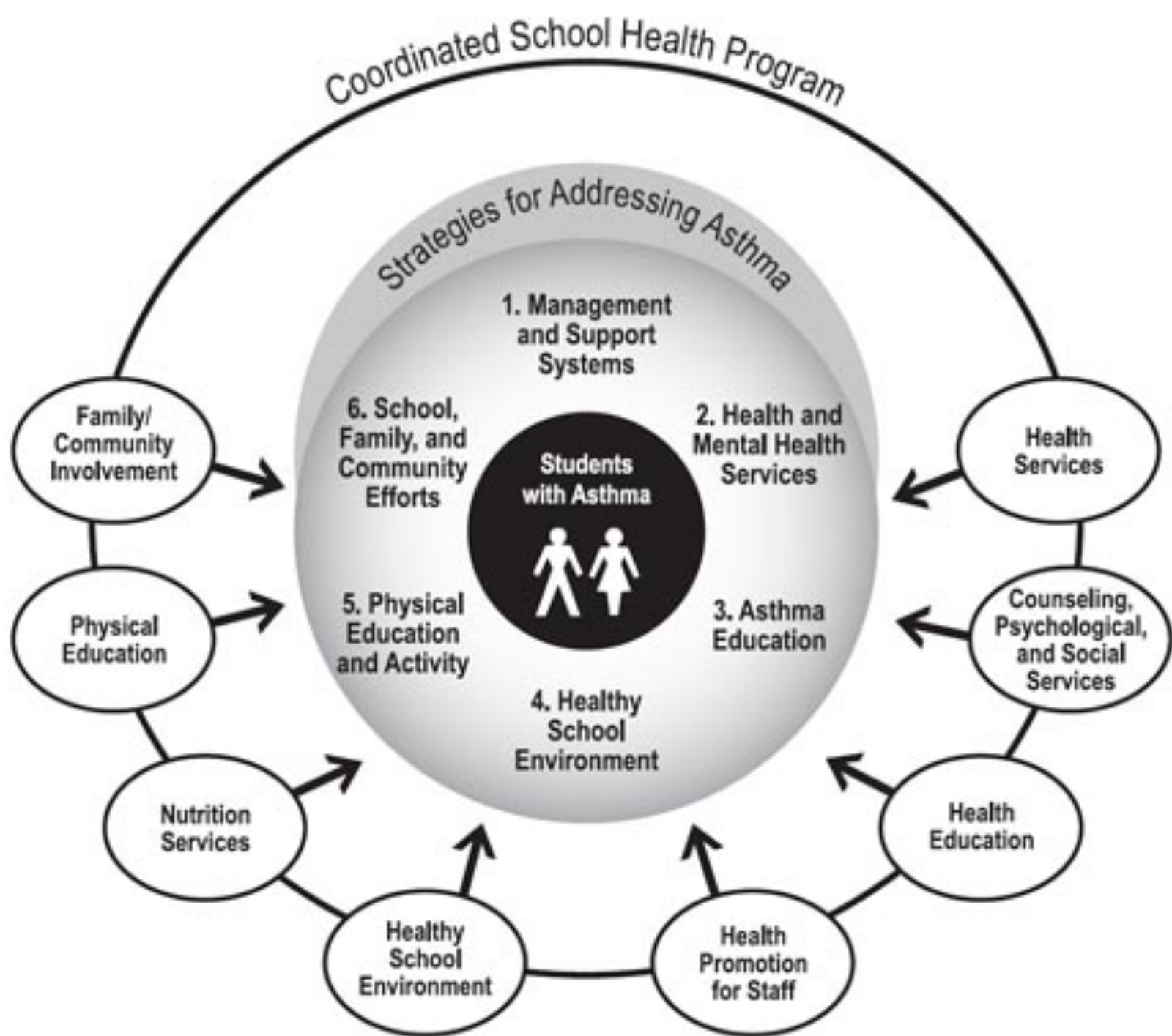


Assessing Children for Asthma in the School Environment

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How many children , did not go to school

- Today due to asthma

COMMUNICATION

- School Staff
- Parent
- Health care provider
- POLICIES

RESOURCES and POLICIES

- RESCUE INHALERS
- ACTION PLANS
- PEAK FLOW METERS
- NEBS

: Child with Exercise - Induced Asthma and Symptoms at School

Max is a 9-year-old boy with a long history of asthma. His asthma was difficult to control as a small child, and he required several emergency room visits and hospitalizations. He and his mother state his asthma is currently stable, although he is having difficulty keeping up with his peers during gym and in physical education(PE) class. Specifically, he begins to cough and feel chest tightness whenever he exercises or plays vigorously.

