



INTEGRATED CARE FOR OLDER PEOPLE

Locomotor capacity

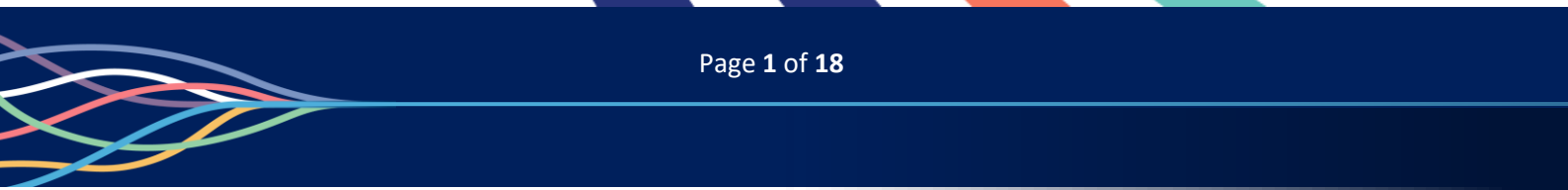


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Introduction to the Guide

Welcome to the Facilitator Guide for the WHO Integrated Care for Older People (ICOPE). This guide serves as a roadmap for facilitators, helping them navigate through the session on assessing and improving locomotor capacity in older people, while ensuring that key topics are covered and participants are actively engaged. It includes practical tips, potential challenges, and suggested ways to handle different situations that may arise during the session.

Session structure

This Facilitator Guide is organized around four core facilitation actions that you will use throughout the session. These actions are represented by icons and indicate how you should guide participants through the content.

You will see these actions repeated across all slides and modules, providing a consistent structure for facilitation.



Show: The slides

This indicates the slide you should present from the slide deck. When you see Show, display the corresponding slide to participants.



Say: What you explain

This provides a suggested narrative outline for you to explain the slide content. The text is intended as guidance rather than a fixed script. You may adapt the wording to suit your facilitation style, experience and the needs of your participants, while keeping the key messages intact.



Ask: Questions to prompt dialogue

This prompts you to ask questions and encourage dialogue with and among participants.

The discussion associated with these questions should generally take 2 to 5 minutes. However, you should use your best judgment to decide how much time to dedicate to such interactions, considering factors as participant engagement, availability of time, and/or relevance of the topic.



Do: Actions to facilitate learning

This prompts you to carry out an action, such as guiding an activity, managing group interaction or providing instructions to participants.

Keep in mind that this Facilitator Guide is only a roadmap. You are expected to apply your voice and experience to make this tool work for you. As explained, the 'Say' sections are simply indications; you can use them as a script when you feel the need to, but you can and

should adapt them to suit your natural training style. Add your personal touch and personality to every training, while being careful to stick to the session objectives.

A key component of successful face-to-face training is establishing trust and rapport with your learners. Use your good judgement to assess the attitude and cultural sensitivities of the people in your workshop. Adapt your training techniques and approach accordingly.

You are going to be great at conducting this training.

Locomotor capacity



Do:

- *Formal welcome*
- *Introduction of the facilitator*



Show: Slide 1



Say:

Welcome to the module on locomotor capacity.

Mobility is vital for healthy ageing, preserving independence and reducing the need for care. While declines in locomotor capacity are often seen as inevitable with age, effective strategies exist to improve and maintain mobility.

Throughout this module, we will explore various aspects related to locomotor capacity. This session will take approximately 15 minutes.

