

The Child With Respiratory Distress And An Acute Illness



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KENYA
PAEDIATRIC
ASSOCIATION

Objectives

- State childhood illnesses that present with respiratory distress
- Describe management of a child with pneumonia
- Describe management of a child with asthma

Respiratory Distress- Causes

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graph TD; A[Respiratory Distress- Causes] --> B[Lung / Airway Disease]; A --> C[Systemic Disease];
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Lung / Airway Disease

- Acute Pneumonia
- Asthma
- PTB
- HIV-PCP
- Croup (LTB)
- Bronchiolitis

Systemic Disease

- Malaria
- Severe Anaemia
- Severe dehydration
- Heart Disease
- Renal Disease

Pneumonia

- Pneumonia can be classified per the causes (Viral, bacterial, fungal) or as per severity.
- Most acute respiratory infections including pneumonia are viral

Pneumonia

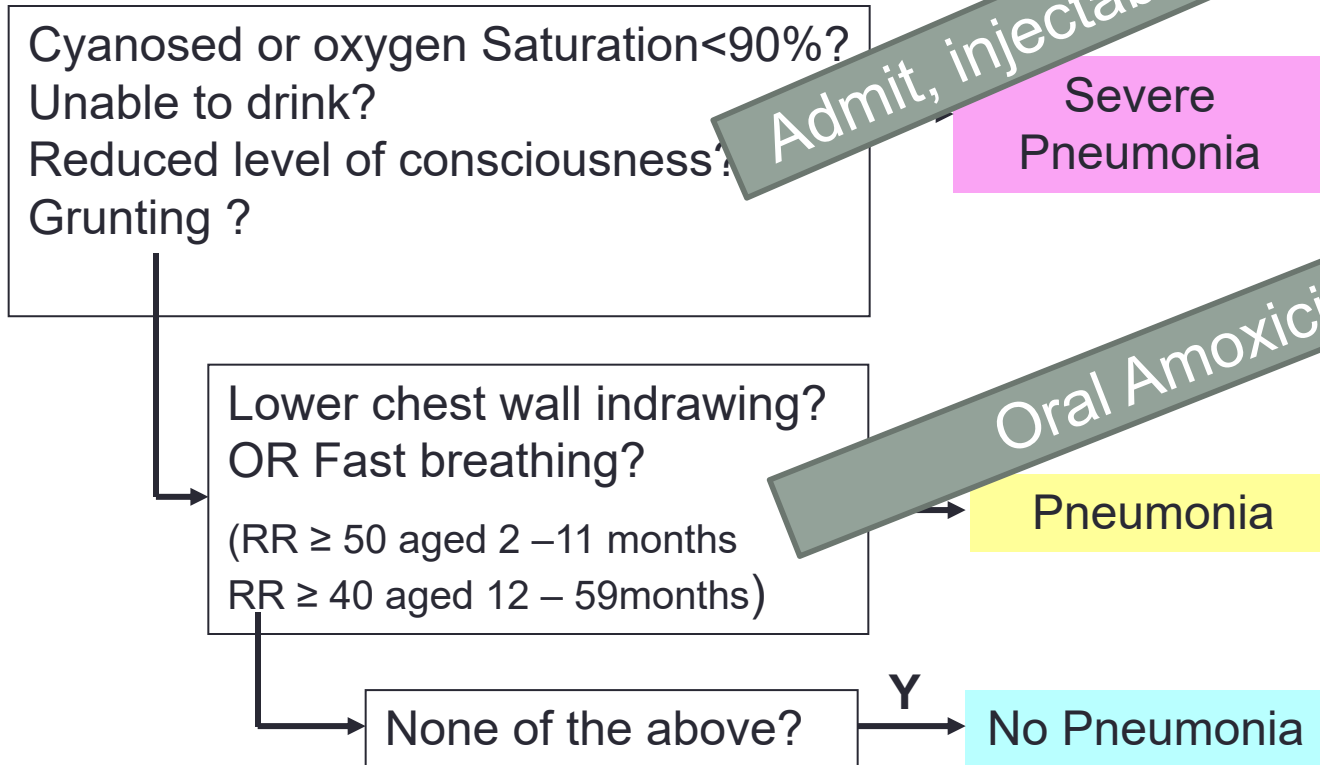
- In this session we will concentrate on the severity of the respiratory distress.
- A few signs in a child with cough and difficulty breathing can classify severity.
- **We will introduce the new pneumonia guidelines – all protocol books before 2016 are out of date!**

Target patient

- Cough or difficulty breathing in a patient aged 2-59 months
- The pneumonia guideline should be applied cautiously in the following patients:

Assessment	Action /cause
Cough or fever more than 14 days	Consider TB
Exposure to TB or chronic cough	Consider TB
Severe acute malnutrition	Use guidelines for severe acute malnutrition
HIV infection	Use guidelines for HIV infected children
Readmission	Consider hospital acquired infection/TB/missed diagnosis

Classification & Treatment in the 2019 BPP



Admission or discharge for pneumonia with in - drawing?

