Outcome Measures for Hip Fracture Care Pathway
Summary of Outcome Measures for Hip Fracture

**PRE-OP CARE:**
Braden, Confusion Assessment Method (CAM), Morse, Numeric Pain Rating Scale (NPRS)

**ACUTE CARE:**
Braden, CAM, Morse, NPRS, Blaylock Risk Assessment Screening Score (BRASS), MoCA, Cumulative Ambulation Score (CAS), short Falls Efficacy Scale-International (short FES-I)

**IN-PATIENT REHAB:**
Braden, CAM, Morse, NPRS, FIM, MoCA, short FES-I, Timed Up and Go (TUG), short Berg Balance Scale 3-Point (SF BBS-3P), Patient Specific Functional Scale (PSFS)

**IN-HOME/OUTPATIENT CARE:**
NPRS, short FES-I, TUG, SF BBS 3-P, PSFS
Numeric Pain Rating Scale (NPRS)
What is the NPRS?

- The NPRS Measures the subjective intensity of pain.
- The NPRS asks the person in pain to assign a number, from zero to ten, to the severity of their pain.
How do I perform the NPRS?

-It is important to properly instruct the person in how to rate their pain:

Use the following statements to ask the person to rate their pain.

◦ 1. I would like you to rate your pain on a scale from zero to ten.
◦ 2. ‘Zero’ means you have no pain at all.
◦ 3. ‘Ten’ means the worst possible pain you can image.
◦ 4. What number would you give to your pain?

-Patients then verbally select a value that is most in line with the intensity of pain that they have experienced in the last 24 hours
How do I perform the NPRS con’t...

-A variation of this technique is to provide the instructions, then ask the person to point to the number that represents their pain:

“In the last 24 hours, on a scale of 0 – 10, where 10 is the worst pain that could possibly be, where would you rate your pain, on average?”
What do NPRS scores mean?

- The higher the score, the worse the pain level
- The values on the pain scale correspond to pain levels as follows:
  1 – 3 = mild pain
  4 – 6 = moderate pain
  7 – 10 = severe pain

**Minimal Detectable Change** – 3 points (for lower extremity pain)

**Minimally Clinically Important Difference** – translated into % for post-op orthopaedic pain

- 35% reduction on the NPRS had a rating of “minimal relief”
- 67% reduction had a rating of “moderate relief”
- 70% reduction had a rating of “much relief”
- 94% reduction had a rating of “complete relief”
Pros of NPRS

- Quick and easy, no training required
- Free, no equipment necessary
- Can be used for both acute and chronic pain conditions
- Tested on a variety of populations
- Demonstrates good psychometric properties
Cons of NPRS

-No well established gold standard for clinically important pain levels because pain is so subjective

-Pain is multifactorial – NPRS may not identify patients with pain caused by anxiety, worry, functional limitations etc
References


Blaylock Risk Assessment Screening Score (BRASS)
What is the BRASS?

-The Blaylock Risk Assessment Screening Score (BRASS) index is a risk screening instrument which can be used early after admission to identify those patients in need of discharge planning

-Meant to be performed within 48 hrs of admission

-The Brass uses information from the following categories:
  ◦ Age
  ◦ Living situation/social support
  ◦ Number of active medical problems
  ◦ Number of drugs
  ◦ Cognition
  ◦ Functional status
  ◦ Behaviour pattern
  ◦ Mobility
  ◦ Sensory deficits
A Better Rehabilitative Care System

Circle all that apply and total. Refer to scoring index for recommendations regarding discharge planning.

