Training for Screening Nutrition Risk in Community-Living Seniors
What is Nutrition Risk?

- Nutrition risk is the **presence of risk factors** such as weight loss, low food intake, and causes of low food intake, which can result in **inadequate consumption of macronutrients, micronutrients, and vitamins**.

- A diet that is inadequate in energy, protein, and vitamins or minerals **influences the nutritional health of a person**.

- Nutritional health **influences overall health**, physical function, cognition, and wellbeing.

- Without intervention, nutrition risk **can result in malnutrition, and associated conditions** such as frailty, weakness, poor immunity, and decreased capacity to recover from injury, as well as exacerbation of pre-existing chronic conditions.

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Seniors in the Community: Risk Evaluation for Eating and Nutrition
Purpose of SCREEEN©:

• Assesses **food and eating behaviours** which can result in nutrition risk

• Identifies **priority clients** for health care services, such as a dietitian

• Identifies who might benefit from **social and community services** such as meal programs

• Raises the older adult’s **awareness** regarding nutrition behaviours, enabling them to make changes to their eating habits
Features of SCREEN©:

• Can be completed by older adults themselves or their healthcare providers
• Can be administered in-person, over the phone, or online
• Available in English, French, and several other languages
• Questions focus on weight change, appetite, food intake, and common reasons for low food intake in older adults
Intended SCREEN© Population:

• Community-dwelling older adults (aged ≥ 55) were the original sample used for the validation of SCREEN©
  • An older adult is considered community-dwelling if they are responsible for getting at least two meals a day on their own

SCREEN© relies on the memory of the older adult

• If you are concerned that the older adult is not a reliable informant (i.e., they have some cognitive deficit or memory problems) SCREEN© should NOT be used at this time
• Completion by a care partner or proxy of an older adult has not yet been studied
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Picking a Version of SCREEN©

Abbreviated version (SCREEN-3 or -8):
• Needs assessment
• Managing a wait list

Full version (SCREEN-14):
• Referring clients to community resources based on their needs
• Building the client’s awareness for education and behaviour change

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How to administer SCREEN©

The relevance of SCREEN© questions
Step 1: Identify yourself

- Introduce yourself using your name, position, and the organization that you work for
- If in person, have a nametag to increase comfort and trust

Step 2: Help the older adult become comfortable with you

- Ask the older adult how they would prefer to be addressed
- If the older adult is with family/friends, ask the older adult if they want them to be included in the interview
  - If they are not involved in meal preparation, having the person who is making meals in the home could be helpful in reporting recall of food intake
- Find a comfortable location to do the interview, with minimal distractions (e.g., television, decrease background noise, etc.)
- Be aware of your non-verbal communication (i.e., be attentive, demonstrate interest in what they are saying, use eye contact).
**Step 3: Briefly explain what nutrition screening means**

- Tell them that you are completing the SCREEN© questionnaire to find out about their eating habits and factors that impact these habits.
- Explain that the results will be used to help determine if they might benefit from education about eating behaviours; referrals to see a registered dietitian or other health professional; or food-related services available in their community.
- If it is a community-wide screening initiative, explain that the results will be used to assess availability and appropriateness of nutrition services for older adults in the community.

**Step 4: Be aware of potential barriers to communication**

- Determine if the older adult can hear, see, and understand you well.
  - **Hearing limitations:** ask how you can help them hear you better (e.g., sit closer to them, talk closer to their better ear, talk slowly, avoid shouting, re-state the question, have them self-administer)
Step 4: Continued

- Determine if the older adult can hear, see, and understand you well
  - **Vision limitations**: ask how you can help them see the questionnaire better (e.g., use larger font, administer using an interview)
  - **Language barrier**: ask how you can help them better understand you (e.g., use a questionnaire that is translated into their first language, identify if a family member/friend can translate)

Step 5: Inform the older adult about confidentiality

- Assure the older adult that you will keep their responses and results private
- Explain that you will only share the results with the professionals involved in the program/service
Step 6: Obtain consent to conduct SCREEN©

- If using a consent form, have the older adult read the consent form (or read it to them), and have them sign it.
- If you do not use a consent form, obtain verbal consent to complete SCREEN© and share results as needed with the professionals involved in the program.

