Manual for Integrated Community Based Screening for Elderly People in Bhutan

Elderly Care Program
Health Care & Diagnostic Division
Department of Medical Services
Ministry of Health
@May 2020

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BACKGROUND

The number of elderly people is ever growing all over the world including developing countries like ours. Of the total population of 727,145 in Bhutan (2017), 43,064 (5.9%) were above the age of 65 years. So, the proportion of elderly people above 65 years has increased from 4.68% (29,745 out of 634,982) in 2005 to 5.90% in 2017(PHCB 2017). It has also been reported that 80 % of them had at least one and 50 % had at least two chronic health conditions. Given the high prevalence of chronic health problems and their impact among the elderly people, the National Elderly Care Programme was established at the Ministry of Health. The aim of the programme is to promote health of elderly and to prepare our society for healthy ageing through extension of elderly care services at all levels of the health care system.

PURPOSE

This guideline is intended for healthcare workers who provide healthcare and other essential services to older people at home, residence, health facility or community setting. This involves screening of all elderly population

OBJECTIVES

- Provide easy access to promotional, preventive, curative and rehabilitative services to the elderly through community based primary health care approach
- Identify health problems and provide appropriate health intervention in the community with a strong back up referral system.
- Build up the capacity on the medical and paramedical professionals as well as caregivers within the family

PRINCIPLE

Respect for the autonomy and dignity of the elderly person must underpin our approach and practice at all times. All elderly people have the right to health and social care. They should have access to health care based on needs, without an age-defined restriction to services.

HEALTH SCREENING

Mandatory Health screening for elderly population, including for conditions that are preventable, will be carried out by the health workers annually. Although there are many problems to be tackled among the elderly, this manual however focus on screening the following condition:

1. Physical and mobility impairment
2. Dementia, depression,
3. Diabetes and Hypertension
4. Arthritis
5. Visual and hearing problem
6. Oral and Dental problem
7. Fall risk
8. Urinary incontinence
9. Alcohol and addiction problem
10. Nutritional problem.
11. Other Chronic disease

It should be noticed that elderly individuals differ greatly in their physiologic and functional status.

1. PHYSICAL AND MOBILITY IMPAIRMENT

Physical and mobility impairment is difficulty or dependency in completing tasks essential for self-care and independent living. It is common among the elderly people. It may develop slowly due to progressive comorbidities and frailty, or acutely due to catastrophic events (e.g. stroke, accidents) and also associated with an increased risk of falls and depression.

1.1 ASSESSMENT:

Physical and mobility impairment can be assessed by using simple tools as below:

1.1.1: CHAIR RISE TEST

A simple test can decide whether an elderly person needs further assessment for limited mobility.

Instructions: Ask the person, "Do you think it would be safe for you to try to stand up from a chair five times without using your arms?" (Demonstrate to the person.)

If YES, ask them to:

- Sit in the middle of the chair
- Cross and keep their arms over their chest
- Rise to a full standing position and then sit down again
- Repeat five times as quickly as possible without stopping.

Time the person taking the test – further assessment is needed if they cannot stand up five times within 14 seconds

Figure 1: Chair Rise Test

1.1.2: SHORT PHYSICAL PERFORMANCE BATTERY (SPPB)

The SPPB measures timed performance on three tasks, each scored out of four, to derive a score from zero (worst performance) to 12 (best performance).
First, describe each test and ask if the person feels they are able to do it. If not, score accordingly and move to the next step.

1.1.3: Balance tests:

Stand for 10 seconds with feet in each of the following three positions. Use the sum of the scores from the three positions.

A. Side-by-side stand
Held for 10 seconds 1 point
Not held for 10 seconds 0 points
Not attempted 0 points
If not attempted, end balance tests

B. Semi-tandem stand
Held for 10 seconds 1 point
Not held for 10 seconds 0 points
Not attempted 0 points
If not attempted, end balance tests.

C. Tandem stand
Held for 10 seconds 2 points
Held for 3 to 9.99 seconds 1 point
Held for < 3 seconds 0 points
Not attempted 0 points

1.1.3: Gait speed test: Time to walk four metres.

Time for four-metre walk:

- < 4.82 seconds 4 points
- 4.82 – 6.20 seconds 3 points
- 6.21 – 8.70 seconds 2 points
- > 8.70 seconds 1 point
- Unable to complete 0 points

3. Chair rise test: Time to rise from a chair five times

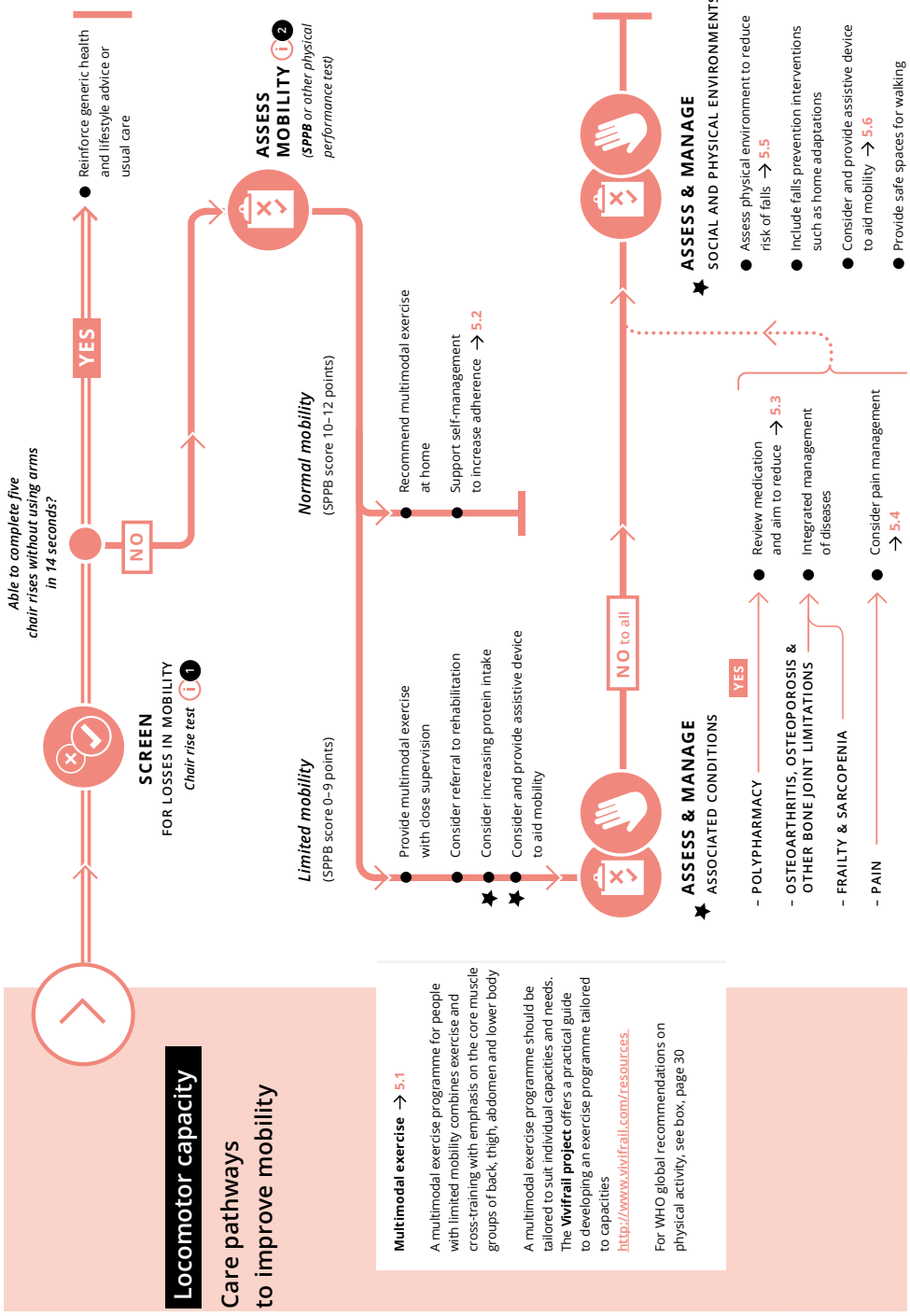
- < 11.19 seconds 4 points
- 11.2 – 13.69 seconds 3 points
- 13.7 – 16.69 seconds 2 points
- 16.7 – 59.9 seconds 1 point
- > 60 seconds or unable to complete 0 points

Final SPPB score = sum of scores from the three tests above

1.2: Follow up

If the score of SPPB is less than 9, the elderly individual should be referred to a higher centre for appropriate management.

