

Respiratory Therapy

Health Professions Event

Eligible Divisions: Secondary & Postsecondary / Collegiate	Round 1: 50 Q test in 60 minutes	Digital Upload: NO
Solo Event: 1 competitor	Round 2: Skill Demonstration	



NEW for 2025-2026

Round 1 is now a 50-question test. The 13th edition of Egan's Fundamentals of Respiratory Care and the 10th edition of DHO Health Science have been released. Editorial updates have been made.

Event Summary

The respiratory therapy event allows individuals to gain the knowledge and skills required in respiratory therapy.. This competitive event consists of two rounds. Round One is a written, multiple-choice test and top-scoring competitors advance to Round Two for the skills assessment. This event aims to inspire HOSA members to learn more about respiratory careers, use critical thinking skills, and become allied health professionals who can respond and assist efficiently in clinical settings.

Sponsorship

HOSA-Future Health Professionals appreciates the sponsorship of this event by the [American Association for Respiratory Care](#). They have developed a [special landing page](#) for HOSA competitors and advisors.



Dress Code

Bonus points will be awarded for [proper dress](#).

Round 1: Proper business attire, official HOSA uniform, or attire appropriate to the occupational area

Round 2: Attire appropriate to the occupational area

Competitors must provide:

- A [photo ID](#) for both rounds
- #2 pencil
- Non-latex gloves, gown, goggles or safety glasses, mask, eye shield or face guard

HOSA Conference Staff will provide equipment and supplies as listed in [Appendix I](#)

General Rules

1. Competitors must be familiar with and adhere to the [General Rules and Regulations](#).
2. Additional Opportunity:
The HOSA Scholarship program has funding available for HOSA members who have an interest in respiratory care careers! The application process begins January 1, 2026 and can be found here:
<https://hosa.org/scholarships/>

Round One Test

3. [Test Instructions](#): The written test will consist of 50 multiple-choice items in a maximum of 60 minutes.
4. **Time Remaining Announcements**: There will be NO verbal announcements for time remaining during ILC testing. All ILC testing will be completed in the Testing Center and competitors are responsible for monitoring their own time.

5. Written Test Plan

The test plan for Respiratory Therapy is:

- Foundations of Respiratory Care - 20%
- Applied Anatomy & Physiology - 10%
- Assessment of Respiratory Disorder- 20%
- Cardiopulmonary Diseases - 20%
- Basic Therapeutics – 20%
- Patient Education and Long-Term Care – 10%

Official References

6. The references below were used in the development of the test questions and skill rating sheets.
 - a. [Stoller, J., Heuer, A., Chatburn, R., Mireles-Cabodevila, E., & Vines, D. *Egan's Fundamentals of Respiratory Care. Elsevier. Latest edition*](#)
 - b. [Simmers, L., Simmers-Nartker, K., Simmers-Kobelak, S. & Morris, L. *DHO: Health Science, Cengage Learning. Latest edition.*](#)
 - c. [American Association for Respiratory Care](#)

7. Sample Test Questions

1. In what year did the CDC recognize AIDS? (Egan's pp 3)
 - A. 1975
 - B. 1977
 - C. 1979**
 - D. 1981
2. What is the term used for a test that accurately measures what it is intended to measure? (Egan's pp 396)
 - A. Sensitivity
 - B. Validity**
 - C. Specificity
 - D. Reliability
3. What is the most common respiratory disorder in newborns? (Egan's pp 689)
 - A. Transient Tachypnea of the Newborn**
 - B. Meconium Aspiration Syndrome
 - C. Bronchopulmonary Dysplasia
 - D. Persistent Pulmonary Hypertension of the Newborn

Round Two Skills

8. The top competitors from Round One will advance to Round Two. The number of advancing competitors will be determined by the scores obtained in Round One and the space and time available for Round Two. Round Two finalists will be announced on-site at ILC per the conference agenda.
9. Round Two is the performance of a selected skill(s). The Round Two skills approved for this event are:

Skill I:	Basic Airway Management	4 minutes
Skill II:	Donning & Removing Transmission-Based Isolation Garments	4 minutes
Skill III:	Administering Oxygen via Nasal Cannula Without Humidification	6 minutes
Skill IV:	Pulse Oximetry	4 minutes
Skill V:	Assessment of the Newborn	5 minutes
Skill VI:	Vital Signs	8 minutes
Skill VII:	Hand-held Nebulizer	8 minutes

(FOR ALL SKILLS, BODY FLUIDS WILL BE A SIMULATED PRODUCT)

10. The selected skill(s) will be presented to competitors as a written scenario at the beginning of the round. The scenario will be the same for each competitor. Some scenarios may involve the combination of multiple skill sheets. An example would be competitors would not need to identify the patient twice. A

sample scenario can be found [here](#).

