



Government of **Western Australia**  
Department of **Health**

# Chronic Lung Conditions Model of Care

**Respiratory Health Network**

**August 2012**

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## Executive summary

Chronic lung conditions impose a substantial impact on Australian society with about 6 million Australians reporting suffering from a chronic lung conditions in 2004–05<sup>1</sup>. The prevention, treatment and management of chronic lung conditions to date have often been condition-specific. The WA Respiratory Health Network has identified the need to facilitate a more holistic approach to delivery of health services for consumers with chronic lung conditions and to ensure those consumers with less common lung conditions have access to the best care. Furthermore, there are commonalities between lung conditions which can lead to misdiagnosis and co-morbidity, highlighting the need to consider and address chronic lung conditions holistically<sup>1</sup>.

The Chronic Lung Conditions Model of Care has been developed as an overarching guide to providing **the right care at the right time by the right team in the right place** for Western Australians with chronic lung conditions. It complements the existing respiratory Models of Care by describing their common core service components, and thus sits hierarchically above the [Asthma](#), [COPD](#) and [Cystic Fibrosis](#) Models of Care. The generic nature of the Model provides a blueprint for implementing consumer and carer focussed health services for addressing more than one chronic lung condition and implementing more than one Model of Care. Importantly, the Model of Care does not replace condition-specific Models of Care.

The Chronic Lung Conditions Model of Care is closely linked to and should be read in conjunction with the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup> and is also closely related to the [WA Chronic Conditions Self-Management Strategic Framework 2011-2015](#)<sup>3</sup> and the [WA Primary Health Care Strategy](#)<sup>4</sup>.

The Chronic Lung Conditions Model of Care shares the same guiding principles as the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup>:

- 1. Integration and service coordination**
- 2. Interdisciplinary care planning and case management**
- 3. Evidence-based, consumer-centred care**
- 4. Health literacy and self-management for chronic health conditions**

The guiding principles focus on slowing the progression of chronic lung conditions and enabling early intervention across the continuum of care - from the well population to end of life. The Model of Care outlines a number of strategies to address the following priority areas. These priority areas align with those outlined in the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup>:

- Prevention of chronic lung conditions
- Priority populations
- Consumer and carer participation, and consumer and carer-centred information and education
- Service coordination, case management and multidisciplinary care planning
- Access to integrated and coordinated primary and community-based care
- Services are based on evidence-based Models of Care/guidelines
- Building the capacity of the workforce

Key recommendations of the Model of Care include:

**Rec 1:** Identifying and minimising risk factors, particularly smoking and targeting strategies towards at risk populations including Aboriginal people, people in prisons, people with mental health issues, people from low socioeconomic backgrounds, people from culturally and linguistically diverse backgrounds and pregnant women are all priority populations.

**Rec 2:** Early detection and diagnosis through increased access to diagnostic tools and services in community settings and ongoing training to diagnostic testing providers.

**Rec 3:** Management of conditions through access to integrated and coordinated services. To achieve this there is a need to develop, distribute and encourage the use of action or self-management plans, expand community-based smoking cessation programs, pulmonary rehabilitation programs and case management/care plans.

**Rec 4:** Ensure best practice, evidence-based consumer and carer education is universally accessible including access to peer support groups and self-management courses, training, information and resources and consumer and carer roadmaps.

**Rec 5:** Develop and implement integrated referral pathways across the service transitions to ensure a holistic multi-disciplinary approach to service delivery.

**Rec 6:** The development and dissemination of evidence based guidelines and protocols.

**Rec 7:** Workforce education and training for all health professionals should be based on a minimum set of standards. Ensure all training and curriculum content that relates to chronic lung conditions also focuses on building skills in the diagnosis, treatment and management of less common chronic lung conditions.

**Rec 8:** Support the development of information communication technology (ICT) to enable multi-disciplinary care planning and facilitate appropriate data exchange with external health care providers (including Telehealth). All people with chronic lung conditions require better access to, and control of their personal and health care information including consumer hand held records and/or e-health records and shared databases for patient/ provider management.

# 1. Introduction

## 1.1 What is the Chronic Lung Conditions Model of Care?

Models of Care describe evidence-based policy and practice frameworks for the way health services could be delivered in Western Australia to ensure the **right care** is delivered at the **right time**, in the **right place** and by the **right team** <sup>5</sup>.

The **Chronic Lung Conditions Model of Care** is an overarching guide to:

- Implementing health service delivery components which are common across the condition-specific WA Models of Care\* for chronic lung conditions. The majority of the information presented is therefore purposely generic, rather than condition-specific. The WA Respiratory Health Network Models of Care contain detailed condition-specific information for lung conditions.
- Optimally managing consumers living with one or more chronic lung conditions.

