User guide for the PRISMA-7 questionnaire to identify older adults with significant disabilities

INTERNATIONAL version (English)

For information :

Centre d'expertise en santé de Sherbrooke (CESS)- Sherbrooke Health Expertise Center

500 Murray
Sherbrooke, Québec
J1G 2K6
CANADA

Téléphone : (+1) 819-821-5122
Télécopieur : (+1) 819-821-5202

Courriel : info@expertise-sante.com

Original version of the user guide (2004) : Michel Raîche, Réjean Hébert, Marie-France Dubois

Update (2021): Myriam Jbabdi, Danielle Benoit, Michel Raîche

October 01st 2021

The Sherbrooke Health Expertise Center **(CESS)** is a non-profit organization whose mission is to promote the expertise developed mainly by its partners, the Integrated University Health and Social Services Center of the Eastern Townships - University Hospital Center of Sherbrooke (CIUSSS de l'Estrie-CHUS) and the Faculty of Medicine and Health Sciences (FMSS) of the Université de Sherbrooke.

The PRISMA-7 questionnaire was developed by Michel Raîche, Réjean Hébert and Marie-France Dubois as part of the Program on Research for Integrating the Services for Maintenance of Autonomy (PRISMA).

The CESS owns the rights to the PRISMA-7 questionnaire. It can grant user licenses after agreement between the parties. Please contact the CESS at the coordinates given on the cover page of this document.

This guide to the utilization of the PRISMA-7 questionnaire is intended for **international organizations** only. If you are an establishment in the Quebec health and social services network or a partner organization (public, private, community) in Quebec, please consult the appropriate user guide.

This guide is based on the various chapters of books and articles published on PRISMA-7 (see the bibliography for a list of references).

Some health facilities using the questionnaire will need to redo the layout (eg to include the facility's logo) or will want to integrate it into an existing tool (eg: emergency triage sheet). The only restriction is to keep the wording of the 7 questions as they are since the validation was done with these questions.

No guarantee is provided on the validity of the wording of questions if they are modified.

We also ask users to reference the questionnaire as follows:

Centre d'expertise en santé de Sherbrooke (CESS)©

Raîche, M., Hébert, R., Dubois, M.F., Grégoire M, Bolduc J., Bureau C., Veil A. Le repérage des personnes âgées en perte d'autonomie modérée à grave avec le questionnaire PRISMA-7 : développement, implantation et utilisation. La Revue de Gériatrie, 2007; 32(3): 209-218.

Raîche M, Hébert R, Dubois M-F. PRISMA-7: A case-finding tool to identify older adults with moderate to severe disabilities. Archives of Gerontology and Geriatrics 2008; 47(1): 9-18.

1. PRESENTATION

The functional autonomy measurement system (SMAF) is made up of 29 items that assess the autonomy of older adults (Hébert et al, 1988). Since it is relatively expensive and counterproductive to carry out a SMAF for all the older persons in a territory, a case-finding tool is more appropriate in a population-based approach with a preventive aim. A group of clinician experts in geriatrics determined that the SMAF score ≥ 15[1] was the best descriptor of moderate to severe disability, based on epidemiological data and observation of the distribution of the ISO-SMAF profiles (Dubuc et al, 1999). It is in this context that researchers developed the PRISMA-7 questionnaire[2] which was validated with the SMAF[3] to identify vulnerable older people with potentially moderate to severe disabilities.

The use of the PRISMA-7 questionnaire is recommended in the context of an integrated service network where home support is a priority. PRISMA-7, made up of 7 questions to be answered by "yes" or "no", allows the identification of significant disabilities during contact between the health system, the community or private sector, and a person aged 75 and over, whose current state of independence is unknown to home support services.

PRISMA-7 does not replace the clinical judgment of the provider, it supports it by documenting the risk for an older person to present a moderate to severe disability. PRISMA-7 aims at the early identification of vulnerable people before the process of loosing autonomy is too far advanced. It allows for a more in-depth assessment and provides the support required by the person's needs through targeted interventions.

