

Rehabilitation Medicine

Version 7

Clinical Indicator User Manual



Endorsed by:



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The data collected with this User Manual are to be reported and submitted to ACHS using the ACHS Performance Indicator Reporting Tool (PIRT ONLINE) at <https://pirt.achs.org.au/login.aspx>

The Rehabilitation Medicine Working Party is led by Ms Frances Simmonds
Version 7 of this set of clinical indicators will be released for data collection in June 2021

Participating Colleges, Societies and Associations

Australasian Faculty of Rehabilitation Medicine
<https://www.racp.edu.au/page/racp-faculties/australasian-faculty-of-rehabilitation-medicine>

Australasian Rehabilitation Outcomes Centre
<https://ahsri.uow.edu.au/aroc/index.html>

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FOREWORD

History

The Clinical Indicators in Rehabilitation Medicine were first developed by a Working Party of the Australasian Faculty of Rehabilitation Medicine (AFRM) of the Royal Australasian College of Physicians (RACP). The process of the AFRM Clinical Indicator development started in 1992 when a field review was conducted. This was followed by the drafting of Clinical Indicators in July 1994. The indicators were then field tested in 1995 and on the basis of the data comments received, the indicators were modified by the Working Party.

Version 1 of the Clinical Indicators were formally approved by the AFRM Council in May 1996 and introduced into the ACHS Evaluation and Quality Improvement Program (EQulP) from January 1997.

Version 2 was introduced for collection in 1999 following minor changes to Version 1. During 2001 the Working Party again reviewed the indicators, amending the definition of terms and introduced the categories of facilities under which the results are collected.

Version 3 was collected from 2002 and three years later required further review. During 2005 the AFRM in consultation with the ACHS planned to conduct a major review of the Rehabilitation Medicine Indicators. However the AFRM's Clinical Indicator Working Party was disbanded during 2005, and, early in 2006, the Australasian Rehabilitation Outcomes Centre (AROC) was asked to take over the role of advising the AFRM Council about Clinical Indicators.

For Version 4 AROC convened a small committee which reviewed the ACHS Rehabilitation Clinical Indicators. A number of changes to the Version 3 indicators were recommended, including a change to the perspective of many of the indicators. Instead of counting when something had not happened, the Version 4 indicators required a count of when an event had happened. Two indicators have been deleted – Program Interruption and Inpatient Mortality and two new outcome based indicators were included - FIM Change Achieved and Discharge Destination. Version 4 of the Clinical Indicators were formally approved by the AFRM Council in February 2007 and were implemented from 1 January 2008.

For development of Version 5 of the Clinical Indicators expression of interest was sought from Faculty members in May 2011 followed by the formation of a working party where Version 4 was reviewed. The draft user manual of Version 5 was sent to all Rehabilitation Physicians and the AROC Scientific and Clinical Advisory Committee (SCAC), and all feedback from this circulation was incorporated.

The development of Version 6 of the Clinical Indicators followed a slightly different trajectory. Members of the AFRM Council and AFRM Policy & Advocacy committee formed the committee that reviewed, with input from AROC, the Version 5 indicators. These revised indicators were then sent to the AFRM college wide committee for final approval. Changes to this version have been minor, the main change being to Indicator 6, which has reverted to describing discharge destination rather than a combination of discharge destination and carer status.

Latest Review

For Version 7 AROC, in association with AFRM, convened a multi-disciplinary working party via expression of interests. The Version 7 indicators saw the removal of two indicators - Functional assessment within 72 hours before end of rehabilitation and Discharge plan on separation. The former was removed as it was seen to be obsolete; to meet the indicators of timely assessment of function on admission and functional gain achieved by rehabilitation program, an assessment prior to episode end must be completed. The latter was seen to

have become embedded as a normal process now; as seen by a high achievement rate (97.8%), and therefore no longer required.

Two new indicators are introduced in Version 7 - Rate of fallers and Rehabilitation intensity. These new indicators represent a significant change to the rehabilitation medicine indicator set but their addition will serve to drive ongoing improvement in the quality of rehabilitation provided in Australia.

Frances Simmonds

Chair, Rehabilitation Medicine Working Party
Australasian Rehabilitation Outcomes Centre

STRATIFICATION VARIABLES

The ACHS, in collaboration with relevant professional colleges, associations and specialty societies, has developed the following stratification variables to enable 'like' organisations to be grouped for the purpose of comparison.

Four levels of comparison are available:

- An individual organisation's data compared to **ALL** organisations that submit data for a particular indicator
- Each individual organisation's data compared to all other organisations submitting data within the same sector, that is, public or private
- Within the Australasian Clinical Indicator Report (published annually), data are compared by state, public/private and on a metropolitan/non-metropolitan basis. These historical data are accessible from the 'Retrospective ACIR data in full' tab via the following link on the ACHS website: <http://www.achs.org.au/publications-resources/australasian-clinical-indicator-report/>
- An individual organisation's data compared to other organisations classified according to defined stratification variables for the indicator set. The criteria used to stratify an indicator set are based on the factors that the Working Party believes may impact how different healthcare organisations perform.

Organisations interested to see their data stratified against additional variables, should contact POS (pos@achs.org.au) to request the additional reports.

Rehabilitation Medicine stratification variables

All organisations are stratified into public / private categories and type of rehabilitation care:

- **Category 1:** Rehabilitation service provided by allied health professionals under the clinical supervision of the referring medical officer.
- **Category 2:** Rehabilitation service providing rehabilitation within a particular medical speciality such as orthopaedics, geriatrics or cardiology and is under the direction of an appropriate qualified specialist.
- **Category 3:** Rehabilitation service under the direction of a Rehabilitation Medicine Specialist and providing a full range of rehabilitation services.