- A child with cough or difficulty breathing with lower chest wall indrawing BUT no danger signs **can safely be managed as an outpatient**
 - **If review at 48 hours can be conducted at a clinic**
 - **If the family can bring the child sooner for any deterioration - careful counseling on danger signs that should prompt early return must be given**
- Is there another illness that makes admission necessary?
- What is the HIV status?
- Is there severe acute malnutrition?
- What are the benefits of oral OPD therapy?

How severe is respiratory distress – Cough or Difficult Breathing 1

Cyanosed/oxygen sat <90%?
Unable to drink?
Reduced level of consciousness?
Grunting ?

Y

Severe
Pneumonia

High Risk of Death

High Risk of Hypoxaemia = Give oxygen if saturations <90% or based on clinical S+S

May need fluid / feeding support

Require Broad Spectrum Antibiotics

How severe is respiratory distress – Cough or Difficult Breathing (2)

Lower chest wall indrawing?
OR Fast breathing?

(RR \geq 50 aged 2 –11 months
RR \geq 40 aged 12 – 59months)

Y

Pneumonia

Not severely ill = Outpatient care **if 48hr review possible**
Can feed orally, is alert & supplemental oxygen not needed
Require high dose Amoxicillin 40mg/kg/dose BD for 5 days
Review in 2 days for improvement /deterioration/unable to feed

