http://dx.doi.org/10.2106/JBJS.16.00303

Appendix

Confidence Survey

Confidence (Self-Efficacy) Assessment

Please indicate (by circling the appropriate number) how confident you are when undertaking the following activities related to neurological assessment of lower limbs.

1. Using anatomical terms of position and movement of the foot and ankle (e.g., dorsiflexion, plantar flexion, inversion, eversion, anterior, posterior, etc.)

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

2. Identifying and naming common musculoskeletal deformities of the lower extremity (e.g., valgus, varus, cavus, planovalgus)

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

3. Describing the basic anatomy and function of the 4 compartments of the leg

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

4. Taking a history from someone presenting with a postoperative neurological deficit

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

5. Identifying and testing the myotomes of the lower extremity

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

6. Identifying and testing the dermatomes of the lower extremity

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

7. Defining and testing the peripheral nerve innervation of the lower extremity (sensory and motor)

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

8. Assessing the knee for soft-tissue swelling and/or hematoma

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

9. Describing the basic types of nerve injury (neurapraxia, axonotmesis, neurotmesis)

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

10. Describing at risk neurological structures during anterior and posterolateral approaches to the hip

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

11. Identifying and describing the possible etiologies (differential diagnosis) of a neurological deficit after hip or knee arthroplasty

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

12. Counseling a patient and/or family after the identification of a postoperative neurological deficit

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

13. Treating a patient in the early postoperative period with a new neurological deficit (i.e., calls to make, tests to order, anticipation of resolution or duration)

Not at all confident									Very confident
1	2	3	4	5	6	7	8	9	10

Communication Skills Assessment: Communication Assessment Tool to Escalate Foot Drop*

Please rate your level of agreement on the following statements on how you would currently escalate a situation once you have identified a patient with foot drop and other related neurological deficits.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I would immediately escalate to the appropriate person.	☐	☐	☐	☐	☐
2. I would immediately escalate to the appropriate person via:					
a. Text	☐	☐	☐	☐	☐
b. Page	☐	☐	☐	☐	☐
c. Verbal face to face	☐	☐	☐	☐	☐
d. Phone	☐	☐	☐	☐	☐
3. I am confident I know when to escalate an identified neurological deficit to the appropriate person in a timely manner.	☐	☐	☐	☐	☐
4. I am confident I know how to escalate an identified neurological deficit to the appropriate person in a timely manner.	☐	☐	☐	☐	☐

*The appropriate person is defined as, for example, resident, physician assistant, fellow, or attending surgeon.

Knowledge Assessment

Module 1: Neurovascular Anatomy of the Lower Extremity

1. Which of the following correctly matches a nerve to a muscle it innervates and the action that muscle produces?
    a. Tibial nerve → tibialis anterior → ankle dorsiflexion
    b. Sciatic nerve → hamstrings → extend hip and flex knee
    c. Deep peroneal nerve → peroneals → foot eversion
    d. Femoral nerve → gastrocnemius → flex hip and extend knee
    e. Superficial peroneal nerve → extensor hallucis longus → great toe extension
2. What function would remain intact after isolated laceration of the common peroneal nerve?
    a. Toe extension
    b. Sensation to the first web space
    c. Ankle dorsiflexion
    d. Foot eversion
    e. Sensation to the sole of the foot
3. Which of the following nerves is correctly matched to its cutaneous sensory distribution?
    a. Lateral femoral cutaneous nerve → lateral thigh
    b. Superficial peroneal → first web-space of foot
    c. Tibial nerve → medial leg
    d. Deep peroneal → lateral leg
    e. Sural nerve → posterior thigh

Module 2: Clinical Examination of a Foot Drop

1. A 72-year-old man presents to an orthopaedic surgeon with hip pain that has been affecting his activities of daily living. He is indicated for a hip replacement and undergoes an uneventful procedure. Postoperatively you are called to his bedside for a suspected foot drop. Which of the following corresponds to a normal strength on the motor component of the examination?
    a. 0/5
    b. 1/5
    c. 3/5
    d. 4+/5
    e. 5/5
2. When called to examine a patient for a suspected foot drop, what should be your first step in the evaluation?
    a. Flex the knee and extend the hip
    b. Perform a complete examination and determine if there has been a change from the preoperative examination
    c. Turn down the epidural catheter
    d. Inquire with the anesthesia team about the choice of intraoperative analgesia
    e. Call the fellow or resident on call

