

PROGRAMMING INSTRUCTIONS APPEAR IN BLUE.

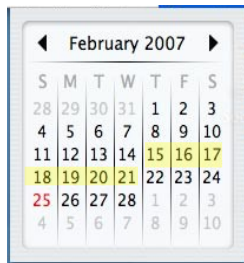
IF RESPONDENT MARKED 'YES' TO ONE OF THE INTRO QUESTIONS, GO TO APPROPRIATE SUBMODULE.

IF RESPONDENT MARKED 'YES' TO TWO INTRO QUESTIONS, RANDOMIZE ORDER THAT THE SUBMODULES ARE PRESENTED.

IF RESPONDENT MARKED 'YES' TO ALL THREE INTRO QUESTIONS, PRESENT SUBMODULE B EITHER FIRST OR LAST [DUE TO DIFFERENT TIME PERIOD (30 DAYS) FOR PENTAMIDINE] AND RANDOMIZE ORDER OF A AND C.

**INTRO QUESTIONS**

- A. Did you administer the aerosolized antibiotics tobramycin (*TOBI<sup>®</sup>*), amikacin (*Amikin<sup>®</sup>*) and/or colistin in the past 7 calendar days?  Yes → **SUBMODULE 1**  
 No



DISPLAY A CALENDAR HIGHLIGHTING THE PAST 7 CALENDAR DAYS. APPLIES TO ALL QUESTIONS WITH 'IN THE PAST 7 OR 30 CALENDAR DAYS'

- B. Did you administer aerosolized pentamidine (*Nebupent<sup>®</sup>*) in the past 30 calendar days?  Yes → **SUBMODULE 2**  
 No
- DISPLAY CALENDAR HIGHLIGHTING THE PAST 30 CALENDAR DAYS

- C. Did you administer aerosolized ribavirin (*Virazole<sup>®</sup>*) in the past 7 calendar days?  Yes → **SUBMODULE 3**  
 No
- DISPLAY CALENDAR HIGHLIGHTING THE PAST 7 CALENDAR DAYS.

**SUBMODULE 1: AEROSOLIZED ANTIBIOTICS TOBRAMYCIN, AMIKACIN AND COLISTIN**

Public reporting burden of this collection of information is estimated to average 13 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer, 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30329-4018; ATTN: PRA (10AP-xxxx).

## MODULE A: Aerosolized Medications

7/23/10

1. During your career, how long have you been administering the aerosolized antibiotics tobramycin (*TOBI<sup>R</sup>*), amikacin (*Amikin<sup>R</sup>*) or colistin?
- Less than one year  
 1-5 years  
 6-10 years  
 11-20 years  
 More than 20 years
2. When was the last time you received training on procedures for the safe handling of these three aerosolized antibiotics?
- Within the past 12 months  
 More than 12 months ago  
 I never received training

**If you work for more than one employer, the following questions apply to your primary employer, i.e., the one for which you typically work the most hours. If you are self-employed, consider yourself the employer.**

3. Does your employer have standard procedures for administering the aerosolized antibiotics tobramycin, amikacin or colistin?
- Yes  
 No  
 I don't know
4. During the past 7 calendar days, on how many days did you administer the aerosolized antibiotics tobramycin, amikacin or colistin?
- 1 day  
 2 days  
 3 days  
 4 days  
 5 days  
 6 days  
 7 days
5. During the past 7 calendar days, what was the total number of times you administered any of these three aerosolized antibiotics?
- Note:** If you administered any of these three aerosolized antibiotics more than one time to the same patient, count each administration separately.
- 1 time  
 2-3 times  
 4-5 times  
 6-10 times  
 More than 10 times.
6. During the past 7 calendar days, did you administer any of these three aerosolized antibiotics...
- ...more times than usual  
 ...fewer times than usual  
 ...about the same number of times as usual

## MODULE A: Aerosolized Medications

7/23/10

7. During the past 7 calendar days, how much time did you typically spend with a patient during a single administration of the aerosolized antibiotics tobramycin, amikacin or colistin?

**Note:** Include medication preparation time, delivery time spent with patient, and clean-up time where you continue to be exposed.

Exclude time spent with the patient in pre-administration assessment or any other times in the process where you are not exposed.

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

8. During the past 7 calendar days, in which of the following areas did you administer the aerosolized antibiotics tobramycin, amikacin or colistin? **Please** ✓ **all that apply.**

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

IF ONLY ONE AREA IN QUESTION 8 ➔ GO TO QUESTION 10.

9. Of the locations you checked above, please indicate the area where you **most often** administered these three aerosolized antibiotics during the past 7 calendar days.

LIST AREAS MARKED IN QUESTION 8 (USE RADIO BUTTONS)

IF RESPONDENT MARKED '1 TIME' IN QUESTION 5 ➔ GO TO QUESTION 10. IF RESPONDENT MARKED ANY OF THE OTHER RESPONSES IN QUESTION 5 ➔ GO TO QUESTION 11.

- |   | Yes | No |
|---|-----|----|
| 10. When you administered the aerosolized antibiotics tobramycin, amikacin or colistin to patients during the past 7 calendar days, did you ... |     |    |

a) ...use a continuous aerosol delivery system attached to a face mask, face tent or tracheostomy collar?

## MODULE A: Aerosolized Medications

7/23/10

- b).....use a hand-held, continuous aerosol delivery system (nebulizer, T-piece, mouth piece) with an **expiratory filter**?
- c).....use a ventilator equipped with an expiratory high efficiency particulate air (HEPA) filter?
- d).....administer the medication(s) in a negative pressure room (NPR) (i.e., air flows from adjacent areas into the NPR, ensuring that contaminated air cannot escape from the NPR to other areas)?

