## RESPIRATORY REFERRAL RECOMMENDATIONS

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<th>Diagnosis / Symptomatology</th>
<th>Evaluation</th>
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<td>Problems include:</td>
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<td>• Airways disease</td>
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<td>• Extra thoracic / neurological conditions</td>
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<td>• Neoplasia</td>
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<td>• Pulmonary Fibrosing Disorders</td>
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<td>• Pleural disease</td>
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<td>• Vascular</td>
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These general symptoms may include any and/or all of the general or specific problems noted. A thorough history and physical examination is required to determine the specific diagnosis. (See below)

Specific treatments depend on the specific problems identified, as noted below

1. Where there is concern regarding diagnosis, investigation and/or treatment
2. Persistent problem, not controlled by current therapy
3. Please state if patient initiated referral
4. Please indicate perceived Category as per prioritisation criteria

If Urgent, referral to be made by telephone, email or fax
### Diagnosis / Symptomatology

- **Airways Disease**

### Bronchiectasis

- Should be considered in anyone with chronic or recurrent purulent sputum. Quantitate phlegm production when well and when ill.
- Past history of severe respiratory infection usually in childhood eg. Whooping cough.
- Assess for asthma.
- Spirometry with reversibility.
- Chest X-ray.
- HRCT Lungs, but not during an exacerbation.
- FBC, ESR.
- Immunoglobulins plus IgG subfractions.
- Sputum culture when patient otherwise well and with exacerbations.
- Assess for sinus disease.
- Assess for cor pulmonale.

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| Airways Disease            | **Bronchiectasis** | • Maintenance treatment: postural drainage/sputum clearing techniques are the cornerstone of long term management (to be referred to physiotherapist for education but not before CT scan)  
  • Long term antibiotics should be discussed with Respiratory Physician  
  • Fluvax and Pneumovax  
  • Treatment of non-infective airways disease i.e. co-existing COPD and asthma should be considered. See below  
  • Management of acute infective exacerbations eg. Acute bronchitis, pneumonia  
  • Management in the community: antibiotics preferably post sputum culture/sensitivity. See Australian Antibiotic Guidelines  
  • Manage co-existent acute / chronic sinusitis | All patients with suspected Bronchiectasis should be referred to respiratory physician for baseline assessment. If severe: refer for admissions. |
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| **Asthma**                 | (Note: National Asthma Campaign literature and Thoracic Society of Australia & New Zealand guidelines) | **Severe:**  
- High flow oxygen, IV/oral steroids, nebulised beta agonists. Transfer to ED by ambulance  
- Consider Adrenaline 200 micrograms SC (=2ml 1:10,000 or 0.2ml 1:1,000) | **For Admission:**  
- Acute moderate asthma not responding to GP management  
- Acute severe asthma (via ambulance) eg coexistent pneumothorax or pneumonia, silent chest, cardiovascular compromise, altered consciousness, relative bradycardia or decreasing rate and depth of breathing  
- Asthma with intercurrent disease eg. Pneumonia |
|                            | • Breathlessness, tightness, wheezing and cough  
• Recognition of severity  
• Spirometry  
• Peak Expiratory Flow recording  
• Oxygen saturation | **Mild to Moderate:**  
- Prednisone +/- inhaled steroids  
- Beta agonists, short &/or long acting  
- Education including smoking cessation, monitoring (PEF), action plan, etc | **For Outpatient Assessment:**  
- Asthma not readily controlled in GP setting – Semi-urgent or Routine  
- Any feature of severe asthma (eg. Requiring frequent courses of prednisone) – Semi-urgent or Routine  
- Frequent after hours attendance (ED or GP after hours service)  
- Asthma with recurrent lung disease (eg. Bronchiectasis, COPD) – Semi-urgent or Routine  
- ? Asthma (i.e. uncertainty about diagnosis eg. LVF) – Routine  
- Pulmonary function testing (need for hospital based asthma educator involvement) – Routine |
### Diagnosis / Symptomatology

**COPD**


- Recognition of severity
- Breathlessness, exercise tolerance
- Cough and sputum
- R) heart failure
- Intercurrent disease (eg lung cancer)
- Spirometry, reversibility.
- Nutritional state
- Chest x-ray
- Assess for osteoporosis, obstructive sleep apnoea, polycythaemia, reflux

**Evaluation**

**Management Options**

- Smoking cessation. QuitLine 131 848.
- Fluvax and Pneumovax
- Formal steroid trial (must be with formal spirometry before & after).
- Inhaled steroids, anticholinergics, long acting beta agonists, antibiotics and mucolytics may all be useful
- Optimise techniques of various drug delivery devices
- Ongoing monitoring
- Nutritional advice
- Pulmonary Rehabilitation via Physiotherapy

