Bronchiolitis Pathway

Clinical Assessment / Management Tool for Children Younger than 1 year old with suspected Bronchiolitis

Management - Acute Setting

Patient Presents

Suspected Bronchiolitis?

- Snuffly Nose
- Poor feeding
- Pyrexia
- Head bobbing
- Bronchiolitis Season
- Chesty Cough
- Vomiting
- Increased work of breathing
- Cyanosis
- Inspiratory crackles +/- wheeze

Risk factors for severe disease

• Pre-existing lung condition • Immunocompromised • Congenital Heart Disease
• Age <6 weeks (corrected) • Re-attendance • Prematurity <35 weeks • Neuromuscular weakness

Complete PEWS for all patients

Do the symptoms and/or signs suggest an immediately life threatening (high risk) illness?

Yes

Contact Lead ED / Paediatric Doctor
Move to Resuscitation Area
Resus Call ("2222") for Paediatric Arrest

Consider differential diagnosis if - temp ≥38°C (sepsis) or sweaty (cardiac) or unusual features of illness

Table 1

Clinical Findings	Green - low risk	Amber - intermediate risk	Red - high risk
Behaviour	• Alert • Normal	• Irritable • Decreased activity • Reduced response to social cues • No smile	• Unable to rouse • No response to social cues • Wakes only with prolonged stimulation • Weak or continuous cry • Appears ill to a healthcare professional
Skin	• CRT < 2 secs • Normal colour skin, lips and tongue • Moist mucous membranes	• CRT 2-3 secs • Pallor colour reported by parent/carer • Pale/mottled • Cool peripheries	• CRT > 3 secs • Cyanotic lips and tongue • Pale/Mottled/Ashen blue
Respiratory Rate	• Under 12mths <50 breaths/minute • Mild respiratory distress	• Increased work of breathing • All ages > 60 breaths /minute	• All ages > 70 breaths/minute • Respiratory distress
O_2 Sats in air**	• 95% or above	• 92-94%	• <92%
Chest Recession	• Mild	• Moderate	• Severe
Nasal Flaring	• Absent	• May be present	• Present
Grunting	• Absent	• Absent	• Present
Feeding Hydration	• Normal - Tolerating 75% of fluid • Occasional cough induced vomiting	• 50-75% fluid intake over 3-4 feeds • Reduced urine output	• <50% fluid intake over 2-3 feeds / 12 hours or appears dehydrated • Significantly reduced urine output
Apnoeas	• Absent	• Absent	• Yes
Other		• Pre-existing lung condition • Immunocompromised • Congenital Heart Disease • Age <6 weeks (corrected) • Re-attendance • Prematurity <35 weeks • Neuromuscular weakness • Additional parent/carer support required	

For all patients, continue monitoring following PEWS Chart recommendation

Also think about...

Babies with bronchiolitis often deteriorate up to Day 3. This needs to be considered in those patients with risk factors for severe disease

Green Action

Send Home:
Provide appropriate and clear guidance to the parent / carer and refer them to the patient advice sheet. Confirm they are comfortable with the decisions / advice given and then think "Safeguarding" before sending home. Consider referral to acute paediatric community nursing team if available

Send Home

Amber Action

Advice from Paediatrician should be sought and/or a clear management plan agreed with parents.

Admit

Table 2 Normal Paediatric Values:

(APLS†)	Respiratory Rate at rest: [b/min]	Heart Rate [bpm]	Systolic Blood Pressure [mmHg]
< 1 year	30 - 40	110 - 160	70 - 90
1-2 years	25 - 35	100 - 150	80 - 95

† Advanced Paediatric Life Support The Practical Approach Fifth Edition Advanced Life Support Group Edited by Martin Samuels; Susan Wieteska Wiley-Blackwell / 2011 BMJ Books.

Urgent Action

Immediate Paediatric Assessment

Seek Assistance
Oxygen if O_2 Sats <92% or severe respiratory distress
Fluids ⅔ maintenance Oral → NG → IV
Step up High Flow Oxygen Therapy / CPAP

Discharge plan criteria
Oxygen Saturations maintained in air O_2 Sats >94%.
Is clinically stable, taking adequate oral fluids and has maintained oxygen saturation over 92% in air for 4 hours, including a period of sleep. Give patient advice sheet, confirm they are comfortable with the decisions / advice given and then think "Safeguarding" before sending home.

GMC Best Practice recommends: Record your findings (See "Good Medical Practice" http://bit.ly/1DPXl2b)
**NB: Oximetry is an important part of the assessment and should be measured with an oximeter appropriately designed for infants if available.

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Glossary of Terms	
ABC	Airways, Breathing, Circulation
APLS	Advanced Paediatric Life Support
AVPU	Alert Voice Pain Unresponsive
B/P	Blood Pressure
CPD	Continuous Professional Development
CRT	Capillary Refill Time
ED	Hospital Emergency Department
GCS	Glasgow Coma Scale
HR	Heart Rate
MOI	Mechanism of Injury
PEWS	Paediatric Early Warning Score
RR	Respiratory Rate
WBC	White Blood Cell Count