How severe is respiratory distress – Cough or Difficult Breathing

History of cough / difficult breathing ONLY

Y

Cough, No
Pneumonia

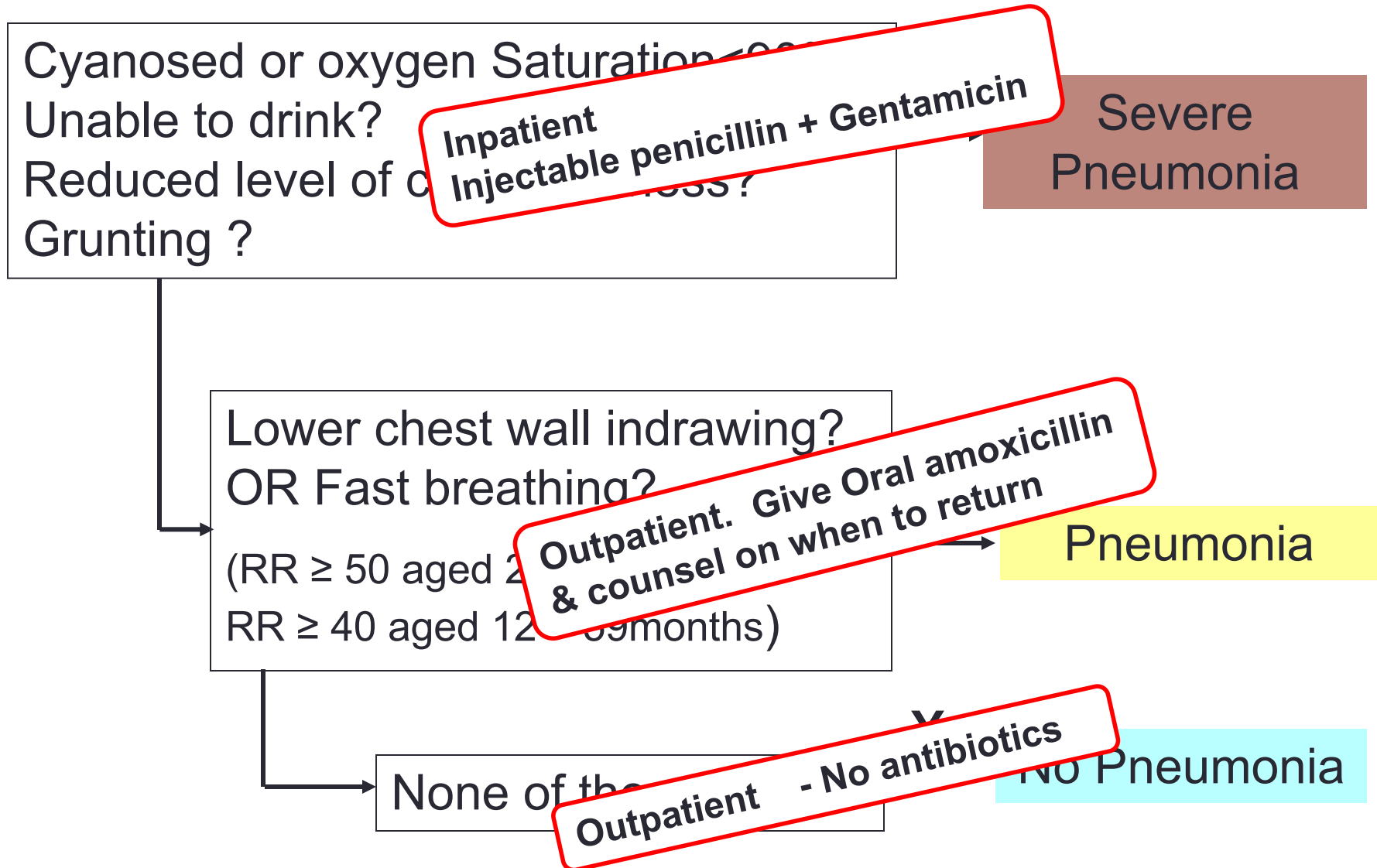
Outpatient care

Antibiotics not indicated

Counsel on signs of deterioration

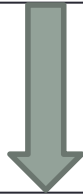
Cough syrups SHOULD NOT be prescribed.

4th Edition (Jan 2016) Pneumonia Guidelines



HIV infected/exposed

- HIV infected or exposed with either :
 - Severe pneumonia or
 - Pneumonia with in-drawing



- Admit
- Treat with crystalline Penicillin & Gentamicin
- Oxygen if required



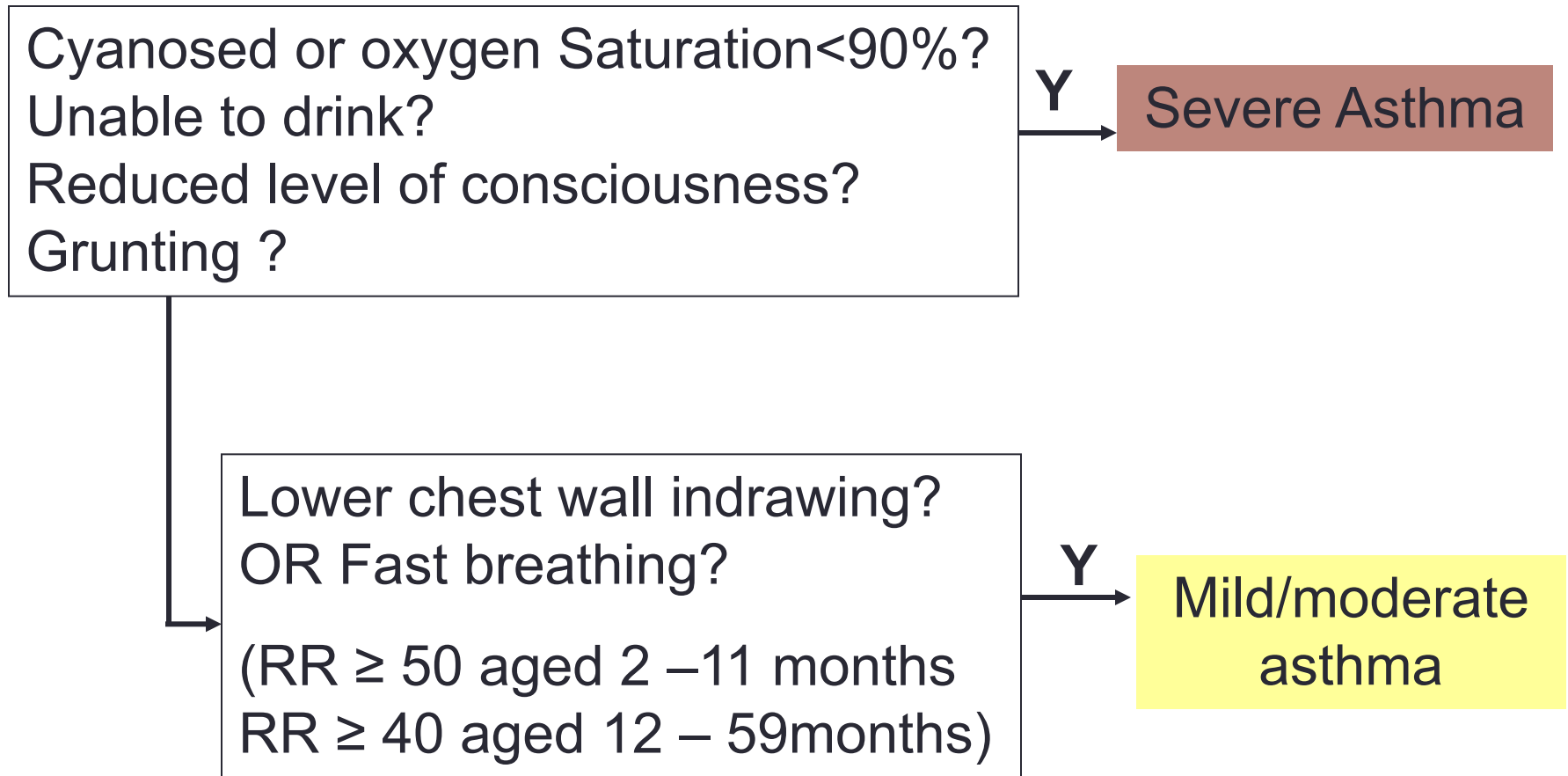
< 12months of age
give empiric
treatment for PCP –
high dose
cotrimoxazole