REHM AREA 1: Timely assessment of function on admission

Rationale

The implementation of an effective rehabilitation program is dependent upon the early assessment of patient function. Use of a standardised assessment instrument provides a baseline from which functional improvement can be measured.

(See Background for more information)

Reporting periods

1 January – 30 June

1 July – 31 December

Inclusions

- As per numerator and denominator.

Exclusions

- Patients admitted to a rehabilitation unit / facility whose length of stay is less than 48 hours are to be **EXCLUDED**.

Data cleaning rules

- Nil

Suggested Data Collection

Interrogation of the AROC data set.

Definitions of terms

For the purpose of CI 1.1:

Functional assessment should include both cognitive and physical function through the use of a standardised functional assessment instrument such as FIM, WeeFIM, Barthels Index or MMSE.^{1,2}

Assessment is complete when the last item of a standardised functional assessment instrument is completed and the time stamp should be the date on which this **occurs**. Even if the recording of this date happens on a day subsequent to the day the last item of a standardised functional assessment instrument was completed, the date recorded **must** be the date the last item of any assessment was completed.

AROC data indicates that more than 95% of episodes from 2019 would have met this new timeframe. Whilst the achievement of 100% is ideal, it is acknowledged that a facility / unit may not be able to achieve this. A performance benchmark of at least 90% should be the target.

Indicator(s) within this Area

CI 1.1: Functional assessment within 48 hours of admission

Numerator	Number of patients admitted to a rehabilitation unit / facility for whom there is documented evidence of a functional assessment within 48 hours of patient admission, during the 6 month reporting period.		
Denominator	Number of patients admitted to the rehabilitation unit / facility with a minimum length of stay of 48 hours, during the 6 month reporting period.		
Desirable rate:	High <input checked="" type="checkbox"/>	Low <input type="checkbox"/>	Not specified <input type="checkbox"/>
Indicator type:	Structure <input type="checkbox"/>	Process <input checked="" type="checkbox"/>	Outcome <input type="checkbox"/>

Background

Rehabilitation medicine focuses on the prevention and reduction of functional loss due to impairment, with care being centred on the return to optimal functioning.^{3, 4} The use of appropriate assessment tools have the ability to provide a functional prognosis.⁵ The ability of healthcare professionals to make a quick prognostic decision is especially important in the current healthcare environment due to the focus on reducing patients' length of stay in hospital.⁵⁻⁷ An early assessment and prognosis of function provides the following important benefits:⁵

- setting of realistic functional goals
- facilitating appropriate discharge planning
- anticipating the need for provisions, modifications, and/or support needs

The Functional Independence Measure (FIM™) instrument and its paediatric counter-part (WeeFIM®) provides a severity of disability score through the assessment of 18 items associated with motor and cognitive function.^{1, 8} The FIM™ is routinely collected by rehabilitation facilities / units and is used as a basis for benchmarking a patient's outcomes, and remains one of the key assessment tools recommended by the Australasian Rehabilitation Outcomes Centre (AROC).^{1, 8} The FIM™ tool is most effective if conducted by a multidisciplinary team in an inpatient setting within 72 hours of admission.¹ The literature recommends that the FIM™ instrument be used concurrently with other tools for patients at the extreme ends of the functional spectrum (either very high functioning or very low functioning).⁹ This will facilitate the capacity to measure the significant and minimal functional progressions that can occur in these extreme populations.⁹

The Australasian Faculty of Rehabilitation Medicine (AFRM) and AROC recommends functional assessment be conducted at admission, enabling baseline data to be captured prior to an intervention, such as a rehabilitation program.^{4, 10} The AROC stipulates that the FIM™ assessment needs to be completed within 72 hours of admission, with the assessment completion being the time the last item within the FIM™ is completed.¹¹ The literature has shown a correlation between the time from injury to commencement of rehabilitation and the rehabilitation outcomes,^{12, 13} highlighting the importance of timely functional assessment and initiation of a rehabilitation program.

References

1. Mackintosh S. Functional independence measure. *Australian Journal of Physiotherapy* 2009; 55: 65.
2. Beckers K, Netz J and Homberg V. The measurement of outcome in day care neurological rehabilitation: discrepancies between changes in FIM and Barthel scores and achievement of treatment goals. *Neurophysical Rehabilitation* 1999; 9(3-4): 437-446.
3. Australasian Faculty of Rehabilitation Medicine. Equity of access to quality rehabilitation services for rural and remote communities, including Aboriginal and Torres Strait Islander communities and the Maori people of New Zealand. 2014 Accessed from <https://members.racp.edu.au/index.cfm?objectid=02A28582-E795-54CF-2A8041E0BD658E1E> on 2/02/2016.
4. Australasian Faculty of Rehabilitation Medicine. AFRM Standards: standards for the provision of inpatient adult rehabilitation medicine services in public and private hospitals. 2011 Accessed from <https://www.racp.edu.au/docs/default-source/default-document-library/afrm-standards-2011.pdf?sfvrsn=2> on 2/02/2016.
5. Bland MD, Sturmoski A, Whitson M *et al.* Prediction of Discharge Walking Ability From Initial Assessment in a Stroke Inpatient Rehabilitation Facility Population. *Archives of Physical Medicine and Rehabilitation* 2012; 93(8): 1441-1447.
6. Okuno Y, Miyasaka T and Dobashi K. Factors Influencing the Outcome of Acute Rehabilitation: Functional Independence Measure Assessment at Discharge. *Journal of Physical Therapy Science* 2012; 24(6): 491-494.
7. Kimmel LA, Holland AE, Simpson PM *et al.* Validating a Simple Discharge Planning Tool Following Hospital Admission for an Isolated Lower Limb Fracture. *Physical Therapy* 2014; 94(7): 1005-1013.
8. Australasian Rehabilitation Outcomes Centre. *What is the FIMTM Instrument*?* AROC, University of Wollongong. Accessed from <http://ahsri.uow.edu.au/aroc/whatisfim> on 2/02/2016.
9. Stubbs PW, Pallesen H, Pedersen AR and Nielsen JF. Using EFA and FIM rating scales could provide a more complete assessment of patients with acquired brain injury. *Disability and Rehabilitation* 2014; 36(26): 2278-2281.
10. Australasian Rehabilitation Outcomes Centre. *Frequently Asked Clinical Questions.* AROC, University of Wollongong. Accessed from <http://ahsri.uow.edu.au/aroc/faqclinical> on 2/02/2016.
11. Australasian Rehabilitation Outcomes Centre. AROC v4 Data Dictionary for Clinicians - AU. 2015 Accessed from <https://apps.ahsri.uow.edu.au/confluence/display/AD/AROC+Data+Dictionaries> on 2/02/2016.
12. Fase B, Takeru A, Hidekazu M *et al.* Interaction effects between rehabilitation and discharge destination on inpatients' functional abilities. *Journal of Rehabilitation Research & Development* 2013; 50(6): 821-833.
13. Hakkennes S, Lindner C and Reid J. Implementing an inpatient rehabilitation Saturday service is associated with improved patient outcomes and facilitates patient flow across the health care continuum. *Disability & Rehabilitation* 2015; 37(8): 721-727.