### ALL RESPONSES ➔ GO TO QUESTION 12.

11. When you administered the aerosolized antibiotics tobramycin, amikacin or colistin to patients during the past 7 calendar days, how often did you...

	Every time	Sometimes	Never
a) ....use a continuous aerosol delivery system attached to a face mask, face tent or tracheostomy collar?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b).....use a hand-held, continuous aerosol delivery system (nebulizer, T-piece, mouth piece) with an <b>expiratory filter</b> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c).....use a ventilator equipped with an expiratory high efficiency particulate air (HEPA) filter?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d).....administer the medication(s) in a negative pressure room (NPR) (i.e., air flows from adjacent areas into the NPR, ensuring that contaminated air cannot escape from the NPR to other areas)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Has exposure monitoring (e.g., air sampling, surface wipe sampling) been conducted in the **past 12 months** to assess your or your co-workers' exposure to.....

	Yes	No	I don't know
tobramycin?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
colistin?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## MODULE A: Aerosolized Medications

7/23/10

Questions addressing work practices and use of personal protective clothing and equipment will help us understand what is currently used and under what circumstances. Depending on your job and exposures, these may not be required.

13.	During the past 7 calendar days, how often did you wear a <b>water resistant gown or outer garment</b> while administering aerosolized tobramycin, amikacin or colistin?	<input type="radio"/> Always ➔ <a href="#">GO TO QUESTION 16</a> <input type="radio"/> Sometimes <input type="radio"/> Never
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14. What were the reason(s) you did not **always** wear a **water resistant gown or outer garment** while administering aerosolized tobramycin, amikacin or colistin? **Please ✓ all that apply.**
- An engineering control (e.g., aerosol delivery system equipped with filter(s)/scavenging system) was being used
  - Skin exposure was minimal
  - Not part of our protocol
  - Not provided by employer
  - No one else who does this work uses them
  - Too uncomfortable or difficult to use
  - Not readily available in work area
  - Cross contamination to other areas is not a concern
  - Concerned about raising the patient's anxiety
  - Other (Please specify):  

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[IF ONLY ONE REASON IN QUESTION 14 ➔ GO TO QUESTION 16.](#)

15. Of the reasons you checked above, please indicate the **most important reason** you did not **always** wear a **water resistant gown or outer garment** while administering any of these three aerosolized antibiotics.
- [LIST REASONS MARKED IN QUESTION 14 \(USE RADIO BUTTONS\)](#)

## MODULE A: Aerosolized Medications

7/23/10

16. In your current job, have you taken home any clothing that came into contact with tobramycin, amikacin or colistin?
- Yes  
 No  
 I don't know
17. During the past 7 calendar days, how often did you wear **protective gloves** while administering aerosolized tobramycin, amikacin or colistin?
- Always ➔ GO TO QUESTION 20  
 Sometimes  
 Never
18. What were the reason(s) you did not **always** wear **protective gloves** while administering these three aerosolized antibiotics? **Please ✓ all that apply.**
- Skin exposure was minimal  
 Not part of our protocol  
 Not provided by employer  
 No one else who does this work uses them  
 Too uncomfortable or difficult to use  
 Not readily available in work area  
 Cross contamination to other areas is not a concern  
 Concerned about raising the patient's anxiety  
 Other (Please specify):
- 

IF ONLY ONE REASON MARKED IN QUESTION 18 AND "NEVER" IN QUESTION 17 ➔ GO TO QUESTION 22

IF ONLY ONE REASON MARKED IN QUESTION 18 AND "SOMETIMES" IN QUESTION 17 ➔ GO TO QUESTION 20

19. Of the reasons you checked above, please indicate the **most important reason** you did not always wear **protective gloves** while administering these three aerosolized antibiotics.
- LIST REASONS MARKED IN QUESTIONS 18 (USE RADIO BUTTONS)

IF "NEVER" IN QUESTION 17 ➔ GO TO QUESTION 22

20. 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 tobramycin, amikacin or colistin?
- Yes No
-

**MODULE A: Aerosolized Medications**

7/23/10

a. Use phone/ cell phone/pager	<input type="radio"/>	<input type="radio"/>
b. Touch a computer keyboard, mouse, monitor or calculator	<input type="radio"/>	<input type="radio"/>
c. Handle files or charts	<input type="radio"/>	<input type="radio"/>
d. Touch door knobs, cabinets or drawers	<input type="radio"/>	<input type="radio"/>
e. Eat, drink, chew gum or smoke	<input type="radio"/>	<input type="radio"/>
f. Use pen or pencil	<input type="radio"/>	<input type="radio"/>
g. Touch waste basket/garbage bags	<input type="radio"/>	<input type="radio"/>
h. Use restroom	<input type="radio"/>	<input type="radio"/>
i. Apply cosmetics (e.g., lip balm)	<input type="radio"/>	<input type="radio"/>
j. Touch IV pump or bed controls	<input type="radio"/>	<input type="radio"/>
k. Use a non-disposable stethoscope	<input type="radio"/>	<input type="radio"/>

21. During the past 7 calendar days, did you remove and later put back on the **protective gloves** you had worn while handling aerosolized tobramycin, amikacin or colistin?  Yes  No

22.	During the past 7 calendar days, how often did you wear <b>eye protection</b> (e.g., goggles, face shield) while administering aerosolized tobramycin, amikacin or colistin? <i>Do not include personal eye glasses</i>	Always ➔ <a href="#">GO TO QUESTION 25</a> Sometimes Never
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23.	What were the reason(s) you did not <b>always</b> wear <b>eye protection</b> while administering tobramycin, amikacin or colistin? <b>Please ✓ all that apply.</b>	<input type="checkbox"/> An engineering control (e.g., exhaust ventilation or enclosure) was being used <input type="checkbox"/> Exposure was minimal <input type="checkbox"/> Not part of our protocol <input type="checkbox"/> Not provided by employer <input type="checkbox"/> No one else who does this work uses them <input type="checkbox"/> Too uncomfortable or difficult to use <input type="checkbox"/> Not readily available in work area <input type="checkbox"/> Concerned about raising the patient's anxiety <input type="checkbox"/> Other (Please specify): <hr/>
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IF ONLY ONE REASON MARKED IN QUESTION 23 ➔ GO TO QUESTION 25.