2. INSTRUCTIONS FOR THE USE OF THE PRISMA-7 QUESTIONNAIRE

a) Targeted clientele

By observing the autonomy continuum of older people, we notice that:

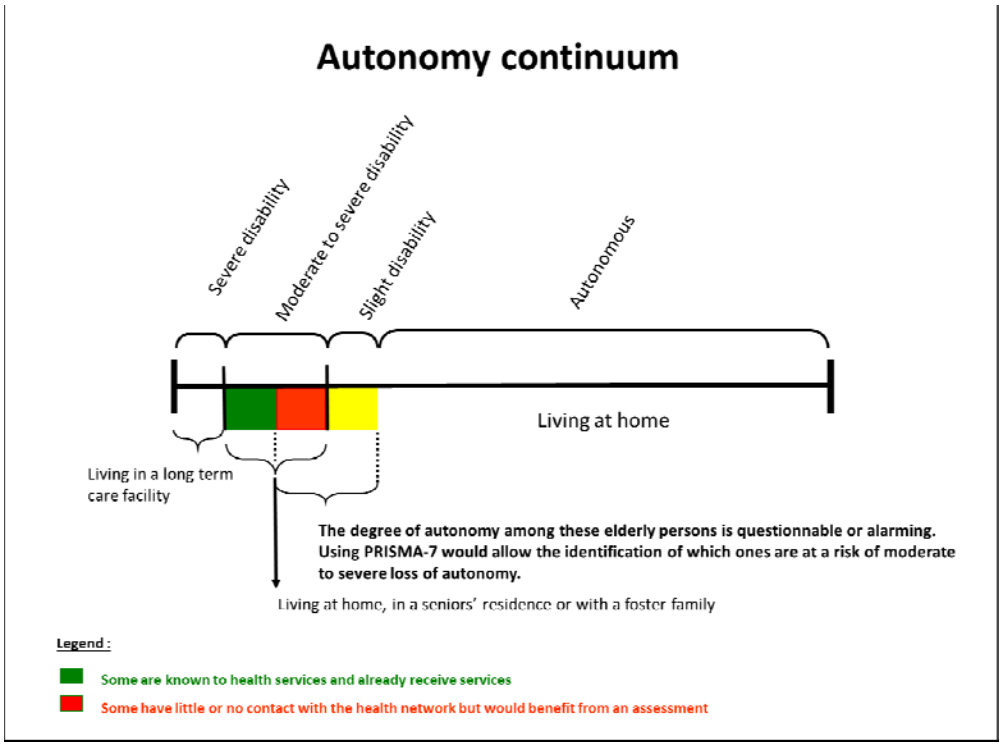
- A small group lives in a long-term care facility with a serious disability.
- A significant group of people live at home or in retirement homes with moderate to severe disabilities.
- the majority of older adults live at home independently or with a slight disability.

Among those living at home or in retirement homes, some are known and receive support services at home, while others are unknown to the health system. It is these latter people, when aged **75 and over**, who are targeted to complete the PRISMA-7 questionnaire for identifying older adults with moderate to severe disabilities.

[1] The validation of the PRISMA-7 questionnaire was done with a randomly selected sample of older people. The prevalence (frequency at a specific time) of moderate to severe disabilities in the non-institutionalized population aged over 75 is 19.4% (Raîche M, Hébert R, Dubois M-F. *PRISMA-7: A case-finding tool to identify older adults with moderate to severe disabilities. Archives of Gerontology and Geriatrics 2008*; 47(1): 9-18. DOI: 10.1016/j.archger.2007.06.004).

[2] See APPENDIX 1: PRISMA-7 Questionnaire.

[3] See APPENDIX 2: Results of the validation study.



b) PRISMA-7 questionnaire

The PRISMA-7 questionnaire has 7 questions to be answered with "yes" or "no".

Question		Answer	
1.	Are you 85 years old or older ?	yes	no
2.	Male ?	yes	no
3.	In general, do you have any health problems that require you to limit your activities ?	yes	no
4.	Do you need someone to help you on a regular basis ?	yes	no
5.	In general, do you have any health problems that require you to stay at home ?	yes	no
6.	In case of need, can you count on someone close to you ?	yes	no
7.	Do you regularly use a cane, a walker or a wheelchair to move about ?	yes	no

Centre d'expertise en santé de Sherbrooke. CESS©

• Raîche, M., Hébert, R., Dubois, M.F., Grégoire M, Bolduc J., Bureau C., Veil A. Le repérage des personnes âgées en perte d'autonomie modérée à grave avec le questionnaire PRISMA-7 : développement, implantation et utilisation. La Revue de Gériatrie, 2007; 32(3): 209-218.
• Raîche M, Hébert R, Dubois M-F. PRISMA-7: A case-finding tool to identify older adults with moderate to severe disabilities. Archives of Gerontology and Geriatrics 2008; 47(1): 9-18.

c) Positive case-finding

The PRISMA-7 validation study demonstrated that scores of **3 "yes" and more, or 4 "yes" and more,** could be used to identify people with moderate to severe disabilities (see appendix 2 to consult the results of the validation study). The choice of the threshold score is up to the teams involved in the assessment of the older person, to be determined according to their intervention priorities and their organization. In practice, the score of 4 "yes" or more is the most frequently used. Once identified as positive, the person should receive a more in-depth assessment to verify their precise degree of disability. **This is the step that must follow a positive case-finding.**

d) Administration of the PRISMA-7 questionnaire

There are two ways to complete the questionnaire, either self-administered (the person answers himself/herself), or by another person (the health service provider asks the questions). PRISMA-7 can also be used in person or over the phone.

