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[Toolkit for]

Spinal Cord Independence Measure III (SCIM)

A clinical guideline for assessment of functional outcomes for individuals with spinal cord injury.

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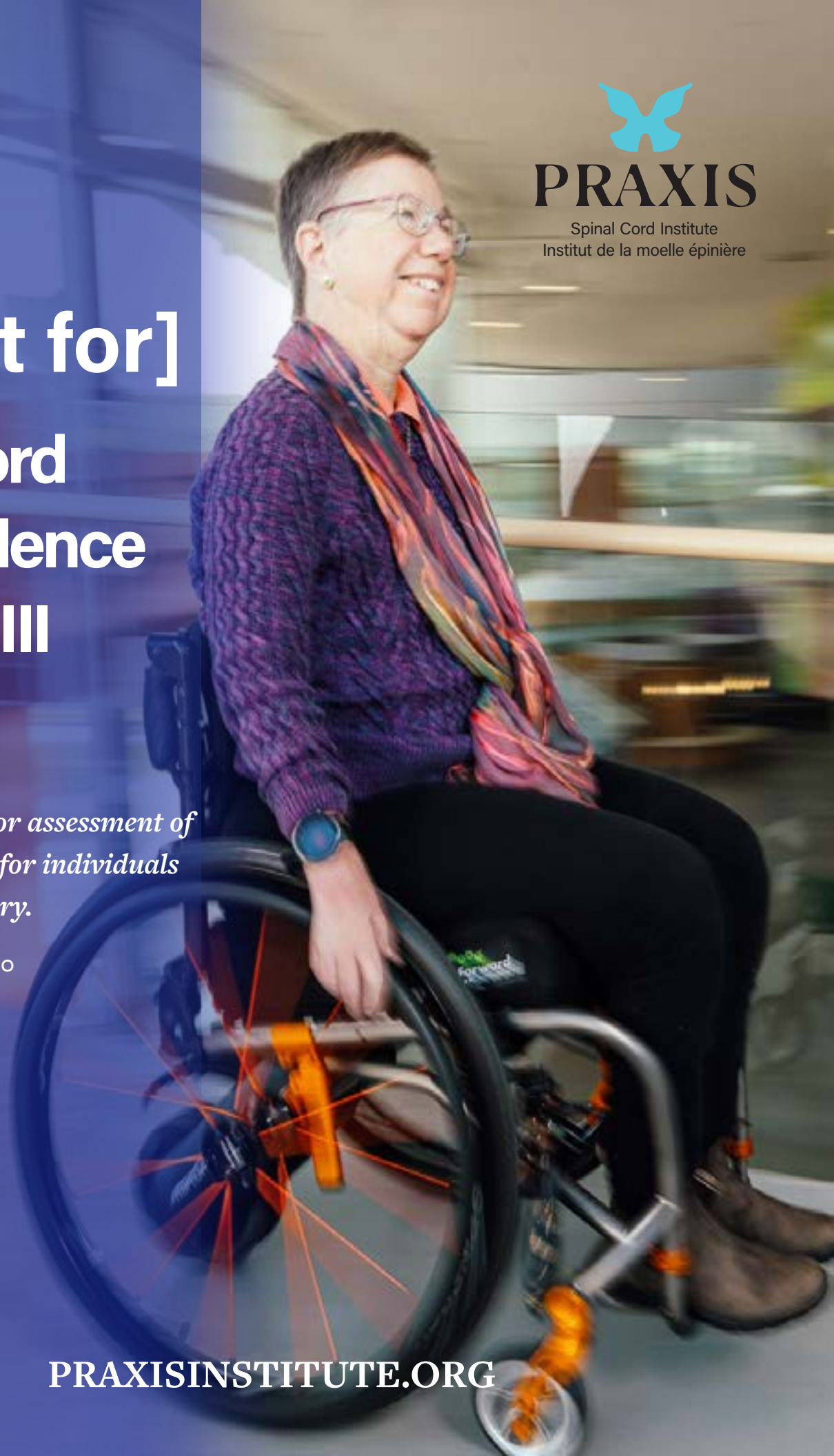

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TOOLKIT FOR SPINAL CORD INDEPENDENCE MEASURE III (SCIM)

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01 BACKGROUND

For most individuals with a spinal cord injury (SCI), maximizing functional recovery to return to community living is the most important goal. To support this goal, it is essential for the clinical team to have an outcome measure that provides accurate information on the patient's current functional skills to guide the rehabilitation plan, document the individual's progress, set treatment priorities and establish goals for discharge planning. The Spinal Cord Independence Measure (SCIM), now in its third iteration, is a disability scale developed specifically for the SCI population to assess various activities of daily living — self-care, respiration and sphincter management, and mobility. This outcome measure is specific to individuals with SCI and sensitive enough to measure functional independence and track functional changes over time, making it a good tool to review progress during the rehabilitation stay and following discharge to the community. In addition to being a valuable tool to guiding treatment plans and discharge goal setting, the SCIM is the internationally preferred research tool for assessing response to treatments in individuals with SCI.