24. Of the reasons you checked above, please indicate the **most important reason** you did not **always** wear **eye protection** while administering these three aerosolized antibiotics.

LIST REASONS MARKED IN QUESTION 23 (USE RADIO BUTTONS)

25. During the past 7 calendar days, did you wear any of the following **while administering aerosolized tobramycin, amikacin or colistin?**

Please ✓ all that apply.

N95 respirator (includes surgical N95 respirator)



Half-facepiece air purifying respirator with particulate cartridge(s)



Powered air purifying respirator (PAPR)



Standard surgical mask



None of the above

I don't know

DISPLAY FOLLOWING NOTE ON A SEPARATE SCREEN FOR ALL RESPONDENTS (EXCEPT THOSE WHO MARKED 'I DON'T KNOW'): THE FOLLOWING QUESTIONS ASK ABOUT RESPIRATORS. STANDARD SURGICAL MASKS ARE NOT RESPIRATORS.

IF RESPONDENT MARKED 'N95 RESPIRATOR', 'HALF-FACEPIECE AIR PURIFYING RESPIRATOR' OR 'POWERED AIR PURIFYING RESPIRATOR' IN QUESTION 25 ➔ GO TO QUESTION 26.

IF RESPONDENT MARKED ONLY 'STANDARD SURGICAL MASK' OR 'NONE OF THE



## MODULE A: Aerosolized Medications

7/23/10

ABOVE' IN QUESTION 25 → GO TO QUESTION 27.

IF RESPONDENT MARKED 'I DON'T KNOW' IN QUESTION 25 → GO TO QUESTION 30.

26. How often did you wear a N95 respirator, half-facepiece air purifying respirator or a powered air purifying respirator while administering these three aerosolized antibiotics?
- Always → GO TO QUESTION 29  
 Sometimes
27. What were the reason(s) you did not **always** wear a N95 respirator, a half-facepiece air purifying respirator with particulate cartridge, or a powered air purifying respirator while administering aerosolized tobramycin, amikacin or colistin? **Please ✓ all that apply.**
- An engineering control (e.g., exhaust ventilation or enclosure) was being used
  - Exposure was minimal
  - Not part of our protocol
  - Not provided by employer
  - No one else who does this work uses them
  - Too uncomfortable or difficult to use
  - Not readily available in work area
  - Concerned about raising patient's anxiety.
  - Other (Please specify):  
\_\_\_\_\_

IF RESPONDENT MARKED MORE THAN ONE REASON IN QUESTION 27 → GO TO QUESTION 28.

OTHERWISE, GO TO INSTRUCTIONS BEFORE QUESTION 30.

28. Of the reasons you checked above, please indicate the **most important reason** you did not **always** wear a **respirator** while administering these three aerosolized antibiotics.
- LIST REASONS MARKED IN QUESTION 27 (USE RADIO BUTTONS)

IF RESPONDENT MARKED 'N95 RESPIRATOR' OR 'HALF-FACEPIECE AIR PURIFYING RESPIRATOR' IN QUESTION 25 → GO TO QUESTION 29.

OTHERWISE → GO TO ANOTHER SUBMODULE IF INDICATED BY RESPONSES TO INTRO QUESTIONS B AND C.

OTHERWISE → EXIT MODULE AND GO TO CORE MODULE IF THIS IS THE FIRST HAZARD MODULE COMPLETED.

IF THIS IS SECOND HAZARD MODULE COMPLETED, END SURVEY. END WITH 'THANK YOU' STATEMENT.

## MODULE A: Aerosolized Medications

7/23/10

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29. Have you been fit-tested for the respirator(s) you use while administering aerosolized tobramycin, amikacin or colistin?

- Yes  
 No

ALL RESPONSES ➔ GO TO ANOTHER SUBMODULE IF INDICATED BY RESPONSES TO INTRO QUESTIONS B AND C.

OTHERWISE ➔ EXIT MODULE AND GO TO CORE MODULE IF THIS IS THE FIRST HAZARD MODULE COMPLETED. IF THIS IS SECOND HAZARD MODULE COMPLETED, END SURVEY. END WITH 'THANK YOU' STATEMENT.

## MODULE A: Aerosolized Medications

7/23/10

### SUBMODULE 2: AEROSOLIZED PENTAMIDINE

30. During your career, how long have you been administering aerosolized pentamidine (*Nebupent<sup>®</sup>*)?
- Less than one year
  - 1-5 years
  - 6-10 years
  - 11-20 years
  - More than 20 years
31. When was the last time you received training on procedures for the safe handling of aerosolized pentamidine?
- Within past 12 months
  - More than 12 months ago
  - I never received training

**If you work for more than one employer, the following questions apply to your primary employer, i.e., the one for which you typically work the most hours. If you are self-employed, consider yourself the employer.**

32. Does your employer have standard procedures for administering aerosolized pentamidine?
- Yes
  - No
  - I don't know

**FOR THE FOLLOWING QUESTIONS THE TIME PERIOD OF INTEREST IS THE 'PAST 30 CALENDAR DAYS' (DISPLAY ON SEPARATE SCREEN)**

33. During the past 30 calendar days, on how many days did you administer aerosolized pentamidine?
- 1 day
  - 2 days
  - 3 days
  - 4 days
  - 5 days
  - 6-10 days
  - 11-15 days
  - 16-20 days
  - 21-25 days
  - 26-30 days

## MODULE A: Aerosolized Medications

7/23/10

34. During the past 30 calendar days, what was the total number of times you administered aerosolized pentamidine?

**Note:** If you administered aerosolized pentamidine more than one time to the same patient, count each administration separately.

