

# How do the psychosocial consequences of ageing affect asthma management?

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It is well recognised that the ageing of the Australian population will bring an increase in the number of people with age-related diseases such as dementia, which is estimated to affect 2.6% of people aged 65–79 years and 12.0% of those aged 80 and over.<sup>1</sup> Less well recognised is the fact that there will also be an increasing number of people with conditions like asthma, which can occur anytime in the lifespan but require special management considerations in older age. Asthma is estimated to affect around 5%–10% of people aged 65 years and over,<sup>2–4</sup> and the proportion of people with asthma who are in this age group is set to increase. Thus it is important to understand the consequences of ageing and how these consequences affect the management of asthma in older people. It is also important to realise that, while the biological changes of ageing can translate into reduced physical health and a higher risk of disease and disability, many problems related to ageing are social rather than biological.

## Comorbidity

The older person with asthma can be expected to have many comorbid conditions that can alter the natural history of asthma, complicate management, and increase the risk of drug interactions.<sup>2</sup> In one study,<sup>5</sup> among 231 older people with asthma, 60% also had arthritis, 29% had hypertension and 28% had heart disease (including angina and cardiac failure). This group was also more likely than other people of similar age to experience anxiety and depression, but not memory impairment.

## Health-related quality of life and disability in activities of daily living

Health-related quality of life has an importance for older people beyond diagnosed disease. For example, the Australian Longitudinal Study on Women's Health<sup>6</sup> shows that, although women in their late 70s have a high prevalence of clinical conditions and have reasonably high medication and health care use, they also report good quality of life. The study also showed that, while women's physical-health related quality of life declines with older age, mental-health related quality of life is more stable. However, asthma is one factor that contributes significantly to poorer health-related quality of life in older age.<sup>7</sup> It is associated with symptoms of depression, limitation of activities of daily living, and daytime sleepiness.<sup>4</sup> These states may further complicate asthma management by limiting physical activity and by interfering with adherence to management plans.

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## ABSTRACT

### What we need to know

- How do social, physical and psychological factors affect asthma and asthma management in older people? How can we minimise their impact and enhance quality of life for older people with asthma?
- Does inequity based on age, sex, socioeconomic status and/or area of residence affect accessibility, quality and effectiveness of care for older people with asthma?
- What is the extent of undiagnosed and undertreated asthma among older people, and what are the barriers to symptom reporting, diagnosis and treatment?

### What we need to do

- Promote equity of access to diagnosis, investigation and treatment across age, sociodemographic and geographic groups.
- Encourage older people to seek help for symptoms and exacerbations.
- Encourage quality use of medicines among older people with asthma and comorbid conditions and disabilities.
- Promote healthy behaviours for older people with asthma (eg, smoking cessation, exercise, vaccination, better nutrition).
- Develop guidelines that account for complexities of older age and that are framed to achieve optimal quality of life for people with asthma.

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Age-associated decline in physical abilities may also affect asthma management. While around 10% of men aged under 65 years have some form of disability, over half of men aged 75–84 and about 80% of men aged 85–94 are affected by disability.<sup>8</sup> In women, disability rates are even higher. Among women aged 70–75 years, about 13% have difficulty hearing, 18% have difficulty seeing newsprint (even with glasses), 8% have difficulty shopping for food, and 4% have difficulty doing the cooking and feeding themselves.<sup>6</sup> Also, while 51% of women in this age group drive themselves as their main means of transport, 11% are unable to use public transport because of poor health.<sup>6</sup>

## Health behaviours

At all ages, asthma can be greatly affected by health-related behaviours. In older age, these behaviours take on additional importance because of accumulated effects over the lifespan, impact on multiple systems, and diminished physiological reserves. For example, smoking can complicate asthma, and also increases the risk that a person will have comorbid conditions. While few older women smoke (8% of those aged  $\geq$  70 years), about 14% of men aged 70 years and over are current smokers and 54% are ex-smokers.<sup>9</sup> Even at older ages, there are health and survival benefits of quitting smoking.<sup>10</sup>

Exercise is another behaviour that has an impact on asthma management. Chronic disease is one factor that reduces exercise participation, while social support can enhance participation.<sup>11</sup>

