

Ensuring Better Health Care for the Elderly

A Manual for Trainers of Community Health Worker

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Preface

With increased access and advancement in health care combined with several other factors People all over the world are now living longer than before. It is natural, therefore, that health care workers are likely to encounter older patients frequently in their practice and service. In most developing countries health of the older person has not received the attention it deserves due to several reasons. Consequently basic training of health workers does not provide adequate training in the principles and practice of “Ensuring better health care for the Elderly”.

In view of the changing population profile, there is an urgent need to provide an understanding of the health and disease profile of the older people and their care to health care workers through both short-term and ongoing training. This manual is meant for trainers who will provide training to health workers working in the community in the sphere of primary health care. In this manual the term **“community health worker”** denotes the health worker working at the most peripheral position of the health care system in immediate contact of the community. The term “community health worker” has been used here to avoid confusion related to changing terminologies from time to time.

The information on ageing contained in this manual is meant to be incorporated into the everyday working of community health workers. Issues which affect the older people in health and disease have been dealt here. The manual comprises training plans designed to help health workers to learn how best to manage older individuals in the community. The trainers are free to include other issues which they feel are important in their setting and can develop additional modules after referring to standard textbooks.

The total duration of the program should ideally be about ten to twelve hours spread across two days. This program should ideally be incorporated into ongoing training programs. However it can also be conducted as a stand alone and possibly more extended program if resources are available. However, trainers can modify the duration and the contents of the course depending on the realities at the grassroots level. Each module has a set of learning objectives which the trainee is expected to understand and be able to put into practice after the completion of the training. The trainers should decide on the amount of learning materials to be passed on to the trainees, which is always helpful. Assessment of the trainees is essential for measuring the achievement of the learning objectives. Pre- and post-training assessment of assessment at the completion of each module or each day can achieve this objective. Assessment of adult learners is both a sensitive and confidential issue and trainers should be tactful while deciding on the assessment methodology they choose to implement.

Module 1: Why do we need to learn more about older people?

In the twentieth century most nations experienced a tremendous rise in populations the main reason for this global population explosion is the socio-economic growth in most societies, discovery of antibiotics and vaccines and better public health practices. People now not only survive the early life mortality but live long into old age. The rise in the number in the segment of older people (aged 60 years or more) in the population has been much more than any other segment. This phenomenon of demographic change in the population has also affected India. In the previous 100 years the population of older people in India has risen from 12 million in 1901 to 75 million in 2001. The number is likely further to go up to 168 million in the year 2025.

The proportion of older people in the population is expected to rise from 5.5% in 1951 to a projected 12.5% in 2025, though the absolute number rose nearly by three times. This discrepancy is the result of high birth rate despite improvement in all other adverse determinant of population growth. Life expectancy for males in India has shown a rise from 42 years in 1951-60 to 61 years in 1999-2001 and this is likely to increase to 67 years in 2011-16. In the case of females, the increase in expectation of life has been higher, during the same period from 63 years in 1999-2001 to 69 years in 2011-16. During the period 2001-2005; the expectancy of life for people aged 60 years was 16 years and for those at 70 it was 10 years. The implications of these figures for the community health worker are:

- Large number of older people requiring care and this population will continue to grow;
- Considerable period of life after 60 or 70 requiring care;
- No decline in the number or proportion of other vulnerable people requiring care in the population; and
- Competition among various groups of people for resources (time, finances, and manpower) which are any way scarce in most developing nations those are resource-restricted.

Challenges facing health care for the elderly:

With the change in the composition of the population and advances in medicine and public health practices, the morbidity and mortality pattern in most developing countries including India has changed considerably. A major shift from acute communicable diseases with high mortality to chronic non-communicable diseases with high disability has been observed all over the world. These transformations in morbidity and mortality figures require that public health programs for non-communicable diseases be initiated while continuing control and surveillance of infectious diseases.

This implies that there is a double burden of disease for developing societies from the point of view of health economics. The heavy load of non-communicable degenerative diseases that produce considerable disability and require costly treatment, along with killer communicable diseases, will have to be borne by health workers who are not trained to do so. As non-communicable diseases are more frequent in older individuals, the focus of most public health activity will gradually shift towards older people.

Health care workers have to be aware of the complexity of care of the older people.

- Health care needs of the elderly are different from those of the other age groups.
- The structural, functional, mental and emotional status of an older patient is not same as a younger adult.
- Manifestations and course of the disease are varied and requires specialized training and care.
- The goals of health interventions are more often to care then cure. Consequently; restoration of function and improvement of quality of life gets priority over eradication of disease.

Role of health care workers in supporting the elderly

The community health worker as a member of the team of health professionals has to understand his or her role in care of the older people very clearly; which include:

- Support: Help older people in staying independent and functional
- Knowledge: Know the age related norms of body structure and function
- Awareness: Differentiate age related changes from pathological states
- Identification: Detect new risk factors and deficiencies in activities of daily living of the older person quickly as markers of new disease
- Monitoring: Regular monitoring of existing health problems
- Evaluation: Monitoring the effectiveness and side effects of medication
- Risk Reduction: Assist older people in health promotion and disease prevention.

Module 2: Why do we age?

Learning objectives

On the completion of this module the trainee should be able to:

1. Understand the biological basis of ageing
2. Understand the psychological and social constructs of ageing

Contents

- Definition
- Mechanism of ageing
- Ageing in the psychosocial perspective

Definition of ageing

Ageing is the progressive and generalized impairment of functions resulting in the loss of adaptive response to stress and in increasing the risk of age-related diseases. The overall effect of these alterations is an increase in the probability of dying, which is evident from the rise in age-specific death rates in the population.

We age because we live long. It has been considered that all living beings have predetermined life span or the maximum possible length of life. Maximum life span of human being is around 120 years. Similarly most animals have life span determined by their genetic composition.

It is only the human beings in organized and protected living survive to old age and bear the ravages of an ageing body. It is uncertain as to how and why the body ages. Several mechanisms have been suggested, but none of them have widely accepted.

Some important mechanisms of ageing

Several explanations have been proposed to explain ageing as a biological process. These include:

- **Genetic:** Genes determine the lifespan and the children of older people are expected to survive longer. Thus genes may have a role to play in the ageing process.
- **Wear and Tear:** Wear and tear of important organs by continuous functioning
- **Structural Changes:** Accumulation of free radicals and damage of intracellular structures by them
- **DNA Repair:** Loss of important genetic material during DNA repair, and impaired DNA repair due to deficiency of key enzymes.