As of 2022, there are ten rehabilitation facilities across Canada who are utilizing the SCIM clinically, as well as participating in the Rick Hansen Spinal Cord Injury Registry (RHSCIR). Using standardized research protocols and data collection forms, RHSCIR tracks the experiences and outcomes of individuals with SCI during their journey from injury through acute care, rehabilitation to community reintegration and beyond. Details about participants' spinal cord injuries, including the level and severity of injury, clinical interventions, and outcomes are among the information captured. The data collected in RHSCIR contains powerful information, including the SCIM, that helps track the effectiveness of specific treatments, practices, or programs for improving functional outcomes and quality of life after SCI. It allows facilities to understand how their patients' functional outcomes compare to others across the country and answers important clinical and research questions. In addition, SCIM data that is collated from participating facilities can be used to establish more accurate functional expectations for this patient population over time.

Historically RHSCIR has captured only those individuals with traumatic SCI, but those with non-traumatic SCI attending inpatient rehab were added in 2021. Currently, 30 facilities across Canada contribute to RHSCIR, of which 12 offer rehabilitation services, 16 offer acute services, and two offer combined services. RHSCIR was established in 2004 and includes data on over 10,000 individuals living with SCI in Canada.

To learn more about RHSCIR, please visit www.praxisinstitute.org/research-care/key-initiatives/national-sci-registry.

Rehabilitation facilities collecting SCIM clinically are located in 10 cities across Canada

02 Spinal Cord Independence Measure III (SCIM) Overview

The Spinal Cord Independence Measure III (SCIM) is used to determine the patient's level of functional independence in the domains of Self Care, Respiration and Sphincter Management, and Mobility. There are a total of 19 items on the SCIM with a score calculated within each domain and a total score of 100. Scores are higher in patients that require less assistance or fewer adaptive aids to complete basic activities of daily living. The SCIM is administered on admission to rehabilitation (within 72 hours), ideally regularly during the patient's rehabilitation stay, and prior to discharge (within 72 hours).

2A. WHY IS THIS INFORMATION IMPORTANT?

Accurate clinical outcome measures are essential to monitoring and tracking functional progress and improvements in persons with SCI. Understanding the functional skills of a person with SCI is essential in determining a prognosis, guiding treatment priorities, goal setting and discharge planning.

Why Collect SCIM Outcomes and How Can This Information Be Used?

Benefits to Patients and Clinicians:

- Establishing a baseline of functional independence
- Supporting discussion with patient and team regarding functional recovery, and for setting realistic and timely goals
- Monitoring and tracking the patient's functional progress
- Directing and prioritizing therapeutic interventions
- Assisting with identifying the patient's equipment and care needs in preparation for discharge
- Assisting with focused patient education

Benefits to Program:

- Identify and support areas for resource development (e.g. educational material on pressure injury, sexual health)
- Identifying gaps in services or determining allocation of clinical resources (e.g. mental health supports, respiratory therapy, community liaison or peer support)
- Facilitating an evidence-based clinical decision-making standard of practice in the determination of a patient's functional and care needs for discharge
- Identifying needs and justification for determining required equipment and supplies to optimize clinical practice and safety (e.g. walking aids, transfer aids, body weight support treadmills, orthoses, robot aided gait training devices etc)
- Assisting with continuity of care between health care providers with regard to functional outcomes by tracking changes and sustainment after discharge and into the community
- Offering comparators to national data to ensure your facility is providing a high standard of care
- Reporting metrics to facility administrators which may assist with determining staffing allocation and budget priorities

Benefits to Research

- Providing a larger sample size of data from the SCI population across Canada, which will allow for more accurate and meaningful interpretation and analysis
- Developing predictive models for overall prognosis, motor recovery and rehabilitation potential
- Developing and participating in clinical trials designed to evaluate the efficacy of interventions to optimize functional recovery
- Evaluating the effectiveness of various treatment approaches
- Assisting with the creation of best practice guidelines for maximizing functional recovery within the SCI population
- Assisting clinicians to identifying research priorities, questions and proposals to inform clinical practice

2B. WHAT HAPPENS ONCE I COLLECT SCIM WITH MY PATIENT?

The information collected from the SCIM on admission and at discharge becomes part of the patient's medical record (following your facility's standard documentation processes) for your clinical use in evaluating the patient's progress, developing the patient's plan of care as well as discharge planning. At the facility level this information can help evaluate overall patient care efficacy and provide insight into strengths and weaknesses in providing therapies related to functional outcomes.

For facilities that are RHSCIR partners, once you complete the assessment and document the data on the clinical form, your facility's RHSCIR coordinator will collect this information and input the data into the registry database along with additional relevant clinical information. The national RHSCIR team at Praxis Spinal Cord Institute has developed a number of practices to ensure patient confidentiality is maintained and strict privacy policies and procedures are followed. RHSCIR's team of clinical and data experts at Praxis Spinal Cord Institute will provide you and your program with data entry, analysis services, and nationally benchmarked reports free of charge. This wealth of information assists in providing validated and supported evidence-based practice with the potential to improve efficiencies in the health care system and ultimately improve outcomes for individuals living with SCI. De-identified data from your facility will be tabulated along with other information collected in RHSCIR (e.g. neurology, length of stay, etc.) and reported back on a biannual basis to provide information on your facility's patients that are in RHSCIR.