Flow Chart for the mobility test:



2. DEMENTIA

Cognitive decline presents as increasing forgetfulness, loss of attention and reduced ability to solve problems. While the exact cause is not known, cognitive decline can be related to the ageing of the brain, to diseases (for example, cardiovascular diseases, such as hypertension and stroke, or Alzheimer's disease) or even environmental factors such as a lack of physical exercise, social isolation and a low level of education.

Cognitive decline becomes of greatest concern when it starts to interfere with a person's ability to function effectively in their environment – that is, when a person develops dementia.

2.1: CONDITION THAT CAUSES DEMENTIA

Common reversible conditions that can cause cognitive decline include dehydration, malnutrition, infections and problems with medications. With proper treatment of these conditions, a person's cognitive symptoms should go away.

2.1.1: SEVERE DEHYDRATION

Severe dehydration and other nutritional problems can cause delirium (which resembles dementia) and, in severe cases, death. Delirium. Delirium is a sudden and drastic loss of the ability to focus attention. People also become extremely confused about where they are and what the time is. Delirium develops over a short period of time and tends to come and go during the course of a day. It may result from acute organic causes such as infection, medications, metabolic abnormalities (such as hypoglycemia or hyponatremia), substance intoxication or substance withdrawal.

2.1.2: POLYPHARMACY

Two or more drugs may interact and cause adverse side-effects. Sedatives and hypnotics are the medications most often responsible for cognitive disorders among older people.

2.1.3: MAJOR SURGERY & GENERAL ANAESTHESIA

Major surgery and general anesthesia are a recognized risk for cognitive decline. Practitioners should ask if the person's cognitive decline followed major surgery.

If so, that person will be at higher risk for further cognitive decline following any further major surgery. This higher risk will need to be identified and discussed with the surgical team and anesthetist before any future surgeries or anesthesia.

2.1.4: CEREBROVASCULAR DISEASE

Vascular disease in the brain is closely associated with cognitive decline. If the patient has a history of stroke/mini-stroke/transient ischaemic event, then prevention of further events is the primary approach to stop further declines in cognition.

Therefore, follow up requires:

- Physical examination
- Neurologic examination
- Screening for B12 deficiency and hypothyroidism
- Screening for depression
- Structural Neuro-imaging with either a non-contrast head CT or MRI in the initial evaluation of the patient with dementia.

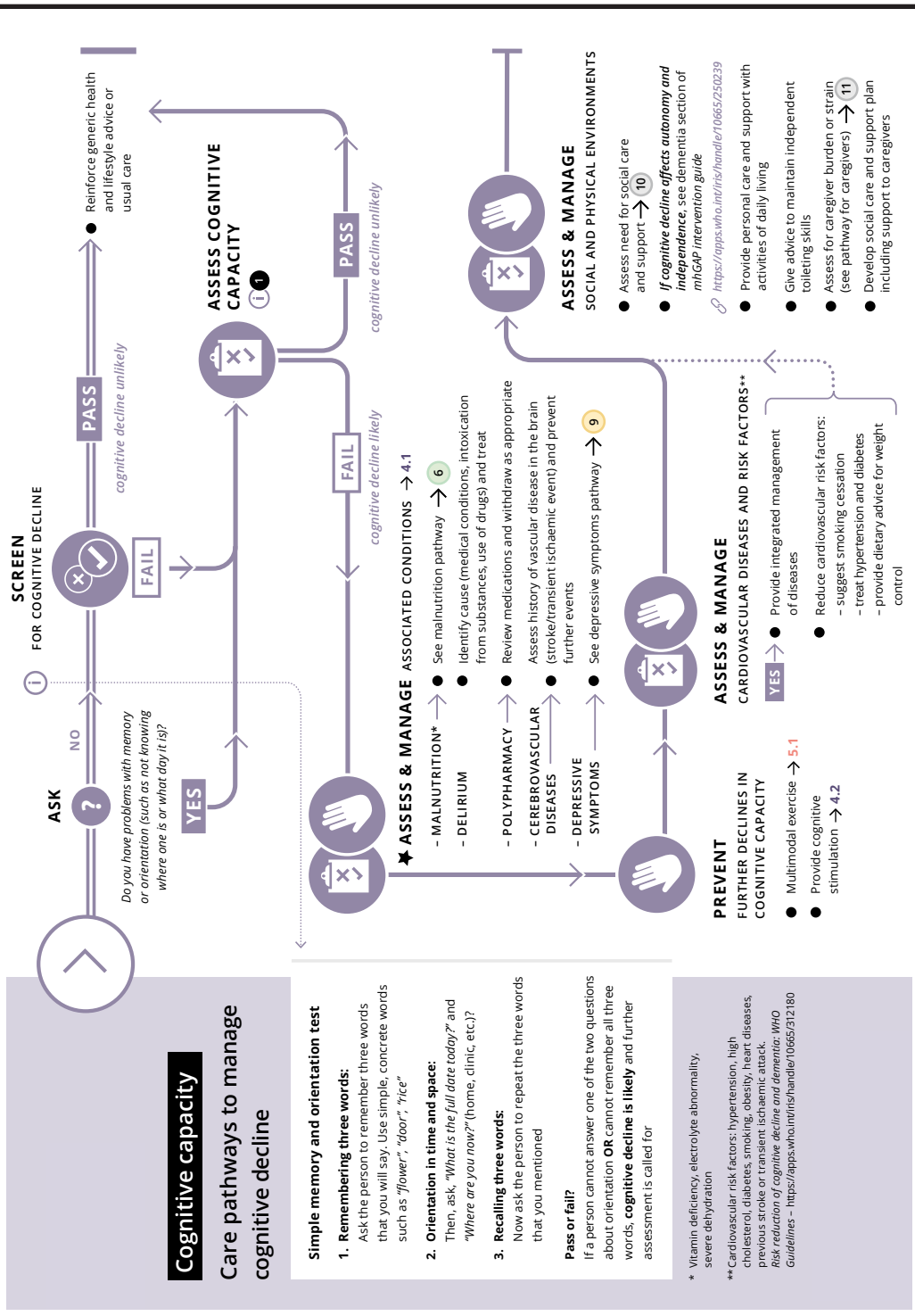
2.2: ASSESSMENT

The initial step in the evaluation of a patient with suspected dementia should focus upon the history. Family members or other informants who know the patient well are invaluable resources for providing an adequate history of cognitive and behavioral changes. Dementia can be screened with three-word recall. The three-word recall tasks are widely used as brief measures of verbal memory function. The normal range of the three word recall is 2 or more. Although a number of definitions exist for dementia, the DSM 5 definition is widely accepted.