Case (continued)

In addition, he continues to cough and feel “chest tightness” even after he stops exercising. His PE teacher has told his mother that Max can no longer participate in PE class due to his “asthmatic condition”.

Question1: EIA is rare in Children with Asthma?

- True
- False

Exercise-Induced Asthma in Children

- Very common in childhood asthma
- Should be anticipated in all children with asthma
- Many children with mild intermittent asthma will only have symptoms with exercise

Case History (Continued)

Continuing the medical history, Max is currently on no controller medications. He uses albuterol without a holding chamber as needed for symptoms but has never been told to pre-treat with albuterol before exercise. He states that he has “occasional” symptoms and sometimes awakens at night with cough and wheezing. Max’s physical exam is

Case History (Continued)

Unremarkable with no wheezing appreciated. Based on his history, you make the diagnosis of mild intermittent asthma and EIA.

Question 2: Which of the following are potential treatment option(s) for EIA?

- A. The gym teacher is correct: asthmatics should not exercise
 - B. 2 puffs of short-acting beta-agonist 5 to 30 minutes prior to exercise
 - C. 2 to 4 puffs of cromolyn or DULERA 5 to 30 minutes to exercise
- b and c are correct
 - b is correct

Follow-up Visit #1

You recommend that Max pre-treat with two puffs of a short-acting beta-agonist with a holding chamber prior to any exercise or vigorous play. Max returns to the clinic two weeks later and states that the treatment appears to be helpful, but not completely successful. He says that even with pre-treatment with albuterol, if he runs vigorously, he will develop

symptoms following exercise. With further questioning, it becomes apparent that Max's asthma is not as well controlled as originally thought. He has been using an entire albuterol inhaler (approximately 200 puffs total) at least once a month (6-7 puff/day). Max keeps his albuterol inhaler near his bed at night and he often uses it in the middle of the night due to "feeling tight".

Question 3: Can appropriate long-term control therapy reduce the frequency and intensity of E1A?

- Yes
- No

Follow-up Visit #2

Max was placed on moderate-dose inhaled glucocorticoid therapy and returned for a follow-up visit six weeks later. He and his mother state that he is much improved, with less need for his albuterol inhaler. In addition, Max is no longer developing EIA as long as he pre-treats with a short-acting beta-agonist. His FEV¹ is now 85% of predicted.

Follow-up Visit #2 (continued)

Unfortunately, his PE teacher is reluctant to have Max join the soccer team because he has asthma. The teacher stated that asthmatics cannot be good athletes, and that Max should concentrate on non-athletic events.

Question 4: Which of the following steps could help Max fully participate in school events?

- A. Involve the school nurse
 - B. Provide information to school personnel to increase their understanding about asthma
 - C. Provide written action plan for handling asthma episodes
 - D. Work with the student and parents to increase asthma awareness
- a through d are correct

Asthma Plan for the Child and Family

- Asthma requires on-going management by the healthcare provider, family, and child.
- The family must be educated on how to manage the child's asthma.

Perceptions Influencing Treatment

I really want to be able to provide effective treatment, but I know her mom is going to be worried if I prescribe ICS therapy.

I want my child's asthma to go away.

I want to be able to play with my friends.



Written Asthma Plan Tells:

- When to increase anti-inflammatory medications.
- When to begin oral steroids
- When to call the healthcare provider.
- When to go to the Emergency Department

Green, Yellow, and Red Zones

- Green means that the child is doing fine.
- Yellow indicates caution. Use a rescue medication.
- Red indicates that rescue medication is not working. Steroids may be indicated.
- Call healthcare provider.