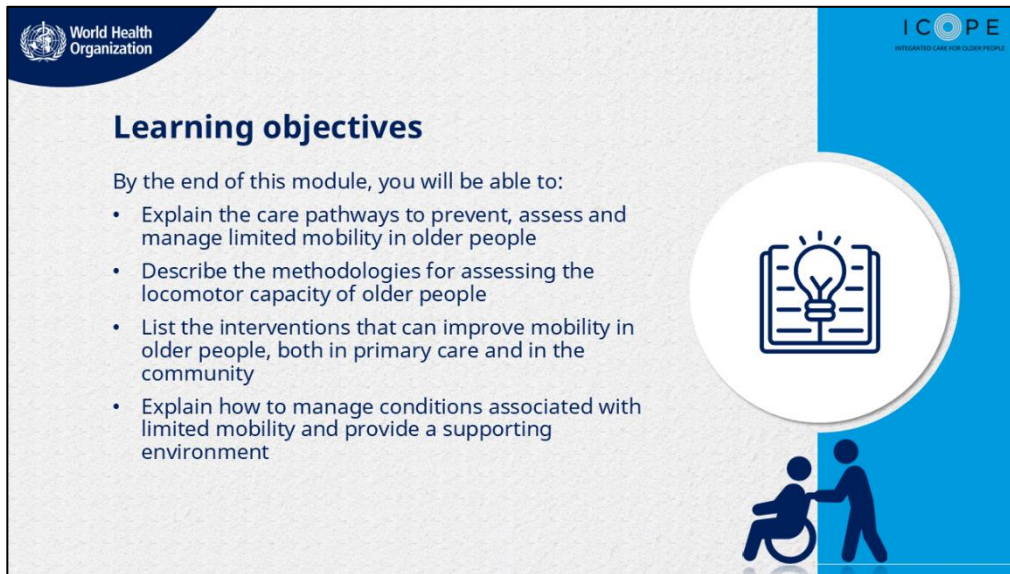
You will find more details on this topic in Chapter 6 of the ICOPE handbook.

Let us dive in and explore how we can improve locomotor capacity and promote healthier ageing together.

Learning objectives



Show: Slide 2



Learning objectives

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

- Explain the care pathways to prevent, assess and manage limited mobility in older people
- Describe the methodologies for assessing the locomotor capacity of older people
- List the interventions that can improve mobility in older people, both in primary care and in the community
- Explain how to manage conditions associated with limited mobility and provide a supporting environment



Say:

Throughout this module, we will explore various aspects related to locomotor capacity and its significance. By the end of this module, you will be able to:

- Explain the care pathways to prevent, assess, and manage limited mobility in older people.
- Describe the methodologies to assess the locomotor capacity of older people.
- List the interventions to improve the mobility of older people.
- Explain how to manage conditions associated with limited mobility.



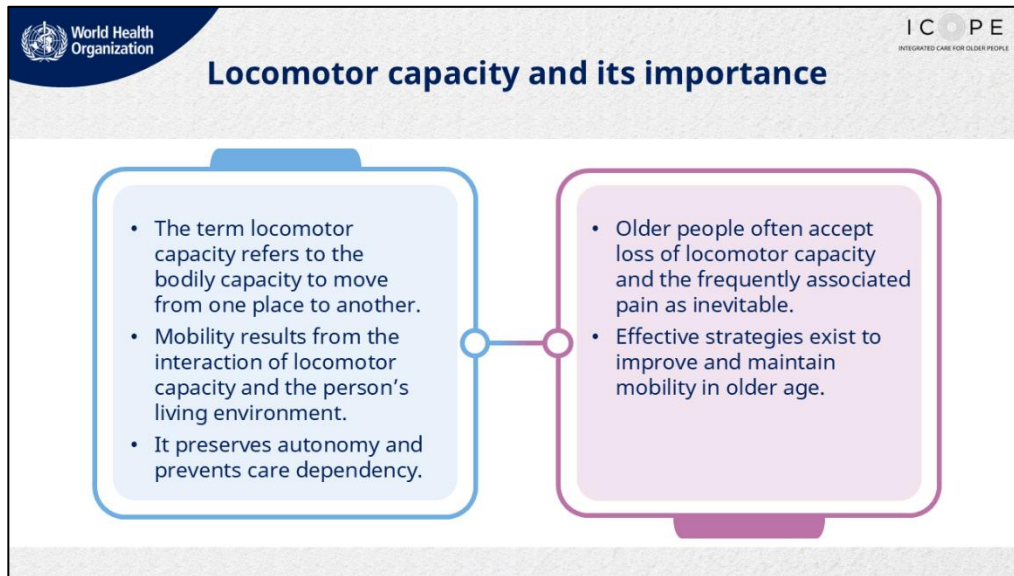
Ask:

What is locomotor capacity, and why do you think it is important for healthy ageing?