The Model of Care is targeted at all organisations tasked with planning and implementing service delivery for consumers of all ages with chronic lung conditions in WA. The Model of Care should be read in conjunction with the [WA Chronic Health Conditions Framework 2011-2016](#) <sup>2</sup>, the [WA Chronic Conditions Self-Management Strategic Framework 2011-2015](#) <sup>3</sup> and the [WA Primary Health Care Strategy](#) <sup>4</sup>.

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\* All Models of Care are available at [www.healthnetworks.health.wa.gov.au/modelsofcare/](http://www.healthnetworks.health.wa.gov.au/modelsofcare/).

## Why a Chronic Lung Conditions Model of Care?

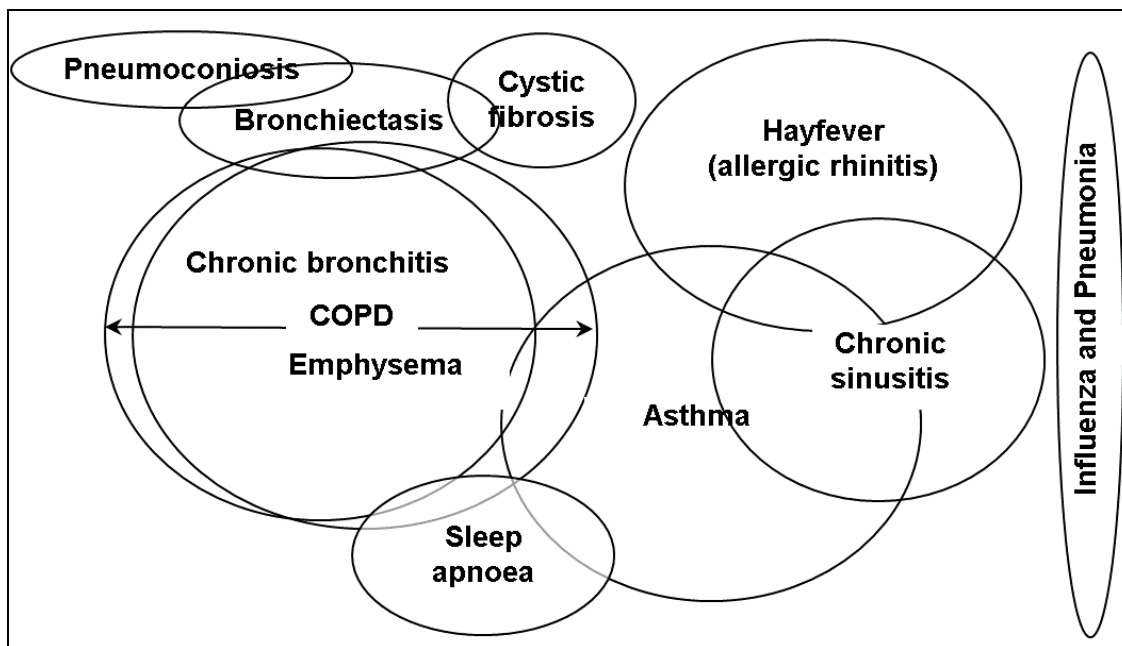
The WA Respiratory Health Network has identified the need to facilitate a more holistic approach to delivery of health services for consumers with chronic lung conditions. Consumer and carer feedback suggests a broader approach is preferred compared to siloed and disease-specific management, where applicable. The availability of condition-specific services results in many individuals with less common conditions being excluded despite the fact they would benefit from the same care. In this respect, the Model of Care acknowledges the coordinating role and expertise of multidisciplinary teams within tertiary hospitals for less common chronic lung conditions.

The development of an overarching Chronic Lung Conditions Model of Care was deemed as a way to shift the thought paradigm driving this siloed approach, to maximise access to care for people with all chronic lung conditions for the following reasons:

- There are a number of common elements in the existing respiratory Models of Care that can be pulled together into an overarching model to avoid duplication and produce a composite policy which articulates the common, evidence-based health service delivery principles for consumers with chronic lung conditions.
- It will provide guidance to people developing and delivering services, projects and policies relating to a single lung condition on how to adopt a more holistic approach to address lung conditions as a whole.
- It will have broader application in service planning and delivery, bringing into scope the many other lung conditions not covered by the existing respiratory Models of Care, such as pulmonary fibrosis, pulmonary hypertension, occupational lung disease, congenital and neonatal lung disease and bronchiectasis.