- **Hormonal Deficiencies:** Exhaustion of production and deficiency of important hormones: namely: growth hormone, androgen, estrogen and thyroid hormones.

Evolutionary basis of ageing

Ageing is possibly also being linked to the evolutionary process. Survival after the reproductive era is not beneficial to the propagation of species because it leads to over-crowding and competition for resources for survival. Ageing is beneficial in the weeding out of species not engaged in active reproduction if it survives predatory elimination, accidents, environmental hazards and disease. It is thus likely that ageing is not physiological but a natural phenomenon mediated by genes.

Psychosocial aspects of ageing

With the changes in structure and function of the body and different organs, several changes also take place in the attitude, behavior, thinking and mental state of the older person. In many cultures there is a feeling that one is not able to do things that one used to do earlier leading to a sense of helplessness, despair, loss of the previous role etc. The society also expects a change in role after a certain age as a norm. Older people are expected to give up their place for the younger generation. There is a tendency to make older people feel unproductive, dependent and unwanted.

Contrary to such negative images of old age, in most traditional societies old age has a definitive role and value. Most people age in good health of body and mind and are assets to the family, community and the society. They have definitive economic value and with awareness of health promotion measures may not be perceived as a burden for the health system or society.

The community health worker has a role in highlighting these positive aspects of ageing while working in the community. Older people need to be identified and included as resources for community development as well as caregivers of fellow older people.

Module 3: How is an older person different from others?

Learning objectives

On the completion of this module, the trainee should be able to:

1. Enumerate the age-related changes in different organ systems in an older person.
2. Discuss how an older person differs from a young person physically and mentally.

Contents

1. Changes in the structure and function of organs in old age.
2. Effect of these changes on an older person.

Changes in the structure and function of organs in old age

All organs in the body undergo changes in their structure and function as age advances. This process of change is gradual and imperceptible to begin with. Scientific research has shown that age related changes start possibly at the molecular level in side cells affecting different enzyme systems responsible for different cellular functions. Slowly groups of cells or tissue are affected followed by organs and organ systems.

Normal healthy older people do not perceive any difficulty in functioning despite substantial alterations in individual organ structure and function. However, the functional alterations get manifested in the face of age related physical and mental illnesses and often subtle abnormalities become manifest as major decline in function

In addition it is important to differentiate age related changes in an older person from disease states. For example presbyopia is an age related process but cataract is a pathological state though both of them cause visual impairment. Similarly age associated memory impairment needs to be differentiated from dementia both of them being causes of impaired memory.

It is the health care worker who should identify the functional abnormality to begin with. In the next step he or she should try to guide the older person to physician for further intervention.

Age-related changes in the brain

- The brain size decreases due to loss of brain cells which die out in large numbers and do not get replaced and loss of nerve fibers which connects brain cells at different locations. Along with the process of cell loss, harmful substances also get deposited in the brain. The chemicals in the brain which carry information and thereby regulate the function get depleted. As a result the above changes the efficiency of neural transmission is adversely affected.

- Blood flow to the brain in older people is generally compromised due to the process of narrowing of blood vessels, which however does not affect the brain functioning at normal levels of blood pressure.
- These structural and functional changes have no real significance since the normal older brain is still quite capable of learning and remembering as the reserve capacity of the brain is enormous. However recent memory may be adversely affected and some degree of slowness in cognitive abilities may creep in.
- Deficiency of certain brain chemicals may cause slowness of motor movement and gait; while balance may be adversely affected. Extreme forms of such deficiency may manifest as disease states such as Parkinson's diseases.

Cardiovascular system

- The heart muscles get flabbier and less efficient in their ability to contract and pump blood. The heart valves become thicker and less elastic. Blood vessels become rigid and narrowed with atherosclerosis. The electrical functions of the heart including impulse generation and conduction. As a result of these two changes older people are often considered to have slightly higher blood pressure and a lower heart rate.
- The cardiovascular reflexes involving the autonomic nervous system are blunted. Consequently the heart rate response to exercise and similar maneuvers declines making the older person vulnerable to wide fluctuations of heart rate and blood pressure and clinically to episodic loss of consciousness during haemo dynamic stress .

Respiratory system

- The elasticity of the lungs is reduced and its ability to exhale out air also declines resulting in a certain degree of air trapping in the lungs. The protective layer of mucus on the airways and the ciliary movements which prevent microbial invasion are distorted. The respiratory muscles become weakened as all other skeletal muscle in the body. The cough reflex is blunted. The surface for gas exchange decreases. The work of breathing increases.
- As a result of these changes older people get breathless easily and their ability to undertake heavy work declines. Older people also develop respiratory infection quickly which often turns out to be serious in absence of early treatment.

Oral and dental system

- The oral mucous membrane atrophies and salivary secretion is reduced; making the mouth dry and tongue coated. The teeth are lost as a result of gum and dental disease and resorption of the mandible. Muscles of mastication are weak.
- All these changes make chewing and eating difficult and with loss of taste, medications and physical illness affect food intake., resulting in malnutrition

Gastrointestinal system

- The swallowing mechanism is affected adversely with high risk of dysphagia and aspiration.
- Gastrointestinal emptying is delayed along with mal-absorption of multiple nutrients. The abdominal and pelvic muscle become weak and affects bowel movement. These changes result in dyspepsia, flatulence and constipation.
- The capacity of liver to metabolize and detoxify toxins, hormones and drugs is impaired and the risk of adverse drug reaction is increased.

Changes in endocrine system

- Neural regulation of hormone secretion is disturbed which may lead to hormonal imbalance.
- Most hormone levels remain within normal range. Thyroid deficiency appears to be more frequent in older people.
- Metabolism of carbohydrates and fats are disturbed. There is a tendency to develop glucose intolerance and often frank diabetes.
- Older people also tend to deposit fat in subcutaneous tissue as well many vital organs along with distorted distribution of body fat.
- The maintenance of fluid and electrolyte is usually normal in health but may get distorted with slightest stress.

Changes in the musculoskeletal system

- The number of muscle cells declines resulting in loss of lean body mass along with reduction in muscle power, endurance and balance. There is fall in bone mineral content along with deterioration in bone architecture. These changes result in bones becoming porous and brittle. The cartilage surface of the bone inside joints breaks down. The ligaments lose their tensile strength and become lax.
- These changes result in decrease in working capacity and degeneration of joints. The risk of fracture increases especially in women. The overall result of these functional impairments is locomotor disability which is only next to visual disability in prevalence.