Empiric treatment for PCP is NOT recommended in children older than 12months with severe pneumonia or pneumonia with lower chest wall in-drawing

Asthma

- Most children with asthma will have a wheeze in addition to the cough or difficulties in breathing
- Severity of asthma is graded using just a few signs as for pneumonia
- Degree of severity can change after the initial dose of bronchodilators – *reassess frequently*.
- Consider other causes of wheeze for atypical presentation.

Wheeze – how severe is the asthma?



Asthma – treat and reassess and decide about antibiotics

Severe Asthma



Oxygen

Bronchodilator - Salbutamol

Steroids

Mild / moderate
asthma



Bronchodilator - Salbutamol



Severe
Pneumonia



Pneumonia



Reassess after 20 – 60
mins and reclassify
pneumonia severity

Providing Salbutamol

Nebulisers



- 2.5 mg for ages up to 5yrs
- Check – if the nebuliser uses oxygen?
- Up to 3 doses in first 1 hour if needed
- Reassess after each dose

Providing Salbutamol

Inhaler, spacer + mask



- Mask should be used in all aged < 3 years
- 4-5yrs mouthpiece or mask
- Severe asthma – 6 puffs every 20min for one hour if needed
- Mild/moderate asthma – 2 puffs every 20minutes for one hour if needed

Cause of Respiratory Distress 1?