Locomotor capacity and its importance



Show: Slide 3



Say:

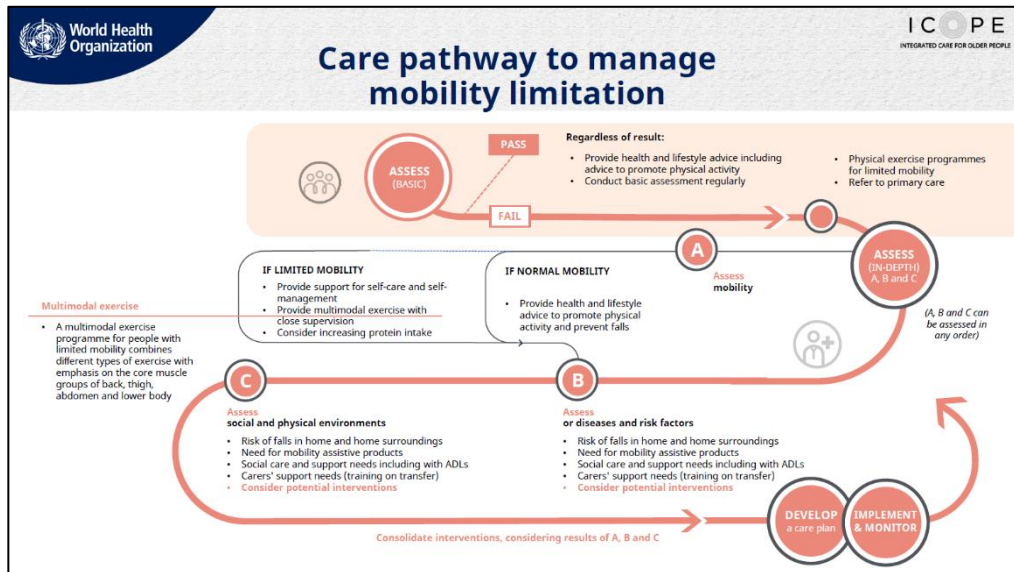
Locomotor capacity is the bodily capacity to move independently, relying on muscle strength, joint function, balance and coordination. Locomotor capacity underpins mobility, which is the practical ability to move within one's environment, and is influenced by external factors like assistive devices and surroundings. Mobility is crucial for healthy ageing, as it helps individuals maintain independence and avoid relying too much on others for assistance. Declines in locomotor capacity (e.g., sarcopenia) limit mobility, but environmental barriers can also restrict mobility even when capacity is intact.

Many older people view declining mobility and the pain that often accompanies it as an unavoidable part of ageing. However, effective strategies exist to maintain and even improve locomotor capacity, helping older adults stay active, independent, and engaged in daily life.

Care pathway to manage mobility limitation



Show: Slide 4



Say:

Let us look at the care pathway specifically design to support the assessment and management of mobility impairment in older people.

After the identification of a possible mobility limitation at the ICOPE basic assessment, an in-depth evaluation is recommended. Aligned with the ICOPE generic pathway, this step (i.e., Assess) is focused on

- In-depth evaluation of Mobility.** Mobility can be assessed with standardized tools such as the Short Physical Performance Battery (SPPB), which helps distinguish between limited and normal locomotor capacity. Scores in the lower range (e.g., 0-9 out of 12) indicate reduced mobility. In such cases, support for self-care and self-management, a plan for multimodal exercise, and guidance on adequate protein intake may be recommended. Higher scores (e.g., 10-12 out of 12) generally reflect normal mobility. Regardless of the score, it is always important to provide preventive advice to maintain function and reduce the risk of falls.
- Diseases and risk factors.** It is important to explore the possible presence of conditions that can affect mobility, such as inappropriate medication use, pain, musculoskeletal conditions (e.g., osteoporosis or osteoarthritis), and urinary incontinence.
- Social and physical environment** should also be assessed to evaluate the risk of falls in the home and surrounding environment, the need for mobility aids or assistive devices, the eventual social care needs, and whether the carer may require support.

After this information is collected, it will be possible to use and integrate findings into the subsequent design of a coordinated, individualized care plan. This will be discussed and implemented with multidisciplinary support and clear plans for monitoring and re-evaluation over time.

**Ask:**

Who is familiar with the SPPB, or who has used it in their professional practice?