<table>
<thead>
<tr>
<th>Age</th>
<th>65 years or less</th>
<th>56-64 years</th>
<th>65-79 years</th>
<th>80+ years</th>
<th>Functional Status</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>Independent in activities of daily living and instrumental activities of daily living</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>Dependent in:</td>
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<td></td>
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<td></td>
<td>Eating/Feeding</td>
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<td>Bathing/Grooming</td>
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<td>Toileting</td>
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<td>Transferring</td>
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<td></td>
<td>Incontinent of bowel function</td>
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<td></td>
<td>Incontinent of bladder function</td>
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<td></td>
<td>Meal Preparation</td>
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<td></td>
<td>Responsible for own medication administration</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Grocery Shopping</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Transportation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Living Situation/Social Support</th>
<th>Lives only with spouse</th>
<th>Lives with family</th>
<th>Lives alone with family support</th>
<th>Lives alone with friend's support</th>
<th>Lives alone with no support</th>
<th>Nursing home/residential care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Previous Admissions/ Emergency Room Visits</th>
<th>None in the last 2 months</th>
<th>One in the last 3 months</th>
<th>Two in the last 2 months</th>
<th>More than two in the last 3 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Active Medical Problems</th>
<th>Up to three medical problems</th>
<th>Three to five medical problems</th>
<th>More than five medical problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Drugs</th>
<th>Fewer than three drugs</th>
<th>Three to five drugs</th>
<th>More than five drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cognition</th>
<th>Oriented</th>
<th>Disoriented to some spheres (person, place, self, time) some of the time</th>
<th>Disoriented to some spheres (person, place, self, time) all of the time</th>
<th>Disoriented to all spheres (person, place, self, time) and some of the time</th>
<th>Disoriented to all spheres (person, place, self, time) all of the time</th>
<th>Coma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sensory Deficits</th>
<th>None</th>
<th>Visual or hearing deficits</th>
<th>Visual and hearing deficits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Score: __________________________  Signature: __________________________  Date: __________________________

Scoring Index

0-9  Probable outpatient physiotherapy or occupational therapy follow up
10-19 May require CCAC services
Online copy of Blaylock

-A copy of the Blaylock tool is available at:

http://regionalhealthprogramsww.com/HealthCareProviders/CarePathways/FracturedHip
What do the scores mean

-Score of 0 -10 – few needs for discharge planning and low demand for discharge planning resources (i.e. probable outpatient PT/OT)

-Score of 10-19 – patients are affected by more complicated problems & may require more extensive discharge planning, but likely do not need institutionalization (i.e. may require CCAC services)

-Score of >19 – patients with severe problems who need extensive discharge planning, with high probability of further institutionalization (i.e. ALC for rehab/restorative/LTC). Scores >19 also strongly correlated with mortality rate.
Pros of BRASS

- BRASS scores have high correlation with problems experienced after discharge.
- BRASS has high specificity to predict patients with problems after discharge.
- The BRASS index is a good predictor instrument for indicating patients who will not be discharged home.
- Provides specific recommendations for discharge planning compared to other discharge screening tools that just indicate if discharge planning is required.
- Some studies state that the BRASS is quick (3 mins or less) to use.
Cons of BRASS

-Some clinicians feel the BRASS is long and time consuming to complete
-BRASS is unable to identify patients who will likely be readmitted or return to ER

Cumulative Ambulation Score (CAS)
What is the CAS?

- The CAS is a simple tool that has proven to be valid for the evaluation of patients with hip fracture, including those with cognitive impairment.
- The CAS measures the level of independence with basic activities that are considered the minimum criteria in order to get home.
### What it looks like:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not able to despite human assistance or cueing</th>
<th>Able to with human assistance or cueing</th>
<th>Able to with no human assistance or cueing (Can use gait aid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get in and out of bed</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sit -&gt; stand -&gt; sit from chair</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Walking</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
How do I score it?

-Score from 0 – 2 based on assessment of activity for each activity: in & out of bed, sit<->stand<->sit from a chair, walking

-Combine score from each activity to get daily score of 0 to 6

-Scores from first 3 days post-surgery are combined to obtain 3 day CAS of 0 to 18

-Also recommended that the preadmission CAS be recorded to allow facilities to track progress
What does the score mean?

