



PHYSICAL THERAPY

- Purpose:** To provide the Health Science student with an opportunity to develop and demonstrate knowledge and skills in the area of physical therapy.
- Description of Event:** This event will consist of two rounds of competition. Round One will be a written, multiple choice test of knowledge and understanding. The top scoring competitors will advance to Round Two for the performance of selected skill procedure(s) identified in a written scenario. The scenario will require the use of critical thinking skills. The performance will be timed and evaluated according to the event guidelines.
- Dress Code:** Competitors shall wear professional attire appropriate to the occupational area during the written test and skill procedure(s). School identification or name pins must be removed or covered during competition. Bonus points will be awarded for proper dress.
- Rules and Procedures**
- Competitors in this event must be active members of HOSA in good standing in the category in which they are registered to compete (Secondary or Postsecondary/Collegiate). Competitors should compete in skill events at the highest level of their training.
 - The test shall be developed from the National HOSA test item bank and will consist of fifty (50) multiple choice items. Competitors will be given one hour to complete the test.

Round One: Written Test Plan
Range of Motion 20%
Ambulating with gait belt, cane, walker or crutches..... 20%
Heat/cold applications..... 8%
Musculoskeletal Anatomy, Physiology and Pathophysiology 30%
Workplace Safety 16%
Careers in Physical Therapy..... 6%
 - All competitors shall report to the site of the event orientation at the time designated. The Round One test will immediately follow the orientation. **No proxies will be allowed for the orientation.** No study materials are allowed in the room.
 - All official references are used in the development of the written test. The specific reference selected for each procedure is listed in the Facilities, Equipment and Materials section of these guidelines.
 - Simmers, Louise. *Diversified Health Occupations*. Delmar Publishing. Latest edition
 - Pierson, Frank and Sheryl Fairchild. *Principles and Techniques of Patient Care*. Elsevier Science/W.B. Saunders Co., Latest edition.
 - The test score from Round One will be used to qualify the competitor for the Round Two skill procedures. The procedures approved for this event are:
 - Procedure I: Ambulating with a Transfer (Gait) Belt
 - Procedure II: Ambulating with a Walker
 - Procedure III: Ambulating with a Cane
 - Procedure IV: Range of Motion
 - Procedure V: Ambulating with Crutches
 - Procedure VI: Ice Pack Application

6. The selected procedure(s) for Round Two, in the form of a written scenario, will be presented to the competitor at the start of the skill to be performed. The timing for the skill will begin when the scenario is presented. The scenario will be the same for each competitor and will include a challenging component that will require the competitor to apply critical thinking skills.
7. In case of a tie, the highest test score will be used to determine the rank.
8. Competitors must complete all steps of the procedure listed in the guidelines even if the steps must be simulated/verbalized.
9. Competitors will be stopped at the end of the time allowed for a selected procedure(s).
10. Competitors must bring all items noted with *** in the materials section of these guidelines to the event.
11. **Competitors must be familiar with and adhere to the "General Rules and Regulations of the National HOSA Competitive Events Program."**

Required Personnel

1. One Event Manager per event
2. One Section Leader per section
3. One judge per procedure selected per section (with expertise in the specific skill area)*
 - a. One judge will role-play the physical therapist.
4. Proctors for testing
5. One-two Courtesy Corps per section
6. One-two patients as required by the scenario (per section)
7. Timekeepers (if necessary)

Facilities, Equipment and Materials (Per Section)

General

1. Clinical and/or laboratory stations for selected procedures
2. Holding rooms or areas for competitors
3. Written scenario (one copy per competitor and judge)
4. Calculators, note pads, pencils for judges
5. Certificates for all who complete Round One.
6. Event evaluations and pencils to complete evaluation.
7. Stopwatch(s)
- *** 8. Watch with a second hand
- *** 9. Pens and pencils for all events

Round One: Written Test (Reference: All resources)

1. One test copy per competitor
2. Scantron forms

Round Two:

Procedure I

Ambulating with a Transfer (Gait) Belt (Reference: Simmers)

