

**Appendix 1 – Questionnaire for pediatricians.**

Form number: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Name: \_\_\_\_\_

E-mail: \_\_\_\_\_

1 - Workplace: [1] IMIP [2] HBL
2 - Gender (Male = 1; Female = 2)
3 - Age (years)
4 - Time since graduation (years)
5 - Length of professional experience (years)
6 - Level of education: [1] Bachelor's degree [2] Specialist degree [3] Residency [4] Master's degree [5] Doctoral degree [6] Other _____
7 - Continuing education: [1] Attendance of conferences, symposia, seminars (previous year) Which? _____ [2] Reading of scientific articles (previous week) Which? _____ [3] Reading of articles online (previous month) Which? _____ [4] Reading of educational material produced by the pharmaceutical industry (previous month) Which? _____

IMIP: *Instituto de Medicina Integral Prof. Fernando Figueira* (Professor Fernando Figueira Institute of Comprehensive Medicine); and HBL: *Hospital Barão de Lucena* (Barão de Lucena Hospital).

**Read the report below and respond to questions 8–14:**

A five-year-old male child (weight, 20 kg) is admitted to the pediatric emergency room with a 24-h history of wheezing and mild dyspnea, having taken albuterol syrup 7 h prior. The child has mild asthma attacks every two months and has no symptoms between attacks. Physical examination reveals the following: good general health; good hydration; +/4 dyspnea without retractions, an RR of 28 breaths/min; an HR of 128 bpm; and wheezing in both hemithoraces. No other alterations are found.

The pediatrician prescribes nebulization with 10 drops of fenoterol and 10 drops of a dilute solution of ipratropium bromide.

Give your opinion regarding the pediatrician's approach:

8 - In this particular case, is it appropriate to use the fenoterol-ipratropium bromide combination?
[1] Yes
[2] No (correct response)
[3] No opinion
9 - What is your opinion regarding the dose of fenoterol?
[1] It is too high, and it should not be used.
[2] It is high, but it can be used.
[3] It is appropriate. (correct response)
[4] It is low, but it can be used.
[5] It is too low, and it should not be used.
10 - What is the recommended compressed air or oxygen flow rate?
[1] 2 to 4 L/min
[2] 4 to 6 L/min
[3] 6 to 8 L/min (correct response)
[4] 8 to 10 L/min

## Appendix 1 – Continued...

11 - This child does not need a mouthpiece, because of his age. Is this statement true or false?
[1] True <u>(correct response)</u>
[2] False
12 - What is the recommended nebulizer solution?
[1] Distilled water
[2] 0.9% saline <u>(correct response)</u>
[3] Distilled water or 0.9% saline
[4] I am not sure.
13 - How would you compare metered dose inhalers and nebulizers, in terms of efficacy?
[1] Nebulizers are more efficient than are metered dose inhalers.
[2] Both have similar efficacy. <u>(correct response)</u>
[3] Metered dose inhalers are more efficient than are nebulizers.
[4] I am not sure.
14 - How would you compare metered dose inhalers and nebulizers, in terms of ease of use?
[1] Metered dose inhalers are easier to use than are nebulizers.
[2] Metered dose inhalers are as easy to use as are nebulizers.
[3] Metered dose inhalers are more difficult to use than are nebulizers. <u>(correct response)</u>
[4] I am not sure.
15 - How should the metered dose inhaler be attached to the spacer?
[1] The canister should be upward, with the outlet downward. <u>(correct response)</u>
[2] Ensuring that there is no leak in the system is more important than the position of the inhaler.
[3] The canister should be downward, with the outlet upward, avoiding the impact of the medication particles in the spacer, which hinders access to the airways of the patient.
[4] The position of the inhaler in relation to the spacer has no effect on the delivery of the drug to the respiratory tract.
16 - For correct inhalation of the puff, in schoolchildren, how would you describe a correct intake of breath?
[1] Rapid and superficial
[2] Rapid and deep
[3] Slow and deep <u>(correct response)</u>
[4] What is important is that patients keep their mouths attached to the spacer for 30 s.

## Read the report below and respond to question 25:

A seven-year-old female child (weight, 30 kg) is admitted to the pediatric emergency room with a 12-h history of wheezing and moderate dyspnea, having taken no medication previously. The child cannot speak long sentences. She has had asthma attacks every three months since she was 2 years old. She has no symptoms between attacks. Physical examination reveals the following: satisfactory general health; good hydration; +++/4 dyspnea with retractions; an RR of 36 breaths/min; an HR of 140 bpm; and wheezing in both hemithoraces. No other alterations are found.