- The lower the CAS, the poorer the patient is mobilizing.
- A 3 day CAS of ≥ 10 = 99% survival rate at 1 month.
- Score of 10 or more predicts that there is a 93% chance that this patient will be discharged home.
- Worthwhile using the 3 day CAS to help determine whether a patient is more appropriate for rehab vs. restorative (i.e., if a score is less than 10, restorative may be the better option).
Case Study:

A patient with a R hip #, assessed as being able to perform the following:

POD #1: Only able to sit at the edge of the bed with 2 x max assist

POD #2: Able to get to the side of the bed with 2 x mod assist, able to stand at the side of the bed with 2 x max assist and a 2 wheeled walker

POD #3: Able to get to the side of the bed with 2 x min assist, able to stand with 2 x mod assist, able to take ~ 5 steps with 2 x max assist and a 2 wheeled walker, then sits in a chair with 2 x min assist.
Case study cont’d

Score Day 1: 1 + 0 + 0 = 1
Score Day 2: 1 + 1 + 0 = 2
Score Day 3: 1 + 1 + 1 = 3

3 Day CAS = 6

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not able to despite human assistance or cueing</th>
<th>Able to with human assistance or cueing</th>
<th>Able to with no human assistance or cueing (Can use gait aid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get in and out of bed</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sit -&gt; stand -&gt; sit from chair</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Walking</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Pros of CAS

-CAS is a very simple tool, evaluating activities that PT’s are already performing on a daily basis when mobilizing hip fracture patients

-For those with cognitive impairment, much easier to use compared to TUG or sit to stand test

-Valid and reliable predictor for predicting outcome following surgery (i.e. length of hospitalization, time to discharge, 30 day mortality, post-op medical complications)
Cons of CAS:

- For those who are very independent, the CAS does not show change in the mobility level of patients who are independent on POD #1 (i.e. ceiling effect, score of 6). For these patients it is suggested that assessment be supplemented with other tools such as the TUG.

- Minimal detectable change & minimal clinically important difference not yet determined.
References


Falls Efficacy Scale – International (FES-I)
What is the FES-I

-The FES-I is a self-report questionnaire, providing information on level of concern about falls for a range of activities of daily living

-The scale was developed and validated by the Prevention of Falls Network Europe (ProFaNE)

-There are 3 versions of the FES – the original FES (10 questions), the FES-I (16 questions), and the Short FES-I (7 questions)

-Since the Short FES-I has similar psychometric properties to the FES-I, it was chosen for the hip fracture care pathway as it is quicker and easier to use
What does the Short FES-I look like:

I would like to ask some questions about how concerned you are about the possibility of falling. For each of the following activities, please check the opinion closest to your own to show how concerned you are that you might fall if you did this activity. Please reply thinking about how you usually do the activity. If you currently don’t do the activity (example: if someone does your shopping for you), please answer to show whether you think you would be concerned about falling IF you did the activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not at all concerned</th>
<th>Somewhat concerned</th>
<th>Fairly concerned</th>
<th>Very concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Getting dressed or undressed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2  Taking a bath or shower</td>
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<tr>
<td>3  Getting in or out of a chair</td>
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<tr>
<td>4  Going up or down stairs</td>
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<tr>
<td>5  Reaching for something above your head or on the ground</td>
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<tr>
<td>6  Walking up or down a slope</td>
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<tr>
<td>7  Going out to a social event (e.g. religious service, family gathering, or club meeting)</td>
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<tr>
<td><strong>Sub Total</strong></td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td></td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>
How to score the Short FES-I

-Scores are based on a scale of 1-4, with 1 being not at all concerned, and 4 being very concerned

-To obtain a total score for the FES-I simply add the scores on all the items together, to give a total that will range from 7 (no concern about falling) to 28 (severe concern about falling).

-If data is missing on more than one item then that questionnaire cannot be used. If data is missing on no more than one of the seven items then calculate the sum score of the six items that have been completed (i.e. add together the responses to each item on the scale), divide by six, and multiply by seven. The new sum score should be rounded up to the nearest whole number to give the score for an individual.
What do the scores mean?

- Score of 7 - 8 – low concern

- Score of 9 - 13 – moderate concern

- Score of 14 – 28 – high concern, and these patients should be referred to appropriate falls prevention programs if available
Pros of Short FES-I

-The English version of the FES-I has already been translated into 14 languages, and the translated versions are available through the ProFaNE website.

