ISAR Identification of Seniors At Risk | Identification Systématique des Aîné(e)s à Risque

The ISAR Screening Tool Manual©

Identification of Seniors At Risk (ISAR): An Emergency Department Screening Tool to Identify Older Adults at Risk of Adverse Functional Outcomes.

Step One of a Two-step Intervention for Seniors in the Emergency Department.

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What is ISAR?

ISAR stands for ''**I**dentification of **S**eniors **A**t **R**isk''.

ISAR is **Step 1** of a **2-step intervention** (see Figure 1 on p. 6 for an overview).

ISAR is a **6-item screening questionnaire that** can be easily and quickly administered to seniors in the emergency department (ED).

What is ISAR screening for?

The ISAR screen is used to identify a **HIGH-RISK** subgroup amongst all seniors presenting in the ED.

ISAR identifies those at **increased risk of adverse functional outcomes** after the ED visit, including significant functional decline, increase rate of hospitalization, and high use of community services, **who would benefit from further assessment and intervention**.

What is the 2-step intervention?

Step 1 is the ISAR screening questionnaire **systematically** done with seniors presenting to the ED.

Step 2 is for those who test positive on ISAR. It is a brief clinical assessment (see below) to further characterize the risk, identify unmet needs, and perform a clinical intervention as indicated, either in the ED or on the ward or following discharge from the ED.

How is ISAR scored?

The 6 ISAR questions require yes/no responses, with a score of 0 for low risk, and 1 for high risk factors identified. The total score, ranging from 0-6, can then be quickly obtained.

A score of 2 or more out of a total of 6 is usually considered as the ISAR POSITIVE threshold, based on our validation and predictive studies and in the literature, because of its high sensitivity.[1]

Practical tip: *Many EDs and studies have used a* ***score of 3 or more out of 6 as the ISAR positive threshold,*** *in order to reduce the number of patients with a positive screen who need intervention, in the context of resource allocation. This increases the specificity, at the cost of decreased sensitivity. As a consequence, more patients who are at risk of adverse outcomes will not be detected.*[2]

Who can administer ISAR?

The ISAR questionnaire can be used to screen seniors by different trained workers in the ED: ambulance technician, triage clerk, bedside nurse, and others. It may also be self-administered or filled out by an accompanying person.[2]

Who should be screened with the ISAR tool?

ISAR is a valid screening tool for ED patients **aged 65 and over, not living in a long-term care institution**, who meet all the following criteria: **oriented to time and place; able to complete the ISAR tool**, either

alone or with help.

If the screening tool cannot be completed by the patient, ISAR is also valid when completed by an **accompanying person**.[2] If there is no accompanying person, the patient is considered to be at increased risk and should receive the Step 2 clinical assessment.[2]

Practical tip: *Some EDs have chosen to limit the use of ISAR to certain age subgroups (70 and over or 75 and over), thus reducing the need for the step 2 clinical assessment. ISAR maintains its validity in these subgroups.*[2,3]

What are the Original ISAR and the Revised ISAR?

The **Original ISAR** was developed and validated in urban EDs, in a large cohort of ED patients,[2] and in a multi-centre randomised controlled trial in similar EDs.[4] Please refer to Figure 2 on p. 7.

Since then, a **Revised ISAR**, also named Elder-Alert, was developed, using PDSA (Plan-Do-Study-Act) cycles, in collaboration with members of the original ISAR team.[5,6]

The **Revised ISAR** modified the wording and phrasing of a few items, and adjusted the number of medications in question 6, to be more adapted to current practice. Individual risk factors remained unchanged. Please refer to **Figure 2** on p. 7 for direct comparison.

Both versions have been used successfully in research and practice with ISAR.

Can questions be added to ISAR?

ISAR predictive values have been validated in the current format. No questions should be added. If specific questions are felt to be useful by an ED, they can be asked separately and used as an additional trigger to Step 2.

Can wording of the ISAR be modified for local use?

ISAR predictive validity has been validated in the current format. Modification may affect the predictive value of ISAR.