11. Timing will begin when the scenario is presented to the competitor and will be stopped at the end of the time allowed.
12. The scenario is a secret topic that includes the Physician's Orders for the skill(s) to be performed. Competitors MAY NOT discuss or reveal the secret topic until after the event has concluded or will face penalties per the [GRRs](#).
13. Judges will provide information to competitors as directed by the rating sheets. Competitors may ask questions of the judges while performing skills if the questions relate to the patient's condition and will be included in the scenario or judge script.

Final Scoring

14. The competitor must earn a score of 70% or higher on the combined skill(s) of the event to be recognized as an award winner at the ILC.
15. The final rank is determined by adding the round one presentation score plus the round two skill score. In case of a tie, the highest presentation score will be used to determine the rank.

Future Opportunities

Graduating from high school or completing your postsecondary/collegiate program does not mean your HOSA journey has to end. As a HOSA member, you are eligible to become a HOSA Lifetime Alumni Member - a free and valuable opportunity to remain connected, give back, and help to shape the future of the organization. Learn more and sign up at hosa.org/alumni.

RESPIRATORY THERAPY

Section # _____ Division: _____ SS _____ PS/C
 Competitor # _____ Judge's Signature _____

**For use with unconscious patient who is not breathing (manikin)*

Skill I: Basic Airway Management (Time: 4 minutes)		Possible	Awarded
1.	Gathered equipment.	1 0	
2.	Washed hands or used alcohol-based hand-rub for hand hygiene and put on gloves.	2 0	
3.	Identified self.	2 0	
4.	Assessed for responsiveness. *Judge states, "patient is not responding".	2 0	
5.	Performed Head Tilt Chin Lift	2 0	
	a. Held the mandible with the middle and index finger of one hand.	2 0	
	b. Lifted the chin forward to displace the mandible anteriorly while tilting the head back with the other hand on the forehead.	2 0	
6.	Checked for breathing and pulse simultaneously for no more than 10 seconds. *Judge states, "pulse is evident, no breathing noted".	2 0	
7.	Attached BVM to 100% O ₂ using the flowmeter.	2 0	
8.	Positioned self at the top of the patient's head or at the head of the bed.	2 0	
9.	Checked mask is working properly.	2 0	
10.	Applied mask tightly to the face using the "C-E" hold.	2 0	
11.	Manually ventilated.	2 0	
12.	Observed for chest rise and fall. If no chest rise, repositioned.	2 0	
13.	Ventilated every 5 to 6 seconds until airway adjunct is placed and chest rise evident. *Judge states, "airway adjunct is placed"	2 0	
14.	Removed gloves.	2 0	
15.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
16.	Appropriately documented procedure in treatment notes.	2 0	
17.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
18.	Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS -- SKILL I		37	
70% Mastery for Skill I = 25.9			

RESPIRATORY THERAPY

Section # _____ Division: _____ SS _____ PS/C
 Competitor # _____ Judge's Signature _____

Skill II Donning & Removing Transmission-Based Isolation Garments (Time: 4 minutes)		Possible	Awarded
1.	Assembled equipment.	1 0	
2.	Removed any jewelry and if sleeves are long pulled up sleeves	2 0	
3.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
4.	Donning Gown:		
	a. Lifted the gown by placing the hands inside the shoulders.	2 0	
	b. Worked arms into the sleeves of gown by gently twisting (If sleeves are too long rolled the cuffs).	2 0	
	c. Placed hands inside the neckband and adjusted until in position and tied the bands at the back of the neck.	2 0	
	d. Secured gown at the waist with the ties.	2 0	
5.	Donning Mask:		
	a. Secured mask under the chin and covered mouth and nose.	2 0	
	b. Either placed elastic bands behind ears or tied mask securely behind head and neck by tying top ties first and bottom ties second.	2 0	
	c. Pinched at the nose to secure the mask.	2 0	
6.	Donning Gloves: Put gloves on and made sure that gloves covered the top cuff of the gown.	2 0	
7.	Judge states "Skill completed". Removing Gown: Untied the waist ties and loosened the gown at the waist.	2 0	
8.	Removing Gloves:		
	a. Removed first glove by grasping the outside of the cuff with the opposite gloved hand and placed the glove over the hand so it is inside out.	2 0	
	b. Removed the second glove by placing the bare hand inside the cuff and pulled glove off so it is inside out.	2 0	
	c. Placed the gloves in the infectious waste container.	2 0	
	d. Washed hands or used alcohol-based hand-rub for hand hygiene,	2 0	
9.	Removing Gown:		
	a. Untied the neck ties and loosened the gown at the shoulders handling only the inside of the gown.	2 0	
	b. Folded the gown in half and rolled together.	2 0	
	c. Placed gown in infectious waste container.	2 0	

