



Respiratory Health Assessment for Child Health Procedure

1. Guiding Principles

The aim of this document is to guide Population Health staff in the prevention, early detection, referral and monitoring of children 0-5 years with respiratory illness. Refer to Appendix 1 for an overview (flow chart) of the procedure.

The respiratory system includes all the parts of the body involved with breathing, including nose, throat, larynx, trachea and lungs. Irritation and infection to the respiratory system results in coughing, a protective reflex mechanism which is both involuntary and voluntary. Healthy children may (dry) cough about 10 times a day, but rarely at night. Ongoing coughing is a major source of parental concern and may be an indication of a need for medical assessment and treatment.¹ In contrast, chronic coughing in children can be normalised in remote communities and may not raise concern among parents and carers.²

Upper respiratory tract infections are extremely common and a major cause of coughing, but are not usually of concern for healthy children. Pre-school children can have up to six acute upper respiratory tract infections each year, with a cough lasting up to three weeks after each episode. What may appear as a chronic cough in children may be a series of respiratory tract infections with a lingering cough between each new infection.¹

Although most children with acute coughs are likely to have an uncomplicated viral infection, ongoing coughing or protracted bronchitis featuring a wet or productive cough requires prompt intervention as chronic and irreversible conditions may result.³ A concern should be raised if a wet cough is present every day for four weeks or more, even if there are no other signs or symptoms.

Chronic respiratory conditions, particularly protracted bronchitis, may lead to chronic suppurative lung disease which may in turn result in bronchiectasis and irreversible damage to the lungs.⁴ Bronchiectasis, which is diagnosed by high resolution CT scans, is a chronic progressive disease caused by protracted inflammation by which the bronchi become abnormally and irreversibly dilated.⁵

Chronic suppurative lung disease and bronchiectasis are significant causes of morbidity and mortality. The conditions result in hospitalisation, time away from school, poor quality of life and chronic cough linked to cardiac problems, sleep disturbance, psychological difficulties.⁴ In less common cases, the conditions may be linked to underlying conditions such as congenital malformation, cystic fibrosis or immune deficiency.⁵

Smoking cigarettes and passive smoking a significant risk factor in respiratory conditions, and particularly for children. Smoking during pregnancy and associated low birth weight are also key risk factors. Further, respiratory infections are associated with mould and mildew, often linked to poor housing and poor hygiene.⁶

Key prevention strategies should involve culturally appropriate health education to promote immunisation, good hygiene, good nutrition and prevention of smoking/passive smoking. Other causation factors to consider are exposure to camp fire smoke and environmental air pollutants, overcrowding, poor housing quality and limited access to running water.⁵

2. Procedure

Steps	Additional information
<p>Step 1. Promotion and Prevention</p> <p>1.1. At every contact, promote key health education messages:</p> <ul style="list-style-type: none"> - Promote immunisation and provide information about local clinics. - Encourage family to eat a healthy diet including iron-rich food. - Avoid tobacco smoke, passive smoking, smoking in pregnancy. - Breastfeed exclusively for the first six months, and continue to 12 months. - Promote good hygiene; <ul style="list-style-type: none"> ▪ Children and adults to wash hands with soap and water before eating, after going to the toilet, after coughing or wiping nose, before going to bed. ▪ Dispose of soiled tissues appropriately ▪ Keep clean with regular showers. ▪ Regularly wash clothes, bed linen and towels (dry in the sun). <p>1.2. Provide positive feedback about what is going well for the family and the health promoting activities or practices they have already adopted.</p> <p>1.3. Promote adequate supply of fresh water for drinking, washing and cleaning. If not available in community, refer to local government Environmental Health officer</p> <p>1.4. Refer for concerns about environmental factors, (e.g. power supply, dust control, pest control, waste management, food safety, dog health), with consent from the family. For more information about environmental referrals visit Department of Health website.</p>	
<p>Step 2. Identify child at risk of respiratory disease</p> <p>2.1. Ask key screening questions of parent/ carer:</p> <ul style="list-style-type: none"> - Does your child cough often? - When does your child cough? - Does your child cough at night? - Is the cough dry or wet (productive)? - Does it sound like there is phlegm in the chest? - How long has s/he been coughing? - Does s/he cough when running around or exercising? - Does s/he wheeze? - Has s/he been in hospital for breathing problems? <p>2.2 Conduct or refer for a respiratory health assessment if there is any evidence if:</p> <ul style="list-style-type: none"> • wet (productive) coughing 	

- hospital admission for respiratory problems
- prolonged or recurrent infections
- coughing at night
- wheezing or coughing when physically active
- any respiratory concerns are raised by parent/carer

