.A. Dontsova, & G.V. Berezkin. Theories of Aging: An Ever – Evolving Field. *Acta Naturae*.2015 Jan – Mar, 7(1): 9 – 18.

UNIT 2 AGING DEMOGRAPHICS

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- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
- 4.0 Conclusion
- 5.0 Summary
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- 7.0 References/Further Reading

1.0 INTRODUCTION

As a result of the technological advancements in healthcare, the life expectancy of populations worldwide has increased. This has led to more and more people attaining the age of 65 years, which is usually recognised as the year a person can be regarded to be an elderly person. This unit will discuss the demographical distribution of the elderly, highlighting countries that have high elderly population amongst their larger population.

2.0 OBJECTIVES

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

- explain the population distribution of the elderly
- mention the gender differences that are in existence.

3.0 MAIN CONTENT

3.1 Global Aging Trends

There has been enormous increase in the global population within the last century. This is largely as a result of increasing life expectancy and decreasing fertility rates. In the past, the epidemiologic pattern that existed were those of high fertility rates and high mortality rates. Then, many people died from infectious diseases and acute illnesses, especially in childhood. With advancement in healthcare technology and improvement in public health measures, these infant and childhood mortality rates started to reduce, leading to more and more people living up to adulthood and beyond. Also, decreasing fertility rates played a part leading to increasing older population.

Population aging is happening at quicker rates than before. In 2000, the worldwide population of persons who were 65 years or older was

estimated to be 420 million people. This figure doubled in 2015 to 900 million. As a result of the fast pace of population aging, it has been estimated that in 2050, up to 2 billion people will be aged 65 years or older. In the world today, 120 million people are aged 80 years or older, and by 2020, the number of people aged 60 years and older will outnumber children younger than 5 years.

While in the past, the shift in the distribution of a country's population towards older ages were noticed mainly in the developed countries, the current situation now is that many low and middle – income countries are the ones experiencing these changes. It therefore becomes imperative that all countries, not just only developed countries, have to make sure that their health and social systems are ready to accommodate the challenges of these demographic shifts.

4.0 CONCLUSION

In conclusion, global trends in the aging population show that more and more people are surviving up to the age of 65 years and older. Countries should adopt measures that will help cater for the needs of these old people, so that they can enjoy their extra years in good health within a supportive environment.

5.0 SUMMARY

In summary, this unit has discussed the increasing number of aged people in both developed and developing countries, and has emphasised the need for more supportive roles from the society.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the global trends in the aging population.

7.0 REFERENCES/FURTHER READING

World Health Organization, 2018.

Aldwin, C. M., & Gilmer, D. F. (2004). Health, illness, and optimal aging: Biological and psychosocial perspectives. Thousand Oaks, CA, US: Sage Publications, Inc.

UNIT 3 THEORIES OF AGING

CONTENTS

- 1.0 Introduction
- 2.0 Objective
- 3.0 Main Content
 - 3.1 Biological theories
 - 3.1.1 Programmed Theory
 - 3.1.2 Damage and Error Theory
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 - 3.2.1 Disengagement Theory
 - 3.2.2 Activity Theory
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor – Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

In the previous unit, the student has learnt about how the aged population began to increase as a result of increasing life expectancy and decreasing fertility rates. In this unit, the student is expected to learn about the different theories that have been propounded to explain the concept of aging

2.0 OBJECTIVE

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

mention the different theories of aging which seek to explain why individuals grow old.

3.0 MAIN CONTENTS

3.1 Theories of aging

Theories are usually formulated to help make sense about a specific situation, and help understand facts from different viewpoints. In the course of researches in gerontology, many theories have been put forward as the cause of aging. Many of these theories sought to answer questions on why we age, and how we age. Oftentimes, these theories, especially those that attempt to answer the question on why we age, compete with one another and contradict themselves. However, as of yet, there is no one acceptable theory. The underlisted theories are some of the theories that have been propounded by scientists:

- i. **Biological theories:** - these theories are concerned about answering questions bothering on the physiologic processes that occur in living organisms as they age in a chronological manner. They focus on factors that trigger the aging process. Biologic theories of aging can be generally classified into two categories: programme cell theory and damage or error theory
 - (a) **Programmed theory:** - this theory suggests that there is a biological timetable that the aging process follows, resembling in some manner the continuous regulation process that follows growth and development in childhood and adulthood. This is expressed by way of gene expression which regulates body systems responsible for maintenance, repair and defence systems. This theory can be further subdivided into:
 - (i) **Programmed longevity:** - this occurs when the sequential switching off and on of certain genes will lead to aging, being the point at which certain age – related defects are manifested.
 - (ii) **Endocrine theory:** - this is when hormones act as a biological clock that controls how fast the aging process occurs. The insulin/IGF-1 signalling pathway has been implicated in this aging process.
 - (iii) **Immunological theory:** - this theory emphasis the role that the immune system plays on the human body, because as time goes by, the immune system is programmed to decline in potency, and the body’s ability to respond to antibiotics, thereby leading to increased susceptibility to infections and diseases in old age, leading to death. Even though it has not been shown directly that the breakdown in the immune system leads to increased incidences of cardiovascular diseases, cancers, etc. in old age, it has been indirectly associated.
 - (b) **Damage and error theory:** - this theory emphasises that accumulated damages that lead to cell death in living things occur as a result of constant assault on the cells by external environmental stimuli. Damage and error theory can be further subdivided into the following categories:
 - (i) **Wear and tear theory:** - it is one of the well – known theories of aging. It suggests that vital components of cells and tissues eventually wear out as a result of constant use, thereby leading to cell damage and eventually, cell death.
 - (ii) **Rate of living theory:** - this theory suggests that the greater oxygen consumption rate of an organism, the quicker the death that may result for that organism.
 - (iii) **Cross – linking theory:** - this theory describes the relationship of cross – linked proteins with cell deaths. Cross – linked proteins are proteins that have combined with other proteins to produce compounds with stronger biological properties. Examples of places in the body that cross – linked proteins can be found

include hair, skin, cartilage, etc. The cross – linked theory suggests that an accumulation of these proteins can lead to damages in cell tissues, ultimately leading to aging.

- (iv) **Free radicals theory:** - free radicals are toxic by-products of oxygen metabolism that can cause significant damage to living cells and tissues in a process called “oxidative stress”. The free radical theory suggests that free radicals in the body can lead to accumulated damage causing malfunctioning of cells, and ultimately cell and organ death.
- (v) **Somatic DNA damage theory:** - this theory suggests that aging will occur when there is damage to the genetic integrity of a cell. The body normally repairs the DNA damage that occurs regularly. However, a time comes when the body will not be able to repair the DNA at the same rate at which the damage occurs, thereby leading to cell deterioration and malfunctioning.
- (ii) **Psychosocial theories of aging:** - there are many theories of aging that highlight the social component of aging. However, the two commonest theories include:
 - (a) **Disengagement theory:** - this theory describes the situation that occurs when older adults and the society are expected to mutually separate from each other. In other words, the theory suggests that aging occurs when older adults voluntarily slow down their activities by withdrawing their services (retiring), as expected of them by the society. An example of this is when people who have attained the age of 65 years retire from the workforce.
 - (b) **Activity theory:** - this theory is actually in contrast with the disengagement theory, and it proposes that older adults are happiest when they stay active and maintain social interactions. This theory assumed that there were some sort of positive association between living a healthy, active life and overall satisfaction, leading to a successful aging process.

4.0 CONCLUSION

In conclusion, only a few theories have attempted to answer the question of why we age and how we age. It is hoped that with the advancement of technology that will aid new research in the field of aging, more knowledge in the aging process will be revealed, which can go a long way in helping to find solutions to many age – related health conditions in the future.

5.0 SUMMARY

In summary, this unit has described briefly explained the concept of aging, and also listed the different types of theories that have tried to explain the aging process

6.0 TUTOR-MARKED ASSIGNMENT

Briefly discuss theories of aging and list the different types of aging theories.

7.0 REFERENCES/FURTHER READING

Sana Loue; Martha Sajatovic (16 January 2008). *Encyclopedia of Aging and Public Health*. Springer. pp. 79–81. ISBN 978-0-387-33753-1

MODULE 2 GERIATRICS

| | |
|--------|--|
| Unit 1 | Meaning of Geriatrics |
| Unit 2 | Common Diseases of the Elderly |
| Unit 3 | Ethical and Medico – legal Issues in the Elderly |

UNIT 1 MEANING OF GERIATRICS

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1.0 INTRODUCTION

As we age as humans, our bodies start to change with time. Because the aged body differs physiologically from the younger adult body, the functionality of different body organs starts to decline. This leads to different manifestation of diseases in old age. Geriatrics is the discipline that caters exclusively for aged people, which tries to optimize the health of elderly people aged 65 years or older, and also treats infections and diseases that are associated with old age.

2.0 OBJECTIVES

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

- state the meaning of geriatrics,
- differentiate geriatrics from gerontology.

3.0 MAIN CONTENTS

3.1 Meaning of Geriatrics

Many people often confuse geriatrics with gerontology. While gerontology is primarily concerned with the study of the aging process in adults, geriatrics is often seen as the aspect of medicine that focuses on the unique needs of the elderly patient. Geriatrics can be defined as the branch of medicine concerned with the diagnosis, treatment and prevention of disease in older people and the problems specific to aging.

Issues such as physical disability, memory loss and neurodegenerative diseases are central to geriatrics medicine.

