STARS Education and Research Alliance

CREATING KNOWLEDGE | TRANSFORMING CARE

The University Of Queensland
AUSTRALIA

Metro North Health

Queensland Government

STARS Critically Appraised Topic (CAT) Group: What are the most effective assessment tools for assessing a patient's ability/capacity to self-manage medications in the subacute rehabilitation hospital setting?

Specific Question:

What is the best tool to assess a patient's ability to self-manage medication in the inpatient rehabilitation hospital setting prior to discharge home, for adults aged 18 years or older without severe cognitive impairment?

Clinical bottom line

Multiple tools may be needed to assess a person's ability to self-manage medications as there does not appear to be a stand-alone tool that comprehensively assesses all of the abilities required to independently self-manage medications.

Why is this important?

A self-medication assessment tool underpinned by the best available evidence is needed to ensure that patients at STARS are adequately assessed and appropriate intervention provided to ensure that they can independently take medication at home after discharge.

Inclusion Criteria

1. The study evaluates a self-medication assessment tool
2. Population is adults aged 18 years and older without severe cognitive impairment
3. Published in a peer-reviewed journal from 2000 onwards

Search dates

2000 to present

Type of Study

Higher levels of evidence, including reviews which have used a systematic methodology.

PICOT

	Description	Search terms
Population and Setting	Adults 18 years receiving inpatient rehab and will be discharged home to community, previously managing independently without severe cognitive impairment; regular medication users Able to be discharged home	Adults Inpatient rehabilitation hospital (including broad search for rehabilitation OR hospital OR inpatients OR subacute)
Intervention or Exposure (ie what is being tested)	Self-medication assessment tool	Self-medication Assessment tool
Comparison, if any	None	

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Report Finalised November 2025

Outcomes of interest	Tool that can be individualised (i.e., not just a pill box)- flexible assessment tool Comprehensive assessment of skills needed to self-administer medications (i.e., cognitive skills (understanding what medications are; planning and problem, memory, ability to monitor and take medications at the right time, safety and judgement), physical skills (sufficient hand function to open containers); vision/perception (ability to read labels and distinguish correct tablets)	
Types of studies	Highest level evidence from 2000 onwards	Systematic-type reviews and meta-analyses

Databases Searched

PubMed, CINAHL Complete, Embase, Cochrane Library

Date of search

22 August 2025

Search Strategies (including subject headings)

Search strategy, include key concepts and limits:
(assessment**) AND (**self-management**) AND (**medications**) AND (**rehabilitation OR hospital OR inpatients OR subacute**) AND (**study types/level of evidence – systematic-type reviews and meta-analyses**) AND (**2000-2025 publication year range**) AND (**English language**) AND (**limit to Humans, exclude animal studies**) AND (**exclude irrelevant publication types – letters, commentaries, editorials, conference abstracts**)**