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

35. During the past 30 calendar days, did you administer aerosolized pentamidine...

- ...more times than usual  
 ...fewer times than usual  
 ...about the same number of times as usual

36. During the past 30 calendar days, how much time did you typically spend with a patient during a single administration of aerosolized pentamidine?

**Note:** Include medication preparation time, delivery time spent with patient, and clean-up time where you continue to be exposed.

Exclude time spent with the patient in pre-administration assessment or any other times in the process where you are not exposed.

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

37. During the past 30 calendar days, in which of the following areas did you administer aerosolized pentamidine? **Please ✓ all that apply.**

- Patient's hospital room  
 Clinic/department treatment room or area  
 Patient's home  
 Other location (Please specify):
- 

IF ONLY ONE AREA MARKED IN QUESTION 37 ➔ GO TO QUESTION 39.

38. Of the locations you checked above, please indicate the area where you **most often** administered aerosolized pentamidine during the past 30 calendar days.

LIST AREAS MARKED IN QUESTION 37  
(USE RADIO BUTTONS)

IF RESPONDENT MARKED '1 TIME' IN QUESTION 34 ➔ GO TO QUESTION 39. IF RESPONDENT MARKED ANY OF THE OTHER RESPONSES IN QUESTION 34, ➔ GO TO QUESTION 40.

39. When you administered aerosolized pentamidine during the past 30 calendar days, did you ...

Yes

No

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## MODULE A: Aerosolized Medications

7/23/10

- |  |                       |                       |
|--|-----------------------|-----------------------|
| a. ...use a ventilated booth or treatment station equipped with high efficiency particulate air (HEPA) filter?   | <input type="radio"/> | <input type="radio"/> |
| b. ...use a hand-held, continuous aerosol delivery system (nebulizer, T-piece, mouth piece) with an expiratory filter?   | <input type="radio"/> | <input type="radio"/> |
| c. ...administer pentamidine in a negative pressure room (NPR) (i.e., air flows from adjacent areas into the NPR, ensuring that contaminated air cannot escape from the NPR to other areas)? | <input type="radio"/> | <input type="radio"/> |

[ALL RESPONSES](#) ➔ [GO TO QUESTION 41.](#)

40. When you administered aerosolized pentamidine during the past 30 calendar days, how often did you ...

Every time      Sometimes      Never

- |  |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|
| a. ...use a ventilated booth or treatment station equipped with high efficiency particulate air (HEPA) filter?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. ...use a hand-held, continuous aerosol delivery system (nebulizer, T-piece, mouth piece) with an expiratory filter?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. ...administer pentamidine in a negative pressure room (NPR) (i.e., air flows from adjacent areas into the NPR, ensuring that contaminated air cannot escape from the NPR to other areas)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

41.	Has exposure monitoring (e.g., air sampling, surface wipe sampling) been conducted in the past 12 months to assess your or your co-workers' exposure to pentamidine?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> I don't know
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**Questions addressing work practices and use of personal protective clothing and equipment will help us understand what is currently used and under what circumstances. Depending on your job and exposures, these may not be required.**

42.	During the past 30 calendar days, how often did you wear a <b>water resistant gown or outer garment</b> while administering aerosolized pentamidine?	<input type="radio"/> Always ➔ <a href="#">GO TO QUESTION 45</a> <input type="radio"/> Sometimes <input type="radio"/> Never
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**MODULE A: Aerosolized Medications**

7/23/10

43.	What were the reason(s) you did not always wear a <b>water resistant gown or outer garment</b> while administering aerosolized pentamidine?  Please ✓ all that apply.	<input type="checkbox"/> An engineering control (e.g., ventilated booth or stall) was being used <input type="checkbox"/> Skin exposure was minimal <input type="checkbox"/> Not part of our protocol <input type="checkbox"/> Not provided by employer <input type="checkbox"/> No one else who does this work uses them <input type="checkbox"/> Too uncomfortable or difficult to use <input type="checkbox"/> Not readily available in work area <input type="checkbox"/> Cross contamination to other areas is not a concern <input type="checkbox"/> Concerned about raising the patient's anxiety <input type="checkbox"/> Other (Please specify):  _____
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IF ONLY ONE REASON MARKED IN QUESTION 43 ➔ GO TO QUESTION 45.