3. A 65-year-old woman with rheumatoid arthritis notes that her ankle feels weak after her elective total knee replacement earlier in the day. On examination, you note that she has 3/5 strength in dorsiflexion and 3/5 strength in eversion. When you ask her to turn the foot in (inversion), you note that she has 5/5 strength. What nerve has likely sustained an injury?
    a. Tibial nerve
    b. Sciatic nerve
    c. L5 nerve root
    d. Peroneal nerve
    e. Tibial and peroneal nerves

Module 3: Nerve Lesions and Differential Diagnosis

1. The nerve injury most often seen following hip and knee arthroplasty is a neurapraxia. What is the definition of this term?
    a. Interruption of the continuity of all nerve elements including the axon, epineurium, perineurium, and endoneurium
    b. A physiologic block to conduction with intact nerve elements
    c. A loss of continuity of the axon but intact connective tissue within the nerve
    d. Transection of the nerve including all nerve elements
2. A neurological deficit following hip and knee arthroplasty may be secondary to which of the following anesthetics:
    a. Residual spinal nerve block
    b. Lumbar plexus block
    c. Indwelling epidural catheter
    d. All of the above
    e. None of the above
3. After a total knee arthroplasty, a patient is found to have an inability to dorsiflex the ankle on the operative side. The patient also has diminished sensation in the superficial and peroneal distributions. What factor may have contributed to this neurological deficit?
    a. Preoperative weakness in the quadriceps
    b. Intraoperative release of the medial collateral ligament
    c. Preoperative valgus deformity of 20°
    d. Preoperative varus deformity of 20°

Module 4: Foot Drop Algorithm, Walkthrough

1. Who can identify a foot drop?
    a. PACU (post-anesthesia care unit) nurse
    b. Physical therapist
    c. Physician assistant
    d. Resident
    e. All of the above

2. A PACU nurse or physical therapist identifies a patient with a foot drop immediately after total hip arthroplasty. The nurse or physical therapist notices the patient has an epidural. What should the nurse or physical therapist do?
    a. Contact the primary orthopaedic team
    b. Turn off the epidural and reassess in 3 hours
    c. Make the patient NPO (nil per os) provisionally
    d. Extend the hip and flex the knee on the operative side
    e. No interventions needed
3. During regular business hours, a resident, physician assistant, or fellow identifies a patient with a foot drop immediately after total hip arthroplasty. The patient had general anesthesia. No block was performed and the patient does not have an epidural. What should the resident, physician assistant, or fellow do?
    a. Contact the attending surgeon directly
    b. Make the patient NPO provisionally
    c. Extend the hip and flex the knee on the operative side
    d. All of the above
    e. b and c only
4. A resident, physician assistant, or fellow is notified of a newly identified foot drop in a patient immediately after total knee arthroplasty. Which of the following actions is NOT appropriate?
    a. Examine the patient, noting positioning, dressings, and drain output
    b. Review the preoperative and postoperative radiographs
    c. Tell the nurse to feed the patient dinner and page again in 2 hours if the foot drop does not improve
    d. Contact the attending surgeon
5. Where can you find the Foot Drop Algorithm and related informational modules?
    a. By typing “foot drop” into your Internet browser’s search bar
    b. On youtube.com
    c. On the Hospital for Special Surgery intranet

Case Details and Assessment Checklists

Case Scenario 1 (Participants Only)

Clinical Setting: Post-Anesthesia Care Unit, Tuesday morning
Patient Information:
Name: Chris Smith
Age: 65
Chief symptom reported: "I can't lift my foot."
Vital signs: temperature = 37.0°C (98.6°F), blood pressure = 115/75, respiratory rate = 15, and pulse = 70

Case Instructions

You are in the PACU on a busy Tuesday morning. One of your patients is a 65-year-old man with a history of insulin-dependent type-2 diabetes and osteoarthritis who underwent a left total hip replacement earlier today. The patient reports that he cannot raise the left foot. You call the primary orthopaedic team physician assistant and you see the patient together.

You will have 15 minutes to complete the following:

1. Focused history
2. Focused physical examination
3. Taking appropriate action according to the Neurological Assessment of Lower Extremities algorithm.

(Examinees do not see this page; For Facilitator and Standardized Patients only)

Standardized Patient: A 65-year-old man with a medical history of insulin-dependent type-2 diabetes with peripheral neuropathy (preoperative hemoglobin A1C of 7.0%), hypertension, benign prostatic hyperplasia, and osteoarthritis of the left hip. His surgical history is notable for an appendectomy in 1975. He has no known drug allergies. His home medications are metformin, glipizide, insulin, lisinopril, hydrochlorothiazide, tamsulosin, and naproxen.

