

The Emergency Room Asthma Management Algorithm is to be used for any patient seen in the Emergency Room with the diagnosis of asthma. (The initial history should be documented on the standard Triage/Emergency Room Form.) Each sheet is to be used to document patient risk factors, physical examination findings, levels of pulmonary function and oxygenation, asthma severity level and physician orders. In addition, the algorithm is designed to facilitate hospital admission based on written criteria. The order forms provide a severity-based algorithm to improve efficiency and to standardize care in the Emergency Room. Each page allows the Emergency Room physician to document continuation of care in the Emergency Room or final patient disposition.

Inhaled beta<sub>2</sub>-agonists are the mainstay of acute bronchodilator treatment. Most experts advocate the use of albuterol by frequent or continuous nebulization. There is little evidence favoring the use of beta<sub>2</sub>-agonists other than albuterol; however, metaproterenol (5% solution using 0.3 cc + saline 2.0 cc) is a reasonable alternative. Other drugs, such as isoetharine, are not recommended because they are less beta<sub>2</sub> selective. The majority of patients will improve with beta<sub>2</sub>-agonists nebulization q20 minutes x 3 over the first hour. At times the use of subcutaneous epinephrine may be indicated.

The use of albuterol through an MDI (4 puffs) delivered with a spacer or reservoir bag q20 minutes has been shown to be as effective in the treatment of acute asthma as albuterol given by nebulization for adult patients. However, severely dyspneic patients or those with severe coughing may prefer the nebulizer. The use of albuterol via MDI has not been widely adopted in acute management of asthma because more coordination is required, breath holding is more critical and more instruction and supervision is required.

The patient's response to therapy within the first hour in the Emergency Room is one of the most reliable ways to predict need for hospitalization.

Severely ill patients should receive oral or intravenous corticosteroids immediately in the Emergency Room. The minimum duration required to see improvement after corticosteroids is 4 hours. Less severely ill patients may be observed for their response to inhaled beta-agonist therapy over the first hour. However, if the patient remains moderately ill (severity index = 2) after the first hour, corticosteroids should then be given STAT.

Supplemental oxygen (1-2 liters/minute via nasal cannula) is recommended for any patient undergoing Emergency Room treatment for asthma unless the oxygen saturation is demonstrated to be consistently >92% on room air.

Intravenous theophylline or aminophylline are generally not recommended for treatment in the Emergency Room, and their use in hospitalized patients has also declined over the past decade. However, these drugs may provide some benefit in terms of respiratory drive, improved respiratory muscle function or prolonging or sustaining the response to beta<sub>2</sub>-agonists between doses.

A chest x-ray is recommended for any patient with a severity index = 3 and for any patient who is hospitalized. A standard PA and lateral chest x-ray is preferred; however, if this requires transport to a radiology department, the patient's respiratory status must be monitored at all times.

### **Emergency Room Severity-Based Treatment Algorithm: Severity Index = 3**

Patients with severe illness (Severity Index = 3) on entry to the Emergency Room must be assessed and treatment instituted quickly. An arterial blood gas (ABG) should be obtained to document the degree of hypoxemia and the acid-base status. The criteria for hospitalization should be reviewed, including those based on abnormalities in the ABG. Most patients who meet criteria for hospitalization within the first hour in the Emergency Room should be confined in the ICU. A bolus of corticosteroids should be given intravenously as a STAT order, since any delay in this treatment may increase the likelihood of serious sequelae, such as the need for mechanical ventilation.

## Emergency Room Protocols and Forms

### Triage Flow Sheet

The Triage Officer must have a basic understanding of symptoms and signs of respiratory distress and asthma. The principal duty of the Triage Officer is to prioritize the entry of patients into the Emergency Room based on acuity and severity of illness. When appropriate, the Triage Officer may also discharge patients from the Triage Department without being seen in the Emergency Room.

Discharge of an asthmatic from the Triage Department is permissible **only if**:

1. symptoms are acute but mild, or
2. symptoms are moderate but have been present chronically (>72 hours), and
3. the patient can be directed to an appropriate care facility within 24 hours, or if the Triage Officer believes the patient can be managed by phone by the Asthma Case Worker.

Discharge from the Triage Department after hours or on weekends must be weighed against the risk of prolonging medical evaluation greater than 24 hours.

