

  
**CYCLE RCT**  
**Physical Outcome Assessor**  
**Startup + Refresher Meetings**  
**Levis + SMH**  
 Wednesday, June 9 @ 11:45-12:45 (Startup)  
 Wednesday, June 16 @ 11:45-12:45 (Startup + Refresher)  
 Hosted by: Michelle Kho, Laurel Kelly, Geoff Strong  





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**Agenda**





|                                |   |
|--------------------------------|---|
| <b>Pre-Meeting tasks:</b>      |   |
| - View website training videos |   |
| <b>60 mins</b>                 | <b>Outcome Assessor - Startup Meeting</b><br>Wednesday, June 9 @ 11:45-12:45                                      |
| <b>5 mins</b>                  | <b>Welcome and introductions</b>  |
| <b>10 mins</b>                 | <b>Overview of CYCLE RCT</b> <ul style="list-style-type: none"> <li>Protocol, study schema, timepoints</li> </ul> |
| <b>40 mins</b>                 | <b>Introduction to CYCLE RCT physical outcome measures + case report forms</b>                                    |
| <b>5 mins</b>                  | <b>Questions and Next Steps</b>   |

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**CYCLE: Critical Care Cycling to Improve Lower Extremity Strength**  
**Research Question:**  
 In medical-surgical ICU patients, does 30 minutes of in-bed cycling and routine PT started within the first 4 days of mechanical ventilation, compared to routine PT improve patient function at 3 days post-ICU?  




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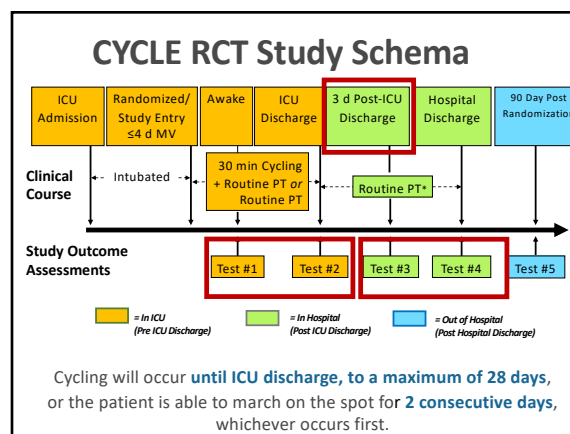
  
**CYCLE: Critical Care Cycling to Improve Lower Extremity Strength**  
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**CYCLE**

- Design:** 360 patient, multicenter, international open-label randomized trial
- Population:** Medical-surgical adults within the first 4 days of mechanical ventilation
- Intervention:** 30 minutes/ day of in-bed cycling + routine physiotherapy
  - Until ICU discharge, 28 days, or able to march on the spot for 2 consecutive days, whichever comes first
- Comparison:** Routine physiotherapy
- Primary Outcome:** Physical Function ICU Test @ 3 days post-ICU discharge by blinded outcomes assessors

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## CYCLE RCT Physical Outcome Measures

### By PTs:

- **Physical Function Test for ICU\*** (PFIT-s)
  - blinded @ 3 days post-ICU discharge
- Muscle strength
- 2-minute walk test
- 30s sit to stand

\*= Primary outcome for full RCT

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## Strength and Function Assessment Prioritization

Highest Priority

PFIT

Manual Muscle Testing

30s Sit to Stand

2 Minute Walk Test

Lowest Priority

Strength

Sit to Stand

Marching on the Spot

Other Strength Components

Shoulder Flexion & Knee Extension

Sit to Stand Assistance Required

Cadence

ICU Awakening

ICU Discharge, 3 Days Post-ICU Discharge and Hospital Discharge

As of Aug 08, 2018

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## Key Responsibilities-Blinded Outcomes PT