1. Bed with siderails OR Chair
2. Patient robe
3. Patient shoes/slippers with non-skid soles
4. Gait Belt
5. Alcohol-based handrub
6. Scenario – must indicate patient information and instructions from therapist
7. Judge instructions – must indicate if patient is going to fall

Procedure II Ambulating with a Walker (Reference: Simmers)

1. Walker
2. Chair
3. Gait Belt
4. Alcohol-based handrub
5. Patient – walking shoes
6. Scenario – must indicate patient information and instructions from therapist
7. Judge instructions – must indicate if walker adjustments are needed

Procedure III Ambulating with a Cane (Reference: Simmers)

1. Cane
2. Chair
3. Gait Belt
4. Alcohol-based handrub
5. Patient – walking shoes
6. Scenario – must indicate patient information and instructions from therapist that indicate the gait the therapist taught the patient
7. Judge instructions – must indicate if cane adjustments are needed

Procedure IV Range of Motion (Reference: Simmers)

1. Bed with siderails or PT table
2. Bath blanket/linens (as appropriate to setting)
3. Alcohol-based handrub
4. Scenario – must indicate patient information and instructions from therapist that indicate the number of repetitions for each movement

Procedure V Ambulating with Crutches (Reference: Simmers)

1. Crutches
2. Chair or wheelchair
3. Gait belt
4. Alcohol-based handrub
5. Scenario – must indicate patient information and instructions from therapist that indicate the gait the therapist taught the patient
6. Judge instructions – must indicate if adjustments are needed for the crutches and the gait to be performed

Procedure VI Ice Pack Application (Reference: Simmers)

1. Hospital bed with linens or exam table or table/chair
2. Underpad (bed protector)
3. Basin
4. Sink
5. Towels (2)
6. Gauze pads
7. Ice packs or plastic bags
8. Ice
9. Tape
10. Hamper
11. Alcohol-based handrub
12. Scenario – must indicate patient information and instructions from therapist that indicate the type of cold pack to be used and duration of treatment

Note to Event Manager: Procedures I, III, V and VI have multiple options. It may be helpful to modify the rating sheet before the event begins to make judging clearer and consistent. Once the scenario is finalized, cross out (or delete) the steps (points possible) on the rating sheet that will not apply to the selected skill.

PHYSICAL THERAPY

Competitor #: _____

Judge's Signature: _____

Procedure I	Ambulating with a Transfer (Gait) Belt (Time: 6 minutes)	Possible	Allocated
1.	Obtained instructions from therapist	2	
2.	Assembled equipment	2	
3.	Knocked on door or requested permission to enter from behind the curtain, and paused before entering.	2	
4.	Closed the door or screened the unit to provide privacy (if applicable)	2	
5.	Greeted and identified patient	2	
6.	Introduced self	2	
7.	Explained procedure	2	
8.	Used alcohol-based handrub for hand hygiene	2	
<i>Note to Judge: The patient may already be sitting in a chair and wearing a robe and shoes/slippers. If so, omit steps #9, #10 and #14 and do not award the points.</i>		-	
9.	Locked the bed to prevent movement and lowered the near siderail	2	
10.	Assisted patient into a sitting position and put a robe on the patient	2	
11.	Checked to be sure the transfer belt is the correct size, then positioned the belt around the patient's waist and on top of the clothing	3	
12.	Positioned the buckle or clasp so that it is slightly off center in the front, smooth and free of wrinkles	3	
13.	Tightened the belt so that it fits snugly, secured the clasp or buckle, and placed fingers under the belt to make sure it is not too tight	3	
14.	Put shoes or slippers with non-skid soles on the patient	2	
15.	Faced the patient with a broad base of support and grasped the loops on the side of the belt or placed hands under the sides of the belt	3	
16.	Asked the patient to assist to stand by pushing against the bed with his/her hands at a given signal	2	
17.	Gave the signal to stand and kept back straight and straightened knees as the patient stood	2	
18.	Ambulated patient – encouraged patient to walk slowly and use handrails if available	2	
19.	Walked slightly behind the patient at all times and kept a firm, underhand grip on the belt or kept hands firmly in the loops	2	