To access your facility's SCIM clinical reports, contact us at clinical@praxisinstitute.org or contact your local RHSCIR Coordinator.

The SCIM assessment can be completed periodically throughout the patient's rehabilitation stay to monitor progress towards discharge goals.

03 RESOURCE REQUIREMENTS

Completing the SCIM requires minimal staff burden or changes in clinical practice as the variables that are evaluated reflect basic areas of patient assessment that are routinely collected as a component of clinical practice.

Time

The estimated time required to complete the SCIM is approximately 30 minutes.

Additional assessments are not required as the information collected in the SCIM is typically completed as part of the initial and discharge assessments. Adding the information to the SCIM document can be completed separately by different team members, minimizing the time commitment for any one clinician.

The assessment should be performed within 72 hours of admission and repeated within 72 hours of discharge.

Equipment

No specialized equipment needed.

Team members are able to complete different domains in the SCIM, resulting in a minimal time commitment for any one clinician.

04 INSTRUCTIONS

The SCIM was designed to be user friendly without any formal training, and therefore the authors of the SCIM did not develop an instructional manual. While the administration and scoring of the assessment tends to be self-explanatory, in some situations, clinical judgment and team discussion may be required to accurately determine the patient's level of function and the correct score. The SCIM ideally is administered by clinical observation; however, chart abstraction or clinical consultation can also be used to score the items when necessary. More than one clinical team member can contribute to the scoring as necessary.

- There are a total of 19 items on the SCIM, which are divided into 3 subscales - self-care, respiration and sphincter management, and mobility.
- Each of the 19 items should be assessed within a 72-hour period and all questions should be answered.
- 'Not tested' (NT) is not an option.
- 'Assistance' refers to physical assistance, (including assistance with set-up); and 'adapted aids' refers to any equipment the patient requires to complete the task.

A total score out of 100 is achieved, with the subscales weighted as follows: self-care: scored 0-20; respiration and sphincter management: scored 0-40; and mobility: scored 0-40. Scores are higher in patients that require less assistance or fewer aids to complete basic activities of daily living and life support activities.

Additional resources have been included in this toolkit to provide definitions, guidelines and tips for assessment and example clinical questions.

05 SCIM CLINICAL ASSESSMENT FORM

Once the SCIM has been done at admission to the rehabilitation facility, it is only required to be repeated at discharge. Of course, some clinicians may find it useful to repeat it more frequently to monitor the patient's functional progress and to assist with determining equipment and care needs in preparation for discharge. In this section we have provided an example of the SCIM Clinical Assessment form that can be used to collect the SCIM data.

If you would like assistance with incorporating your facility information onto the SCIM form, please contact us at clinical@praxisinstitute.org.

FACILITY NAME

SCIM – Spinal Cord Independence Measure

(Version III, 2002-2011)

ADDRESSOGRAPH

Traumatic SCI ◯ NTSCI ◯ Level/AIS (If known) _____ Paraplegia ◯ Tetraplegia ◯ Complete ◯ Incomplete ◯

Assessment Date: _____

Admission (A) _____ Re-Assessment (RA) _____ Discharge (DC) _____

Self Care

Item Score	A	RA	DC

Adaptive Devices and Specific Setting (ADSS) are adaptions not customarily used

1. Feeding (cutting, opening containers, pouring, bringing food to mouth, holding cup with fluid)

0. Needs parenteral, gastrostomy or fully assisted oral feeding
1. Needs partial assistance for eating and/or drinking, or for wearing adaptive devices
2. Eats independently; needs adaptive devices or assistance only for cutting food and/or pouring and/or opening containers
3. Eats and drinks independently; does not require assistance or adaptive devices

2. Bathing (soaping, washing, drying body and head, manipulating water tap)

A. Upper body
0. Requires total assistance
1. Requires partial assistance
2. Washes independently with adaptive devices or in a specific setting (e.g., bars, chair)
3. Washes independently; does not require adaptive devices or specific setting (not customary for healthy people) (adss)

B. Lower Body
0. Requires total assistance
1. Requires partial assistance
2. Washes independently with adaptive devices or in a specific setting (adss)
3. Washes independently; does not require adaptive devices (adss) or specific setting

3. Dressing (clothes, shoes, permanent orthoses; dressing, wearing, undressing)

A. Upper body
0. Requires total assistance
1. Requires partial assistance with clothes without buttons, zippers or laces (cwobzl)
2. Independent with cwobzl; requires adaptive devices and/or specific settings (adss)
3. Independent with cwobzl; does not require adss; needs assistance or adss only for bzl.
4. Dresses (any clothes) independently; does not require adaptive devices or specific setting

B. Lower Body
0. Requires total assistance
1. Requires partial assistance with clothes without buttons, zippers or laces (cwobzl)
2. Independent with (cwobzl); requires adaptive devices and/or specific settings (adss)
3. Independent with (cwobzl) without adss; needs assistance or adss only for bzl.
4. Dresses (any clothes) independently; does not require adaptive devices or specific setting