PubMed 176 results
Includes MeSH

(“assess*”[tiab]) AND ("Self Care"[Mesh] OR "Self-Management"[Mesh] OR “self*”[tiab]) AND ("Medication Adherence"[Mesh] OR "Patient Medication Knowledge"[Mesh] OR "Prescription Drugs"[Mesh] OR "Pharmaceutical Preparations"[Mesh] OR "Self Medication"[Mesh] OR “medication*”[ti] OR “medicine*”[ti] OR “drug*”[ti] OR “pharmaceutical*”[ti]) AND ("Rehabilitation"[Mesh] OR "Hospitals, Rehabilitation"[Mesh] OR "Hospitals"[Mesh] OR "Inpatients"[Mesh] OR "Subacute Care"[Mesh] OR “rehab*”[tiab] OR “subacute”[tiab] OR “sub-acute”[tiab] OR “sub acute”[tiab] OR “hospital*”[tiab] OR “inpatient*”[tiab]) AND ("Systematic Reviews as Topic"[Mesh] OR "Systematic Review" [Publication Type] OR "Meta-Analysis as Topic"[Mesh] OR "Meta-Analysis" [Publication Type] OR "systematic review"[ti] OR "systematic reviews"[ti] OR "systematic literature review"[ti] OR "systematic scoping review"[ti] OR "systematic narrative review"[ti] OR "systematic evidence review"[ti] OR "systematic qualitative review"[ti] OR "systematic quantitative review"[ti] OR "systematic critical review"[ti] OR "systematic mixed studies review"[ti] OR "systematic mapping review"[ti] OR "Cochrane review"[ti] OR "Cochrane reviews"[ti] OR "systematic search and review"[ti] OR "systematic integrative review"[ti] OR "systematically"[tiab] OR "meta analysis"[ti] OR "meta analyses"[ti] OR “meta-analysis”[ti] OR “meta-analyses”[ti] OR "metanalysis"[ti] OR "metanalyses"[ti] OR “metaanalysis”[ti] OR “metaanalyses”[ti] OR "meta review"[ti] OR "meta reviews"[ti] OR "meta-review"[ti] OR "meta-reviews"[ti] OR "metareview"[ti] OR "metareviews"[ti] OR "umbrella review"[ti] OR "umbrella reviews"[ti] OR “scoping review”[ti]) AND (2000:2025[dp]) AND (eng[la] OR und[la]) NOT (animals [mh] NOT humans [mh]) NOT ("Comment"[Publication Type] OR "Editorial"[Publication Type] OR "Letter"[Publication Type])

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CINAHL Complete (EBSCOhost) 44 results
Includes CINAHL Subject Headings

(XB(“assess*”)) AND (MH "Self Care+" OR XB(“self*”)) AND (MH "Medication Compliance" OR MH "Drugs, Prescription+" OR MH "Self Medication" OR TI(“medication*” OR “medicine*” OR “drug*” OR “pharmaceutical*”)) AND (MH "Rehabilitation+" OR MH "Rehabilitation Centers+" OR MH "Hospitals+" OR MH "Inpatients" OR MH "Rehabilitation Patients" OR MH "Subacute Care" OR XB(“rehab*” OR “subacute” OR “sub-acute” OR “sub acute” OR “hospital*” OR “inpatient*”)) AND (MH "Systematic Review" OR MH "Meta Analysis" OR TI("systematic review" OR "systematic reviews" OR "systematic literature review" OR "systematic scoping review" OR "systematic narrative review" OR "systematic evidence review" OR "systematic qualitative review" OR "systematic quantitative review" OR "systematic critical review" OR "systematic mixed studies review" OR "systematic mapping review" OR "Cochrane review" OR "Cochrane reviews" OR "systematic search and review" OR "systematic integrative review" OR "meta analysis" OR "meta analyses" OR “meta-analysis” OR “meta-analyses” OR "metanalysis" OR "metanalyses" OR “metaanalysis” OR “metaanalyses” OR "meta review" OR "meta reviews" OR "meta-review" OR "meta-reviews" OR "metareview" OR "metareviews" OR "umbrella review" OR "umbrella reviews" OR “scoping review”) OR XB("systematically")) AND PY 2000-2025 AND (LA English) NOT ((MH "Animals+" OR MH "Animal Studies" OR TI animal model*) NOT MH "Human") NOT (PT(“Commentary” OR “Editorial” OR “Letter”))