44.	Of the reasons you checked above, please indicate the <b>most important reason</b> you did not always wear a <b>water resistant gown or outer garment</b> while handling aerosolized pentamidine.	LIST REASONS MARKED IN QUESTION 43 (USE RADIO BUTTONS).
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45.	In your current job, have you taken home any clothing that came into contact with pentamidine?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> I don't know
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46.	During the past 30 calendar days, how often did you wear <b>protective gloves</b> while handling aerosolized pentamidine?	<input type="radio"/> Always ➔ GO TO QUESTION 49 <input type="radio"/> Sometimes <input type="radio"/> Never
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**MODULE A: Aerosolized Medications**

7/23/10

47.	<p>What were the reason(s) you did not always wear <b>protective gloves</b> while handling aerosolized pentamidine?</p> <p><b>Please ✓ all that apply.</b></p>	<input type="checkbox"/> Skin exposure was minimal <input type="checkbox"/> Not part of our protocol <input type="checkbox"/> Not provided by employer <input type="checkbox"/> No one else who does this work uses them <input type="checkbox"/> Too uncomfortable or difficult to use <input type="checkbox"/> Not readily available in work area <input type="checkbox"/> Cross contamination to other areas is not a concern <input type="checkbox"/> Concerned about raising the patient's anxiety <input type="checkbox"/> Other (Please specify):  <hr style="width: 30%; margin-left: auto; margin-right: 0;"/>
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IF ONLY ONE REASON MARKED IN QUESTION 47 AND "NEVER" IN QUESTION 46 ➔ GO TO QUESTION 51.  
 IF ONLY ONE REASON MARKED IN QUESTION 47 AND "SOMETIMES" IN QUESTION 46 ➔ GO TO QUESTION 49.

48.	<p>Of the reasons you checked above, please indicate the <b>most important reason</b> you did not always wear <b>protective gloves</b> while handling aerosolized pentamidine.</p>	<p><b>LIST REASONS MARKED IN QUESTION 47 (USE RADIO BUTTONS)</b></p>
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IF RESPONDENT MARKED "NEVER" IN QUESTION 46 ➔ GO TO QUESTION 51

49.	<p>During the past 30 calendar days, did you perform any of the following activities while wearing <b>protective gloves</b> that had been used during the handling of aerosolized pentamidine?</p>		
		Yes	No
	a. Use phone/ cell phone/pager	<input type="radio"/>	<input type="radio"/>
	b. Touch a computer keyboard, mouse, monitor, or calculator	<input type="radio"/>	<input type="radio"/>
	c. Handle files or charts	<input type="radio"/>	<input type="radio"/>
	d. Touch door knobs, cabinets or drawers	<input type="radio"/>	<input type="radio"/>
	e. Eat, drink, chew gum or smoke	<input type="radio"/>	<input type="radio"/>
	f. Use pen or pencil	<input type="radio"/>	<input type="radio"/>
	g. Touch waste basket/garbage bags	<input type="radio"/>	<input type="radio"/>
	h. Use restroom	<input type="radio"/>	<input type="radio"/>

**MODULE A: Aerosolized Medications**

7/23/10

	i. Apply cosmetics (e.g., lip balm)	<input type="radio"/>	<input type="radio"/>
	j. Touch IV pump or bed controls	<input type="radio"/>	<input type="radio"/>
	k. Use a non-disposable stethoscope	<input type="radio"/>	<input type="radio"/>

50.	During the past 30 calendar days, did you remove and later put back on the <b>protective gloves</b> you had worn while handling aerosolized pentamidine?	<input type="radio"/> Yes <input type="radio"/> No
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51.	During the past 30 calendar days, how often did you wear <b>eye protection</b> (e.g., goggles, face shield) while administering aerosolized pentamidine? <i>Do not include personal eye glasses</i>	<input type="radio"/> Always ➔ <b>GO TO QUESTION 54</b> <input type="radio"/> Sometimes <input type="radio"/> Never
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52.	What were the reason(s) you did not always wear <b>eye protection</b> while administering aerosolized pentamidine?  <b>Please ✓ all that apply.</b>	<input type="checkbox"/> An engineering control (e.g., ventilated booth or stall) was being used <input type="checkbox"/> Exposure was minimal <input type="checkbox"/> Not part of our protocol <input type="checkbox"/> Not provided by employer <input type="checkbox"/> No one else who does this work uses them <input type="checkbox"/> Too uncomfortable or difficult to use <input type="checkbox"/> Not readily available in work area <input type="checkbox"/> Concerned about raising the patient's anxiety <input type="checkbox"/> Other (Please specify):  _____ -
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**IF ONLY ONE REASON MARKED IN QUESTION 52 ➔ GO TO QUESTION 54.**

53.	Of the reasons you checked above, please indicate the <b>most important reason</b> you did not always wear <b>eye protection</b> while administering aerosolized pentamidine.	<b>LIST REASONS MARKED IN QUESTION 52 (USE RADIO BUTTONS).</b>
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**MODULE A: Aerosolized Medications**

7/23/10

54. During the past 30 calendar days, did you wear any of the following **while administering aerosolized pentamidine**?

Please ✓ **all that apply.**

N95 respirator (includes surgical N95 respirator)



Half-facepiece air purifying respirator with particulate cartridge(s)



Powered air purifying respirator (PAPR)



Standard surgical mask



None of above

I don't know

DISPLAY FOLLOWING NOTE ON A SEPARATE SCREEN FOR ALL RESPONDENTS (EXCEPT THOSE WHO MARKED 'I DON'T KNOW': THE FOLLOWING QUESTIONS ASK ABOUT RESPIRATORS. STANDARD SURGICAL MASKS ARE NOT RESPIRATORS.

IF RESPONENT MARKED 'N95 RESPIRATOR', 'HALF-FACEPIECE AIR PURIFYING RESPIRATOR' OR 'POWERED AIR PURIFYING RESPIRATOR' IN QUESTION 54 → GO TO QUESTION 55.

IR RESPONDENT MARKED ONLY 'SURGICAL MASK' OR 'NONE OF THE ABOVE' IN QUESTION 54 → GO TO QUESTION 56

IF RESPONDENT MARKED 'I DON'T KNOW' IN QUESTION 54 → GO TO QUESTION 59

55. How often did you wear a N95 respirator,  Always → GO TO QUESTION 58  
half-facepiece air purifying respirator or a  Sometimes  
powered air purifying respirator while administering aerosolized pentamidine?