### Severity Index Scoring Method

**(1 = mild, 2 = moderate, 3 = severe)**

Use this rating to evaluate the patient for each of the 4 criteria:

- Respiratory distress
- Use of accessory muscles
- Decreased air movement
- Drowsiness, confusion

**The highest individual score becomes the patient's severity index rating.**

**Alternately: The patient has a severity index of 3 if he or she meets any of the following 6 criteria:**

- Pulses paradox > 12 mm Hg
- Diaphoresis
- Inability to recline
- PEF or FEV<sub>1</sub> < 40% predicted
- O<sub>2</sub> saturation < 88%
- Patient deteriorating in Emergency Room

## Emergency Room Protocols and Forms

### Emergency Room Flow Sheet

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

ID Number: \_\_\_\_\_

**Date:** \_\_\_\_\_

**Time:** \_\_\_\_\_

**Chief Complaint:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Vital Signs:** Temp \_\_\_\_\_ Pulse \_\_\_\_\_ BP \_\_\_\_\_ Resp \_\_\_\_\_

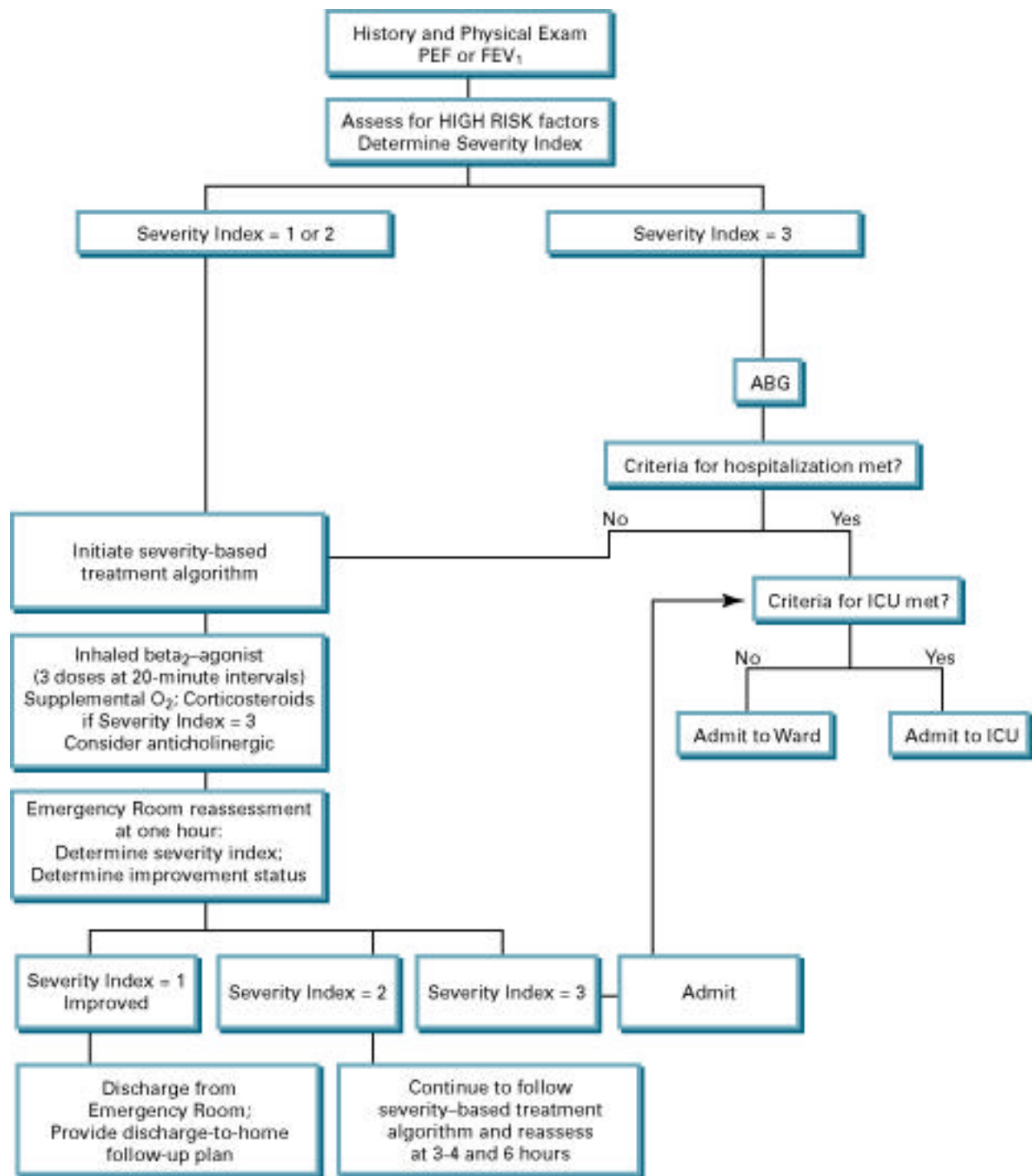
**Acuity/Severity Index:**

Chronic, mild or moderate

Acute, mild

Patient discharged from  
Emergency Room without  
evaluation (must complete  
Discharge Form)

**Attach standard Emergency Room form to this page.**



The main purpose for establishing criteria for hospitalization is to minimize the risks of inappropriate discharges from the Emergency Room leading to potentially serious exacerbations of asthma outside the hospital setting and repeated Emergency Room visits. The criteria change with elapsed time in the Emergency Room in order to account for the patient's changing medical condition. When appropriate, hospitalization should be specified to the ICU.

At entry to the Emergency Room, the criteria for hospitalization are:

1. Respiratory arrest (ICU)
2. Impending respiratory arrest due to extreme fatigue (ICU)
3. Unconsciousness or significantly altered mental state (ICU)
4. HIGH RISK patient with Severity Index = 3 (ICU) (High risk is defined on initial assessment form.)
5. Tachyarrhythmia (other than sinus tachycardia) (ICU)

At the one hour asthma reassessment in the Emergency Room, the criteria for hospitalization are:

1. Earlier admission criteria are met
2. Severity Index = 3
3. Pulse oximeter <88% despite supplemental O<sub>2</sub>
4. PEF OR FEV<sub>1</sub> <40%
5. HIGH RISK AND WORSENING IN Emergency Room (ICU)

At the 3-4 hour asthma reassessment in the Emergency Room, the criteria for hospitalization are unchanged. At the 6 hour asthma reassessment in the Emergency Room, a final disposition must be made. Any patient with a Severity Index = 2 should be admitted.