Skill II Donning & Removing Transmission-Based Isolation Garments (con't)		Possible	Awarded
10.	Removing Mask:		
	a. Untied bottom ties first followed by the top ties or removed from behind ears.	2	0
	b. Held mask by top ties only and dropped into infectious waste container.	2	0
11.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2	0
TOTAL POINTS -- SKILL II		43	
70% Mastery for Skill II = 30.1			

RESPIRATORY THERAPY

Section # _____ Division: _____ SS _____ PS/C
 Competitor # _____ Judge's Signature _____

Scenario will include method of administration and liter flow per minute (cannula only).

Skill III: Administering Oxygen via Nasal Cannula Without Humidification (Time: 6 minutes)		Possible	Awarded
1.	Obtained and reviewed physician's order (scenario).	2 0	
2.	Obtained needed equipment.	1 0	
3.	Washed hands or used alcohol based hand-rub for hand hygiene and put on gloves.	2 0	
4.	Approached, greeted, and identified patient using two patient identifiers.	2 0	
5.	Explained the procedure and obtained consent.	2 0	
6.	Connected the tubing from the oxygen supply to the tubing on the cannula.	2 0	
7.	Nasal cannula did not touch any surface.	2 0	
8.	Turned on the oxygen supply. (O ₂ may either be on a wall unit or portable Oxygen tank.)	2 0	
9.	Regulated the gauge to the correct liter flow.	2 0	
10.	Checked to be sure the oxygen is passing through the tubing by placing hand by the outlet on the cannula.	2 0	
11.	Washed hands or used alcohol based hand-rub for hand hygiene and put on disposable gloves.	2 0	
12.	With the oxygen flowing, applied nasal cannula.	2 0	
13.	Cannula:	2 0	
	a. Placed two prongs in the patient's nostrils pointing down and looped the tubing around each ear.	2 0	
	b. Adjusted the straps at the neck so the tips remain in position.	2 0	
	c. Instructed patient to take deep breaths through the nose.	2 0	
14.	Checked surrounding area to make sure all safety precautions are observed – no sparks or flames.	2 0	
15.	Removed gloves.	2 0	
16.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
17.	Appropriately documented procedure in treatment notes..	2 0	
18.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
19.	Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS – SKILL III		41	
70% Mastery for Skill III = 28.7			

RESPIRATORY THERAPY

Section # _____ Division: _____ SS _____ PS/C
 Competitor # _____ Judge's Signature _____

**Skill will be performed with a portable pulse oximetry and probe.*

Skill IV: Pulse Oximetry (Time: 4 minutes)		Possible	Awarded
1.	Obtained and reviewed physician's order (scenario).	2 0	
2.	Obtained needed equipment.	1 0	
3.	Washed hands or used alcohol-based hand-rub for hand hygiene and put on gloves.	2 0	
4.	Approached, greeted, and identified patient using two patient identifiers.	2 0	
5.	Provided privacy.	1 0	
6.	Explained the procedure and obtained consent.	2 0	
7.	Properly assembled equipment and tested equipment prior to patient application.	1 0	
8.	Equipment turned on and tested prior to use.	2 0	
9.	Examined the patient's fingers to make sure the nail beds are clear and the hands are not visibly soiled.	2 0	
10.	Pulse oximeter probe is placed on the finger.	1 0	
11.	Observed for an adequate waveform.	1 0	
12.	Assured measurement of the patient's oxyhemoglobin status (SpO ₂) and heart rate (Pulsatile).	1 0	
13.	Notified patient and appropriate personnel (judge) of SpO ₂ and verbalized if level is in normal range.	2 0	
14.	Removed and disposed of gloves.	2 0	
15.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
16.	Appropriately documented procedure in treatment notes.	2 0	
17.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
18.	Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS – SKILL IV 70% Mastery for Skill IV = 21		30	

RESPIRATORY THERAPY

Section # _____ Division: _____ SS _____ PS/C
 Competitor # _____ Judge's Signature _____