2.2.1: SIMPLE MEMORY AND ORIENTATION TEST

2.2.1.1: Remembering three words

Ask the person to remember three words that you will say. Use simple, concrete words such as “flower”, “door”, “rice”


Cognitive capacity
Care pathways to manage cognitive decline
ASK
NO
YES
Do you have problems with memory or orientation (such as not knowing where one is or what day it is)?
SCREEN
FOR COGNITIVE DECLINE
PASS
FAIL
cognitive decline unlikely
cognitive decline likely
Reinforce generic health and lifestyle advice or usual care
ASSESS COGNITIVE CAPACITY
1
PASS
FAIL
cognitive decline unlikely
cognitive decline likely
ASSESS & MANAGE ASSOCIATED CONDITIONS → 4.1
- MALNUTRITION* → See malnutrition pathway → 6
- DELIRIUM → Identify cause (medical conditions, intoxication from substances, use of drugs) and treat
- POLYPHARMACY → Review medications and withdraw as appropriate
- CEREBROVASCULAR DISEASES → Assess history of vascular disease in the brain (stroke/transient ischaemic event) and prevent further events
- DEPRESSIVE SYMPTOMS → See depressive symptoms pathway → 9
PREVENT
FURTHER DECLINES IN COGNITIVE CAPACITY
● Multimodal exercise → 5.1
● Provide cognitive stimulation → 4.2
ASSESS & MANAGE
CARDIOVASCULAR DISEASES AND RISK FACTORS**
YES →
● Provide integrated management of diseases
● Reduce cardiovascular risk factors:
– suggest smoking cessation
– treat hypertension and diabetes
– provide dietary advice for weight control
ASSESS & MANAGE
SOCIAL AND PHYSICAL ENVIRONMENTS
● Assess need for social care and support → 10
● If cognitive decline affects autonomy and independence, see dementia section of mhGAP intervention guide
https://apps.who.int/iris/handle/10665/250239
● Provide personal care and support with activities of daily living
● Give advice to maintain independent toileting skills
● Assess for caregiver burden or strain (see pathway for caregivers) → 11
● Develop social care and support plan including support to caregivers
Simple memory and orientation test
1. Remembering three words:
Ask the person to remember three words that you will say. Use simple, concrete words such as "flower", "door", "rice"
2. Orientation in time and space:
Then, ask, "What is the full date today?" and "Where are you now?" (home, clinic, etc.)?
3. Recalling three words:
Now ask the person to repeat the three words that you mentioned
Pass or fail?
If a person cannot answer one of the two questions about orientation OR cannot remember all three words, cognitive decline is likely and further assessment is called for
* Vitamin deficiency, electrolyte abnormality, severe dehydration
**Cardiovascular risk factors: hypertension, high cholesterol, diabetes, smoking, obesity, heart diseases, previous stroke or transient ischaemic attack.
Risk reduction of cognitive decline and dementia: WHO Guidelines – https://apps.who.int/iris/handle/10665/312180

2.2.1.2: Orientation in time and space

Then, ask, "What is the full date today?" and "Where are you now?" (home, clinic, etc.)?

2.2.1.3: Recalling three words:

Now ask the person to repeat the three words that you mentioned

Pass or fail?

If a person cannot answer one of the two questions about orientation OR cannot remember all three words, cognitive decline is likely and further assessment is called for.

2.3: FOLLOW UP

- Manage Cognitive Decline
- People with cognitive decline can benefit from cognitive stimulation.
- Losses in other domains of intrinsic capacity, particularly hearing, vision and mood, can affect cognition.
- Cognitive stimulation may slow declines in cognitive capacity. Cognitive stimulation aims to stimulate participants through cognitive activities and recollection, stimulation of multiple senses and contact with other people.
- Cognitive stimulation may be offered to an individual or in a group. Groups may be better for some people; social contact in the group may help. Groups may also be suitable and efficient if those in the group share a common purpose, such as improving health literacy.
- The standard group approach involves up to 14 themed sessions of about 45 minutes each, held twice a week.
- A facilitator leads these sessions. Typically, a session might start with some non-cognitive warm-up activity and then move to a variety of cognitive tasks, including reality orientation (for e.g, a board displaying such information as place, date and time). Sessions focus on different themes, including, for example, childhood, use of money, faces or scenes. These activities generally avoid factual recall but instead focus on questions such as, "What do these [words or objects] have in common?"

Who can conduct cognitive stimulation? In high-income countries, usually it is psychologists who conduct cognitive stimulation therapy. With adaptation, it

could be conducted by suitably trained and supported non-specialists. However, designing and providing a personalized intervention for a person with significant declines may require more detailed assessment and planning – tasks that require specialized skills.

Therefore, local protocols should include criteria for referral to mental health specialists for cognitive stimulation therapy.

Family members and caregivers can play an important role in cognitive stimulation. It is important to encourage family members and caregivers to regularly provide older people with such information as day, date, weather, time, names of people and so on. This information helps them to remain oriented in time and place. Also, providing materials such as newspapers, radio and TV program, family albums and household items can promote communication, orient an elder person to current events, stimulate memories and enable the person to share and value their experiences.

If cognitive declines limit a person's autonomy and independence, that person is likely to have major social care needs. A health worker can help caregivers tailor a plan for activities of daily living that maximizes independent activity, enhances function, helps to adapt and develop skills, and minimizes the need for support.

Family members and caregivers can:

- Provide orienting information, such as the date, current community events, identity of visitors, weather, news of family members;
- Encourage and arrange contacts with friends and family members at home and in the community;
- Make and keep the home safe to reduce the risk of falls and injury;
- Post signs in the home – for example, for the toilet, bedroom, door to outside – to help the person find his or her way about; and
- Arrange for and join in occupational activities (as appropriate to the person's capacities).

3. DEPRESSION

Depressive illness in the older population is a serious health concern leading

to unnecessary suffering, impaired functional status, increased mortality, and excessive use of health care resources. Late-life depression often goes undetected and has a significant adverse impact on quality of life, outcomes of medical disease, healthcare utilization, morbidity and mortality. The overwhelming majority of older adults with depression initially present to primary care, often with somatic complaints. Suicide rates are almost twice as high in the elderly compared with the general population.

The term "depressive symptoms" (or low mood) applies to older adults who have two or more simultaneous symptoms of depression most of or all the time for at least two weeks, but who do not meet the criteria for a diagnosis of major depression. Depressive symptoms are more common in older people with long-term and disabling conditions, in social isolation or who are caregivers with demanding care responsibilities. These issues should be considered as part of a comprehensive approach to managing depressive symptoms.

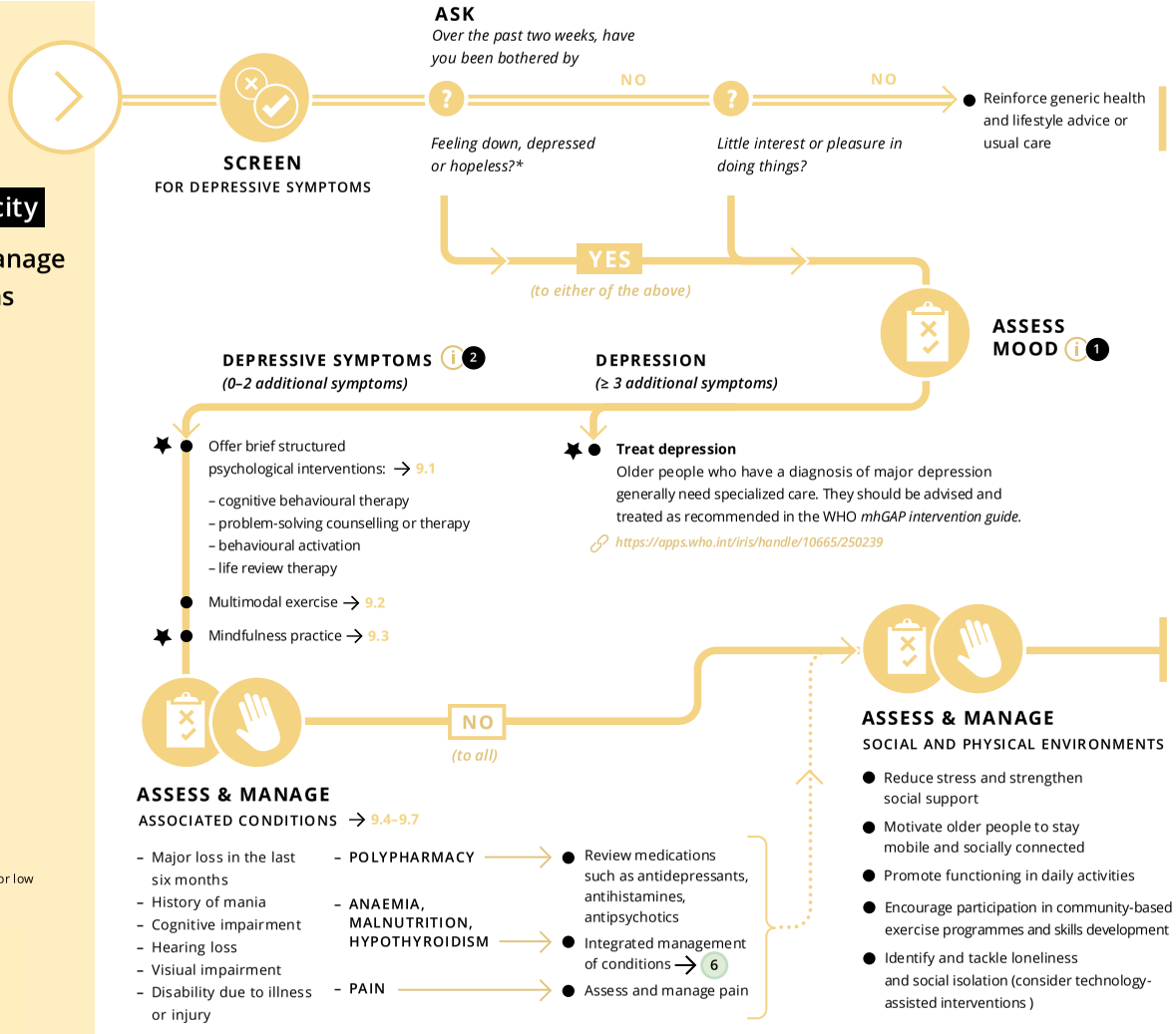
Depressive symptoms are an important aspect of psychological capacity, but only one dimension. There are other aspects such as anxiety, personality characteristics, coping and mastery that need complex measures.