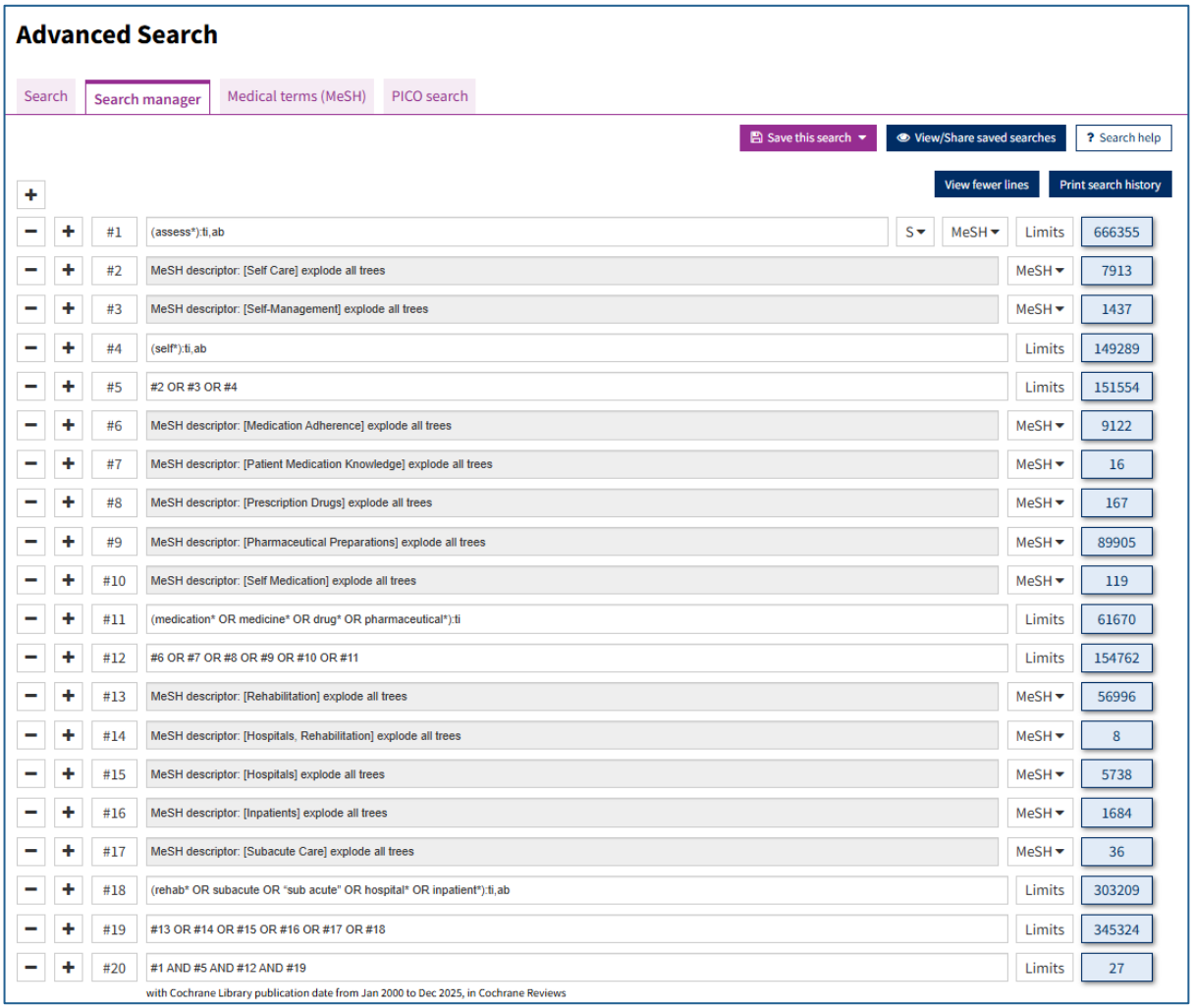
Embase (Elsevier) 189 results
Includes Emtree, and limited to relevant publication types (articles, articles in press and reviews)