Items Evaluated	Possible	Allocated
<i>Note to Judge: If scenario calls for the patient to fall, evaluate item #20. If not, skip to item #21</i>	-	
20. If the patient started to fall: a. Kept a firm grip on the belt. b. Used body to brace the patient, keeping back straight, and gently eased the patient to the floor, taking care to protect his/her head. c. Stayed with the patient and called for help. d. Did not attempt to stand the patient up until help arrives, reassured the patient	1 2 2 2	
<i>Note to Judge: Verbalize that help has arrived and that the patient has been returned to bed and examined by a physician. It is now OK to remove the gait belt and complete the procedure. (Competitor will resume skill evaluation at step #22)</i>	-	
21. Assisted the patient back to the bed (chair) after ambulating for the distance/time directed by the therapist	2	
22. Removed gait belt	2	
23. Elevated siderail (if indicated) and observed all checkpoints before leaving the patient	2	
24. Used alcohol-based handrub for hand hygiene	2	
25. Reported procedure and observations to the therapist	2	
TOTAL POINTS -- PROCEDURE I: Patient Fell (Bed)	59	
TOTAL POINTS – PROCEDURE I: Patient Did Not Fall (Bed)	52	
TOTAL POINTS -- PROCEDURE I: Patient Fell (Chair)	53	
TOTAL POINTS – PROCEDURE I: Patient Did Not Fall (Chair)	46	

**** If a competitor jeopardizes the patient's or his/her own safety or fails to perform a critical step and does not take immediate action to correct the error, the total points for the procedure or specific subpart(s) of the procedure will be deducted by the judge(s).**

PHYSICAL THERAPY

Competitor #: _____

Judge's Signature: _____

Procedure II	Ambulating with a Walker (Time: 9 minutes)	Possible	Allocated
1.	Obtained instructions from therapist (to include distance/time for ambulation)	2	
2.	Assembled equipment	2	
3.	Checked walker to assure rubber suction cups are secure on all legs, no rough or damaged edges on hand rests	2	
4.	Knocked on door or requested permission to enter from behind the curtain, and paused before entering.	2	
5.	Greeted and identified patient	2	
6.	Introduced self	2	
7.	Explained procedure	2	
8.	Used alcohol-based handrub for hand hygiene	2	
9.	Helped patient put on good walking shoes	2	
10.	Applied gait belt	2	
11.	Used an underhand grasp on the belt and assisted the patient to a standing position	3	
12.	Positioned the walker with patient standing inside and asked the patient to grasp the hand rests securely	2	
13.	Checked height of walker to assure handrests were at the level of the top of the femur and elbows, flexed at a 25 ⁰ -30 ⁰ angle -- and notified physical therapist if adjustments were needed	3	
14.	Instructed the patient to lift walker and place it forward so the back legs were even with the patient's toes, and reminded patient to avoid sliding the walker	3	
15.	Instructed the patient to transfer the weight forward slightly, use the walker for support, and walk into the walker without shuffling the feet	3	
16.	Repeated steps 14-15 while walking to the side and slightly behind the patient, alert at all times	3	
17.	Was prepared to or caught the patient if he/she started to fall	3	
18.	Checked constantly to assure steps 14 and 15 are being done correctly	2	
19.	Assisted the patient back to the chair after ambulating for the distance/time directed by the therapist	2	
20.	Removed gait belt and replaced equipment	2	
21.	Used alcohol-based handrub for hand hygiene	2	
22.	Reported procedure and observations to the therapist	2	
TOTAL POINTS – PROCEDURE II		50	