4. Grooming (washing hands and face, brushing teeth, combing hair, shaving, applying makeup)

0. Requires total assistance
1. Requires partial assistance
2. Grooms independently with adaptive devices
3. Grooms independently without adaptive device

Self Care Subtotal (0-20)

FACILITY NAME

SCIM – Spinal Cord Independence Measure

(Version III, 2002-2011)

ADDRESSOGRAPH

Respiration and Sphincter Management

Item Score

5. Respiration

	A	RA	DC
0. Requires tracheal tube (TT) and permanent or intermittent assisted ventilation (IAV)			
2. Breathes independently with TT; requires oxygen, much assistance in coughing or TT management			
4. Breathes independently with TT; requires little assistance in coughing or TT management			
6. Breathes independently without TT; requires oxygen, much assistance in coughing, a mask (e.g., peep, c-pap) or IAV (bipap)			
8. Breathes independently without TT; requires little assistance or stimulation for coughing			
10. Breathes independently without assistance or device			

6. Sphincter Management – Bladder (external drainage instrument is any device that collects urine = condom catheter, urinal, diaper, pads, Indwelling catheter includes suprapubic catheter)

0.Indwelling catheter			
3.Residual urine volume (RUV) > 100cc; no regular catheterization or assisted intermittent catheterization			
6. RUV < 100cc or intermittent self-catheterization; needs assistance for applying drainage instrument			
9. Intermittent self-catheterization; uses external drainage instrument; does not need assistance for applying			
11. Intermittent self-catheterization; continent between catheterizations; does not use external drainage instrument			
13. RUV <100cc; needs only external urine drainage; no assistance is required for drainage			
15. RUV <100cc; continent; does not use external drainage instrument			

7. Sphincter Management – Bowel

0. Irregular timing or very low frequency (less than once in 3 days) of bowel movements			
1. Regular timing, but requires assistance (e.g., for applying suppository, anal irrigation or stoma management); rare accidents (less than twice a month)			
2. Regular bowel movements, without assistance; rare accidents (less than twice a month)			
3. Regular bowel movements, without assistance; no accidents			

8. Use of Toilet (perineal hygiene, stoma management, adjustment of clothes before/after, use of napkins or diapers)

0.Uses toilet with total assistance			
1.Requires partial assistance; does not clean self			
2.Requires partial assistance; cleans self independently			
3.Uses toilet independently in all tasks but needs adaptive devices or special setting (e.g., bars, commode, stoma management)			
4.Uses toilet independently; does not require adaptive devices or special setting			

Respiration and Sphincter Management Subtotal (0-40)			

Mobility (room and toilet)

9. Mobility in Bed and Action to Prevent Pressure Sores (turning upper body in bed, turning lower body in bed, sitting up in bed, doing push-ups in wheelchair, with or without adaptive devices, but not with electric aids

0. Needs assistance in all activities:			
2. Performs one of the activities without assistance			
4. Performs two or three of the activities without assistance			
6. Performs all the bed mobility and pressure release activities independently			

10. Transfers: bed-wheelchair (locking wheelchair, lifting footrests, removing and adjusting arm rests, transferring, lifting feet)

0. Requires total assistance			
1. Needs partial assistance and/or supervision, and/or adaptive devices (e.g., sliding board)			
2. Independent (or does not require wheelchair)			

11. Transfers: wheelchair-toilet-tub (if uses toilet wheelchair: transfers to and from; if uses regular wheelchair: locking wheelchair, lifting footrests, removing and adjusting armrests, transferring, lifting feet)

0. Requires total assistance			
1. Needs partial assistance and/or supervision, and/or adaptive devices (e.g., grab-bars)			
2. Independent (or does not require wheelchair)			

FACILITY NAME

SCIM – Spinal Cord Independence Measure

(Version III, 2002-2011)

ADDRESSOGRAPH

Mobility (indoors and outdoors, on even surface)

Item Score

12. Mobility Indoors

A RA DC

0. Requires total assistance
1. Needs electric wheelchair or partial assistance to operate manual wheelchair
2. Moves independently in manual wheelchair
3. Requires supervision while walking (with or without devices)
4. Walks with a walking frame or crutches (swing)
5. Walks with crutches or two canes (reciprocal walking)
6. Walks with one cane
7. Needs leg orthosis only
8. Walks without walking aids

13. Mobility for Moderate Distances (10-100 meters)

0. Requires total assistance
1. Needs electric wheelchair or partial assistance to operate manual wheelchair
2. Moves independently in manual wheelchair
3. Requires supervision while walking (with or without devices)
4. Walks with a walking frame or crutches (swing)
5. Walks with crutches or two canes (reciprocal walking)
6. Walks with one cane
7. Needs leg orthosis only
8. Walks without walking aids

14. Mobility Outdoors (more than 100 meters)

0. Requires total assistance
1. Needs electric wheelchair or partial assistance to operate manual wheelchair
2. Moves independently in manual wheelchair
3. Requires supervision while walking (with or without devices)
4. Walks with a walking frame or crutches (swing)
5. Walks with crutches or two canes (reciprocal walking)
6. Walks with one cane
7. Needs leg orthosis only
8. Walks without walking aids

