MODULE A: Aerosolized Medications (Respiratory Therapists)

This module is directed toward respiratory therapists, or others who administer ribavirin (Virazole), pentamidine (Nebupent) or tobramycin (Nebcin, "tobi") in an aerosolized form.

1. During your career (including all jobs at this and other facilities), how long have you been administering aerosolized ribavirin, pentamidine or tobramycin?
   - Less than 6 months
   - At least 6 months but less than a year
   - 1-5 years
   - 6-10 years
   - 11-20 years
   - More than 20 years

2. When have you received formal training at this facility on procedures for the safe handling of aerosolized medications?
   - During orientation for your current job or task
   - Once, but not at orientation
   - Periodically, but less than once per year
   - At least annually (i.e., one or more times every year
   - Other (Please specify): __________________________
   - Never received training at this facility

3. Have you seen written policies or standard procedures at this facility for administering aerosolized medications?
   - Yes
   - No

4. Do you ever wear or take home any clothing (protective clothing or street clothes) which were worn when administering ribavirin, pentamidine or tobramycin at this facility?
   - Yes
   - No

5. At any time in the past 7 calendar days did you administer aerosolized ribavirin, pentamidine or tobramycin?
   - Yes
   - No

6. At any time in the past 7 calendar days did you administer aerosolized ribavirin (Virazole)?
   - Yes
   - No

Skip to Question 43

Skip to Question 14.
7. During the past 7 calendar days, how many days did you administer aerosolized ribavirin?

Number of days ........... [ ]
(Please write a number from 1-7)

8. During the past 7 calendar days, how much time did you typically spend within 5 feet of a patient during a single administration of ribavirin? (Include only the time you spent actually handling ribavirin, were present in the area during administration, and in clean-up. Do not include set up time or time the patient was receiving the drug while you were not present.)

- Less than 5 minutes
- 5-9 minutes
- 10-14 minutes
- 15-19 minutes
- 20-24 minutes
- More than 24 minutes

9. During the past 7 calendar days, what was the total number of times you administered aerosolized ribavirin? (If you administered ribavirin several times to the same patient, count each administration separately.)

- 1 time
- 2-3 times
- 4-5 times
- 6-10 times
- More than 10 times

10. How does the total amount of time you administered aerosolized ribavirin during the past 7 calendar days compare with most weeks?

- Past 7 days were about normal
- Past 7 days were less than normal
- Past 7 days were greater than normal

11. During the past 7 calendar days, in which of the following areas did you ever administer aerosolized ribavirin? Please ✓ all that apply.

- a. Patient's hospital room
- b. Clinic/department treatment room or area
- c. Patient's home
- d. Some other location (Please specify):

Area most often administered ............... [ ]

11A. From the location(s) checked above, please write the letter (a, b, c, or d) corresponding to the area where you most often administered aerosolized ribavirin during the past 7 calendar days.
12. During the past 7 calendar days, how often did you administer aerosolized ribavirin...
   a. Inside a fully enclosed and sealed treatment chamber or booth? ..............................................
   b. Inside a partially enclosed treatment hood or tent? ......................................................................
   c. When no type of enclosure was being used? ...................................................................................

13. During the past 7 calendar days when you administered aerosolized ribavirin, how often did you...
   a. Inspect the aerosol generator for leaks or worn parts prior to use? ..............................................
   b. Use a nebulizer with an automatic shutoff valve? ........................................................................
   c. Administer the medication in an isolation room under negative pressure (i.e., where air flows into the room from adjacent areas)? ........................................................................

14. At any time in the past 7 calendar days did you administer aerosolized pentamidine (Nebupent)?
   □ Yes
   □ No        ➩ Skip to Question 22.

15. During the past 7 calendar days, how many days did you administer aerosolized pentamidine?
   Number of days: .......... □
   (Please write a number from 1-7)

16. During the past 7 calendar days, how much time did you typically spend within 5 feet of a patient during a single administration of pentamidine? (Include only the time you spent actually handling pentamidine, were present in the area during administration, and in clean-up. Do not include set-up time or time the patient was receiving the drug while you were not present.)
   □ Less than 5 minutes
   □ 5-9 minutes
   □ 10-14 minutes
   □ 15-19 minutes
   □ 20-24 minutes
   □ More than 24 minutes
17. During the past 7 calendar days, what was the total number of times you administered aerosolized pentamidine? (If you administered pentamidine several times to the same patient, count each administration separately.)

- 1 time
- 2-3 times
- 4-5 times
- 6-10 times
- More than 10 times

18. How does the amount of time you administered aerosolized pentamidine during the past 7 calendar days compare with most weeks?

- Past 7 days were about normal
- Past 7 days were less than normal
- Past 7 days were greater than normal

19. During the past 7 calendar days, in which of the following areas did you ever administer aerosolized pentamidine? Please ☑ all that apply.

