

**ASTHMA CONTROL – CLINICAL DECISION SUPPORT APP
FOR CARE PROVIDER AT THE POINT OF CARE:
REQUIREMENTS (QUESTIONS, RECOMMENDED ACTIONS
AND PROCEDURES TO ASSESS THE ASTHMA CONTROL)
BASED ON THE EPR-3 GUIDELINES**

▪ **0-4 YEARS OLD**

1- INPUT FORM (ASTHMA CONTROL ASSESSMENT)

QUESTIONS NUMBER	QUESTIONS	ANSWER TYPES	ANSWER CHOICES	ANSWER CHOICE NUMBER	USE TO EVALUATE ASTHMA CONTROL?	DOMAIN OF CONTROL
Q1	Asthma symptoms in previous 2 – 4 weeks	Multiple choice - one answer	≤2 days /week	A1	Yes	Impairment
			>2 days/week	A2		
			Throughout the day	A3		
Q2	Night time awakenings in previous 2-4 weeks	Multiple choice - one answer	≤ 1x/month	A1	Yes	Impairment
			> 1x/month	A2		
			≥ 1x/week	A3		
Q3	Interference with normal activity in previous 2-4 weeks	Multiple choice - one answer	None	A1	Yes	Impairment
			Some limitation	A2		
			Extremely limited	A3		

Q4	Short-acting beta2-agonist use for symptom control in previous 2-4 weeks (not prevention of exercise-induced bronchospasm)	Multiple choice - one answer	≤ 2 days/week	A1	Yes	Impairment
			>2 days/week	A2		
			Several times per day	A3		
Q5	Exacerbations requiring oral systemic corticosteroids	Multiple choice - one answer	0-1/ year	A1	Yes	Risk
			2 - 3 / year	A2		
			>3 / year	A3		

2- WORKFLOW TO FOLLOW TO ASSESS THE ASTHMA CONTROL LEVEL

Please refer to the 1-page document (Figure 4-3a on page 309) taken from the EPR-3 guidelines and sent along with this document to know the conditions under which the asthma control level for children age 0- 4 years old is assessed as “Well Controlled”, “Not Well Controlled” or “Very Poorly Controlled”.

Attempt of logic to use to assess asthma control:

For Impairment domain:

If (Q1 or Q2 or Q3 or Q4) answers are A3 then

Asthma Control assessment (Impairment domain) is “**Very Poorly Controlled**”

Else

If (Q1 or Q2 or Q3 or Q4) answers are A2 then

Asthma Control assessment (Impairment domain) is “**Not Well Controlled**”

Else

If (Q1 and Q2 and Q3 and Q4) answers are A1 then

Asthma Control assessment (Impairment domain) is “**Well Controlled**”

Note

Impairment domain is “well controlled” only when Q1=A1 and Q2=A1 and Q3=A1 and Q4= A1

For Risk domain:

If Q5 answer is A3 then

Asthma Control assessment (Risk domain) is **“Very Poorly Controlled”**

Else

If Q5 answer is A2 then

Asthma Control assessment (Risk domain) is **“Not Well Controlled”**

else

Asthma Control assessment (Risk domain) is **“Well Controlled”**

3- OUTPUT (ASTHMA CONTROL LEVEL ASSESSED AND RECOMMENDED ACTION)

After that the input form has been completed and the answers to the questions in the form assessed following the EPR- 3 guidelines, a screen should display to the user with the following message:

- **Asthma Control Level (Impairment Domain):** “Well Controlled” or “Not Well Controlled” or “Very Poorly Controlled”
Recommended Action for treatment
Note: Please look at the **recommended action for treatment** details in the 1-page document (Figure 4-3a on Page 309) corresponding to the asthma control level resulting from the assessment and put it here as recommended action.
- **Asthma Control Level (Risk Domain):** “Well Controlled” or “Not Well Controlled” or “Very Poorly Controlled”
Recommended Action for treatment
Note: Please look at the **recommended action for treatment** details in the 1-page document (Figure 4-3a on Page 309) corresponding to the asthma control level resulting from the assessment and put it here as recommended action.

