

Is it Bronchiolitis?

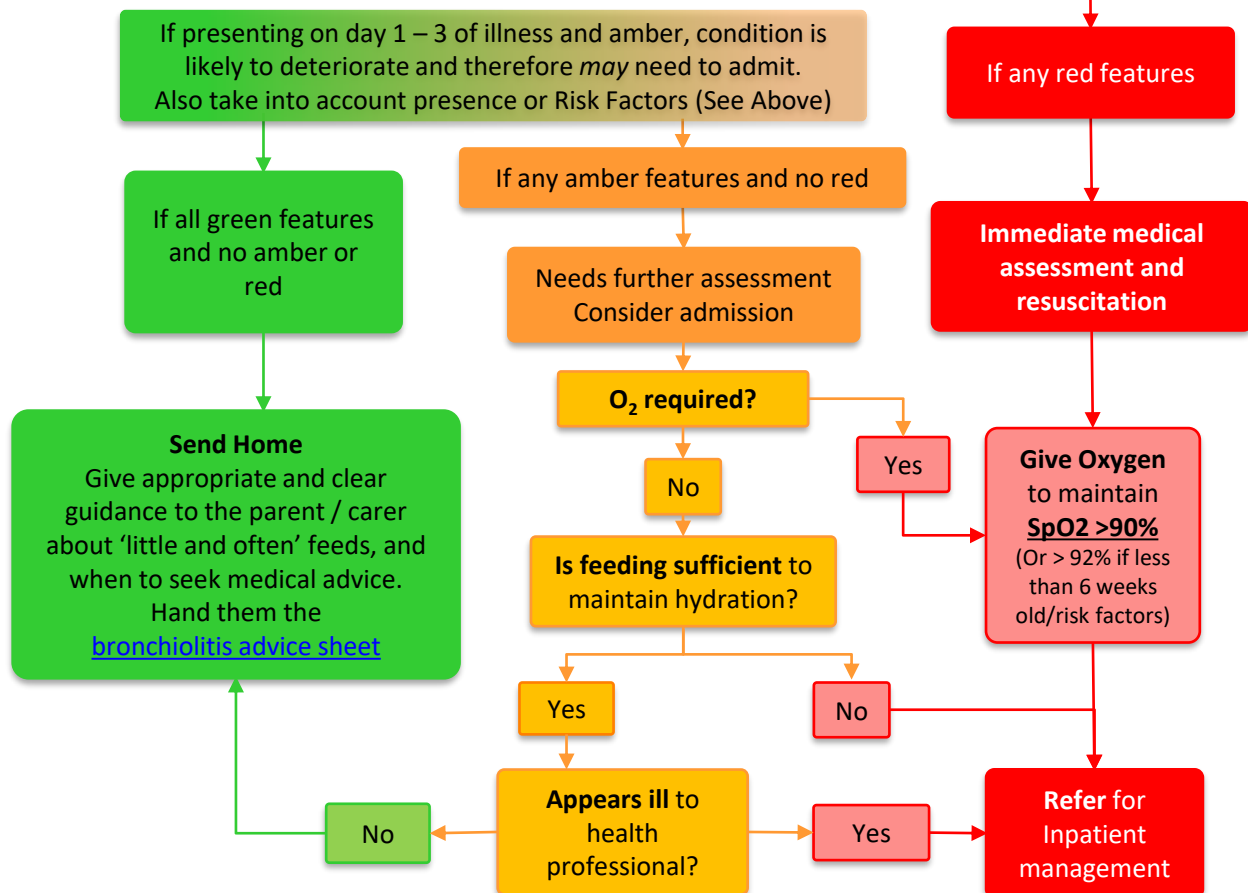
- Coryzal prodrome lasting 1-3 days, followed by:
 - Persistent cough **and**
 - **either** tachypnoea **or** chest recession (or both) **and**
 - **either** wheeze **or** crackles on chest auscultation (or both).
- Can also present with apnoea in young babies e.g <6wks
- Consider alternative diagnosis if temperature >39°C or unusual features of illness.

Risk factors for severe disease

- Chronic lung disease
- Significant congenital heart disease
- Age <6 weeks
- Premature birth, particularly under 32 weeks
- Neuromuscular disorders
- Immunodeficiency
- Children with Trisomy 21 (Down's Syndrome)

Assess Severity (treat according to category of most severe signs and symptoms)

	Green - Mild	Amber - Moderate	Red - Severe
Behaviour	Alert Normal	Miserable Not responding normally to social cues	Reduced conscious level Weak, high pitched or continuous cry
Skin	CRT < 2 secs Moist mucous membranes	CRT 2–3 secs Cool peripheries	CRT > 3 secs Pale / Mottled / Ashen
Respiratory Rate	< 12 mths < 50 breaths / min > 12 mths < 40 breaths / min No respiratory distress	Tachypnoea < 12 mths 50-60 breaths / min > 12 mths 40-60 breaths / min	Tachypnoea All ages > 60 breaths / min
SpO ₂ in air	95% or above	90 – 94%	< 90%
Resp distress	None	Moderate	Severe
Feeding/ Hydration	Normal Tolerating 75% of fluid	50-75% fluid intake Reduced urine output	< 50% fluid intake over 2-3 feeds Significantly reduced urine output
Apnoeas	None	None	Present
Other		Presence of Risk Factors (Above)	



