

Asthma *Action Plan* & Patient Teaching

A written, individualized roadmap that empowers patients and families to recognize worsening asthma, respond with the right medications at the right time, and prevent escalation to the ER.

 **SOURCE TRANSPARENCY:** Topic not in uploaded notes. Content drawn from Saunders NCLEX-RN Review, ATI Med-Surg, Lippincott, NHLBI EPR-3 Asthma Guidelines, and GINA 2024 Global Initiative for Asthma.

1 Definition & Overview

WHAT IS AN ASTHMA ACTION PLAN?

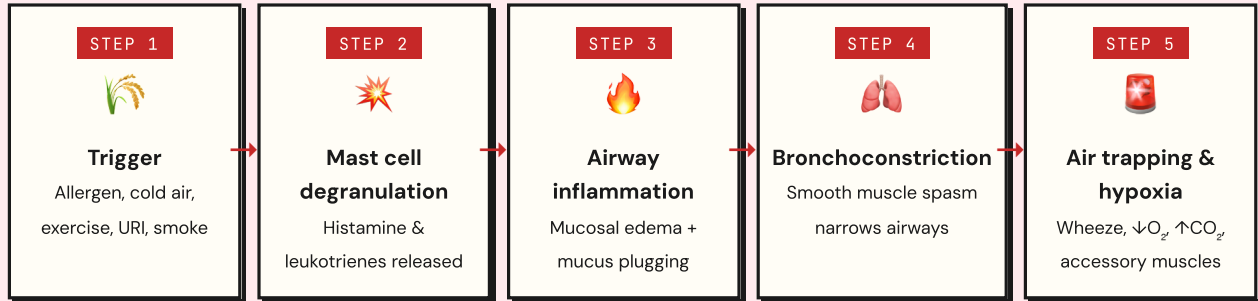
- ▶ **A written, personalized plan** developed collaboratively with the HCP that maps symptoms and peak expiratory flow rate (PEFR) to specific medication actions.
- ▶ **Uses a traffic-light system** — Green (well), Yellow (caution), Red (emergency) — so patients of any age or literacy level can self-manage and know when to escalate.
- ▶ **Why it matters:** Reduces ER visits and hospitalizations, prevents asthma deaths, and is a Joint Commission / NCLEX-prioritized patient safety standard.

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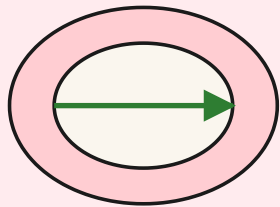
Pathophysiology

WHY THE ACTION PLAN WORKS

Asthma is a chronic, reversible obstructive airway disease. Recognizing the cascade below helps patients act before the airway closes.

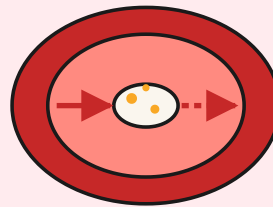


NORMAL AIRWAY



Open lumen · free airflow

ASTHMATIC AIRWAY



Narrowed lumen · mucus · edema

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The Traffic Light Zones

HEART OF THE ACTION PLAN • KNOW PEFR % OF PERSONAL BEST



GREEN • YELLOW • RED

MATCH PEAK FLOW + SYMPTOMS → TAKE THE RIGHT ACTION



GREEN ZONE

PEFR 80–100% personal best

HOW PATIENT FEELS

- No cough, wheeze, or chest tightness
- Sleeps through the night
- Performs usual activities

ACTION

- Continue **daily controller** (ICS)
- Avoid known triggers
- Pre-treat before exercise if ordered

✅ **STAY THE COURSE** — keep taking controllers even when feeling well



YELLOW ZONE

PEFR 50–79% personal best

HOW PATIENT FEELS

- Coughing, wheezing, mild SOB
- Chest tightness
- Waking at night with symptoms
- Decreased activity tolerance

ACTION

- **Add rescue inhaler** (albuterol 2–4 puffs q4h)
- Continue controller medication
- May start oral corticosteroid per plan
- Call HCP if not back to Green in 24 h

⚠️ **CAUTION** — asthma getting worse, treat early



RED ZONE

PEFR < 50% personal best

HOW PATIENT FEELS

- **Severe SOB** — can't speak in full sentences
- Rescue inhaler NOT helping
- Lips or fingernails blue (cyanosis)
- Retractions, tripod position
- Drowsy, confused, ↓ LOC

ACTION

- Take rescue inhaler **NOW**
- Sit upright, stay calm
- Have someone drive to ER

📞 **CALL 911 IMMEDIATELY** 📞

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Signs & Symptoms

EARLY RECOGNITION VS LATE / SEVERE RED FLAGS

⚡ Early / Mild (Yellow)