Figure 1 provides an indication of common overlaps between several lung conditions which further highlights the need to consider and address chronic lung conditions holistically <sup>1</sup>. The figure illustrates examples of co-morbidity and misdiagnosis where consumers might suffer from multiple conditions and it might be difficult for clinicians to accurately distinguish one lung condition from another. The Figure is not inclusive of all chronic lung conditions.





\* not to scale

\*\* although sleep apnoea is represented in the figure, it is not addressed by this Model of Care

**Figure 1. Respiratory disease co morbidity**

Source: Page 5, AIHW (2010) Asthma, chronic obstructive pulmonary disease and other respiratory diseases in Australia<sup>1</sup>

## 2. Scope and context of the Chronic Lung Conditions Model of Care

### 2.1 What does the Model of Care cover?

For the purpose of this Model of Care, the term 'chronic lung conditions' refers to any chronic condition of the airways and other structures of the lung.

The Model of Care applies to people of any age living with one or more chronic lung conditions, or who are at risk of developing a chronic lung condition or co-morbidity. The Model of Care applies to Aboriginal people and people from culturally and linguistically diverse (CaLD) backgrounds, although it is recognised that targeted and culturally-specific services may be required for these groups.

Although the principles and service components of the Model of Care may apply to aspects of lung cancer care, management of cancer is within the scope of the [WA Cancer and Palliative Care Network \(CPCN\)](#), which is funded by WA Health to coordinate cancer services across WA. Prevention, particularly primary prevention is recognised as fundamental to addressing the burden associated with chronic lung conditions. Although primary prevention is addressed by this Model of Care, a more detailed exploration of this topic, particularly in terms of smoking prevention and cessation, is addressed by the *draft* WA Health Promotion Strategic Framework 2011-2016 and the Respiratory Health Network's [Framework for the Treatment of Nicotine Addiction](#).

### 2.2 Where does the Model of Care sit within the broader policy context?

Models of Care are critical to informing health service delivery in WA. For example, Models of Care are used in conjunction with other policies to develop funding models through [Activity Based Funding \(ABF\)](#) and identify appropriate service delivery strategies through the [Clinical Services Framework \(CSF\)](#) for WA.

The Chronic Lung Conditions Model of Care complements the existing respiratory Models of Care by describing their common core service components, and thus sits hierarchically above the [Asthma](#), [COPD](#) and [Cystic Fibrosis](#) Models of Care. Therefore the principles and service components of the Chronic Lung Conditions Model of Care may be applied to other chronic lung and airway conditions, which for example, may be co-morbidities, such as hayfever or sinusitis. The generic nature of the Chronic Lung Conditions Model of Care provides a blueprint for implementing consumer and carer-focussed health services for addressing more than one chronic lung condition and implementing more than one Model of Care. Importantly, the Model of Care does not replace condition-specific Models of Care.

The document which sits above the Chronic Lung Conditions Model of Care and all of the chronic condition specific Models is the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup>, which provides more detail of the relationship between the Models of Care, the Framework and the broader policy context including the Commonwealth and State Government health reforms. The Chronic Lung Conditions Model of Care should be read in conjunction with this [Framework](#).

### 3. Methodology

The Chronic Lung Conditions Model of Care Working Group, with representation from relevant professions and backgrounds, developed the Chronic Lung Conditions Model of Care in 2012. The development of the Model was informed by the [Asthma](#), [COPD](#) and [Cystic Fibrosis](#) Models of Care. It has also been developed in alignment with key state, national and international strategies and documents including:

- [WA Chronic Health Conditions Framework 2011-2016, Health Networks Branch, Department of Health WA](#) <sup>2</sup>
- [AIHW Asthma, chronic obstructive pulmonary disease and other respiratory diseases in Australia 2010](#) <sup>1</sup>
- [Framework for the Treatment of Nicotine Addiction, Respiratory Health Network, Department of Health WA](#) <sup>5</sup>
- WA Chronic Respiratory Disease Clinical Service Improvement Framework (CSIF) November 2005, Western Australian Health Respiratory Reference Group, Department of Health WA <sup>6</sup>
- [Draft WA Health Promotion Strategic Framework 2012-2016, Chronic Disease Prevention Directorate, Department of Health](#) <sup>7</sup>
- [WA Primary Health Care Strategy, Health Networks Branch, Department of Health WA](#) <sup>4</sup>
- [WA Chronic Conditions Self-Management Strategic Framework 2011-2015, Health Networks, Department of Health WA](#) <sup>3</sup>
- [National Tobacco Strategy 2004–2009, Ministerial Council on Drug Strategy](#) <sup>8</sup> and [WA Tobacco Action Plan 2007 - 2011, Department of Health WA](#) <sup>9</sup>
- [Australia: The Healthiest Country by 2020, National Preventative Health Strategy – the roadmap for action. 30 June 2009. National Preventative Health Taskforce, Commonwealth of Australia](#) <sup>10</sup>
- [National Partnership Agreement – Closing the Gap in Indigenous Health Outcomes 2009, Council of Australian Governments](#) <sup>11</sup>