-Short FES-I has been validated for use in older adults with cognitive impairments.
Cons of Short FES-I

- No information on SEM, MDC, and MCID for clinicians
References


ProFane – Prevention of Falls Network Europe. Available at http://ageing.oxfordjournals.org/content/37/1/45.full

Timed Up and Go (TUG)
What is the TUG?

-The TUG assesses mobility, balance, walking ability, and falls risk in older adults

-The TUG quantifies the functional mobility level as the time in seconds it takes an individual to rise from a chair, walk 3 metres, and return to the chair

-Likely the most internationally used test by PT’s
What equipment do I need for the TUG?

- Stopwatch
- Standard armchair (approximately 46 cm in height)
- Paper/pencil
- Distance of 3 meters marked on floor
- Patient’s regular gait aid, and appropriate footwear
How do I perform the TUG:

• Begin the test with the subject sitting correctly (hips all of the way to the back of the seat) in a chair with arm rests.
• The chair should be stable and positioned such that it will not move when the subject moves from sit to stand.
• The subject is allowed to use the arm rests during the sit – stand and stand – sit movements.
• Place a piece of tape or other marker on the floor 3 meters away from the chair so that it is easily seen by the subject.
How do I perform the TUG cont’d:

• Give the patient the instructions: “On the word GO you will stand up, walk to the line on the floor, turn around and walk back to the chair and sit down. Walk at your regular pace.”

• Start timing on the word “GO” and stop timing when the subject is seated again correctly in the chair with their back resting on the back of the chair.

• The subject wears their regular footwear, may use any gait aid that they normally use during ambulation, but may not be assisted by another person. There is no time limit. They may stop and rest (but not sit down) if they need to.
How do I perform the TUG cont’d:

• The subject should be given ONE practice trial that is not timed before testing.

• Record the date and time (example below) so change can be tracked over time.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<th>9</th>
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<tbody>
<tr>
<td>Date</td>
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</tbody>
</table>

To watch an example of how to perform the TUG, go to:

http://www.youtube.com/watch?v=dsTfqk9ZTiw
### Normative Data:

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Reference Value (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 – 69 years</td>
<td>8.1 (7.1 – 9.0)</td>
</tr>
<tr>
<td>70 – 79 years</td>
<td>9.2 (8.2 – 10.2)</td>
</tr>
<tr>
<td>80 – 99 years</td>
<td>11.3 (10.0 – 12.7)</td>
</tr>
</tbody>
</table>

**SEM for Hip Fracture Population:** limited info, but one article suggests 1.3 seconds, but this was based on median of 6 months post fracture

**MDC for Hip Fracture Population:** same study suggests 2.5 seconds, but once again patients were median 6 months post fracture
### Data for Falls Risk:

**Cut-off Values Predictive of Falls:**

<table>
<thead>
<tr>
<th>Group</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Dwelling Frail Older Adults</td>
<td>&gt; 14</td>
<td>Associated with high fall risk</td>
</tr>
<tr>
<td>Post-op hip fracture patients at time of discharge</td>
<td>&gt; 24</td>
<td>Predictive of falls within 6 months after hip fracture</td>
</tr>
<tr>
<td>Frail older adults</td>
<td>&gt; 30</td>
<td>Predictive of requiring assistive device for ambulation and being dependent in ADL’s</td>
</tr>
</tbody>
</table>
Pros of the TUG:

- Easy and free to perform, with minimal equipment
- Takes less than 5 minutes
- Requires minimal training
- Plenty of normative data to compare patients to
- Can be performed in a variety of settings – hospital, home, clinic
- Has been trialled in large number of patient populations (Parkinson’s, SCI, CP, OA, etc)
- Results correlate with gait speed, balance, functional level, the ability to go out, and can follow change over time.
Cons of the TUG:

- The TUG may demonstrate less reliability among patients suffering from cognitive impairment.
- Intrarater reliability may be affected by subject performance when completing multiple assessments (i.e. patients quickly become familiar with this test resulting in the first test affecting the second test).
- Predictive values of poor TUG scores can be inaccurate as the score is influenced greatly by type of walking aid.
- Difficulty obtaining accurate values and comparing these values as each study does the test differently (i.e. one practice run, three practice trials).
- Limited information regarding SEM/MDC/MCID on hip fracture population.
References:


Short Form Berg Balance Scale – 3 Point (SF BBS-3P)
What is the SF BBS-3P?