- ⚡ Expiratory wheeze, "musical" breathing
- ⚡ Dry, persistent cough (esp. at night)
- ⚡ Chest tightness or pressure
- ⚡ Mild dyspnea on exertion
- ⚡ ↑ Respiratory rate
- ⚡ PEFr 50–79% of personal best

🚨 Late / Severe (Red)

- 🚨 **SILENT CHEST** — no wheeze = ominous, near-total obstruction
- 🚨 Cannot speak in full sentences (1–2 words only)
- 🚨 Use of accessory muscles, retractions
- 🚨 Tripod positioning
- 🚨 Cyanosis (lips, nail beds)
- 🚨 Diaphoresis, tachycardia >120
- 🚨 ↓ LOC, confusion, drowsiness
- 🚨 SpO₂ < 90%, PEFr < 50%

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Priority Nursing Interventions

ABC FRAMEWORK · ACUTE EXACERBATION

A

AIRWAY

- ✓ Assess airway patency & auscultate breath sounds
- ✓ Position high-Fowler's or tripod
- ✓ Suction PRN if mucus plugging
- ✓ Prepare for intubation if silent chest

B

BREATHING

- ✓ Administer O₂ to keep SpO₂ ≥ 92%
- ✓ Give SABA (albuterol) FIRST — nebulizer or MDI + spacer
- ✓ Add ipratropium (Atrovent) if severe
- ✓ IV / PO corticosteroids per order
- ✓ Monitor PEFr before & after treatments

C

CIRCULATION

- ✓ Continuous SpO₂ & cardiac monitoring
- ✓ Watch for tachycardia (β-agonist side effect)
- ✓ IV access & fluids — thin secretions
- ✓ Monitor ABGs — early respiratory alkalosis → late acidosis

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Pharmacology

CONTROLLERS VS RESCUE — NEVER CONFUSE THESE

CLASS / DRUG	MECHANISM	USE	KEY SIDE EFFECTS	NURSING PEARLS
SABA Albuterol, Levalbuterol	β_2 -agonist → bronchodilation in 5–15 min	RESCUE (acute)	Tachycardia, tremor, hypokalemia, anxiety	First-line in attack · use FIRST if combo · > 2× / wk = poor control
Anticholinergic Ipratropium (Atrovent)	Blocks ACh → relaxes smooth muscle	RESCUE adjunct	Dry mouth, urinary retention	Often combined w/ albuterol (DuoNeb) in severe attack
Oral Steroid Prednisone	↓ inflammation systemically	RESCUE (short burst)	Hyperglycemia, mood, ↑BP, immunosuppression	Short burst 3–10 days · taper if > 14 days · take w/ food
ICS Fluticasone, Budesonide, Beclomethasone	↓ airway inflammation locally	CONTROLLER (daily)	Oral candidiasis (thrush), hoarseness, dysphonia	RINSE MOUTH after every dose · NOT for acute attack · daily even when well
LABA Salmeterol, Formoterol	Long-acting β_2 - agonist (12+ h)	CONTROLLER add-on	Tachycardia · BLACK BOX warning if used alone	NEVER monotherapy — only with ICS (Advair, Symbicort)
Leukotriene Modifier Montelukast (Singulair)	Blocks leukotriene receptor	CONTROLLER · exercise / allergic asthma	BLACK BOX: neuropsychiatric (mood, suicidal)ity	Take in evening · report mood changes
Biologic Omalizumab (Xolair)	Anti-IgE monoclonal antibody	CONTROLLER · severe allergic asthma	Anaphylaxis risk, injection site reaction	SQ in office · observe 2 h post-dose · EpiPen on hand

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NCLEX Test Traps

WHERE STUDENTS LOSE POINTS

Trap #1 • Wrong inhaler for the moment

Patient in active attack — which inhaler first?

~~✗ WRONG~~

~~Reach for the
fluticasone (ICS) — it's
the controller~~

✓ RIGHT

Give albuterol (SABA)
FIRST — opens airway in
minutes

Trap #2 • "Patient feels fine, stop daily inhaler"

Symptom-free does NOT mean cured.

~~✗ WRONG~~

~~Discontinue ICS when
wheezing stops~~

✓ RIGHT

Continue daily
controller in Green
Zone — prevents next
attack

Trap #3 • The "silent chest" trap

No wheezing = better? Wrong direction.

~~✗ WRONG~~

~~"Lungs clear, patient
improving"~~

✓ RIGHT

Silent chest = NEAR-
TOTAL OBSTRUCTION
→ call rapid response

Trap #4 • Inhaler order with combo therapy

If both prescribed, which comes first?

~~✗ WRONG~~

~~Give ICS first, then
bronchodilator~~

✓ RIGHT

Bronchodilator (SABA)
FIRST, wait 5 min, then
ICS — opens airway so
steroid penetrates

Trap #5 • Forgetting mouth rinse after ICS

Most common patient teaching omission.