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PHYSICAL THERAPY

Competitor #: _____

Judge's Signature: _____

Procedure III	Ambulating with a Cane (Time: 9 minutes)	Possible	Allocated
1.	Obtained instructions from therapist and ascertained which gait the therapist taught the patient.	2	
2.	Assembled equipment	2	
3.	Checked cane to assure the bottom has a rubber suction tip.	2	
4.	Knocked on door or requested permission to enter from behind the curtain, and paused before entering.	2	
5.	Greeted and identified patient	2	
6.	Introduced self	2	
7.	Explained procedure	2	
8.	Used alcohol-based handrub for hand hygiene	2	
9.	Helped patient put on good walking shoes	2	
10.	Applied gait belt	2	
11.	Used an underhand grasp on the belt and assisted the patient to a standing position	3	
12.	Advised the patient to bear his or her weight on the unaffected leg	2	
13.	Checked the height of the cane:		
	a. Positioned the cane on the unaffected (good) side and approximately 6-10 inches from the side of the foot	2	
	b. Checked that the top of the cane is level with the top of the femur at the hip joint	2	
	c. Checked to assure the patient's elbow is flexed at a 25 ^o - 30 ^o	2	
14.	If the height of the cane needs adjustment, notified the physical therapist	2	
15.	Instructed the patient to use the cane on the good or unaffected side	2	
16.	Assisted the patient with the gait ordered: Three Point Gait		
	a. Patient balanced the body weight on the strong on unaffected foot while moving the cane forward approximately 12-18 inches	2	
	b. Patient moved the weak or affected foot forward	2	
	c. Patient transferred the weight to the affected foot and cane, then brought the unaffected foot forward	2	
OR			
	Assisted patient with the gait ordered: Two Point Gait		
	a. Patient balanced the weight on the strong on unaffected foot	2	
	b. Patient moved the cane and the weak or affected foot forward, keeping the cane close to the body to prevent leaning	2	
	c. Patient transferred body weight forward to the cane	1	
	d. Patient moved the good, or unaffected, foot forward	1	

Items Evaluated	Possible	Allocated
17. Was prepared to or caught the patient if he/she started to fall	3	
18. Assured that patient took small steps	2	
19. Assisted the patient back to the chair after ambulating for the distance/time directed by the therapist	2	
20. Removed gait belt and replaced equipment	2	
21. Used alcohol-based handrub for hand hygiene	2	
22. Reported procedure and observations to the therapist	2	
TOTAL POINTS -- PROCEDURE III	54	

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PHYSICAL THERAPY

Competitor #: _____

Judge's Signature: _____

Procedure IV	Range of Motion (one side) (Time: 10 minutes)	Possible	Allocated
1.	Obtained instructions from physical therapist, to include the number of repetitions for each movement (3-5)	2	
2.	Greeted and identified patient	2	
3.	Identified self	2	
4.	Explained procedure to patient	2	
5.	Screened unit and locked wheels of bed to prevent movement	2	
6.	Used alcohol-based handrub for hand hygiene	2	
7.	Elevated the bed to a comfortable working height	2	
8.	Lowered the siderail on the side where you are working (if appropriate)	2	
9.	Positioned patient in supine position in good body alignment	2	
10.	Used bath blanket to drape patient and fanfolded top linen to the foot of the bed	3	
11.	Exercised the shoulder joint:		
	a. Supported the patient's arm by placing one hand at the elbow and the other at the wrist	2	
	b. Abducted the shoulder by bringing the arm straight out at a right angle to the body	2	
	c. Adducted the shoulder by moving the arm straight in to the side	2	
	d. Flexed the shoulder by raising the arm in front of the body and then above the head	2	
	e. Extended the shoulder by bringing the arm back down to the side from above the head	2	
12.	Exercised the elbow joint		
	a. Supported the patient's arm by placing one hand on the elbow and the other hand on the wrist	2	
	b. Flexed the elbow by bending the forearm and hand up to the shoulder	2	
	c. Extended the elbow by moving the forearm and hand down to the side, or straightening the arm	2	
	d. Pronated by turning the forearm and hand so that the palm of the hand is down	2	
	e. Supinated by turning the forearm and hand so that the palm of the hand is up	2	