REHM AREA 2: Timely establishment of an initial multidisciplinary rehabilitation plan

Rationale

The establishment of an initial rehabilitation plan with regular review is necessary for effective patient rehabilitation. The multidisciplinary clinical team meeting is a vital component of the rehabilitation planning process.

(See Background for more information)

Reporting periods

1 January – 30 June

1 July – 31 December

Inclusions

- As per numerator and denominator.

Exclusions

- Patients admitted to a rehabilitation unit / facility whose length of stay is less than 7 days are to be **EXCLUDED**.

Data cleaning rules

- Nil

Suggested Data Collection

Interrogation of the AROC data set.

Definitions of terms

For the purpose of CI 2.1:

Rehabilitation plan refers to the documentation of negotiated, patient centred goals and the ongoing progress and plans to achieve these within a specified time frame. The process is led by a Rehabilitation Physician or a Physician with specialised expertise in rehabilitation, in consultation with the multidisciplinary team, most often in the context of a multidisciplinary meeting. The patient and/or carer should be included in the planning process, except when physically or cognitively unable.

Indicator(s) within this Area

CI 2.1: Multidisciplinary team plan within 7 days

Numerator	Number of patients admitted to a rehabilitation unit / facility for whom there is a documented establishment of an initial multidisciplinary rehabilitation plan within 7 days of patient admission, during the 6 month reporting period.		
Denominator	Number of patients admitted to a rehabilitation unit / facility with a minimum length of stay of 7 days, during the 6 month reporting period.		
Desirable rate:	High <input checked="" type="checkbox"/>	Low <input type="checkbox"/>	Not specified <input type="checkbox"/>
Indicator type:	Structure <input type="checkbox"/>	Process <input checked="" type="checkbox"/>	Outcome <input type="checkbox"/>

Background

The quality of care provided to rehabilitation patients is optimised when multidisciplinary teams have effective communication and decision making processes.¹⁻³ Common members of the rehabilitation multidisciplinary team include doctors, nurses and allied health staff, however the team can vary depending on the environment.^{4,5} The sharing of knowledge, in a structured and unstructured manner, fosters collaborative working within a multidisciplinary team and between professional specialties, and assists in the establishment of common terminology and values.^{2,6} The formation of the Australasian Rehabilitation Nurses' Association (ARNA) in the early 1990s greatly influenced the development of rehabilitation as a specialty of nursing, and lead to the creation of rehabilitation nursing competency standards.⁷ Nurses can be a key player in the coordination of the team.^{3,7} The introduction of a structured multidisciplinary team development programme will facilitate thought being given to crucial operational components such as the meeting time, facilitator, agenda, documentation etc. which are variables that will impact upon the function of a multidisciplinary rehabilitation team.²

The Australasian Faculty of Rehabilitation Medicine (AFRM) standards state that a multidisciplinary team must create a written rehabilitation plan for each patient based on the patient's assessment at admission to the facility.⁵ The AFRM also recommends that staffing in rehabilitation units be sufficient enough in time allocation to allow for the provision of individualised programs to meet the needs of the rehabilitation patient.⁵ Patient outcomes are optimised when there is the establishment of patient-centred goals⁸ that cross many different health disciplines, rather than a discipline-centred goal.¹ Patients who are actively involved in the rehabilitation planning process are more likely to experience positive outcomes.⁸ The rehabilitation plan can be a powerful goal setting tool that is reviewed regularly and the patient evaluated against the established plan.^{5,8}