Case 1 Details

The patient underwent a left total hip replacement using a posterior approach under combined spinal-epidural anesthesia earlier today and has an ePCA (epidural patient-controlled analgesia) in place. The patient has been using the maximum ePCA dosage. The patient reports decreased sensation in the left lower extremity from the mid-calf to the toes. If prompted, he states that this is different from his baseline neuropathy, which has been present for >1 year. If prompted, the patient states that the right lower extremity has decreased sensation in the same distribution that is also different from his baseline neuropathy. The patient reports inability to raise the left foot. If prompted, the patient states that he is also unable to raise the right foot.

On examination, the patient is afebrile with stable vital signs, is in no distress, and is awake and fully oriented. The left hip is wrapped in a hip spica dressing, which is clean, dry, and intact. The bilateral lower extremities have globally decreased sensation to light touch that extends from the toes to the proximal part of the thigh and that is symmetric. He has 2+ dorsalis pedis and posterior tibial pulses, the feet are warm and well perfused, and the capillary refill is <2 seconds bilaterally in the lower extremities.

Initial Motor Examination

Bilateral upper extremities: 5/5 all muscle groups

Right lower extremity: tibialis anterior 2/5, extensor hallucis longus 2/5, gastrocnemius and soleus muscles 4/5

Left lower extremity: tibialis anterior 2/5, extensor hallucis longus 2/5, gastrocnemius and soleus muscles 4/5

The patient's motor examination will remain as above until the ePCA is turned off at the request of the resident, fellow, or physician assistant. Upon turning off the ePCA, an overhead announcement will be made that it is now 3 hours later. The patient is now reporting pain in the left hip and thigh. If prompted, the patient states that the sensation is now back to baseline in the bilateral lower extremities. If prompted, the patient states that he is moving the feet and toes normally.

On examination, the patient has symmetrically reduced sensation in all the toes and the soles of the feet bilaterally, but sensation is normal and symmetric on the dorsum of the foot, the medial and lateral aspects of the foot, and above the ankle.

Repeat Motor Examination

Bilateral upper extremities: 5/5 all muscle groups

Right lower extremity: tibialis anterior 5/5, extensor hallucis longus 5/5, gastrocnemius and soleus muscles 5/5

Left lower extremity: tibialis anterior 5/5, extensor hallucis longus 5/5, gastrocnemius and soleus muscles 5/5

The case ends at this point, or if the nurse pages the on-call resident or attending surgeon at an earlier point.

Facilitator Expectations or Prompts

If the examinees choose the wrong pathway on the decision tree, step in immediately and correct the examinees briefly in the following manner: "The correct step to have taken at the point when _____ (describe branch point on decision tree where the practitioner diverged from correct course of action), would have been _____ (describe the correct course of action). Proceed as if you had _____ (describe the correct course of action)." Do not go into a detailed explanation of why an error occurred or why the correct course of action should be taken.

If the examinees are struggling, the facilitator should progress the scenario at specific time points so that the examinees must navigate the critical decision branch points presented in the scenario. Suggest the next appropriate step at the following time points:

Time	Task	Suggestions
5 minutes	Perform neurological examination and interrogate anesthesia record.	"The correct course of action is to perform a neurological examination of the lower extremities or interrogate the anesthesia record. Please do so now."
10 minutes	The correct course of action is to ask the anesthesia team to turn off the ePCA. Do so now.	"The correct course of action is to turn off the ePCA. Please do so now."
12 minutes	Perform a repeat neurological examination.	"The correct course of action is to perform a repeat neurological examination. Please do so now."

Name of Facilitator:		Date:		Time Slot:	
Number of Examinees	Physical Therapist:	Nurse:	Physician Assistant:	Resident:	Fellow:

Nurse or Physical Therapist Evaluation Checklist for Case Scenario 1

	Facilitator: Please mark the columns to the right.	YES	NO	Notes
1.	Examinee interrogates the anesthesia record			
2.	Examinee elicits history of peripheral neuropathy			
3.	Examinee evaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscles			
4.	Examinee notifies primary orthopaedic team physician assistant, resident, or fellow			
5.	Examinee reevaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscles after ePCA is turned off (do not score item if physician assistant or resident does not turn off ePCA)			
6.	Examinee calls primary orthopaedic team			
Overall Comments:				

Physician Assistant, Resident, or Fellow Evaluation Checklist for Case Scenario 1

