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# The needs of older people with asthma

**BACKGROUND**

Asthma is prevalent among elderly Australians but is often misdiagnosed and undertreated. Asthma presents with the same clinical features in the elderly as in the younger population.

**OBJECTIVE**

This article identifies current knowledge about the needs of elderly people with asthma, as well as the knowledge gaps currently existing in this area of health care.

**DISCUSSION**

A significant proportion of elderly people with asthma go undiagnosed. Elderly patients under-report symptoms and attribute breathlessness to age and other comorbidities. Other difficulties include impaired perception of asthma severity, poor medication adherence, physical disability, cognitive dysfunction, and a passive self management approach. These all contribute to poorer asthma outcomes among the elderly. The management of asthma among the elderly is likely to improve if specific needs are addressed with tailored educational interventions and appropriate care.

**Asthma is an inflammatory airway disease; airway hyper-responsiveness causes narrowing in response to a wide range of environmental stimuli such as allergens or exercise.<sup>1</sup> This leads to symptoms such as coughing, wheezing, breathlessness and chest tightness.<sup>1</sup> Asthma symptoms are usually associated with pulmonary airflow obstruction, which is often reversible with treatment.<sup>1</sup>**

An older patient is defined as a person aged 65 years and over. Only a small number of studies have looked at the specific needs of elderly patients with asthma.

Research indicates that despite the fact that the majority of patients indicate their asthma is well controlled and are satisfied with the asthma care provided to them,<sup>2,3</sup> many report ongoing asthma symptoms and exacerbations.<sup>2</sup> Clinicians often fail to address the different areas of asthma management when providing asthma education.<sup>2</sup>

A few studies have suggested that poor management of asthma is common in older patients and that this has a negative impact on quality of life (QOL).<sup>4-9</sup> It is important therefore to gain a better understanding about the specific needs of elderly patients and to develop educational interventions which can improve overall health status and QOL in this population group.

## Prevalence

The prevalence of asthma among Australians aged 65 years and over ranges from 7–15%, a rate similar to the rest of the adult population.<sup>10,11</sup> However, misdiagnosis and underdiagnosis are common in the elderly and it remains difficult to estimate the true prevalence in this group.<sup>5,9,11-14</sup>

## Diagnosis

Difficulties can occur when differentiating asthma from other diseases causing breathlessness in older people, especially chronic obstructive pulmonary disease (COPD) and heart failure.<sup>11</sup> Patients and physicians may attribute breathlessness to age alone.<sup>9,15</sup>

Clinicians should not rely solely on self reporting. Elderly patients may underestimate symptom severity, dismiss their symptoms altogether, or attribute symptoms to other causes, thereby under-reporting them to their GP.<sup>5</sup> Specific questioning about change to every day activities and QOL can help assess the impact of asthma symptoms in older patients. Given its high prevalence, asthma must always be considered as a cause of breathlessness.<sup>9</sup>

Spirometry is an important tool in the diagnosis and management of asthma<sup>16</sup> but is underused among elderly patients.<sup>17,18</sup> General practitioners often have problems

performing and interpreting the test, while elderly patients may have difficulty due to cognitive or physical disability<sup>17</sup> or poor test tolerance. Spirometry can also cause fatigue and dizziness.<sup>9</sup> Therefore these difficulties may reduce spirometry reliability among elderly patients.<sup>8</sup>

Peak expiratory flow (PEF) is easier to perform and better tolerated by elderly patients, but results must be interpreted carefully; PEF is not a sensitive measure of airway obstruction.<sup>9</sup>

## Mortality and morbidity

Most deaths attributable to asthma occur in the elderly population.<sup>10</sup> Clinical features and symptoms of asthma are the same in the elderly as in younger patients,<sup>10,15</sup> however, asthma severity is greater among the elderly.<sup>9</sup> In Australia, children under 4 years of age and those 65 years of age and over are most likely to be hospitalised after an asthma related emergency department visit and require the longest hospital stays.<sup>19</sup>

## Impact on the lives of elderly people

### Symptom awareness and treatment seeking behaviour

Awareness of bronchoconstriction has been shown to decrease with age, with elderly people having an impaired perception of the presence and severity of asthma.<sup>8</sup> Elderly patients may use different language to describe an asthma attack compared to the rest of the population.<sup>8</sup> Asthma sufferers often do not realise that their condition can improve over time with appropriate treatment and adherence.<sup>3</sup> The way in which older people recognise, assess and prioritise their symptoms is likely to affect their initial symptom presentation to their GP, as well as their adherence to their medication and asthma management plan.<sup>5</sup> Elderly people are less likely to actively seek out information about their medication and management.<sup>20</sup> They are also less likely to access emergency services when required, due to the perception that they are not deserving.<sup>8</sup>