(“assess*”:ti,ab) AND ('self care'/exp/mj OR “self*”:ti,ab) AND ('medication compliance'/exp/mj OR 'prescription drug'/exp/mj OR 'drug'/exp/mj OR 'self medication'/exp/mj OR “medication*”:ti OR “medicine*”:ti OR “drug*”:ti OR “pharmaceutical*”:ti) AND ('rehabilitation'/exp OR 'rehabilitation center'/exp OR 'hospital'/exp OR 'hospital patient'/exp OR 'subacute care'/exp OR “rehab*”:ti,ab OR “subacute”:ti,ab OR “sub-acute”:ti,ab OR “sub acute”:ti,ab OR “hospital*”:ti,ab OR “inpatient*”:ti,ab) AND ('systematic review (topic)'/exp OR 'systematic review'/exp OR 'meta analysis (topic)'/exp OR 'meta analysis'/exp OR "systematic review":ti OR "systematic reviews":ti OR "systematic literature review":ti OR "systematic scoping review":ti OR "systematic narrative review":ti OR "systematic evidence review":ti OR "systematic qualitative review":ti OR "systematic quantitative review":ti OR "systematic critical review":ti OR "systematic mixed studies review":ti OR "systematic mapping review":ti OR "Cochrane review":ti OR "Cochrane reviews":ti OR "systematic search and review":ti OR "systematic integrative review":ti OR "systematically":ti,ab OR "meta analysis":ti OR "meta analyses":ti OR “meta-analysis”:ti OR “meta-analyses”:ti OR "metanalysis":ti OR "metanalyses":ti OR “metaanalysis”:ti OR “metaanalyses”:ti OR "meta review":ti OR "meta reviews":ti OR "meta-review":ti OR "meta-reviews":ti OR "metareview":ti OR "metareviews":ti OR "umbrella review":ti OR "umbrella reviews":ti OR “scoping review”:ti) AND [2000-2025]/py AND [english]/lim NOT (‘animal experiment’/de NOT (‘human experiment’/de OR ‘human’/de)) AND ([article]/lim OR [article in press]/lim OR [review]/lim)

Cochrane Library (Wiley) Cochrane Reviews - 27 results
Advanced search > Search manager
Includes MeSH
Link to saved search - https://www.cochranelibrary.com/advanced-search/search-manager?search=7796197

ID	Search	Hits
#1	(assess*):ti,ab	666355
#2	MeSH descriptor: [Self Care] explode all trees	7913
#3	MeSH descriptor: [Self-Management] explode all trees	1437
#4	(self*):ti,ab	149289
#5	#2 OR #3 OR #4	151554
#6	MeSH descriptor: [Medication Adherence] explode all trees	9122
#7	MeSH descriptor: [Patient Medication Knowledge] explode all trees	16
#8	MeSH descriptor: [Prescription Drugs] explode all trees	167
#9	MeSH descriptor: [Pharmaceutical Preparations] explode all trees	89905
#10	MeSH descriptor: [Self Medication] explode all trees	119
#11	(medication* OR medicine* OR drug* OR pharmaceutical*):ti	61670
#12	#6 OR #7 OR #8 OR #9 OR #10 OR #11	154762
#13	MeSH descriptor: [Rehabilitation] explode all trees	56996
#14	MeSH descriptor: [Hospitals, Rehabilitation] explode all trees	8
#15	MeSH descriptor: [Hospitals] explode all trees	5738

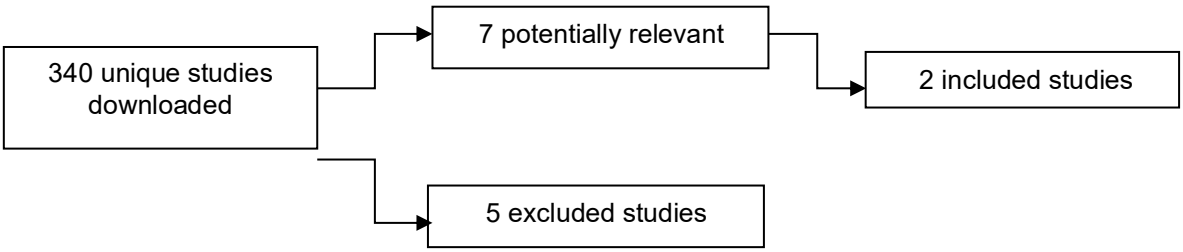
#16 MeSH descriptor: [Inpatients] explode all trees 1684
#17 MeSH descriptor: [Subacute Care] explode all trees 36
#18 (rehab* OR subacute OR "sub acute" OR hospital* OR inpatient*):ti,ab 303209
#19 #13 OR #14 OR #15 OR #16 OR #17 OR #18 345324
#20 #1 AND #5 AND #12 AND #19 with Cochrane Library publication date Between Jan 2000 and Dec 2025, in Cochrane Reviews 27



Search process

A search was developed in PubMed and translated for other health databases. Results were exported to an EndNote Library. Duplicates were removed using the SR Accelerator Deduplicator tool - https://sr-accelerator.com/#/deduplicator. The de-duplicated results were imported into a new EndNote Library for identifying potentially relevant results. For potentially relevant results, formatted references were copied in an annotated style into Word document for the CAT Group to select studies for critical appraisal.