15. Stair Management

0. Unable to ascend or descend stairs
1. Ascends and descends at least 3 steps with support or supervision of another person
2. Ascends and descends at least 3 steps with support of handrail and/or crutch or cane
3. Ascends and descends at least 3 steps without any support or supervision

16. Transfers: wheelchair-car (approaching car, locking wheelchair, removing arm and footrests, transferring to and from car, bringing wheelchair into and out of car)

0. Requires total assistance
1. Needs partial assistance and/or supervision and/or adaptive devices
2. Transfers independent; does not require adaptive devices (or does not require wheelchair)

17. Transfers: ground-wheelchair

0. Requires assistance
1. Transfers independent with or without adaptive devices (or does not require wheelchair)

Mobility Subtotal (0-40)

TOTAL SCIM SCORE (0-100) Admission: _____ Re-Assessment: _____ Discharge: _____

Clinician Signature: _____ Date: _____

06 ADDITIONAL RESOURCES

6A. SCIM DEFINITIONS

Admission
The date the individual is admitted to the RHSCIR facility, regardless of where in the facility the individual is first admitted or where he/she may be internally transferred between care areas.

Admission assessment
A SCIM assessment should be performed within 72 hours of admission. If the admission assessment cannot be completed within that timeframe, then it should be completed as soon as possible.

Adaptive aid or adaptive device
Any object that is used for the purpose of assisting the individual with completing the task.(e.g. universal cuff, transfer board, bathbench).

Canes
Includes all types of walking canes and walking poles.

Discharge assessment
A SCIM assessment should be performed within 72 hours of discharge. If the discharge assessment cannot be completed within that timeframe, then it should be completed as soon as possible.

Electric aids
Any assistive device that requires an external source of power to operate.

Electric wheelchair
Any wheelchair device that has an electric component that facilitates propelling the wheelchair. This includes power-assist wheels.

External drainage instrument
Any device/aid used to collect urine that is external to the body (e.g. condom catheter, pad, adult diaper / brief).

Independent
No assistance from another person or an assistive device/ aid is required.

Internal drainage instrument
Any device used to collect urine that is internal to the body (e.g. suprapubic, indwelling and intermittent catheters)

Leg orthosis
Any assistive device the participant wears on their lower extremity, including an ankle-foot orthosis, knee-ankle-foot orthosis, or a functional electrical stimulation (FES) unit. This does not include orthoses that only act at the level of the foot, such as foot orthotics.

Partial Assistance
The person is able to perform at least some portion of the task that is being assessed independently.

SCIM
Spinal Cord Independence Measure is the version of the tool that is administered by one or more clinicians, such as an occupational therapist, physical therapist, nurse or physician.

SCIM SR
Spinal Cord Independence Measure III Self Report is the questionnaire version of the tool that is completed by the RHSCIR participant directly, or with the assistance of another individual.

Set-up
The person requires their environment or equipment be organized by another individual in a specific way to facilitate completing the task (e.g. setting out the catherization supplies).

Specific setting
The person requires a specific environment or specific equipment to perform the task that is being assessed (e.g. grab bars, bed rails, hospital bed).

Supervision
The person requires monitoring when performing the task that is being assessed, however they do not require direct physical assistance to complete the task.

Total Assistance
The person is not able to perform any portion of the task independently.

Walking frame
Refers to all types of walkers (including standard, 2-wheeled, 4-wheeled, platform and forearm walkers).

6B. GUIDELINES AND TIPS FOR ADMINISTERING AND SCORING THE SCIM

This Toolkit was developed by the clinical team to improve scoring clarity and inter-rater reliability with clinicians using the outcome measure. These guidelines were developed with consultation and feedback from clinicians and researchers who work with individuals with SCI.

The purpose of the SCIM is to accurately capture the patient's level of function on admission to the rehabilitation facility to guide the rehabilitation plan, and again at discharge to determine functional changes. It is important to record the score that best describes the patient's level of function at the time of the assessment, as the score should reflect how the patient typically performs the task. The direction from Dr Catz is to always score what you observe, however; there are parts of the outcome measure that are more qualitative where it is necessary to rely on your clinical judgement.

Keeping in mind that the intent of the SCIM is to assess and show change in function over time, consider the following when scoring:

- If the patient's function is affected on short-term basis due to an acute illness (i.e. influenza, infection such as C diff) that is being treated or is expected to resolve, then scoring would reflect the patient's function when healthy.
- If the patient's function is compromised by more chronic health issues that have longer healing times (i.e. a fracture or a wound) or are not expected to resolve, then the patient is scored on their performance at the time of the assessment.
- If significant differences in function occur throughout the day the task should be scored according to the patient's baseline function.

Clinical Example:

Patient is a 64 year old male diagnosed as T10, AIS A, independent with all self-care, and completing independent lateral transfers to all surfaces. During his rehabilitation stay he developed carpal tunnel syndrome (CTS), and underwent bilateral CTS release. At the time of discharge, he is wearing bilateral splints, is non-weightbearing and is completely dependent for transfers.

This is not a straight forward case for scoring and there are several things to consider when scoring for the person's "typical function." As per the guidelines above, and given the information in this case study, for this patient, it appears the CTS may be a chronic condition with a long healing time and he would be scored as functional ability at time of discharge.