A geriatrician is a specialist who works to promote health in the elderly while treating other diseases that older adults are prone to. This is because, although aging may result to impairments of certain bodily functions, not all diseases an adult is suffering from are caused by the aging process itself.

3.2 Subspecialties in Geriatrics

Changes that occur as a result of ageing mean that older people have different patterns of disease presentation when compared to younger adults, and they respond to treatments and therapies in different ways.

Geriatricians have an interesting and varied job which involves providing comprehensive medical care to older people, who may have several medical conditions and are often taking multiple medications. The work also involves promoting better health in old age.

As societies aged, many specialized geriatric- and geriatrics-related services emerged. The following are some of the subspecialties in geriatrics, and they are by no means exhaustive:

- (i) **Geriatric nephrology**:- this is a subspecialty of geriatrics that deals with diseases affecting the kidneys. As people age, there is increasing tendency to acquire diseases that lead to the development of chronic kidney diseases, which can lead to the need for dialysis, especially when the problem has not been detected on time. Geriatric nephrology places heavy importance on the need for early detection of these diseases so that prompt and aggressive interventions can be instituted, thereby affecting positively the quality of life.
- (ii) **Geriatric cardiology**:- this is a branch of medicine that deals with diseases of the heart and its blood vessels. Examples of such disorders include heart failure, myocardial infarction, hypertension, peripheral arterial disease, and so on. These disorders often account for high morbidity and mortality rates among the elderly.
- (iii) **Geriatric oncology**:- this is the branch of geriatrics that specializes in treating cancers among the elderly. The association between the development of cancer and age has been established. Again, many more people are surviving into late adulthood (65 years and above), thereby leading to increasing incidences of

cancers. Examples of cancers linked to age include breast cancer, colorectal cancer, prostate cancer, lung cancers, and so on.

- (iv) **Geriatric urology:-** as more and more advancements are made in health, leading to greater proportion of older people growing dramatically, the need for geriatric urology subspecialty becomes necessary, because of the commonly encountered urology problems such as urinary incontinence, urinary tract infections, prostate diseases, genitourinary malignancies, and so on.
- (v) **Geriatric trauma:-** as greater proportion of people survive into late adulthood, trauma suffered by older adults have continued to be an increasing recognized problem. This is because the aging process leads to a progressive reduction in cellular functions, thereby causing a further loss in the capacity of older adults to respond to injury. Also, many older adults are on medications for different co – morbid conditions, which may further blunt the response to injury, thereby increasing their risk of developing complications such as falls, leading to high trauma – related deaths among this age group.

4.0 CONCLUSION

In conclusion, more than half of adults age 65 or older have medical problems such as hypertension, arthritis, diabetes. Geriatrics is the branch of medicine that addresses the complex needs of older people, focusing on health promotion and the prevention and treatment of disease and disability in the elderly.

5.0 SUMMARY

In summary, this unit has discussed the meaning and definition of geriatrics. It has also discussed some of the different subspecialties in geriatrics.

6.0 TUTOR MARKED ASSIGNMENT

List and discuss the different subspecialties in geriatrics.

7.0 REFERENCES/FURTHER READING

“Chapter 10: Extremes of Age”. ATLS: Advanced Trauma Life Support Program for Doctors (8th ed). Chicago: American College of Surgeons pp.243 – 74.

UNIT 2 COMMON DISEASES OF THE ELDERLY

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1.0 INTRODUCTION

In the previous unit, we discussed the concept of geriatrics and geriatric subspecialties exist to cater for the different types of illnesses and diseases that the seniors might face as a result of their age. This unit discusses some of the common diseases that are associated with the elderly.

2.0 OBJECTIVES

At the end of this unit, the student is expected to know the common disease conditions that are usually associated with the seniors.

3.0 MAIN CONTENTS

3.1 Common Diseases of the Elderly

As the human body ages, there is an increasing chance of the elderly to develop chronic diseases, which may affect the quality of life and pose a huge financial burden on them as they seek treatment. While it is true that aging process is a risk factor for the development of diseases that can affect the quality of life of the elderly, experts in the field of gerontology have pointed out that having poor health may not be a direct consequence. The chances of developing these chronic diseases are greatly reduced when

- (i) The elderly practice a healthy lifestyle that includes healthy eating, regular exercise and avoiding tobacco use
- (ii) There is regular use of early detection and testing such as breast, prostate and cervical cancer screenings, diabetes and cholesterol screenings, bone density scans, etc.

Nonetheless, the common chronic conditions among the elderly are listed below.