There may be unusual circumstances which warrant hospitalization of patients with less severe disease. The Emergency Room physician should use his/her best judgment in such circumstances and document the special circumstances in the Emergency Room note.

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At entry to the Emergency Room, the criteria for hospitalization are:

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4. HIGH RISK patient with Severity Index = 3 (ICU)
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At the one hour asthma reassessment in the Emergency Room, the criteria for hospitalization are:

1. Earlier admission criteria are met
2. Severity Index = 3
3. Pulse oximeter <88% despite supplemental O<sub>2</sub>

At the 3-4 hour asthma reassessment in the Emergency Room, the criteria for hospitalization are unchanged. At the 6 hour asthma reassessment in the Emergency Room, a final disposition must be made. Any patient with a Severity Index = 2 should be admitted.

There may be unusual circumstances which warrant hospitalization of pediatric patients with less severe disease. The Emergency Room physician should use his/her best judgment in such circumstances and document the special circumstances in the Emergency Room note.

# Emergency Room Protocols and Forms

Emergency Room Assessment: Initial

Adult Patients

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

ID Number: \_\_\_\_\_

## Initial Assessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

### HIGH RISK Patient:

- Recent hospitalization for asthma
- Seen in Emergency Room for asthma in previous 72 hours
- Previous intubations
- Recent withdrawal from oral steroids
- On chronic oral steroids
- Extreme noncompliance with medications or psychiatric overlay to asthma

### Admit to Hospital if:

- Patient intubated, unconscious (ICU)
- ABG: PaO<sub>2</sub> < 50 or PaCO<sub>2</sub> > 45 (ICU)
- Respiratory arrest (ICU)
- Extreme fatigue
- HIGH RISK Patient with Severity Index = 3
- Altered mental status (ICU)
- Tachyarrhythmia, angina or myocardial ischemia (ICU)

## Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_

BP: \_\_\_\_\_ Temp: \_\_\_\_\_

O<sub>2</sub> Sat: \_\_\_\_\_ Suppl O<sub>2</sub> (L/min): \_\_\_\_\_

FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_

PEF: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Severity Index

(1=mild, 2=moderate, 3=severe)