**Referral Guidelines**

**Admission:** Urgent Acute exacerbations of respiratory failure

**Outpatient Assessment — Routine**

- Optimum management including other diagnostic considerations i.e. intercurrent disease
- Pulmonary function testing
- Nutritional advice
- Physiotherapy assessment (exercise, rehabilitation, sputum clearing)
- Home oxygen assessment
## Extra Thoracic / Neurologic Conditions

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| Kyphoscoliosis            | • At risk group includes teenagers and young adults, especially females and older patients with osteoporosis  
  • Primarily an orthopaedic problem but may require referral to medical specialist due to respiratory failure, pulmonary hypertension, RHF | • Observation and monitoring  
  • Ventilation support  
  • Orthopaedic referral | • Referral to Respiratory Physician for assessment and management in home/community, eg home ventilatory support  
  • Referral to Respiratory Physician  
  • Respiratory Infection and pneumonia usually will require acute admission  
  NB: Even relatively minor respiratory infections may trigger respiratory failure. | |
| Neuromuscular Disorders   | • History and physical examination.  
  • Diagnosis often already established | Referral to Paediatrician / Adult neurologist and pulmonary physiology |                                                                                   | Shared care (Intensivist, Neurologist, Paediatrician and Respiratory Physician) as I/P for respiratory failure |
| Guillain Barre Syndrome   | • Progressive weakness spreading from periphery  
  • Paraesthesiae  
  • Areflexia | Urgent referral to hospital Emergency Department |                                                                                   | Referral to hospital Emergency Department |
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<td><strong>Acute Tracheo Bronchitis</strong></td>
<td>Smoking history&lt;br&gt;Inhalation of irritants&lt;br&gt;Relevant past respiratory history eg Asthma</td>
<td>• Stop smoking advice&lt;br&gt;• Symptomatic treatment&lt;br&gt;• Broad spectrum antibiotics&lt;br&gt;• Consider flu vaccination for recurrent attacks</td>
<td>Specialist input not usually required. Consider admission for significant co-morbidities</td>
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<td><strong>Pneumonia/Lower Respiratory Tract Infection</strong></td>
<td>Standard history and examination with particular emphasis on the following:&lt;br&gt;• Respiratory rate, pulse rate, blood pressure and confusion&lt;br&gt;• Significant co-morbidities (diabetes, cardio respiratory)&lt;br&gt;• Social circumstances</td>
<td>Manage at home/community&lt;br&gt;Appropriate broad spectrum antibiotics&lt;br&gt;• Refer to Australian Antibiotic Guidelines for treatment.&lt;br&gt;• Chest X-ray may be considered at presentation and 6-8 weeks post treatment&lt;br&gt;• Consider bronchial carcinoma where history of smoking, refer early for chest X-ray&lt;br&gt;• Refer for admission</td>
<td>If X-ray changes unresolved O/P referral recommended&lt;br&gt;Severe pneumonia, significant co-morbidity and/or adverse social circumstances – Urgent&lt;br&gt;Severe pneumonia defined by tachypnoea, tachycardia, hypotension, confusion, high or low temperature, high urea, high or low WCC, multilobar disease. See Australian Antibiotic Guidelines&lt;br&gt;Failure to resolve satisfactorily in the community – Semi-urgent</td>
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| TB | High risk groups/refugees:  
• Recent immigrants particularly from Asia, South East Asia, Africa.  
• Australian Aborigines  
• Immuno suppressed, Eg AIDS/HIV  
• Alcohol and drug abuser  
Chest X-ray. If TB suspected, collect x 3 early morning sputum for AFBs and request ZN stain  
Quantiferon / Mantoux (should be deferred until specialist opinion given)  
1 x early morning urine for AFBs | All patients with suspected and confirmed TB should be referred for appropriate specialist investigation and treatment at the WA Tuberculosis Control Program  
**Location:**  
Anita Clayton Centre,  
Suite 1 / 311 Wellington Street,  
Perth WA 6000  
**Phone:** 08 9222 8500  
**Fax:** 08 9222 8501  
**Email:** accadmin@health.wa.gov.au | Notification is mandatory to Communicable Disease Control Branch, Ph 9388 4848  
Refer to specialist o/p Routine  
Refer to appropriate surgical specialty for biopsy, eg cervical lymph nodes – Semi-urgent | **Note:** Biopsy material MUST also be sent for culture |

| Pulmonary TB |  |
| Extrapulmonary TB |  |
### Miscellaneous

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<td>Excessive Sleepiness, eg, Severe Obstructive Sleep Apnoea</td>
<td>Should be considered in patients who snore and who have excessive day time sleepiness</td>
<td>Treat insomnia if probable cause of sleepiness. Treat upper airway problem, i.e. rhinitis, tonsillar hypertrophy</td>
<td>Refer to physician for assessment – Routine</td>
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**History should include details of snoring, waking unrefreshed and daytime sleepiness, time in bed**

