

A View of Asthma in Oregon

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In This Issue

Emergency Department Visits for Asthma: National Scope 1

Emergency Department Visits for Asthma: Oregon 2

Risk Factors for Emergency Department Visits for Asthma 3

Preventing Emergency Department Visits for Asthma 3

References 4

NOTES: Some emergency department visits for asthma are for routine care rather than urgent care. This document does not distinguish between such visits, because the data-sets cited are either unable to distinguish between these types of visits, or have not been analyzed in that way.

National rates are age-adjusted to the 2000 U.S. population.

“An emergency department visit for asthma is a loud and clear signal that a patient’s asthma is out of control. That 11% of insured Oregonians with asthma have at least one emergency department visit per year for asthma is too many. This shows a need for better management for all patients with asthma.”

- Mel Kohn, M.D.

Oregon State Epidemiologist

Emergency Department Visits for Asthma: National Scope

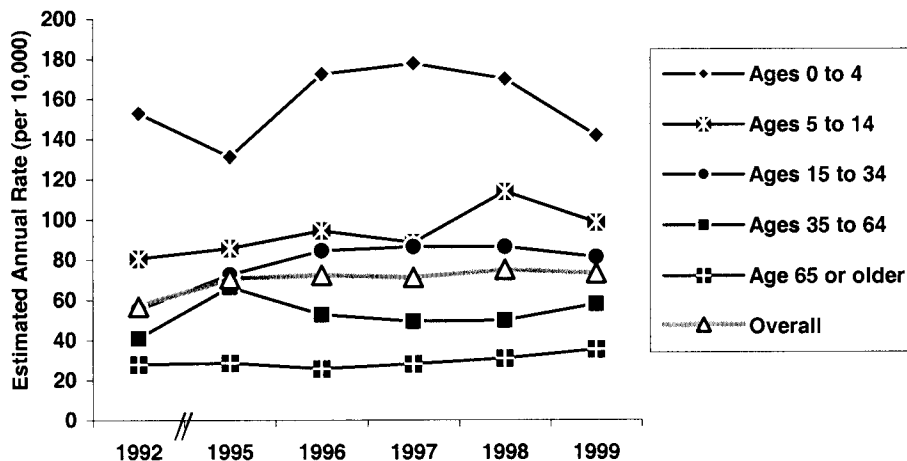
In 2000, nearly two million emergency department (ED) visits in the United States were for asthma [a]. These represented 1.7% of all ED visits that year, and 14.4% of ED visits that had a primary diagnosis of respiratory disease (ICD-9-CM of 460-519).

Asthma was the twelfth most common diagnosis for ED visits in 2000. Of these top diagnoses, no other could be as easily prevented as an asthma attack. In addition, experts agree that the ED is not the best place to get appropriate asthma care. Visiting the ED for an asthma attack contributes to disjointed care. ED visits also do not solve the underlying problem in many

cases. Relapse estimates for adults who receive care for asthma in an ED range up to 45% within 8 weeks [b], and estimates for kids are equally discouraging.

As illustrated in Figure 1, the overall rate of ED visits for asthma increased in the U.S. from 1992 to 1995, but has hovered around the same rate since then. In 1999, the rate of ED visits for asthma was 73.3/10,000 persons. During the same year, the asthma ED visit rate for African Americans (174.3/10,000) was almost three times that for whites (59.4/10,000) (see April 2002 issue of *A View of Asthma in Oregon* on the web at <http://www.oshd.org/asthma/view/>) and children under 5 years old had the highest rates of any age group (141.8/10,000). Both of these trends have been consistent since data collection began in the early 1990's.

Figure 1. Age-Adjusted Annual Rate of ED Visits for Asthma by Age: U.S., 1992-1999 [c]



Emergency Department Visits for Asthma: Oregon

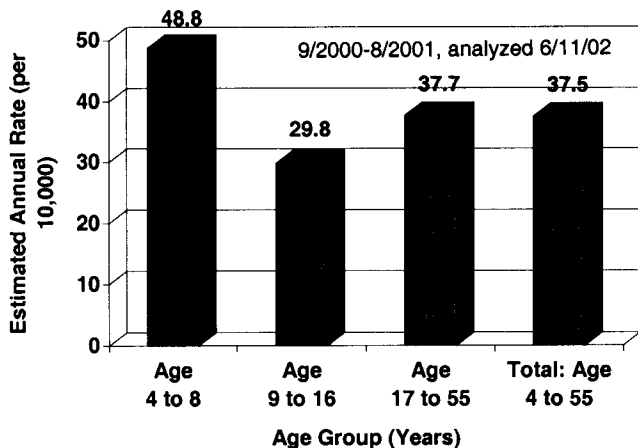
Currently ED visits, unlike hospitalizations, are not routinely reported to the Oregon Department of Human Services. However, funding received by Oregon in recent years intend to make these data available in the future. Oregon data in this report, though, exist as a result of a unique collaboration between the Oregon Asthma Program and many of Oregon's health plans and systems.