Step 7: Explain how the screening will be done

- Decide whether to administer SCREEN© as an interview (e.g., vision, reading) or to have the older adult self-administer SCREEN© with assistance as needed.
- Self-administered:
  - Tell them to select only one answer for each question.
  - Reassure them that you can provide assistance as needed.

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Step 7: Continued

- Interview administered:
  - Remind them to select only one answer for each question
  - Read the question slowly, provide each potential response
    - If required repeat potential response
  - If there are any doubts about an answer, choose the response that has a lower score
    - It is better not to miss an individual at this step before a further nutritional assessment is completed

Step 8: Ask the older adult if they have any questions

- Ask the older adult if they have any questions or concerns before starting SCREEN©
- Reassure them about any areas of uncertainty
Several questions on SCREEN© use value judgment responses.

When scoring these questions the following interpretation is appropriate:

- “Rarely” means once a week or less
- “Sometimes” means 2-4 times a week
- “Often” means 5-6 times a week
- “Always” means daily
Has your weight changed in the past 6 months?

• Question is trying to get at any weight change that poses increased nutritional and health risk.

Scoring Tips:

• Record the most recent weight change.

• If the older adult’s weight continually fluctuates ± 2 pounds, mark “NO”. This is common and does not signify increased risk.

• If the older adult has lost/gained a large amount of weight (5-10 pounds) in the past 6 months, but then re-gained/re-lost only a few (2-3 pounds), calculate the net gain/loss to choose a response (see example on next slide).

Question appears on:
SCREEN-3 (q.1), SCREEN-8 (q.1), and SCREEN-14 (q.1a)
Determining net change if loss and regained:

Has your weight changed in the past 6 months?

• The older adult indicates that when they were in hospital 2 months ago, they lost 15 pounds.
• Since they have been home in the past month, the older adult has regained 10 pounds.
• The net difference is 5 pounds lost, which would be used to provide the answer to this question.

CONVERSIONS:
• 5 pounds = 2.25 kg
• 6-10 pounds = 2.5-4.5 kg
• 10 pounds = 4.5 kg

Question appears on: SCREEN-3 (q.1), SCREEN-8 (q.1), and SCREEN-14 (q.1a)
Have you been trying to change your weight in the past 6 months?

- Question is trying to get at *unintentional* weight change that poses increased nutritional and health risk.

**Scoring Tips:**

- If the older adult has been following a diet to change his/her weight, mark “YES”.
- If the older adult has only been making small, occasional changes, mark “NO”.

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Do you think your weight is ...?  

- Question is trying to get at the older adult’s perception of their weight, which could pose increased nutrition and health risk.
Do you skip meals?

- Asking about how frequently an older adult eats can provide clues about the adequacy of their dietary intake.

Scoring Tips & Prompts:

- Remind the older adult that you want to know about their typical eating patterns.
- Three meals a day are considered the usual number that people consume. For example, if the older adult only eats twice a day, they would report as someone who skips meals “almost every day”.
- If the older adult doesn’t eat meals, consider if they eat regularly throughout the day. In such a case, the response would be “never or rarely”.

Question appears on:
SCREEN-8 (q.2) and SCREEN-14 (q.2)
Do you limit or avoid certain foods?

• Question is meant to identify seniors who find it hard to manage their diet restrictions, which can be prescribed or self-imposed.

• Only use prompts if required

Prompts:

• Food avoidance may be used to prevent health problems:
  • Ask: “Do you limit or avoid foods that are high in fat/salt/sugar?”

• Food avoidance may be due to food prices or not knowing how to prepare certain foods/meals:
  • Ask: “Do you limit or avoid expensive foods?”
  • Ask: “Do you find it difficult cooking certain foods/meals?”
Prompts (continued):
• Food avoidance may be due to difficulties choosing healthy food at restaurants or during shared eating occasions with others.
  • Ask: “Do you find it difficult making food choices in restaurants or while eating with others?”

Scoring Tips:
• If the older adult limits/avoids a food group, score this as a limitation:
  • If certain foods are limited (e.g., milk; not the entire food group), and the older adult can manage it, mark score as 4.
  • If an entire food group is limited AND:
    • The older adult can manage, mark score as 2
    • The older adult finds it hard to manage, score as 0

Question appears on: SCREEN-14 (q.3)
Scoring Tips (continued):

• Diet restrictions due to the older adult’s food preferences (e.g., avoidance of spicy food) do not affect the score, mark the score as 4.
How would you describe your appetite?

• Question aims to determine usual appetite.

