Infant Flow® LP nCPAP system

Training Assessment and Exercises

CareFusion
Self assessment—Section 1

1. Describe RDS: __________________________________________
   __________________________________________
   __________________________________________

2. List three indications for nCPAP therapy: _________________________
   __________________________________________
   __________________________________________

3. List three benefits of nCPAP therapy: ______________________________
   __________________________________________
   __________________________________________

4. List three potential complications to nCPAP therapy:
   __________________________________________
   __________________________________________
   __________________________________________

5. State four methods used to deliver nCPAP therapy:
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

6. Discuss the advantage of variable flow technology over other CPAP modalities: ________________
   __________________________________________
   __________________________________________
   __________________________________________

7. Discuss why low work of breathing is important:
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

8. Match the generator parts to the diagram:
   ____ Pressure line
   ____ Impinging jets
   ____ Exhaust tube
   ____ Drive line
   ____ Patient

Notes: __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
Self assessment—Section 2

1. Where should the circuit airway temperature probe be placed if the infant is in an isolette/incubator? 

2. If condensation occurs in the breathing circuit, what should you do? 

3. Explain how to disable the oxygen sensor: 

4. Demonstrate how to reset the alarm limits when the device is in operation: 

5. To deliver a CPAP of 5 cmH₂O, what would you set the flow rate at? 

6. Where is the best placement for the respiratory abdominal sensor? 

7. While in nCPAP, you press the manual breath button, but nothing happens. What would prevent a manual breath from delivery? 

8. When should you perform an oxygen sensor calibration on the Infant Flow SiPAP? 

Notes:
SiPAP exercises and self assessment—Section 3

Exercises #1

Attach the SiPAP circuit, and occlude the nasal prongs. Enter these settings on the SiPAP driver:

- Set low pressure flow rate at 9 LPM
- Set high pressure flow rate at 2 LPM
- Set FiO₂ at 21%
- Go to nCPAP mode screen

1. What is the nCPAP value?
2. Press the manual breath button. What pressure was delivered?
3. How long did the breath remain at the high CPAP?
4. Set the T-high to 1.0 seconds, and press the manual breath button. What happened?

Exercises #2

Switch from the nCPAP mode to the BiPhasic mode, and enter the settings:

- Low pressure flow rate at 9 LPM
- High pressure flow rate at 2 LPM
- FiO₂ at 21%
- Rate of 20
- T-high at 0.3 seconds
- Set FiO₂ at 21%

1. What is the MAP?
2. Switch from the graphic screen to the parameter screen.
   - What is the PIP?
   - What is the CPAP level?
3. Increase the T-high to 1.0 seconds.
   - What is the PIP?
   - What is the MAP?

Discuss why these values changed.

Exercises #3

In BiPhasic mode, enter these settings:

- Low pressure flow rate at 9 LPM
- High pressure flow rate at 2 LPM
- FiO₂ at 21%
- Rate of 20
- T-high at 2.0 seconds
- Set FiO₂ at 21%

1. Increase the rate to 30. What happens to the T-high?
2. Increase the T-high back to 1.5 seconds. What happens to the rate?
3. Discuss why these values changed:
Exercises #4 (Comprehensive model only)

Ensure the Infant Flow transducer and abdominal respiratory sensor (ARS) are attached. Switch to BiPhasic trigger mode. Set these parameters:

- Low pressure flow rate at 9 LPM
- High pressure flow rate at 2 LPM
- FiO₂ at 21%
- Rate of 25
- T-high at 0.3 seconds
- T-apnea at 15 seconds

1. Apply intermittent pressure to the ARS to mimic breathing. How is this reflected on the monitoring screen?

2. Stop pressing the ARS. What happens?

Self assessment

1. Explain how the BiPhasic mode differs from pressure support ventilation: __________________________
   __________________________
   __________________________
   __________________________

2. To reduce the incidence of gas trapping in BiPhasic mode, the baseline CPAP should be at least: __________________________
   __________________________

3. What parameters do you set in BiPhasic mode? __________________________
   __________________________
   __________________________
   __________________________

4. What settings would you change to improve oxygenation? __________________________
   __________________________
   __________________________

5. What settings would you change to improve ventilation? __________________________
   __________________________
   __________________________
   __________________________

6. What could prevent the high CPAP level from being reached? __________________________
   __________________________
   __________________________
   __________________________

7. List two advantages of the BiPhasic mode or nCPAP: __________________________
   __________________________
   __________________________

8. List three indications of successful nCPAP therapy: __________________________
   __________________________
   __________________________

Notes:
Exercises #4 (Comprehensive model only)

Ensure the Infant Flow transducer and abdominal respiratory sensor (ARS) are attached. Switch to BiPhasic trigger mode.

Set these parameters:
• Low pressure flow rate at 9 LPM
• Rate of 25
• High pressure flow rate at 2 LPM
• T-high at 0.3 seconds
• FiO$_2$ at 21%
• T-apnea at 15 seconds

1. Apply intermittent pressure to the ARS to mimic breathing. How is this reflected on the monitoring screen?

2. Stop pressing the ARS. What happens?

Self assessment—Section 4

1. What type of technology does the generator utilize?

2. List three features of the generator:

3. List three features of the nasal prongs:

4. List three features of the nasal mask:

5. Explain why the design of the fixation device and nasal interface is important:

6. Match the interface color to the sizes:
   - Extra small
   - Small
   - Medium
   - Large
   - Extra large
   - a. Clear
   - b. Purple
   - c. Green
   - d. Red
   - e. Blue

Notes:
Using the training doll provided, follow the steps outlined and document the measurements.

1. Measure the doll's head, and select the appropriate headgear size.

2. Measure the doll's head, and select the appropriate bonnet size.

3. Use the sizing guide to select the correct interface size.
   Nasal prongs: ______________________
   Nasal mask: ______________________

4. Apply the fixation device (bonnet or headgear).

5. Attach the generator assembly with the interface to the fixation device.

6. Inspect for proper application on the doll, and obtain feedback from the instructor or another participant.

Observation skills assessment

This Infant Flow LP system has not been applied correctly. Identify at least four application errors: ______________________
____________________________________
____________________________________
____________________________________
____________________________________
____________________________________
____________________________________
____________________________________
____________________________________
____________________________________
Observation skills assessment

This Infant Flow LP system has not been applied correctly.
Identify five application errors: ____________________

________________________________________
________________________________________
________________________________________
________________________________________
________________________________________

Are there any additional application errors? __________

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Notes:

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________________________________________
1. Why is selecting the proper prongs/mask size important?

2. When properly positioned, the generator should sit ___________________ to the infant’s face.

3. List at least three assessments that should be conducted every three to four hours while on nCPAP therapy:

4. List three ways to help prevent nasal injury:

5. The Infant Flow LP components are interchangeable with the original Infant Flow nCPAP system.
   True ___________  False ___________

6. List three actions to help prevent nasal injury:

7. Explain why the SiPAP system does not deliver a breath while the manual breath button is pressed:

8. Medications can be nebulized through the Infant Flow LP generator.
   True ___________  False ___________

9. A flow rate of 9 LPM will deliver how much CPAP?
   ____ 3 cmH₂O
   ____ 5 cmH₂O
   ____ 7 cmH₂O
   ____ 9 cmH₂O

Notes:
WARNING—U.S. Federal Law restricts this device to sale by or on the order of a physician.

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