This collaboration, called the Asthma Data Workgroup (ADWG), presently consists of representatives from CareOregon, Kaiser Permanente NW, Legacy Health Systems, the Office of Medical Assistance Programs, ODS Health Plans, Mid-Valley Independent Physicians Association, Providence Health System, and Regence BlueCross BlueShield of Oregon.

Data presented in this section, both commercial and Medicaid, are aggregated from five of the health plans that participate in the ADWG. These data represent 752,489 insured Oregonians between the ages of 4 and 55, measured between 9/1/2000 and 8/31/2001, who had at least six months of continuous enrollment in the health plan during that time.

Although data depicted in this section are not representative of Oregon as a whole, they are fairly representative of Oregonians with health insurance who live in the Portland, Salem or Eugene metropolitan areas. As routine ED surveillance data become available in the future, they will be reported.

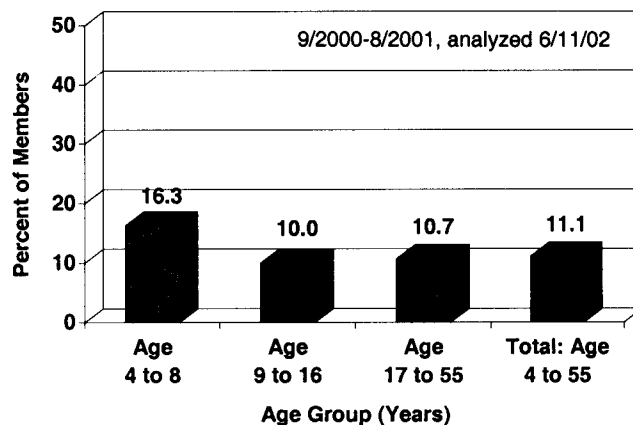
Figure 2. Rate of ED Visits for Asthma, by Age, Aggregated Data from 5 Oregon Health Plans



As illustrated in Figure 2, the health plans have an overall asthma ED visit rate of 37.5 visits per 10,000 members aged 4 to 55. This rate differs significantly from the national rate described in the previous section (73.3 per 10,000 in 1999), probably because these numbers only reflect insured individuals who are more likely to have access to primary care services and asthma medications.

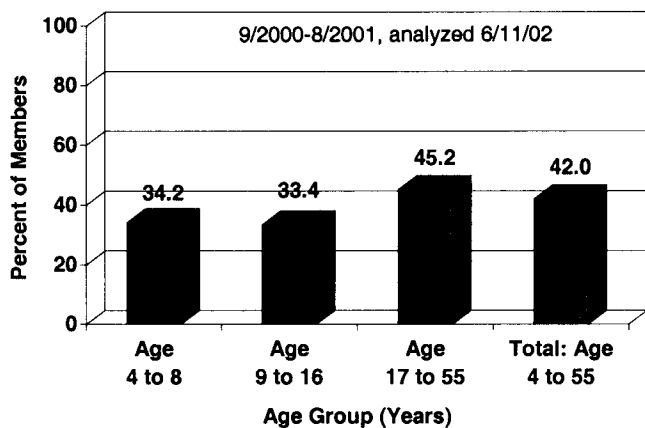
More than 10% of the plans' members with asthma aged 4 to 55 had one or more ED visits for asthma during the measurement year (Figure 3). This varied by age with a greater percentage of the youngest age group of asthmatics experiencing one or more ED visits (16.3%).