Step 3. Assessment

3.1. Observe

- Child's demeanour, appearance
- Breathing rate – count for one minutes, at least twice and take the average.
Parameters for normal breathing rates.
- Chest deformity
- Chest in-drawing – lower part or edge of rib cage moves as child breaths in
- Nasal flaring – nostrils widen when child breaths in (suggests laboured breathing)
- Grunting, in young infants, (suggests laboured breathing)

3.2. Listen

- Coughing, e.g. wet or productive
- Noisy breathing
- Wheeze – usually when breathing out
- Stridor – vibration sound when breathing in

3.3. Check for danger signs requiring referral for urgent medical consultation and/or hospital

- Lethargic, drowsy, uninterested in what is going on
- Not able to eat or feed. If breastfeeding, may often pull off breast to breath.
- Apnoea
- Fits/seizures

3.4. Consider if child is at risk of severe respiratory disease and refer promptly

- Growth faltering
- Preterm birth
- Two or more chest infections in last year

Conduct assessment if within scope of practice and timely medical assessment is not locally available.

Parameters for normal breathing rates:

Age in Years	Normal Breathing Rate (breaths/min)
<1	30-40
1-2	25-35
2-5	25-30
5-12	20-25
>12	12-20

Based on CAPRA Standard Treatment Plan⁷

Consider use of flip chart or video clip to help educate parents and carers about causes and treatment of chronic suppurative lung disease - [Telethon Kids Institute Wet Cough](#)

Refer to CAHS policy documents [Growth birth - 18 years](#) and [Growth faltering](#).

<ul style="list-style-type: none"> - Treated for pneumonia in last 4 weeks - Wet/productive cough more than 4 weeks - Persistent wet cough after 4 weeks of continuous antibiotics - Three hospital admissions for chest problems in child's life - Episode of severe pneumonia - Chest deformity (puffed up) - Sounds when listening with stethoscope (e.g. crackles, unequal air entry, bronchial breathing, wheezing). <p>3.5. Make a clinical judgement about possible respiratory issues and refer accordingly.</p>	<p>See Appendix 2 – Respiratory problems in children for reference.</p>
<p>Step 4. Management</p> <p>4.1. Refer for medical assessment and care as required.</p> <p>4.2. Plan follow-up contact (within 1 month) to monitor progress and need for support.</p> <p>4.3. Continue to monitor growth as per the Enhanced Child Health Schedule.</p> <p>4.4. Reinforce health education messages.</p>	<p>Consider use of flip chart or video clip to help educate parents and carers about causes and treatment of chronic suppurative lung disease - Telethon Kids Institute Wet Cough</p>

Useful Resources

Telethon Kids Institute [Wet Cough site](#) for video, audio and flipchart resources.

[Lets kick this wet cough](#)

[Raising Children Network](#) Information and videos about asthma, bronchitis, bronchiolitis, croup, immunisation, medications, pneumonia and more.

Menzies School of Health Research **No Germs on me** video clips

[Young boy and baby](#)

[School kids](#)

[Young family](#)

WACHS (Wheatbelt) **Ngamari free** video clips for Noongar families

[Boodjari Yogars and Smoking](#)

[Second Hand Smoke and Your Health](#)

[Young People and Smoking](#)

[Tobacco Education](#)

3. Definitions

Asthma	Chronic condition causing episodes of wheezing, chest tightness and shortness of breath. The underlying problem is inflammation of the air passages, with spasm and increased mucus production in the airways.
Bronchiectasis	Progressive disease characterised by dilated, thick-walled bronchi, usually associated with chronic bacterial infection and inflammation. The diagnosis is made with high resolution CT scan. ²
Chronic Suppurative Lung Disease (CSLD)	Recurrent episode of PBB and at risk of developing bronchiectasis. Characterised by wet or productive cough for more than four weeks and history of respiratory infections. ²
Protracted Bacterial Bronchitis	Wet cough lasting for more than four weeks, and without an alternative cause, and which responds to antibiotic treatment ²
Upper Respiratory Tract Infection	Acute infection involving the nose, sinuses, pharynx or larynx. Common signs and symptoms include fever, cough, running nose, sneezing, sore throat, headache, muscle aches, fatigue and malaise. ⁹

4. Roles and Responsibilities

Population Health staff conducting health assessments for children aged 0-8 years; Enhanced Child Health Schedule (ECHS), Children in Care checks, child and school health assessments or other opportunistic health checks on children are required to;

- Identify children with respiratory health concerns.
- Conduct respiratory health screening and/or assessment for children **IF** in scope of practice **OR** promptly refer for assessment.
- Refer and manage respiratory conditions and infections as described in this document.

All Staff are required to work within policies and guidelines to make sure that WACHS is a safe, equitable and positive place to be.