~~✗ WRONG~~

~~"Just take it and you're
done"~~

✓ RIGHT

Rinse mouth & spit
after every ICS dose →
prevents oral thrush

Trap #6 • LABA alone

NCLEX loves to test this Black Box.

~~✗ WRONG~~

~~Salmeterol prescribed
as sole controller~~

✓ RIGHT

LABA must ALWAYS be
combined with an ICS
— solo LABA ↑ asthma
death risk

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Patient & Family Education

SELF-MANAGEMENT IS THE WIN CONDITION



Carry the written plan

Keep a copy at home, school, daycare, work, and in wallet/phone.



Establish personal best PEF

Highest reading over 2–3 symptom-free weeks.
Recheck every 6 mo.



Peak flow daily, same time

Stand, deep breath, fast blast — best of 3 readings.



Use a spacer with MDI

Doubles drug delivery to lungs · shake → exhale → press → inhale slowly 5 sec → hold 10 sec.



Rinse mouth after ICS

Swish & spit water — prevents oral thrush & hoarseness.



Avoid triggers

Smoke, dust mites, pets, mold, cold air, strong scents, NSAIDs (some patients), beta-blockers.



Stay current on vaccines

Annual flu shot · pneumococcal · COVID-19 boosters.



Always carry rescue inhaler

Replace before expiration · check dose counter · NEVER share.



Pre-medicate for exercise

2 puffs albuterol 15 min before activity if ordered.



Know when to call 911

Red Zone signs · no relief from rescue · blue lips · cannot talk.

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Memory Boosters

MNEMONICS & PATTERN RECOGNITION



The Traffic Light

- G** **Green = GO** — feeling great, stay on controllers
- Y** **Yellow = SLOW** — add rescue, watch closely
- R** **Red = STOP & CALL** — rescue + 911



Triggers — "ABCDE"

- A** **Allergens** (pollen, pets, dust)
- B** **Bugs** (viral URI, sinusitis)
- C** **Cold air, Cigarette smoke**
- D** **Dust, mold, strong odors**
- E** **Exercise, Emotions (stress)**



Inhaler Roles

- R** **Rescue = Rapid** · albuterol · Red can lid
- C** **Controller = Consistent** · ICS · daily
- B** **Bronchodilator Before steroid** (5 min wait)



Severe Attack — "STRIDOR"

- S** **Silent chest** (worst sign)
- T** **Tripod position**
- R** **Retractions**
- I** **Inability to speak in sentences**
- D** **Diaphoresis**
- O** **LOW SpO₂** (<90%)
- R** **Cyanosis (bruised lips)**

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NCJMM Clinical Judgment Walkthrough

NEXT GENERATION NCLEX • 6-STEP MODEL IN ACTION

CLINICAL SCENARIO

10-year-old male with moderate persistent asthma comes to school nurse's office during PE. Mother reports he's been coughing at night for 3 nights. School records show personal best PEFR = 300 L/min. Current reading: **PEFR 195 L/min (65%)**. Vitals: HR 108, RR 26, SpO₂ 94%, mild expiratory wheeze, able to speak in short sentences. He has albuterol MDI and fluticasone MDI in his backpack. Last albuterol use: yesterday morning.

STEP 1

Recognize Cues

- PEFR 65% → **Yellow Zone**
- Night cough × 3 (poor control marker)
- Mild expiratory wheeze
- Tachypnea, mild tachycardia
- SpO₂ 94% (mild hypoxia)
- Able to speak — not red zone yet

STEP 2

Analyze Cues

PEFR + symptoms = **moderate exacerbation in Yellow Zone**.
Night symptoms indicate inadequate controller therapy or trigger exposure.
Bronchoconstriction is reversible — rescue inhaler is the priority intervention. No silent chest, no cyanosis = not yet emergent.

STEP 3

Prioritize Hypotheses

#1 Acute bronchoconstriction requiring SABA
#2 Inadequate controller adherence
#3 Trigger exposure (PE = exercise, pollen?)
Rule out: pneumonia, foreign body, anaphylaxis

STEP 4

Generate Solutions

- Albuterol 2–4 puffs via spacer NOW
- Sit upright, calm reassurance
- Reassess PEFR & SpO₂ in 15 min
- Notify mother & HCP
- Excuse from PE today
- Review action plan together

STEP 5

Take Action

Nurse administers **albuterol 4 puffs via MDI + spacer**, positions upright, calls mother. After 15 min: PEFR 270 L/min (90%), SpO₂ 98%, no wheeze, breathing comfortably. Reviews ICS technique — child admits skipping morning doses.

STEP 6

Evaluate Outcomes

- ✓ PEFR returned to Green Zone
- ✓ SpO₂ normalized
- ✓ Symptoms resolved
- ✓ Education reinforced re: daily ICS
- 📅 Plan: HCP follow-up this week, mom signs updated action plan, school keeps copy on file.