Skill V: Assessment of Newborn (Time: 5 minutes)		Possible	Awarded
1.	Obtained needed equipment.	1 0	
2.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
3.	Put on disposable gloves.	2 0	
4.	Identified self to care team, mother, and any family members with mother.	2 0	
5.	Draped warm dry blanket over arms to receive infant.	2 0	
6.	Hugged infant to chest to prevent dropping the infant.	2 0	
7.	Placed infant in warmer in supine position.	2 0	
8.	Positioned head closest to competitor and in neutral position or slightly extended.	2 0	
9.	Used blanket to dry providing tactile stimulation.	2 0	
10.	As blanket becomes wet, removed and used dry blanket under infant to continue stimulation for one minute.	2 0	
11.	Inspected the chest and noted breathing pattern. <i>Judge will share information on the above from the script provided. If increased work of breathing go to step #12; if no increased work of breathing move to step #13.</i>	2 0	
12.	Using a bulb syringe	2 0	
	a. Squeezed the bulb prior to entering into the airway.	2 0	
	b. Entered bulb syringe into the mouth and released and cleaned.	2 0	
	c. Repeated steps 12 a & b above for both nares.	8 0	
13.	Used stethoscope to assess breath sounds and heart rate. <i>*Judge states, "heart rate greater than 100 beats/min and respirations are adequate".</i>	2 0	
14.	Assessed for muscle tone, infant response to stimuli, and infant skin color. <i>Judge will share information on the above from script provided.</i>	2 0	
15.	Verbalized to the judge that the APGAR score was completed at 1 and 5 minutes. <i>*Judge states, "the infant is stable".</i>	2 0	
16.	Infant is wrapped in a dry towel and hat is placed on the head.	2 0	
17.	Ensured patient's safety and comfort.	2 0	
18.	Verbalized handed infant to appropriate personnel or mother (while handing infant to judge).	2 0	
19.	Removed and disposed of gloves.	2 0	
20.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
21.	Appropriately documented procedure in treatment notes.	2 0	

Skill V: Assessment of Newborn (cont'd)		Possible	Awarded
22.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
23.	Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS – SKILL V Increased Work of Breathing 70% Mastery for Skill V Increased Work of Breathing = 38.5		55	
TOTAL POINTS – SKILL V Without Increased Work of Breathing 70% Mastery for Skill V Without Increased Work of Breathing = 30.1		43	

RESPIRATORY THERAPY

Section # _____ Division: _____ SS _____ PS/Collegiate
 Competitor # _____ Judge's Signature _____

Skill VI	Measure and Record Vital Signs (Time: 8 minutes)	Possible	Awarded
1.	Assembled equipment and supplies.	1 0	
2.	Washed hands or used alcohol-based hand-rub for hand hygiene and put on gloves.	2 0	
3.	Greeted patient and introduced self.	1 0	
4.	Identified patient using two patient identifiers.	2 0	
5.	RADIAL PULSE		
a.	Positioned patient's hand and arm so they were well supported and rested comfortably with palm pointed downward.	1 0	
b.	Located the radial artery by placing middle and index finger toward the inside of the patient's wrist on the thumb side.	1 0	
c.	Exerted light pressure, counted for 30 seconds and multiply by 2 or count for full minute.	1 0	
6.	RESPIRATION		
a.	Continued pulse position to keep patient unaware of counting.	1 0	
b.	Counted regular respirations for 30 seconds and multiply by 2 or count for a full minute (counting each expiration and inspiration as one respiration).	1 0	
7.	Verbalized pulse count and respiration count within +/- 2 of judge's count.	4 0	
8.	Described quality characteristics of pulse (volume – character strength, and rhythm - regularity) AND respirations (depth and rhythm) to judge.	4 0	
9.	Recorded pulse and respiration accurately on the graphic form.	4 0	
10.	BLOOD PRESSURE		
a.	Placed the center of the cuff above the brachial artery.	1 0	
b.	Palpatory Systolic Pressure: Found radial pulse and fingers remained on radial pulse.	1 0	
c.	Closed valve on bulb, by turning clockwise.	1 0	
d.	Inflated the cuff until the radial pulse disappeared.	1 0	
e.	Continued to inflate cuff 30 mm Hg above this point.	1 0	
f.	Slowly released the pressure while watching the gauge.	1 0	
g.	When the pulse is felt again noted the reading (palpatory systolic pressure).	1 0	
h.	Correctly positioned earpieces of stethoscope in ears.	1 0	
i.	Palpated brachial artery.	1 0	
j.	Placed stethoscope over brachial artery.	1 0	
k.	Inflated the cuff to 30 mm Hg above palpatory systolic pressure.	1 0	
l.	Deflated the cuff by slowly turning the valve counterclockwise at an even rate of 2 – 3 mm Hg per second.	2 0	