5. Compliance

Failure to comply with this policy document may constitute a breach of the WA Health Code of Conduct (Code). The Code is part of the [Integrity Policy Framework](#) issued pursuant to section 26 of the [Health Services Act 2016](#) (WA) and is binding on all WACHS staff which for this purpose includes trainees, students, volunteers, researchers, contractors for service (including all visiting health professionals and agency staff) and persons delivering training or education within WACHS. WACHS staff are reminded that compliance with all policies is mandatory.

6. Records Management

All WACHS child and school health activity is recorded in the Community Health Information System (CHIS). Note clinical items for respiratory health assessment.

7. Evaluation

Monitoring of compliance with this document is to be carried out in partnership by the Director Population Health and Central Office Population Health, annually using:

- CHIS reports and audits of respiratory health assessment, referrals and outcomes.

8. Standards

[National Safety and Quality Health Service Standards](#) 2.1 & 5.3

9. Legislation

[Public Health Act 2016](#)

[Health \(Miscellaneous Provisions\) Act 1911](#) – Part XIII - Section 335

10. References

1. HealthPathways WA. Online Manual: Child Health, Medical [cited 2019, August 19]
2. Kimberley Aboriginal Health Planning Forum. [Clinical Protocols and Guidelines](#) Broome, WA; KAMSC, 2015
3. Chang AB, Bell SC, Byrnes CA, Grimwood K, Holmes PW, King PT, et al. Chronic suppurative lung disease and bronchiectasis in children and adults in Australia and New Zealand. *Clinical Practice Guideline*. Thoracic Society of Australia and New Zealand; 2014 Oct.
4. RACGP National Aboriginal Community Controlled Health Organisation and the Royal Australian College of General Practitioners. *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people*. 3rd edn. East Melbourne, Vic: RACGP, 2018.
5. McCallum GB and Binks MJ (2017). The epidemiology of Chronic Suppurative Lung Disease and Bronchiectasis in children and adolescents, *Frontiers in Pediatrics*, 5:27. doi: 10.3389/fped.2017.00027
6. Ali SH, Foster T & Lansbury Hall N. The Relationship between Infectious Diseases and Housing Maintenance in Indigenous Australian Households, *International Journal of Environmental Research and Public Health* 2018, 15, 2827.
7. Centre for Remote Health. 2017. *CARPA Standard Treatment Manual (7th edition)*. Alice Springs, NT: Centre for Remote Health

8. Australian Institute of Health and Welfare. (2010). *Asthma, chronic obstructive pulmonary disease and other respiratory diseases in Australia*. Canberra: Australian Institute of Health and Welfare
9. Government of South Australia. SA Health. Health Topics [cited 2019, October 09]

11. Related Forms

WACHS Community Health Services E-Referral form (CHIS)

12. Related Policy Documents

[CAHS Child Health Services policy](#)

[CAHS Growth Birth - 18 Years](#)

[CAHS Growth Faltering](#)

[CAHS Wound Swab Collection procedure](#)

[CHIS Data Entry Standards, Clinical Item Guides and Document Naming Conventions](#)

[WACHS Enhanced Child Health Schedule Guideline](#)

[WACHS Enhanced Child Health Schedule Practice Guide](#)

[WACHS WebPAS Child at Risk Alert Procedure](#)

13. Related WA Health System Policies

OD0606/15 [Guidelines for Protecting Children 2015](#)

14. Policy Framework

[Clinical Services Planning and Programs](#)

[Public Health](#)

15. Appendices

Appendix 1: [Respiratory Health Assessment for Children 0-5 years Care Pathway](#)