- a. Patient's hospital room
- b. Clinic/department treatment room or area
- c. Patient's home
- d. Some other location (Please specify):

19A. From the location(s) checked above, please write the letter (a, b, c, or d) corresponding to the area where you most often administered aerosolized pentamidine during the past 7 calendar days.

Area most often administered..................................................

20. During the past 7 calendar days, how often did you administer aerosolized pentamidine...

<table>
<thead>
<tr>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

a. Inside a fully enclosed and sealed treatment chamber or booth?

b. Inside a partially enclosed treatment hood or tent?

C. When no type of enclosure was being used?
21. During the past 7 calendar days when you administered aerosolized pentamidine, how often did you...

<table>
<thead>
<tr>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Inspect the aerosol generator for leaks or worn parts prior to use? ........................................

b. Use a nebulizer with an automatic shutoff valve? .................................................................

c. Administer the medication in an isolation room under negative pressure (i.e., where air flows into the room from adjacent areas)? .................................................................

22. At any time in the past 7 calendar days did you administer aerosolized tobramycin (Nebcin, "tobi")?

☐ Yes
☐ No  ➡️ Skip to Question 30.

23. During the past 7 calendar days, how many days did you administer aerosolized tobramycin?

Number of days........... [ ]
(Please write a number from 1-7)

24. During the past 7 calendar days, how much time did you typically spend within 5 feet of a patient during a single administration of tobramycin? (Include only the time you spent actually handling tobramycin, were present in the area during administration, and in clean-up. Do not include set-up time or time the patient was receiving the drug while you were not present.)

☐ Less than 5 minutes
☐ 5-9 minutes
☐ 10-14 minutes
☐ 15-19 minutes
☐ 20-24 minutes
☐ More than 24 minutes

25. During the past 7 calendar days, what was the total number of times you administered aerosolized tobramycin? (If you administered tobramycin several times to the same patient, count each administration separately.)

☐ 1 time
☐ 2-3 times
☐ 4-5 times
☐ 6-10 times
☐ More than 10 times

26. How does the amount of time you administered aerosolized tobramycin during the past 7 calendar days compare with most weeks?

☐ Past 7 days were about normal
☐ Past 7 days were less than normal
☐ Past 7 days were greater than normal
27. During the past 7 calendar days, in which of the following areas did you ever administer aerosolized tobramycin? Please ✓ all that apply.

- a. Patient's hospital room
- b. Clinic/department treatment room or area
- c. Patient's home
- d. Some other location (Please specify):

27A. From the location(s) checked above, please write the letter (a, b, c, or d) corresponding to the area where you most often administered aerosolized tobramycin during the past 7 calendar days.

Area most often administered: □ □ □ □

28. During the past 7 calendar days, how often did you administer aerosolized tobramycin...

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Inside a fully enclosed and sealed treatment chamber or booth?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b. Inside a partially enclosed treatment hood or tent?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c. When no type of enclosure was being used?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

29. During the past 7 calendar days when you administered aerosolized tobramycin, how often did you...

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Inspect the aerosol generator for leaks or worn parts prior to use?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b. Use a nebulizer with an automatic shutoff valve?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c. Administer the medication in an isolation room under negative pressure (i.e., where air flows into the room from adjacent areas)?</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
The following questions pertain to the use of personal protective equipment (PPE) during the preparation and delivery of aerosolized medications.

30. During the past 7 calendar days, did you wear a water resistant gown or outer garment while administering aerosolized ribavirin, pentamidine or tobramycin?

- Always
- Sometimes
- Never

31. What were the reason(s) you did not always wear a water resistant gown or outer garment while administering aerosolized ribavirin, pentamidine or tobramycin? Please ✓ all that apply.

- 1. Potential for exposure to aerosolized medications is insignificant
- 2. Exposure to aerosolized medications is possible but the health hazard is insignificant
- 3. Not required by employer
- 4. Not provided by employer
- 5. Not standard practice
- 6. Too uncomfortable or difficult to use
- 7. Not readily or always available in work area
- 8. Cross contamination to other areas is not a concern
- 9. Concerned about raising the patient’s anxiety
- 10. Other (Please specify):

31A. From the reason(s) checked above, please write the number (1, 2, 3, etc.) of the one most important reason you did not wear a water resistant gown or outer garment while administering aerosolized ribavirin, pentamidine or tobramycin.

Most important reason

32. During the past 7 calendar days, did you wear protective gloves while handling ribavirin, pentamidine or tobramycin?

- Always
- Sometimes
- Never
33. What were the reason(s) you did not always wear protective gloves while handling ribavirin, pentamidine or tobramycin? Please ✓ all that apply.