12 months

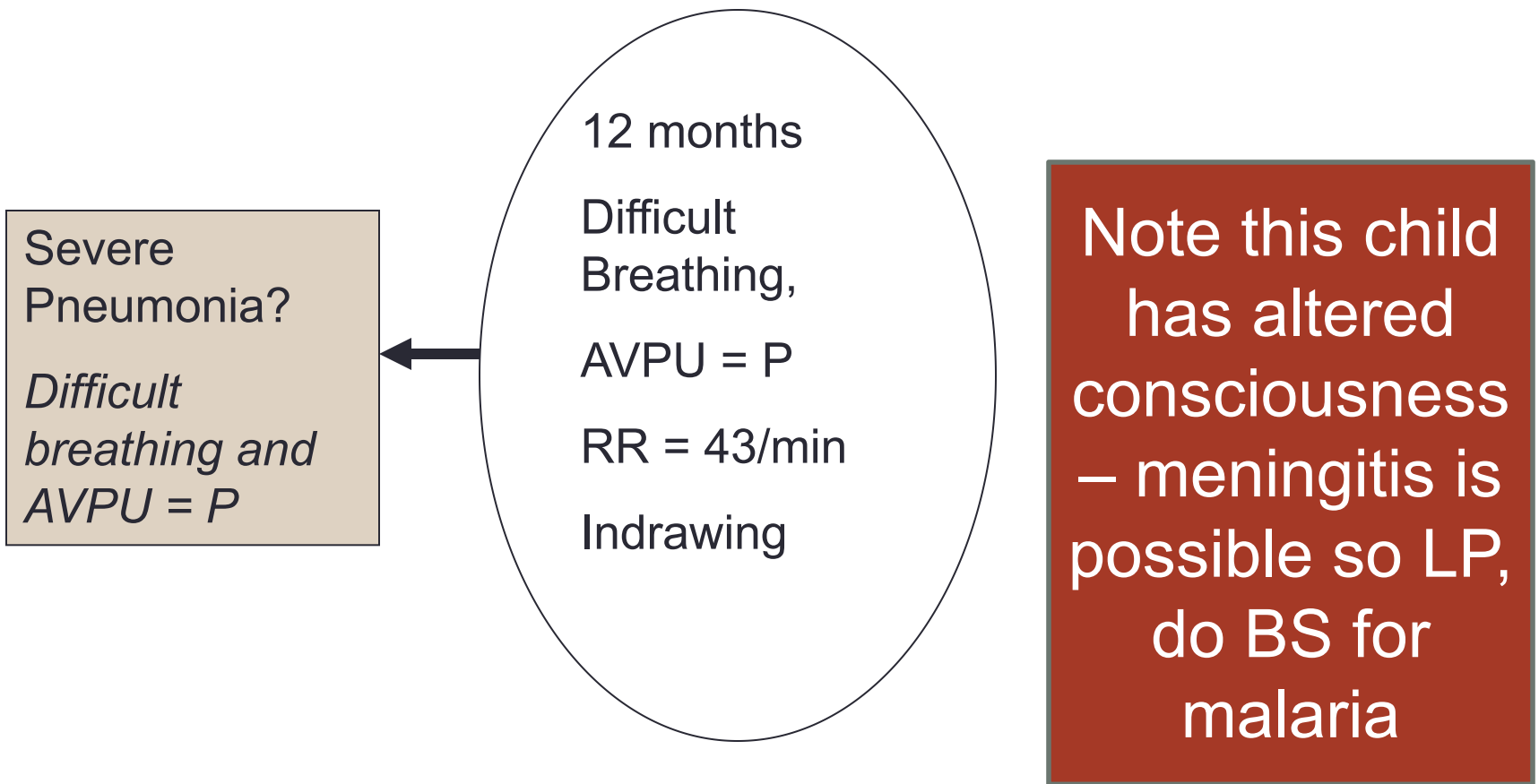
Difficult
Breathing,

AVPU = P

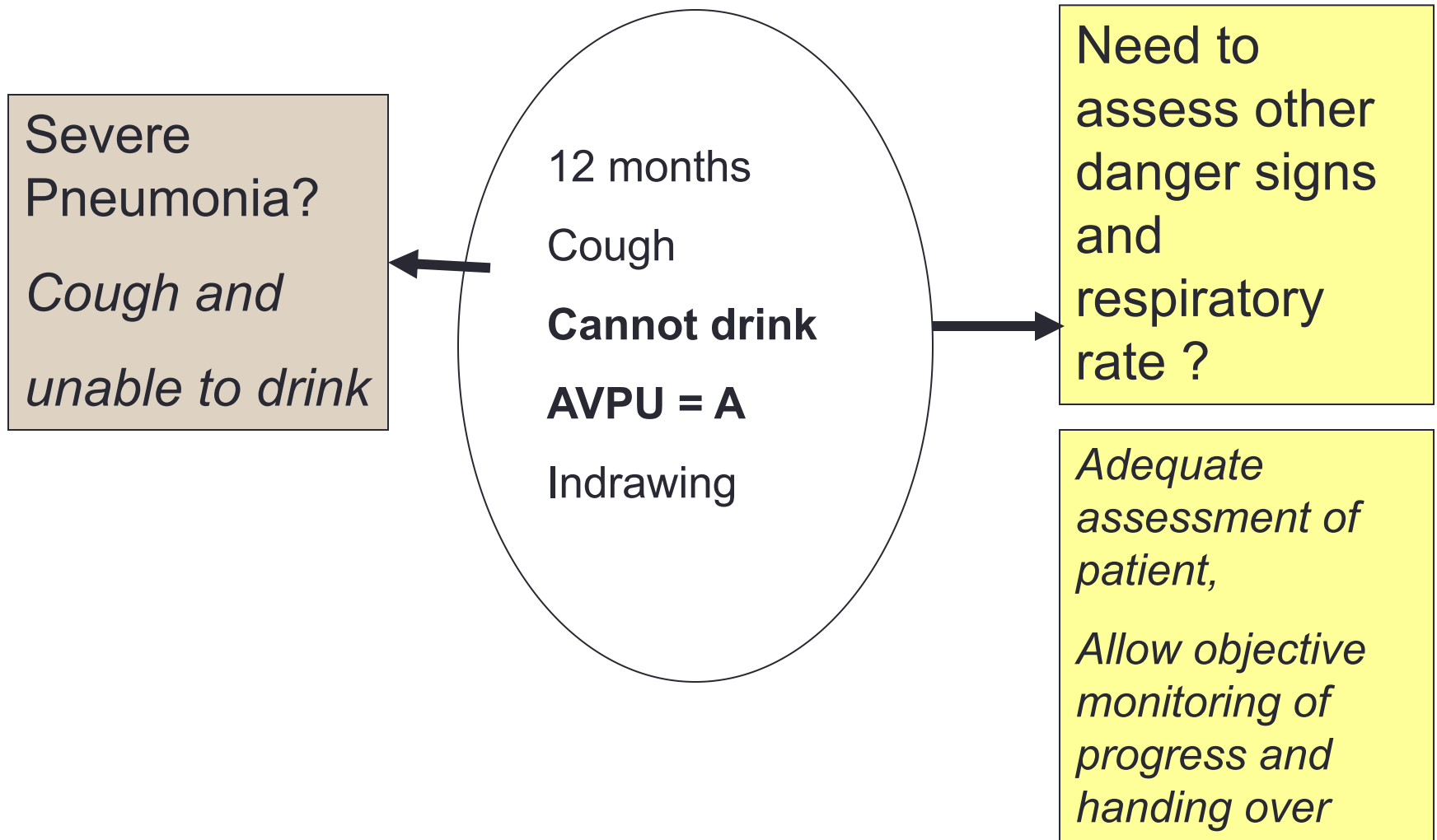