References

1. Sinclair LB, Lingard LA and Mohabeer RN. What's So Great About Rehabilitation Teams? An Ethnographic Study of Interprofessional Collaboration in a Rehabilitation Unit. *Archives of Physical Medicine and Rehabilitation* 2009; 90(7): 1196-1201.
2. Benson A. Creating a culture to support patient safety. The contribution of a multidisciplinary team development programme to collaborative working. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen* 2010; 104(1): 10-17.
3. White MJ, Gutierrez A, McLaughlin C *et al.* A Pilot for Understanding Interdisciplinary Teams in Rehabilitation Practice. *Rehabilitation Nursing* 2013; 38(3): 142-152.
4. Savage TA, Parson J, Zollman F and Kirschner KL. Rehabilitation Team Disagreement: Guidelines for Resolution. *PM&R* 2009; 1(12): 1091-1097.
5. Australasian Faculty of Rehabilitation Medicine. AFRM Standards: standards for the provision of inpatient adult rehabilitation medicine services in public and private hospitals. 2011 Accessed from <https://www.racp.edu.au/docs/default-source/default-document-library/afrm-standards-2011.pdf?sfvrsn=2> on 2/02/2016.
6. Davies K, Harrison K, Clouder DL *et al.* Making the transition from physiotherapy student to interprofessional team member. *Physiotherapy* 2011; 97(2): 139-144.
7. Pryor J and Buzio A. Enhancing inpatient rehabilitation through the engagement of patients and nurses. *Journal of Advanced Nursing* 2010; 66(5): 978-987.
8. Lexell EM, Lexell J and Larsson-Lund M. The rehabilitation plan can support clients' active engagement and facilitate the process of change – experiences from people with late effects of polio participating in a rehabilitation programme. *Disability and Rehabilitation* 2016; 38(4): 329-336.

REHM AREA 3: Functional gain achieved by rehabilitation program

Rationale

Rehabilitation programs aim to provide the highest level of independence (physically, psychologically and socially) to people with loss of function or ability due to injury or disease. This indicator serves as a broad measure that the unit is achieving functional gains on behalf of their patients. FIM / WeeFIM is the standardised functional assessment instrument that is routinely collected by rehabilitation facilities / units and is used as a basis for benchmarking their outcomes.

(See Background for more information)

Reporting periods

1 January – 30 June

1 July – 31 December

Inclusions

- As per numerator and denominator.

Exclusions

- Patients who die are to be **EXCLUDED**.
- Patients whose suspension of rehabilitation treatment leads to a care type change to acute care are to be **EXCLUDED**.

Data cleaning rules

- Nil

Suggested Data Collection

Interrogation of the AROC data set.

Definition of terms

For the purpose of CI 3.1:

A completed rehabilitation program occurs when a patient finishes their program and undergoes a functional assessment prior to episode end.

Rehabilitation program refers to a multidisciplinary rehabilitation plan as documented within the patient record.

Functional gain means that the standardised functional assessment instrument used indicates a **positive difference** between the **admission score** and the **score at episode end**.¹

Assessment of function should include both cognitive and physical function through the use of a standardised functional assessment instrument (such as FIM, WeeFIM, Barthels Index or MMSE).^{1,2}

Indicator(s) within this Area

CI 3.1: Functional gain following completed rehabilitation program

Numerator	Number of patients who have completed a rehabilitation program and for whom there is documented evidence of functional gain , during the 6 month reporting period.					
Denominator	Number of patients who have completed a rehabilitation program , during the 6 month reporting period.					
Desirable rate:	High	<input checked="" type="checkbox"/>	Low	<input type="checkbox"/>	Not specified	<input type="checkbox"/>
Indicator type:	Structure	<input type="checkbox"/>	Process	<input type="checkbox"/>	Outcome	<input checked="" type="checkbox"/>

Background

The evaluation of a rehabilitation program is important to determine if the program is meeting its objectives. The Functional Independence Measure (FIM™) gain achieved through a rehabilitation program is a strong predictor of long-term mortality risk.³ The improved ability to conduct activities of daily living and the ability to walk safely are common objectives of rehabilitation programs.⁴ Follow-up assessments are important to gain feedback on whether the prescribed program was firstly, completed by the patient, and secondly, effective in producing functional gains for the patient.⁵ There are several tools that can be utilised to evaluate a rehabilitation program. Analysis of a tool's responsiveness to genuine functional change should be a key determinant in the selection of the appropriate assessment tool for that particular patient or rehabilitation program.⁶ The functional gains achieved by a rehabilitation program can also be assessed through the monitoring of carer involvement required.⁷

The success of a rehabilitation program can be impacted upon by developed or existing comorbidities, such as cardiac disease, drug and alcohol abuse, and respiratory disease, and complications, such as a fracture, infection, or fall.⁷ It is important for a healthcare professional to identify and document comorbidity and complication confounders, and monitor occasions where they may have interrupted the compliance with a rehabilitation program as it will likely impact upon the functional gain reached.⁷ Compliance with a rehabilitation program can also be enhanced through the forming of a meaningful relationship between the patient and the multidisciplinary team members.⁸

References

1. Mackintosh S. Functional independence measure. *Australian Journal of Physiotherapy* 2009; 55: 65.
2. Beckers K, Netz J and Homberg V. The measurement of outcome in day care neurological rehabilitation: discrepancies between changes in FIM and Barthel scores and achievement of treatment goals. *Neurophysical Rehabilitation* 1999; 9(3-4): 437-446.
3. Scrutinio D, Monitillo V, Guida P *et al.* Functional Gain After Inpatient Stroke Rehabilitation: Correlates and Impact on Long-Term Survival. *Stroke* 2015; 46(10): 2976-2980.
4. Bland MD, Sturmoski A, Whitson M *et al.* Prediction of Discharge Walking Ability From Initial Assessment in a Stroke Inpatient Rehabilitation Facility Population. *Archives of Physical Medicine and Rehabilitation* 2012; 93(8): 1441-1447.
5. Schmidt AS. Outcome Trends Post Discharge from Inpatient Rehabilitation to the Community. *Rehabilitation Nursing* 2013; 38(6): 284-296.
6. Fioravanti AM, Bordignon CM, Pettit SM *et al.* Comparing the Responsiveness of the Assessment of Motor and Process Skills and the Functional Independence Measure. *Canadian Journal of Occupational Therapy* 2012; 79(3): 167-174.
7. Australasian Rehabilitation Outcomes Centre. AROC v4 Data Dictionary for Clinicians - AU. 2015 Accessed from <https://apps.ahsri.uow.edu.au/confluence/display/AD/AROC+Data+Dictionaries> on 2/02/2016.
8. Tyrrell EF, Levack WM, Ritchie LH and Keeling SM. Nursing contribution to the rehabilitation of older patients: patient and family perspectives. *Journal of Advanced Nursing* 2012; 68(11): 2466-2476.