Scoring Tips & Prompts:

• Some older adults may respond “it is not as good as it used to be”; encourage them to choose between “good”, “fair”, or “poor”.

• If appetite fluctuates, select a lower score, especially if the older adult expresses that it has affected their dietary intake/desire to eat.
Scoring Tips:

• If the older adult sometimes feels like not eating when it is mealtime, their appetite may be best described as “**fair**”.
  • If this happens to them *often*, then their appetite may be “**poor**”.

• If the older adult’s desire to eat fluctuates sometimes, their appetite may be best described as “**fair**”.
  • If this *often* happens to them, their appetite may be “**poor**”.

*Question appears on:* SCREEN-3 (q.2), SCREEN-8 (q.3), and SCREEN-14 (q.4)
How many pieces or servings of vegetables and fruit do you eat in a day?

• Question aims to get at the older adult’s overall intake of vegetables and fruit. A ’piece’ is a whole fruit e.g. apple

Tips & Prompts:

• 1 serving can be: a medium size piece of a whole fruit; a ½ cup of vegetables or fruit; and/or 1 cup of salad.
  • Include potatoes in the count.

• Remind the older adult that you want to know about their typical eating patterns. It may help to review what they typically eat during:
  • Breakfast, lunch, dinner, and snacks

Question appears on:
SCREEN-8 (q.5) and SCREEN-14 (q.5)
Scoring Tips & Prompts:

• For screening purposes, mixed foods (e.g., vegetable soup, tomato sauces) are not counted UNLESS they contain a substantial amount of vegetables.

• Review with the older their food intake if the score is low (≤ 2), as they may have omitted some foods.
  • Ask about vegetables and fruit separately; add up the total.
How often do you eat meat, eggs, fish, poultry, tofu, dried peas, beans, lentils, nuts, or nut butters?

• Question aims to get a basic or general understanding of the older adult’s protein intake.

Tips & Prompts:

• Small amounts of protein such as in a vegetable soup or a few nuts on a salad are not counted.

• A serving of protein foods is typically: 2½ ounces (½ cup) meat, poultry, fish; 2 eggs; ¾ cup hummus or lentils; ¼ cup shelled nuts; 2 tablespoons nut butters; and/or ¾ cup (150 g) tofu.
Tips & Prompts:

• Remind the older adult that you want to know about their typical eating patterns. It may help to review what they typically eat during:
  • Breakfast, lunch, dinner, and snacks
• Ask about protein in mixed dishes (e.g., hummus, stew, casserole, pasta, salad, etc.). Ask about the approximate amount of protein in the mixed dish and if it aligns with a typical serving, it is counted.
• Dairy foods are not included in the list of foods as there is a separate question specific to milk, cheese, and soy beverages.
• Review food intake with the older adult if their score is low (≤ 2), as they may have omitted some foods.
  • Ask about different sources of protein; add up the total.
Milk and Soy Intake

How often do you have milk, soy beverages, or milk products such as cheese, yogurt, or kefir?

• Question aims to get at the older adult’s intake of milk and soy products.

• Soy beverage is considered an adequate replacement to cow’s milk as it has sufficient protein and is fortified with calcium, vitamin D and B12.

Tips:

• 1 serving can be: 1 cup of milk/soy beverage; 1 cup cottage cheese; ¾ cup (175 g) of yogurt or kefir; 1 ½ ounces (50 g) of cheese or paneer.
Tips & Prompts:

• Remind the older adult that you want to know about their typical eating patterns. It may help to review what they typically eat during:
  • Breakfast, lunch, dinner, and snacks
• Ask about milk or soy beverage use in mixed dishes (e.g., soup, pudding/custards, cereal, etc.); consider typical serving sizes to determine if they count towards the total.
• Do not include the small amount added to tea or coffee, unless the product is predominately milk/soy (e.g., chai tea, cafe latte).
• Taking calcium or vitamin D supplements does not affect the score.
• Review food intake with the older adult if their score is low (≤ 2), as they may have omitted some foods.
  • Ask about different sources of milk or soy; add up the total.
Fluid Intake

How much fluid do you drink in a day?

• Question aims to get a basic understanding of the older adult’s fluid intake.

Tips & Prompts:

• 1 serving can be: 1 cup (250 mL) water, tea, coffee, herbal drinks, juice, and soft drinks, but NOT alcohol.