3.1.1 Arthritis

Arthritis is probably the leading health condition that people aged 65 years or older often come down with. It is a term used to describe any disorder that affects the joints. There are more than 100 different types of arthritis, some of which include osteoarthritis, rheumatoid arthritis, infectious arthritis, and so on. It is estimated that worldwide prevalence of osteoarthritis is men and women over the age of 60 years is 9.6% and 18%, respectively. Arthritic symptoms include joint pains, swellings, stiffness, and decreased range of motion. These symptoms can be mild, moderate, or severe, and usually come and go. However, they may progress and get worse over time. Severe arthritis can result in chronic pain, inability to do daily activities and make it difficult to walk or climb stairs.

3.1.2 Heart Diseases

Heart (cardiovascular) disease is a general term for any disorder that affects the heart. Cardiovascular diseases (CVDs) are disorders of the heart and blood vessels and include coronary heart disease, cerebrovascular disease, rheumatic heart disease and other conditions. It has been estimated that one quarter of all deaths in developing countries and almost half of all deaths in developed countries are attributable to CVDs. 81% of people who die from CVD are 65 years or older. Individuals at risk of CVD may demonstrate raised blood pressure (hypertension), glucose, and lipids as well as overweight and obesity. These can all be easily measured in primary care facilities. Identifying those at highest risk of CVDs and ensuring they receive appropriate treatment can prevent premature deaths. Access to essential non communicable disease medicines and basic health technologies in all primary health care facilities is essential to ensure that those in need receive treatment and counselling.

3.1.3 Cancer

The risk of cancer increases with age, and the number of older adults seeking treatment is increasing dramatically in line with the aging population. There is considerable variation in cancer mortality rates in the elderly among high-income countries, with the UK having poorer outcomes compared to the USA and Western and Northern European countries. If caught early through screenings, such as mammograms, colonoscopies, and skin checks, many types of cancer are treatable. And though you're not always able to prevent cancer, you can improve your quality of life as a senior living with cancer, including during treatment, by working with your medical team and maintaining their healthy senior living recommendations.

3.1.4 Respiratory Diseases

Respiratory disorders have been ranked as one of the chronic diseases that are fairly common among the elderly, with chronic obstructive respiratory disorder (COPD) being ranked as the third commonest cause of death among people aged 65 years or older in America. Other examples of respiratory diseases that affect the elderly include pneumonia, asthma, bronchitis, emphysema, etc. pneumonia is an inflammation of the lungs usually caused by viruses, bacteria, fungi and other organisms. Elderly people are more susceptible to developing pneumonia because as they age their immune system becomes weakened, thereby limiting their immune responses to virulent organisms in the system. Also, because of the comorbid conditions at their age, such as heart disease, they may not tolerate the infective process as much as younger people.

3.1.5 Osteomyelitis

Osteoporosis is a common disease of the elderly. It is a degenerative disease of the bones that is characterized by decrease in bone density, which can lead to fractures. The outcomes of fractures among the elderly are poor compared to the younger generation. Fractures have been shown to be associated with increased mortality and significant reduction in health – related quality of life. A number of patients can lose their ability to carry out normal daily tasks, such as dressing or taking care of their personal hygiene if they suffer fractures on their forearm, hip, or spine.

3.1.6 Dementia

Dementia is a syndrome – usually of a chronic or progressive nature – in which there is deterioration in cognitive function (i.e. the ability to process thought) beyond what might be expected from normal ageing. It affects memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgment. Consciousness is not affected. The impairment in cognitive function is commonly accompanied, and occasionally preceded, by deterioration in emotional control, social behaviour, or motivation. Dementia results from a variety of diseases and injuries that primarily or secondarily affect the brain, such as Alzheimer's disease or stroke. Dementia is one of the major causes of disability and dependency among older people worldwide. It is overwhelming not only for the people who have it, but also for their carers and families. There is often a lack of awareness and understanding of dementia, resulting in stigmatization and barriers to diagnosis and care. The impact of dementia on carers, family and societies can be physical, psychological, social and economic.

3.1.7 Depression

Major depressive episodes can occur in the elderly. It is common and usually associated with coexisting medical conditions. Major depressive disorder occurs in up to 5% of community-dwelling older adults, and 8 to 16% of older adults have clinically significant depressive symptoms. Older adults who are depressed are often at an increasing risk of suicide. According to the Centers for Disease Control and Prevention (CDC), depression affects about 1%-5% of the general elderly population, 13.5% in elderly who require home healthcare, and 11.5% in older hospital patients.

The essential feature of a major depressive episode is a period of at least two weeks when the person experiences either depressed mood (most of the day, nearly every day) or loss of interest or pleasure in nearly all activities.³ According to the American Association for Geriatric Psychiatry, the most common symptoms of depression in the elderly include:

- Persistent sadness
- Feeling slowed down
- Excessive worries about finances and health problems
- Frequent tearfulness
- Feeling worthless or helpless
- Weight changes
- Pacing or fidgeting
- Difficulty sleeping
- Difficulty concentrating
- Somatic complaints (unexplained physical pain or gastrointestinal problems)
- Withdrawal from social activities

4.0 CONCLUSION

In conclusion, as people to 65 years and older, the chances of them developing wide range of chronic diseases tend to increase. Understanding this relationship between age and chronic diseases helps to identify the pertinent challenges that the elderly might face at this stage.