RR = 43/min

Indrawing

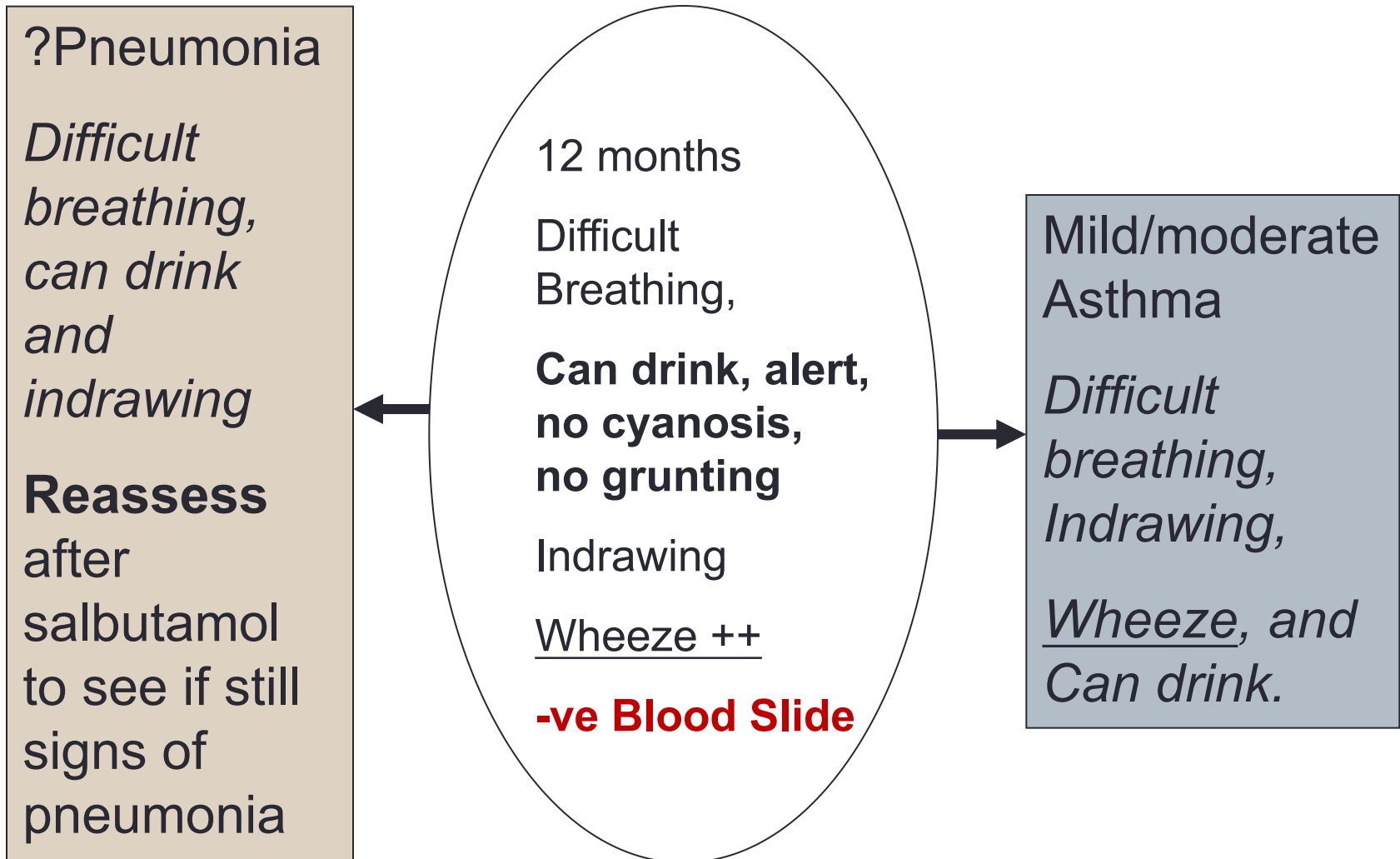
Cause of Respiratory Distress 2?