Has ISAR been translated into other languages?

ISAR has been used around the world and **translated into many languages**. We are currently collecting these translations so that they can be made available to other users.

What are the limitations of ISAR?

ISAR is **not a diagnostic tool**. It has a defined sensitivity and specificity, which may vary according to the population in which it is used.

ISAR is **not a clinical assessment tool**. But it can be used to assist with case-finding for geriatric problems in the ED.

ISAR does **not substitute for clinical judgement**. But it can be used as supplement to clinical decision making, and guide for further assessment and intervention, whether in hospital or in the community.

Practical tip: *If ED staff suspect a problem in an ISAR NEGATIVE senior, i.e. score less than 2, we recommend that this patient is considered to be at increased risk and should receive the Step 2 clinical assessment.*

What outcomes does ISAR predict?

Numerous published studies and meta-analyses support the predictive ability of the ISAR screen, including:

Outcomes after an ED visit:

- Hospitalization: ISAR predicts risk of hospital admission, readmission, and longer hospital stays for up to 6 months following as ED visit.[1,3,6]
- Mortality: ISAR predicts risk of mortality for up to 6 months following an ED visit.[1]
- Return ED Visits: ISAR predicts risk of more frequent return ED visits for up to 6 months following an ED visit.[1,7]
- Use of Community Services: ISAR predicts risk of high use of community services during the 5 months following the ED visit.[4]

In addition to its ability to predict adverse outcomes, ISAR performs well as a screening tool to detect seniors with **significant current geriatric problems**:

- Current Functional Impairment. [2]
- Presence of Depression.[4]
- Unresolved Geriatric Problems: Seniors with a positive ISAR screen have 3 times the prevalence of unresolved geriatric problems compared to those who test negative.[8]

What should be done at Step 2?

Following a positive screening, a brief clinical assessment of unmet needs should be conducted in the ED, that will guide referrals and other interventions to be implemented in the ED, on the ward, or after discharge. For patients to be discharged back home, the ED nurse may provide follow-up appointments with primary care and/or homecare services to avoid return to the ED. For patients admitted to the wards, those with a positive ISAR score can be flagged, and a comprehensive geriatric assessment can be done on the wards. Please refer to Figure 1. Several published studies show examples of different interventions that have been done at Step 2 following a positive ISAR screen.[9-11]

Step 2: SEISAR – Standardised Evaluation and Intervention for Seniors At Risk

In our original research we used the Standardized Evaluation and Intervention for Seniors At Risk (SEISAR), a brief checklist to guide clinical assessment (sometimes referred to as ISAR 2).[12] The 2-step ISAR-SEISAR intervention improved the process of care by targeting patients for rapid referral to homecare services, thus increasing the receipt of homecare services during the 30 days after the ED visit.[13] The intervention was also effective in reducing the rate of 4-month functional decline, at no increase in overall costs.[8,9]

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Figure 1. Outline of the 2-step approach