Assess locomotor capacity



Show: Slide 5





Assess locomotor capacity



Short Physical Performance Battery (SPPB)

Three timed tests, each scored out of four, for a total score from 0 (worst performance) to 12 (best performance). Describe each test and inquire if the person feels capable before proceeding with the assessment.

Final SPPB score = sum of scores obtained from the three tasks.

1. Balance test			2. Gait speed Time to walk 4 m		3. Chair rise Time to rise from a chair five times		
	Side-by-side stand: Held for 10 sec Not held for 10 sec Not attempted	1 point 0 point 0 point					
	Semi-tandem stand Held for 10 sec Not held for 10 sec Not attempted	1 point 0 point 0 point					
	Tandem stand Held for 10 sec Held for 3 to < 10 sec Held for < 3 sec Not attempted	1 point 1 point 0 point 0 point					
			< 4.82 seconds	4 points	< 11.19 seconds		4 points
			4.82–6.20 seconds	3 points	11.2–13.69 seconds		3 points
			6.21–8.70 seconds	2 points	13.7–16.69 seconds		2 points
			> 8.70 seconds	1 point	16.7–59.90 seconds		1 point
			Unable to complete	0 points	60 seconds or unable to complete		0 points



Say:

Let's see what the SPPB is and how it is administered.

The SPPB is a widely used instrument designed to score an older person's physical performance objectively. The SPPB is recommended because of its superior measurement properties and applicability. It consists of three timed tests; each scored from zero (worst performers) to 12 (best performers) according to predefined criteria.

Based on the total SPPB score, mobility is usually interpreted as follows:

- **Limited mobility:** 0–9 points
- **Normal mobility:** 10–12 points

Here is how to proceed with its evaluation.

The SPPB consists of three tasks.

The first is the **balance test**, in which the person is asked to stand for 10 seconds in each of three progressively challenging positions: side-by-side, semi-tandem, and tandem stance. These positions are shown in the orange box on the left. Record the time achieved in each position and convert the results into a balance score from 0 (unable) to 4 (normal performance) according to the predefined criteria indicated in the slide.

The second task is the **gait speed test**. The person is asked to walk 4 metres at their usual pace, starting from a standing position. Time the walk and convert the result into a score from 0 to 4 based on the standard scoring criteria indicated in the box at the center of the slide.

The third task is the **chair rise test**, which assesses lower-extremity strength. Although this

test is already part of the ICOPE basic assessment, it is recommended to repeat it during the in-depth assessment to ensure consistency within the full SPPB and to capture the person's current capacity. For this task, the person is asked to stand up from a chair and sit back down five times as quickly as possible, without using their arms. Again, record the total time and assign a score from 0 to 4 according to the predefined criteria reported on the left side of the slide.

The total score of the SPPB results from the sum of the scores obtained from the three tasks.

Before proceeding with the assessment, be sure to explain each subtask of the SPPB to the person and check whether they feel able to perform it. Only if the person feels able to perform the tasks, you can proceed with the assessment.

Health and lifestyle advice



Show: Slide 6



Health and lifestyle advice

For all older people

- Older persons can benefit from physical activity, regardless of mobility level.
- Too much sedentary behaviour is unhealthy.
- Physical activity should be tailored to individual abilities. If these goals cannot be met, one should be as active as possible.
- Start slowly and increase activity over time with options like walking, cycling, and gardening.
- Aim for at least 150 minutes of moderate or 75 minutes of vigorous activity each week, with sessions lasting at least 10 minutes.
- Include muscle-strengthening exercises on 2 days and balance activities on 3 days each week.
- A healthy diet is also important.

For older people with (potential) limited mobility, to prevent falls

- Certain activities can help prevent falls, including balance activities (e.g., yoga).
- Adapt the home environment.
- Practising good foot care and hygiene and wearing appropriate footwear.



Say:

Health and lifestyle advice is relevant for all older people, regardless of their level of mobility. Everyone can benefit from being physically active, and spending too much time being sedentary is unhealthy. Physical activity should always be tailored to individual abilities. When recommended activity levels cannot be fully achieved, the key message is to remain as active as possible.