Changes in genitourinary & reproductive system

- After menopause women develop several health problems; some of which are early where as others evolve over several years. All these problems are results of deficiency of female sex hormone estrogen. The immediate problems that appear after menopause are flushing, sweating, mental changes and symptoms in genital tract; all of which slowly disappear with time. The long term health problems are osteoporosis (brittle bone disease) and ischemic heart disease.
- Men do not have a similar landmark event in life involving their sex hormones. However with passage of time the sexual drive declines and men also develop osteoporosis but much later than women. Men develop gradual enlargement of the prostate gland. Enlargement of prostate gland produces obstruction to flow of urine and can be a cause of several symptoms like frequency, urgency and slow stream of micturition .
- The pelvic muscle weaken in women often due to repeated child births and poor midwifery practice in youth. Weak pelvic muscles cause poor control of urinary bladder resulting in urinary incontinence or leaking of urine.
- In both the sexes the number nephrons (urine forming units) in the kidney decrease, the ability of the surviving nephrons to produce concentrated urine is reduced. . The capacity of the urinary bladder is reduced, as a result of these changes the older person have a tendency to have frequent urination especially at night.
- Inefficient functioning of the kidneys make them vulnerable to develop hyponatremia (low sodium in blood) which often can be life threatening. Increased risk of urinary tract infection and reduced renal clearance of drugs can lead to adverse drug reactions.

Changes in Skin

- The thickness of the skin decreases. The connective tissue support to skin becomes lax making the skin wrinkled. Sweat and sebaceous gland secretion declines and nerve supply gets disorganized. The blood supply declines. The hair turn grey due to **loss of melanin** and there is loss of hair on the scalp. Growth of nails slows down. The changes in the skin affect the appearance of the individual along with high of skin infection and delayed wound healing.

Taste and smell

- The receptors of taste located in tongue decline in number and food becomes tasteless with loss of interest in eating.
- The smell receptors in nose become blunted and inefficient. Loss of ability to smell also affects appetite but more importantly makes the older person vulnerable to fire accidents.

Eye

- The eyelids become lax with rotation of lid margins as result flow of tear may be disrupted. The production of tear from the lachrymal glands may decline making the eyes dry and burning. There may be accumulation of fluid in the cornea turning it hazy. The muscles of iris are weak and the lens capsule becomes stiff making it difficult to see small objects and depth perception in accurate. The lens protein gets denatured and solidifies. The anterior aspect of the uveal tract degenerates along with degeneration of important areas in the retina.
- The net result of these changes are inability to see small objects and details, defective accommodation and defective depth perception, extra sensitivity to glare and dry eyes.

Ears

- There is decline in hearing abilities as a result of degeneration of the nerve cells of hearing. The following behavior of a person suggests hearing loss associated with ageing:
 - Tendency to shout and to speak very loudly;
 - Tendency to requests for words repeated;
 - Tendency to speak little and not to participate in discussion when in group; and
 - Tendency to become suspicious that things are being told about the person .
- The equilibrium center in the ear is affected, leading to dizziness and reeling of head.

Effects of the age related changes on the older person

- 1. Wrinkled and dry skin**
- 2. Osteoporosis; loss of height and high risk of fracture**
- 3. Muscle weakness and reduced exercise tolerance**
- 4. Breathlessness and high risk of chest infection**
- 5. Loss of cardiac reflexes and increased risk of syncope**
- 6. Large and weak heart: heart failure**
- 7. Obesity**
- 8. Glucose intolerance and diabetes**
- 9. High risk of drug side effects**
- 10. Visual disability: cataract and macular degeneration**
- 11. Impaired hearing**
- 12. Impaired gastrointestinal motility: dyspepsia and constipation**
- 13. Memory failure and impaired mental function**
- 14. Sleep disorders**
- 15. Anxiety and depression**
- 16. Loss of autonomy and independence**

Module 4: Introduction to Geriatric Medicine

Learning objectives

On the completion of this module, the trainee should be able to:

1. Understand the fundamentals of care of older people.

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Morbidity in old age

Mortality in old age

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Stereotyping of ageing

Assessment of the older patient

Morbidity in old age

In the previous module age related changes in different organ systems have been enumerated. Nation wide surveys in the community have shown that nearly half of the older people have one or more chronic disease. Further nearly forty five percent of them have one or more physical disability. These diseases and disabilities include age related changes of organ systems as well as pathological conditions common to all age groups.

Community based studies have identified the following disease as the most common among older patients

- Hypertension
 - Cataract
 - Osteoarthritis
 - Chronic obstructive pulmonary disease
 - Ischemic heart disease
 - Diabetes
 - Benign prostatic hypertrophy
 - Upper and lower gastrointestinal dysmotility: dyspepsia and constipation
 - Depression
 - Falls leading to fractures
 - Urinary incontinence
 - Stroke
 - Dementia
- These diseases account for nearly 85% of the diagnosis in older people.
 - Cancers of most organs are common in older patients.
 - Older people with diseases of early adulthood tend to manifest their long term complications.

- Older people have multiple diseases and disabilities. On an average an older patient may have three to four diagnoses unrelated to each other and each requiring some intervention or the other.
- Among the functional disabilities both in the hospital as well as the community; visual disability and difficulty in hearing are the commonest.
- Disabilities of locomotion and inability to carry out activities of daily living affect a small proportion of older people but can prove to be a heavy burden for the caregivers.
- Cognitive impairment or failing memory and intellect affects up to ten percent of older people, which again require substantial amount of care.
- Older people above 80-85 years of age tend to have predilection for certain diseases such as recurrent stroke, dementia, osteoporosis and fractures, cardiac failure and physical frailty.
- Most of the disease and disabilities of old age as mentioned above cannot be cured in the literal sense but can be managed for alleviation of symptoms and handicaps. The health worker should refer and guide the older person to physicians for appropriate management which includes medicines, surgery, aids and appliances; and physiotherapy. Counseling and encouragement will improve the quality of life of the older person.

Mortality in old age

By definition old age is associated with a high risk of death from diseases and their complications. It must be remembered that older patients have late recovery from illness, have an extra risk of complications from surgical treatment and high risk of adverse side effects of medicines. The common causes of death among older people in rural India are as following:

- Bronchitis and pneumonia
- IHD
- Stroke
- Cancer
- Tuberculosis

In urban India all these conditions hold true and in addition accidents and injuries also tend to kill or disable a substantial number of older patients.

Important concepts in the practice of geriatric medicine

The manifestation of disease and its course in old people is different from that in younger individuals. It is important to remember the following concepts of geriatric medicine:

- The organ which is symptomatic most is probably not the organ which is diseased most in a particular situation.
- Presentation of disease is often atypical and should not be considered as an exception.
- Older patients get symptomatic early but seek health care much later due to socio-economic reasons.