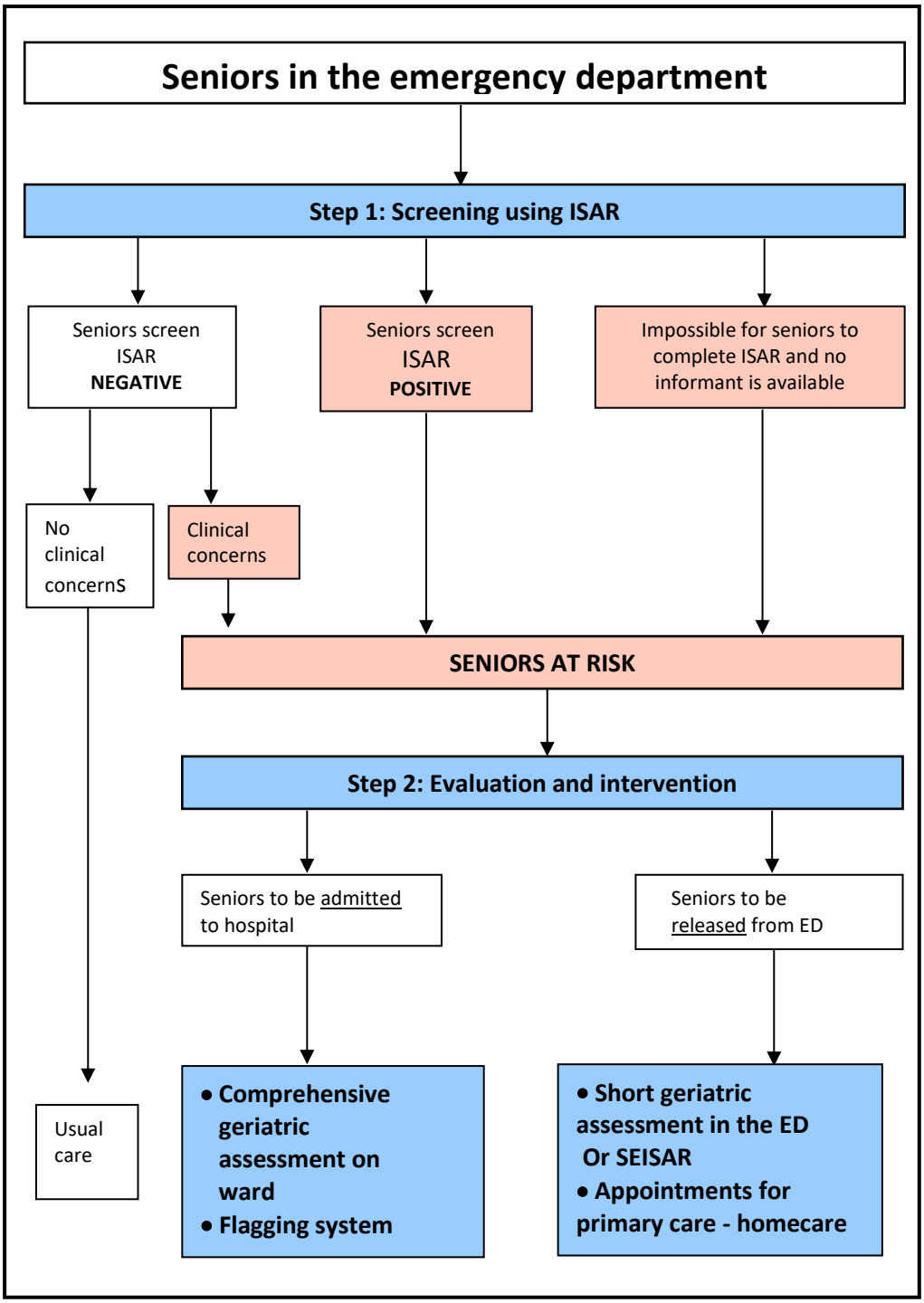

Figure 2. ISAR© tool: Original and revised versions

Original ISAR©	No	Yes
1) Before the illness or injury that brought you to the Emergency, did you need someone to help you on a regular basis?	0	+1
2) Since the illness or injury that brought you to the Emergency, have you needed more help than usual to take care of yourself?	0	+1
3) Have you been hospitalized for one or more nights during the past six months? (Excluding a stay in the Emergency).	0	+1
4) In general, do you see well?	+1	0
5) In general, do you have serious problems with your memory?	0	+1
6) Do you take more than three different medications every day?	0	+1
Positive test is 2 or more	Total	/6

McCusker et al., 1999[2]

Revised ISAR©: Elder Alert Version	No	Yes
1) Before the illness or injury that brought you to the Emergency, did you need someone to help you on a regular basis?	0	+1
2) In the last 24 hours, have you needed more help than usual?	0	+1
3) Have you been hospitalized for one or more nights during the past six months?	0	+1
4) In general, do you have serious problems with your vision that cannot be corrected with glasses?	0	+1
5) In general, do you have serious problems with your memory?	0	+1
6) Do you take six or more different medications every day?	0	+1
Positive test is 2 or more	Total	/6

Warburton et al. (with McCusker), 2004[5]