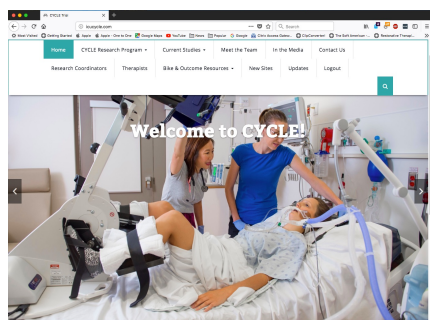
- Liaise with Research Team on patient status to plan for blinded outcomes assessments
- Complete strength and function outcome measurements at 3 days post ICU discharge and hospital discharge
- Complete assessment paperwork
- Maintain and clean equipment and report any issues to Research Coordinator
- Communicate with the Research Coordinator on:
  - Assessment progress and completion
  - Deviations in protocol
  - Staffing issues

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## CYCLE RCT Study Materials

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## www.icucycle.com



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## CYCLE Study Materials

- Website – [www.icucycle.com](http://www.icucycle.com)
  - Training videos
  - Case report forms
  - Supplementary materials / 1-pagers
- Binders
  - Therapist (intervention and outcome measures)
  - Research Coordinator
  - Regulatory

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## Outcome Measures

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## Case Report Forms

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Patient ID: [ ] [ ] [ ] [ ] Coded Patient: [ ] [ ] [ ] [ ] Therapist(s): [ ] [ ] [ ] [ ] Test Date: [ ] [ ] [ ] [ ] (dd/mm/yyyy)

**STRENGTH AND FUNCTION ASSESSMENT: 3 DAYS POST-ICU DISCHARGE (SF3)**

1. Assessment (as) merged with other ax form/ other timepoint (complete at 18) 2. Patient did not pass cog. screen prior to ICU discharge (alive @ discharge) 3. Patient died prior to reaching timepoint 4. Goals of care changed to palliative 5. Patient or Proxy refusal 6. Assessment missed 7. Cognitive issue - patient too undated/diagnosed

8. Assessor perceives patient unable to perform due to safety concerns (e.g. physiological or physical) 9. Assessor perceives that patient is likely able to but has a limitation such as pain, lines, amputation, tongue etc. 10. Other assessment prioritized 11. Other (specify)

12. Other (specify)

13. Clinical data should apply to the following timepoints (check all)

14. Any part of assessment completed any clinical data

15. Strength (MMT) → Assessor blinded? ☐ Yes ☐ No

16. Reason # not done (specify)

17. Muscle Score

18. Sit to Stand: Assistance Required? → Assessor blinded? ☐ Yes ☐ No

19. Level of assistance required

20. Location

21. Chair → Armrest used? ☐ Yes ☐ No

22. Marching on the Spot: Cadence? → Assessor blinded? ☐ Yes ☐ No

23. Reason # not done (specify)

24. Steps

25. Time

26. Cadence

27. Distance

28. 30 SECOND SIT TO STAND → Assessor blinded? ☐ Yes ☐ No

29. Reason # not done (specify)

30. Sit to stand repetitions completed

31. Level of assistance required

32. Location

33. Chair → Armrest used? ☐ Yes ☐ No

34. 2 MINUTE WALK TEST → Assessor blinded? ☐ Yes ☐ No

35. Reason # not done (specify)

36. Distance

37. Level of assistance required

38. Gait aid used

39. Comments

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Patient ID: [ ] [ ] [ ] [ ] Coded Patient: [ ] [ ] [ ] [ ] Therapist(s): [ ] [ ] [ ] [ ] Test Date: [ ] [ ] [ ] [ ] (dd/mm/yyyy)

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24. Steps

25. Time

26. Cadence

27. Distance

28. 30 SECOND SIT TO STAND → Assessor blinded? ☐ Yes ☐ No

29. Reason # not done (specify)

30. Sit to stand repetitions completed

31. Level of assistance required

32. Location

33. Chair → Armrest used? ☐ Yes ☐ No

34. 2 MINUTE WALK TEST → Assessor blinded? ☐ Yes ☐ No

35. Reason # not done (specify)

36. Distance

37. Level of assistance required

38. Gait aid used

39. Comments

16

Patient ID: [ ] [ ] [ ] [ ] Coded Patient: [ ] [ ] [ ] [ ] Therapist(s): [ ] [ ] [ ] [ ] Test Date: [ ] [ ] [ ] [ ] (dd/mm/yyyy)