Results



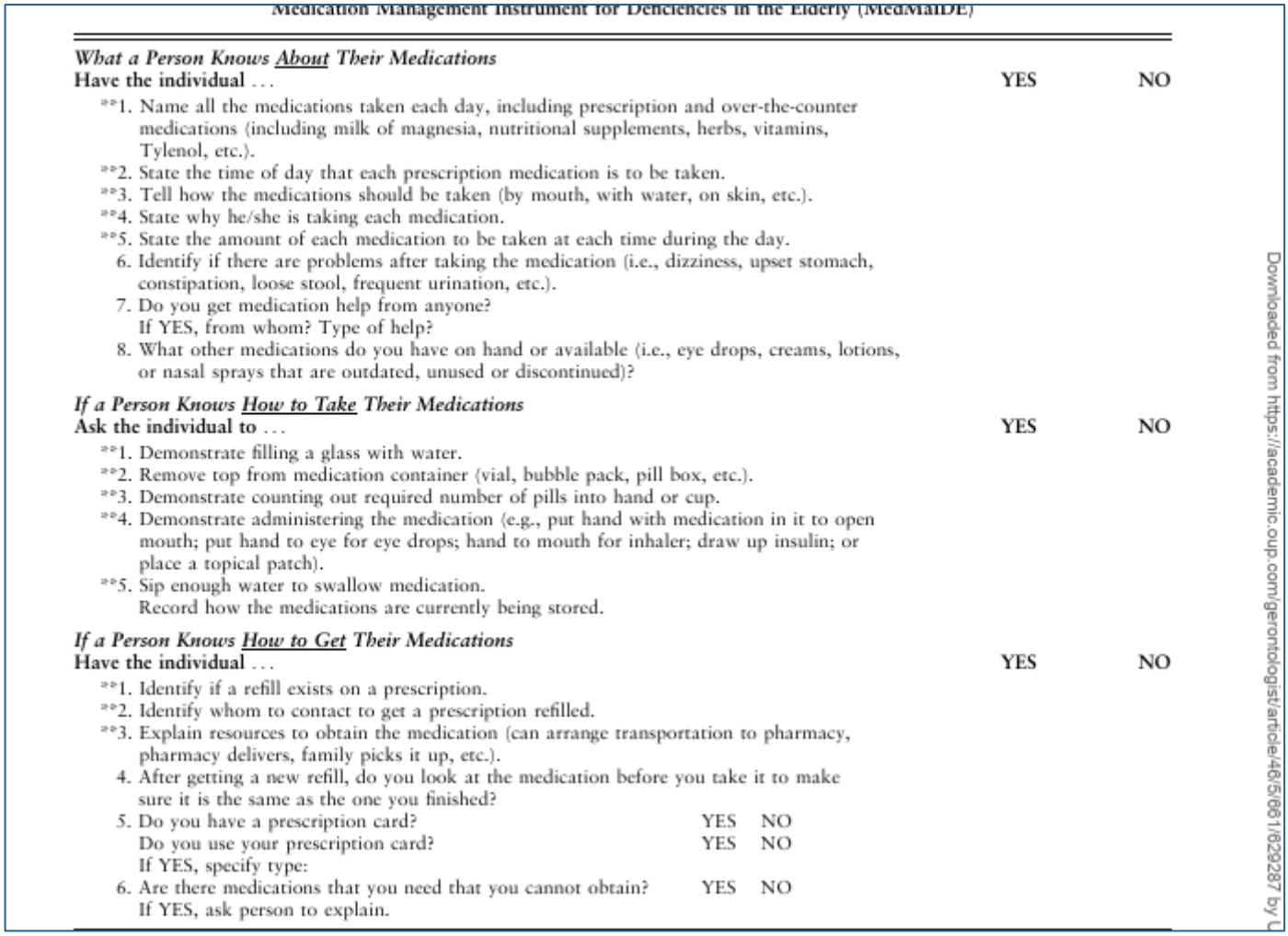
Seven potentially relevant papers were identified (4 systematic reviews and 3 scoping reviews). All seven shortlisted papers were reviewed by the shortlisting team on the 27th August by 1 researcher and 2 clinicians. Two papers were shortlisted:

1. Baby, B., McKinnon, A., Patterson, K., Patel, H., Sharma, R., Carter, C., ... & Patel, T. (2024). Tools to measure barriers to medication management capacity in older adults: A scoping review. *BMC Geriatrics*, *24*(1), 285. This paper was chosen as it appeared to include assessments which were comprehensive (i.e., assessed physical, cognitive, environmental and sensory factors. It was noted that the population tested was largely the elderly population.
2. Badawoud, A. M., Salgado, T. M., Lu, J., Parsons, P., Peron, E. P., & Slattum, P. W. (2020). Measuring medication self-management capacity: A scoping review of available instruments. *Drugs & Aging*, *37*(7), 483-501. This paper was chosen because of all the reviews examined in the shortlisting process, the mean age of participants was 39 which was more relevant to the age groups of admitted patients at STARS.

Summary

Both of the above papers were critically analysed prior to the final CAT group and discussed by attendees on the 10th September at the second CAT group meeting This second CAT meeting was attended by the librarian, consumer representative and researchers from SERA, however the only discipline providing intervention for patients at STARS who attended the meeting was pharmacy (i.e., the STARS occupational therapists were unable to attend). The outcomes of the discussion at the CAT group meeting included:

1. No tools with established psychometric properties for the inpatient rehabilitation populations (i.e., most other tools have established psychometric properties with community dwelling older adults.
2. PASS (i.e., assessment tool currently used by Occupational Therapists at STARS) not identified in either of the scoping reviews that were critically appraised, therefore the Librarian conducted a separate search for this after the second CAT group meeting.
3. On balance of all evidence, MedMaide appears to be an alternative screening tool with the best-established psychometric properties when compared with the DRUGS assessment tool. The specific components of the assessment are shown below:



Medication Management Instrument for Deficiencies in the Elderly (MedMaIDE)

What a Person Knows About Their Medications		
Have the individual . . .	**YES**	**NO**
**1. Name all the medications taken each day, including prescription and over-the-counter medications (including milk of magnesia, nutritional supplements, herbs, vitamins, Tylenol, etc.).		
**2. State the time of day that each prescription medication is to be taken.		
**3. Tell how the medications should be taken (by mouth, with water, on skin, etc.).		
**4. State why he/she is taking each medication.		
**5. State the amount of each medication to be taken at each time during the day.		
6. Identify if there are problems after taking the medication (i.e., dizziness, upset stomach, constipation, loose stool, frequent urination, etc.).		
7. Do you get medication help from anyone? If YES, from whom? Type of help?		
8. What other medications do you have on hand or available (i.e., eye drops, creams, lotions, or nasal sprays that are outdated, unused or discontinued)?		
If a Person Knows How to Take Their Medications		
Ask the individual to . . .	**YES**	**NO**
**1. Demonstrate filling a glass with water.		
**2. Remove top from medication container (vial, bubble pack, pill box, etc.).		
**3. Demonstrate counting out required number of pills into hand or cup.		
**4. Demonstrate administering the medication (e.g., put hand with medication in it to open mouth; put hand to eye for eye drops; hand to mouth for inhaler; draw up insulin; or place a topical patch).		
**5. Sip enough water to swallow medication. Record how the medications are currently being stored.		
If a Person Knows How to Get Their Medications		
Have the individual . . .	**YES**	**NO**
**1. Identify if a refill exists on a prescription.		
**2. Identify whom to contact to get a prescription refilled.		
**3. Explain resources to obtain the medication (can arrange transportation to pharmacy, pharmacy delivers, family picks it up, etc.).		
4. After getting a new refill, do you look at the medication before you take it to make sure it is the same as the one you finished?		
5. Do you have a prescription card?	YES	NO
Do you use your prescription card?	YES	NO
If YES, specify type:		
6. Are there medications that you need that you cannot obtain?	YES	NO
If YES, ask person to explain.		