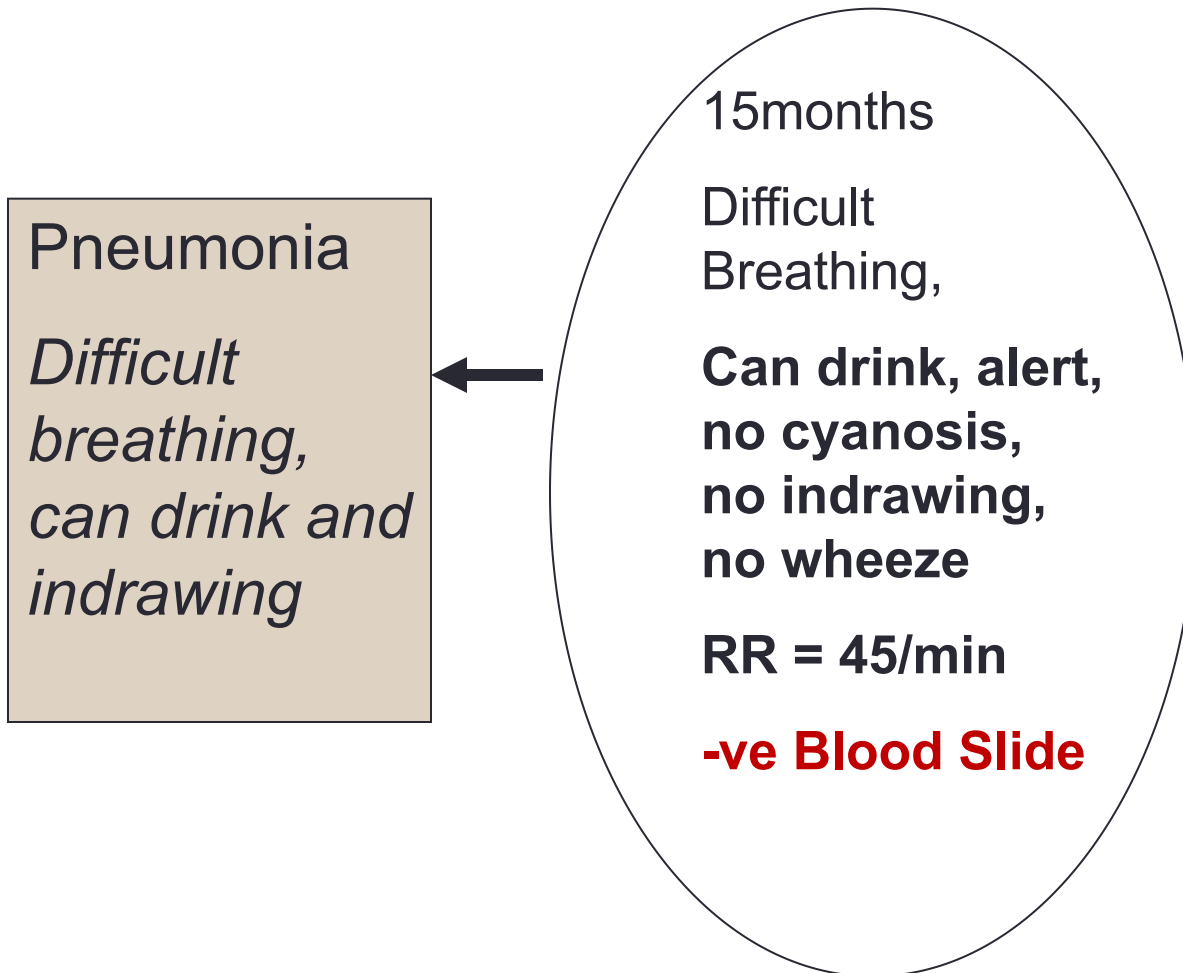
Cause of Respiratory Distress 3?