**3. SIT TO STAND: ASSISTANCE REQUIRED?** → Assessor blinded? ☐ Yes ☐ No

1. Level of assistance required

2. Location

3. Chair → Armrest used? ☐ Yes ☐ No

**4. MARCHING ON THE SPOT: CADENCE?** → Assessor blinded? ☐ Yes ☐ No

1. Steps

2. Time

3. Cadence

4. Distance

**5. 30 SECOND SIT TO STAND** → Assessor blinded? ☐ Yes ☐ No

1. Sit to stand repetitions completed

2. Level of assistance required

3. Location

4. Chair → Armrest used? ☐ Yes ☐ No

**6. 2 MINUTE WALK TEST** → Assessor blinded? ☐ Yes ☐ No

1. Distance

2. Level of assistance required

3. Gait aid used

4. Comments

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## Manual Muscle Testing

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## 1. Muscle Strength – Manual Muscle Testing

### Medical Research Council Sum Score

- **6 muscle groups:**
  - Shoulder abduction                      -Hip flexion
  - Elbow flexion                                -Knee extension
  - Wrist extension                             -Ankle dorsiflexion
- Scored 0 – 5 (higher scores, better strength)
- No plusses or minuses
- Tested in static position (not through range)
- Tested bilaterally = 6 muscle groups = max score 60
- ICU-acquired weakness: total score <48

MUSCLE & NERVE 14:1103–1109 1991

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## MRC scoring:

Scored 0 – 5 (higher scores, better strength)

**Table 2.** MRC-scale with full figures only. The patient is investigated in sitting posture and/or lying supine.

- 0 = No visible contraction
- 1 = Visible contraction without movement of the limb (not existent for hip flexion)
- 2 = Movement of the limb but not against gravity
- 3 = Movement against gravity over (almost) the full range
- 4 = Movement against gravity and resistance
- 5 = Normal

MUSCLE & NERVE 14:1103–1109 1991

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## Supine MMT

- Recommend using ASIA muscle testing positions to test gravity-eliminated strength in lower extremities to reduce need to roll/reposition patient

### Hip Flexion

#### Grade 2

**Patient Position:** Place the patient in the gravity eliminated position with the hip in external rotation and 45° of flexion. The knee is flexed at 90°.

**Examiner Position:** Support the leg.

**Instructions to Patient:** "Try to bring your knee out to the side," or "Try to flex your thigh toward the side of the body."

**Action:** The patient attempts to move through the full range of motion in hip flexion.



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### Knee Extension

#### Grade 2

**Patient Position:** The hip is in external rotation and 45° of flexion. The knee is flexed at 90°.

**Examiner position:** Support the distal thigh and leg.

**Instructions to Patient:** "Straighten your knee."

**Action:** The patient attempts to move through the full range of motion.



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## Scoring

### 2. STRENGTH (MMT) → Assessor blinded? ☐ Yes ☐ No

☐ Reason # not done (specify)

| MUSCLE                     | RIGHT                      |                          | LEFT                       |                          | MUSCLE                   | RIGHT                      |                          | LEFT                       |                          |
|----------------------------|----------------------------|--------------------------|----------------------------|--------------------------|--------------------------|----------------------------|--------------------------|----------------------------|--------------------------|
|                            | SCORE                      | Reason # not done        | SCORE                      | Reason # not done        |                          | SCORE                      | Reason # not done        | SCORE                      | Reason # not done        |
| 1. <i>Shoulder Flexion</i> | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> 5 | <input type="checkbox"/> | 5. Hip Flexion           | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> 5 | <input type="checkbox"/> |
| 2. Shoulder Abduction      | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> 5 | <input type="checkbox"/> | 6. <i>Knee Extension</i> | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> 5 | <input type="checkbox"/> |
| 3. Elbow Flexion           | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> 5 | <input type="checkbox"/> | 7. Ankle Dorsiflexion    | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> 5 | <input type="checkbox"/> |
| 4. Wrist Extension         | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> 5 | <input type="checkbox"/> |                          |                            |                          |                            |                          |

