Infants with Wheeze

Adam Buckmaster

Hercules age 3 months

Hercules age 3 months

- Comes to your office with his mother
- Cough and runny nose for 2 days with audible “wheeze”
- Older boy had similar episode and she took her to hospital where she waited for 3 hours before she was seen and then was sent home after another 3 hours in the ED
- Wanted to avoid this if possible.

In Groups

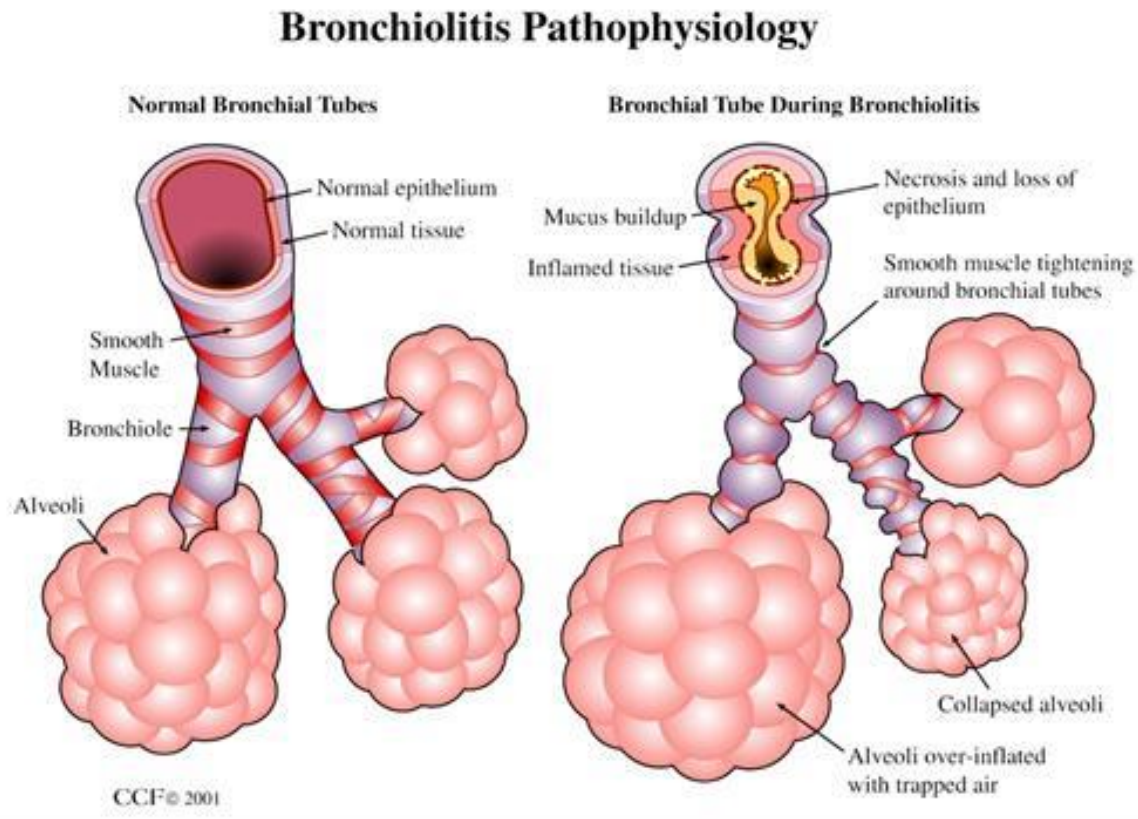
- What is the most likely diagnosis?
- What other information (if any) do you require in order to manage him?
- What factors do you take into consideration when deciding whether or not to send to hospital ?
- What tools do you use to estimate severity of illness?

Likely Diagnosis ?

Bronchiolitis

Bronchiolitis

- Very common viral LRTI
- Distal air trapping and inflammation of the bronchioles
- < 12 months or < 24 months
- Coryza
- Cough
- Tachypnoea
- Work of breathing
- Wheeze and crackles



Who cares?

UP TO 1/3 CHILDREN WILL HAVE BRONCHIOLITIS BY THE AGE OF 1 YEAR

MOST COMMON CAUSE FOR HOSPITALISATION IN < 2 YEAR OLDS

COST ESTIMATED

MILLIONS EACH YEAR

MANY GUIDELINES EXIST

ADHERENCE TO THESE ASSESSED HAMAIRA N ET AL, BMJ 2018

Further Information

- History of Illness
  - How long, previous episodes, family history, smoking
  - Feeding and hydration : Fluids in and fluids out
- Examination
  - Vital signs including oxygen saturation
  - Work of breathing
  - Air entry
  - Level of interaction
- Red Flags to aid decision making regarding disposition
  - Episodes of going blue or apnoea
  - Social circumstances, distance from hospital, supports at home, parental understanding and capability

Assessment of severity

Note: The more symptoms the infant has in the mod-severe categories, the more likely they are to develop severe disease.