3.1: ASSESSMENT

If a person reports at least one of the core symptoms –feeling down, depressed or hopeless and having little interest or pleasure in doing things – do a further assessment of mood. Alternative words can be used if a person is not familiar with those in the two screening questions.

Psychological capacity

Care pathways to manage depressive symptoms



Specialized care needed

* Older people use a wide variety of terms for low mood, like sadness, depressed, down, etc.

3.1.1: ASK:

"Over the last two weeks, have you been bothered by any of the following problems?"

- Trouble falling or staying asleep, or sleeping too much.
- Feeling tired or having little energy.
- Poor appetite or overeating.
- Feeling bad about yourself or that you are a failure or that you have let yourself or your family down.
- Trouble concentrating on things such as reading the newspaper or watching television.
- Moving or speaking so slowly that other people could have noticed.
- Being so fidgety or restless that you have been moving around a lot more than usual.
- Thoughts that you would be better off dead or of hurting yourself in some way.

3.1.2: DEPRESSIVE SYMPTOMS

- If a person has at least one of core symptoms and one or two additional symptoms, they may have depressive symptoms. If a person has more than two symptoms, they may qualify for a diagnosis of depressive disorder. It is important to distinguish depressive symptoms from depressive disorder because their treatments differ.
- Cognitive decline and dementia may be associated with depressive symptoms and must be assessed as well.
- People with dementia often come to a health worker with complaints of mood or behavioral problems, such as apathy, loss of emotional control, or difficulties carrying out usual work, domestic or social activities.
- At the same time, declines in other domains of intrinsic capacity, such as sensory or mobility, may reduce functional ability and social participation, and so contribute to depressive symptoms.
- Interventions for declines in other components of intrinsic capacity, such as cognition or hearing, may be more effective if depressive symptoms are addressed at the same time. This should be considered when developing the personalized care plan.

3.2: FOLLOW UP

3.2.1: BRIEF STRUCTURED PSYCHOLOGICAL INTERVENTIONS

Brief structured psychological interventions, such as cognitive behavioral therapy, problem-solving approaches, behavioral activation and life review therapy, may considerably reduce depressive symptoms in older adults. Multimodal exercise and mindfulness practice can also reduce depressive symptoms.

Many psychological interventions can be used, with the consent and agreement of the older person and taking into account their concerns, such as difficulties with problem-solving. Physical exercise should be considered, in addition to structured psychological treatments, due to the positive effect of physical exercise in improving mood.

Prescriptions of antidepressants by primary care physicians without specialized knowledge in mental health is not recommended.

3.2.2: COGNITIVE BEHAVIOURAL THERAPY

Cognitive behavioural therapy (CBT) is based on the idea that feelings are affected by both beliefs and behaviour. People with depressive symptoms (or diagnosed mental disorders) may have unrealistic, distorted negative thoughts that, if unchecked, can lead to harmful behaviour. Thus, CBT typically has a cognitive component – helping the person to develop the ability to identify and challenge unrealistic negative thoughts – as well as a behavioural component to enhance positive behaviours and reduce negative behaviours. Steps can include (1) identifying problems in one's life, (2) becoming aware of thoughts, emotions and beliefs about these problems, (3) identifying negative or inaccurate thinking (4) and reshaping this thinking to be more realistic.

Problem-solving counselling or therapy A problem-solving approach should be considered for people with depressive symptoms who are in distress or who have some degree of impaired social functioning (in the absence of a diagnosed depressive episode or disorder).

Problem-solving therapy offers the person direct and practical support. The health professional acting as the therapist and the older person work together to

identify and isolate key problem areas that might be contributing to the depressive symptoms. Together, they break these down into specific, manageable tasks by problem-solving and by developing coping strategies for specific problems.

3.2.3 BEHAVIOURAL ACTIVATION

Behavioural activation involves encouraging the person to participate in rewarding activities as a means to reduce depressive symptoms. This approach can be learned more quickly than most other evidence-based psychological treatments. It might be learned by non-specialists and so access to care for depressive symptoms can be increased. The intervention has been studied mainly as a multiple-session intervention conducted by specialists. It is possible, however, that the intervention could be modified into a brief intervention and delivered by trained health professionals as an adjunct treatment or as part of a first step in a comprehensive care approach in primary care.

3.2.4 LIFE REVIEW THERAPY

Life review therapy involves a therapist guiding a person to remember and evaluate their past in order to achieve a sense of peace or acceptance about their life. This type of therapy can help put life in perspective and even recover important memories about friends and loved ones. Life review therapy can help to treat depression in older adults and can help those facing end-of-life issues.
Therapists centre life review therapy on life themes or by looking back on certain time periods, such as childhood, parenthood, becoming a grandparent or working years.

3.2.5 MULTIMODAL PHYSICAL EXERCISE

A program of exercise tailored to the physical abilities and preferences of the person can reduce depressive symptoms in the short term and perhaps in the longer term as well.

3.2.6: MINDFULNESS PRACTICE

Mindfulness consists of paying attention to what is happening in the present moment instead of being carried along by a train of thoughts about the past, future, wishes, responsibilities or regrets. Such latter thoughts can become a downward spiral for a person with depressive symptoms. There are many types

of mindfulness practice. An approach widely used is sitting or lying quietly and focusing attention on the sensations of breathing. Mindfulness of physical movement – for example, during yoga or walking – is also helpful for some people.

4. DIABETES

Type 2 diabetes is a major public health problem affecting approximately 8 percent of the US population. The global prevalence of type 2 diabetes continues to rise. Data from the Framingham Heart Study indicate that the incidence of type 2 diabetes has doubled over the last 30 years. Patients with diabetes mellitus are at increased risk for both microvascular (myocardial infarction, stroke, peripheral vascular disease) and macrovascular diseases (retinopathy, neuropathy and nephropathy). In addition, they are at high risk for polypharmacy, functional disabilities and common geriatric syndromes that include cognitive impairment, depression, urinary incontinence, falls, and persistent pain. Those with impaired fasting glucose (IFG) are at increased risk for macrovascular disease.

4.1. ASSESSMENT

Diabetes can be screened with fasting blood sugar. Fasting blood sugar is checked by a portable device, Stat Strip Xpress Glucose (Nova biomedical, U.S.A.). Normal range of fasting plasma glucose (FPG) is less than 100 mg/dL (5.6 mmol/L). Fasting is defined as no caloric intake for at least eight hours. Subject is categorized in impaired fasting glucose (IFG) when the FPG is between 100 and 125 mg/dL (5.6 to 6.9 mmol/L). Subject is categorized in diabetes mellitus when the FPG is at or above 126 mg/dL (7.0 mmol/L). The diagnosis of diabetes must be confirmed on subsequent day by repeat measurement, repeating the same test for confirmation.

- Screen Random blood sugar (RBS) (Refer Guideline for Normal RBS range)
- Further examination if RBS is more than 140 mg/dL and taking anti-diabetic medication

4.2: FOLLOW UP

- Monitor blood sugar
- Diet control

- Weight reduction
- Physical activities.
- Individual counseling regarding lifestyle modification, including a medical and nutrition evaluation.
- Refer to hospitals to screen complications and initiate further treatment.