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## Physical Function Test for ICU "PFIT-s"



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## Physical Function Test for ICU (scored) “PFIT-s”

- 4 items:
  - Muscle strength
    - Shoulder flexion
    - Knee extension
  - Assistance from sitting to standing
  - Marching on the spot as long as possible
- Uses:
  - Exercise prescription
  - Prediction: Higher admission PFIT-s:
    - Discharge home
    - Reduced likelihood of discharge to inpatient rehab
    - Shorter hospital LOS

Skinner et al., Crit Care Resusc. 2009 Jun;11(2):110-5.  
Denehy et al., Phys Ther. 2013. 93(12):1-10.

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## A Physical Function Test for the Intensive Care Unit

**Table 3.**  
Classification of Component Scores Used in the Physical Function ICU Test (Scored) (PFIT-s) Ordinal Score

| PFIT-s Components |                     |                                |                            |
|-------------------|---------------------|--------------------------------|----------------------------|
| Assistance        | Cadence (steps/min) | Shoulder Strength <sup>a</sup> | Knee Strength <sup>a</sup> |
| 0=unable          | 0=unable            | 0=grade 0, 1, or 2             | 0=grade 0, 1, or 2         |
| 1=assist × 2      | 1=>0-49             | 1=grade 3                      | 1=grade 3                  |
| 2=assist × 1      | 2=50-180            | 2=grade 4                      | 2=grade 4                  |
| 3=no assistance   | 3=80+               | 3=grade 5                      | 3=grade 5                  |

<sup>a</sup>Maximum strength of left or right shoulder flexion using the Oxford grading system.

<sup>a</sup>Maximum strength of left or right knee extension using the Oxford grading system.

**Table 4.**  
Ordinal Scores and Equivalent Interval Scores for the Physical Function ICU Test (Scored) (PFIT-s)<sup>a</sup>

| Scale    | PFIT-s Score |   |     |     |     |     |     |     |     |     |     |     |    |
|----------|--------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Ordinal  | 0            | 1 | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12 |
| Interval | 0            | 2 | 3.2 | 3.9 | 4.4 | 4.9 | 5.4 | 5.9 | 6.4 | 7.1 | 7.9 | 8.8 | 10 |

<sup>a</sup>Algorithm for conversion from ordinal to interval score =  $5.418 + (1.068 \times \log_{10} \text{location of ordinal score})$ .

Denehy et al., Phys Ther. 2013. 93(12):1-10.

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## PFIT-s Scoring

**2. STRENGTH (MMT)** → Assessor blinded? ☐ Yes ☐ No  
Reason # not done (specify): \_\_\_\_\_

| MUSCLE                           | RIGHT             | LEFT  | MUSCLE                         | RIGHT | LEFT              |
|----------------------------------|-------------------|-------|--------------------------------|-------|-------------------|
| SCORE                            | Reason # not done | SCORE | Reason # not done              | SCORE | Reason # not done |
| 1. Shoulder Flexion <sup>a</sup> | /5                | /5    | 5. Hip Flexion                 | /5    | /5                |
| 2. Shoulder Abduction            | /5                | /5    | 6. Knee Extension <sup>a</sup> | /5    | /5                |
| 3. Elbow Flexion                 | /5                | /5    | 7. Ankle Dorsiflexion          | /5    | /5                |
| 4. Wrist Extension               | /5                | /5    |                                |       |                   |