5.0 SUMMARY

In summary, this unit has identified some of the common chronic diseases that people might face when they get to 65 years or older, that is, when they become elderly.

6.0 TUTOR-MARKED ASSIGNMENT

List 5 common diseases of the elderly.

7.0 REFERENCES/FURTHER READING

Blazer DG. Depression in late life: review and commentary. *J Gerontol A Biol Sci Med Sci*2003;58:249-265)

UNIT 3 ETHICAL AND MEDICOLEGAL ISSUES IN THE ELDERLY

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main content
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor–Marked assignment
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1.0 INTRODUCTION

As people age, they tend to have a reduced capacity to make rational decisions. They are often faced with the challenges of caring for themselves as they used to, most often requiring the attention and services of other people to take care of them, which may lead to abuse and neglect. It is therefore, important to understand some of the potential medico - legal issues that may arise in the course of providing care for the elderly.

2.0 OBJECTIVES

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

discuss the legal issues that the elderly might face when receiving medical care.

3.0 MAIN CONTENT

The following are some of the issues to be considered when providing care to the elderly:

3.1 Assessing Capacity

Medical interventions usually take place when the elderly present themselves for care. Before the interventions can be initiated, it is important to determine whether the patients have the capacity to give assent to the intervention, or refuse outright.

For a patient's decision about the intervention he is about to receive to remain valid, there are three important elements that must be present:

- (a) **Voluntary participation:** - the patient must be seen to be participating voluntarily in the decision – making process, without any external influence in the form of force, coercion, duress, etc.
- (b) **Informed agreement:** - this simply means that before the intervention is given to the patient, he must have been informed or educated about the nature of the intervention and possible side effects that may occur. The physician caring for this elderly patient must recognize the effect of aging itself on the patient's mental and physical status, so as to decide the amount of information to reveal to the patient, which should be specific to the patient's condition at the time.
- (c) **Rational decision – making:** - it means that a patient must be able to understand fully the decision – making process, and should be able to make rational judgments or decisions on whether to accept or reject the intervention. If the patient demonstrates a limited capacity to do this, another person who can act as surrogate and take decisions on behalf of the patient should be involved.

3.2 Decision on best interest

Sometimes, an elderly patient might be found to not have the cognitive or emotional capacity to take decisions for him or herself. It now becomes expedient to determine whether the intervention to be given will be in their best interest or not. The following represents a guideline on the principles to adopt when making such decisions for the patient:

- Whether the patient's lack of capacity is temporary or permanent?
- Which options for treatment would provide overall clinical benefit?
- Which option, including the option not to treat, would be least restrictive of the patient's future choices?
- Any evidence of the patient's previously expressed preferences, such as an advance statement?
- The views of anyone the patient asks you to consult, or who has legal authority to make a decision on their behalf, or has been appointed to represent them.
- The views of people close to the patient on the patient's preferences, feelings, beliefs and values, and whether they consider the proposed treatment to be in the patient's best interests.
- What you and the rest of the healthcare team know about the patient's wishes, feelings, beliefs and values.

3.3 Confidentiality

The elderly patient also has a right, as much as everyone else, to confidentiality, and so the opportunity to be seen alone must first be provided to them, if they so wish. Or if they wish that their relatives or carers be present during treatment, they should be allowed to make the choice.

4.0 CONCLUSION

In conclusion, aging leads to reduced capacity to make rational decisions. In order to reduce the chances and frequency of elder neglect or abuse, the authorities must recognize and enforce the different ways or approaches this can be prevented.

5.0 SUMMARY

In summary, this unit has discussed the medicolegal issues that the elderly can face as a result of aging.

6.0 TUTOR – MARKED ASSIGNMENT

Discuss the medicolegal issues that the elderly face.

7.0 REFERENCES/FURTHER READING

<https://www.gponline.com/medico-legal-treating-elderly-patients/article/845708>

MODULE 3

| | |
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| Unit 1 | Concept of Disability |
| Unit 2 | Types of Disability |
| Unit 3 | Rehabilitation of the Disabled |

UNIT 1 THE CONCEPT OF DISABILITY

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1.0 INTRODUCTION

The previous units in this course material have discussed gerontology and geriatrics, which is the branch of medicine that deals with issues of the elderly, including disabilities. This unit goes ahead to explain the concept of disability, and how it is different from handicap.

2.0 OBJECTIVES

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

- differentiate between an individual that is disabled and an individual who is handicapped
- state the different models of disability should be learnt.