Encourage older people to start slowly and increase activity over time. Everyday activities such as walking, cycling, and gardening are good options. As a general guide, aim for at least 150 minutes of moderate-intensity activity, or 75 minutes of vigorous activity, each week, in bouts lasting at least 10 minutes. It is also important to include muscle-strengthening activities on at least two days per week and balance activities on three days per week. A healthy diet is an essential part of maintaining overall health and physical function.

For older people with, or at risk of, limited mobility, additional advice can help reduce the risk of falls. This includes balance-focused activities, adapting the home environment to improve safety, and maintaining good foot care and hygiene, including wearing appropriate footwear.

Community-based health care



Show: Slide 7




Community-based health care



Empathic behaviour

- Organize exercise classes and informal activities for older people.
- Offer physical exercise options (e.g., brisk walking groups, Tai Chi classes in parks and yoga at community centres).
- Foster social engagement and peer support to help maintain exercise routines.
- Include intergenerational activities to connect people of different ages.
- Collaborate with local authorities and service providers to ensure dedicated exercise opportunities for older persons.
- Enhance the physical environment to create age-friendly cities and communities.



If in doubt about the safety of exercise, refer to an appropriate health care worker with knowledge



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Say:

This slide presents community-based ways to promote physical exercise for older people. Communities can organize exercise classes and informal activities that are accessible and enjoyable, including brisk walking groups, Tai Chi classes in parks and yoga at community centres. These activities help foster social engagement and peer support, which are important for maintaining regular exercise routines. Intergenerational activities are also encouraged to connect people of different ages.

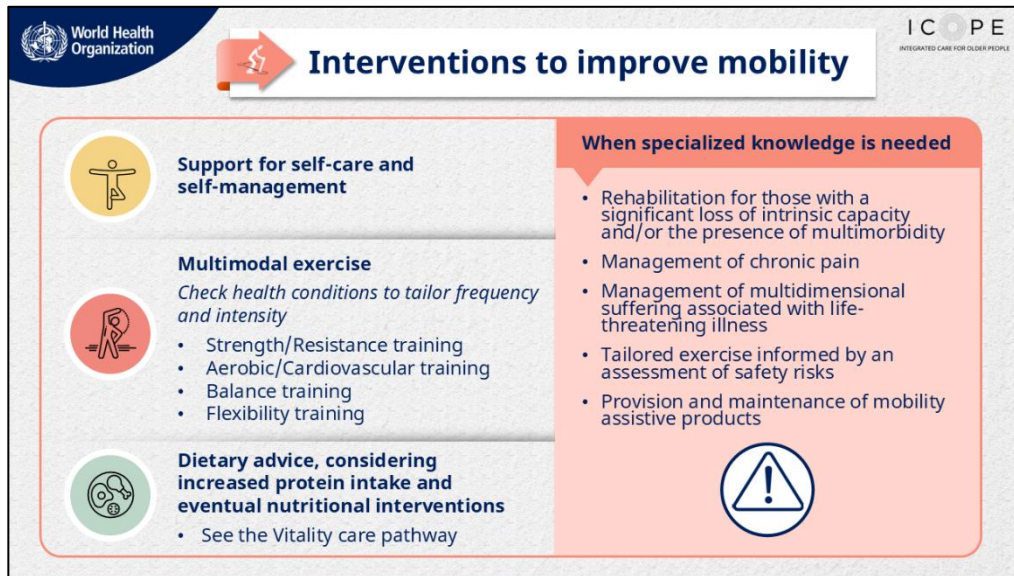
Collaboration with local authorities and service providers ensures dedicated exercise opportunities for older persons. Enhancing the physical environment is equally important, especially when creating age-friendly cities and communities that support safe and active living.

The slide also highlights the safety of exercise. If there is doubt about whether exercise is safe, the person should be referred to an appropriate health care worker with knowledge.

Interventions to improve mobility



Show: Slide 8



Say:

Many interventions can be proposed to improve mobility, as outlined in this slide.

First, it is important to support self-care and self-management, empowering older people to take an active role in maintaining their mobility through daily routines, informed decision-making, and consistent engagement in physical activity. Encouraging autonomy and confidence is critical.

Multimodal exercise is essential and should be tailored to the individual's health status and functional capacity. The programme should include a combination of strength or resistance training (to maintain muscle mass), aerobic or cardiovascular training (to support heart and lung function), balance training (to reduce the risk of falls), and flexibility training (to preserve joint mobility and ease of movement).