**3. SIT TO STAND: ASSISTANCE REQUIRED<sup>b</sup>** → Assessor blinded? ☐ Yes ☐ No  
Reason # not done (specify): \_\_\_\_\_

1. Level of assistance required<sup>c</sup> ☐ 0 people ☐ 1 person ☐ 2 people (or more) ☐ Attempted + unable  
2. Location ☐ Bed ☐ Chair → Armrest used? ☐ Yes ☐ No

**4. MARCHING ON THE SPOT: CADENCE<sup>d</sup>** → Assessor blinded? ☐ Yes ☐ No  
Reason # not done (specify): \_\_\_\_\_

1. Steps ☐ (if) ☐ Attempted + unable (if checked, insert score = "0" in "steps")  
2. Time ☐ (seconds) = ☐ (seconds)  
3. Cadence<sup>e</sup> ☐ (steps/min) = ☐ (steps/min)  
Cadence =  $\frac{\text{Steps (steps)} \times 60}{\text{Time (seconds)}}$

**Marching on the spot instructions:**  
"Once you are in the standing position, we will ask you to march on the spot. We would like you to march on the spot for as long as you can. We are going to record how long you walk for and how many steps you do. The test is designed to record your maximum exercise ability, so it is very important that you march on the spot for as long as you possibly can."  
Give standardized encouragement every 10 seconds: "Keep going for as long as you can!"  
"You're doing very well!" "Well done!" if applicable (ie retest), then: "Last time you performed the best, you marched for \_\_\_\_\_ and did \_\_\_\_\_ steps."

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## Sit to Stand Assistance

- Ideal positioning: Patient should have their arms crossed at the wrist and held against their chest.
- Patient can push off arms of chair if needed (you will indicate this on CRF) or use a gait aid
- Provide least amount of assistance required for patient to safely transfer to standing

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## Scoring

**3. SIT TO STAND: ASSISTANCE REQUIRED<sup>b</sup>** → Assessor blinded? ☐ Yes ☐ No  
Reason # not done (specify): \_\_\_\_\_

1. Level of assistance required<sup>c</sup> ☐ 0 people ☐ 1 person ☐ 2 people (or more) ☐ Attempted + unable  
2. Location ☐ Bed ☐ Chair → Armrest used? ☐ Yes ☐ No

**Note:** Only score as assist if hands-on support provided. If patient is able to stand with close supervision only, score as "0 people"

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## Marching on the Spot

- Patient may use a gait aid if needed
- Provide standardized instructions and encouragement
- Each time a foot hits the floor this counts as one step
- Foot must completely clear the floor for a step to count towards patient's total. If patient's foot does not clear for 6 steps, test is over
- If patient stops marching for >2 seconds, test is over
- If patient has been marching continuously for 3 minutes, stop test. Patient will receive highest score

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## Scoring

4. **MARCHING ON THE SPOT-CADENCE** → Assessor blinded? ☐ Yes ☐ No

☐ Reason if not done (specify): \_\_\_\_\_

1. Steps ☐ (s) ☐ Attempted + unable (if checked, insert score = "0" in "steps")

2. Time ☐ (min) ☐ (sec) = ☐ (min:sec)

3. Cadence ☐ (steps/min)

4. Cadence =  $\frac{\text{Steps (s)}}{\text{Time (seconds)}} \times 60$

5. 30 **SECOND SIT TO STAND** → Assessor blinded? ☐ Yes ☐ No

☐ Reason if not done (specify): \_\_\_\_\_

1. Sit to stand repetitions completed ☐ (s) ☐ Attempted + unable (if checked, insert score = "0" in "sit to stand repetitions completed")

2. Level of assistance required ☐ 0 people ☐ 1 person ☐ 2 people (or more)

3. Location ☐ Bed ☐ Chair → Armrest used? ☐ Yes ☐ No

**Marching on the spot instructions:**  
 "Once you are in the standing position, we will ask you to march on the spot. We would like you to march on the spot for as long as you can. We are going to record how long you walk for and how many steps you do. The test is designed to record your maximum exercise ability, so it is very important that you march on the spot for as long as you possibly can."  
 Give standardized encouragement every 10 seconds: "Keep going for as long as you can", "You're doing very well", "Well done", if applicable (ie rested, then: "Last time you performed the test, you marched for \_\_\_\_\_ and did \_\_\_\_\_ steps."