The pediatrician prescribes albuterol sulfate (aerosol) with a spacer, at a dose of two puffs.

17 - What is your opinion regarding the prescription?
[1] I agree with it and I would add nothing to it.
[2] I agree with it, but I would add ipratropium bromide. <u>(correct response)</u>
[3] I disagree with it.
[4] I have no opinion.

**Appendix 2 – Questionnaire for nurses.**

Form number: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Name: \_\_\_\_\_

E-mail: \_\_\_\_\_

1 - Workplace: [1] IMIP [2] HR [3] HBL
2 - Gender (Male = 1, Female = 2)
3 - Age (years)
4 - Time since graduation (years)
5 - Length of professional experience (years)
6 - Level of education: [1] Bachelor's degree [2] Specialization [3] Residency [4] Master's degree [5] Doctoral degree [6] Other _____
7 - Continuing education: [1] Attendance of conferences, symposia, seminars (previous year) Which? _____ [2] Reading of scientific articles (previous week) Which? _____ [3] Reading of webpages Which? _____ [4] Reading of educational material produced by the pharmaceutical industry Which? _____

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8 - Have you ever used a metered dose inhaler in children with an acute asthma attack?
[1] Yes
[2] No
9 - In this pediatric emergency room, are metered dose inhalers routinely used for the treatment of acute asthma attacks in children?
[1] Yes
[2] No
10 - How long should schoolchildren and adolescents be required to hold their breath after one puff from their metered dose inhaler?
[1] They do not need to hold their breath.
[2] 5 seconds
[3] 10 seconds (correct response)
[4] I do not know.
11 - For which age groups is the use of metered dose inhalers recommended?
[1] All age groups (correct response)
[2] 1 to 5 years
[3] 6 years or older
[4] I do not know.
12 - In the emergency room, how should spacers be cleaned?
[1] Daily, with water and detergent, and subsequently dried with a cloth
[2] Daily, with water only, and subsequently dried with a cloth
[3] Once a week, with water and detergent, and allowed to air dry
[4] After each use (correct response)

## Appendix 2 – Continued...

13 - How would you compare metered dose inhalers and nebulizers, in terms of efficacy?
[1] Nebulizers are more efficient than are metered dose inhalers.
[2] Both have similar efficacy. <u>(correct response)</u>
[3] Metered dose inhalers are more efficient than are nebulizers.
[4] I am not sure.
14 - How would you compare metered dose inhalers and nebulizers, in terms of ease of use?
[1] Metered dose inhalers are easier to use than are nebulizers.
[2] Metered dose inhalers are as easy to use as are nebulizers.
[3] Metered dose inhalers are more difficult to use than are nebulizers. <u>(correct response)</u>
[4] I am not sure.
15 - What is the recommended nebulizer solution?
[1] Distilled water
[2] 0.9% saline <u>(correct response)</u>
[3] Distilled water or 0.9% saline
[4] I am not sure.
16 - How should the metered dose inhaler be attached to the spacer?
[1] The canister should be upward, with the outlet downward. <u>(correct response)</u>
[2] Ensuring that there is no leak in the system is more important than the position of the inhaler.
[3] The canister should be downward, with the outlet upward, avoiding the impact of the medication particles in the spacer, which hinders access to the airways of the patient.
[4] The position of the inhaler in relation to the spacer has no effect on the delivery of the drug to the respiratory tract.
17 - For correct inhalation of the puff, in schoolchildren, how would you describe a correct intake of breath?
[1] Rapid and superficial
[2] Rapid and deep
[3] Slow and deep <u>(correct response)</u>
[4] What is important is that patients keep their mouths attached to the spacer for 30 s.
18 - How often should the nebulizer system (mask, circuit, and bottle) be disinfected in the emergency room?
[1] After each use <u>(correct response)</u>
[2] Every 24 h
[3] Every 48 h
[4] I do not know.
19 - In routine practice, how often is the nebulizer system changed in the emergency room?
[1] After each use
[2] Every 24 h
[3] Every 48 h
[4] Other _____
20 - The nebulizer system should be cleaned with:
[1] Glutaraldehyde (the circuit should be immersed in the solution for 10 min)
[2] Soap and water (it should be physically cleaned and allowed to air dry)
[3] 0.025% sodium hypochlorite (the circuit should be immersed in the solution for 30 min)
[4] I do not know.