Items Evaluated	Possible	Allocated
12. Exercised the wrist a. Supported the patient's wrist by placing one hand above it and the other hand below it b. Flexed the wrist by bending the hand down toward the forearm c. Extended the wrist by straightening the hand d. Hyperextended the wrist by bending the top of the hand back toward the forearm e. Deviated the wrist in an ulnar direction by moving the hand toward the little finger side f. Deviated the wrist in a radial direction by moving the hand toward the thumb side	2 2 2 2 2 2	
13. Exercised the fingers and thumb a. Supported the patient's hand by placing one hand at the wrist b. Flexed the thumb and fingers by bending them toward the palm c. Extended the thumb and fingers by straightening them d. Abducted the thumb and fingers by spreading them apart e. Adducted the thumb and fingers by moving them together f. Performed opposition by touching the thumb to the tip of each finger g. Circumducted the thumb by moving it in a circular motion.	2 2 2 2 2 2 2	
14. Uncovered the leg nearest you	2	
15. Exercised the hip a. Supported the patient's leg by placing one hand under the knee and the other hand under the ankle b. Abducted the hip by moving the entire leg out to the side c. Adducted the hip by moving the entire leg back toward the body d. Flexed the hip by bending the knee and moving the thigh up toward the abdomen e. Extended the hip by straightening the knee and moving the leg away from the abdomen f. Medially rotated the hip by bending the knee and turning the leg in toward the midline g. Laterally rotated the hip by bending the knee and turning the leg out away from the midline	2 2 2 2 2 2 2	
16. Exercised the knee a. Supported the patient's leg by placing one hand under the knee and the other hand under the ankle b. Flexed the knee by bending the lower leg back toward the thigh c. Extended the knee by straightening the leg	2 2 2	

Items Evaluated	Possible	Allocated
17. Exercised the ankle a. Supported the patient's foot by placing one hand under the foot and the other hand behind the ankle b. Dorsiflexed the ankle by moving the toes and foot up toward the knee c. Plantar flexed the ankle by moving the toes and foot down away from the knee d. Inverted the foot by gently turning it inward e. Everted the foot by gently turning it outward	2 2 2 2 2	
18. Exercised the toes a. Rested the patient's leg and foot on the bed for support b. Abducted the toes by separating them, or moving them away from each other c. Adducted the toes by moving them together d. Flexed the toes by bending them down toward the bottom of the foot e. Extending the toes by straightening them	2 2 2 2 2	
19. Replaced the top bed linens and removed the bath blanket.	2	
20. Elevated the siderail (if appropriate)	2	
21. Used alcohol-based handrub for hand hygiene	2	
22. Reported treatment and observations to physical therapist	2	
TOTAL POINTS -- PROCEDURE IV	115	

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PHYSICAL THERAPY

Competitor #: _____

Judge's Signature: _____

Procedure V	Ambulating with Crutches (Time: 9 minutes)	Possible	Allocated
1.	Obtained instructions from physical therapist and ascertained which gait the therapist taught the patient.	2	
2.	Assembled equipment	2	
3.	Checked crutches to assure the rubber suction tips on the bottom ends are not worn down or torn and the axillary bars and hand rests are covered with padding	2	
4.	Knocked on door or requested permission to enter from behind the curtain, and paused before entering (as appropriate)	2	
5.	Greeted and identified patient	2	
6.	Identified self	2	
7.	Explained procedure	2	
8.	Used alcohol-based handrub for hand hygiene	2	
9.	Helped patient put on good walking shoes (or checked to see patient was wearing good walking shoes)	2	
10.	Applied gait belt	2	
11.	Used an underhand grasp on the belt and assisted patient to a standing position	2	
12.	Advised the patient to bear his or her weight on the unaffected leg and positioned the crutches on either side of the patient	2	
13.	Checked the fit of the crutches: <ul style="list-style-type: none"> a. Positioned the crutches 4-6 inches in front of the patient's feet b. Moved the crutches 4-6 inches to the sides of the feet c. Assured there is a 2 inch gap between the axilla and the axillary bar d. Assured each elbow is flexed at a 25^o to 30^o angle e. If any adjustments needed, notified physical therapist who will make the necessary adjustments 	2 2 2 2 2	
14.	Assisted patient with the required gait: <i>Judge's Note: Evaluate competitor on one of the following 5 gaits as designated in the event scenario.</i>	-	
15.	Four-Point Gait <ul style="list-style-type: none"> a. Moved the right crutch forward b. Moved the left foot forward c. Moved the left crutch forward d. Moved the right foot forward 	2 2 2 2	