	MILD	MODERATE	SEVERE
Behaviour	Normal	Some / intermittent irritability	Increasing irritability and / or lethargy Fatigue
Respiratory rate	Normal – mild tachypnea RR 30-60 breaths/min	Increased respiratory rate RR 60-70 breaths/min	Marked increase or decrease in respiratory rate. RR <30 or >70 breaths/min
Use of accessory muscles	Nil to mild chest wall retraction	Moderate chest wall retractions Suprasternal retraction Nasal flaring	Marked chest wall retractions Marked suprasternal retraction Marked nasal flaring
Oxygen saturation*/ oxygen requirement	O2 saturations greater than 92% (in room air)	O2 saturations 90 –92% (in room air)	O2 saturations less than 90% (in room air) Hypoxemia, may not be corrected by O2
Apnoeic episodes	None	May have brief apnoea	May have increasingly frequent or prolonged apnoea
Feeding	Normal	May have difficulty with feeding or reduced feeding	Reluctant or unable to feed

* Oxygen saturation is difficult to measure in infants in general practice. If unable to obtain a reliable tracing, disregard this feature.

High Risk Red Flags

- Ex premature
- Chronic Lung Disease
- Under 10 weeks
- Failure to thrive (CF)
- Co-existent Cardiac or neurological disease
- Breast fed < 2 months
- Indigenous background

In Groups

- What investigations would you do?
- What is your management?

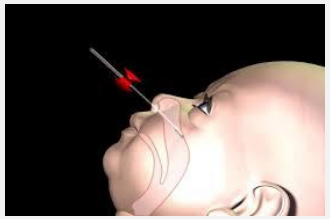
Investigations

Blood

FBC,

EUC,

Blood Culture



Nasopharyngeal aspirate

Influenza,

RSV,

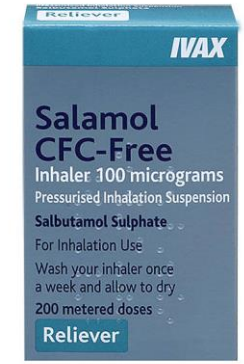
Adeno,

Rhino, Paraflu, etc

CXRAY

Treatment Options

Antibiotics	X
Bronchodilators	XX
Anticholinergics	XXX
Adrenaline/ Epinephrine	XXXX
CorticoSteroids	XXXX
Antivirals	XXX



Management (Statewide)

- No investigations
- No routine medication
- Advice around feeding: frequent and smaller
- Go to hospital if ….

Manage Expectations

- Parental
  - Anxiety
  - Infection treat with antibiotics
  - Will he stop breathing?
  - Long term damage /Asthma
  - Need to get back to work
- Your own

What do I say?

- Explain about the illness in simple terms
- Acknowledge that their child is sick
- Reassurance “Benign Optimism”
- Discuss common treatments even if not using them
- Discuss supportive measures at home
- Realistic time frame for improvement
  - Cough lasts ?
  - When to see GP
  - ? CXR
- When to return
  - “If you’re worried bring him back”
  - “Come back to the Ambulatory Unit and we will review him tomorrow”
  - Be specific, fluids, temperature, lethargy, fluctuating course

NSW GOVERNMENT

AGENCY FOR CLINICAL INNOVATION

NSW Health

Leading Better Value Care

Bronchiolitis

Represents a 3rd time each 3 weeks apart

- Now age 5 months with same clinical findings
- You learn that the family identify as Aboriginal

In Groups

- How, if at all, does your **management** change with this new information?

Returns age 10 months

- Mother concerned as he still has a cough

- You had warned her at the last episode that cough can often last up to 2-3 weeks but it is now 8 weeks

In Groups

- What additional information would be important to know?
- What is your advice?

Resources: SCHN Fact Sheets for Parents

FACTSHEET

This fact sheet is for education purposes only. Please consult with your doctor or other health professionals to make sure this information is right for your child. If you would like to provide feedback on this fact sheet, please visit: www.schn.health.nsw.gov.au/parents-and-carers/fact-sheets/feedback-form.

Bronchiolitis

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Viral induced wheeze

What is viral induced wheeze?

Your child may also be given a short course of oral steroids, eg Redipred® prednisolone, to help reduce

https://www.schn.health.nsw.gov.au/files/factsheets/bronchiolitis-en.pdf
https://www.schn.health.nsw.gov.au/files/factsheets/wheeze_-_viral_induced_wheeze-en.pdf

Session 2 – The Vicki Burneikis Memorial Session
Wheeze in Children
Relevant HealthPathways

- Central Coast HealthPathways website – https://centralcoast.communityhealthpathways.org/
  Username: centralcoast Password: 1connect
- Asthma in Children section
  - Acute Asthma in Children pathway
  - Non-acute Asthma in Children pathway
  - Inhalers and Techniques pathway
- Wheeze in Children Aged 1 to 5 Years pathway
- Bronchiolitis pathway
- Cough in Children pathway
- Allergic Rhinitis and Nasal Obstruction in Children pathway
- Urgent Paediatric Assessment referral page
- Non-urgent Paediatric Assessment referral page
- Paediatric Medical Advice referral page
- Non-urgent Immunology and Allergy Assessment referral page