Note: (This note should appears after the recommended action for treatment message)

At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma control. In general, more frequent and intense exacerbations (e.g., requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate poorer disease control. For treatment purposes, patients who had ≥ 2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have **not-well-controlled** asthma, even in the absence of impairment levels consistent with **not-well-controlled** asthma.

▪ **5-11 YEARS OLD**

1- **INPUT FORM (ASTHMA CONTROL ASSESSMENT)**

QUESTIONS NUMBER	QUESTIONS	ANSWERS TYPES	ANSWERS CHOICES	ANSWER CHOICE NUMBER	USE TO EVALUATE ASTHMA CONTROL?	DOMAIN OF CONTROL
Q1	Asthma symptoms in previous 2 – 4 weeks	Multiple choice - one answer	≤2 days /week but no more than once on each day	A1	Yes	Impairment
			>2 days/week or multiple times on ≤2 days /week	A2		
			Throughout the day	A3		
Q2	Nighttime awakenings In previous 2- 4 weeks	Multiple choice - one answer	≤ 1x/month	A1	Yes	Impairment
			≥ 2x/month	A2		
			≥ 2x/week	A3		
Q3	Interference with normal activity in previous 2-4 weeks	Multiple choice - one answer	None	A1	Yes	Impairment
			Some limitation	A2		
			Extremely limited	A3		
Q4	Short-acting		≤ 2 days/week	A1	Yes	Impairment

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	beta2-agonist use for symptom control in previous 2-4 weeks (not prevention of exercise-induced bronchospasm)	Multiple choice - one answer	>2 days/week	A2		
			Several times per day	A3		
Q5	FEV1 or peak flow in previous 2-4 weeks	Multiple choice - one answer	> 80% predicted / personal best	A1	Yes	Impairment
			60-80 % predicted/personal best	A2		
			< 60 % predicted / personal best	A3		
			Not available	A4		
Q6	FEV1/FVC	Multiple choice - one answer	>80%	A1	Yes	Impairment
			75-80%	A2		
			< 75%	A3		
			Not available	A4		
Q7	Exacerbations requiring oral systemic corticosteroids	Multiple choice - one answer	0-1 /year	A1	Yes	Risk
			≥ 2 / year	A2		

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2- WORKFLOW TO FOLLOW TO ASSESS THE ASTHMA CONTROL LEVEL

Please refer to the 1-page document (Figure 4-3b on page 310) taken from the EPR-3 guidelines and sent along with this document to know the conditions under which the asthma control level for children age 5- 11 years old is assessed as “Well Controlled”, “Not Well Controlled” or “Very Poorly Controlled.”

3- OUTPUT (ASTHMA CONTROL LEVEL ASSESSED AND RECOMMENDED ACTION)

After that the input form has been filled out and the answers to the questions in the form assessed following the EPR- 3 guidelines, a screen should display to the user with the following message:

- **Asthma Control Level (Impairment Domain):** “Well Controlled” or “Not Well Controlled” or Very Poorly Controlled”
Recommended Action for treatment
Note: Please look at the **recommended actions for treatment** details in the 1-page document (Figure 4-3b on Page 310) corresponding to the asthma control level (Impairment domain) resulting from the assessment and put it here as recommended action.
- **Asthma Control Level (Risk Domain):** “Well Controlled” or “Not Well Controlled” or Very Poorly Controlled”
Recommended Action for treatment
Note: Please look at the **recommended actions for treatment** details in the 1-page document (Figure 4-3b on Page 310) corresponding to the asthma control level (Impairment domain) resulting from the assessment and put it here as recommended action.

Note: (This note should appears after the recommended action for treatment message)

At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma control. In general, more frequent and intense exacerbations (e.g., requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate poorer disease control. For treatment purposes, patients who had ≥ 2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have **persistent** asthma, even in the absence of impairment levels consistent with **persistent** asthma.