Skill VI Measure and Record Vital Signs (con't) - Items Evaluated		Possible		Awarded
m.	Continued deflating the cuff slowly and noted the first sound and the last sound.	1	0	
n.	Completely deflated the cuff and removed cuff from patient's arm and made patient comfortable.	1	0	
o.	Recorded blood pressure accurately on graphic form.	4	0	
p.	Replaced equipment appropriately.	1	0	
q.	Maintained accuracy within +/- 2 mm Hg of judge's reading of systolic pressure.	4	0	
r.	Maintained accuracy within +/- 2 mm Hg of judge's reading of diastolic pressure.	4	0	
11.	Washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
12.	Executed all vital sign skills (pulse, respiration and blood pressure) smoothly and in logical order, overlapping skills to maximize efficiency of time.	1	0	
13.	Observed all checkpoints before leaving the patient: placed call signal within easy reach, lowered bed, positioned patient in good body alignment, and reported any changes to the nurse.	2	0	
14.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2	0	
15.	Practiced standard precautions throughout skill.	2	0	
TOTAL POINTS – SKILL VI		60		
70% Mastery for Skill VI = 42				

Competitor ID # _____ **Graphic Chart**

Attending Physician										Patient Name Last Name: First Name:															
Date																									
		0	0	0	1	1	2	0	0	0	1	1	2	0	0	0	1	1	2	0	0	0	1	1	2
		0	4	8	2	6	0	0	4	8	2	6	0	0	4	8	2	6	0	0	4	8	2	6	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulse	140																								
	130																								
	120																								
	110																								
	100																								
	90																								
	80																								
	70																								
60																									
Resp	50																								
	40																								
	30																								
	20																								
	10																								
Blood Pressure																									
Weight																									

RESPIRATORY THERAPY

Section # _____ Division: _____ SS _____ PS/C
 Competitor # _____ Judge's Signature _____

Skill VII: Hand-Held Nebulizer (Time: 8 minutes)		Possible	Awarded
1.	Obtained and reviewed physician's order (scenario).	2 0	
2.	Obtained needed equipment.	1 0	
3.	Obtained medication as ordered (per scenario).	2 0	
4.	Knocked and provided privacy.	2 0	
5.	Washed hands or used alcohol-based hand-rub for hand hygiene and put on gloves.	2 0	
6.	Approached, greeted, and identified patient using two patient identifiers.	1 0	
7.	Interviewed patient and obtained relevant history (home nebulizer use, any oxygen use at home).	1 0	
8.	Explained the procedure and obtained consent.	2 0	
9.	Performed baseline physiology assessment:	2 0	
	a. pulse	2 0	
	b. breath sounds and respiratory rate	2 0	
10.	Removed and disposed of gloves.	2 0	
11.	Washed hands or used alcohol-based hand-rub for hand hygiene and put on gloves.	2 0	
12.	Properly assembled equipment and tested equipment prior to patient application.	1 0	
13.	Prepared medication:	2 0	
	a. Accurately prepared prescribed medication.	2 0	
	b. Aseptically injected medication into delivery device.	2 0	
14.	Verbalized "Activated gas flow to meet manufacturers' flowrate requirement or as limited by gas source."	2 0	
15.	Selected mouthpiece/mask delivery system and connected to compressor.	1 0	
16.	Observed for aerosol before placing on or handing to the patient.	2 0	
17.	Handed nebulizer to patient or placed mask on patient.	1 0	
18.	Coached patient to breathe slowly through the mouth and hold breath after 5-6 regular breaths for 10 seconds.	1 0	
19.	Monitored patient for adverse response to treatment and noted if monitors show:	2 0	
	a. Patient's HR increased greater than 30 BPM - stopped.	2 0	
	b. Patient's RR increased to above 22 breaths per minute – stopped.	2 0	

Skill VII: Hand-Held Nebulizer (cont'd)		Possible	Awarded
20.	Continued treatment until nebulizer begins to sputter. <i>*Judge states, "nebulizer has begun to sputter".</i>	1 0	
21.	Removed nebulizer or mask prior to turning off the oxygen.	2 0	
22.	Turned off oxygen and encouraged patient to cough.	2 0	
23.	Asked patient how they feel.	2 0	
24.	Performed post assessment by checking the listening to breath sounds, respiratory rate and pulse rate.	2 0	
25.	Disassembled and rinsed the nebulizer with sterile water and air dried or discarded if soiled.	1 0	
26.	Removed gloves, and washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
27.	Appropriately documented procedure and response in treatment notes.	2 0	
28.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
29.	Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS – SKILL VII		55	
70% Mastery for Skill VII = 38.5			

Competitor ID # _____

HOSA HOSPITAL Treatment Notes

[illegible]