- Some symptoms and signs, namely; anemia, confusion and recent onset of incontinence warrant immediate attention and may associated with several life threatening conditions.
- All clinical abnormalities complained or detected can not be given equal importance and needs to be prioritized. Problem oriented approach is preferred to disease oriented approach in older person.
- A single diagnosis for many coexisting symptoms is not possible in old age. Many diseases coexist and require a multiple management strategy.
- Multiple small deficits in an older patient often produce major disability and multiple small interventions produce dramatic results.
- Older people often require rapid access to health care and may need specialized care.
- Apart from medicines and surgeries; physiotherapy and counseling have major role in the care of older patients.
- Contrary to popular belief, all levels of prevention are effective in old age. The health care worker therefore must provide preventive intervention in all situations.

Stereotyping of Ageing

By stereotyping we try to describe or to portray a group in a similar, oversimplified and conventional manner which prohibits individuality. There is always a tendency to stereotype groups among health professionals as well as social scientists and economists. However there is scientific evidence to suggest the contrary. Some examples of stereotyping are provided below.

| Myths | Facts |
|---|---|
| All old people are diseased | Many older people are likely to age in good health than to become decrepit and dependent. |
| All old people have problem in remembering. | Older people can, and do, learn new things. Two key factors predict strong mental function in old age. 1) regular mental activity 2) a strong social support system. |
| Older people cannot support themselves and are a burden on the society. | Many older people are productive. Some work for money while others provide help in household chores, childrearing and volunteering in social institutions. All these activities have social and economic value. |

- Stereotyping of old age and older persons can seriously harm them. It can contribute to discrimination, loss of self-esteem, and physical and mental decline in older persons.
- Stereotyping also counteracts positive interventions for health promotion.
- Quality health care for older patients requires abolition of stereotyping from the minds of health professionals.

Assessment of the older patient

Clinical evaluation of the older patient is no different from that of a younger patient. However, certain issues need detail assessment in old age which may be overlooked in a younger patient. The components of assessment of an older patient are physical, functional, psychological (mood and mental state), financial, social support and care facility; environmental and overall quality of life. The community health workers are in the best position to assess financial status, environmental situation, social support and availability of care facility objectively because of their access to the community. Evaluations of activities of living provide important clues to the health status.

- **Basic activities** of daily living are activities those are independent of culture, education and socioeconomic status. They include bathing, dressing, going to the toilet, transferring (moving from place to place), continence and feeding.
- **Intermediate activities** of daily living are activities those are dependent on culture and socioeconomic status. They include using telephone, shopping, preparing meals, house keeping, cleaning clothes, using public transport, taking medication and handling money.
- **Advanced activities** of daily living are activities those are dependent on education, culture, socio-economic status and the past profession. They include recreational, occupational and community activities.

Though detailed physical and mental health examination should better be left to the physician the community health worker should be able to assess the older patients' mobility and nutritional status (adequacy and deficiency).

As majority of older people have some chronic illness or disability, they need to be guided and educated as when to seek medical attention over and above their existing health problems. The best indicator of a new health problem is decline in activities of daily living and discovery of a new risk factor for ill health.

Module 5: Healthy Ageing

Learning objectives

On the completion of this module, the trainee should be able to:

1. Enumerate the health risks in older individuals; and
2. Enumerate strategies for health promotion in regard to the needs.

Contents

- Health risks in older patients.
- Health promotion interventions: Nutrition, Exercise, Screening, Immunization.
- Preventive aspects: prevention of smoking and alcohol consumption, prevention of accidents, prevention of adverse drug reaction.

Health risks in older patients

Through epidemiological research following health risks for older people have been identified:

- Malnutrition (including over-nutrition and under-nutrition)
- Inadequate consumption of fibers and fruits
- Physical inactivity and sedentary lifestyle
- Smoking
- Excessive alcohol consumption
- Adverse drug reaction
- Accidents and injuries

These risks factors render the older person vulnerable to ischemic heart disease, stroke, heart failure, cancer, injury and infection. Several health promotion measures have been advocated to avoid the ill-effects of these unhealthy behaviors. In addition, early detection of certain common cancers, hypertension, diabetes and immunization against certain infections have also proven to be cost-effective. Safe home environment and management of medications also needs to be emphasized in all health promotion activities for older people.

Nutrition

- Over-nutrition causes obesity and is associated with hypertension, IHD and diabetes, which are among the commonest health problems in old age.
- Under-nutrition is equally harmful leading to frailty, physical dependence and premature death apart from impairment of the immune system, increased risk of infection and poor wound-healing.
- The energy requirement declines with age due to reduction in the body mass, body metabolism and physical activity. Yet older people are at high risk of under-nutrition due to several reasons, namely:
 - Food is less enjoyable due to changes in taste and smell sensation;
 - Lack of teeth, gum problems and ill-fitting dentures make eating painful; and

- Reduced appetite due to lack of exercise, chronic debilitating disease, confusion, forgetfulness, side-effects of drugs, alcohol and smoking.
- Several socio-psychological factors also affect food intake; namely: economic condition, food beliefs (hot and cold food etc), religious beliefs, care-giver neglect and abuse, depression and loneliness
- Common nutritional deficiencies include total calories, iron, fiber, folic acid, vitamin C, calcium, zinc, riboflavin and vitamin A.
- It should be ensured that older people are eating nutritious and easily digestible diet and have access to food that is tasty and easy to prepare. A healthy diet varies widely depending on the availability and cultural acceptability of foods. Most traditional diets are now considered to have been close to being ideal, at least for adults and the elderly.
- The principles of a balanced diet are similar in all ages. Elderly being a heterogeneous group, prescription of a uniform dietary schedule is difficult. However, certain guideline can be followed to make a balanced diet.

Guidelines to healthy diet

1. Complex carbohydrates (whole grains, roots, fruits, vegetables and beans) should be consumed in large amount for good bowel movement while helping treatment of high cholesterol, blood pressure, heart disease and diabetes. Simple carbohydrates (sugar and derivatives) should be reduced..
2. Calcium and vitamin D in the form of milk, curd, cheese, small fish and certain green vegetables should be increased to compensate for osteoporotic changes.
3. Water and other liquid should be consumed liberally.
4. Additional supplementation of vitamins and micronutrients may be required in older people as there is higher risk of their deficiency.
5. Vegetarian diets are as good as non-vegetarian diet; if adequate and varies types of protein is consumed.