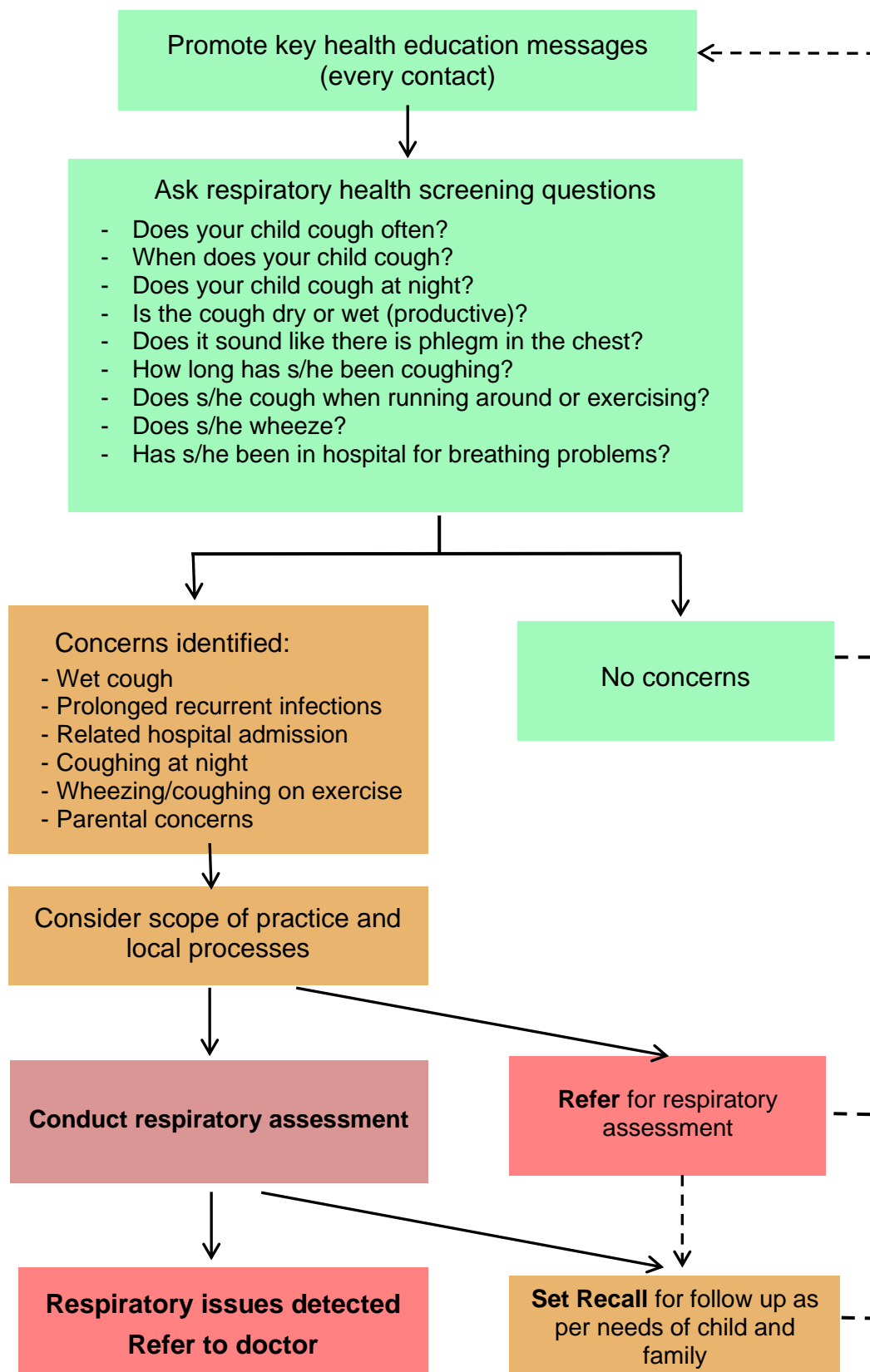
Appendix 2: [Respiratory Problems in Children](#)

**This document can be made available in alternative formats
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Version:	1.00	Date Published:	22 April 2020

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Appendix 1: Respiratory Health Assessment for Children 0-5 years Care Pathway



Appendix 2: Respiratory Problems in Children

Signs and symptoms	Likely problem	Action
Wet cough every day for the last four weeks	Protracted bacterial bronchitis	Refer for urgent medical consultation
Recurrent episodes of chronic wet or productive cough	CSLD	Refer for medical consultation and management plan
Infant 2 months or under with fast breathing, laboured breathing, apnoea (stopping breathing, fever >38°	Serious infection	Refer for urgent medical consultation or hospital
Child with fast breathing, fever >38°, looks unwell	Respiratory infection	Refer for urgent medical consultation
Child with cough, fast breathing, wheeze, normal temp	Respiratory infection	Refer for medical consultation. Bronchodilator may be useful for children 12 months+
Wheeze, cough, known history of asthma, wheeze or short of breath on physical activity, frequent night coughing	Asthma or viral induced wheeze	Refer for medical consultation and asthma action plan
Barking cough, stridor (noisy breathing)	Croup	Refer for medical consultation
Coughing in spells, with or without whoop. Vomiting, going red in face, cyanosis (blue lips), apnoea with coughing spells	Whooping cough	Refer for prompt medical consultation
Noisy breathing, wheeze, cough after choking on something	Inhaled foreign body	Refer for urgent medical consultation
Child with diabetes and fast breathing, with or without fever	Consider diabetic ketoacidosis	Check blood glucose, U/A. Refer for medical consultation
Child with heart disease and fast breathing, with or without fever	Cardiac failure, chest problem	Refer for medical consultation

Based on CAPRA Standard Treatment Plan⁷