Asthma is a chronic lung disease that causes recurring episodes of wheezing and breathlessness and makes breathing difficult. Certain groups of people are at higher risk for developing asthma. They may also be more likely to experience risk factors that make asthma worse. In Oregon, the prevalence of asthma is 70% higher among those on the Oregon Health Plan (OHP) compared to people with other health insurance, such as insurance through an employer or Medicare (Figure 1).

**Risk factors**

There are many causes contributing to the disparity in asthma experienced by those on OHP. OHP makes medical care affordable for those with lower incomes.(2) The percentage of people on OHP with lower socioeconomic status is 56%, compared to 14% for those on other health insurance plans (Figure 2). People with lower incomes are more likely to live in substandard housing, smoke, and have higher rates of illness.(3) These are all risk factors that make asthma worse.

When a person has asthma, certain exposures and conditions can trigger an attack or cause symptoms to become worse. Some common risk factors include smoking or secondhand smoke. Another risk factor is being extremely obese. Still other risk factors are exposure to allergens and poor air quality, including mold, irritants, or pet dander. In addition, access to affordable medical care and medications contributes to effectively people with asthma can take care of themselves. OHP members that have asthma are more likely to experience certain risk factors that make asthma worse. Among people with asthma, those on OHP are more than two and a half times as likely as those with other insurance to smoke cigarettes or have exposure to secondhand smoke (for non-smokers). They are also more than one and a half times as likely to be extremely obese (Figure 3).(4)
Costs and Hospitalizations

Going to the emergency department (ED) or hospital because of asthma often means it is poorly controlled. Proper use of medicine and limiting exposure to asthma triggers can reduce acute asthma events. The rate of asthma-related hospitalizations for OHP members is 80% higher compared to people with other insurance plans (Figure 4). In addition, the percentage of asthma-related ED visits is 170% higher for those on OHP (Figure 5). Treating asthma in the hospital is expensive. In 2014, the cost of asthma-related hospitalizations for those on OHP was more than $6 million.

Medications

Prevention can often help to avoid emergency department and hospital visits for asthma. Prevention can come through guideline-based asthma care, access to and use of appropriate control and rescue medications, and community support. People with asthma should receive self-management education and a written asthma action plan. They should also regularly review medications and asthma control with a medical practitioner.

All people with persistent asthma should receive control medications. These medications help manage disease and reduce the chance of serious attacks. However, only six out of 10 OHP members with persistent asthma received at least one control medication in 2014 (Figure 6).

Rescue medications provide quick relief when a person is experiencing difficulty breathing or other symptoms of an asthma attack. However, overuse of rescue medications can cause long-term health effects. For example, there can be long-lasting changes in the lung airways. Unfortunately, nearly one quarter of OHP members with persistent asthma filled more than six prescriptions for rescue medications in 2014 (Figure 6). When a person fills this many prescriptions in a single year, it may indicate their condition is poorly-controlled.
Physicians and clinics can use pharmacy data about rescue medication use to talk with patients about controlling their asthma and appropriate self-management strategies.

**Self-management**

Asthma care experts recommend that all patients discharged from the hospital or ED receive a referral for a follow up appointment. Experts also recommend that all patients have a written asthma action plan.(8) An asthma action plan is a written plan created between a doctor and patient to help control their asthma.

For the OHP population:
- More than six out of 10 don’t have an asthma management plan, or don’t know if they have one.(9)
- Only four out of 10 people that went to ED for asthma had an outpatient follow-up visit within 30 days.(7)

**Improving the quality of life for Oregonians with asthma**

People with asthma can live healthy, active lives. They can manage and control their asthma symptoms. The Oregon Asthma Program (OAP) aims to ensure all Oregonians with asthma live, work, play and learn in communities that support health and optimal quality of life. The OAP improves the quality of life for Oregonians with asthma by:

- **Protecting people** from secondhand smoke where they live, work, learn and play. This includes housing, worksites, schools, daycares and health care facilities.
- **Increasing awareness** and access to community-based programs that help people manage their asthma. Community-based programs include the Oregon Tobacco Quit Line and chronic disease self-management programs.
• **Reducing environmental health risks** and asthma triggers. Specifically, to improve outdoor air quality with OAP collaborates Environmental Public Health and the Department of Environmental Quality.

Quality health care, correct medications, good self-management skills and policies to reduce environmental triggers can help people with asthma live healthy and productive lives.

**Endnotes**

6. Oregon Health Authority. Oregon Hospital Discharge Dataset. 2014. Unpublished data. (Estimates are age-adjusted to the 2000 standard population.)
7. Oregon Health Authority. Oregon All Payers All Claims Database. 2014. Unpublished data. (Estimates are age-adjusted to the 2000 standard population.)

You can get this document in other languages, large print, braille or a format you prefer. Contact Health Promotion and Chronic Disease Prevention Section at 971-673-0984 or email HPCDP.Surveillance@dhsoha.state.or.us. We accept all relay calls or you can dial 711.