Before finalising the MOC, the draft document was released for broad consultation to allow for further comments and feedback. The Respiratory Health Network Executive Advisory Group endorsed the final draft of the Model of Care.

## 4. The Chronic Lung Conditions Model of Care

The Model of Care is underpinned by four guiding principles which align with the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup> and have been identified through evidence provided in the existing Models of Care. The principles include:

- 1. Integration and service coordination**
- 2. Interdisciplinary care planning and case management**
- 3. Evidence-based, consumer-centred care**
- 4. Health literacy and self-management for chronic health conditions**

Based on these guiding principles, the Model of Care describes priority areas for action, strategies to address these priorities and recommendations for addressing service delivery for consumers with chronic lung conditions.

### 4.1 Priority areas

The priorities for action are consistent with the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup> and have been tailored to ensure they are relevant to chronic lung conditions. They focus on prevention, consumer and carer-focussed care, workforce, and system requirements to reduce the risk and rate of progression of disease, improving access, and overcoming the fragmented, duplicated and high cost service models<sup>12,13</sup>. The table below sets out priority areas and implementation strategies. All of the implementation strategies outlined in the [WA Chronic Health Conditions Framework 2011-2016](#) are also applicable.

**Table 1. Chronic lung conditions priorities and strategies**

Priority Areas	Strategies	Related MOC recommendations
<p><b>Prevention of chronic lung conditions</b></p>	<ul style="list-style-type: none"> <li>▪ Implementation of the draft <i>WA Health Promotion Strategic Framework 2011-2016</i> and the <a href="#">Framework for the Treatment of Nicotine Addiction</a> to prevent the uptake and reduce the prevalence of current smokers.</li> <li>▪ Promote a clear understanding and encourage compliance with air quality control legislation, guidelines and procedures to protect and maintain air quality in WA. Refer to the <a href="#">Department of Environment and Conservation</a> and the <a href="#">Department of Health Environmental Health Directorate</a> for relevant documents.</li> <li>▪ Minimise environmental and occupational exposure to health hazards that cause or exacerbate lung conditions through compliance with the <a href="#">Occupational Health, Safety and Welfare Act 1984</a> and other relevant guidelines and procedures of the <a href="#">Department of Environment and Conservation</a>. Examples of environmental and occupational risks include:               <ul style="list-style-type: none"> <li>▫ <a href="#">Environmental tobacco smoke</a> (<a href="#">Smoke Free WA Health Policy</a> and <a href="#">smoke free home and cars</a>)</li> <li>▫ <a href="#">Gas, vapours and fumes</a>      ▫ <a href="#">Dust and fibres</a> (eg. <a href="#">Asbestos</a>)      ▫ <a href="#">Legionella</a></li> </ul> </li> <li>▪ Give further consideration to the issue of carrier testing.</li> <li>▪ Prevent and treat high rates of pneumonia in Aboriginal populations.</li> <li>▪ Promote uptake of the influenza vaccine to reduce the number and severity of exacerbations in people with chronic lung conditions <sup>14</sup>.</li> <li>▪ Develop population-based health awareness and promotion campaigns and social marketing initiatives to address established modifiable risk factors for chronic lung conditions, primarily smoking.</li> <li>▪ Appropriate use of MBS items for 4 year old, 45-50 year old and Aboriginal Health Checks.</li> <li>▪ Identify those at risk through the <a href="#">WA Newborn Screening program</a>.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma Rec 1</li> <li>▪ COPD Rec 1</li> <li>▪ Nicotine Addiction Rec 1-7</li> </ul>
<p><b>Priority populations</b></p>	<ul style="list-style-type: none"> <li>▪ Priority populations are likely to require targeted strategies in each of the priority areas to ensure their specific needs are met. Priority populations include:               <ul style="list-style-type: none"> <li>▫ Aboriginal people</li> <li>▫ people in prisons</li> <li>▫ people with mental health issues,</li> <li>▫ people from low socioeconomic backgrounds</li> <li>▫ people from culturally and linguistically diverse backgrounds</li> <li>▫ pregnant women</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma Rec 1, 2</li> <li>▪ COPD Rec 1</li> <li>▪ Nicotine Addiction Rec 6</li> </ul>