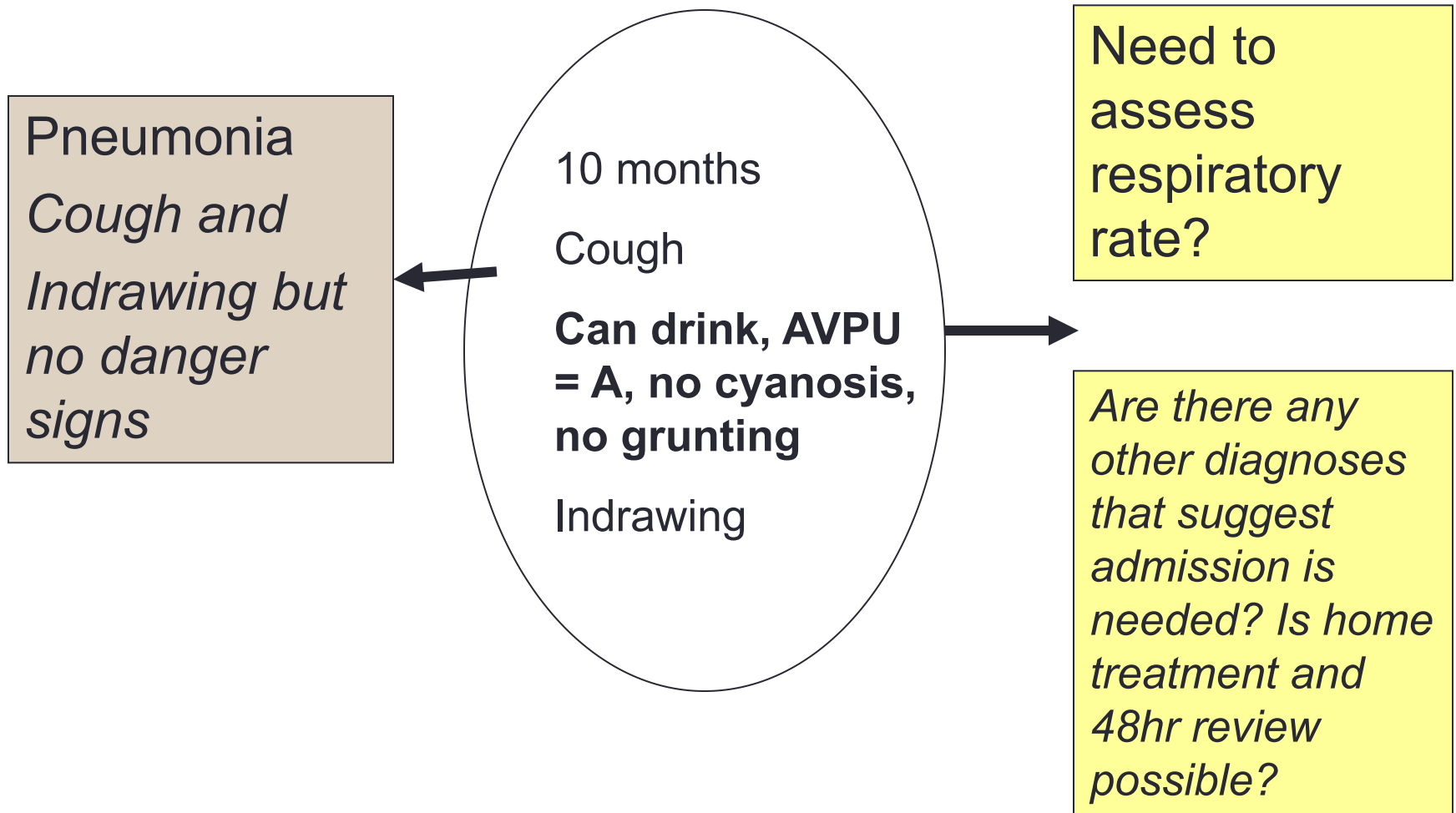
Cause of Respiratory Distress 4?



Cause of Respiratory Distress 5?



Cause of Respiratory Distress 6?



QUESTIONS?

Summary

- Key clinical signs define the severity of respiratory distress
- Define severity of asthma/pneumonia and treat appropriately.
 - Danger signs – inpatient care
 - No danger signs – outpatient care
- Success of treatment of pneumonia with high dose oral amoxicillin is comparable to that of crystalline penicillin