5. HYPERTENSION

Hypertension is a common problem in elderly individuals (age greater than 60 to 65 years), reaching a prevalence as high as 60 to 80 percent. In the US, high blood pressure is known to be the single largest risk factor for cardiovascular mortality and treatment of hypertension has contributed to a 59 percent reduction in age-adjusted stroke mortality and a 50 percent reduction in mortality from coronary artery disease since 1972. Isolated systolic hypertension (ISH) accounts for 60 to 75% of cases of hypertension in the elderly. ISH is associated with a two- to fourfold increase in the risk of myocardial infarction, left ventricular hypertrophy, renal dysfunction, stroke, and cardiovascular mortality. Even in patients who also have diastolic hypertension, the cardiovascular risk correlates more closely with the SBP than the DBP.

5.1: ASSESSMENT

Hypertension is defined as blood pressure (BP) greater than 140/90 mmHg or use of an antihypertensive drug. ISH is defined as systolic BP (SBP) above 160, diastolic BP (DBP) below 90 But 7th Joint National Committee report SBP above 140.Isolated systolic Hypertension: systolic pressure greater than 140 mmHg with diastolic pressure less than or equal to 90 mmHg.

- Check BP in sitting position
- Repeat after 15-30 minute: Find out the mean. If mean BP is normal, advice for physical activities, diet control. If mean BP is greater than 140/90 mmHg or use of anti-hypertensive drugs, follow anti-hypertensive treatment standard/protocol.
- Refer if required.

5.2: FOLLOW UP

- Monitor blood pressure as per standard/treatment guideline
- Advice to reduce salt and weight
- Continue the medication
- Control dietary intake habits.
- Monitor prescription adherence
- Carry out renal function and electrolytes diagnostic tests
- Check orthostatic BP and pulse
- Assess for gait instability and falls.
- Refer to elderly care guideline for hypertensive treatment

6. ORAL AND DENTAL PROBLEM

Globally, poor oral health amongst older people has been particularly evident in high rates of tooth loss, dental caries, prevalence of gingivitis and periodontal diseases, oral lichenoid lesions, xerostomia, oral precancers and cancers. The negative impact of poor oral conditions on the quality of life of elderly people is an important public health issue. Extensive tooth loss reduces chewing performance and affects food choice; for example, edentulous people tend to avoid dietary fiber and prefer foods rich in saturated fats and cholesterols. Edentulousness is also shown to be an independent risk factor for weight loss, problem with chewing food and poor general health. They also have social handicaps related to communication which deters them from socialization. Poor oral health and poor general health are interrelated, primarily because of common risk factors. Studies have shown that periodontal disease is associated with diabetes mellitus, risk of ischemic heart disease and chronic respiratory diseases. Tooth loss and dental infections are also linked to increased risk of ischemic stroke, bacterial endocarditis and poor mental health.

6.1. ASSESSMENT

Examine by Dental Hygienist/Dentist (Dental Surgeon)/ Dental Specialist
Assess for the following:

- Teeth present/ missing teeth/ root stumps and carious or sharp teeth
- Attrition/ abrasion/ erosion/ abfraction and dentinal hypersensitivity

- Dentures if any (RPD/FPD/CD), Crown, Bridge and Implants
- Betel/doma stains, plaque and calculus (subgingival and supragingival)
- Gingival and Periodontal problems including periodontitis, hyper-pigmentation and hyperplasia (hyperplasia can be drug induced).
- Any swelling or tumor, ulcers (esp. non healing ulcer) and other oral lesions
- Potentially premalignant lesions like oral submucous fibrosis (OSMF), oral lichen lichen planus (OLP), oral lichenoid lesion (OLL), Leukoplakia, erythroplakia, erythro-leukoplakia, discoid lupus erythematosus (DLE), Vasculitis, Necrotising sialometaplasia and Oral Cancer.
- Dry mouth/ xerostomia
- Neuralgic and Neuropathic pain (TN)
- Glossitis, Anemia and other deficiency and features of systemic diseases

6.2. FOLLOW UP

- Teach the importance of oral care
- Refer to Dental Technician/ Dental Hygienist/Dentist (Dental Surgeon) or to Dental Specialist appropriately.

7. VISUAL PROBLEM

Impaired visual acuity is common in the elderlies. Screening for impaired visual acuity could lead to interventions to improve vision, function, and quality of life. Impaired visual acuity is consistently associated with decreased functional capacity and quality of life in older persons and can affect the ability to live independently or increase the risk for falls and other accidental injuries. Uncorrected refractive errors, cataracts, and age-related macular degeneration are common causes of impaired visual acuity.

7.1. ASSESSMENT

Patients are examined by eye technicians. A systematic review found no evidence that screening by self-reported history of visual problems improves vision in the elderly. Several randomized trials of older adults seen in primary care found that vision screening (usually Snellen chart testing for visual acuity) was not

more effective than no screening or usual care. There is general agreement that older patients should be screened every one to two years by an eye professional; the appropriate age to initiate screening is not certain, and may depend on risk factors including positive family history.

7.2. FOLLOW UP

Eye technicians refer to ophthalmologists, if appropriate. Cataract surgery has been shown to improve cognition, depression, and vision-related quality of life in elderly patients with cataracts. Early intervention for age-related macular degeneration seems to be beneficial.

8. HEARING PROBLEM PROBLEM

The prevalence of hearing loss increases with age. Hearing loss is the third most common ailment in older adults (behind hypertension and arthritis), affecting an estimated 40 to 66 percent of those over age 75. The World Health Organization estimates that in 2025, there will be 1.2 billion people over 60 years of age worldwide, with more than 500 million individuals who suffer significant impairment from presbycusis.

8.1. ASSESSMENT

Hearing problems can be screened with a whispered voice test. The whispered voice test can detect hearing impairment. The test requires the examiner to stand an arm's length behind the patient while whispering a combination of letters and numbers and ask the patient to repeat them. The examiner masks hearing in one ear by occluding the ear canal and rubbing the tragus with a circular motion. An evidence review to support a recommendation from USPSTF found that the whispered voice test at two feet was nearly as effective as a formal hearing questionnaire or a use of a tone-emitting otoscope for the detection of hearing loss.

8.2. FOLLOW UP

Patients should be referred to ear-nose-throat doctors if appropriate. A directed treatment to prevent or reverse the effects of presbycusis is not available. However, most patients with significant age-related hearing loss will benefit from use of hearing aids. Hearing aids are generally indicated when high

frequency hearing thresholds reach 40 dB on an audiogram.

9. ALCOHOL PROBLEM AND ADDICTION PROBLEM

Approximately 15 percent of adults over age 65 years experience health problems related to the complications of alcohol consumption in combination with medication or chronic conditions. Two to four percent meet criteria for alcoholism. Alcohol use in the elderly may negatively impact function and condition, as well as general health. Risk factors for alcohol abuse among older adults include bereavement, depression, anxiety, pain, disability, and a prior history of alcohol use.

9.1. ASSESSMENT

The American Geriatrics Society guidelines suggest specific questioning regarding the frequency and quantity of alcohol use, and then asking CAGE questions (Cut down, Annoyed, Guilty, Eye-opener) to identify patients with alcohol related problems. The CAGE questionnaire asks the following questions.

- Have you ever felt the need to cut down on drinking?
- Have you ever been annoyed by criticism of your drinking?
- Have you ever felt bad or guilty about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eye-opener)?

The cutoff point for the CAGE is usually two or more positive responses

9.2. FOLLOW UP

If the elderly are into drinking habit; advise him/her to reduce drinking and if possible stop drinking in the long run.

- If he/she cannot reduce or stop, Counselling and brief intervention can be provided
- Detoxification can be done as per standard protocol if it becomes very difficult for he/she to reduce or stop drinking

10. URINARY INCONTINENCE

Urinary incontinence (UI), the complaint of involuntary leakage of urine, often remains undetected and undertreated by health care personnel worldwide, despite its substantial impact upon affected individuals and health care systems. Aging leads to many factors that predispose to urinary incontinence: detrusor over activity, decreased bladder contractility, decreased flow rate, increased post void residual volume, and change in diurnal fluid excretion. UI is estimated to affect 11 to 34 percent of elderly men and 17 to 55 percent of elderly women. Diabetes approximately doubles the risk for severe incontinence in women.

