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**Methodological guidelines for teachers on teaching clinical skills in The center of practical skills
(using action algorithms)**

Specialty: General Medicine

Discipline: «Propaedeutics of childhood diseases»-2

Course: 3rd course

Department: Pediatrics 1

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Considered at a meeting of the Department of Pediatrics-1

Protocol №6 from « 24 »01.2023 year

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1. **Name of clinical skill:** Peak flowmetry.
2. **Learning objective:** Train students to conduct peak flowmetry
3. **Pre-training and time to display the skill on the dummy:** 10 minutes
4. **Time to master the skill:** 10 minutes
5. **Theoretical knowledge required for mastering skills:**
 - Anatomy and physiology: know the anatomy and physiology of the respiratory system;
6. **A list of trainers, simulators, mannequins models:**
 - Peak flowmetry.;
7. **The list of medical products and equipment:**
 - Gloves;
 - Diary;
 - Marker;
8. **Algorithm of execution skills:**

№	Algorithm of execution skills	Execution		
		Yes	No	Note
1	Explained the rules for conducting peak flowmetry.			
2	Attach the mouthpiece to the peak flowmeter.			
3	I made sure that the arrow is at the zero mark of the scale.			
4	The peak flowmetry was performed in the patient's standing position; I asked the patient to hold the peak flowmeter horizontally.		4	
5	I asked the patient to take a deep breath so that he grasped the mouthpiece of the device with his lips, made the fastest and strongest exhalation through his mouth.			
6	The exhaled air exerts pressure on the valve of the device, which moves along the arrow-pointer scale.			
7	The arrow shows the peak exhalation rate in liters per minute.			
8	Noted the result			
9	He asked the patient to make three attempts, each time returning the arrow to the zero mark.			
10.	Of the three results obtained, I chose the largest (best) and noted it in the patient's self-observation diary. The benchmark for comparing the next result obtained is the best PSV indicator.			

9. Tasks:

A sick child M., diagnosed with bronchial asthma, paroxysmal period. Complaints of attacks of suffocation, shortness of breath with difficulty exhaling, paroxysmal cough with separation at the end of thick, viscous sputum, weakness, dizziness. The attack of suffocation was preceded by lacrimation, nasal congestion. Objectively: the condition is of moderate severity, the skin is clean, pale. Breathing with labored exhalation, single whistling wheezes can be heard in the distance. BDD 22 in 1/min., PS 96 in 1/min., satisfactory qualities, blood pressure 100/60 mmHg.

1. Determine which needs are being met by the patient and identify problems.
2. Identify priority problems, set goals.

10. Materials for evaluation on the topic of the lesson:

1. Peak flowmetry is the definition of

- A) respiratory volume;
- B) vital capacity of the lungs;
- C) residual volume;
- D) peak exhalation rate+

2. When using a peak flowmeter, how many zones are in the individual diagram?

- A) 3+
- B) 2
- C) 5
- D) 4

3. Green zone coefficient?

- A) 0.5
- B) 0.6
- C) 0.7
- D) 0.8+

4. Yellow zone coefficient?

- A) 0.5+
- B) 0.6
- C) 0.7
- D) 0.8

5. For the purpose of constant self-monitoring of the patency of the respiratory tract, it is used

- A) spirometer
- B) spacer

C) Peak flowmeter+

D) nebulizer

11. Evaluation criterions:

№	Execution	Evaluation criterions
1	Completed	All steps are taken into account when performed correctly.
2	Half completed	It is counted for small errors during execution in 3 steps
3	Did not fulfill	Makes mistakes during execution by more than 3 steps.

12. Literature:

Basic:

1. Балалар ауруларының пропедевтикасы. 1 т.: оқулық / А. В. Мазурин - Алматы : Эверо, 2016. - 166 бет. с.
2. Балалар ауруларының пропедевтикасы. 2 т.: оқулық / А. В. Мазурин - Алматы : Эверо, 2016. - 188 бет. с.
3. Балалар ауруларының пропедевтикасы. 3 т.: оқулық / А. В. Мазурин. - Алматы : Эверо, 2016. - 156 бет. с.
4. Балалар ауруларының пропедевтикасы. 4 т.: оқулық / А. В. Мазурин - Алматы : Эверо, 2016. - 156 бет. с.
5. Баймұхамбетов, Б. Н. Балалар ауруларының пропедевтикасы мен балаларда жиі кездесетін аурулар: оқу құралы - Қарағанды : ЖК "Ақнұр", 2012. - 336 бет
6. Балалар аурулары пропедевтикасы : оқулық / Г. А. Шәкімова [ж. б.] . - Түзет., 2-бас. - Алматы : Эверо, 2011.
7. Асқамбаева К. А. Балалар аурулары пропедевтикасы : оқулық. -Шымкент: Б. ж., 2002.
8. Мазурин А. В. Пропедевтика детских болезней : Учебник/. -2-е изд., доп. расширенное и перераб. -СПб.: Фолиант, 2000, 2001.
9. Сборник клинических протоколов по профилю педиатрия, разработанных
- 10.Сборник клинических протоколов по профилю педиатрия, разработанных в 2014 году. 1 том- Астана, 2015ж- 616 бет.

Additional:

- Mazurin, A. V. Propaedeutics of childhood diseases. 1 volume [: textbook / - Алматы : "Evero" , 2017. - 144 p
1. Mazurin, A. V. Propaedeutics of childhood diseases. 2 volume] : textbook / - Алматы : "Evero" , 2017. - 172 p.

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2. Mazurin, A. V. Propaedeutics of childhood diseases. 3 volume [: textbook / - Almaty : "Evero" , 2017. - 140 p.
3. Mazurin, A. V. Propaedeutics of childhood diseases. 4 volume: textbook / - Almaty : "Evero" , 2017. - 136 p.
4. Түсіпқалиев Б. Т. Балалар аурулары пропедевтикасы : мед. ин-ның педиатрия фак. 3-курс студенттеріне арналған лекциялар конспектісі. -Ақтөбе: Б. ж., 1993.
5. Капитан Т. В. Пропедевтика детских болезней с уходом за детьми : учебник. -5-е изд., доп.. -М.: Медпресс-информ, 2009.
6. Капитан Т. В. Пропедевтика детских болезней с уходом за детьми : учебник. -3-е изд., доп.. -М.: Медпресс-информ, 2006.
7. Чапова О. И. Пропедевтика детских болезней : учебное пособие для студентов мед. учеб. заведений. -М.: ВЛАДОС - ПРЕСС, 2005.

13. Standards of correct answers for the assessment material:

Answers: 1-Г; 2-А; 3-Г; 4-А; 5-В;