Priority Areas	Strategies	Related MOC recommendations
<b>Consumer and carer participation, and consumer and carer-centred information and education</b>	<ul style="list-style-type: none"> <li>▪ Enable consumer and carer participation in health system planning and service design through the WA Respiratory Health Network.</li> <li>▪ Promote the importance of self-management and ensure self-management resources and support are available in English and non-English languages. Opportunities for integration with the WA Better Health Improvement Programme (BeHIP) should be explored. Activity relating to self-management should have a focus consistent with the <a href="#">WA Chronic Conditions Self-Management Strategic Framework 2011-2015</a>.</li> <li>▪ Partner with/promote awareness of services provided by relevant non-government and support organisations including: <ul style="list-style-type: none"> <li>▫ <a href="#">Asthma Foundation WA</a> (eg. <a href="#">Living Well With Asthma</a>, <a href="#">Community Group Education</a>, <a href="#">Newborns Asthma and Parental Smoking (NAPS) Project</a>)</li> <li>▫ <a href="#">Cystic Fibrosis WA</a> (eg. <a href="#">Comprehensive Home Care program</a>, <a href="#">school/ employment education</a>)</li> <li>▫ <a href="#">Australian Lung Foundation</a> (eg. <a href="#">Breathe Easy, Walk Easy</a>, <a href="#">COPD National Program</a>)</li> <li>▫ <a href="#">Lung Institute of WA (LIWA)</a> (eg. <a href="#">Lung Information and Friendship for Everyone (LIFE) Group</a>)</li> </ul> </li> <li>▪ Develop chronic lung condition service directories (including consumer and carer support groups) that are easily accessible by consumers and carers.</li> <li>▪ Develop and promote consumer and carer roadmaps for chronic lung conditions as a centralised source of information (eg <a href="#">Cystic Fibrosis WA Roadmap</a>). Also consider the development of guides for consumers and carers similar to the <a href="#">Cancer Council WA Understanding Chemotherapy Guide</a>.</li> <li>▪ Promote collaboration and partnerships with relevant organisations to develop population-based awareness campaigns encouraging individuals to seek early medical advice if they have respiratory symptoms, especially those who smoke.</li> <li>▪ Promote the dissemination and use of relevant chronic lung conditions resources including: <ul style="list-style-type: none"> <li>▫ <a href="#">Asthma Action Plan</a></li> <li>▫ <a href="#">COPD Action Plan</a></li> <li>▫ <a href="#">Would Home Oxygen Help Me? brochure</a></li> <li>▫ <a href="#">Living Life to the Full with a Chronic Condition Resource</a></li> </ul> </li> <li>▪ Explore alternative ways to improve accessibility of chronic lung conditions resources (ie develop smart phone applications for action plans)</li> <li>▪ Improve access and control of personal and health care information for consumers with chronic lung conditions by: <ul style="list-style-type: none"> <li>▫ Encouraging consumers to utilise hand held records</li> <li>▫ Facilitating the introduction of Personally Controlled Electronic Health Records (PCEHR)</li> <li>▫ Developing shared databases for patient and service provider management</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma Rec 4, 5, 8</li> <li>▪ COPD Rec 3, 7</li> <li>▪ CF Rec 5, 7</li> </ul>