Exercise

- Ageing causes a progressive decline in power, strength and endurance of skeletal and cardiac musculature. Sedentary lifestyle and lack of physical activity accelerate this decline and are associated with higher risk of morbidity and mortality.
- Regular physical exercise has proven value in health promotion, which include:
 - Greater survival;
 - Protection against cardiovascular disease;
 - Weight reduction;
 - Control of high blood sugar in diabetes;
 - Protection against osteoporosis and fracture;
 - Improvement of muscle strength, balance and functional capacity; and
 - Improvement in psychological well-being., better sleep, and bowel habits.

- Physical exercise should be carried out at a frequency of 3 to 5 days per week, between 20 to 30 minutes per session, to achieve the maximum heart rate.
- Physical exercise in old age is limited by diseases such as obesity, IHD, chronic obstructive lung disease, stroke, arthritis which reduce exercise tolerance.
- In addition there are several psychological barriers which include stereotyping ('old people are weak', 'slow', they must rest'), family attitudes, lack of proper information, cultural and social inhibitions (exercise is for young people), fear of accidents and lack of supportive environment.
- Before initiating a physical exercise program the risks of exercise, potential for falls and accidents, medications, nutritional adequacy and motivation needs to be evaluated.
- The health worker must educate the older person in self-monitoring of symptoms and signs of IHD and must know when to stop if symptoms appear.
- Several types of physical exercises are available. The older person should be advised to choose the one which is enjoyable, easy to perform, convenient and inexpensive. Considering all aspects, brisk walking and stretching exercises seem to be the best for older individuals.

Tobacco Smoking

- Cigarette smoking is a cause of many diseases that cause death in old age. Smoking is one of the three determinants of functional disability in old age (the other two are obesity and lack of physical exercise).
- Smoking is responsible for:
 - Most respiratory problems in the elderly;
 - Cancers of lungs and gastrointestinal tract;
 - Ischemic heart disease; and
 - Stroke
- Despite the knowledge of advantages of smoking cessation, most smokers have difficulty in quitting due to withdrawal symptoms (nicotine craving, irritation, frustration, anxiety, restlessness and difficulty in concentrating) and lack of motivation.
- The benefits of quitting smoking are also there in old age. Attempt must be made to eliminate smoking. However, if the person cannot quit smoking it should at least be cut down.
- The community health worker must counsel the smoker and help him/ her quit smoking often with the help of the physician.

Alcohol

- Older people are not free from the risk of alcohol abuse. But generally health workers tend to overlook this problem. Misconceptions regarding association of alcoholism with a higher social status, lack of communication skills in asking uncomfortable questions on alcoholism and a fatalistic attitude may lead to missing alcohol abuse in older subjects.

- Alcohol intake in excess increases the potential for diseases such as cardiomyopathy, cirrhosis of the liver, atrophic gastritis, chronic pancreatitis, peripheral neuropathy and dementia, falls and accidents, malnutrition, immune suppression and social isolation.
- Detection of alcohol abuse in an older patient may be difficult due to:
 - Age-related physiological changes;
 - Presence of chronic disease;
 - Effects of medicines;
 - Alteration in lifestyle; and
 - Denial by the patient and family.
- Symptoms of intoxication and withdrawal can be easily mistaken for disease and age-related physical changes. Several features of alcohol abuse such as memory loss, poor balance, frequent falls and ill-health may be ignored as consequences of ageing.
- Drinking problems must be assessed through direct questioning as well as indirect questions on the history of falls, accidents, episodes of confusion, symptoms of self-neglect such as weight loss or poor hygiene, or lack of attention to usual activities. The family should also be used as a source of information.
- Treatment of chronic alcoholism is difficult and requires specialized effort by a multidisciplinary team through hospitalization. Community health worker must educate the patient as well as the caregivers about the problem and guide them in de-addiction..

Screening

- Early detection and treatment is an important step in the secondary prevention of disease and disability. So regular screening for common, life-threatening and disabling diseases is important for health promotion.
- Alterations in bowel habits, new onset of constipation, smaller stool size or blood in stools, anorexia, weight loss, wasting, anemia and low backache are indicators of colorectal cancer which involves an appreciable amount of morbidity and ill-health.
- About 50% of all breast cancers occur in women aged over 65 years. Older women should be instructed in how to do self-examination of their breasts and to do it at least once every month.
- Cancer of the cervix is usually screened in all women after 40 years of age with annual pelvic examination and Pap smear.
- Several diseases such as hypertension, heart disease, diabetes can be detected during routine physical examination and managed with better results.
- The vision, hearing teeth and feet of older people should be inspected periodically.
- Screening requires resources (time and finances) but is extremely cost effective in the long run.

Prevention of accidents

- Accidents are associated with: pain and trauma of injury; loss of function, prolonged immobility and its complications; fear of future accident and self-imposed isolation; and loss of independence.

- Most accidents in old age are in some way or the other related to normal age-related changes in the sensory system and the musculoskeletal system. These changes include:
 - Degeneration of sense organs: vision, hearing, smell, pain, touch, temperature
 - Decline in body balance;
 - Defective stance and gait; and
 - Poor muscle strength and co-ordination.
- In addition, several other factors increase the probability of falls and accidents in elderly subjects. They are:
 - Dementia;
 - Confusion;
 - Chronic illness;
 - Use of medications for heart diseases; and
 - Emotional stress.
- A large number of accidents in older people can be avoided. The health worker needs to identify the risk factors for accident and environmental hazards for an older person and intervene by simple and innovative measures. These include:
 - Use of walking aids
 - Use of visual aids
 - Use of colors to enhance the older person's vision and depth perception;
 - Removal of obstacles;
 - Bright lighting;
 - Use of flat shoes;
 - Availability of stable structures to hold on to in case of an impending fall; and
 - Proper flooring in side the home and the immediate outside environment.

Burns and falls are the most common among accidents and injuries.

Prevention of adverse drug reaction

Older persons require multiple drugs due to the presence of multiple diseases. As a result there is high risk of drug interaction and adverse drug reaction. The behavior of the medications in side the body and their effects (pharmacokinetics and pharmacodynamics) are changed in old age due to alterations in absorption from gastrointestinal tract, detoxification in liver, excretion through kidney, composition of body fat, muscle mass and total body water; and drug receptor sensitivity.