## MODULE A: Aerosolized Medications

7/23/10

56. What were the reason(s) you did not **always** wear a N95 respirator, a half-facepiece air purifying respirator with particulate cartridge, or a powered air purifying respirator while administering aerosolized pentamidine?

Please ✓ all that apply.

- An engineering control (e.g., ventilated booth or stall) was being used
  - Exposure was minimal
  - Not part of our protocol
  - Not provided by employer
  - No one else who does this work uses them
  - Too uncomfortable or difficult to use
  - Not readily available in work area
  - Concerned about raising the patient's anxiety
  - Other (Please specify):
- 

IF MORE THAN ONE REASON MARKED IN QUESTION 56 ➔ GO TO QUESTION 57. OTHERWISE, GO TO INSTRUCTIONS BEFORE QUESTION 58

57. Of the reasons you checked above, please indicate the **most important reason** you did not **always** wear a **respirator** while administering aerosolized pentamidine.

LIST REASONS MARKED IN QUESTION 56 (USE RADIO BUTTONS)

IF RESPONDENT MARKED 'SURGICAL N95 RESPIRATOR' OR 'HALF-FACEPIECE AIR PURIFYING RESPIRATOR' IN QUESTION 54 ➔ GO TO QUESTION 58.

OTHERWISE ➔ GO TO ANOTHER SUBMODULE IF INDICATED BY RESPONSES TO QUESTIONS A AND C.

OTHERWISE, ➔EXIT MODULE AND GO TO CORE MODULE IF THIS IS THE FIRST HAZARD MODULE COMPLETED INDICATED.

IF SECOND HAZARD MODULE COMPLETED, END SURVEY. END WITH 'THANK YOU' STATEMENT.

58. Have you been fit-tested for the respirator(s) you use while administering aerosolized pentamidine?  Yes  No

ALL RESPONSES ➔ GO TO ANOTHER SUBMODULE IF INDICATED BY RESPONSES TO QUESTIONS A AND C. OTHERWISE, ➔EXIT MODULE AND GO TO CORE MODULE IF THIS IS THE FIRST HAZARD MODULE COMPLETED INDICATED.

IF SECOND HAZARD MODULE COMPLETED, END SURVEY. END WITH 'THANK YOU' STATEMENT.

# MODULE A: Aerosolized Medications

7/23/10

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## MODULE A: Aerosolized Medications

7/23/10

### SUBMODULE 3: AEROSOLIZED RIBAVIRIN

59. During your career, how long have you been administering aerosolized ribavirin (*Virazole<sup>R</sup>*)?
- Less than one year  
 1-5 years  
 6-10 years  
 11-20 years  
 More than 20 years
60. When was the last time you received training on procedures for the safe handling of aerosolized ribavirin?
- Within past 12 months  
More than 12 months ago  
I never received training

**If you work for more than one employer, the following questions apply to your primary employer, i.e., the one for which you typically work the most hours. If you are self-employed, consider yourself the employer.**

61. Does your employer have standard procedures for administering aerosolized ribavirin?
- Yes  
 No  
 I don't know
62. During the past 7 calendar days, on how many days did you administer aerosolized ribavirin?
- 1 day  
 2 days  
 3 days  
 4 days  
 5 days  
 6 days  
 7 days
63. During the past 7 calendar days, what was the total number of times you administered aerosolized ribavirin?
- Note:** If you administered aerosolized ribavirin more than one time to the same patient, count each administration separately.
- 1 time  
 2-3 times  
 4-5 times  
 6-10 times  
 More than 10 times
64. During the past 7 calendar days, did you administer aerosolized ribavirin...
- ...more times than usual  
 ...fewer times than usual  
 ...about the same number of times as usual

## MODULE A: Aerosolized Medications

7/23/10

65. During the past 7 calendar days, how much time did you typically spend with a patient during a single administration of aerosolized ribavirin?
- Note:** Include medication preparation time, delivery time spent with patient, and clean-up time where you continue to be exposed  
Exclude time spent with the patient in pre-administration assessment or any other times in the process where you are not exposed.
- Less than 5 minutes  
 5-9 minutes  
 10-14 minutes  
 15-19 minutes  
 20-24 minutes  
 More than 24 minutes

66. During the past 7 calendar days, in which of the following areas did you administer aerosolized ribavirin? **Please ✓ all that apply.**
- Patient's hospital room  
 Clinic/department treatment room or area  
 Patient's home  
 Other location (Please specify):

IF ONLY ONE AREA MARKED IN QUESTION 66 ➔ GO TO QUESTION 68.

67. Of the locations you checked above, please indicate the area where you **most often** administered aerosolized ribavirin during the past 7 calendar days.
- LIST AREAS MARKED IN QUESTION 66 (USE RADIO BUTTONS)

IF RESPONDENT MARKED '1 TIME' IN QUESTION 63 ➔ GO TO QUESTION 68. IF RESPONDENT MARKED ANY OF THE OTHER RESPONSES IN QUESTION 63 ➔ GO TO QUESTION 69.

