

## Asthma in the elderly and aging societies in Asia Pacific

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Asthma is a chronic inflammatory disease of the airway with airway hyperresponsiveness and constriction. Asthma occurs globally and affects people of all ages. The world's population is increasingly becoming older. They are also facing increase in non-communicable diseases including asthma and chronic obstructive pulmonary disease.

### Global facts for asthma (from asthma facts [1] and key messages [2])

- Some 235-300 million people currently suffer from asthma. The prevalence of asthma has increased following transition to a modern, urban lifestyle [3, 4].
- Globally, 250,000 people die of asthma every year.
- Asthma deaths are related to lack of proper treatment.
- In Japan, 90% of deaths from asthma occur in people 60 years and over [5].
- Most asthma-related deaths occur in low- and lower-middle income countries.
- Appropriate management of asthma can enable people to enjoy a good quality of life.
- Treatment for asthma is not available to all people who have the disease.

- The elderly with asthma often have irreversible airway obstruction due to severe airway remodeling or chronic obstructive pulmonary disease [6].

### Selected facts on global aging [7]

The world will soon have more older people than children. Since asthma affects all ages, the number of elderly with asthma will also increase and therefore, caring for the elderly is more and more important.

- The world's elderly population - people 60 years of age and older- is the fastest growing age group. Aging is a global phenomenon and increases in the population of the elderly is occurring in parallel with rapid urbanization. In 2007, more than half of the world's population lives in cities.
- By 2050, close to 80% of all deaths are estimated to occur in people over 60 years of age
- Health expenditures increase with age but are concentrated in the last two years of life, regardless of how old someone is. As people live longer, it is important to ensure these added years are healthy so that health-care costs can be kept manageable.

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**Asthma management guidelines [4, 8-10]**

In 1993, Global Initiative for Asthma and the Japanese Asthma Prevention and Management Guidelines (JGL) were initiated.

The effectiveness of JGL can be evaluated by a decrease in deaths from asthma after its inception compared to prior implementation of the JGL. In Japan, deaths from asthma started to decrease continuously around 1997 through 2010. The total number of deaths from asthma between 1993 to 1998 was approximately 5,900, and it was as low as 1765 in 2010 [5, 8]. Implementation of asthma management guidelines should be effective in decreasing deaths from asthma in developing countries in the Asia Pacific.

**Burden of asthma in the elderly of the Asia Pacific [11]**

Asia Pacific is a developing area with some developed countries. Economic progress can increase the elderly population by a prolonged life expectancy.

Prolonged life expectancy and urbanization are thought to increase asthma in the elderly.

Active elderly, non-asthma or asthma, represents a resource of family life, community and economics. The elderly can contribute to activities in society through their many experiences. Active elderly asthmatics can manage themselves with less medical expenses. Indeed, emergency treatment or hospitalization is expensive [4, 12]. Treatment of asthma in the elderly is similar for all other ages. Elderly patients and their families should be educated to adhere to medications for asthma as well as control environmental pollution [6, 13]. Regional support and continued care of elderly asthmatics should be encouraged by following asthma managing guidelines [14].

**REFERENCES**

1. WHO media centre fact sheet N°307: Asthma (key facts). Available from: <http://www.who.int/mediacentre/factsheets/fs307/en/index.html>.
2. World Health Organization. Global surveillance, prevention and control of chronic respiratory diseases, a comprehensive approach. Geneva: WHO; 2007.
3. Masoli M, Fabian D, Holt S, Beasley R. The global burden of asthma: executive summary of the GINA Dissemination Committee report. *Allergy* 2004;59:469-78.
4. Global Initiative for Asthma (GINA). Global Strategy for Asthma Management and Prevention. Revised 2006. Available from: <http://www.seicap.es/documentos/archivos/GINA2006general.pdf>
5. Japanese Society of Allergology, Asthma Guideline Committee. Asthma Prevention and Management Guidelines 2006. Tokyo: Kyowa Kikaku; 2006.
6. Reed CE. Asthma in the elderly: What we do not know yet but should find out. *J Allergy Clin Immunol* 2011;128:S1-3.
7. WHO features fact files: 10 facts on ageing and the life course. Available from: <http://www.who.int/features/factfiles/ageing/en/>.
8. Makino S, Sagara H. Evolution of asthma concept and effect of current asthma management guidelines. *Allergy Asthma Immunol Res* 2010;3:172-6.
9. Makino S, Adachi M, Ago Y, Akiyama K, Baba M, Egashira Y, Fujimura M, Fukuda T, Furusho K, Iikura Y, Inoue H, Ito K, Iwamoto I, Kabe J, Kamikawa Y, Kawakami Y, Kihara N, Kitamura S, Kudo K, Mano K, Matsui T, Mikawa H, Miyagi S, Miyamoto T, Morita Y, Nagasaka Y, Nakagawa T, Nakajima S, Nakazawa T, Nishima S, Ohta K, Okubo T, Sakakibara H, Sano Y, Shinomiya K, Takagi K, Takahashi K, Tamura G, Tomioka H, Yoyoshima K, Tsukioka K, Ueda N, Yamakido M, Hosoi S, Sagara H. Epidemiology of asthma. *Int Arch Allergy Immunol* 2005;136 Suppl 1:5-13.
10. Makino S, Adachi M, Ago Y, Akiyama K, Baba M, Egashira Y, Fujimura M, Fukuda T, Furusho K, Iikura Y, Inoue H, Ito K, Iwamoto I, Kabe J, Kamikawa Y, Kawakami Y, Kihara N, Kitamura S, Kudo K, Mano K, Matsui T, Mikawa H, Miyagi S, Miyamoto T, Morita Y, Nagasaka Y, Nakagawa T, Nakajima S, Nakazawa T, Nishima S, Ohta K, Okubo T, Sakakibara H, Sano Y, Shinomiya K, Takagi K, Takahashi K, Tamura G, Tomioka H, Yoyoshima K, Tsukioka K, Ueda N, Yamakido M, Hosoi S, Sagara H. Pharmacologic control of asthma. *Int Arch Allergy Immunol* 2005;136 Suppl 1:14-49.
11. Makino S, Sagara H. Present status of prevalence and management of chronic respiratory disease in Asia-Pacific. Osaka: Elsevier Japan; 2006.
12. Chuesakoolvanich K. Cost of hospitalizing asthma patients in a regional hospital in Thailand. *Respirology* 2007;12:433-8.
13. Makino S. Elderly asthma. *Geriat Med* 2010;48:1389-92.
14. Hong JS, Kang HC, Kim J. Continuity of care for elderly patients with diabetes mellitus, hypertension, asthma, and chronic obstructive pulmonary disease in Korea. *J Korean Med Sci* 2010;25:1259-71.