CONDITIONS	SELF-ADMINISTERED	ADMINISTERED BY ANOTHER PERSON
If the older person is able to complete the questionnaire by herself/himself	The older person completes the questionnaire and then gives it to you. This is the method that must be used when possible	
If the older person has difficulty completing the questionnaire by herself/himself	A caregiver (relative or friend) present on site can help the older person answer by entering her/his responses on the sheet	
If the older person cannot answer at all	A caregiver who knows the older person very well can answer for her/him	
If the older person could answer verbally but there is no caregiver on site		A facilitator or a designated person can ask the questions and enter the older person answers on the sheet
If the older person cannot answer at all AND there is no caregiver on site	Do not complete a questionnaire and notify the home support service	

e) Details for completion

- First and foremost, do not indicate to the older person who is completing the questionnaire that a YES answer is an *at risk* response.
- The correct response = the individual's own response.
  - Do not attempt to interpret participants' responses.
  - Do not influence participants' responses when asking the questions.
  - Avoid making any judgments (i.e. he/she answered "no" but I think it should be "yes").
- Should the participant hesitate between yes and no, ask him or her to choose one of the two responses.
- If, despite several attempts, the person persists in answering "a little" or "at times", enter yes as the correct response.
- Do not tell participants whether they have been identified as positive or negative.
  - It may cause unnecessary worry if we tell them they are at risk of something.
  - Say: "If necessary, a health care worker will contact you."

3. QUESTIONS AND ANSWERS ABOUT THE PRISMA-7 QUESTIONNAIRE

Question # 1: Are you 85 years old or older ?

It is common knowledge that older individuals experience greater disabilities than those who are not as old. But at what age can we truly claim that there is a very high risk? Beginning at 80? 90? 82? With the study data, the 85-year-old threshold proved to be the most closely associated with moderate to severe disabilities. However, that constitutes only a single additional risk factor, it does not mean the questionnaire is restricted to those 85 and over; it is aimed at people 75 years and over. A 78-year-old who provides 4 other positive responses has probably less autonomy than a 90-year-old woman with a single positive response to the Prisma-7, i.e. that she is 85 years old or older. Does a person who is exactly 85 years old have a positive answer? Yes, the research data was analyzed with the criterion of 85 years and over.

Question # 2: Male?

According to the validation study, being male is strongly associated with moderate to severe disability. Part of the explanation is believed to be that many older men are less independent in many activities of daily living.

Question # 3: … do you limit your activities?

If the person does not understand this term, try "*cut down on your activities*" instead.

Question # 4: ... regularly assist you?

If the person asks what we mean by regularly, it is his or her definition of regularly that counts, so ask "does regularly mean every week or every day to you?" If the respondent says every week, reformulate the question as follows: "Do you need someone to help you on a weekly basis?"

Question # 6: "In case of need, can you count on someone close to you?"

A "yes" response to question # 6 truly constitutes a person at risk, contrary to what you might previously have believed. It is likely that simply being able to identify this person indicates that the participant felt the need of assistance. While this result may be surprising, it is correct; it was measured with the 594 people who took part in the study. Those who replied **"no"** to this question enjoy greater autonomy than those who responded **"yes"**. An older person who does not identify someone that he or she can count on in case of need, is more autonomous.

4. CONFIDENTIALITY AND CONSENT

We must ensure the confidentiality of the transmission of clinical information and the consent of the older person for this transmission. A consent sentence and the person's signature or verbal consent are therefore required when completing the PRISMA-7 questionnaire.

BIBLIOGRAPHY :

Raîche, M., Hébert, R., Dubois, M.F. PRISMA-7: A case-finding tool to identify older adults with moderate to severe disabilities. Archives of Gerontology and Geriatrics 2008; 47(1: July/August): 9-18.

Raîche, M., Hébert, R., Dubois, M.F., Grégoire M, Bolduc J., Bureau C., Veil A. Le repérage des personnes âgées en perte d'autonomie modérée à grave avec le questionnaire PRISMA-7 : développement, implantation et utilisation. La Revue de Gériatrie, 2007; 32(3): 209-218.