### Neoplasia

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| Primary Bronchogenic Carcinoma | • Smoking history/asbestos  
• Examination for metastatic disease  
• Assess for airways disease, other co-morbidity eg. Coronary artery disease, exercise tolerance, QOL, weight loss  
• Chest X-ray, location and date of previous films, if any  
• Full blood count, ESR, calcium, LFT, Electrolytes, coagulation screen/INR  
• NB: Sputum cytology indicated if new endobronchial symptoms, eg haemoptysis, change in productive cough  
• *Not indicated in presence of infected sputum* | Refer for specialist opinion | All suspected cases should be referred urgently – Semi-urgent |
### Diagnosis / Symptomatology

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| Pulmonary nodule(s)        | • Smoking history  
• Past history of malignancy  
• Chest X-ray, location and date of previous films if any  
• CT may be considered after consultation with specialist/radiologist  
• Full blood count, ESR, calcium, LFT, Creatinine & E, Coagulation screen/INR | Refer for specialist opinion | All suspected cases should be referred semi urgently – Routine |

### Diagnosis / Symptomatology

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| Mesothelioma               | • Generally present with lateral chest pain, weight loss, shortness of breath, and systemic symptoms.  
• At risk group includes, among others: Wittenoom employees, plumbers, builders, mechanics, ship engineers, railway engineers, wharfies, WA State Ships employees, and truckies with asbestos exposure  
• Chest X-ray | Refer to respiratory specialist | All suspected cases should be referred urgently – Semi-urgent |
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<td><strong>Fibrosing Lung Disorders</strong> (These conditions are uncommon)</td>
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| Pulmonary Fibrosis | • Need to establish clear diagnosis  
• Clinical assessment  
• Bloods  
• Lung function assessment  
• Radiology – with images reviewed by respiratory radiologist  
• Possible bronchoscopy / biopsy | Review diagnosis based on ATS / ERS Guidelines (AJRCCM 2011). These conditions fall into groups – those that cannot be treated and those which do respond to treatment. It is important for a specialist respiratory physician to make this determination.  
• Possible drug therapy  
• Suitability for clinical trials  
• Suitability for lung transplant  
• General support and / or  
• Palliation | Refer to Respiratory Physician semi urgent – Semi-urgent |
| Sarcoidosis | • Patient may present acutely with Erythema Nodosum (EN) and other extra pulmonary symptoms or signs.  
• Often asymptomatic.  
• Chest X-ray (changes compatible with diagnosis).  
• ESR, Calcium, LFT, FBC.  
• Ophthalmology review. | | |

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<td>Pleural Effusion</td>
<td>• Breathlessness and symptoms and signs of underlying condition eg. Heart failure, liver or kidney disease, neoplasia and infection. • Chest X-ray</td>
<td>• Heart failure: treat/refer as appropriate</td>
<td>Referral to Respiratory Physician or other appropriate Specialist Semi-urgent – Routine based on physician’s discretion</td>
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<tr>
<td>Pneumothorax</td>
<td>Sudden onset of chest pain and/or breathlessness. • Chest X-ray</td>
<td>• Consider development of tension pneumothorax requiring immediate drainage. This is associated with haemodynamic compromise Note: Traumatic pneumothorax or haemopneumothorax should always be drained</td>
<td>Refer to hospital Emergency Department General/Respiratory Physician or Thoracic Surgeon assessment with a view to admission, Urgent</td>
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<tr>
<td>Pleural Plaques</td>
<td>• History of asbestos exposure • See at risk occupational groups above • Incidental Chest X-ray finding</td>
<td>Consider referral to Respiratory Physician</td>
<td>Referral to Respiratory Physician Routine to confirm diagnosis and discussion potential implications</td>
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</table>
Pulmonary Hypertension

Involves the heart and the lungs and is usually the result of any disease which affects the lung, left heart failure

Some mild COPD patients may have more significant pulmonary hypertension where oxygen levels have been low

- Shortness of breath
- Coughing
- Dyspnoea

Refer to respiratory specialist

- ECHO examining the right side of the heart
- Measurement of heart and lung indices
- Drugs to control scarring response in the lung
- Suitability for drug trials

Semi-urgent – Routine based on physician’s discretion

Pulmonary Embolus

Consider high risk groups:
- post operative
- post partum
- malignancy
- heart failure
- Immobility
- family history especially in those < 50 years old

Look for DVT and symptoms and signs of severe embolism, i.e. chest pain, anxiety, breathlessness, tachycardia, tachypnoea, hypotension, elevated JVP

Refer for admission Urgent

Referral to hospital Emergency Department, Urgent