• Remind the older adult that you want to know about their typical fluid intake. It may help to review what they typically drink during:
  • Breakfast, lunch, dinner, and snacks

• If they sip fluids throughout the day, ask them to estimate the number of cups, millilitres, or litres; add up the total.
  • 8 cups = 2L or 2000 mL
  • 4 cups = 1 L or 1000 mL

Question appears on:
SCREEN-8 (q.6) and SCREEN-14 (q.8)
Do you cough, choke or have pain when swallowing food OR fluids?

• Question helps determine if the older adult needs a swallowing assessment. Swallowing difficulties can be assessed by a healthcare professional and managed.

Tips & Prompts:

• You may need to ask each part of the question separately:
  • “Do you cough when swallowing food or fluids?”
  • “Do you choke when swallowing food or fluids?”
  • “Do you have pain when swallowing food of fluids?”

• Difficulty swallowing pills and/or coughing from a cold does not count for this question.

Question appears on:
SCREEN-3 (q.3), SCREEN-8 (q.4), and SCREEN-14 (q.9)
Is biting or chewing food difficult for you?

• Question aims to find out whether the older adult’s dental health is affecting their eating enjoyment and comfort.

Scoring Tips:

• If they respond: “I can’t eat hard foods (e.g., corn), so I avoid them”, the response would be “rarely”.

• If it is only a few foods that they have difficulty chewing or biting, the response would be “sometimes”.

• If dentures are an issue, probe to determine the best response option.

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Do you use commercial meal replacements or supplements?

• Question aims to find out whether the older adult is relying on supplements for their nutritional intake (e.g., meals or snacks); they may not be getting enough calories and/or nutrients.

Tips:

• Meal replacements or supplements are drinks/shakes, puddings, soups, or bars that provide the nutrients and energy of a meal (e.g., Boost®, Ensure®, Sustacal®, Carnation Instant Breakfast®, Clinutren®, Resource®, Nutribar®, Slim Fast, IsaLean® Soup).

• Supplements described in this question are not multivitamins, herbal preparations, or frozen meals.

Question appears on: SCREEN-14 (q.11)
Eating with Others

Do you eat one or more meals a day with someone?

• Question aims to develop a basic understanding of whether the older adult’s diet is affected by eating alone.

Tips & Prompts:

• Ask about, and include, day programs serving meals that the older adult might attend (e.g., congregate dining).
Meal Preparation

Who usually prepares your meals?

- Question aims to develop a basic understanding of whether the older adult has difficulties with cooking, which could be affecting their diet. This can also determine whether they could benefit from community meal services.

Tips & Prompts:

- Ask about if they are responsible for making their main meals (i.e., breakfast, lunch, dinner) each day.
- If they use meal delivery programs (e.g., Meals on Wheels), eat a restaurant, or go to a meal with others for their main meal(s) most days, then choose "Someone else cooks most of my meals".
If the older adult indicates they make meals or they share meal preparation with someone else, **ask which of the first three responses apply to them:**

- I enjoy cooking most of my meals.
- I sometimes find cooking a chore.
- I usually find cooking a chore.

**Tips & Prompts:**

- Older adults may find cooking to be a chore/nuisance/work.
- Only use prompts if necessary.
  - Ask: “Do you look forward to preparing your meals?”
  - Ask: “Do you try to make meals that are very simple and do not take a lot of time/effort?”

*Question appears on:* SCREEN-8 (q.8) and SCREEN-14 (q.13b)
Scoring Tips:

• **The older adult enjoys cooking if:**
  - They enjoy taking the time to cook most days or find it pleasant.
  - They like to find new recipes.

• **The older adult finds cooking a chore if:**
  - They are tired of cooking, find cooking to be a task rather than a pleasure, or dread having to think about what to prepare.
  - They do not know how to cook or choose very simple dishes.
When participant indicates they do not cook most of their meals:

a) Clarify how often meals are prepared by others, including Meals on Wheels and congregate dining, going to a restaurant to confirm this is the correct response option.

b) Continue with the two final responses of this question if they do not cook their meals:

I’m satisfied with the quality of food prepared by others.

I’m not satisfied with the quality of food prepared by others.

Question appears on:
SCREEN-8 (q.8) and SCREEN-14 (q.13b)
Tips & Prompts:

• You may need to ask multiple questions:
  • Ask: “Do you like the food that is prepared for you?”
  • Ask: “Are you provided with the food that you enjoy?”
  • Ask: “Would you rather cook for yourself if you were able to?”