REHM AREA 4: Discharge destination

Rationale

One measure of an effective rehabilitation program is that it allows the patient to return to a previous, similar or improved type of accommodation. Measuring the destination of a patient subsequent to discharge from a rehabilitation program is both an outcome measure and a quality measure.

[\(See Background for more information\)](#)

Reporting periods

1 January – 30 June

1 July – 31 December

Inclusions

- As per numerator and denominator.

Exclusions

- Patients who die are to be **EXCLUDED**.
- Patients whose suspension of rehabilitation treatment leads to a care type change to acute care are to be **EXCLUDED**.

Data cleaning rules

- Nil

Suggested Data Collection

Interrogation of the AROC data set.

Definition of terms

For the purpose of CI 4.1:

Destination refers to the final place that the patient will go to after the end of their rehabilitation program, for example private residence, residential care, etc. Some patients transition through another form of accommodation prior to attaining their final private residence destination. Where there is a definite plan that the ultimate discharge destination will be a private residence within a defined timeframe, then for the purpose of this indicator, the private residence should be considered the discharge destination.

A completed rehabilitation program occurs when a patient finishes their program and undergoes a functional assessment prior to episode end.

Rehabilitation program refers to a multidisciplinary rehabilitation plan as documented within the patient record.

Indicator(s) within this Area

CI 4.1: Destination after discharge from a rehabilitation program

Numerator	Number of patients who have completed a rehabilitation program and been discharged to a previous, similar or improved type of accommodation, during the 6 month reporting period.					
Denominator	Number of patients who have completed a rehabilitation program and been discharged, during the 6 month reporting period.					
Desirable rate:	High	<input checked="" type="checkbox"/>	Low	<input type="checkbox"/>	Not specified	<input type="checkbox"/>
Indicator type:	Structure	<input type="checkbox"/>	Process	<input type="checkbox"/>	Outcome	<input checked="" type="checkbox"/>

Background

The discharge destination is a factor that can influence a patient’s functional ability and progress following hospital discharge.¹ Some patients are deemed suitable for discharge but they require a period of time in an interim destination, possibly for further rehabilitation or whilst the final destination is appropriately prepared.² The early prediction of discharge destination generally allows for appropriate planning and preparation by the patient and carer, families members and/or support agencies.^{3,4} Furthermore, the early determination of likely discharge destination and timing, facilitates appropriate resource allocation within the health system, which is an important benefit if resources are constrained.⁵

There is a high correlation between high Functional Independence Measure (FIM™) scores at admission and discharge to home rather than another facility.¹ Research has found that a patient’s excretion control, ability to care for themselves and transfer ability are key determinants in a patient’s suitability to be discharged to their home rather than alternate location.⁶ The presence of home support is also a strong predictor of a patient being able to be discharged home.⁷ For stroke patients it has been shown that as well as their Motor Assessment Scale (MAS) results, their residential status and age were key determinants in predicting their discharge destination.³ Home-based rehabilitation initiatives have been shown to target a broad range of conditions with good outcomes, including improvements to function and quality of life whilst remaining within the community.^{1, 8-10} Whilst it has been reported that some healthcare professionals remain cautious regarding the outcomes that can be achieved by a home-based rehabilitation program,¹¹ recent literature reviews have found that home-based rehabilitation can have outcomes comparable, and potentially even better than, inpatient rehabilitation programs for a number of patient groups.^{9, 11} It has been comprehensively demonstrated in the literature that the patients in need of rehabilitation in the home-based setting have the best outcomes when they are supported by physiotherapists and occupational therapists.⁹ A recent investigation into the use of rehabilitation in the home (RITH) in metropolitan Perth found that the main reason for readmission of patients was due to the presence of comorbidities. The study therefore recommended the careful selection of appropriate patients to RITH to improve the chances of optimal outcomes.⁸

References

1. Fase B, Takeru A, Hidekazu M *et al.* Interaction effects between rehabilitation and discharge destination on inpatients' functional abilities. *Journal of Rehabilitation Research & Development* 2013; 50(6): 821-833.
2. Australasian Rehabilitation Outcomes Centre. AROC v4 Data Dictionary for Clinicians - AU. 2015 Accessed from <https://apps.ahsri.uow.edu.au/confluence/display/AD/AROC+Data+Dictionaries> on 2/02/2016.
3. Brauer SG, Bew PG, Kuys SS *et al.* Prediction of Discharge Destination After Stroke Using the Motor Assessment Scale on Admission: A Prospective, Multisite Study. *Archives of Physical Medicine and Rehabilitation* 2008; 89(6): 1061-1065.
4. Bland MD, Sturmoski A, Whitson M *et al.* Prediction of Discharge Walking Ability From Initial Assessment in a Stroke Inpatient Rehabilitation Facility Population. *Archives of Physical Medicine and Rehabilitation* 2012; 93(8): 1441-1447.
5. Kimmel LA, Holland AE, Simpson PM *et al.* Validating a Simple Discharge Planning Tool Following Hospital Admission for an Isolated Lower Limb Fracture. *Physical Therapy* 2014; 94(7): 1005-1013.
6. Okuno Y, Miyasaka T and Dobashi K. Factors Influencing the Outcome of Acute Rehabilitation: Functional Independence Measure Assessment at Discharge. *Journal of Physical Therapy Science* 2012; 24(6): 491-494.
7. Lindenberg K, Nitz JC, Rahmann A and Bew P. Predictors of Discharge Destination in a Geriatric Population After Undergoing Rehabilitation. *Journal of Geriatric Physical Therapy* 2014; 37(2): 46-98.
8. Bharadwaj S and Bruce D. Effectiveness of 'rehabilitation in the home' service. *Australian Health Review* 2014; 38(5): 506-509.
9. Cook RJ, Berg K, Lee K-A *et al.* Rehabilitation in Home Care Is Associated With Functional Improvement and Preferred Discharge. *Archives of Physical Medicine and Rehabilitation* 2013; 94(6): 1038-1047.
10. Schmidt AS. Outcome Trends Post Discharge from Inpatient Rehabilitation to the Community. *Rehabilitation Nursing* 2013; 38(6): 284-296.
11. Kraut JC, Singer BJ and Singer KP. Referrer and service provider beliefs and attitudes towards rehabilitation in the home; factors related to utilisation of Early Supported Discharge. *Disability and Rehabilitation* 2014; 36(25): 2178-2186.