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## 30 Second Sit to Stand

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## 30 Second Sit to Stand

- # times sit to stand completed in 30s
- Predictive equations available for specific ages
- Sample values below (mean, 95% CI)

| Age   | Females    | Males      |
|-------|------------|------------|
| 18-29 | 26 (23-29) | 27 (25-30) |
| 30-39 | 24 (22-27) | 27 (25-30) |
| 40-49 | 25 (23-27) | 29 (27-32) |
| 50-59 | 24 (22-26) | 25 (23-27) |
| 60-69 | 21 (18-23) | 24 (22-27) |

Tveter et al., Arch Phys Med Rehabil. 2014 Jul;95(7):1366-73.

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## 30 Second Sit to Stand

- Patient may use a gait aid if needed and as much assistance as needed to safely stand
- Same positioning as sit to stand if patient able. May push off arm rests if needed
- Must stand up and sit all the way back down for each repetition to count
- If more than halfway up at the end of 30 seconds count this as a full stand

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## Scoring

5. 30 **SECOND SIT TO STAND** → Assessor blinded? ☐ Yes ☐ No

☐ Reason if not done (specify): \_\_\_\_\_

1. Sit to stand repetitions completed ☐ (s) ☐ Attempted + unable (if checked, insert score = "0" in "sit to stand repetitions completed")

2. Level of assistance required ☐ 0 people ☐ 1 person ☐ 2 people (or more)

3. Location ☐ Bed ☐ Chair → Armrest used? ☐ Yes ☐ No

**Note:** If patient performs sit to stand assistance, but is unable to perform 30 second sit to stand, score 30 second sit to stand = 1

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## 30 Second Sit to Stand Scenario

You are performing the 30 second sit to stand test with your patient. They are rushing through the test and only standing up halfway with each repetition.

Answer the following true or false questions:

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## 2-Minute Walk Test

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## 2-Minute Walk Test

- Studied in COPD, CF, frail elderly, neurologic impairment, polio, stroke<sup>1</sup>
- 6MWT may be infeasible - muscle weakness, gait inefficiency, poor endurance
- MDC<sub>95</sub>=13.4 m (23%; stroke population)<sup>1</sup>
- Sample values below (mean, 95% CI)<sup>2</sup>

| Age   | Females          | Males           |
|-------|------------------|-----------------|
| 18-54 | 183 (181-185) m  | 201 (197-204) m |
| 55-59 | 176 (168-185) m  | 191 (177-205) m |
| 60-64 | 166 (158 -175) m | 179 (165-192) m |
| 70-74 | 146 (137-155) m  | 172 (164-181) m |

<sup>1</sup>Pin. Archives of Physical Medicine and Rehabilitation 2014;95:1759-75.

<sup>2</sup>Bohannon et al., Archives of Physical Medicine and Rehabilitation 2015, in press.

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## 2-Minute Walk Test

- 50-foot walking course (15.24m)
- Provide standardized instructions and encouragement
- Patient may use a gait aid, assistance from others, and/or supplemental O2 if needed
- Count the number of laps completed and measure additional distance using trundle wheel

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## Scoring

6. 2 MINUTE WALK TEST → Assessor blinded? ☐ Yes ☐ No

☐ Reason # not done (specify) \_\_\_\_\_

1. Distance (1 metre = 3.28 feet)  (metres) OR  (feet) ☐ Attempted - unable (if checked, insert score = "0" in "distance")