Raîche M, Grégoire M, Hébert R, Dubois M-F. Repérer les personnes âgées en perte d'autonomie significative à l'urgence avec le PRISMA-7 : une opportunité pour les infirmières. Première ligne, 2009, 23(3) : 10-12.

Raîche M, Hébert R, Dubois M-F. Guide d'utilisation du questionnaire PRISMA-7 pour le repérage des personnes âgées en perte d'autonomie modérée à grave. Dans Hébert R, Tourigny A, Gagnon M. Intégrer les services pour le maintien de l'autonomie des personnes. Québec, Edisem, 2004; pp 153-175.

Additional references

Hébert, R., Bravo, G., Korner-Bitensky, N., & Voyer, L. Predictive validity of a postal questionnaire for screening community-dwelling elderly individuals at risk of functional decline (1996). Age & Ageing, 25(2), 159-67.

Hébert, R., Bravo, G., Korner-Bitensky, N., & Voyer, L. Refusal and information bias associated with postal questionnaires and face-to-face interviews in very elderly subjects (1996). Journal of clinical epidemiology, 49(3), 373-81.

Hébert R., Desrosiers, J., Dubuc, N., Tousignant, M., Guilbeault, J., Pinsonnault, E. Le système de mesure de l'autonomie fonctionnelle (SMAF) – Mise au point (2003). Revue de gériatrie, 28: 323-336.

Hébert R, Guilbeault J, Desrosiers J, Dubuc N. The functional autonomy measurement system (SMAF): a clinical-based instrument for measuring disabilities and handicaps in older people (2001). Geriatrics Today: J Can Geriatr Soc; 141-7.

Hébert R.,Carrier R., Bilodeau A. Le système de mesure de l'autonomie fonctionnelle (SMAF) (1988). Revue de gériatrie, 14:161-167.

Hébert R., Carrier R., Bilodeau A. The functional autonomy measurement system (SMAF): Description and validation of an instrument for the measurement of handicaps (1988). Age and Ageing, 17:293-302.

Dubuc N., Hébert R., Desrosiers J., Buteau M., Trottier L. Système de classification basé sur le profil d'autonomie fonctionnelle (1999). Dans Autonomie et vieillissement, Hébert R et Kouri K, Editors. IDISEM: St-Hyacinthe. p. 255-272.

Dubuc N, Hébert R, Desrosiers J, Buteau M, Trottier L. (2006). Disability-based classification system for older people in integrated long-term care services: the Iso-SMAF profiles. Archives of Gerontology and Geriatrics 42(2): 191-206.

PRISMA-7 is recommended for the case-finding of frailty in older individuals

Turner G, Clegg A. Best practice guidelines for the management of frailty: a British Geriatrics Society, Age UK and Royal College of General Practitioners report. Age Ageing. 2014; 43(6):744-7.

Sutorius FL, Hoogendijk EO, Prins BA, van Hout HP. Comparison of 10 single and stepped methods to identify frail older persons in primary care: diagnostic and prognostic accuracy. BMC Fam Pract. 2016; 17:102, 1-12.

Hoogendijk EO, van der Horst HE, Deeg DJ, Frijters DH, Prins BA, Jansen AP, Nijpels G, van Hout HP. The identification of frail older adults in primary care: comparing the accuracy of five simple instruments. Age Ageing. 2013;42(2):262-5.

APPENDIX 1 : PRISMA-7 Questionnaire

First name:
Family name at birth:
Date of birth:

Address:
City:
Postal code:
Telephone:

Health insurance number (RAMQ):

PRISMA-7 QUESTIONNAIRE

To identify people aged 75 years old or older with moderate to severe disabilities

Please tick the screening location:

☐ Home
☐ Seniors' residence
☐ Community-based organization
☐ Social aid organization
☐ Local drugstore
☐ Day activity centre
☐ Hospital activity centre
☐ Access point/ assessment, orientation and referral
☐ Hospital - Emergency department
☐ Hospital - care unit
☐ Outpatient clinic
☐ Family medecine group/unit
☐ Medical clinic
☐ Event (ex : vaccination campaign)

Validate the following elements:

- Check whether the older person must complete this questionnaire (do not complete this questionnaire if the person is under 75 years of age or if they receive home support services or if they live in a CHSLD, an intermediate resource or in a nursing home).
- Explain to the person what PRISMA-7 questionnaire is for.
- Validate consent of the older person.

Validate consent to screening:

I agree that my answers and my contact details will be sent to the health facility who will contact me only if necessary.