Self-Care

Q1. Feeding: The patient's level of independence with this task should be assessed at the location where they most typically eat and drink. The patient's ability to get to an eating location through wheeling or walking is not considered when scoring this task. The patient is scored on their ability to eat and drink, and if adaptive aids or assistance is required. If the patient is independent with eating and drinking, but requires assistance with set-up, then they would achieve a score of 2. Assistance throughout the day to ensure adequate fluid intake, should also be considered. A camelback or customized cup would be considered an adapted aid.

Q2. Bathing (upper and lower body): This is an assessment of a patient's ability to perform bathing tasks including soaping, washing, drying the body and head and manipulating the water tap and shower handle. Shower, tub or commode transfers are not considered when scoring this task. The patient's function in their present setting or home should be assessed, and not in novel settings (such as when travelling). Stand-by assistance or supervision for safety reasons such as checking water temperature, should be considered partial assistance.

Clinical Example:
44 year old male, SCI: C5, AIS B

Patient needs a mechanical lift to transfer onto commode. His caregiver positions his commode in the shower room and adjusts the water temperature. The caregiver passes the patient a soapy cloth and he is able to wash his face and chest. He needs help to wash his hair, wash and dry the remainder of his upper body and his complete lower body.

Score for upper body? Lower body?

0. **Requires total assistance** (*because the patient is able to assist minimally with only one of the bathing tasks he would score 0, needing total assistance*)
1. Requires partial assistance
2. Grooms independently with adaptative devices
3. Grooms independently without adaptative devices

Q3. Dressing (upper and lower body): This is an assessment of the patient's ability to don and doff clothing. Their ability to transfer to a location to dress or obtain clothing from drawers or closets is not considered when scoring this task. The patient needs to be able to do all three of the difficult to-dress tasks of buttons, zippers and laces (bzl) without assistance or aids to be scored as independent. If the patient can dress without any assistance or aids, but they choose to have assistance with this task, they would be scored according to how they function in their present daily routine, which would be partial or full assistance. If the patient has never tried to do the bzl's since their injury, they should be scored based on what they say their level of function would be for these activities. Examples of adaptive aids or specific equipment can be splints, adapted clothing, assistive devices (such as button hooks, reachers, dressing sticks, zipper pulls), overhead loops, bed railings, a wheelchair or an electric bed (if they position the wheelchair or bed in a specific position to enable them to dress).

Q4. Grooming: The patient should be evaluated on their ability to complete their typical daily grooming routine. Assessment of this task includes all activities pertaining to grooming and managing objects such as toothbrushes, combs/hairbrushes, razors and make-up brushes. Wheeling or walking to the location of the activities is not considered when scoring this task.

Clinical Example:
20 year old female, SCI: C6, AIS C

Patient is able to propel her wheelchair into the bathroom and position herself in front of the sink. She is able to turn on the water to wash hands and face. She is able to brush her teeth using a universal cuff and electric toothbrush. She does need help with opening the toothpaste tube and putting on the cuff.

Score:

0. Requires total assistance
1. **Requires partial assistance** (*patient would score 1. because she needs assistance to don the universal cuff and manage the toothpaste tube*)
2. Grooms independently with adaptative devices
3. Grooms independently without adaptative devices

Respiration and Sphincter Management

Q5. Respiration: Assistance with coughing refers to assistance with secretion clearance and can include positioning, suctioning and physical assistance with coughing. Frequency and time should be considered when scoring this question. If the patient requires frequent sessions for long periods of time for assisted coughs/secretion removal, then that would be considered 'a lot of assistance'. If someone requires assistance occasionally for short periods of time, then that would be considered 'a little assistance'.

Clinical Example:

64 year old female, SCI: C6, AIS B

Patient has been breathing well during the day. She does not have a trach, does not require cough assist and is able to clear secretions independently. She has been prescribed a CPAP to assist with respiration at night. She has used the CPAP a few nights, but is not tolerating the mask and is refusing to wear the device.

Score:

0. Requires tracheal tube (TT) and perm / intermittent assisted ventilation (IAV)
2. Breathes independently with TT; requires oxygen, much assistance in coughing or TT management
4. Breathes independently with TT; requires little assistance in coughing or TT management
6. Breathes independently without trach tube; requires oxygen, much assistance in coughing, a mask (eg. peep) or IAV (e.g CPAP)
8. Breathes independently without trach tube; requires little assistance for stimulation for coughing
10. **Breathes independently without assistance or device** (*although the team has recommended that the patient use a CPAP, she has chosen not to, and is able to function without*)

Q6. Sphincter Management-Bladder:

This question refers to how the patient manages their bladder. Transfers and positioning for bladder management are not considered when scoring this task. Residual urine volume (RUV) is the amount of urine that remains in the bladder after voiding and can be abstracted from the patient's chart if measurement was not completed by the assessing clinician. An external drainage instrument is any equipment that is external to the body and is used to collect urine; this would include condom catheters, pads and adult diapers/ briefs. A Suprapubic catheter would be considered an indwelling catheter.