- Respiratory distress
- Use of accessory muscles
- Highest score = Severity Index or Severity Index x should be 3 if:
- Pulses paradox > 12 mm Hg
- Diaphoresis
- Inability to lie supine
- Decreased air movement
- Drowsiness, confusion
- PEF or FEV<sub>1</sub> < 40% predicted
- O<sub>2</sub> saturation < 88%
- Inability to speak

## Orders (Initial)

### Severity Index = 1-2

- 1. Albuterol 0.5% solution using 0.5 cc and normal saline 2.0 cc via nebulizer every 20 minutes for 1 hour or albuterol MDI with spacer 4 puffs and repeat every 20 minutes for 1 hour; plus inhaled anticholinergic
- 2. Oxygen \_\_\_\_\_ liters/minute via nasal cannula
- 3. Finger pulse oximeter
- 4. Start IV Access
- 5. Spirometry, initial, repeat in 1 hour
- 6. Spirometry in 1 hour then notify Emergency Room MD to reassess patient and write orders
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_

### Severity Index = 3

- 1. Albuterol 0.5% solution using 0.5 cc and normal saline 2.0 cc via nebulizer every 20 minutes for 1 hour or albuterol MDI with spacer 4 puffs and repeat every 20 minutes for 1 hour; plus inhaled anticholinergic
- 2. Oxygen \_\_\_\_\_ liters/minute via nasal cannula
- 3. Finger pulse oximeter
- 4. Start IV Access
- 5. Spirometry, initial, repeat in 1 hour
- 6. Spirometry in 1 hour then notify Emergency Room MD to reassess patient and write orders
- 7. Arterial blood gas (if pH < 7.2, PaO<sub>2</sub> < 60, PaCO<sub>2</sub> > 45 = Admit), electrolytes, theophylline
- 8. Methylprednisolone sodium succinate 40-60 mg STAT and q6h x 4 doses
- 9. Chest x-ray
- 10. \_\_\_\_\_
- 11. \_\_\_\_\_

Admit to  Hospital  ICU

MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# Emergency Room Protocols and Forms

Emergency Room Assessment: 1 Hour

Adult Patients

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

ID Number: \_\_\_\_\_

## 1 Hour Reassessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

## Physician Comments

Improved       Not improved       Deteriorating

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_  
BP: \_\_\_\_\_ Temp: \_\_\_\_\_  
O<sub>2</sub> Sat: \_\_\_\_\_ PEF: \_\_\_\_\_  
FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_  
Suppl O<sub>2</sub> (L/min): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Severity Index

(1=mild, 2=moderate, 3=severe)

\_\_\_ Respiratory distress  
\_\_\_ Use of accessory muscles  
\_\_\_ Decreased air movement  
\_\_\_ Drowsiness, confusion

Highest score = Severity Index or  
Severity Index should be 3 if:

- Pulses paradox >12 mm Hg
- Diaphoresis
- Inability to recline
- PEF or FEV<sub>1</sub> <40% predicted
- O<sub>2</sub> saturation <88%
- Patient deteriorating in Emergency Room

## Admit to Hospital if

- Earlier admission criteria are met
- Severity Index = 3
- HIGH RISK and worsening in Emergency Room (ICU)

## Orders

- Severity Index = 1**      Observe for 60 minutes, then:
  - PEF or FEV<sub>1</sub> >70% predicted → Discharge
  - PEF or FEV<sub>1</sub> <70% predicted → Treat as Severity Index 2

- Severity Index = 2**
  - 1. Albuterol 0.5% solution using 0.5 cc and normal saline 2.0 cc via nebulizer q 1 hour or albuterol MDI with spacer 4 puffs and repeat q 1 hour; plus inhaled anticholinergic
  - 2. Oxygen \_\_\_\_\_ liters/minute via nasal cannula
  - 3. Finger pulse oximeter
  - 4. IV Access
  - 5. Spirometry in 1 hour then notify Emergency Room MD to reassess patient and write orders
  - 6. Arterial blood gas (if pH <7.2, PaO<sub>2</sub> <60, PaCO<sub>2</sub> >45= Admit), electrolytes, theophylline
  - 7. Solumedrol 60 mg IV STAT (if not already given)
  - 8. \_\_\_\_\_
  - 9. \_\_\_\_\_
  - 10. \_\_\_\_\_