Facilitator: Please mark the columns to the right.		YES	NO	Notes
1.	Examinee interrogates the anesthesia record			
2.	Examinee elicits history of peripheral neuropathy			
3.	Examinee evaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscles			
4.	Examinee turns off ePCA			
5.	Examinee reevaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscles after ePCA is turned off (do not score item if physician assistant, resident, or fellow does not ask for the anesthesia team to turn off ePCA)			
6.	Examinee calls attending surgeon			
Overall Comments:				

Case Scenario 2 (Participants Only)

Clinical Setting: Post-Anesthesia Care Unit, Friday evening
Patient Information:
Name: Pat Miller
Age: 70
Chief symptom reported: “I can’t move my big toe.”
Vital signs: temperature = 36.8°C (98.2°F), blood pressure = 125/85, respiratory rate = 14, and pulse = 65

Case Instructions

You are in the PACU on a Friday evening. The last patient to come out of the operating room on your shift is reporting, “I can’t move my big toe.” The patient is a 70-year-old woman with a history of hypertension and osteoarthritis who underwent right total knee replacement earlier today. You call the primary orthopaedic team physician assistant and you see the patient together.

You will have 15 minutes to complete the following:

1. Focused history.
2. Focused physical examination.
3. Taking appropriate action according to the Neurological Assessment of Lower Extremities algorithm.

(Examinees do not see this page; For Facilitator and Standardized Patients only)

Standardized Patient: A 70-year-old woman with a medical history of hypertension and osteoarthritis of the bilateral knees. Her surgical history is notable for a posterior lumbar spinal fusion L2-S1 and two cesarean sections. She has no known drug allergies. Her home medications are hydrochlorothiazide and naproxen.

Case 2 Details

Patient underwent right total knee replacement under general endotracheal anesthesia earlier today after several failed attempts at placing an epidural. The patient has an intravenous patient-controlled analgesia (PCA). The patient is reporting decreased sensation in the right foot. If prompted, she states that she did not have this problem prior to the surgical procedure. If prompted, the patient states that the left lower extremity has full sensation. The patient reports the inability to raise the right foot. If prompted, the patient states that she has full strength in the left ankle and left great toe.

On examination, the patient is afebrile with stable vital signs, is in no distress, and is awake and fully oriented. The right knee is wrapped in an ACE bandage, which is clean, dry and intact. There is a suction drain emerging from the right knee dressing with 250-mL serosanguinous output. The left lower extremity has full sensation intact to light touch. The right lower extremity has decreased sensation to light touch over the right anterolateral leg and over the right dorsal foot. She has 2+ dorsalis pedis and posterior tibial pulses, the feet are warm and well perfused, and the capillary refill is <2 seconds bilaterally in the lower extremities.

Motor Examination

Bilateral upper extremities: 5/5 all muscle groups

Right lower extremity: tibialis anterior 3/5, extensor hallucis longus 2/5, gastrocnemius and soleus muscles 5/5

Left lower extremity: tibialis anterior 5/5, extensor hallucis longus 5/5, gastrocnemius and soleus muscles 5/5

After examination, the patient will ask the examinee for crackers and ginger ale.

The case ends at this point, or if the physician assistant pages the attending surgeon or on-call resident at an earlier point.

Facilitator Expectations or Prompts

If the examinees choose the wrong pathway on the decision tree, step in immediately and correct the examinees briefly in the following manner: “The correct step to have taken at the point when _____ (describe branch point on decision tree where the practitioner diverged from the correct course of action), would have been _____ (describe the correct course of action). Proceed as if you had _____ (describe the correct course of action).” Do not go into a detailed explanation of why an error occurred or why the correct course of action should be taken.

If the examinees are struggling, the facilitator should progress the scenario at specific time points so that the examinees must navigate the critical decision branch points presented in the scenario. Suggest the next appropriate step at the following time points:

Time	Task	Suggestions
5 minutes	Perform neurological examination and interrogate anesthesia record.	"The correct course of action is to perform a neurological examination of the lower extremities or interrogate the anesthesia record. Please do so now."
10 minutes	Page the on-call resident.	"The correct course of action is to page the on-call resident. Please do so now."
12 minutes	Loosen dressings and reposition patient.	"The correct course of action is to loosen the patient's dressings and reposition the patient. Please do so now."