Priority Areas	Strategies	Related MOC recommendations
<b>Service coordination, case management and multidisciplinary care planning</b>	<ul style="list-style-type: none"> <li>▪ Create smoking cessation coordinator/nurse positions to facilitate care transition services between hospital and community-based providers. Ensure all health professionals play a role in transitions, particularly in the absence of coordinators.</li> <li>▪ Improve understanding and awareness of the seasonal nature of exacerbation of lung conditions (ie cases more prevalent in winter) and ensure this is linked to vaccinations and case management planning to cope with increased demand at certain times.</li> <li>▪ Access to psychological services (eg cognitive behaviour therapy) in the prevention and management of panic attacks which often result in unnecessary ambulance and Emergency Department (ED) use.</li> <li>▪ Promote awareness of the importance of information exchange in the diagnosis, management and treatment of chronic lung conditions.</li> <li>▪ Ensure appropriate information communication technology (ICT) systems and relevantly trained individuals are available to facilitate data sharing between health settings and health professionals.</li> <li>▪ Encourage the introduction of more generic chronic lung conditions services rather than programs that just target one disease group, where possible.</li> <li>▪ Raise health professional awareness of the importance of referring patients to pulmonary rehabilitation.</li> <li>▪ Develop and implement referral pathways across the service transitions to facilitate a holistic multidisciplinary approach to service delivery. Improvements to all types of transition are needed including: <ul style="list-style-type: none"> <li>▫ Paediatric to adult services</li> <li>▫ Transplantation transition</li> <li>▫ Palliation transition</li> </ul> </li> <li>▪ Review existing policies and programs and consider broadening inclusion criteria to address lung conditions as a whole rather than individual conditions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma Rec 4, 8</li> <li>▪ COPD Rec 3, 4, 7</li> <li>▪ CF Rec 4, 6, 7, 10</li> </ul>
<b>Access to integrated and coordinated primary and community based care</b>	<ul style="list-style-type: none"> <li>▪ Identify and support health service providers to establish high quality lung function and diagnostic testing services in community settings, including mobile services.</li> <li>▪ Promote the importance of providing care in the community to avoid unnecessary tertiary hospital admissions, including through emphasising the role of relevant non-government organisations, support groups, allied health, nursing and programs such as Hospital in the Home (HITH).</li> <li>▪ Ensure the referral pathways and protocols for the management of chronic lung conditions includes the management of acute exacerbations through enhanced ambulatory care services, where feasible.</li> <li>▪ Promote resources that improve communication between consumers/carers and primary and community-based providers including: <ul style="list-style-type: none"> <li>▫ <a href="#">Asthma Action Plan</a></li> <li>▫ <a href="#">COPD Action Plan</a></li> <li>▫ <a href="#">Healthdirect</a></li> </ul> </li> <li>▪ Expand the range of community-based smoking cessation programs available, based on the finding from the evaluation of the Australian Better Health Initiative (ABHI) Nicotine Addiction Treatment Program.</li> <li>▪ Promote the establishment of pulmonary rehabilitation programs in secondary hospitals and community settings to improve access to all individuals with lung disease, particularly access to airway clearance.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma Rec 3, 4, 5, 9</li> <li>▪ COPD Rec 2, 3, 4, 7</li> <li>▪ CF Rec 6</li> </ul>

Priority Areas	Strategies	Related MOC recommendations
<b>Services are based on evidence-based Models of Care/guidelines</b>	<ul style="list-style-type: none"> <li>▪ Ensure lung health services adopt evidence-based Models of Care/guidelines and shared care models. This can be achieved through formalised partnerships between Health Services, private and non government service providers to develop integrated referral pathways and protocols to guide access to appropriate service delivery across the continuum of care.</li> <li>▪ Develop airway assessment algorithms and protocols to ensure the use of appropriate, high quality tests.</li> <li>▪ Implement the <a href="#">WA Paediatric Chronic Diseases Transition Framework</a> to facilitate optimal transition between paediatric to adult health services for young people with chronic lung conditions.</li> <li>▪ Promote high quality research to inform evidence based practice and clinical decision making, particularly those that involve the application of research tools and designs into service delivery and practices. Establishing and strengthening partnerships with research and development organisations and WA academics will underpin success in this area.</li> <li>▪ Systematic use of evidence-based measurements including spirometry, <a href="#">Fagerstrom Test for Nicotine Dependence</a> and carbon monoxide readers.</li> <li>▪ Improve the availability of ventilatory equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma Rec All</li> <li>▪ COPD Rec All</li> <li>▪ CF Rec All</li> <li>▪ Nicotine Addiction Rec All</li> </ul>
<b>Building the capacity of the workforce</b>	<ul style="list-style-type: none"> <li>▪ Provide ongoing education and training opportunities to develop a competent health workforce to provide health services to consumers with chronic lung conditions.</li> <li>▪ Facilitate and support education institutions and training organisations to ensure the curriculum for all lung health undergraduate and postgraduate programs meet national competencies and standards, including appropriate training in cultural security and competency. Other focus areas for training and education include: <ul style="list-style-type: none"> <li>▫ Brief tobacco intervention (eg. <a href="#">Online Brief Intervention Training Package</a>)</li> <li>▫ Chronic disease self-management training</li> <li>▫ End of life planning</li> <li>▫ Airway clearance techniques in pulmonary physiotherapy courses and medical courses</li> <li>▫ Self-management support</li> <li>▫ Diagnostic testing and interpretation</li> <li>▫ Management of acute exacerbations in the community</li> </ul> </li> <li>▪ Support the accreditation and monitoring of standards for health care organisations where appropriate.</li> <li>▪ Enhance the capacity of the community-based health workforce through the expansion of multidisciplinary teams with clearly defined roles and responsibilities.</li> <li>▪ Improve compliance with evidence based Models of Care/guidelines by ensuring they are easily accessible to all health professionals.</li> <li>▪ Ensure all generic chronic lung conditions training and curriculum content also includes capacity to build skills in the diagnosis, treatment and management of less common chronic lung conditions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma Rec 6</li> <li>▪ COPD Rec 6</li> <li>▪ CF Rec 8</li> <li>▪ Nicotine Addiction Rec 3</li> </ul>