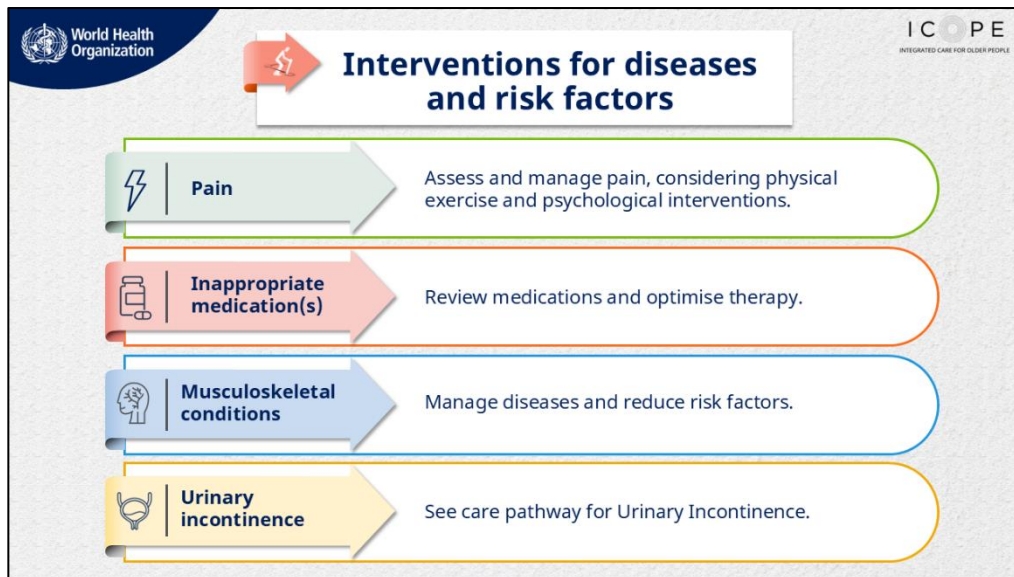
It is also important to intervene through the provision of dietary advice, particularly stressing the importance of adequate protein intake to support muscle health. This is closely linked to the vitality care pathway in the ICOPE approach.

Please be aware that specialized knowledge is required when caring for older people with greater clinical complexity. This includes situations involving significant loss of intrinsic capacity, multimorbidity, chronic pain, or multidimensional suffering related to life-threatening illness. It also applies when designing tailored exercise programmes that account for safety risks, and when providing fitting, and maintaining mobility assistive products. In these cases, assessment and guidance from trained professionals are essential to ensure safe and appropriate care.

Interventions for diseases and risk factors



Show: Slide 9



Say:

Next, let us discuss how to assess and manage diseases and risk factors associated with limited mobility.

A critical condition to consider is pain, which is a frequent but often underreported issue among older people. Effective pain management begins with proper assessment and may include a combination of physical exercise, pharmacological treatments, and psychological interventions (e.g., cognitive behavioural therapy). The goal is to reduce discomfort while maintaining function and independence.

It is also important to focus on inappropriate medication use, which is a major concern in older populations due to the risks of polypharmacy and adverse drug reactions. Regular medication reviews are recommended to identify drugs that may no longer be necessary or that could be replaced with safer alternatives.