- Common drugs which produce adverse reactions are: antibiotics, anti-arrhythmic drugs, digoxin, diuretics, non-steroidal anti-inflammatory drugs, anti-Parkinsonian drugs, anti-cholinergic drugs, sedatives, anti-depressants, anti-hypertensive, anti-coagulants and psychotropic drugs.
- Common adverse drug reactions are: confusion, delirium, postural hypotension, falls, anxiety, depression, sleep disturbances, constipation, diarrhea, urinary incontinence and urinary retention.

- Interventions to reduce adverse drug reactions are:
 - i. Avoidance of self medication
 - ii. Minimizing the number of drugs used
 - iii. Use of specific medications for specific illnesses;
 - iv. Use of medicines which do not have major side effects; and
 - v. Frequent review of medication;
 - vi. Instructions about possible side-effects;
 - vii. Limited use of over-the-counter drugs;

Immunization

Specific immunizations against following three agents have been recommended in old age: pneumococcus (causing pneumonia), influenza virus (causing “flu” and subsequent respiratory infection) and tetanus.

All the three vaccines are available widely but only tetanus toxoid is affordable from the point of view of cost. Pneumococcal and influenza vaccines are costly and thus are specifically recommended for those older patients in whom pneumococcal pneumonia and influenza are either more frequent or can be dangerous.

| |
|--|
| <p>Indications for pneumococcal and influenza vaccines</p> <ul style="list-style-type: none">• Kidney diseases: chronic renal failure, nephrotic syndrome• Chronic obstructive pulmonary disease• Congestive heart failure• Ischemic heart disease• Cirrhosis of liver• Diabetes mellitus |
|--|

Pneumococcal vaccine should be administered only once while the influenza vaccine is recommended every year.

Tetanus immunization has a special place for older people in view of a higher risk of accidents and injuries in old age. Administration of tetanus toxoid every 10 years is recommended for the elderly who provides effective protection and is free of side-effect

Herpes Zoster vaccine is currently advised to prevent Zoster and its complications.

Module 6: Social Security, Support and Services for the elderly

Learning objectives

On the completion of this module, the trainee should be able to:

1. Recognize the impact of social factors on ageing process
2. Enumerate the social protection available to older people
3. Enumerate the health services required for older people

Contents

- Ageing and society
- Social protection for the older Indians
- Health services for older people

The ageing process is a biological reality and has its own dynamics, which is largely beyond human control. Each society makes sense of old age in its own constructs. Social meanings of old age are significant as specific roles are assigned to older people. In some cases it is the loss of roles accompanying physical decline. In contrast to the chronological milestones which mark stages of life in the developed world (school age, working age, retirement age), old age in many developing countries is seen to begin at the point when active contribution to the family and community is no longer possible. To remain productive to the family, the community and the society, it is important that one ages gracefully while remaining active and functional.

Social Protection and Social Networking

Social services and social networking have a major impact on the ageing process. It is the social system that provides the long-term care. All over the world, family members (mostly women) and neighbors provide the bulk of support and care to older persons. It must be remembered that the best care and support for the older person comes from his/ her own home.

Currently, the following government funded services are available for the older persons in India.

1. National old age pension scheme
2. Old age pension scheme in states of Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chandigarh, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttaranchal, Uttar Pradesh and West Bengal.
3. Widow pension scheme of Maharashtra, Karnataka, West Bengal and Kerala
4. Pension and family pension schemes of Central and State Governments.

5. Supply of free grain to destitute elderly under “Annapurna” scheme.
6. Income tax benefits for older people and for those who are caring for older members of the family.
7. Tax benefits with respect to medical insurance premium
8. Benefits under life insurance, long-term and short-term investment.
9. Health insurance for accidents and hospital treatment.
10. Discounted travel for older individuals in road transport, railways and air lines
11. Old age homes by different State Governments
12. Priority telephone connection
13. Special Counters in railway reservation, income tax return.
14. Training of formal (paid) carers by National Open School and National Institute of Social Defense.
15. Older person maintenance, care and protection bill 2005.

Health services for older people

The goal for organizing health services for older people is to maintain autonomy with concern for their self-respect and welfare of the caregivers. The ideal health system for older people should have the following properties:

- ❖ Comprehensiveness in range
- ❖ Easy accessibility
- ❖ Acceptability
- ❖ Affordability
- ❖ Continuity in content and time
- ❖ Coordinated rather as a loose collection of services

Types of Elderly Care Services

- ❖ Health promotion & disease prevention Services
 - Health Education (exercise, nutrition)
 - Screening of general health (blood pressure, blood sugar, cholesterol, vision)
 - Screening for cancer of the uterine cervix
 - Specific health promotion program (smoking cessation, immunization, nutritional supplementation)

❖ **Curative**

- Early diagnosis and treatment of day to day ill-health in primary health care
- Diagnosis and treatment of serious health problems in secondary care (district hospitals, general hospitals) and tertiary care institution (medical schools, corporate hospitals)
- Chronic care in long-term-care institutions and / or home health care programs

❖ **Rehabilitative**

- Physiotherapy
- Restorative surgery
- Prosthesis
- Occupational therapy
- Long term care for cognitive impairment

❖ **Mental Health Services**

- Counseling services for adjustment (ageing, retirement, relocation, widowhood and bereavement)
- Drug and substance abuse
- Ambulatory treatment for mental diseases

It is obvious that the ideal system does not exist in our society. However with rapid population ageing and increasing demand for services, a system will evolve soon. Health professionals at all levels (doctors, nurses, community health workers) will have to contribute to this system. The community health worker will have an important role as the coordinator in the system.

Module 7: Abuse & Violence Experience by Older People

Learning objectives

On the completion of this module, the trainee should be able to:

1. Recognize abuse of an older person by the care giver; and
2. Develop plans to prevent such abuse.

Contents

- Definition and spectrum of elder abuse
- Detection of abuse
- Management and prevention of elder abuse

Elder abuse

- Elder abuse refers to the ill-treatment of an older person. The usual place of abuse is his/ her home but it can also take place in the joint family and hospital.
- The spectrum of elder abuse is very broad and comprises of physical abuse, psychological abuse, financial abuse, sexual abuse and neglect.
- **Physical abuse** includes non-accidental and intentional use of physical force leading to pain and injury. Examples of physical abuse are slapping, hitting, pushing burning and physical restraint by tying; leading to bruises, fractures, burns, sprains, cuts etc.
- **Psychological abuse** includes repeated and constant use of threats, humiliation, scolding and any other forms of mental cruelty leading to physical and mental distress. Examples of psychological abuse are treating the elderly like a child, blaming, intimidating, threatening violence and isolating, leading to fear, depression, sleeplessness and anorexia.
- **Financial abuse** includes unauthorized and improper use of resources (funds and property) of the older person. Examples of financial abuse are misappropriation of money, valuables and property; forcing the elderly to change the will and not allowing the older person to use his / her resources, leading to loss of money, forced poverty, decline in standard of living and eviction from house.
- **Sexual abuse** includes direct or indirect involvement in sexual activity without consent. Examples of sexual abuse are looking, indecent exposure, harassment, touching of breast or genitalia, penetration and attempted penetration, leading to pain, bruises, bleeding, sexually transmitted diseases and mental trauma.
- **Neglect** includes repeated deprivation of the assistance that the older person needs for activities of daily living. Examples of neglect are failure to provide food, shelter, clothing, medical care, hygiene, personal care and inappropriate use of medicine, leading to malnutrition, bedsores, over-sedation, depression, confusion and life-threatening health problems.