### Quality of life

Asthma may have a negative impact on a patient's every day life including their finances, mobility and QOL.<sup>12,21,22</sup> In a Spanish study, people with asthma had a significantly worse

QOL compared to the rest of the population, and among adults with asthma, the elderly had the worst QOL overall.<sup>23</sup> Patients with severe asthma have poorer QOL and are more prone to suffer from symptoms of depression and emotional dysfunction.<sup>24</sup>

## Management

Effective asthma management in the elderly is influenced by: health beliefs, level of asthma education, comorbidities, language barrier, lifestyle, cultural values,<sup>25</sup> symptom interpretation, medication adherence, and medical care access.<sup>8</sup> Each of these may need addressing in order to achieve the best possible outcome.

### Medication adherence

Nonadherent patients with severe asthma show poor symptom control, increased rescue medication use, GP visits, hospital admissions and visits to an emergency department.<sup>26</sup> Older people often find it difficult to comply with medication advice and adherence to asthma treatment decreases with age.<sup>6,7</sup> Poor medication adherence in the elderly is related to cognitive impairment, physical disability and poor coordination.<sup>8</sup>

### Delivery systems

Inhaled corticosteroids are underused by elderly patients with asthma.<sup>4</sup> Poor coordination, hand weakness and arthritis should influence choice of inhaler device.<sup>27</sup> It is essential that clinicians check inhaler use regularly to ensure that older patients are receiving the prescribed dose of medication. Patients prefer to follow a simple treatment regimen with no more than two inhalers, preferably only one.<sup>3</sup> Large volume spacers can assist with medication delivery and studies suggest that older patients prefer to use these rather than a metered dose inhaler alone.<sup>8,9</sup>

### Side effects

Side effects create a major barrier to treatment adherence among elderly patients.<sup>8</sup> Elderly patients have more concerns about side effects induced by corticosteroids.<sup>8</sup> In general, asthma sufferers are more reluctant to take long term preventer medication compared to medication used for short term acute

episodes.<sup>2,3</sup> Polypharmacy increases the risk of poor adherence and adverse events among older patients.<sup>8</sup> To minimise interactions and side effects, physicians must thoroughly assess the need for each medication.<sup>5</sup>

## Self management

Studies have suggested that active asthma self management reduces morbidity and increases QOL when compared with passive management.<sup>28,29</sup> Older patients are more likely to accept a passive approach and are less keen to be involved or seek out information.<sup>30</sup> The number of patients willing to be involved in their own care declines with age.<sup>30</sup> In these circumstances, elderly patients may need education and encouragement to take on a more active role or clinicians may need to adopt a more directive approach.

## Education/intervention programs

Education programs should be tailored to the learning needs of elderly patients. They should address known barriers to optimal asthma treatment, as well difficulties specific to this age group.

Self management interventions which promote self monitoring, regular medical review, and the use of a written action plan, consistently improve a number of different health outcomes including lung function, QOL, days absent from employment, hospitalisation and emergency department visits.<sup>29,31,32</sup> Reinforcement over time can help improve patient knowledge and self management behaviours.<sup>28</sup>

More research is required to assess how to tailor education programs specifically to elderly patients with asthma. These interventions must address the specific needs of elderly people and accommodate the cognitive and sensory impairment of some patients<sup>5</sup> in order to achieve optimum outcomes.

## Conclusion

The elderly population is a specific group with particular needs that must be addressed in order to provide appropriate asthma care. Asthma causes higher morbidity and mortality rates among the elderly population. Appropriate education and management strategies may help to reduce these. Patients are often

misdiagnosed, due to both an impaired patient perception of symptom severity, and failure of physicians to come to an accurate diagnosis.

Improvement in self management skills may enhance the health status of elderly patients. Educational programs suitable for this age group, taking specific learning requirements and self management perspectives into account, should be developed for maximal benefit. More research into the needs of elderly people with asthma is necessary, including the development of a valid, reliable questionnaire designed to collect data on asthma care needs of elderly people. This information would facilitate the development of suitable programs and management approaches for older patients in order to achieve optimal health outcomes.

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