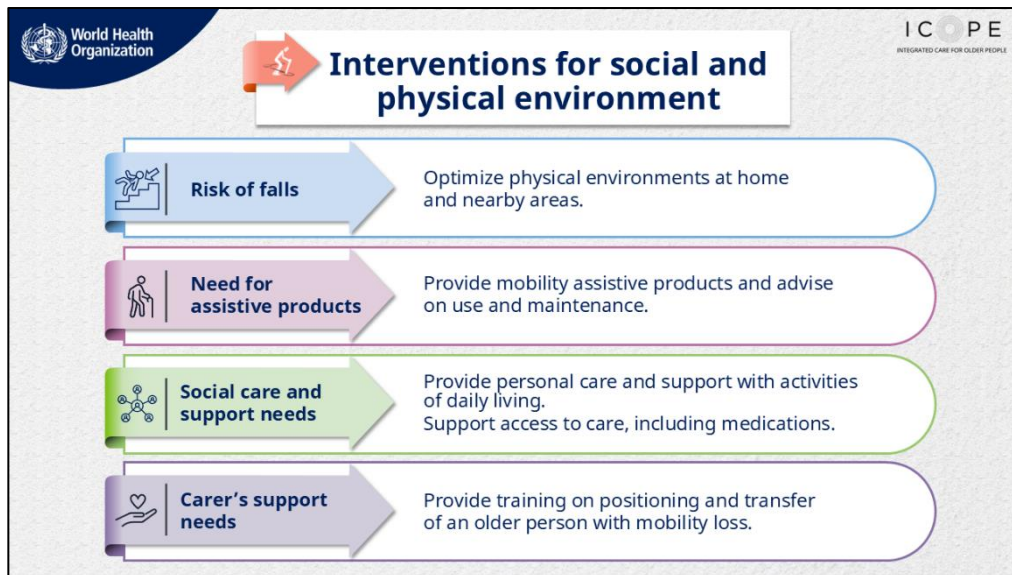
Musculoskeletal conditions (e.g., osteoarthritis, osteoporosis, and sarcopenia) can lead to pain, reduced mobility, and increased fall risk. Management strategies include medical treatment, nutritional support, and tailored exercise programs designed to strengthen muscles and improve joint function.

Finally, the slide refers to urinary incontinence, a condition that can affect dignity, social participation, and overall well-being. The dedicated urinary incontinence care pathway in the ICOPE approach can provide detailed guidance on its assessment and management strategies.

Interventions for the social and physical environment



Show: Slide 10



Say:

There are also social and physical environmental barriers that can potentially impact the locomotor capacity.

A first area of focus is the risk of falls, which is a leading cause of injury and loss of independence in older people. To mitigate this risk, it is important to optimize the physical environment both inside the home and in its immediate surroundings. This may include improving lighting, removing tripping hazards, installing handrails, and ensuring that pathways are clear and accessible.

Another area for possible intervention is related to the need for assistive products. Providing appropriate mobility aids (e.g., canes, walkers, or wheelchairs) and offering guidance on their correct use and maintenance can significantly enhance the older person's ability to move safely and confidently.

It is also important to look at the social care and support needs. Many older people require personal care and help with activities of daily living (e.g., bathing, dressing, and meal preparation). It is also critical to ensure access to health services and medications, especially for those with limited mobility or living in remote areas.

Finally, the slide highlights the importance of addressing carers' support needs. Carers should receive training on safe techniques for positioning and transferring older people with mobility limitations. This protects the older person from injury and helps prevent strain and injury to the carer.

Summary



Show: Slide 11




Summary



- Health workers can assess locomotor capacity using the Short Physical Performance Battery.
- Pain and identification of inappropriate medications should be considered as critical risk factors for mobility limitation.
- A tailored multimodal exercise programme, along with nutritional interventions, can improve locomotor capacity.
- Assistive products can help older people maintain mobility.
- Environmental modifications can enhance the functional ability of older people with limited mobility.
- Community organizations and older people themselves can support adherence to physical activity and peer support.

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Do:

Go through the slides and recap the points discussed during the session.



Say:

To summarize this session, we have explored how health workers can assess locomotor capacity using the SPPB as a practical and objective tool. We highlighted that pain and the identification of inappropriate medications are critical risk factors that should always be considered when mobility limitations are present.

We have seen that improving locomotor capacity requires a tailored approach. Multimodal exercise programmes, combined with appropriate nutritional interventions, can lead to meaningful improvements in physical function. Assistive products also play an important role in helping older people maintain mobility and independence.

Finally, we discussed how environmental modifications can enhance functional ability for older people with limited mobility, and how community organizations, alongside older people themselves, can support ongoing physical activity, adherence to interventions, and peer support.

Together, these actions contribute to maintaining mobility, independence and quality of life in older age.

References



Show: Slide 12




References

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Say:

Here are some useful links and citations for your reference. Thank you for your time and participation.



Do:

After the presentation of this module, it is recommended to have a specific session to conduct a live demonstration of the SPPB (see Section 6.3.1. Return demonstration, role-play and teach back, in the guidance).