What to do**Feeding & Hydration**

- Assess circulation. Treat shock if present
- Correct dehydration if present

Give normal feeds (if tolerated)

- May need small, frequent feeds
- The baby **MUST** have a strict fluid balance chart maintained - recording accurate input and output

Consider NG feeds if :

- Oral intake by normal route is insufficient
- Infant well enough to tolerate NG feeds

Give intravenous **ISOTONIC** fluids to children who:

- do not tolerate NG / orogastric fluids
- have impending respiratory failure

If using IV fluids:

- Restrict intake to 2/3rd of estimated maintenance requirements
- Use 0.9% saline + 5% dextrose +/- KCl
- Daily U&E while on intravenous fluids

Oxygen

- For vulnerable babies (less than 6 weeks, or significant comorbidities) admit and start oxygen if sats persistently below 92%
- For all other babies, admit and start oxygen if sats persistently below 90% (NICE update 2021)
- Consider humidified high-flow nasal cannula (HFNC) O₂ therapy if increasing FiO₂ or increasing work of breathing. [See separate HFNC guideline]

Virus testing and Infection Control

- Appropriate respiratory PPE must be worn based on local policy
- Please see COVID Respiratory Testing Pathway for up-to-date guideline on cohorting and testing

What not to do routinely**Chest X-Ray**

- Do not routinely perform a chest X-ray in children with bronchiolitis. Changes on X-ray may mimic pneumonia and should not be used to determine the need for antibiotics.
- Consider performing CXR if intensive care is being proposed

Bloods

- FBC / U&E / CRP / Blood Culture / Blood gas are not routinely recommended but may be considered where there is diagnostic uncertainty or an atypical disease course.

Antibiotics

- Fever is common in bronchiolitis (~30%) but is usually less than 39°C
- For babies aged less than 6 weeks or infants with temperature more than 39°C, assess clinically and *consider* septic screen/antibiotics.
- Consider pneumonia if **persistent focal** crepitations over multiple clinical assessments and/or unusual clinical progress

Airway Suctioning

- Do not routinely perform upper airway suctioning
- Consider upper airway suctioning in children who have respiratory distress or feeding difficulties due to upper airway secretions
- Perform upper airway suctioning in children with bronchiolitis presenting with apnoea even if there are no obvious upper airway secretions

Chest Physiotherapy

- Should not be used routinely unless there are comorbidities which would impair clearance of secretions (e.g. neuromuscular problems / tracheomalacia)

Other Treatments:

"Procedures with no good evidence supporting their use should be minimised."

These include:

- Salbutamol / Ipratropium bromide / Adrenaline
- Hypertonic saline
- Systemic or inhaled corticosteroids

It should be noted that nebulisers are NOT aerosol-generating procedures (AGP).

Discharge After an inpatient stay*Clinical Factors*

Ensure that the child:

- is clinically stable
- is taking adequate oral fluids
- has maintained oxygen saturation **over 90% in air for 4 hours**, ideally including a period of sleep.

Social Factors

Take into account factors that might affect a carer's ability to look after the child with bronchiolitis, for example:

- Adverse social circumstances
- The skill / confidence of the parent / carer in managing the child at home
- Parent's / carers' confidence in being able to spot red flag symptoms
- Distance to healthcare in case of deterioration

Discharge advice

Provide a safety net for the parents / carers by using one or more of the following:

- Provide parent / carer with written and verbal information on
 - warning symptoms (see Bronchiolitis Advice sheet)
 - accessing further health care
- Arrange appropriate follow up
- Inform the parents that there is an increased risk of wheezing after bronchiolitis, more so if there is a family history of atopy
- Inform parents that infants may continue to cough for few weeks post discharge

Smoking Cessation Advice

- In all children admitted with bronchiolitis, a social history including history of smokers in the household should be taken.
- Smoking cessation advice should be offered to families where appropriate. <http://www.nhs.uk/smokefree>
- They can be also referred for support via EPR: Requests & Prescribing -> Refer to Health and Wellbeing

Follow-up

- Hospital follow-up is not routinely required.
- Consider follow up if:
 - Patient required invasive ventilation
 - Frequent episodes

REVIEW

Name	Revision	Agreed by	Date	Version	Review date
Dr Rhiannon Furr Paediatric Consultant	New doc	General Paediatric Consultants	May 2017	1.0 2.0	May 2019 Dec 2020
Dr Rhiannon Furr Paediatric Consultant	NICE/COVID Update	General Paediatric Consultants	Sept 2021	4.0	Sept 2024

References

1. National Institute for Health and Care Excellence. Bronchiolitis : diagnosis and management of bronchiolitis in children. <http://www.nice.org.uk/Guidance/Ng9> 1–301 (2015).
2. Cunningham et al. (2015) Oxygen saturation targets in infants with bronchiolitis (BIDS): a double-blind, randomised, equivalence trial *The Lancet* Vol 386 1041-1048
3. National guidance for the management of children with bronchiolitis and lower respiratory tract infections during COVID-19. https://www.rcpch.ac.uk/resources/national-guidance-management-children-bronchiolitis-during-covid-19#footnote1_bl368d2 (2020)