Items Evaluated	Possible	Allocated
16. Three-Point Gait a. Advanced both crutches and the weak or unaffected foot b. Transferred the patient's body weight forward to the crutches c. Advanced the unaffected or good foot forward	3 2 3	
17. Two-Point Gait a. Moved the right foot and left crutch forward at the same time b. Moved the left foot and right crutch forward at the same time	4 4	
18. Swing-to Gait a. Balanced weight on foot or feet and moved both crutches forward b. Transferred weight forward c. Used shoulder and arm strength to swing feet up to crutches	3 2 3	
19. Swing-through Gait a. Balanced weight on foot or feet b. Advanced both crutches forward at the same time c. Transferred weight forward d. Used shoulder and arm strength to swing up and through the crutches, stopping slightly in front of the crutches	2 2 2 2	
20. Repeated steps of the gait for three series	2	
21. Monitored progress and provided feedback to patient on gait performance, not moving too far forward at one time and avoidance of resting weight on axillary rest	5	
17. Removed gait belt, replaced equipment and cleaned treatment area	3	
18. Used alcohol-based handrub for hand hygiene	2	
19. Reported procedure and observations to physical therapist	2	
TOTAL POINTS -- PROCEDURE V	56	

*** If a competitor jeopardizes the patient's or his/her own safety or fails to perform a critical step and does not take immediate action to correct the error, the total points for the procedure or specific subpart(s) of the procedure will be deducted by the judge(s).*

PHYSICAL THERAPY

Competitor #: _____ Judge's Signature: _____

Procedure VI	Ice Pack Application (Time: 9 minutes)	Possible	Allocated
1.	Obtained instructions from physical therapist	2	
2.	Assembled equipment	2	
3.	Used alcohol-based handrub for hand hygiene	2	
Skip to step #9 if disposable cold pack is used.			
4.	Filled the plastic bag with water to check for leaks. Empty if no leaks present.	1	
5.	Used a scoop to fill the bag half full.	1	
6.	If ice cubes are used, rinsed them in water to remove sharp edges.	1	
7.	Placed the bag on a flat surface to expel all air, then sealed the bag	1	
8.	Wiped the outside of the bag dry.	1	
9.	If a disposable cold pack is used , omit steps 4-8 and evaluate the following: Activated the chemicals in the cold pack by squeezing the pack or striking it against a solid surface.	2	
10.	Placed a cover on the bag, or wrapped the ice pack/cold pack in a towel and taped the towel in place.	3	
11.	Greeted and identified patient	3	
12.	Identified self	2	
13.	Explained procedure to patient	3	
14.	Provided for privacy	2	
15.	Elevated the bed to a comfortable working height	2	
16.	Folded sheets back to expose area to be treated	2	
17.	Positioned an underpad or bed protector under the area to be treated	2	
18.	Placed the ice pack on the affected area as directed.	2	
19.	Verbalized how long they would leave the ice pack in place and the steps they would follow while the ice pack was in place	3	
20.	Removed the ice pack, noting the condition of the skin and patient reaction to the procedure	2	
21.	Observed all safety checkpoints before leaving the patient	2	
22.	Cleaned and/or replaced equipment used. Discarded disposables and placed linen in hamper	2	
23.	Used alcohol-based handrub for hand hygiene	2	
24.	Reported procedure and observations to the physical therapist	2	
TOTAL POINTS -- PROCEDURE VI – Ice Bag Used		45	
TOTAL POINTS -- PROCEDURE VI – Disposable Cold Pack Used		42	

**** If a competitor jeopardizes the patient's or his/her own safety or fails to perform a critical step and does not take immediate action to correct the error, the total points for the procedure or specific subpart(s) of the procedure will be deducted by the judge(s).**