-The SF BBS-3P is a performance-based measure of balance during specific movement tasks.

-The purpose of Short Form Berg Balance Scale is to assess the static and dynamic balance and fall risk in adult and geriatric populations.
What equipment do I need to do the SF BBS-3P?

- Stop watch or watch with second hand
- Chair of reasonable height with arm rests
- Measuring tape/ruler/any indicator of 2, 5 and 10 inches
What activities are on the SF BBS-3P

The 7 items included in the BBS-3P are:

1. Reaching forward with outstretched arm
2. Standing with eyes closed
3. Standing with one foot in front
4. Turning to look behind
5. Retrieving object from floor
6. Standing on one foot
7. Changing from a sitting to standing position
How do I score the SF BBS-3P

-The BBS-3P is scored based on 3 levels:
  ◦ *unable to complete the task* – 0 points
  ◦ *partially completes task* – 2 points
  ◦ *able to complete the task* – 4 points
-The SF BBS-3P uses the criteria for 0, 2, 4 from the original BBS
-The score is then added to get a total out of 28
What does the score mean?

- The lower the score, the poorer the person’s balance
- Score of 23 or below suggests high risk of falling
- Standard error of measure (SEM) is 1 point
- Minimal detectable change (MDC) is 4 points for hip and knee arthroplasty, 3 points for elderly population
Pros of SF BBS-3P

- Shorter and quicker to use than original BBS (average of 10 mins vs. average of 20 mins for BBS)
- Less equipment required
- Free, no training required
- Less redundancy in activities compared to BBS
- Shown to have similar psychometric properties to original BBS
- Having only 3 point scoring system allows for more consistency and less inaccurate interpretation by raters
Cons of SF BBS-3P

- BBS seemed to provide more accurate balance assessment than the SF BBS in patient population that received intervention

-The SF BBS scores have not been interpreted and cut-off scores have not been set for different patient populations
References

Rehabilitation Measures Database. Short Form Berg Balance Scale 3 Point. Available at:

Phys Ther. 86:195-204.

Canadian Stroke Network. Stroke Engine Assess - BBS. Available at:
http://strokengine.ca/assess/module_bbs_indepth-en.html
Berg Balance Scale
What is the Berg?

-A 14-item objective measure designed to assess static balance and fall risk in adult populations

-Static and dynamic activities of varying difficulty are performed

-Item-level scores range from 0-4, determined by ability to perform the assessed activity for a total score out of 56
What equipment do I need for the Berg?

Stop watch
Chair with arm rests, surface with no arm rests
Measuring tape/ruler
Object to pick up off the floor
Step stool
What does the Berg look like?

Refer to Appendix K in the Fractured Hip appendices located at:

http://regionalhealthprogramsww.com/HealthCareProviders/CarePathways/FracturedHip

Or go to:

How do I score the Berg?

- When scoring, please record the lowest response category that applies for each item.

- Document and score each task as per criteria outlined on test.

- Sum the 14 scores for a total score out of 56.

- In most items, the subject is asked to maintain a given position for a specific time. Progressively more points are deducted if:
  - the time or distance requirements are not met
  - the subject’s performance warrants supervision
  - the subject touches an external support or receives assistance from the examiner
What do the scores mean?

- 41-56 = low fall risk
- 21-40 = medium fall risk
- 0 – 20 = high fall risk

Authors support a cut off score of 45/56 for independent safe ambulation

Score of < or equal to 40 on BBS associated with almost 100% falls risk

Minimal Detectable Change:

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<thead>
<tr>
<th>Score</th>
<th>MDC</th>
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<tbody>
<tr>
<td>45-56</td>
<td>4 points</td>
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<tr>
<td>35-44</td>
<td>5 points</td>
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<tr>
<td>25-34</td>
<td>7 points</td>
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<tr>
<td>0-24</td>
<td>5 points</td>
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</table>
Pros of Berg:

- Strong psychometric properties
- Plenty of normative data to compare patients to
- Berg has been tested in large number of patient populations
- No training required, inexpensive to perform, minimal equipment
Cons of Berg:

- Time consuming as takes approximately 15-20 minutes to perform
- Ceiling effect for higher level patients
- MCID not yet established
- No data specifically for hip fracture population
- Recent study shows that there is not enough evidence for using BBS to prescribe gait aids
References:


Patient Specific Functional Scale (PSFS)
What is the PSFS?