10.1. ASSESSMENT

Because many patients are reluctant to initiate a discussion about their incontinence, The Assessing Care of Vulnerable Elders (ACOVE) authors recommend asking about and documenting the presence or absence of UI biannually, and determining whether the UI, if present, is bothersome to patient or caregiver. The major clinical types of UI are: urge incontinence (leakage with sudden urgency), stress incontinence (leakage with maneuvers that increase intra-abdominal pressure), mixed incontinence (urge and stress leakage), and incomplete bladder emptying (resulting in an elevated postvoid residual volume, often associated with weak stream, hesitancy, frequency and nocturia). UI may also be due to reversible medical factors.

10.2. FOLLOW UP

The exercise of pelvic floor muscle is often effective for the UI. A targeted physical might include assessment for fluid overload, genital and rectal examination (eg, stool impaction, bladder and prostate neoplasms), and neurologic evaluation (eg, multiple sclerosis, cord lesions). Urine and blood tests are indicated to evaluate for infection, metabolic causes (eg, hyperglycemia, hypercalcemia), renal dysfunction, and possible vitamin B12 deficiency. Alcohol and some medicines may cause or worsen urinary incontinence. Urine cytology is indicated only if there is hematuria or pelvic pain.

11. NUTRITIONAL PROBLEM

Elderly are particularly vulnerable to malnutrition due to the process of ageing affecting nutritional needs. Typically after around 70yrs of age, muscle mass may

decrease with potentially harmful effects on vitality and inadequate nutrition leads to loss of muscle mass and strength. Elder people are at high risk if under nutrition due to several reasons

11.1 ASSESSMENT

Nutritional status is screened based on Body Mass Index (BMI) by measuring height and weight and further assess the status using the Mini Nutritional Assessment (MNA) tool

- BMI between 25 to 29.9: Overweight
- BMI of 30 or greater: Obese
- BMI less that 19: Under-nutrition

11.2. FOLLOW UP

If the nutritional status is within the normal range, reinforce dietary advice, physical activities. If they are at risk of malnutrition, offer dietary advice and monitor weight loss. In case of undernourished, over weight and obese: refer to dietician or nutritionist for further assessment and intervention

Health worker should monitor weight closely and follow up on the compliance of the intervention

Dietary advice for elderly people

- Take freshly cooked food
- Encourage more vegetables and fruits
- Encourage intake of dairy product
- Drink lots of water
- Consider less intake of salt, fats, oil and sugar in your diet
- Consider high protein diet for acute illness and elderly with pressure sore

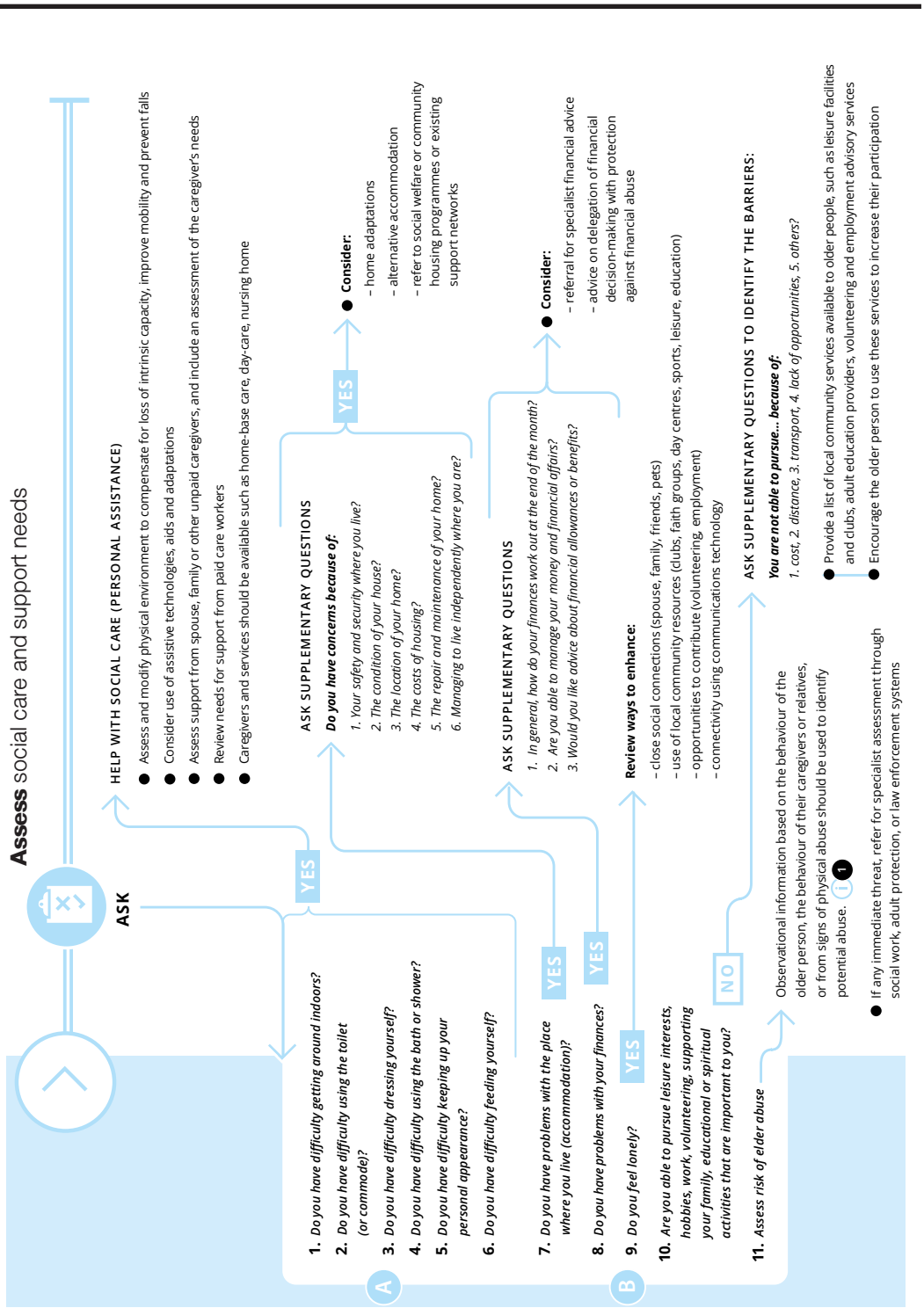
12. SOCIAL CARE AND SUPPORT

Social support refers to an older adult's perception of receiving help and support from family members, friends and significant others with regard to taking care of them to achieve successful aging; subsequently it can be understood as physical and emotional comfort given to older adults by their family, friends, co-worker and others.

Social support is one of the core bricks that has a great contribution in the line of successful aging; it riddles to make more meaningful in creating happiness, shares difficulties during the time of life, asides of expression of love and affection, especially during old age.

The availability of social care and support is critical to ensuring a dignified and meaningful life. It not only includes help with activities of daily living (ADLs) and personal care, but also facilitating access to community facilities and public services, reducing isolation and loneliness, helping with financial security, providing a suitable place to live, freedom from harassment and abuse, and participation in activities that give life meaning. Assisting with transportation, home and personal care, emotional support such as being listened to their stories, understood, and comforted are few examples. Social support has been recognized as an important social determinant of health because it assists individuals in reaching their physical and emotional needs. It reduces the effects of stressful events on their quality of life. Having a positive social lifestyle can increase an elderly person's psychological and physical well-being thereby lowering their stress levels, and treat issues such as anxiety or depression. Sometimes an useful option is to seek community services where there is helpful social support.