REHM AREA 5: Rate of fallers

Rationale

Falls within hospitals represent a significant cause of harm for older people. The measurement of the rate of fallers within a rehabilitation unit/facility allows for ongoing monitoring and evaluation of strategies to reduce the rate of fallers and the harm caused by them.

(See Background for more information)

Reporting periods

1 January – 30 June

1 July – 31 December

Inclusions

- All patients who are admitted to a rehabilitation unit/facility are to be **INCLUDED**.

Exclusions

- No patients will be **EXCLUDED**.

Data cleaning rules

- Nil

Suggested Data Collection

Interrogation of hospital records. NOTE: AROC has built these items into the inpatient data set for this information to be recorded against, effective from 11th October 2021

Definition of terms

For the purpose of CI 5.1:

A **fall** is an event which results in a person coming to rest inadvertently on the ground or floor or other lower level.¹This includes when a patient is lowered to the floor but excludes seizures or syncopal episodes.

Indicator(s) within this Area

CI 5.1: Rate of fallers of less than 15% of admissions

Numerator	Number of patients who have fallen during their inpatient rehabilitation program, during the 6 month time period.		
Denominator	Number of patients admitted to a rehabilitation unit, during the 6 month time period.		
Desirable rate:	High <input type="checkbox"/>	Low <input checked="" type="checkbox"/>	Not specified <input type="checkbox"/>
Indicator type:	Structure <input type="checkbox"/>	Process <input type="checkbox"/>	Outcome <input checked="" type="checkbox"/>

Background

Currently there is no accepted benchmark in Australia for falls or fallers rates with rehabilitation units. Published falls rates among older people in hospital vary from 4-12 per 1000 occupied bed days and are higher from certain population groups including stroke.² These rates are largely made up of acute admissions and may not be representative of acceptable rates within rehabilitation units due to proportionally small number of rehabilitation admissions across the entire inpatient hospital system.

A 2015 RCT in general rehabilitation units within Australia looking at an individualised education program, found falls rates of 7.8/1000 bed days in the intervention group and 13.78 in the control group. The fallers rate was 8.85% and 12.5% of total admissions in the intervention group and control group respectively. Higher rates were found in patients with impaired cognition.³

A 2011 study in two American geriatric rehabilitation units found falls rates of 7-8/1000 bed days,⁴ while 2006 Italian study in an Orthopaedic and Neurological rehabilitation unit found 12.5% of patients admitted had a fall.⁵

The rate of fallers was chosen as a more suitable measure for rehabilitation units than a falls rate. It was considered more suitable as the rates will be reported at a facility level and therefore overall numbers would be small, a very small number of multiple fallers could skew the data collected.

The rate of less than 15% was chosen by considering the limited evidence available and discussions within the working party. The rate may need to be modified in the future.

As this is a new indicator it will be reviewed after one year of implementation.

References

1. World Health Organization. Falls. www.who.int/news-room/fact-sheets/detail/falls
2. Preventing Falls and Harm From Falls in Older People: Best Practice Guidelines for Australian Hospitals 2009. ACSQHC
3. Hill et al, Fall rates in hospital rehabilitation units after individualised patient and staff education programmes: a pragmatic, stepped-wedge, cluster-randomised controlled trial. *The Lancet* 2015;385:2592-2599
4. Vieira et al, Risk and suggestions to prevent falls in geriatric rehabilitation: a participatory approach. *BMJ Qual Saf* 2011;20:440-448
5. Saverino et al, Falls in rehabilitation setting: functional independence and fall risk. *Eura Medicophys* 2006;42:179-84

REHM AREA 6: Rehabilitation Intensity

Rationale

The intensity or amount of rehabilitation therapy a patient receives is a vital factor in their recovery. The measurement of rehabilitation intensity will allow for benchmarking against impairment specific guidelines and across the sector.

(See Background for more information)

Reporting periods

1 January – 30 June

1 July – 31 December

Inclusions

- All patients who are admitted to a rehabilitation unit/facility are to be **INCLUDED**.

Exclusions

- No patients will be **EXCLUDED**.

Data cleaning rules

- Nil

Suggested Data Collection

Interrogation of hospital records. NOTE: AROC has built these items into the inpatient data set for this information to be recorded against, effective from 11th October 2021

Definition of terms

For the purpose of CI 6.1:

Active practice:

- Patients are engaged physically, cognitively or socially in a task that assists in the achievement of their rehabilitation goals.

Therapist supervised:

- Practice is supervised by an allied health professional; or an allied health student or allied health assistant as instructed by an allied health professional.