-The PSFS can be used to quantify activity limitation and measure functional outcome for patients with any orthopaedic condition

-The PSFS asks patients to identify up to 3 important activities that they are having difficulty with as a result of their condition

-The patients are then asked to rate their difficulty with activity on a scale of 0-10, with 0 being unable to perform the activity and 10 being able to perform the activity as they could before their injury/problem

-The activities identified with the PSFS can then be used to develop the client’s physiotherapy treatment plan
What does the PSFS look like?

A copy of the PSFS is available from:

The Patient-Specific Functional Scale

This useful questionnaire can be used to quantify activity limitation and measure functional outcome for patients with any orthopaedic condition.

Clinician to read and fill in below: Complete at the end of the history and prior to physical examination.

Initial Assessment:

I am going to ask you to identify up to three important activities that you are unable to do or are having difficulty with as a result of your ___________ problem. Today, are there any activities that you are unable to do or having difficulty with because of your_____________ problem? (Clinicians show scale to patient and have the patient rate each activity).

Follow-up Assessments:

When I assessed you on (state previous assessment date), you told me that you had difficulty with (read all activities from list at a time). Today, do you still have difficulty with (read and have patient score each item in the list)?

Patient-specific activity scoring scheme (Point to one number):

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(Date and Score)

Activity | Initial
---|---
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2. |  |
3. |  |
4. |  |
5. |  |
Additional |  |
Additional |  |

Total score = sum of the activity scores/number of activities.
Minimum detectable change (90% CI) for average score = 2 points.
Minimum detectable change (90% CI) for single activity score = 3 points.


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Patient instructions:

Initial Assessment:
I am going to ask you to identify up to three important activities that you are unable to do or are having difficulty with as a result of your _________________ problem. Today, are there any activities that you are unable to do or having difficulty with because of your _________________ problem? (Clinician: show scale to patient and have the patient rate each activity).

Follow-up Assessments:
When I assessed you on (state previous assessment date), you told me that you had difficulty with (read all activities from list at a time). Today, do you still have difficulty with: (read and have patient score each item in the list)?
### Patient-specific activity scoring scheme (Point to one number):

0 1 2 3 4 5 6 7 8 9 10

<table>
<thead>
<tr>
<th>Activity</th>
<th>Initial Date: Score (0-10)</th>
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</table>

**Unable to perform activity**

**Able to perform activity at same level as before injury/problem**
What do PSFS scores mean?

- The higher the score, the better the patient feels they are able to perform an activity.
- Total score = sum of the activity scores/number of activities.
- Minimum detectable change (90% CI) for average score = 2 points.
- Minimum detectable change (90% CI) for single activity score = 3 points.
- SEM is 1 point.
- Minimally clinical important difference is not available for L/E conditions, but is approximately 1 point for U/E conditions and spinal stenosis.
Pros of PSFS

- Tested on wide variety of patients: Joint Replacement, Knee Dysfunction, Low back pain, Lower Limb Amputees, Multiple Sclerosis, Neck Dysfunction and Whiplash, Pubic Symphysis pain in pregnancy, Spinal Stenosis, Upper Extremity Musculoskeletal

- Quick, easy, and free (takes approximately 4 mins)

- No equipment or training required

- Good psychometric properties
Cons of PSFS

- No SEM/MCID available for joint arthroplasty or L/E orthopaedic conditions
- Likely not appropriate for use with patients with cognitive impairment
- Difficulty for patients to remember how they were at their initial visit, and this may therefore bias scores
- Possible floor effect as patients tend to pick activities that are very difficult for them, so there is no room for increased disability