▪ **≥ 12 YEARS OLD**

4- INPUT FORM (ASTHMA CONTROL ASSESSMENT)

QUESTIONS NUMBER	QUESTIONS	ANSWERS TYPES	ANSWERS CHOICES	ANSWER CHOICE NUMBER	USE TO EVALUATE ASTHMA CONTROL?	DOMAIN OF CONTROL
Q1	Asthma symptoms in previous 2 – 4 weeks	Multiple choice - one answer	≤2 days /week	A1	Yes	Impairment
			>2 days/week	A2		
			Throughout the day	A3		
Q2	Nighttime awakenings in previous 2-4 weeks	Multiple choice - one answer	≤ 2x/month	A1	Yes	Impairment
			1-3x/week	A2		
			≥ 4x/week	A3		
Q3	Interference with normal activity in previous 2-4 weeks	Multiple choice - one answer	None	A1	Yes	Impairment
			Some limitation	A2		
			Extremely limited	A3		
Q4	Short-acting beta2-agonist use for symptom control in previous 2-4 weeks (not prevention of exercise-induced bronchospasm)	Multiple choice - one answer	≤ 2 days/week	A1	Yes	Impairment
			>2 days/week	A2		
			Several times per day	A3		

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Q5	FEV1 or peak flow in previous 2-4 weeks	Multiple choice - one answer	> 80% predicted / personal best	A1	Yes	Impairment
			60-80 % predicted/personal best	A2		
			< 60 % predicted / personal best	A3		
			Not available	A4		
Q6	Validated questionnaire: ATAQ	Multiple choice - one answer	0	A1	Yes	Impairment
			1-2	A2		
			3-4	A3		
			Not available	A4		
Q7	Validated questionnaire: ACQ	Multiple choice - one answer	≤ 0.75	A1	Yes	Impairment
			≥ 1.5	A2		
			N/A	A3		
Q8	Validated questionnaire: ACT	Multiple choice - one answer	≥ 20	A1	Yes	Impairment
			16-19	A2		
			≤ 15	A3		
			Not available	A4		

Q9	Exacerbations requiring oral systemic corticosteroids	Multiple choice - one answer	0-1 /year	A1	Yes	Risk
			≥ 2 / year	A2		

5- WORKFLOW TO FOLLOW TO ASSESS THE ASTHMA CONTROL LEVEL

Please refer to the 1-page document (Figure 4-7 from page 345) taken from the EPR-3 guidelines and sent along with this document to know the conditions under which the asthma control level for children age ≥ 12 years old is assessed as “Well Controlled”, “Not Well Controlled” or “Very poorly Controlled”.

6- OUTPUT (ASTHMA CONTROL LEVEL ASSESSED AND RECOMMENDED ACTION)

After that the input form has been filled out and the answers to the questions in the form assessed following the EPR- 3 guidelines, a screen should display to the user with the following message:

- **Asthma Control Level (Impairment Domain):** “Well Controlled” or “Not Well Controlled” or Very Poorly Controlled”.
Recommended Action for treatment
Note: Please look at the **recommended actions for treatment** details in the 1-page document (Figure 4-7 on Page 345) corresponding to the asthma control level (Impairment domain) resulting from the assessment and have it here
- **Asthma Control Level (Risk Domain):** “Well Controlled” or “Not Well Controlled” or Very Poorly Controlled”
Recommended Action for treatment
Note: Please look at the **recommended actions for treatment** details in the 1-page document (Figure 4-7 on Page 345) corresponding to the asthma control level (Impairment domain) resulting from the assessment and put it here as recommended action.

Note: (This note should appears after the recommended action for treatment message)

At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma control. In general, more frequent and intense exacerbations (e.g., requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate poorer disease control. For treatment purposes, patients who had ≥ 2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have **Not-well-controlled** asthma, even in the absence of impairment levels consistent with **Not-well-controlled** asthma.