**Severity Index = 3 → ADMIT**

Admit to     Hospital     ICU

MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Emergency Room Protocols and Forms

Emergency Room Assessment: 3-4 Hour

Adult Patients

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

ID Number: \_\_\_\_\_

## 3-4 Hour Reassessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

## Physician Comments

Improved

Not improved

Deteriorating

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_

BP: \_\_\_\_\_ Temp: \_\_\_\_\_

O<sub>2</sub> Sat: \_\_\_\_\_ PEF: \_\_\_\_\_

FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_

Suppl O<sub>2</sub> (L/min): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Severity Index

\_\_\_\_ Respiratory distress

\_\_\_\_ Use of accessory muscles

\_\_\_\_ Decreased air movement

\_\_\_\_ Drowsiness, confusion

**Highest score = Severity Index or  
Severity Index should be 3 if:**

Pulses paradox >12 mm Hg

Diaphoresis

Inability to recline

PEF or FEV<sub>1</sub> <40% predicted

O<sub>2</sub> saturation <88%

Patient deteriorating in Emergency  
Room

## Admit to Hospital if

Earlier admission criteria are met

Severity Index = 3

HIGH RISK and worsening in  
Emergency Room (ICU)

## Orders

**Severity Index = 1** Observe for 60 minutes, then:

PEF or FEV<sub>1</sub> >70% predicted → Discharge

PEF or FEV<sub>1</sub> <70% predicted → Treat as Severity Index 2

**Severity Index = 2**

1. Albuterol 0.5% solution using 0.5 cc and normal saline 2.0 cc via nebulizer q 1 hour or albuterol MDI with spacer 4 puffs and repeat q 1 hour; plus inhaled anticholinergic

2. Oxygen \_\_\_\_\_ liters/minute via nasal cannula

3. Finger pulse oximeter

4. IV Access

5. Spirometry in 1 hour then notify Emergency Room MD to reassess patient and write orders

6. Arterial blood gas (if pH <7.2, PaO<sub>2</sub> <60, PaCO<sub>2</sub> >45 = Admit), electrolytes, theophylline

7. Solumedrol 60 mg IV STAT (if not already given)

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

**Severity Index = 3 → ADMIT**

Admit to  Hospital  ICU

MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Emergency Room Protocols and Forms

Emergency Room Assessment: 6 Hour

Adult Patients

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

ID Number: \_\_\_\_\_

### 6 Hour Reassessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

### Physician Comments

Improved

Not improved

Deteriorating

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_

BP: \_\_\_\_\_ Temp: \_\_\_\_\_

O<sub>2</sub> Sat: \_\_\_\_\_ PEF: \_\_\_\_\_

FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_

Suppl O<sub>2</sub> (L/min): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Severity Index

(1=mild, 2 = moderate, 3=severe)

\_\_\_ Respiratory distress

\_\_\_ Use of accessory muscles

\_\_\_ Decreased air movement

\_\_\_ Drowsiness, confusion

**Highest score = Severity Index or  
Severity Index should be 3 if:**

Pulses paradox >12 mm Hg

Diaphoresis

Inability to recline

PEF or FEV<sub>1</sub> <40% predicted

O<sub>2</sub> saturation <88%

Patient deteriorating in  
Emergency Room

### Admit to Hospital if

Earlier admission criteria are met

Severity Index = 3

### Orders

Severity Index = 1 Observe for 60 minutes, then:

PEF or FEV<sub>1</sub> >70% predicted → Discharge

PEF or FEV<sub>1</sub> <70% predicted → Admit

Severity Index = 2 → ADMIT

Admit to  Hospital  ICU

MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# Emergency Room Protocols and Forms

Emergency Room Assessment: Initial

Pediatric Patients

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

ID Number: \_\_\_\_\_

## Initial Assessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

### HIGH RISK Patient:

- Recent hospitalization for asthma
- Seen in Emergency Room for asthma in previous 72 hours
- Previous intubations
- Recent withdrawal from oral steroids
- On chronic oral steroids
- Extreme noncompliance with medications or psychiatric overlay to asthma