_____	_____	_____
Signature of the person /representative	Telephone	Date (yyyy/mm/dd)

☐ Or verbal consent from the older person or representative

Please, indicate who completed the PRISMA-7 questionnaire on the back side:

☐ Person him/herself
☐ Representative/caregiver
☐ Volunteer
☐ Clerk
☐ Administrative officer
☐ Health professional
☐ Postman
☐ Policeman
☐ Paramedic
☐ Delivery service from the drugstore
☐ Delivery service from the grocery store
☐ Other
☐ Information unavailable

_____	_____	_____
Signature of the person in charge	Telephone	Date (yyyy/mm/dd)

Questionnaire PRISMA-7 au verso

Instructions for older individuals :

- If you are 75 years or older, please complete the seven following questions.
- Indicate your answers spontaneously and then give the questionnaire to the person in charge.

Question	Answer	
1. Are you 85 years old or older ?	yes ☐	no ☐
2. Male ?	yes ☐	no ☐
3. In general, do you have any health problems that require you to limit your activities?	yes ☐	no ☐
4. Do you need someone to help you on a regular basis ?	yes ☐	no ☐
5. In general, do you have any health problems that require you to stay at home ?	yes ☐	no ☐
6. In case of need, can you count on someone close to you ?	yes ☐	no ☐
7. Do you regularly use a cane, a walker or a wheelchair to move about ?	yes ☐	no ☐

Centre d'expertise en santé de Sherbrooke (CESS)©

- Raîche, M., Hébert, R., Dubois, M.F., Grégoire M, Bolduc J., Bureau C., Veil A. Le repérage des personnes âgées en perte d'autonomie modérée à grave avec le questionnaire PRISMA-7 : développement, implantation et utilisation. La Revue de Gériatrie, 2007; 32(3): 209-218.
- Raîche M, Hébert R, Dubois M-F. PRISMA-7: A case-finding tool to identify older adults with moderate to severe disabilities. Archives of Gerontology and Geriatrics 2008; 47(1): 9-18.

Send all completed questionnaires to the contact details below :

Fax :

E-mail :

Telephone :

APPENDIX 2 : Results of the validation study[4]

Methodology of the study

The list of studied questions was drawn up from a review of the scientific and clinical literature by a clinical committee of experts in geriatrics, on the topic of significant disabilities. The committee has targeted a list of 23 "yes" or "no" questions that address the main issues related to the independence of older persons. These questions included falls, medications, memory problems, need for help, nutrition, emotional state, hospitalizations, activity limitations, mobility, hearing, vision, age, gender, etc. The study[5] involved 594 older people from the Sherbrooke region, chosen at random. They answered 23 questions and were subsequently assessed at home using the SMAF.

As a first analysis, each of the questions was linked to a SMAF score ≥ 15. A first list of significant questions was thus drawn up (statistical Chi-square analysis). Subsequently, a multivariate statistical regression analysis made it possible to find the required and best performing questions related to a SMAF score ≥ 15. Finally, sensitivity and specificity analysis made it possible to study different cut-off scores, i.e. that is, the number of questions to which a positive answer had to be given by the older person in order for them to be considered "at risk".

Results

In the list of 23 questions, 7 were found to be the best descriptors of a SMAF score ≥ 15. The others were found to be less successful in describing a high SMAF score.

Choice of the threshold score for the PRISMA-7 questionnaire

Two threshold scores proved effective when administering the PRISMA-7. You will find below the results obtained from the analyses.

<u>Questionnaire's ability to identify the targeted clientele</u>

				Predictive value	
Critical threshold	Positive iden.	**Sensitivity**	**Specificity**	positive	negative
3 yes or more	35,5%	78,3%	74,7%	42,7%	93,5%
4 yes or more	19,0%	60,9%	91,0%	62,0%	90,6%

[4] From the book chapter 8 (page 147-167): Raîche M, Hébert R, Dubois M-F. User Guide for the PRISMA-7 Questionnaire to Identify Elderly people with Severe Loss of autonomy In Integrated service delivery to ensure persons' functional autonomy / ed. Hébert, Réjean ; ed. Tourigny, André ; ed. Gagnon, Maxime ; Program of research to integrate services for the maintenance of autonomy. Edisem, 2005, xiv, 323 p

[5] Raîche M, Hébert R, Dubois M-F. PRISMA-7: A case-finding tool to identify older adults with moderate to severe disabilities. Archives of Gerontology and Geriatrics 2008; 47(1): 9-18. DOI: 10.1016/j.archger.2007.06.004.