Vaccination against influenza and pneumococcal infection is another means of protecting the health of older people, especially those with asthma. However, vaccination coverage among older people in Australia is low.<sup>12</sup>

Poor nutrition can affect respiratory muscle strength, immune function and electrolyte levels. Malnutrition is a common problem among older Australians, with up to 30% of people in the community aged 60 years and over being at risk of malnutrition.<sup>13</sup>

Compliance with medication advice may be more difficult in older people.<sup>14</sup> Adherence to asthma treatment guidelines has been found to decrease with age and comorbidity and to be lower in smokers.<sup>14</sup> Some older people have difficulty using inhaler devices, a difficulty that may be exacerbated by arthritis, tremor, reduced visual acuity, cognitive problems, and medication complexity,<sup>3</sup> as well as psychosocial factors, including social isolation and caring responsibilities.<sup>3,14</sup>

Older people are also more likely to delay seeking treatment for acute exacerbations of asthma.<sup>3,15</sup> This is partly because they attribute wheezing and breathlessness to “age”, and partly because of age-related reduced awareness of symptoms of bronchoconstriction.<sup>3,15</sup>

### Social roles

As well as physical changes, ageing is associated with many changes in social relationships. Many older people live alone, with only occasional care from family or community services, and must therefore manage their own medications, monitor symptoms and seek help during acute exacerbations. The situation is not equal for men and women. Single older men are more likely to be admitted to residential care than single older women, and married men are more likely to remain living in the community than married women.<sup>16</sup> Older people living alone in their own homes are likely to have more difficulty managing on their income than older couples. For those with asthma, these financial limits may restrict options for purchasing nebulisers and other management devices.

Married older women are often caring for their spouse as well as managing their own illness. This caring responsibility can affect the woman's own health, and may be associated with poorer adherence to asthma medication regimens.<sup>14</sup>

Beyond marriage, most older people in Australia have reasonably high levels of social interaction with family and friends.<sup>17</sup> However, older people with respiratory disease have a higher risk of social isolation and loneliness.<sup>18</sup> It is thought that social interaction may protect against ill health (through positive effects on cardiovascular, endocrine and immune systems) and improve quality of life among people with chronic disease.<sup>19</sup> In contrast, isolation is associated with lower levels of adherence to medication regimens and poorer health outcomes.<sup>14</sup>

Living arrangements and transport can also influence asthma exacerbation and management. People living with pets, or those who have moved house, may be encountering new or increased levels of allergens. People with transport difficulties may have problems accessing health care.

### Inequity and ageism

Socioeconomic disadvantage is associated with greater health risks from smoking, excessive alcohol intake, physical inactivity and obesity, together with poorer health-related quality of life and higher mortality rates.<sup>1,20</sup> Inequities in these areas can persist into older age,<sup>20</sup> and are likely to influence asthma management and increase the probability of comorbid and complicating conditions.

Moreover, access to health care is not evenly distributed geographically. Although people in rural areas have a higher relative risk of developing asthma, the shortage of health care providers in many rural areas of Australia<sup>21</sup> means that people in rural areas may receive less specialised care for their asthma.

There is also a risk of inequity in health care on the basis of age. It is believed that asthma is underdiagnosed in older people and that asthma symptoms in older people are more likely to be attributed to age-related diseases, such as cardiac failure or chronic obstructive pulmonary disease.<sup>4</sup> There is also evidence of a reluctance to investigate respiratory symptoms in older people.<sup>3</sup> Even when asthma is diagnosed, older people may not get appropriate treatment, such as inhaled steroid therapy, despite evidence that such treatment can reduce asthma-related hospital admissions and death.<sup>4</sup>

### Conclusion

Older people with asthma are likely to have comorbid conditions and health risks that complicate their asthma and magnify its impact on their quality of life. They are also likely to have to manage their medication on their own, in spite of physical and psychosocial factors that can make management and monitoring of their condition more difficult. Guidelines for asthma management in older age need to account for these complexities. Ideally, such guidelines should be framed to achieve optimal quality of life for the older person with asthma, not just management of the disease.

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