## 4.2 Service components across the continuum of care

The Respiratory Health Network Models of Care identify the need for programs and services to be delivered across the *continuum of care*. They identify a number of important components across this continuum including:

- Minimise or delay the need for more complex or specialist level care through self-management, self-management support and joint responsibility of the consumer/carer and health care providers (i.e co-care)
- Integrated and coordinated care – strategies to achieve care transition between sectors are described in the [WA Primary Health Care Strategy](#)<sup>4</sup> and the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup>.
- Prevention – including primary prevention which is outlined by the draft WA Health Promotion Strategic Framework 2012-2016

Table 1 from the [WA Chronic Health Conditions Framework 2011-2016](#)<sup>2</sup> sets out the key service components of the **right care, at the right time, by the right team, in the right place, across the continuum of care** for chronic conditions experienced by Western Australians of all ages. These service components are all applicable to people with chronic lung conditions.

## 4.3 Recommendations

### Rec 1: Prevention

- Identify and minimise risk factors, particularly smoking, that cause or exacerbate chronic lung conditions in all settings.
- Target prevention strategies towards at risk populations including Aboriginal people, people in prisons, people with mental health issues, people from low socioeconomic backgrounds, people from culturally and linguistically diverse backgrounds and pregnant women are all priority populations.

### Rec 2: Early detection and diagnosis

- Increase access to chronic lung conditions diagnostic tools and services including spirometry, particularly in community settings.
- Provide training and ongoing clinical support to all diagnostic testing providers to ensure the highest quality of testing and interpretation of results is achieved.

### Rec 3: Management of conditions

- From diagnosis, all people with chronic lung conditions should have access to integrated and coordinated services across the continuum of care by primary, secondary and tertiary providers. To achieve this there is a need to:
  - Develop, distribute and actively encourage the use of action plans (eg. [COPD Action Plan](#) and [Asthma Action Plan](#)) as a self-management tool
  - Expand the range of community-based smoking cessation programs
  - Expand community and hospital-based pulmonary rehabilitation programs
  - Expand case management/care plans for people with chronic lung conditions
  - Improve access to services to assist with airway clearance in the community
  - Encourage the introduction of more generic services rather than programs that just target one disease group, where possible
  - Improve access to services for people in rural and remote areas
  - Address the shortage of ventilatory equipment

#### **Rec 4: Consumer and carer education**

- Ensure best practice, evidence based consumer and carer education is universally accessible state wide to all people with chronic lung conditions to support consumer and carer decision making and self-management of their condition. To achieve this there is a need to:
  - Improve access to peer support groups and self-management courses, training, information and resources.
  - Develop and promote consumer and carer roadmaps for chronic lung conditions as a centralised source of information.

#### **Rec 5: Referral pathways**

Develop and implement integrated referral pathways across the service transitions to ensure a holistic multi-disciplinary approach to service delivery. These should include:

- Paediatric/adolescent to adult services.
- Adult services to end stage/palliation.
- Inter-disciplinary - multi-disciplinary and medical specialists
- Discharge planning - hospital to community and GPs
- Community services to hospital services
- Hospital in the Home (HITH) and rehabilitation in the home (RITH)

#### **Rec 6: Guidelines and protocols**

- Service enhancement through the development of evidence based guidelines and protocols for the appropriate management of chronic lung conditions.

#### **Rec 7: Workforce strategies**

- Workforce education and training should be provided to all health professionals based on a minimum set of standards for training and syllabus content of chronic lung conditions and delivered through various media including online self-directed learning courses.
- Ensure all training and curriculum content that relates to chronic lung conditions also focuses on building skills in the diagnosis, treatment and management of less common chronic lung conditions.

#### **Rec 8: Information communication technology (ICT)**

- Support the development of ICT to enable multi-disciplinary care planning, supported by evidence based guidelines and patient pathways, to be integrated across primary, secondary and tertiary health services to facilitate appropriate data exchange with external health care providers (including Telehealth).
- All people with chronic lung conditions require better access to, and control of their personal and health care information including consumer hand held records and/or e-health records and shared databases for patient and service provider management.