Name of Facilitator:		Date:		Time Slot:	
Number of Examinees	Physical therapist:	Nurse:	Physician assistant:	Resident:	Fellow:

Nurse or Physical Therapist Evaluation Checklist for Case Scenario 2

	Facilitator: Please mark the columns to the right.	YES	NO	Notes
1.	Examinee interrogates the anesthesia record			
2.	Examinee evaluates right extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscles			
3.	Examinee assesses drain output			
4.	Examinee does not allow patient to eat or drink			
5.	Examinee notifies primary orthopaedic team (physician assistant, resident, or fellow)			
6.	Examinee pages on-call resident			
Overall Comments:				

Physician Assistant, Resident, and Fellow Evaluation Checklist for Case Scenario 2

	Facilitator: Please mark the columns to the right.	YES	NO	Notes
1.	Examinee interrogates the anesthesia record			
2.	Examinee evaluates right extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscles			
3.	Examinee assesses drain output			
4.	Examinee flexes patient's right knee over a pillow			
5.	Examinee loosens right knee dressing			
6.	Examinee gives order to keep the patient NPO			
7.	Examinee pages on-call resident			
Overall Comments:				

Knowledge Assessment Scores from Pretest and Immediately After Online Modules (N = 322)

Question	Before Modules*	After Modules*	P Value
Module 1			
1	50.9%	84.2%	<0.001
2	63.4%	82.6%	<0.001
3	65.2%	84.8%	<0.001
Module 2			
1	63.4%	82.6%	<0.001
2	84.5%	92.5%	<0.001
3	67.1%	85.7%	<0.001
Module 3			
1	64.6%	90.4%	<0.001
2	88.5%	96.3%	<0.001
3	56.2%	82.6%	<0.001
Module 4			
1	96.6%	98.4%	0.210
2	73.6%	83.2%	0.002
3	62.4%	81.1%	<0.001
4	90.1%	97.2%	<0.001
5	94.4%	98.1%	0.017

*The values are given as the percentage of respondents answering each item correctly.

Knowledge Assessment Scores of Pretest, Immediately After Online Modules, and at the Time of the Latest Follow-up (N = 38)

Question	Before Modules*	After Modules*	P Value†	Latest Follow-up*	P Value‡
Module 1					
1	42.1%	78.9%	0.001	63.2%	0.077
2	57.9%	86.8%	0.001	86.8%	0.013
3	76.3%	94.7%	0.016	81.6%	0.774
Module 2					
1	97.4%	97.4%	1.000	94.7%	1.000
2	89.5%	94.7%	0.500	86.8%	1.000
3	76.3%	94.7%	0.039	89.5%	0.227
Module 3					
1	68.4%	94.7%	0.006	84.2%	0.146
2	94.7%	97.4%	1.000	94.7%	1.000
3	71.1%	94.7%	0.022	97.4%	0.002
Module 4					
1	100.0%	100.0%	1.000	100.0%	1.000
2	73.7%	89.5%	0.031	97.4%	0.004
3	57.9%	84.2%	0.006	78.9%	0.096
4	100.0%	100.0%	1.000	100.0%	1.000
5	100.0%	100.0%	1.000	100.0%	1.000

*The values are given as the percentage of respondents who answered each item correctly. †Significance was determined between the percentages before the online modules and those after the online modules. ‡Significance was determined between the percentages before the online modules and those at the time of the latest follow-up.

Scores on Boot Camp Assessment

Physician assistants or residents' checklist results: Case 1	Score*
Examinee interrogates the anesthesia record	76.7%
Examinee elicits history of peripheral neuropathy	90.0%
Examinee evaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscles	93.3%
Examinee calls anesthesia team to turn off ePCA	96.7%
Examinee reevaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscle after ePCA is turned off (do not score item if physician assistant, resident, or fellow does not turn off ePCA)	96.7%
Examinee follows escalation policy appropriately	96.3%
Physical therapists or nurses' checklist results: Case 1	
Examinee interrogates the anesthesia record	64.3%
Examinee elicits history of peripheral neuropathy	76.9%
Examinee evaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscle	76.9%
Examinee notifies primary orthopaedic team	100.0%
Examinee reevaluates left extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscle after ePCA turned off (do not score item if physician assistant, resident, or fellow does not turn off ePCA)	76.9%
Examinee calls primary orthopaedic team	64.3%
Physician assistants or residents' checklist results: Case 2	
Examinee interrogates the anesthesia record	100.0%
Examinee evaluates right extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscle	100.0%
Examinee assesses drain output	66.7%
Examinee flexes the patient's right knee over a pillow	96.7%
Examinee loosens right knee dressing	96.7%
Examinee follows escalation policy appropriately	86.7%
Physical therapists or nurses' checklist results: Case 2	
Examinee interrogates the anesthesia record	76.9%
Examinee evaluates right extensor hallucis longus, tibialis anterior, and gastrocnemius and soleus muscle	84.6%
NURSES ONLY: Examinee assesses drain output (n = 8)	62.5%
Examinee notifies primary orthopaedic team	100.0%
Examinee pages primary orthopaedic team	69.2%