2. Level of assistance required ☐ 0 people ☐ 1 person ☐ 2 people (or more)

3. Gait aid used ☐ (#, 1 - None, 2 - Cane or crutches, 3 - Walker, 4 - Other (specify)) (specify) \_\_\_\_\_

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## 2-Minute Walk Test Scenario

You are completing a 2-minute walk test with your patient. They have a history of COPD and poor exercise tolerance. /

Answer the following questions:

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## Reasons Not Done

**3. REASON FOR FUNCTIONAL ASSESSMENT NOT DONE**

Reason # not done: \_\_\_\_\_

1. Assessment (ax) merged with other ax form/ other timepoint (complete of 1B) 8. Cognitive issue - patient unable to follow commands

2. Patient did not pass cog. screen, prior to ICU discharge (alive or discharge) 9. Assessor perceives patient unable to perform due to safety concerns (e.g. physiological or physical)

3. Patient died prior to reaching timepoint

4. Goals of care changed to palliative 10. Assessor perceives that patient is likely able to but has a limitation such as pain, lines, amputation, fatigue, etc.

5. Patient or Proxy refusal

6. Assessment missed 11. Other assessment prioritized

7. Cognitive issue - patient too sedated/delirious 12. Other (specify) \_\_\_\_\_

1A. Any part of assessment completed/ any clinical data

☐ Yes (go to 1B)

☐ No (insert reason # not done, if "other", specify) →  (specify) \_\_\_\_\_

1B. Clinical data should apply to the following timepoints (check all)

ICU ICU 3 (D) Post-ICU Hospital

Awakening Discharge Discharge Discharge

☐ ☐ ☐ ☐

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## Agenda

### Pre-Meeting tasks:

- Complete Outcome Measure competency checklist
- Complete outcome measures quiz

| 60 mins | Outcome Assessor – Startup + Refresher Meeting<br>Wednesday, June 16 @ 11:45-12:45   |
|---------|--|
| 5 mins  | Welcome and introductions  |
| 5 mins  | Quiz video questions   |
| 5 mins  | Review CYCLE protocol  |
| 15 mins | CYCLE RCT Progress <ul style="list-style-type: none"> <li>• Enrollment update</li> <li>• Outcome Measure Ascertainment</li> <li>• Lessons learned (post-interim analysis)</li> </ul> |
| 15 mins | Scenarios + Discussion (site processes and internal communication plans)   |
| 10 mins | Quiz review  |
| 5 mins  | Questions, next steps, feedback  |

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**Quiz sheet Q&A for: physical outcomes training**