Clinical Example:

33 year old female, SCI: C7 AIS A

Patient prefers to complete bladder management in bed. She is able to transfer independently using transfer board wheelchair to / from bed; she requires 1PA with clothing management and pillow placement for positioning. She is independent with self-catheterization, draining urine into urinal. Residual urine volume (RUV) s are low. She has some occasional incontinence and typically wears a brief during the day and night.

Score:

0. Indwelling catheter
3. RUV >100cc; no regular catheterization or assisted intermittent self-catheterization
6. RUV < 100cc or intermittent self-catheterization; needs assistance for applying drainage instrument
9. **Intermittent self-catheterization; uses external drainage instrument; does not need assistance for applying** (*the patient has low RUV's, is independent with self-catheterizaton, but still wears a pad / brief. She would score "11" if she did not have occasional incontience and did not wear a pad / brief*).
11. Intermittent self-catheterization; continent between caths, does not use external drainage instrument
13. RUV < 100cc, needs only external drainage device; no assistance is required for drainage
15. RUV <100cc, continent, does nse external drainage instrument

Further explanation of the scoring options is as follows:

0. Indwelling catheter as the patient's primary method of managing their bladder. This includes a suprapubic catheter

3. This answer refers to patients who do not have an indwelling catheter AND RUV are high or unknown. This includes:

- Patients who manually stimulate their bladder to urinate (for example, pressing on their lower abdomen to urinate).
- Patients who perform infrequent and unscheduled intermittent self-catheterizations.
- Patients who require assistance with infrequent intermittent catheterization.
- Patients who use an external drainage device (pad, adult diaper / brief, condom catheter), AND have high or unknown residual volumes.

6. This answer refers to patients who have low RUV, perform regular intermittent self-catheterizations throughout the day with assistance OR the patient that uses an external drainage instrument, has low RUV and requires assistance with applying the drainage device.

9. The patient has low RUV, is independent with intermittent self-catheterizations, uses an external drainage instrument and that they can independently apply.

11. The patient is independent with performing regular intermittent self-catheterizations and does not require an external drainage instrument.

13. The patient has low RUV, uses an external drainage instrument and is independent with applying the instrument.

15. The patient is continent with low RUV, and does not require an external drainage instrument.

Q7. Sphincter Management – bowel: This question is about bowel emptying once the patient is in position to perform their bowel routine. The ability to transfer, perform peri-care or manage clothing is not considered when scoring this task. Having a stoma (e.g. colostomy, iliostomy) would qualify as having assistance. The patient would be scored '0' if they have infrequent bowel movements (less than once every three days) or unscheduled /undesirable timing of bowel movements. The patient with bowel movements at desired time, but requires assistance (e.g. stoma, applying suppository) and with rare accidents would be scored a '5.' The patient with bowel movements at desired timing, without assistance would score as '8' if they have rare accidents, or would score as '10' if they have zero accidents. Rare accidents would be considered twice a month or less.

Q8. Use of Toilet: This question evaluates the patient's ability to clean themselves after toileting (either bowel or bladder). This includes adjusting clothing before/after, use of pads or diapers and stoma management. This would include patients who manage their bladder from their wheelchair (such as catheterizing into a toilet bowl from a wheelchair). If the patient does their bowel routine in bed or on a commode with assistance and wears a drainage device for their bladder, then they would be scored at a '0' or '1', depending on the level of assistance they require. The patient would score '4' if they complete bowel routine independently in bed (requires a specific setting) or does not use the toilet but manages stoma without assistance. If the patient performs their bowel routine or colostomy bag changes in bed, but are independent with this task, then they would score '4' as they require a special setting.

Mobility (room and toilet)

Q9. Mobility in Bed and Action to Prevent Pressure Sores: 'Without assistance' means the patient can change their position in bed and perform weight shifts without physical assistance or the aid of an electric bed or an electric wheelchair. They can use bedrails, the side of a manual wheelchair, an overhead loop or a strap to move in bed. Doing a push up in the wheelchair refers to doing a seat lift or a lateral lean. The patient needs to be able to lift their buttocks completely off of the cushion in their wheelchair, or completely unweight their right and left buttocks to score '6'. The patient can use their arms and/or legs as well as adaptive devices like a table or armrests to perform the seat lift.

Clinical Example:

35 year old male, SCI: T1, AIS B

Patient is independent with wheelchair weight shifts and pushups. He is independent with turning upper and lower body in bed using the bed rails. When moving from supine to sitting up in bed, he needs to use the electronic controls to elevate the head of bed.

0. Needs assistance in all activities: turning upper body in bed, turning lower body in bed, sitting up in bed, doing push-ups in wheelchair
2. Performs one of the activities without assistance
4. **Performs two or three of the activities without assistance.** (*Patient is able to complete 3 of the activities independently. Without assistance means the patient can change their position in bed without physical assistance or the aid of an electric bed or power wheelchair. The patient is able to use the bed rails, side of the wheelchair or overhead strap / bar*)
6. Performs all the bed mobility and pressure release activities independently

Q10. Transfers: Bed to wheelchair: This question assesses the patient's ability to transfer between a bed and a wheelchair, which includes positioning of the wheelchair and manipulating any accessories (such as wheelchair brakes, armrests, caster locks). Scoring should also consider the patient's ability to position their legs and any adaptive aids such as a transfer board. If the patient uses a mechanical lift and are independent with parts or all of the transfer they would be scored a '1' (partial assist).