*The values are given as the percentage of groups successfully performing each item on the scoring rubric. Although the groups were composed of a mixture of provider types, 2 separate scoring rubrics were utilized: one for the physician assistants and residents in each group and another for the physical therapists and nurses. Results were therefore tabulated and presented separately.

Boot Camp Participant Satisfaction Survey Results

Satisfaction Survey Item	Score*				
	Excellent	Very Good	Good	Fair	Poor
Overall program	50.0%	41.4%	8.6%	0.0%	0.0%
Facilitator's clarity in answering participants questions	71.4%	20.0%	8.6%	0.0%	0.0%
Facilitator's ability to be understood (volume, pace)	74.3%	21.4%	4.3%	0.0%	0.0%
Facilitator's ability to modify teaching points to your level of difficulty	72.9%	24.3%	2.9%	0.0%	0.0%
Facilitator's ability to explain teaching points	71.4%	22.9%	5.7%	0.0%	0.0%
Facilitator's assistance when needed	77.1%	20.0%	1.4%	1.4%	0.0%

*The values are given as the percentage of respondents indicating each satisfaction level.

Communication Assessment Results

Communication Assessment Item*	Pre-Intervention†					Post-Intervention†					P Value
	1	2	3	4	5	1	2	3	4	5	
1. I would immediately escalate to the appropriate person.	0	0	0	13.2	86.8	0	0	0	5.3	94.7	0.751
2a. I would immediately escalate to the appropriate person via text.	0	0	0	13.2	86.8	0	0	0	5.3	94.7	0.751
2b. I would immediately escalate to the appropriate person via page.	44.7	7.9	18.4	13.2	15.8	0	0	2.6	5.3	92.1	0.571
2c. I would immediately escalate to the appropriate person face to face.	5.3	7.9	7.9	21.1	57.9	0	0	0	13.2	86.8	0.537
2d. I would immediately escalate to the appropriate person via phone.	10.5	0	10.5	18.4	60.5	36.8	7.9	10.5	13.2	31.6	0.07
3. I am confident I know when to escalate an identified neurological deficit to the appropriate person in a timely manner.	0	0	0	13.2	86.8	0	0	0	5.3	94.7	0.751
4. I am confident I know how to escalate an identified neurological deficit to the appropriate person in a timely manner.	0	0	0	13.2	86.8	0	0	0	5.3	94.7	0.751

*The appropriate person is defined as, for example, resident, physician assistant, fellow, or attending surgeon. †The values are given as the percentage of participants endorsing a given level of agreement (1-to-5 scale encompassing strong disagreement to strong agreement) with each assessment item.

Mean Confidence Assessment Scores by Activity

Confidence Assessment Item	Pre-Intervention*	Post-Intervention*	P Value
Using anatomical terms of position and movement of the foot and ankle	8.9	9.0	0.860
Identifying and naming common musculoskeletal deformities of the lower extremity	7.6	8.3	0.006
Taking a history from someone presenting with a postoperative neurological deficit	7.4	8.3	0.002
Describing the basic anatomy and function of the 4 compartments of the leg	7.9	9.0	0.001
Identifying and testing the myotomes of the lower extremity	6.6	8.1	<0.001
Identifying and testing the dermatomes of the lower extremity	7.0	8.0	0.002
Defining and testing the peripheral nerve innervation of the lower extremity	7.2	8.3	0.001
Assessing the knee for soft-tissue swelling and/or hematoma	8.0	8.7	0.010
Describing the basic types of nerve injury	5.9	8.1	<0.001
Describing at risk neurological structures during anterior and posterolateral approaches to the hip	6.5	8.1	<0.001
Identifying and describing the possible etiologies (differential diagnosis) of a neurological deficit after hip or knee arthroplasty	7.0	8.5	<0.001
Counseling a patient and/or family after the identification of a postoperative neurological deficit	6.6	8.2	<0.001
Treating a patient in the early postoperative period with a new neurological deficit	7.4	8.5	0.005

*The values are given as the mean score. These items were scored on a scale of 1 to 10.