

# Procedural Competency Evaluation

STUDENT:

DATE:

SCREENING SPIROMETRY		PERFORMANCE LEVEL	PERFORMANCE RATING
<b>Evaluator:</b> <input type="checkbox"/> Peer <input type="checkbox"/> Instructor	<b>Setting:</b> <input type="checkbox"/> Lab <input type="checkbox"/> Clinical Simulation		
<b>Equipment Utilized:</b>		<b>Conditions (Describe):</b>	
<b>Performance Level:</b> S or ✓ = Satisfactory, no errors of omission or commission U = Unsatisfactory error of omission or commission NA = Not applicable			
<b>Performance Rating:</b> <b>5 Independent:</b> Near-flawless performance; minimal errors; able to perform without supervision; seeks out new learning; shows initiative; A = 4.7–5.0 average <b>4 Minimally Supervised:</b> Few errors, able to self-correct; seeks guidance when appropriate; B = 3.7–4.65 <b>3 Competent:</b> Minimal required level; no critical errors; able to correct with coaching; meets expectations; safe; C = 3.0–3.65 <b>2 Marginal:</b> Below average; critical errors or problem areas noted; would benefit from remediation; D = 2.0–2.99 <b>1 Dependent:</b> Poor; unacceptable performance; unsafe; gross inaccuracies; potentially harmful; F = < 2.0 <i>Two or more errors of commission or omission of mandatory or essential performance elements will terminate the procedure, and require additional practice and/or remediation and reevaluation. Student is responsible for obtaining additional evaluation forms as needed from the Director of Clinical Education (DCE).</i>			
<b>EQUIPMENT AND PATIENT PREPARATION</b>			
1. Common Performance Elements Steps 1–8 (Refer to Appendix B)			
2. Plugs the unit in if applicable; enters the date and time and patient information; confirms that correct normal values are being utilized			
3. If a volume displacement spirometer is used, checks the unit for leaks			
4. Turns on the recording device and makes sure the pen is recording on the baseline, if applicable			
5. Checks and enters the room temperature			
6. Using a 3-liter calibration syringe, checks the spirometer for accuracy; calculates and records the percent accuracy			
A. Repeats the calibration while varying the speed of volume injection; ensures it is within 3.5%			
<b>ASSESSMENT AND IMPLEMENTATION</b>			
7. Common Performance Elements Steps 9 and 10 (Refer to Appendix B)			
8. Assesses subject by obtaining the following information:			
A. Name and identification number			
B. Age on day of testing			
C. Height in stocking feet (or arm span, if subject unable to stand)			
D. Gender			
E. Race; indicate as white or nonwhite for purposes of race correction according to NIOSH and OSHA regulations for spirometry			
9. Determines if previous testing has ever been done and whether it was done sitting or standing			
10. Elicits a respiratory history including cough/sputum production, smoking history, dyspnea at rest and on exertion, medications, employment history, and previous illnesses			
11. Determines if there are any contraindications to the performance of a baseline spirometry screening at this time by asking the subject the following questions: (acronym FREDs SAFE)			
A. (F) Upper respiratory tract illness, influenza, or bronchitis within the last 3 weeks?			
B. (R) Wearing any tight or restrictive clothing that may interfere with the performance of the test?			
C. (E) Eaten a heavy meal within the last 2 hours?			
D. (D) Any dental appliances, loose teeth, caps, gum or candy in your mouth? Remove as appropriate.			
E. (S) Have you smoked within the last hour?			
F. (S) Recent surgeries?			
G. (A) Used an aerosolized bronchodilator within the last 4 to 6 hours?			
H. (F) How are you feeling today? Do you have any acute illness at the present time?			
I. (E) Ear infections in the last 3 weeks?			
J. If a positive response is obtained to any of the above questions, corrects problems or postpones test for the appropriate time period.			
12. Aseptically attaches clean disposable mouthpiece or flow-sensing device to the main tubing; calibrates as needed			
13. Instructs the subject in the performance of the SVC maneuver and confirms the subject's understanding			

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<b>SCREENING SPIROMETRY (continued)</b>		PERFORMANCE LEVEL	PERFORMANCE RATING
14. Places the nose clips on the subject and verifies that there are no leaks			
15. Positions the subject by instructing him or her to sit or stand straight as appropriate, with chin slightly elevated; places a chair without wheels behind the subject if standing			
16. Activates the machine and recording device; actively coaches the subject throughout inspiration and expiration and performs the SVC			
17. Observes the subject for adequate effort and proper performance during the maneuver; reinstructs as necessary			
18. Notes the volume obtained			
19. Allows for adequate time for subject recovery			
20. Repeats the SVC maneuver with active, forceful coaching until three tracings within 150 mL of each other are obtained			
21. Instructs the subject in the performance of the FVC maneuver and confirms the subject's understanding			
22. Places the nose clips on the subject and verifies that there are no leaks; repositions the subject			
23. Activates the machine and performs FVC with active, forceful coaching throughout			
24. Observes the subject for adequate effort and proper performance during the maneuver; reinstructs as necessary			
25. Notes the volume obtained and the shape and the appearance of the graphic representation if available			
26. Allows for adequate time for subject recovery			
27. Determines the validity of the test:			
A. Three acceptable tracings free from:			
1) Cough or glottic closure			
2) Early termination of expiration			
3) Variable effort			
4) Baseline error			
5) Excessive hesitation at start of test			
B. Extrapolated volume must be less than 5% of the FVC or 150 mL, whichever is greater			
C. Plateau is defined as no change in volume in the last 1 second of the tracing			
D. The test should be at least 6 seconds in duration			
E. Excessive variability: there should be less than 150 mL difference between the two best FVC and FEV <sub>1</sub> results			
28. Compares the SVC and FVC volumes and explains any discrepancies			
29. If a postbronchodilator test is ordered, administers the medication, waits an appropriate length of time, and repeats the FVC			
A. Calculates the percent change in FEV <sub>1</sub>			
B. Calculates the percent change in FEV <sub>1</sub> /FVC ratio (FEV <sub>1</sub> %)			
30. Instructs the subject in the MVV maneuver, if appropriate, and confirms understanding			
A. With the subject seated, has the subject begin breathing as rapidly and deeply as possible			
B. Activates the machine and actively coaches the test performance for 12–15 seconds			
C. Allows for adequate time for subject recovery			
D. Multiplies the volume achieved by 6 or 4 to obtain the volume/minute; records the results			
E. Repeats the test; assures variability no greater than 10%			
<b>FOLLOW-UP</b>			
31. Common Performance Elements Steps 11–16 (Refer to Appendix B)			
32. Has the subject sign and date the spirometric tracing			

**SIGNATURES**

Student:

Evaluator:

Date:

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