### Admit to Hospital if:

- Patient intubated, unconscious (ICU)
- ABG: PaO<sub>2</sub> < 50 or PaCO<sub>2</sub> > 45 (ICU)
- Respiratory arrest (ICU)
- Extreme fatigue
- HIGH RISK Patient with Severity Index = 3
- Altered mental status (ICU)
- Tachyarrhythmia, angina or myocardial ischemia (ICU)

## Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_

BP: \_\_\_\_\_ Temp: \_\_\_\_\_

O<sub>2</sub> Sat: \_\_\_\_\_ Suppl O<sub>2</sub> (L/min): \_\_\_\_\_

FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_

PEF: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Severity Index

(1=mild, 2=moderate, 3=severe)

- Respiratory distress
- Use of accessory muscles
- Highest score = Severity Index or Severity Index x should be 3 if:
- Pulses paradox > 12 mm Hg
- Diaphoresis
- Inability to lie supine
- Decreased air movement
- Drowsiness, confusion
- PEF or FEV<sub>1</sub> < 40% predicted
- O<sub>2</sub> saturation < 91%
- Inability to speak

## Orders (Initial)

### Severity Index = 1-2

- 1. Albuterol .15 mg/kg/dose (max 5 mg/dose) 3 doses at 20 min intervals for 1 hour
- 2. Oxygen to maintain O<sub>2</sub> sat > 95%
- 3. Finger pulse oximeter
- 4. Start IV Access
- 5. Spirometry, initial, repeat in 1 hour
- 6. Spirometry in 1 hour then notify Emergency Room MD to reassess patient and write orders
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_

### Severity Index = 3

- 1. Albuterol .15 mg/kg/dose (max 5 mg/dose) 3 doses at 20 min intervals for 1 hour
- 2. Oxygen to maintain O<sub>2</sub> sat > 95%
- 3. Finger pulse oximeter
- 4. Start IV Access
- 5. Spirometry, initial, repeat in 1 hour
- 6. Spirometry in 1 hour then notify Emergency Room MD to reassess patient and write orders
- 7. Arterial blood gas (if pH < 7.2, PaO<sub>2</sub> < 60, PaCO<sub>2</sub> > 45 = Admit), electrolytes, theophylline
- 8. Methylprednisolone sodium succinate 1-2 mg per kg STAT and q6h x 4 doses
- 9. Chest x-ray
- 10. \_\_\_\_\_
- 11. \_\_\_\_\_

Admit to  Hospital  ICU

MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# Emergency Room Protocols and Forms

Emergency Room Assessment: 1 Hour

Pediatric Patients

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

ID Number: \_\_\_\_\_

## 1 Hour Reassessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

## Physician Comments

Improved       Not improved       Deteriorating

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_

BP: \_\_\_\_\_ Temp: \_\_\_\_\_

O<sub>2</sub> Sat: \_\_\_\_\_ PEF: \_\_\_\_\_

FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_

Suppl O<sub>2</sub> (L/min): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Severity Index

(1=mild, 2=moderate, 3=severe)

\_\_\_ Respiratory distress

\_\_\_ Use of accessory muscles

\_\_\_ Decreased air movement

\_\_\_ Drowsiness, confusion

Highest score = Severity Index or  
Severity Index should be 3 if:

Pulses paradox >12 mm Hg

Diaphoresis

Inability to recline

PEF or FEV<sub>1</sub> <40% predicted

O<sub>2</sub> saturation <91%

Patient deteriorating in Emergency  
Room

## Admit to Hospital if

Earlier admission criteria are met

Severity Index = 3

HIGH RISK and worsening in  
Emergency Room (ICU)

## Orders

**Severity Index = 1** Observe for 60 minutes, then:

PEF or FEV<sub>1</sub> >70% predicted → Discharge

PEF or FEV<sub>1</sub> <70% predicted → Treat as Severity Index 2

**Severity Index = 2**

1. Albuterol .15 mg/kg/dose (max 5 mg/dose) 3 doses  
at 20 min intervals for 1 hour. Consider inhaled  
anticholinergic and/or 0.01 cc per kg of 1:1000 aque-  
ous epinephrine subcutaneously