68. When you administered aerosolized ribavirin during the past 7 calendar days, did you.....
- |  | Yes                   | No                    |
|--|-----------------------|-----------------------|
| a. ...use an aerosol delivery hood within a ventilated isolation tent equipped with HEPA filter system to remove fugitive aerosols that cannot be contained?                               | <input type="radio"/> | <input type="radio"/> |
| b. ...use a ventilator equipped with an expiratory high efficiency particulate air (HEPA) exhaust filter?  | <input type="radio"/> | <input type="radio"/> |
| c. ...administer ribavirin in a negative pressure room (NPR) (i.e., air flows from adjacent areas into the NPR, ensuring that contaminated air cannot escape from the NPR to other areas)? | <input type="radio"/> | <input type="radio"/> |

**MODULE A: Aerosolized Medications**

7/23/10

**ALL RESPONSES ➔ GO TO QUESTION 70.**

69. When you administered aerosolized ribavirin during the past 7 calendar days, how often did you.....

	Every time	Sometimes	Never
a. ...use an aerosol delivery hood within a ventilated isolation tent equipped with HEPA filter system to remove fugitive aerosols that cannot be contained?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. ...use a ventilator equipped with an expiratory high efficiency particulate air (HEPA) exhaust filter?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. ...administer ribavirin in a negative pressure room (NPR) (i.e., air flows from adjacent areas into the NPR, ensuring that contaminated air cannot escape from the NPR to other areas)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**IF RESPONDENT MARKED '1 TIME' IN QUESTION 63 ➔ GO TO QUESTION 70. IF RESPONDENT MARKED ANY OF THE OTHER RESPONSES IN QUESTION 63 ➔ GO TO QUESTION 71.**

70. During the past 7 calendar days when you administered aerosolized ribavirin, did you...

	Yes	No
a. ...inspect the aerosol delivery system for leaks or worn parts prior to use?	<input type="radio"/>	<input type="radio"/>
b. ...use a nebulizer with an automatic shutoff valve?	<input type="radio"/>	<input type="radio"/>
c. ...discontinue nebulization of medication while patient is not breathing the aerosol?	<input type="radio"/>	<input type="radio"/>

**ALL RESPONSES ➔ GO TO QUESTION 72.**

71. During the past 7 calendar days when you administered aerosolized ribavirin, how often did you...

	Always	Sometimes	Never
a. ...inspect the aerosol delivery system for leaks or worn parts prior to use?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. ...use a nebulizer with an automatic shutoff valve?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## MODULE A: Aerosolized Medications

7/23/10

c. ...discontinue nebulization of medication while patient is not breathing the aerosol?

72. Has exposure monitoring (e.g., air sampling, surface wipe sampling) been conducted in the past 12 months to assess your or your co-workers' exposure to ribavirin?
- Yes  
 No  
 I don't know

**Questions addressing work practices and use of personal protective clothing and equipment will help us understand what is currently used and under what circumstances. Depending on your job and exposures, these may not be required.**

73. During the past 7 calendar days, how often did you wear a **water resistant gown or outer garment** while administering aerosolized ribavirin?
- Always ➔ [GO TO QUESTION 76](#)  
 Sometimes  
 Never

74. What were the reason(s) you did not always wear a **water resistant gown or outer garment** while administering aerosolized ribavirin?
- Please ✓ all that apply.**
- An engineering control (e.g., enclosure and/or exhaust ventilation) was being used  
 Skin exposure was minimal  
 Not part of our protocol  
 Not provided by employer  
 No one else who does this work uses them  
 Too uncomfortable or difficult to use  
 Not readily available in work area  
 Cross contamination to other areas is not a concern  
 Concerned about raising the patient's anxiety  
 Other (Please specify): \_\_\_\_\_

**IF ONLY ONE REASON MARKED IN QUESTION 74 ➔ GO TO QUESTION 76.**

75. Of the reasons you checked above, please indicate the **most important reason** you did not always wear a **water resistant gown or outer garment** while handling aerosolized ribavirin.
- LIST REASONS MARKED IN QUESTION 74 (USE RADIO BUTTONS)**

# MODULE A: Aerosolized Medications

7/23/10

76. In your current job, have you taken home any clothing that came into contact with aerosolized ribavirin?  Yes  
 No  
 I don't know
77. During the past 7 calendar days, how often did you wear **protective gloves** while handling aerosolized ribavirin?  Always ➔ **GO TO QUESTION 80**  
 Sometimes  
 Never
78. What were the reason(s) you did not always wear **protective gloves** while handling aerosolized ribavirin?  
**Please ✓ all that apply**
- Skin exposure was minimal
  - Not part of our protocol
  - Not provided by employer
  - No one else who does this work uses them
  - Too uncomfortable or difficult to use
  - Not readily available in work area
  - Cross contamination to other areas is not a concern
  - Concerned about raising the patient's anxiety
  - Other (Please specify):  
\_\_\_\_\_

IF RESPONDENT MARKED ONLY ONE REASON IN QUESTION 78 AND MARKED "NEVER" IN QUESTION 77 ➔ GO TO QUESTION 82.

IF RESPONDENT MARKED ONLY ONE REASON IN QUESTION 78 AND MARKED "SOMETIMES" IN QUESTION 77 ➔ GO TO QUESTION 80.

79. Of the reasons you checked above, please indicate the **most important reason** you did not always wear protective gloves while handling aerosolized ribavirin. **LIST REASONS MARKED IN QUESTION 78 (USE RADIO BUTTONS)**

80. 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 aerosolized ribavirin?