| Demographic Questions  |     | MMT  |       | Cycling   |      |
|--|-----|--|-------|---|------|
| Y  | N   | Pre  | Post  | Pre   | Post |
| Have you previously involved in the CYCLE research program (if yes, check all that apply)? |     | 8  |       | 1   |      |
| <input type="checkbox"/> Delivered cycling   |     | 9  |       | 2   |      |
| <input type="checkbox"/> Collected physical outcome measures                               |     | 10   |       | 3   |      |
| <input type="checkbox"/> Conducted research coordinator assessments                        |     | Score  |       | 4   |      |
| <input type="checkbox"/> Other (specify):  |     |  |       | 5   |      |
| Did you review the website materials before this training session?                         |     | 6  |       | 6   |      |
| What is your role in CYCLE?  |     | 30 Second STS  |       | 7a  |      |
| <input type="checkbox"/> PT  |     | Pre  | Post  | 7b  |      |
| <input type="checkbox"/> PT Assistant  |     | 11   |       | 8   |      |
| <input type="checkbox"/> Nurse   |     | 12a  |       | 9   |      |
| <input type="checkbox"/> Research Coordinator  |     | 12b  |       | Score   |      |
| <input type="checkbox"/> Other (specify):  |     | Score  |       |   |      |
| PFIT-4   |     | ZMWT   |       | Research Coordinator  |      |
| 1  | Pre | Post   | 13    | Pre   | Post |
| 2  |     |  | 14    |   |      |
| 3  |     |  | 15    |   |      |
| 4  |     |  | Score |   |      |
| 5  |     |  |       | 4a  |      |
| 6  |     |  |       | 4b  |      |
| 7  |     |  |       | 5   |      |
| 8  |     |  |       | 6   |      |
| CYCLE-Specific Processes   |     | CYCLE-Specific Processes                             |       | CYCLE-Specific Processes  |      |
| <input type="checkbox"/> Shoulder flexion strength   |     | <input type="checkbox"/> Shoulder flexion strength   |       | <input type="checkbox"/> Conduct the research coordinator hospital assessment   |      |
| <input type="checkbox"/> Shoulder abduction strength                                       |     | <input type="checkbox"/> Shoulder abduction strength |       | <input type="checkbox"/> Mark the hospital dis assessments as completed         |      |
| <input type="checkbox"/> Knee extension strength   |     | <input type="checkbox"/> Knee extension strength     |       | <input type="checkbox"/> Complete Final Study                                   |      |
| <input type="checkbox"/> 10 second STS   |     | <input type="checkbox"/> 10 second STS               |       | <input type="checkbox"/> Complete the strength function hospital dis assessment |      |
| <input type="checkbox"/> STS level of assistance   |     | <input type="checkbox"/> STS level of assistance     |       |   |      |
| <input type="checkbox"/> ZMWT  |     | <input type="checkbox"/> ZMWT                        |       |   |      |
| <input type="checkbox"/> MOS Cadence   |     | <input type="checkbox"/> MOS Cadence                 |       |   |      |
| Score  |     | Score  |       | Score   |      |

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## OM Competency Checklist

| COMPETENCY   | ✓ |
|--|---|
| <b>Protocol</b>  |   |
| • Understands assessment time points and blinding status at each                               |   |
| • Understands how to assess eligibility for time points (e.g. awakening assessment)            |   |
| • Demonstrates ability to organize assessment and generate components appropriately            |   |
| <b>PFIT</b>  |   |
| • Performs shoulder flexion strength testing   |   |
| - Grades strength correctly  |   |
| - Demonstrates understanding of testing position   |   |
| - Tests muscle strength in a static position (not through range)                               |   |
| • Performs knee extension strength testing   |   |
| - Grades strength correctly  |   |
| - Demonstrates understanding of testing position   |   |
| - Tests muscle strength in a static position (not through range)                               |   |
| • Assesses sit-to-stand performance  |   |
| - Cues patient for starting position   |   |
| - Records appropriate amount of assistance required  |   |
| • Assesses step cadence (standing on the spot)   |   |
| - Reads standardized instructions  |   |
| - Demonstrates knowledge of when to stop test  |   |
| - Counts patient's steps and keeps time  |   |
| - Uses provided equation to calculate step cadence   |   |
| • Completes components of PFIT in correct order  |   |
| <b>Manual Muscle Testing</b>   |   |
| • Demonstrates understanding of grading system   |   |
| • Demonstrates understanding of different testing positions for each limb/muscle/grade         |   |
| • Tests muscle strength in a static position (not through range)                               |   |
| <b>10 Second Sit to Stand</b>  |   |
| • Cues patient for starting position   |   |
| • Clearly explains to patient and demonstrates how to perform test                             |   |
| • Correctly scores number of stands while keeping time   |   |
| <b>2 Minute Walk Test</b>  |   |
| • Demonstrates understanding of test contraindications, precautions, and criteria for stoppage |   |
| • Reads standardized instructions and encouragement  |   |
| • Accurately measures total distance walked  |   |
| <b>CRPS</b>  |   |
| • Properly completes strength and function assessment CRF                                      |   |
| • Demonstrates understanding of how to apply "reason not done" codes appropriately             |   |

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## Next Steps – Practice!

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## Questions, next steps, feedback

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