Detection of elder abuse

Recognition of elder abuse is often difficult. Usually more than one type of abuse co-exists. It is a very sensitive issue and its detection requires a high level of vigilance for detection. Signs of elder abuse include the following.

- Skin injuries, bruises, untreated ulcers and bedsores on the older person with inadequate explanations.
- Evidence of severe malnutrition and dehydration in the absence of obvious disease
- Poor personal hygiene on several occasions when the older person is unable to care for himself / herself.
- Bleeding from genito-urinary tract
- Medical attention is not made available when the older person needs it.
- Medications are not used despite clear instructions from the health professional.
- The older person is afraid or hesitant to talk about his / her state of affairs or injury.
- The older person is left alone without much to do for enjoyment or spending time.

Likely victims of abuse

- Older widowed women
- Cognitively impaired
- Economically dependent
- Those living in isolation

Management and prevention of elder abuse

In traditional societies, older people avoid discussion on abuse and violence as it goes against their self-esteem. The community health worker has a role in detecting abuse and intervening tactfully without worsening the situation. Management of elder abuse required involvement of several professionals. The steps involved are:

- Assessment of the older person's physical and mental capacity
- Assessment of general quality of care
- Assessment of relationship with the abuser at home or institution
- Assessment of the abusers for his / their problems & Counseling of the abuser
- Documentation, liaison and interaction with other professionals (police, social worker) when the victim is incapable of self care or does not want to accept help.
- Involvement of other family members, relatives and community leaders

Module 8: Care-giver stress

Learning objectives

On the completion of this module, the trainee should be able to:

1. Explain the concept of care-giver burden and its implications; and
2. Develop management plans for care-giver support

Contents

- Burden of care-giving
- Assessment of care-giver burden
- Managing care giver stress

The burden of care-giving

In most traditional societies, the family provides care to its older members. Various socioeconomic and cultural changes namely; the strain on the joint family system, have disrupted this age-old set-up.

- People are living longer and this has increased the number of generations living together, sometimes up to as many as three to five generations.
- Housing being very expensive and living space being small, accommodating several generations of old people is becoming harder. This is especially true if the older person requires an aid such as a walker or a wheelchair.
- Traditionally, women, usually the daughter-in-law and sometimes daughters, have been responsible for the care of the elderly. For economic viability, more and more women are going for employment outside the home. As a result, the traditional care model is getting disrupted.
- In the changing circumstances the care of the elderly in the family has become a challenging social issue. It is now possible that two generations of older persons might be existing in a single family and expecting care from younger generations, whose number has dwindled due to smaller family norms.
- Long-term care of a frail and physically-dependent older person leads to a variety of physical, emotional, social and financial stress for the care-giver, which is termed as 'care-giver burden'.
- The care-giver is usually the "hidden patient" and the health care worker must direct some attention towards the needs of the care-giver. Prolonged stress of caring indirectly affects the well-being and living condition of the older person. This may at times lead to abuse or neglect of the elderly

Assessment of care-giver burden

While assessing the burden of caring an older person, one has to look at:

- Capability of the older person for self-caring
- Type of care required by the older person (feeding, dressing, bathing and toilet)
- Amount of extra time the care-giver needs to spend in caring for the older person
- Availability of time for the care giver to meet his / her personal needs
- Resources and support systems available for the care-giver
- Vague complaints about physical health by a care-giver should make one suspect that they need more assistance in the home

Supporting the care-giver

- In developed countries “care-giver burden” has been recognized as an important issue in the care of the elderly by the social support agencies. Methods of assessing care-giver burden and supporting them in times of need have been developed. However, in developing countries the concept of care-giver burden is new and carries many negative implications. As a result, no formal system exists.
- The care-giver needs to be supported to:
 - Maintain his / her physical and mental health
 - Avoid development of abusive situations
 - Promote good quality life for the entire family
- The role of the community health worker is rather limited in supporting the care-giver in the prevailing system. However, several interventions can be organized with community support and involvement of other health professionals without requiring much resource. Some of the methods of providing assistance to care-givers are:
 - Organization of day hospitals, day-care centers and senior citizen centers which provide recreation, food and social support.
 - Outpatient and inpatient care for the investigation of major problems.
 - Mobile clinics for clinical purpose and as well as rehabilitation.
 - Provision of psychological help for care givers by providing supportive environment, counseling, stress management techniques individually or through self help groups.

Module 9: Counseling

Learning objectives

On the completion of this module, the trainee should be able to:

1. Understand the concepts of counseling and health education
2. Develop strategies for counseling an older patient

Contents

Definitions

Dimensions of counseling

Counseling an older person

Counseling is defined as a helping relationship in which a counselor adopts a supportive and non-judgmental role. Counselor helps the client to deal more effectively with psychological or emotional problems and provide advice on practical solutions.

It is the process of helping a person who has come with a problem to sort out what's happening and how they feel about it, to look at their options, to choose a course of action that fits their values, resources and lifestyles, to implement their decisions, and to evaluate the practical and emotional results.

“Counseling” should not be thought as a treatment of mental illness. It is about helping normal, functional people to solve their problems and make decisions about opportunities and choices that come up in life.

The main aim of the counselor is to make the client feel that he / she is able to solve his / her problems on his / her own. All of us have within ourselves the capacity to make and implement good decisions in our lives, and the role of the counselor is simply to provide the client with a safe and supportive space in which to examine the pending issues and make decisions.