2. Oxygen to maintain O<sub>2</sub> sat > 95%

3. Finger pulse oximeter

4. IV Access

5. Spirometry in 1 hour then notify Emergency Room MD to  
reassess patient and write orders

6. Arterial blood gas (if pH <7.2, PaO<sub>2</sub> <60, PaCO<sub>2</sub> >45 =  
Admit), electrolytes, theophylline

7. Solumedrol 1-2 mg per kg IV STAT (if not already given)

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

**Severity Index = 3 → ADMIT**

Admit to     Hospital     ICU

MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Emergency Room Protocols and Forms

Emergency Room Assessment: 3-4 Hour

Pediatric Patients

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

ID Number: \_\_\_\_\_

### 3-4 Hour Reassessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

### Physician Comments

Improved

Not improved

Deteriorating

### Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_

BP: \_\_\_\_\_ Temp: \_\_\_\_\_

O<sub>2</sub> Sat: \_\_\_\_\_ PEF: \_\_\_\_\_

FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_

Suppl O<sub>2</sub> (L/min): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Severity Index

(1=mild, 2=moderate, 3=severe)

\_\_\_ Respiratory distress

\_\_\_ Use of accessory muscles

\_\_\_ Decreased air movement

\_\_\_ Drowsiness, confusion

Highest score = Severity Index or  
Severity Index should be 3 if:

Pulses paradox >12 mm Hg

Diaphoresis

Inability to recline

PEF or FEV<sub>1</sub> <40% predicted

O<sub>2</sub> saturation <91%

Patient deteriorating in Emergency  
Room

### Admit to Hospital if

Earlier admission criteria are met

Severity Index = 3

HIGH RISK and worsening in  
Emergency Room (ICU)

### Orders

- Severity Index = 1** Observe for 60 minutes, then:
- PEF or FEV<sub>1</sub> >70% predicted → Discharge
  - PEF or FEV<sub>1</sub> <70% predicted → Treat as Severity Index 2

**Severity Index = 2**

- 1. Albuterol .15 mg/kg/dose (max 5 mg/dose) 3 doses at 20 min intervals for 1 hour and consider inhaled anti-cholinergic
- 2. Oxygen to maintain O<sub>2</sub> sat > 95%
- 3. Finger pulse oximeter
- 4. IV Access
- 5. Spirometry in 1 hour then notify Emergency Room MD to reassess patient and write orders
- 6. Arterial blood gas (if pH <7.2, PaO<sub>2</sub> <60, PaCO<sub>2</sub> >45 = Admit), electrolytes, theophylline
- 7. Solumedrol 1-2 mg per kg IV STAT (if not already given)
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_

**Severity Index = 3 → ADMIT**

Admit to  Hospital  ICU

MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Emergency Room Protocols and Forms

Emergency Room Assessment: 6 Hour

Pediatric Patients

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

ID Number: \_\_\_\_\_

### 6 Hour Reassessment

Date: \_\_\_\_\_

Time: \_\_\_\_\_

### Physician Comments

Improved       Not improved       Deteriorating

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Physical Exam

P: \_\_\_\_\_ Resp: \_\_\_\_\_

BP: \_\_\_\_\_ Temp: \_\_\_\_\_

O<sub>2</sub> Sat: \_\_\_\_\_ PEF: \_\_\_\_\_

FEV<sub>1</sub>: \_\_\_\_\_ FVC: \_\_\_\_\_

Suppl O<sub>2</sub> (L/min): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Severity Index

(1=mild, 2=moderate, 3=severe)

\_\_\_ Respiratory distress

\_\_\_ Use of accessory muscles

\_\_\_ Decreased air movement

\_\_\_ Drowsiness, confusion

**Highest score = Severity Index or  
Severity Index should be 3 if:**

Pulses paradox >12 mm Hg

Diaphoresis

Inability to recline

PEF or FEV<sub>1</sub> <40% predicted

O<sub>2</sub> saturation <91%

Patient deteriorating in  
Emergency Room

### Admit to Hospital if

Earlier admission criteria are met

Severity Index = 3

### Orders

Severity Index = 1 Observe for 60 minutes, then:

PEF or FEV<sub>1</sub> >70% predicted → Discharge

PEF or FEV<sub>1</sub> <70% predicted → Admit

Severity Index = 2 → ADMIT

Severity Index = 3 → ADMIT

Admit to     Hospital     ICU    MD Signature: \_\_\_\_\_ Date: \_\_\_\_\_