Figure 3. Percent with Asthma, Who Have ≥ 1 ED Visit With Primary Diagnosis of Asthma, by Age, Aggregated Data from 5 Oregon Health Plans



The ADWG's primary goal is to determine how to best measure the indicators in the *Guide to Improving Asthma Care in Oregon* (The Guide) [d], which is a set of population-based indicators that can be used to measure asthma care based on the standards for clinical care described in the National Asthma Education and Prevention Program's (NAEPP) 1997 *Guidelines for the Diagnosis and Management of Asthma* [e]. In addition to looking at the number of ED visits, the ADWG has also focused on the percent of people who receive outpatient follow up within thirty days of an asthma ED visit. Timely follow up is important, as research suggests that a significant proportion of those who visit the ED for asthma experience a relapse within a relatively short period.

Figure 4. Percent With ED Visit for Asthma Who Had Follow Up Visit \leq 30 Days, by Age, Aggregated Data from 5 Oregon Health Plans



The NAEPP Guidelines recommends a follow-up visit within five days of an ED visit for asthma. In Oregon, a mere 42% of health plan members with asthma who visited the ED had a follow-up outpatient visit *within 30 days* (Figure 4). Follow up varied considerably between the age groups. The two youngest age groups (4 to 8, 9 to 16) had timely follow-up visits about a third of the time, but the 17 to 55 age group had timely follow up about 45% of the time.

These data, which represent insured Oregonians, suggest substantial room for improvement. Similar measurements in the general Oregon population would more than likely reveal an even larger gap.

Risk Factors for Emergency Department Visits for Asthma

Many studies have looked at risk factors for ED use for asthma among children, undoubtedly because their ED visit rates are high. Children with asthma on Medicaid use the ED more frequently than children with asthma who have other insurance [f]. In part, this may be due to a lack of continuity of care, particularly the lack of a single primary care provider.

Other studies have linked maternal depressive symptoms to increased ED use in some children [g]. In children who were part of a large HMO, previous hospitalizations and ED visits, six or more beta₂-agonists refills in the past six months, and having three or more physicians prescribing asthma medicine in the last six months were predictive of greater risk of ED visits [h].

For adults, studies have identified poorly controlled asthma as a strong risk factor for obtaining ED care for asthma. Signs of poorly controlled asthma are waking

at night from asthma, prior ED visits or hospital admissions for asthma, and a greater reliance on rescue (beta₂-agonist) medicines.

Some studies have identified psychosocial risk factors for ED use as well. The feeling that a person's asthma limits their lifestyle, even between bouts of asthma, was the best predictor of ED use in one such study [i]. Another found that people who reported more depression and expected asthma treatment to cure their asthma were more likely to seek urgent care for asthma (nonroutine office visits and hospitalizations, as well as ED visits) [j].

Recent research suggests that some people with asthma may not accurately perceive how limited their respiratory function is (technically, low "perception of dyspnea"), and this subset of asthmatics may be more likely to obtain asthma care in the ED [k].

Preventing Emergency Department Visits for Asthma

For optimal asthma management, health care providers, people with asthma, and their families must work together. With proper medication, reduction or elimination of exposure to triggers, and appropriate self-monitoring, the majority of ED visits for asthma can be avoided. When a patient's asthma does become so severe as to require an ED

visit, it is as an opportunity for ED providers to discuss strategies to prevent future life-threatening attacks.

Discussion begun in the ED should be reinforced during a follow-up medical appointment within the next five days. The NAEPP Guidelines recommends that the ED notifies the patient's primary care provider (PCP) of the visit, and ensures that a follow-up outpatient appoint-

ment is scheduled to occur within five days. Patients without PCP's should be referred to appropriate clinics, and given assistance with making an appointment. At the follow-up visit, the provider should review the pa-

tient's medications, spacer and inhaler technique, and assure that the patient has, and understands, an up-to-date asthma action plan.

References

Listed below are the primary sources used for this issue of "A View of Asthma in Oregon." If you would like information on additional sources regarding emergency department visits for asthma, please contact the OAP.

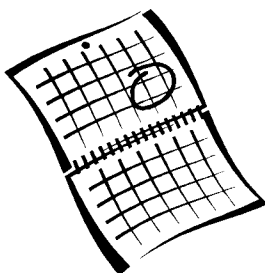
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- [k] Magadle R, Berar-Yanay N, Weiner P. 2002, "The risk of hospitalization and near-fatal and fatal asthma in relation to perception of dyspnea", Chest, vol. 121, no. 2, 329-333.

If you have questions about your or your child's asthma, or want to learn how to better manage your disease, your doctor, nurse or other health professional is an excellent resource for asthma information. Please speak with him or her, or call the Oregon Asthma Program at (503) 731-4025.

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Website: www.oshd.org/asthma/
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