Principles of Counseling

1. Non- judgmental attitude: The client is to be treated in a neutral and objective manner
2. Confidentiality: The discussions carried out during the counseling sessions are to be held as absolutely private
3. Respect: The client is to be treated with respect regardless of any evaluation of his/ her behavior/ action

Dimensions of counseling

There are eight dimensions that must be kept in mind when counseling a client:

- **Empathy**: is the ability to perceive the client's feelings, and to demonstrate accurate perception of this to the client.
- **Warmth**: It involves accepting and caring about the client as a person, regardless of any evaluation of her or his behaviors or thoughts.
- **Respect**: is belief in the client's ability to make appropriate decisions and deal appropriately with his or her life situation, when given a safe and supportive environment in which to do so.
- **Congruence** (or genuineness) is being honest and authentic in our dealings with our clients
- **Concreteness**: The goals and objectives of counseling should be clearly spelt out.
- **Self- disclosure**: the client should be provided with an environment that encourages self- disclosure and exploration of feelings.
- **Confrontation**: the patient should be confronted if any inconsistencies are noted in his/ her behavior.
- **Immediacy**: The problems of the clients should be handled in the present as they are and with a sense of urgency.

Counseling the older person

Elderly people are vulnerable and prone to a variety of problems that are more often than not multidimensional. The aim of counseling is to improve the well-being and consequently the quality of life of these people. Apart from helping them to deal with the problems of old age per se, counseling can also provide the opportunity for enrichment, personal growth and satisfaction. This is because old age is a time when despite some biological and intellectual decline, development continues till the very end of life.

Some of the problems for which elderly people may seek the help of a counselor are:

- Fear of diminished competency at work
- Anxiety about retirement
- Issues relating to the marital relationship which emerge when the children leave home
- Awareness of ageing
- Physical illness and dependence on others
- Fear of a decrease in sexual potency
- An increasing realization of the finality of one's own death
- Loneliness / fruitful utilization of time
- Bereavement
- Fear of increasing disability and dependence
- Vocational/ occupational counseling

In addition, there are certain features of old age that any counselor should be sensitive towards in order to make this helping relationship more effective and successful. These are:

- The problems of old age usually develop gradually over time and often overlap in various areas of life.
- Old people may be reluctant to admit their problems and prefer to deal with them on their own (denial).
- They may be reluctant in interacting with a counselor since many people equate counseling with mental illness.
- They may be anxious about developing dependence on the counselor.
- They may fear change or not be ready to accept it.
- They may not want to open up and confide in a younger person about their personal problems.

To sum up, it is important that a counselor be sensitive to the problems of old age and equip themselves with the qualities of warmth, respect, patience and empathy in dealing with the elderly client. The client must be provided a facilitative environment in which to state their concerns, be made participants in finding the solutions to their own problems and guided in actualizing their inherent potentialities.

Module 10: Health Education for the Older Person

Learning objectives

1. Develop strategies for health education of the older patients

Contents

Health education: definition and concept

Contents of health education for the older person

Health education is defined as a process that informs, motivates and helps people to adopt and maintain healthy practices and lifestyles. It advocates environmental changes as needed to facilitate this goal and conducts professional training and research.

It is a process aimed at induction of health behavior and learning of customs, prejudices and practices which are detrimental to health. Health education requires active involvement of people in achieving the goal of health.

The components of health education are:

- **Informing people:** Reasonable understanding of birth, ageing, death and disease is now available as a result of research and discoveries in medical field. Knowledge about prevention of disease and promotion of health is also available from these discoveries. Informing people about the knowledge of health promotion and health protection is the first goal of health education. Exposure to knowledge will create awareness of health problems, need for healthy life style and will also put responsibility on people for their own health.
- **Motivating people:** Creation of awareness is not sufficient to expect people to adopt healthy lifestyle. People need to be motivated to change their habits and ways of life. These changes being behavioral changes, health education is similar to influencing a “consumer” to make his choice and decision but towards healthy actions and ways of life.
- **Guiding them into action:** People need help to adopt and practice healthy life style, which may be totally new to them. To achieve this there is a need for creation of a setting from where health education can be disseminated. In other words, there has to be an infrastructure for health education and related services and people need to be encouraged to utilize these services.
- Various **communication channels** like radio, TV, films, news papers should be utilized to create awareness regarding adoption of a healthy life style.

Contents of health education for the older person

- **Human biology:** The older subject and their family should be informed about the biological changes in structure and function of the body in relation to ageing. They must also be informed about the difference between age-related changes and pathological states.
- **Family health:** Information regarding different patterns of human growth and development and needs of different family members to be included in the message to provide a correct perspective of human ageing.
- **Nutrition:** Health educator must guide older people and their family to understand the principles of balanced diet, nutritive value of food, value for money spent on food, storage, preparation, cooling etc. In addition, older people need to know about the food that improves their bowel movement, protects against disease and improves health.
- **Hygiene:** Education on hygiene should be about personal hygiene and environmental hygiene.
 - Education on personal hygiene should include: information on bathing, clothing, toilet, washing of hands before eating, care of feet, nails and teeth; prevention of indiscriminate spitting, coughing and sneezing; and inculcation of clean habits.
 - Education on environmental hygiene should include information on maintain clean home, need for fresh air and light, ventilation, hygienic storage, disposal of waste, sanitation, disposal of human excreta, food sanitation, vector control etc. Though creation of hygienic environment requires mobilization of resources in the community, the role of the individual in maintaining the environmental hygiene can not be neglected.
- **Control of communicable and non-communicable disease:** Information on common communicable and non-communicable diseases specific to old age as well as all age groups needs to be included in health education because older people are often consulted for their wisdom in all matters of health and diseases.

- **Mental health:** Cognitive and affective disorders are extremely common in older subjects. In addition, there has been a rise in mental illness in the general population also. Older people need to be educated regarding adjustment to their changing role in family and community as a result of old age and retirement. In addition, education regarding dementia, depression, anxiety and bereavement needs to be provided.

- **Prevention of accidents:** Modern day life has very high risk of accidents and disasters. Older people should be made aware that they are especially vulnerable to accidents and their complications because of their physiological decline and higher risk of fractures and life threatening injury. Simple measures and tips followed in daily activities can drastically reduce the risk of accidents.

- **Use of health services:** Older people need to be educated to use the health services available in the community to the maximum extent. They must also be encouraged to participate in national health programs designed to promote health in old age and prevent diseases. There are various barriers to use of health services and these include: acceptance of disease and disability in old age as natural, fatalistic attitude, poverty and ignorance and self neglect. The community health worker needs to identify them and intervene to remove these barriers.

Caring for the elderly requires a high degree of sensitivity, awareness and acceptance among health care workers. The provision of service for the elderly is an integrated effort and can be most sustainable and successful if self aware and well-informed health care workers make a coordinated effort with the individual, family and society.