Active Rehab Days:

- Days between episode start and episode end minus leave and suspension days. (Note: this is inclusive of weekend days)

What is included?

- Group and class-based practice where it meets the above definitions.
- Semi supervised practice where a patient is set up to practice and regularly monitored.
- Nonpharmacological pain or mood disorder management strategies that meet the above definition.
- Carer training.
- One to one education that is customised to the patient’s rehabilitation goals.

What is not included?

- Time in therapy environments where patients are waiting for therapist to set/organise therapy.
- Nursing/carer supervised or independent practice.
- The arranging of social supports.
- Generic group-based education or the reading of education material.

Indicator(s) within this Area

CI 6.1: Rehabilitation Intensity

Numerator	Number of patients that averaged at least two hours of active therapist supervised practice per day, across their active rehab days, during the 6 month time period.		
Denominator	Number of patients admitted to a rehabilitation unit, during the 6 month time period.		
Desirable rate:	High <input checked="" type="checkbox"/>	Low <input type="checkbox"/>	Not specified <input type="checkbox"/>
Indicator type:	Structure <input type="checkbox"/>	Process <input type="checkbox"/>	Outcome <input checked="" type="checkbox"/>

Background

Australian rehabilitation units service a wide variety of impairments that have varying levels of evidence base for the benefits of higher intensity rehabilitation programs. Australian¹, American² and United Kingdom (UK)³ stroke guidelines all include minimum amounts of time that patients should be involved in therapy while in rehabilitation after stroke. Australian and American guidelines state a minimum of three hours of therapy a day, while the UK states 45 minutes of each required therapy a day. Studies in Australia⁴ and the UK⁵ have shown that these time frames are not met.

The Australian Hip Fracture Care Clinical Care Standard⁶ advocates for daily mobilisation after surgery, but doesn’t give further guidance on the amount of therapy. However research has shown the benefits of increased intensity for this cohort,⁷ as well as in mixed rehabilitation populations.^{8,9}

On consideration of the evidence and the varying types of patients in rehabilitation units and their functional capacity/goals, two hours was chosen as the minimum target.

Thought was given to the inclusion of nursing led and independence practice programs. While these should be considered an integral part of a patient’s rehabilitation program they were not included due to difficulties in defining and collecting this practice. This can be reviewed in future versions of the indicators.

As this is a new indicator it will be reviewed after one year of implementation.

References

1. Stroke Foundation (2019). Clinical Guidelines for Stroke Management. Melbourne Australia.
2. Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. 2016;47:e98–e169
3. NICE Quality Standard (QS2) Stroke in adults (2016)
4. Grimley RS, Rosbergen ICM, Gustafsson L, et al. Dose and setting of rehabilitation received after stroke in Queensland, Australia: a prospective cohort study. *Clin Rehabil*. 2020;34(6):812-823. doi:10.1177/0269215520916899
5. Foley N, McClure JA, Meyer M, Salter K, Bureau Y, Teasell R. Inpatient rehabilitation following stroke: Amount of therapy received and associations with functional recovery. *Disabil Rehabil*. 2012;34(25):2132-2138. doi:10.3109/09638288.2012.676145
6. Australian Commission on Safety and Quality in Health Care. Hip Fracture Care Clinical Care Standard. Sydney: ACSQHC, 2016
7. Ponten JB, Krug E, Van Baardewijk LJ, et al. Intensive rehabilitation in selected hip fracture patients may optimize care efficiency: A retrospective comparison study. *J Rehabil Med*. 2015;47(3):278-281. doi:10.2340/16501977-1917
8. O'Brien SR, Zhang N. Association Between Therapy Intensity and Discharge Outcomes in Aged Medicare Skilled Nursing Facilities Admissions. *Arch Phys Med Rehabil*. 2018;99(1):107-115. doi:10.1016/j.apmr.2017.07.012
9. Jette DU, Warren RL, Wirtalla C. The relation between therapy intensity and outcomes of rehabilitation in skilled nursing facilities. *Arch Phys Med Rehabil*. 2005;86(3):373-379. doi:10.1016/j.apmr.2004.10.018

APPENDICES

APPENDIX 1: ICD-10-AM Codes applicable to the Rehabilitation Medicine indicator set

REHM AREA 1: Timely assessment of function on admission

No ICD-10-AM codes identified.

REHM AREA 2: Timely establishment of an initial multidisciplinary rehabilitation plan

No ICD-10-AM codes identified.

REHM AREA 3: Functional gain achieved by rehabilitation program

No ICD-10-AM codes identified.

REHM AREA 4: Discharge destination

No ICD-10-AM codes identified.

REHM AREA 5: Rate of Fallers

No ICD-10-AM codes identified.

REHM AREA 6: Rehabilitation Intensity

No ICD-10-AM codes identified.

APPENDIX 2: NSQHS Standards / EQUIPNational and these clinical indicators

The use of clinical indicators by healthcare organisations supports quality oversight and provides a foundation for quality improvement within the organisation and its departments.

The monitoring of clinical indicators and an organisation's response to the data remain an important option for presenting evidence to demonstrate performance against criteria in the NSQHS Standards and EQUIPNational.

Actions from EQUIPNational (including NSQHS Standards, where applicable) that may be evidenced with these Rehabilitation Medicine CIs are outlined in the appendix.