☐ 1. Potential for exposure to aerosolized medications is insignificant
☐ 2. Exposure to aerosolized medications is possible but the health hazard is insignificant
☐ 3. Not required by employer
☐ 4. Not provided by employer
☐ 5. Not standard practice
☐ 6. Too uncomfortable or difficult to use
☐ 7. Not readily or always available in work area
☐ 8. Cross contamination to other areas is not a concern
☐ 9. Concerned about raising the patient’s anxiety
☐ 10. Other (Please specify): ________________

Most important reason ..........................................................

33A. From the reason(s) checked above, please write the number (1, 2, 3, etc.) of the one most important reason you did not wear protective gloves while handling ribavirin, pentamidine or tobramycin.

STOP During the past 7 calendar days if you NEVER wore protective gloves while handling ribavirin, pentamidine or tobramycin, skip to question 36.

34. During the past 7 calendar days, did you perform any of the following activities while wearing protective gloves that had been used during the handling of ribavirin, pentamidine or tobramycin?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Answer the phone</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Use a keyboard or calculator</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Handle files or record cards</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. Eat or drink</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Smoke</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
35. During the past 7 calendar days, did you ever reuse protective gloves while handling ribavirin, pentamidine or tobramycin (reuse means remove and later put on the same gloves)?

- Yes
- No

36. During the past 7 calendar days, did you wear eye protection (safety glasses, goggles, face shield) while administering aerosolized ribavirin, pentamidine or tobramycin?

- Always
- Sometimes
- Never

Skip to Question 38.

37. What were the reason(s) you did not always wear eye protection while administering aerosolized ribavirin, pentamidine or tobramycin? Please ✓ all that apply.

- 1. Potential for exposure to aerosolized medications is insignificant
- 2. Exposure to aerosolized medications is possible but the health hazard is insignificant
- 3. An engineering control (e.g., exhaust ventilation or an enclosure) is already being used
- 4. Not required by employer
- 5. Not provided by employer
- 6. Not standard practice
- 7. Too uncomfortable or difficult to use
- 8. Not readily or always available in work area
- 9. Concerned about raising the patient's anxiety
- 10. Other (Please specify): ______________

37A. From the reason(s) checked above, please write the number (1, 2, 3, etc.) of the one most important reason you did not wear eye protection while administering aerosolized ribavirin, pentamidine or tobramycin.

Most important reason: ___________
MODULE A: Aerosolized Medications (Respiratory Therapists)

38. During the past 7 calendar days, did you wear respiratory protection, not including a surgical mask, while administering aerosolized ribavirin, pentamidine or tobramycin?
   □ Always
   □ Sometimes
   □ Never ➡ Skip to Question 40.

39. What type(s) of respirator(s) did you use? Please ✓ all that apply.
   □ Disposable particulate respirator (also called filtering face-piece respirator, e.g., N95)
   □ Half mask or full-face piece respirator with replaceable filters or cartridges
   □ Powered air-purifying respirator (PAPR)
   □ Don't know

STOP

During the past 7 calendar days, if you ALWAYS wore respiratory protection, not including a surgical mask, while administering aerosolized ribavirin, pentamidine, or tobramycin, skip to Question 41.

40. What were the reason(s) you did not always wear respiratory protection, not including a surgical mask, while administering aerosolized ribavirin, pentamidine, or tobramycin? Please ✓ all that apply.
   □ 1. Potential for exposure to aerosolized medications is insignificant
   □ 2. Exposure to aerosolized medications is possible but the health hazard is insignificant
   □ 3. An engineering control (e.g., exhaust ventilation or an enclosure) is already being used
   □ 4. Not required by employer
   □ 5. Not provided by employer
   □ 6. Not standard practice
   □ 7. Too uncomfortable or difficult to use
   □ 8. Not readily or always available in work area
   □ 10. Other (Please specify): ____________________________
40A. From the reason(s) checked above, please write the number (1, 2, 3, etc.) of the one most important reason you did not always wear respiratory protection while administering aerosolized ribavirin, pentamidine, or tobramycin.

Most important reason .................... [ ]

41. During the past 7 calendar days, did you wear booties while administering aerosolized ribavirin, pentamidine or tobramycin?

☐ Always ☐ Sometimes ☐ Never

42. What are the reason(s) you did not always wear booties while administering aerosolized ribavirin, pentamidine or tobramycin? Please ✓ all that apply.

☐ 1. Potential for exposure to aerosolized medications is insignificant
☐ 2. Exposure to aerosolized medications is possible but the health hazard is insignificant
☐ 3. Not required by employer
☐ 4. Not provided by employer
☐ 5. Not standard practice
☐ 6. Too uncomfortable or difficult to use
☐ 7. Not readily or always available in work area
☐ 8. Cross contamination to other areas is not a concern
☐ 9. Concerned about raising the patient’s anxiety
☐ 10. Other (Please specify): ________________

42A. From the reason(s) checked above, please write the number (1, 2, 3, etc.) of the one most important reason you did not always wear booties while administering aerosolized ribavirin, pentamidine or tobramycin.

Most important reason .................... [ ]

You have now completed this module. Thank you.