12.1 ASSESSMENT


Assess social care and support needs
ASK
A
1. Do you have difficulty getting around indoors?
2. Do you have difficulty using the toilet (or commode)?
3. Do you have difficulty dressing yourself?
4. Do you have difficulty using the bath or shower?
5. Do you have difficulty keeping up your personal appearance?
6. Do you have difficulty feeding yourself?
YES
HELP WITH SOCIAL CARE (PERSONAL ASSISTANCE)
Assess and modify physical environment to compensate for loss of intrinsic capacity, improve mobility and prevent falls
Consider use of assistive technologies, aids and adaptations
Assess support from spouse, family or other unpaid caregivers, and include an assessment of the caregiver's needs
Review needs for support from paid care workers
Caregivers and services should be available such as home-base care, day-care, nursing home
ASK SUPPLEMENTARY QUESTIONS
Do you have concerns because of:
1. Your safety and security where you live?
2. The condition of your house?
3. The location of your home?
4. The costs of housing?
5. The repair and maintenance of your home?
6. Managing to live independently where you are?
YES
Consider:
– home adaptations
– alternative accommodation
– refer to social welfare or community housing programmes or existing support networks
7. Do you have problems with the place where you live (accommodation)?
YES
ASK SUPPLEMENTARY QUESTIONS
1. In general, how do your finances work out at the end of the month?
2. Are you able to manage your money and financial affairs?
3. Would you like advice about financial allowances or benefits?
Consider:
– referral for specialist financial advice
– advice on delegation of financial decision-making with protection against financial abuse
8. Do you have problems with your finances?
YES
B
9. Do you feel lonely?
YES
Review ways to enhance:
– close social connections (spouse, family, friends, pets)
– use of local community resources (clubs, faith groups, day centres, sports, leisure, education)
– opportunities to contribute (volunteering, employment)
– connectivity using communications technology
10. Are you able to pursue leisure interests, hobbies, work, volunteering, supporting your family, educational or spiritual activities that are important to you?
NO
ASK SUPPLEMENTARY QUESTIONS TO IDENTIFY THE BARRIERS:
You are not able to pursue... because of:
1. cost, 2. distance, 3. transport, 4. lack of opportunities, 5. others?
Provide a list of local community services available to older people, such as leisure facilities and clubs, adult education providers, volunteering and employment advisory services
Encourage the older person to use these services to increase their participation
11. Assess risk of elder abuse
Observational information based on the behaviour of the older person, the behaviour of their caregivers or relatives, or from signs of physical abuse should be used to identify potential abuse. 1
If any immediate threat, refer for specialist assessment through social work, adult protection, or law enforcement systems

12.2 FOLLOW UP

Health workers should be aware of who older people should be referred to for specialist assessment and care. Given that integrated social care and support requires the support of multiple dimensions/institutes, regular meetings to foster trust among specialists and services are important. The following are examples of the areas of expertise of different specialists involved in older people's care. Living condition: housing services, social worker, occupational therapist; Finances: social worker, benefit advisory services; Loneliness: social worker, voluntary services, primary care physician; Participation: social worker, leisure, employment and voluntary services; Abuse: social worker, adult protection, law enforcement services; Activities of daily living: occupational therapist, social worker, nurse or multidisciplinary older age specialist team; Indoor mobility: physiotherapist, occupational therapist, social worker or multidisciplinary older people's specialist team; Outdoor mobility: physiotherapist, social worker, voluntary transport services.

13. OTHER DISEASE CONDITION

Assess for any other comorbidity the elderly is suffering from (Heart disease, Respiratory disease, Kidney disease, Cancer and others)

14. POST MENOPAUSE

Menopause, the end of a woman's menstrual cycles.

Post menopause is the period of time after a woman has not bled for an entire year and thereafter not bleed for the rest of life. It is the natural life event that every woman experiences. During this stage women cannot cope up with the hormonal changes in her body whereby women go through emotional, mental, physical and social changes impacting their daily lives.

14.1 ASSESSMENT:

Assess elderly women for the following symptoms

- Irregular periods
- Vaginal dryness
- Hot flashes

- Chills
- Night sweats
- Sleep problems
- Mood changes
- Weight gain

14.2. MANAGEMENT AND FOLLOW UP

Hormone therapy. Mostly Estrogen therapy is the most effective treatment option for relieving menopausal hot flashes. ...
There might be other symptoms that the woman experiences, therefore, treatment will depend on the symptoms they are experiencing.

15. ASSESSMENT FOR BREAST/GASTRIC/CERVICAL CANCER

For screening, management and follow up. Please refer to the "Guideline for screening of Gastric cancer, Cervical cancer and breast cancer"produced by Flagship program, Ministry of Health (2020)

16. ISOLATION

Social isolation and poverty are associated with high rates of depression, anxiety, disability and self-rated poor health. Ten percent of older adults still live at or below the poverty line in the US. Elder mistreatment has been reported in 3 to 8 percent of the older adult population in the US. A variety of forms of neglect or physical abuse (physical, sexual, psychological, financial, neglect) can result in adverse health outcomes for older victims, including increased mortality.

16.1. ASSESSMENT

Isolation can be screened with Lubben Social Network Scale 6 (LSNS6). Visual Analogue Scale (VAS) for Quality of Life (QOL), and examination by clinician are also important. The LSNS6 can be used to assess the level of social support available to an elderly patient. This can help identify a person who may need assistance or help. In the VAS for QOL, a patient is asked about his/her self-rated QOL to indicate his/her perceived pain intensity along a 100 mm horizontal line, and this rating is then measured from the left edge. Elderly individuals

who are noted to have contusions, burns, bite marks, genital or rectal trauma, pressure ulcers, or a Body Mass Index <17.5 without clinical explanation should be asked about mistreatment or referred to social work services. The American Medical Association (AMA) and the United States Preventive Services Task Force (USPSTF) recommend that physicians routinely ask elderly patients direct, specific questions about abuse.

16.2. FOLLOW-UP

The score of LSNS6 less than 12 is a risk for isolation. If patients are suspected of isolation, careful follow-up, including discussion with family, relatives, and neighbors, should be done.

17. FALL RISK

Approximately 30 percent of non-institutionalized elders fall each year. The annual incidence of falls approaches 50 percent in patients over 80 years of age. Five percent of falls in older adults result in fracture or hospitalization. Factors contributing to falls include age-related postural changes, decreased vision, cognitive impairment, certain medications (particularly anticholinergic, psychotropic, and cardiovascular medications), diseases affecting muscle strength and coordination, and environmental factors.

17.1. ASSESSMENT

Fall risk can be assessed with history of fall, review of medication, timed up and go test, functional reach test, orthostatic vital signs. The timed up and go test is performed by observing the subject rising from an armchair, walking a fixed distance across the room, turning around, walking back to the chair, and sitting back down. A timed performance approach will be employed. The normal range of the timed up and go test is less than 16 seconds. The functional reach test (FR test) is to assess balance in elderly persons. Subject stands with fist extended alongside a wall. Subject leans forward as far as possible, moving fist along the wall without taking a step or losing stability. Length of fist movement is measured. The normal range of the FR test is more than 15 cm.

17.2. FOLLOW-UP

Effective interventions for people with a history of falls or who are at risk for

falling involve addressing multiple contributing factors. Multiple risk factors have been identified, including past history of a fall, lower extremity weakness, age, female gender, cognitive impairment, balance problems, psychotropic drug use, and arthritis, history of stroke, orthostatic hypotension, dizziness and anemia. Medication use is one of the most readily modifiable fall risks. Multiple medications of any type, and psychotropic drugs in particular are associated with increased falls. Multiple meta-analyses of randomized trials conducted in various populations found that general exercise reduces the risk of falls, and those exercise programs that include balance components are most effective. Vitamin D reduces the relative risk of falls by 22 percent. The daily intake of vitamin D in older adults should be at least 800 to 1000 IU. At least 1.2 g of elemental calcium in the diet or as a supplement is also recommended.

18. MONITORING AND FOLLOW-UP

Based on the above assessments carried out, a written plan for management and follow-up should be drawn up in consultation with the older person/care-giver. The plan should include what advice that the older person will follow and try to make improvements on and address the components like support needs, referral and follow-up mechanisms.

This written management and follow-up plan should be used to monitor the older person in the subsequent records and should be used by specialized assessors or referral centers.