Source: Orwig, D., Brandt, N., & Gruber-Baldini, A. L. (2006). Medication management assessment for older adults in the community. *The Gerontologist*, *46*(5), 661–668. https://doi.org/10.1093/geront/46.5.661

The separate search from the Librarian identified the following about the PASS (Performance Assessment of Self-Care Skills) tool which is currently used at STARS:

- Is used to assess competence for community living.
- Has been tested in a range of diagnostic groups in the adult population as well as the elderly population. It has been translated into Spanish, Hebrew, Mandarin, Farsi, Turkish, and Arabic
- Has established psychometric properties with established versions for use within a healthcare setting with good to excellent test-retest reliability, interobserver agreement, and well-established construct validity.
- Medication management is one task identified in the IADL (instrumental activities of daily living) section of the tasks. It assesses the cognitive abilities related to medication management.

Therefore, the PASS tool is suitable for use in an inpatient rehabilitation setting and may identify how cognitive impairments impact on a patient's ability to take medications.

Source: Chisholm, D., Toto, P., Raina, K., Holm, M., & Rogers, J. (2014). Evaluating capacity to live independently and safely in the community: Performance assessment of self-care skills. *The British Journal of Occupational Therapy*, *77*(2), 59–63. https://doi.org/10.4276/030802214X13916969447038

Implications for Practice/Research

Evidence indicates further research is required to establish the psychometric properties of self-medication assessment tools in adult inpatient rehabilitation populations, as all existing tools have only been tested with community dwelling older adults. The MedMaide was identified as the best screening tool based on reviewing the highest-level evidence available and could be trialled in the STARS setting to determine if it has a better fit for purpose. However the MedMaide does not appear to include an assessment of a person's cognitive ability to plan and schedule how to take medications (i.e., does not take into consideration a person's ability to be orientated to time, make judgments and plan and schedule taking medications based on reading medication labels to know when in the context of a daily schedule that medications should be taken). If there are concerns about a person's cognitive ability, this information would also need to be assessed. Overall, there does not appear to be a single assessment that comprehensively assesses a person's ability to self-manage medications. Multiple assessments may be needed to determine this.

What would you tweet? (140 characters)

Evidence indicates further research is required to establish the psychometric properties of comprehensive self-medication assessment tools in adult inpatient rehabilitation populations

Critical Appraisal Topic Group Team Members

Dale Trevor- Consumer

Anna Hendy - STARS Pharmacy Team Leader and CAT group clinical lead

Sharon Millhouse – STARS Pharmacist

Rachael Betts – STARS Occupational Therapist

Niamh Ward- STARS Occupational Therapist

Natalie Barker– UQ Librarian

Kimberley Baxter - STARS CCI research officer/dietician

Annelise Silveria – STARS Postdoctoral Research Fellow- Musculoskeletal

Sarah Prescott- STARS Postdoctoral Research Fellow- Brain injury (CAT group leader)

Lisa Wright (did not attend – STARS Research Support Officer / Occupational Therapist)

CAT group meeting dates

20th August and 10th September (shortlisting meeting conducted on the 27th August) 2025

References

Baby, B., McKinnon, A., Patterson, K., Patel, H., Sharma, R., Carter, C., ... & Patel, T. (2024). Tools to measure barriers to medication management capacity in older adults: Ascoping review. *BMC Geriatrics*, *24*(1), 285. This paper was chosen as it appeared to include assessments which were comprehensive (i.e., assessed physical, cognitive, environmental and sensory factors. It was noted that the population tested was largely the elderly population.

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