Q11. Transfers: Wheelchair-Toilet-Tub: This refers to the patient's ability to transfer to either a toilet, commode or shower surface (such as the bottom of a bathtub, shower bench, shower chair or bath board). It is assessing the patient's ability to transfer to surfaces they typically use for toileting or showering. If the patient uses a different surface for toileting and showering the lower score should be chosen if the transfers have different scores.

Q12 to 14. Mobility: Questions 12, 13 and 14 involve walking a variety of distances in both indoor and outdoor environments. The patient can use braces in all of the scoring options except the last one ('8': walk without aids'). The patient should be scored on the walking aid they use rather than their gait pattern (ie: if they step reciprocally but use a walker they would be scored a '4' not a '5'). If the patient walks **and** uses a wheelchair, scoring should reflect what the patient does typically and is safe for the patient at the time of the evaluation for the particular distance. A manual wheelchair with power assist wheels should be considered a power wheelchair. On item 13 and 14, if the patient requires assistance with maneuvering on some terrains (such as grass or inclines) in a manual wheelchair, then they would score '1.'

Clinical Example:

21year old female SCI: T9, AIS C

Patient is now walking in her hospital room and short distances indoors with bilateral ankle foot orthoses, a reciprocal gait and a 4 wheeled walker. When walking longer distances to the treatment room she needs a short break sitting on her walker.

Score:

0. Requires total assist
1. Needs electric wheelchair or partial assistance to operate manual wheelchair
2. Moves independently in manual wheelchair
3. Requires supervision while walking (with or without devices)
4. **Walks with a walking frame or crutches**: (*Guidelines indicate that the patient should be scored on the walking aid they use rather than their gait pattern*)
5. Walks with crutches or two canes (reciprocal walking)
6. Walks with one cane
7. Needs leg orthosis only
8. Walks without walking aids

Q15. Stair Management: Scoring should reflect the patient's ability to manage stairs using their legs. A patient who ascends or descends stairs on their buttocks should be scored '0'. If the patient is learning to climb stairs in therapy, but manages stairs differently in other settings, then they would be scored on their ability to manage stairs outside of therapy.

Q16. Transfers: Wheelchair-Car: This question refers to the patient's ability to transfer in and out of a car. The patient's ability to manage their equipment once they have transferred into a car should be considered. If the patient is unable to transfer into a vehicle seat, they would be scored as '0' (requires total assistance). If the patient requires an adaptation to a vehicle to perform a vehicle transfer or requires assistance when transferring, then they would achieve a score of '1.'

Q17. Transfers: Ground-Wheelchair: If the patient does not use a wheelchair, but requires assistance to transfer from floor level, they would be scored '0'.

07 RESOURCES AND REFERENCES

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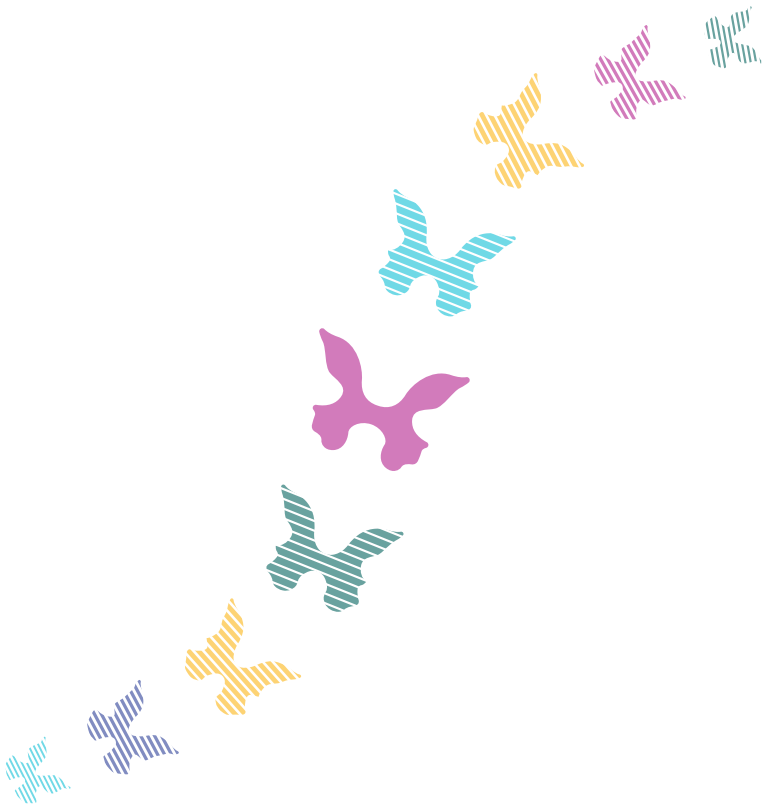
Additional resources, including availability of SCIM in other languages, can be found on the **Spinal Cord Injury Research Evidence (SCIRE)** website.



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