## 4.4 System enablers

Addressing the priority areas and implementing services components effectively across the continuum of care requires a number of system enablers to ensure the systems, infrastructure, workforce and funding can be oriented to meet the demand for service provision. These enablers include:

- Quality and safety
- Financing and system performance
- Infrastructure including clinical service planning and strategic partnerships
- Information technology including eHealth
- Skilled workforce and capacity including education and professional development
- Research and innovation

A more detailed exploration of each of the above enablers can be found in the [WA Chronic Health Conditions Framework 2011-2016<sup>2</sup>](#).

## 5. Rationale supporting the Model of Care

### 5.1 The significance of chronic lung conditions

Lung conditions have a substantial impact on Australian society:

- About 6 million Australians reported suffering from a chronic lung condition in 2004–05.
- The Bettering the Evaluation of Care of Health (BEACH) survey of general practice (GP) activity indicated that respiratory problems were managed 19 times per 100 GP encounters in 2007–08, making it the lead group of problems managed <sup>15</sup>.
- In 2006, there were 10,863 deaths where a disease of the respiratory system was the underlying cause <sup>16</sup>.
- In 2006–07, there were 329,442 hospitalisations where the principal diagnosis was a disease of the respiratory system, about 4% of the total stays.
- Hospitalisation rates for lung conditions for Aboriginal people were three times as high compared to the non-Aboriginal population.

Source: Page 1, AIHW (2010) Asthma, chronic obstructive pulmonary disease and other respiratory diseases in Australia<sup>1</sup>

Refer to the [WA Chronic Health Conditions Framework 2011-2016](#) <sup>2</sup> for more information on the total health care expenditure and disease burden of chronic lung conditions compared to other lung conditions.

#### 5.1.1 Common risk factors and triggers

There are a number of risk factors which have been identified as triggering or contributing to the chronic lung disease. There is some uncertainty regarding the role of many factors as emerging evidence and research comes to light. Nevertheless, these factors are important for identifying people most at risk of developing chronic lung conditions and for whom prevention strategies may be effective. Table 7, identifies some of these risk and trigger factors, identifying those shared between conditions <sup>1</sup>.

**Table 2. Common risk factors and triggers**

Risk factors	Asthma	COPD	Bronchiectasis	Cystic fibrosis	Pneumococcal
<b>Genetic susceptibility</b>	✓	✓		✓(a)	✓
<b>Behavioural factors</b>					
Tobacco smoking	✓	✓	✓		
<b>Indoor allergens and air pollutants</b>					
House dust	✓				
Combustion by-products	✓	✓			
Volatile organic compounds	✓				
<b>Outdoor allergens and air pollutants</b>					
Pollens	✓				
Ambient air pollution	✓	✓			
<b>Occupational exposures</b>	✓		✓		✓(a)
<b>Dietary factors</b>					
<b>Excess body weight</b>	✓	✓			
<b>Medication</b>	✓				
<b>Infectious diseases</b>		✓	✓		

(a) Thought to be the sole cause of the condition

Trigger factors	Asthma	COPD	Bronchiectasis	Cystic fibrosis	Pneumococcal nosis
<b>Behavioural factors</b>					
Tobacco smoking	✓	✓	✓	✓	✓
Alcohol	✓				
Exercise	✓				
<b>Indoor allergens and air pollutants</b>					
House dust	✓				
Combustion by-products	✓				
Volatile organic compounds	✓	✓			
<b>Outdoor allergens and air pollutants</b>					
Pollens	✓				
Ambient air pollution	✓	✓	✓	✓	✓
The weather	✓	*			
<b>Occupational exposures</b>	✓	✓	✓	✓	✓
<b>Dietary factors</b>	✓				
<b>Excess body weight</b>	✓	✓			
<b>Medication</b>	✓				
<b>Infectious diseases</b>	✓	✓	✓	✓	✓

Source: Adapted from AIHW (2010) Asthma, chronic obstructive pulmonary disease and other respiratory diseases in Australia<sup>1</sup>

\* Anecdotal evidence suggests that weather can be a trigger factor for people with COPD.

## Acronyms

ABF	Activity Based Funding
ABM	Activity Based Management
COPD	Chronic Obstructive Pulmonary Disease
CSF	Clinical Services Framework
ED	Emergency Department
ICT	Information Communication Technology
MBS	Medicare Benefits Schedule
NAPS	Newborns Asthma and Parental Smoking Project
NIV	Non invasive ventilation
TSANZ	Thoracic Society of Australia and New Zealand

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