3.0 MAIN CONTENT

3.1 Disability

More than a billion people in the world today experience disability. These people generally have poorer health, lower education achievements, fewer economic opportunities and higher rates of poverty. This is largely due to the barriers they face in their everyday lives, rather than their disability. Disability is not only a public health issue, but also a human rights and development issue.

The WHO describes disability as being a universal term that is used to describe a wide range of conditions such as impairments, the limitation of activities, and the restrictions in participation of activities.

The global disability prevalence is higher than previous WHO estimates, which date from the 1970s and suggested a figure of around 10%. This global estimate for disability is on the rise due to population ageing and the rapid spread of chronic diseases, as well as improvements in the methodologies used to measure disability.

The WHO and the World Bank released the first World Report on Disability in June 2011. In this report, it was estimated that 15.6% of the total adult population aged 18 years and above have a form of disability. That is, 650 million people of the estimated 4.2 billion adults aged 18 and older in 2014 had some form of disability. This prevalence rate ranged from 11.8% in higher income countries to 18.0% in lower income countries.

3.2 Differences between Disability and Handicap

Many people use the terms “impairment”, “disability” and “handicap” interchangeably. However, they are terms that mean different things. Disability is defined as “any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.” Handicap, on the other hand, is defined as “a disadvantage for a given individual that limits or prevents the fulfilment of a role that is normal.” Impairment is defined as “any loss or abnormality of psychological, physiological or anatomical structure or function.”

An impairment is the abnormality itself, and a disability is the restriction that is caused by the abnormality. A handicap is the manner by which the impairment restricts the normal functioning of the individual. These definitions are further explained with the following illustration:

John is an 8 – year – old boy with poliomyelitis, leaving him paralysed at the lower limbs and an inability to walk.

Impairment: The paralysis of the lower limb is the impairment present in this case.

Disability: - He is disabled because he cannot walk due to the paralysis of the lower limbs. His level of disability can be improved upon if he is given special equipment and physiotherapy.

Handicap: He is handicapped because of his inability to fulfil normal roles at home, in school, or in his community. In his early years, the level of handicap is not exactly pronounced

because of the amount of care and support he gets from caregivers. But as he grows older, his level of handicap will increase when he cannot participate in certain activities described as normal that regular children of his age usually participate in. For example, activities such as running or playing football that will naturally require the active use of his legs.

3.3 Models of Disability

3.3.1 The Traditional Model

In ancient times, in many cultures of the world, many people often believed that people who had some sort of physical, sensory, or mental impairments were under a spell of witchcraft, possessed by demons, or as penitent sinners, being punished by God for wrong – doing by themselves or their parents.

3.3.2 The Medical Model

This model considers that persons with disability have a dysfunction or a problem that needs to be corrected. Therefore, medical model promotes activities such as treatment, surgeries, appliances, etc. aimed at reducing the disability in the person.

The medical model views disability as a problem of the person, directly caused by disease, trauma, or other health condition, which requires medical care provided in the form of individual treatment by professionals.

3.3.3 The Social Model

In recent years, it has been advocated that disability should be viewed in a different manner, especially from the viewpoint that disabled children and adults have a right to belong to, and be valued in the society. This is the Social Model, and it considers the physical, social, cultural, environmental and attitudinal barriers that disabled people face, and the need to eliminate these barriers.

This model recognises that disability is not an attribute of an individual, but rather a complex collection of conditions, many of which are created by the social environment. And therefore, its “cure” lies in a changing society that understands the need for a collective, social action in the re – integration of disabled people in all facets of social life.

4.0 CONCLUSION

In conclusion, many more people are living with disabilities than previously. Regardless of the type of model that has been propounded, concerted efforts should be made to make life more comfortable for the disabled.

5.0 SUMMARY

In summary, this unit has discussed the concept of disability, highlighting its prevalence. Also, the unit has discussed the different models of disability used to explain how people viewed disability.

6.0 TUTOR MARKED ASSIGNMENT

List the different models of disability.

7.0 REFERENCE/FURTHER READING

www.slideshare.net/AhmedRefat/disability-current-concepts

UNIT 2 TYPES OF DISABILITY

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main content
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor–Marked assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

The previous unit discussed the concept of disability and the different models that have been used to explain disability. In this unit, the different types of disability will be discussed.

2.0 OBJECTIVE

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

list and discuss the different types of disability.

3.0 MAIN CONTENT

3.1 Types of Disability

Over a billion people in the world have some form of disability. Its prevalence is set to increase because of factors such as aging population as well as increasing cases of chronic medical conditions, such as diabetes, cardiovascular diseases, cancer and mental health disorder.