Annexure:

Community Based Screening, and Assessment of health of older people

Registration No.: Citizenship ID No.:

Name:_____ Age:____ Gender:□M □F Date of Birth:

Present address:

Permanent address: _____

Mobile:_____ Name of primary care giver:_____

Relationship: _____ Contact number:_____

Education: (Grade):_____ Occupation:_____ Past occupation:_____

Marital status: □Never married, □Married, □Divorced, □Widowed

Symptoms (if yes tick boxes):

Headache□ Dizziness□ Neck pain□ Breathlessness□ Cough□ Chest pain□ Palpitation□ Abdominal pain□ Nausea□ Vomiting□ Diarrhea□ Constipation□ Urinary incontinence□ Numbness□ Shoulder pain□ Back pain□ Knee pain□ Sleep disturbance□ Dental problem□ H/O fall□ Loss of appetite□ Loss of weight□ Others□, specify_____

Screening for intrinsic capacity:

Memory decline □
Limited mobility □
Malnutrition □
Visual impairment □
Hearing loss □
Depressive symptom □

Past History:_____

Present Medications:_____

H/O Allergy:_____

H/O Immunization:

H/O addiction:

Family History (Diabetes, Tuberculosis, Hypertension, Bronchial asthma, Cancer, etc.)

Physical Examination

General:

Blood pressure -…….Pulse -……..(Regular/irregular) BMI:…….(kg/m2)

RBS (Using glucometer):…….

Others (as appropriate):…….

Systemic:

Heart:

Lungs:

Provisional Diagnosis:

Advice:

Personalized care plan (after social care and support assessment):

Support to care giver:

Name of Health Facility:
Dzongkhag:

Signature:
Reporting Officer:
Designation:

Date:_____(dd)/_____(mm)/_____(yyyy)

1. Disability

a. Are you able to walk on your own?
3 = able to do it independently
2 = need some occasional help (ex. hand rail and walking stick)
1 = able to do only with someone's help
0 = not able to do at all

b. Are you able to walk up the staircase?
3 = able to do it independently
2 = need some occasional help (ex. hand rail and walking stick)
1 = able to do only with someone's help
0 = not able to do at all

c. Are you able to feed yourself?
3 = able to do it independently
2 = need some occasional help
1 = able to do only with someone's help
0 = not able to do at all

d. Are you able to pass urine and move bowel on your own?
3 = able to do it independently
2 = need some occasional help
1 = able to do only with someone's help
0 = not able to do at all

e. Are you able to bathe on your own?
3 = able to do it independently
2 = need some occasional help
1 = able to do only with someone's help
0 = not able to do at all

f. Are you able to change clothes on your own?
3 = able to do it independently
2 = need some occasional help
1 = able to do only with someone's help
0 = not able to do at all

g. Are you able to wash and comb your hair on your own?
3 = able to do it independently
2 = need some occasional help
1 = able to do only with someone's help
0 = not able to do at all

a+b+c+d+e+f+g = /21

□ 21
□ Less than 21 (need care in basic ADL)

2. Diabetes

Random Blood Sugar (RBS) mg/dL
Anti-diabetic medicine □yes □no

□ RBS <140mg/dL and not taking anti-diabetic medicine (normal)
□ RBS >140mg/dL or taking anti-diabetic medicine (need further examination)

3. Depression

a. Over the two weeks have you felt down, depressed, or hopeless? 1= yes 0= no

b. Over the past two weeks, have you felt little interest or pleasure in doing things?
1= yes 0= no

□ a+b = 0
□ a+b = 1 or more (risk for depression)

4. Dementia

Please listen carefully and remember 3 unrelated words. (ex. banana, dog, coin)
(After 3 minutes)
Please repeat the three words given previously.
_____Score_____ /3

□2 or more
□Less than 2 (risk for dementia)

5. Dental problems

□No wish to be assessed by dental technician
□There is a wish to be assessed by dental technician

6. Isolation

How many members are you living together in your house including you?

Total_____(spouse ,children ,grandchildren ,other relatives ,others)

Living alone □ yes □no

FAMILY: Considering the people to whom you are related by birth, marriage, adoption, etc…

a. How many relatives do you see or hear from at least once a month?
0 = none, 1 = one, 2 = two, 3 = three or four, 4 = five thru eight, 5 = nine or more

b. How many relatives do you feel at ease with that you can talk about private matters?
0 = none, 1 = one, 2 = two, 3 = three or four, 4 = five thru eight, 5 = nine or more

c. How many relatives do you feel close to such that you could call on them for help?
0 = none, 1 = one, 2 = two, 3 = three or four, 4 = five thru eight, 5 = nine or more

FRIENDSHIPS: Considering all of your friends including those who live in your neighborhood

d. How many of your friends do you see or hear from at least once a month?
0 = none, 1 = one, 2 = two, 3 = three or four, 4 = five thru eight, 5 = nine or more

e. How many friends do you feel at ease with that you can talk about private matters?
0 = none, 1 = one, 2 = two, 3 = three or four, 4 = five thru eight, 5 = nine or more

f. How many friends do you feel close to such that you could call on them for help?
0 = none, 1 = one, 2 = two, 3 = three or four, 4 = five thru eight, 5 = nine or more

a+b+c+d+e+f= /30

□12 or more
□Less than 12 (risk for isolation)

7. Hypertension

BP (sitting) 1st _____/_____mmHg HR_____/min
2nd _____/_____mmHg HR_____/min
Mean BP (sitting)_____/_____mmHg HR_____/min

Anti-hypertensive medicine □yes □no

□mSBP<140mmHg/mDBP<90mmHg and not taking anti-hypertensive medicine (normal)
□mSBP>140mmHg/mDBP>90mmHg or taking anti-hypertensive medicine (hypertension)

8. Addiction

Are you smoker? (including chewing tobacco)
□current smoker, □ex-smoker, □non-smoker

Are you doma consumer?
□current consumer, □ex-consumer, □non-consumer

Do you drink alcohol?
□yes, daily, □yes, occasionally, □no

Do you take more than two cups of beer (500ml), more than half cup of ara (100ml), or equivalent amount of alcohol, every day?
□yes □no

a. Have you ever felt you should cut down on your drinking? □yes □no

b. Have people annoyed you by criticizing your drinking? □yes □no

c. Have you ever felt bad or guilty about your drinking? □yes □no

d. Have you ever had a drink first thing in the morning (as an eye opener) to steady your nerves or get rid of a hangover? □yes □no

a+b+c+d= (CAGE questions)

□Less than 2
□2 or more (risk for alcoholism)

9. Visual problems

□No wish to be assessed by eye technician
□There is a wish to be assessed by eye technician

10. Ear problems

Whisper voice test
Right ear: □normal, □abnormal
Left ear: □normal, □abnormal

□Both sides of the ears are OK
□At least 1side of the ear has hearing problems

11. Fall risk

Did you fall down within a month? □yes □no

Poly-pharmacy (more than 3 drugs, any type)
□yes □no

Psychotropic drugs □yes □no

Timed Up & Go test sec >16sec
□yes □no

Functional reach test cm - cm = cm<15cm
□yes □no

□None of the above applies to the patient
□At least 1of the above applies to the patient

12. Urinary Incontinence

In the past three months, have you leaked urine? □ yes □ no

13. Nutritional problems

Height_____cm Weight_____kg BMI_____ kg/m2

□ **BMI <18.5kg/m2 (underweight)**
□ **18.5kg/m2 < BMI <25kg/m2 (normal range)**
□ **25kg/m2 < BMI <30kg/m2 (overweight)**
□ **BMI >30kg/m2 (obese)**

How many full meals do you eat daily?
□no meal, □one meal, □2 meals, □3 meals or more

At least 1serving of dairy products (milk, cheese, yoghurt) per day
□yes, □depending on the season, □no

2or more servings of legumes or eggs per week
□yes, □depending on the season, □no

Meat, fish or poultry every day
□yes, □depending on the season, □no

Consumes 2or more servings of fruit or vegetables per day?
□ yes, □ depending on the season, □ no

14. Happiness

Are you happy? □yes □no □not sure

What do you think of your current health status?
□good □neither good nor bad □bad

What do you think of your relationship with your family?
□good □neither good nor bad □bad

What do you think of your relationship with your friends?
□good □neither good nor bad □bad

What do you think of your current economic situation?
□rich □middle class □poor

Are you satisfied with your life?

□yes, very much □yes, but not so much □no

What makes you unhappy?

What makes you happy?

15.Could you please give us advice for improvements of the program?