	Yes	No
a. Use phone/ cell phone/pager	<input type="radio"/>	<input type="radio"/>
b. Touch a computer keyboard, mouse, monitor or calculator	<input type="radio"/>	<input type="radio"/>
c. Handle files or charts	<input type="radio"/>	<input type="radio"/>
d. Touch door knobs ,cabinets or drawers	<input type="radio"/>	<input type="radio"/>



## MODULE A: Aerosolized Medications

7/23/10

e. Eat, drink, chew gum or smoke	<input type="radio"/>	<input type="radio"/>
f. Use pen or pencil	<input type="radio"/>	<input type="radio"/>
g. Touch waste basket/garbage bags	<input type="radio"/>	<input type="radio"/>
h. Use restroom	<input type="radio"/>	<input type="radio"/>
i. Apply cosmetics (e.g., lip balm)	<input type="radio"/>	<input type="radio"/>
j. Touch IV pump or bed controls	<input type="radio"/>	<input type="radio"/>
k. Use a non-disposable stethoscope	<input type="radio"/>	<input type="radio"/>

81. During the past 7 calendar days, did you remove and later put back on the **protective gloves** you had worn while handling aerosolized ribavirin?  Yes  No
82. During the past 7 calendar days, how often did you wear **eye protection** (e.g., goggles, face shield) while administering aerosolized ribavirin? *Do not include personal eye glasses.*  Always ➔ [GO TO QUESTION 85](#)  Sometimes  Never
83. What were the reason(s) you did not always wear **eye protection** while administering aerosolized ribavirin?  
**Please ✓ all that apply.**
- An engineering control (e.g., enclosure and/or exhaust ventilation) was being used
  - Exposure was minimal
  - Not part of our protocol
  - Not provided by employer
  - No one else who does this work uses them
  - Too uncomfortable or difficult to use
  - Not readily available in work area
  - Concerned about raising the patient's anxiety
  - Other (Please specify):  
\_\_\_\_\_

[IF ONLY ONE REASON MARKED IN QUESTION 83 ➔ GO TO QUESTION 85.](#)

84. Of the reasons you checked above, please indicate the **most important reason** you did not always wear **eye protection** while administering aerosolized ribavirin. [LIST REASONS MARKED IN QUESTION 83 \(USE RADIO BUTTONS\).](#)

**MODULE A: Aerosolized Medications**

7/23/10

85. During the past 7 calendar days, did you wear any of the following **while administering aerosolized ribavirin?**

Please  **all that apply.**

N95 respirator (includes surgical mask)



Half-facepiece air purifying respirator with particulate cartridge(s)



Powered air purifying respirator (PAPR)



Standard surgical mask



None of above

I don't know

DISPLAY FOLLOWING NOTE ON A SEPARATE SCREEN FOR ALL RESPONDENTS (EXCEPT THOSE WHO MARKED 'I DON'T KNOW'): THE FOLLOWING QUESTIONS ASK ABOUT RESPIRATORS. STANDARD SURGICAL MASKS ARE NOT RESPIRATORS.

IF RESPONDENT MARKED 'N95 RESPIRATOR', 'HALF-FACEPIECE AIR PURIFYING RESPIRATOR' OR 'POWERED AIR PURIFYING RESPIRATOR' IN QUESTION 85 ➔ GO TO QUESTION 86

IF RESPONDENT MARKED ONLY 'SURGICAL MASK' OR 'NONE OF THE ABOVE' IN QUESTION 85 ➔ GO TO QUESTION 87

IF RESPONDENT MARKED 'I DON'T KNOW' IN QUESTION 85 ➔ GO TO ANOTHER SUBMODULE IF INDICATED BY RESPONSES TO INTRO QUESTIONS A AND B.

## MODULE A: Aerosolized Medications

7/23/10

86. How often did you wear a surgical N95 respirator, half-facepiece air purifying respirator or a powered air purifying respirator while administering aerosolized ribavirin?
- Always ➔ **GO TO QUESTION 89**  
 Sometimes
87. What were the reason(s) you did not **always** wear a N95 respirator, a half-facepiece air purifying respirator with particulate cartridge, or a powered air purifying respirator while administering aerosolized ribavirin?
- Please ✓ all that apply.**
- An engineering control (e.g., enclosure and/or exhaust ventilation) was being used
  - Exposure was minimal
  - Not part of our protocol
  - Not provided by employer
  - No one else who does this work uses them
  - Too uncomfortable or difficult to use
  - Not readily available in work area
  - Concerned about raising the patient's anxiety
  - Other (Please specify):
- 

IF RESPONDENT MARKED MORE THAN ONE REASON IN QUESTION 87 ➔ GO TO QUESTION 88.

OTHERWISE, GO TO INSTRUCTIONS BEFORE QUESTION 89

88. Of the reasons you checked above, please indicate the **most important reason** you did not **always** wear a **respirator** while handling aerosolized ribavirin.
- LIST REASONS MARKED IN QUESTION 87 (USE RADIO BUTTONS)**

IF RESPONDENT MARKED 'N95 RESPIRATOR' OR 'HALF-FACEPIECE AIR PURIFYING RESPIRATOR' IN QUESTION 85 ➔ GO TO QUESTION 89.

OTHERWISE ➔ GO TO ANOTHER SUBMODULE IF INDICATED BY RESPONSES TO INTRO QUESTIONS A AND B.

OTHERWISE, ➔ EXIT MODULE AND GO TO CORE MODULE IF THIS IS THE FIRST HAZARD MODULE COMPLETED.

IF THIS IS SECOND HAZARD MODULE COMPLETED, END SURVEY. END WITH 'THANK YOU' STATEMENT.

## MODULE A: Aerosolized Medications

7/23/10

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89. Have you been fit-tested for the respirator(s) you use while administering aerosolized ribavirin?
- Yes
- No

ALL RESPONSES ➔ GO TO ANOTHER SUBMODULE IF INDICATED BY RESPONSES TO INTRO QUESTIONS A AND B.

OTHERWISE, ➔ EXIT MODULE AND GO TO CORE MODULE IF THIS IS THE FIRST HAZARD MODULE COMPLETED. IF THIS IS SECOND HAZARD MODULE COMPLETED, END SURVEY. END WITH 'THANK YOU' STATEMENT.

**Thank you for participating in the NIOSH Health and Safety Practices Survey of Healthcare Workers. Your answers have been submitted.**