There are many types of disability, some of which include:

- a. Mobility and physical impairments
 - b. Spinal cord disability
 - c. Head injuries/brain disorders
 - d. Vision disability
 - e. Hearing disability
 - f. Cognitive or learning disabilities
 - g. Mental health disorder
 - h. Invisible disability
- a. **Mobility and physical impairments:-** they range in severity from limitations on stamina to paralysis. This type of disability can either be present at birth or can be acquired with aging. Some

others can be as a result of illness or physical injury. Examples of disabilities in this category include:

- b.
 - Upper limb(s) disability
 - Lower limb(s) disability
 - Manual dexterity
 - Disability in coordination with different organs of the body.
- c. **Spinal cord disabilities:** - these are disabilities that occur as a result of injuries to the spinal cord. A spinal cord injury usually occurs when there has been a traumatic blow to the spine that causes a fracture or a dislocation of the vertebrae. It can cause permanent changes in strength, sensation and other body functions below the site of the injury. The severity of the injury is often called “the completeness”, and is classified as either of the following:
 - Complete: - it occurs if all the feelings and all the ability to control movement are lost below the spinal cord injury
 - Incomplete: - it occurs when there is still some form of movement or feelings present below the affected area.
- d. **Disabilities from head/brain injury:** - these are disabilities that arise from injuries to the brain. They are further classified as:
 - Acquired brain injury:** - defined as damage to the brain which occurs after birth, and is not related to a congenital or a degenerative disease. These impairments may be temporary or permanent and cause partial or functional disability, or psychosocial maladjustment.
 - Traumatic brain injury:** - this occurs when there is a sudden physical damage to the brain, such as a sharp blow, a concussion or an injury that penetrates into the brain. The resulting injury disrupts the normal functioning of the brain. The commonest causes of head trauma include road traffic crashes, violent crimes, falls, sport injuries and child abuse. The commonest cognitive impairment among severely head – injured patients is memory loss, characterized by some loss of specific memories and the partial inability to form or store new ones. Others include difficulty in recognizing what they see, aphasia, dysarthria, emotional or behavioral problems etc.
- e. **Vision disability**
Vision impairment is defined as a decreased ability to see to a degree that causes problems not fixable by usual means, such as glasses or medication.

An estimated 253 million people live with visual impairment; 36 million are blind and 217 million have moderate to severe visual impairment. The ICD – 10 has classified visual function into four broad categories. They are:

1. Normal vision
2. Moderate visual impairment
3. Severe visual impairment
4. Blindness

According to recent estimates, the major global causes of moderate to severe vision impairment are:

- Uncorrected refractive errors – 53%
- Unoperated cataract – 25%
- Age – related macular degeneration – 4%
- Glaucoma – 2%
- Diabetic retinopathy – 1%.

The major causes of blindness are

- Unoperated cataract
- Uncorrected refractive error – 21%
- Glaucoma – 8%

Eighty – one percent of all people who are blind or have moderate to severe vision impairment are aged 50 years and above. With an increasing population of older people, more people will be at risk of vision impairment due to chronic eye diseases.

f. Hearing loss and deafness

A person who is not able to hear well as someone with normal hearing is said to have hearing loss. The normal hearing thresholds for both ears is 25 dB or lower. Hearing loss can be categorized as:

- Mild
- Moderate
- Severe, or
- Profound

Over 5% of the world's population – or 466 million people- have disabling hearing loss (432 million adults and 34 million children). It is estimated that by 2050 over 900 million people – or one in every ten people – will have disabling hearing loss. The prevalence of disabling hearing loss is greatest in sub – Saharan Africa, South Asia and Asia Pacific, where approximately one – third of people over 65 years of age are affected.

g. Cognitive or Learning Disabilities

Cognitive Disabilities: -are kind of impairment present in people who are suffering from dyslexia and various other learning difficulties and includes speech disorders.

4.0 CONCLUSION

In conclusion, there are many types of disability with varying degrees of severity. Unaddressed disability can significantly affect the performance of individuals and cause feelings of loneliness, isolation, and frustration.

5.0 SUMMARY

In summary, this unit has discussed the different types of disability. They include spinal cord disabilities, vision loss, hearing loss, cognitive disabilities, etc.

6.0 TUTOR – MARKED ASSIGNMENT

List and discuss the different types of disabilities.

7.0 REFERENCES/FURTHER READING

Bourne RRA, Flaxman SR, Braithwaite T, Cicinelli MV, Das A, Jonas JB, et al.; Vision Loss Expert Group. Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis. *Lancet Glob Health*. 2017 Sep;5(9):e888–97.

UNIT 3 REHABILITATION OF THE DISABLED

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main content
- 4.0 Conclusion
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1.0 INTRODUCTION

The previous unit discussed some types of disabilities. After an individual has developed a disability due to an injury, for example, it is necessary to rehabilitate the individual, so that the person can have an opportunity to attain the highest level of functional ability as possible. This unit discusses the rehabilitation process and the types of rehabilitation there are.