STANDARD 1: GOVERNANCE FOR SAFETY AND QUALITY IN HEALTH SERVICE ORGANISATIONS	
Criterion: Governance and quality improvement systems	
<p>Action 1.2.1 Regular reports on safety and quality indicators and other safety and quality performance data are monitored by the executive level of governance.</p>	<p>Relevant CIs from this set: ALL REHM CIs</p>
<p>Action 1.2.2 Action is taken to improve the safety and quality of patient care.</p>	<p>Relevant CIs from this set: ALL REHM CIs</p>
<p>Action 1.5.2 Actions are taken to minimise risks to patient safety and quality of care.</p>	<p>Relevant CIs from this set: ALL REHM CIs</p>
<p>Action 1.6.1 An organisation-wide quality management system is used and regularly monitored.</p>	<p>Relevant CIs from this set: ALL REHM CIs</p>
<p>Action 1.6.2 Actions are taken to maximise patient quality of care.</p>	<p>Relevant CIs from this set: ALL REHM CIs</p>

STANDARD 11: SERVICE DELIVERY	
Criterion: Appropriate and effective care	
<p>Action 11.5.1 The organisation ensures appropriate and effective care through:</p> <ul style="list-style-type: none"> • processes used to assess the appropriateness of care • an evaluation of the appropriateness of services provided • the involvement of clinicians, managers and consumers / patients in the evaluation of care and services. 	<p>Relevant indicators from this CI set: ALL REHM CIs</p>

STANDARD 12: PROVISION OF CARE	
Criterion: Assessment and care planning	
<p>Action 12.2.1</p> <p>The assessment process is evaluated to ensure that it includes:</p> <ul style="list-style-type: none"> • timely assessment with consumer / patient and, where appropriate, carer participation • regular assessment of the consumer / patient need for pain / symptom management • provision of information to the consumer / patient on their health status 	<p>Relevant indicators from this CI set:</p> <p>REHM CI 1.1: Functional assessment within 72 hours of admission</p> <p>REHM CI 2.1: Functional assessment within 72 hours before end of rehabilitation</p>
Criterion: Ongoing care and discharge / transfer	
<p>Action 12.8.1</p> <p>Discharge / transfer information is discussed with the consumer / patient and a written discharge summary and / or discharge instructions are provided.</p>	<p>Relevant indicators from this CI set:</p> <p>REHM CI 4.1: Discharge destination</p>
<p>Action 12.8.2</p> <p>Arrangements with other service providers and, where appropriate, the carer are made with consumer / patient consent and input, and confirmed prior to discharge / transfer of care.</p>	<p>Relevant indicators from this CI set:</p> <p>REHM CI 4.1: Discharge destination</p>
<p>Action 12.10.1</p> <p>Formal processes for timely, multidisciplinary care coordination and / or case management for consumers / patients with ongoing care needs are evaluated, and improved as required.</p>	<p>Relevant indicators from this CI set:</p> <p>REHM CI 2.1: Multidisciplinary team plan within 7 days</p>

STANDARD 14: INFORMATION MANAGEMENT	
Criterion: Collection, use and storage of information	
<p>Action 14.6.1</p> <p>Monitoring and analysis of clinical and non-clinical data and information occurs to ensure:</p> <ul style="list-style-type: none"> • accuracy, integrity and completeness • the timeliness of information and reports • that the needs of the organisation are met and improvements are made as required. 	<p>Relevant CIs from this set:</p> <p>ALL REHM CIs</p>
<p>Action 14.7.1</p> <p>The organisation uses data from external databases and registers for:</p> <ul style="list-style-type: none"> • research • development • improvement activities 	<p>Relevant CIs from this set:</p> <p>ALL REHM CIs</p>

Area 6: Rehabilitation Intensity

<ul style="list-style-type: none">• education• corporate and clinical decision making• improvement of care and services.	
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APPENDIX 3: Changes to the user manual from the previous version

The Rehabilitation Medicine Working Party convened in May 2020 and conducted a series of consultations, resulting in the revised set of Rehabilitation Medicine Clinical Indicators (CIs) version 7.

The six CIs in the previous **Rehabilitation Medicine set v6** were organised into six areas:

1. Timely assessment of function on admission
2. Assessment function prior to episode end
3. Timely establishment of a multidisciplinary team rehabilitation plan
4. Multidisciplinary discharge documentation
5. Functional gain achieved by rehabilitation program
6. Discharge destination

Rehabilitation Medicine version 7

In version 7, the Rehabilitation Medicine Working Party has decided to remove two areas and add two new ones. The Working Party reviewed all CIs to ensure they were current, relevant and collectable. A background section has now been provided for each area to build on the rationale for why these CIs were selected.

The following actions were taken in the revision of the Rehabilitation Medicine CIs:

REHM AREA 1: Timely assessment of function on admission

Clinical Indicator	Action
1.1: Functional assessment within 72 hours of admission Amended to: 1.1: Functional assessment within 48 hours of admission	Amended

REHM AREA: Assessment of function prior to episode end

Clinical Indicator	Action
Functional assessment within 72 hours before end of rehabilitation	Removed

REHM AREA 2: Timely establishment of an initial multidisciplinary rehabilitation plan

Clinical Indicator	Action
2.1: Multidisciplinary team plan within 7 days Amendments made to the definition of a Rehabilitation Plan	Retained, with amendments.

REHM AREA: Multidisciplinary discharge documentation

Clinical Indicator	Action
Discharge plan on separation	Removed

REHM AREA 3: Functional gain achieved by rehabilitation program

Clinical Indicator	Action
3.1: Functional gain following completed rehabilitation program	Retained

REHM AREA 4: Discharge destination

Clinical Indicator	Action
4.1: Destination after discharge from a rehabilitation program	Retained

NEW REHM AREA: Rate of Fallers

Clinical Indicator	Action
5.1: Rate of fallers of less than 15% of admissions	Added

NEW REHM AREA: Rehabilitation Intensity

Clinical Indicator	Action
6.1: Rehabilitation Intensity	Added