Question appears on:
SCREEN-8 (q.8) and SCREEN-14 (q.13b)
Do you have any problems getting your groceries?

• Question aims to develop a basic understanding of whether the older adult has difficulties with shopping, which could be affecting their diet. This can also determine whether they could benefit from community meal services.

Tips & Prompts:

• Problems can be poor health or disability, limited income, lack of transportation, weather conditions, or finding someone to shop.

• Only use prompts if required.
  • Ask: “Are you able to grocery shop as often as you need to?”
  • Ask: “Do you choose items that are easier to transport home?”
  • Ask: “Do you avoid driving during the winter?”
Tips & Prompts (continued):

- Problems can be poor health or disability, limited income, lack of transportation, weather conditions, or finding someone to shop.
  - Ask: “Do you get help from others to go grocery shopping as often as you would like?”

Scoring Tips:

- If the older adult does not do their own shopping and has a reliable way of getting groceries (e.g., family or friend, delivery), that they are satisfied with, then choose “never or rarely”.
- If the older adult responds “once in a while”, probe to determine the frequency.
How to score SCREEN©

How to communicate SCREEN© results
Each question has multiple, weighted response options. The subscript numbers beside each response option are the score for that response.

**Calculate the score:**

1. Add up the score of the response options either manually or using a calculator.

2. Do the addition a second time to ensure that it is correct. The lower the score, the greater the nutrition risk.
Total SCREEN© score per version:

- **SCREEN-14:**
  - 14 questions adding to a total of 64 points

- **SCREEN-8:**
  - 8 questions adding to a total of 48 points

- **SCREEN-3:**
  - 3 questions adding to a total of 24 points
Interpret the overall score:

Each version of SCREEN© has a different cut-point to indicate that the older adult is at high nutrition risk.

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Alternative cut-points for SCREEN-14:

- If users are concerned about too many referrals to programs or to a registered dietitian service, they can adjust the score further downwards (e.g., < 46).
- When using this method, some individuals will be missed, but a lower cut-point will ensure that those with the most need are receiving resources, which can sometimes be limited.
Scoring “high risk” with SCREEEN© is associated with poor health outcomes, such as reduced health-related quality of life, and increased hospitalization and mortality.\(^c\)

Considerations:

• Scores ≤ 2 for a response item indicates nutrition risk for that item.

• Individual item scores can be used to understand where the risk is coming from (e.g., chewing, eating alone, etc.) and target specific interventions.

Each older adult will react to their screening results in a different way. Some older adults will be surprised by their results, and others may be indifferent.

Tips:

- Highlight the eating habits the older adult is doing well with and indicate that they should maintain these habits.
- Identify the eating habits where the older adult can improve (i.e., item score ≤ 2).
- Provide resources and community services to promote healthy changes; discuss what resources the senior is willing to try.

Use simple language to promote understanding!
Example scenario with SCREEN-8 results:

- Skipping meals: \( 8/8 \)
- Vegetable and fruit intake: \( 2/4 \)
- Fluid intake: \( 2/4 \)

Communication example:

“You are doing well by not skipping meals, and this is a good habit to continue. Eating less than recommended from certain food groups and not drinking enough fluids increases your risk of not having the nutrients you need for good health. You can decrease your risk by having at least five servings of fruits and vegetables. Aim to drink at least eight cups of fluid throughout the day, including water, tea, coffee, or soup.”
Example scenario with SCREEN-8 results:

- Weight change: 8/8
- Appetite: 8/8
- Difficulty swallowing: 8/8
- Eating with others: 2/4
- Meal preparation: 2/4

Communication example:

“It is great that you have been able to maintain your weight in the last 6 months, and that you describe your appetite as very good. To make cooking more enjoyable, I recommend preparing and eating food with your family or friends. Also, consider trying new recipes with ingredients that you enjoy!”
Wrap-up

SCREEN ...

- Is a questionnaire-based nutrition screening tool
- Identifies nutrition risk to help older adults stay well and independent
- Has 3 versions
- Questions have several responses to help identify risk
- Cut-points are identified for each version
  - Questions that score ≤ 2 are a target for improvement
- Helps older adults identify where to improve their eating habits
- Helps community service and health providers discuss services to support the senior’s food intake and nutrition