2.0 OBJECTIVE

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

explain the rehabilitation process.

3.0 MAIN CONTENT

3.1 Rehabilitation Process

The rehabilitation of the disabled or handicapped person is a process that involves activities that help to retrain the person so as to attain the highest level of functional ability as possible. It implies an understanding of the life role expectations of the particular individuals had they been fully able – bodied.it involves the combined and coordinated use of medical, social, educational and vocational measures. The rehabilitation process generally involves the following:

- Early detection, diagnosis, and intervention
- Improve, facilitate, stimulate and/or provide services for people with disabilities, their families and attendant
- Medical rehabilitation i.e., management of curable disability and lessening the disability to the extent possible
- Social, psychological, and other types of counseling and assistance

- Training in self-care activities including social graces, etiquette, mobility, communication, and daily living skills with special provisions as needed
- Provision of technical, mobility and other devices
- Specialized education services
- Vocational rehabilitation services including vocational guidance, training, open placement, and self-employment
- Certification of degree of disability and provision of available concessions/benefits
- Community awareness, advocacy, empowerment
- Follow-up

3.2 Types of Rehabilitation

There are two broad types of rehabilitation:

- a. Institution – based rehabilitation
- b. Community – based rehabilitation (CBR)

3.2.1 Institution – based rehabilitation

This is the rehabilitation type that makes use of centres or institutions that are primarily set up to provide rehabilitation services to the disabled. They include residential homes, medical and vocational rehabilitation centres, sheltered workshops, day centres, etc.

3.2.2 Community – based rehabilitation

It is aimed to help people with disabilities by establishing community – based programmes for social integration, equalization of opportunities, and physiotherapy rehabilitation programmes for the disabled. Its primary focus is on community care or family care. It is implemented through the combined efforts of people with disabilities, their families and communities, and relevant government and non – governmental health, education, vocational, social and other services.

3.3 Differences between institutional – based and community – based rehabilitation

The table below shows the major differences between institutional and community – based rehabilitation:

| Community Based Rehabilitation | Institution Based (Medical) Rehabilitation |
|--|---|
| Based on Social model and Human rights model | Based on Medical Model |
| Concept of capacity building and empowerment | Concept of treatment – Prescription |
| Person with disability will be the decision taker | Professional is the decision taker |
| Utilization of available resources in their own community | Utilization of professional service delivery model |
| Targeted for larger population | Target of smaller population |
| Minimal medical service / Basic services | High tech medical services |
| Economic status of people with disability is not a barrier | Economic status is big barrier for getting the services |
| Team member include person with disability, parents, care givers, family, local community, NDGs, Voluntary organizations, Governments... (Change according to the cultural / context) | Team member include person with disability, physician, physiotherapist, speech therapist orthotics and prosthetic technician, music therapist...(Change according to the medical condition) |

3.3.1 Advantages of the community – based rehabilitation

The following are the main advantages of community – based rehabilitation over institution – based rehabilitation:

- It is much cheaper than institutional care, and therefore has the potential to reach all disabled people, not just a select few;
- It avoids dislocating people from their communities, and the risks of institutionalization, psychological scarring, and the creation of dependence;
- It trains people to cope directly with the environment in which they will live, using resources that are largely available locally;
- It improves detection and referral, greatly reduces problems of transport and access, allows easy supervision and follow up, and continued support for the whole family;
- It can ensure that disabled people learn useful skills that are directly applicable in their environment, thus promoting their

self-sufficiency and also their capacity to contribute directly to their own society;

- It promotes community and rural development by creating jobs: rehabilitation workers can be drawn from the local community, many simple aids and appliances can be produced locally using local materials and skills as far as possible, and disabled people themselves may be trained to work for the rehabilitation of others;
- By keeping disabled people in the community it enhances family and community understanding and acceptance of disabled people, and an understanding of the causes and treatment of impairments. This will lead to better prevention of impairments, earlier detection and treatment of potentially disabling conditions, and lessened ostracism and social handicapping of impaired individuals;
- It leaves rehabilitation institutions free to concentrate on acute and severe disability or special needs requiring highly technical intervention, and on research, development, training and other functions that make rational use of specialized and scarce resources.

4.0 CONCLUSION

Rehabilitation of the disabled is a veritable tool in getting the injured or disabled patient to attain functionality as quickly as possible. Placing emphasis on the establishment of community – based rehabilitation centers can help the disabled to cope directly with the environment in which they will live, using resources that are largely available locally.

5.0 SUMMARY

In summary, this unit has discussed the concept of rehabilitation and the processes that it entails. It also has discussed the different types of rehabilitation.

6.0 TUTOR–MARKED ASSIGNMENT

Discuss the differences between community – based rehabilitation and institutional – based rehabilitation.

7.0 REFERENCE/FURTHER READING

World Health Organisation, 2010.