



Healthy People 2010 Asthma Objectives

December 2009 Update

Healthy People 2010 is a set of national health goals focusing on disease prevention and health promotion to be reached by the year 2010. The following are the *Healthy People 2010* goals relating to asthma, along with Minnesota's status on meeting these goals. The accompanying table lists the latest Minnesota data, U.S. baseline data for comparison, and the *Healthy People 2010* target for each objective.

Objective 1-9a. Reduce pediatric asthma hospitalization rates.

Pediatric asthma hospitalization rates in Minnesota are within the *Healthy People 2010* target.

Objective 24-1. Reduce deaths from asthma.

Asthma mortality rates for residents aged 5 to 14 and 15 to 34 are higher than the targets; however, due to the small number of cases in these age groups, the targets are likely within the margin of error for these rates. The rate for residents age 65 and older is slightly higher than the target. However, a review of asthma deaths in Minnesota indicated that the number of asthma deaths among seniors was overestimated due to the difficulty in distinguishing asthma from other chronic respiratory diseases and to errors in reporting the underlying cause of death on death certificates. Thus, it is likely that Minnesota has already met the target for this age group.

Objective 24-2. Reduce hospitalizations for asthma.

Minnesota has met the *Healthy People 2010* goal for asthma hospitalizations among persons aged 5 to 64 years. The asthma hospitalization rate for children under age 5 is 14% higher than the target, while the rate for those 65 and older is 18% above the target.

Objective 24-3. Reduce emergency department visits for asthma.

Rates of emergency department (ED) visits for asthma have been reduced to target levels for persons aged 5 to 64, but are 34% above the target for children under 5 and 31% above target for adults aged 65 and older.

Objective 24-4. Reduce activity limitations among persons with asthma.

No data are available to measure this objective at the state level. However, the Behavioral Risk Factor Surveillance System provides an estimate of Minnesota's status on this measure. In 2007, 31.4% of Minnesota adults with current asthma reported limitations in their activities due to physical, mental, or emotional problems. Note that this estimate is not directly comparable with the U.S. baseline and *Healthy People 2010* target which are based on reported activity limitations specifically due to respiratory problems.

Objective 24-5. Reduce the number of school or work days missed by persons with asthma due to asthma. Minnesotans miss an average of 4 days of school or work each year due to asthma. This rate is two times higher than the *Healthy People 2010* target.

Objective 24-6. Increase the proportion of persons with asthma who receive formal patient education, including information about community and self-help resources, as an essential part of the management of their condition.

The proportion of Minnesota adults with asthma receiving formal asthma education has not achieved the *Healthy People 2010* target.

Objective 24-7. Increase the proportion of persons with asthma who receive appropriate asthma care according to the National Asthma Education Prevention Program guidelines:

24-7a. Persons with asthma who receive written asthma management plans from their health care provider.

The proportion of Minnesotans with asthma receiving written asthma management plans (also known as “asthma action plans”) has met the *Healthy People 2010* target.

24-7b. Persons with asthma with prescribed inhalers who receive instruction on how to use the inhaler properly.

Minnesota has nearly met the goal for the proportion of persons with asthma receiving instruction on how to use their inhalers properly.

24-7c. Persons with asthma who receive education about recognizing the early signs and symptoms of asthma episodes and how to respond appropriately, including instruction on peak flow monitoring for those who use daily therapy.

The proportion of Minnesotans with asthma who are receiving education about early signs and symptoms of asthma episodes and how to respond appropriately is 10% lower than the *Healthy People 2010* target.

24-7d. Persons with asthma who receive medication regimens that prevent the need for more than one canister of short-acting inhaled beta agonists per month for relief of symptoms.

No comparable data are available to measure this objective at the state level.

24-7e. Persons who receive follow-up medical care for long-term management of asthma after any hospitalization due to asthma.

No comparable data are available to measure this objective at the state level.

24-7f. Persons with asthma who receive assistance with assessing and reducing exposure to environmental risk factors in their home, school, and work environments.

The proportion of Minnesotans with asthma receiving assistance in reducing their environmental exposures for asthma is 28% lower than the *Healthy People 2010* target.

Healthy People 2010 Asthma Objectives

Healthy People 2010 Asthma Objectives	Minnesota (95% CI)*	U.S. baseline	2010 Target
1-9a. Reduce pediatric asthma hospitalization rate. (Rate per 10,000)			
Age 0-17	14.1	22.6	17.3
24-1. Reduce deaths from asthma. (Rate per 1,000,000)			
Age 0-4	0.7 [#]	1.7	1.0
5-14	1.5 [#]	3.1	1.0
15-34	2.3 [#]	5.6	2.0
35-64	7.6	15.5	9.0
65 and older	60.7	69.5	60.0
24-2. Reduce hospitalizations from asthma. (Rate per 10,000)			
Age 0-4	29.1	45.6	25.0
5-64†	6.6	12.5	7.7
65 and older†	13.4	17.7	11.0
24-3. Reduce emergency department visits from asthma.‡ (Rate per 10,000)			
Age 0 - 4	121.2	150.0	80.0
5-64	34.7	71.1	50.0
65 and older	21.8	29.5	15.0
24-4. Reduce activity limitations among persons with asthma			
	§	10%	6%
24-5. Reduce the number of school/work days missed by persons with asthma due to asthma, age 5 to 64[∞]			
	4.1 (2.1-6.1)	6.1	2.0
24-6. Increase the proportion of persons with asthma who receive formal patient education, age 18 and older[^]			
	6.9% (4.1-9.6)	8.4%	30%
24-7. Increase the proportion of persons with asthma who receive appropriate asthma care according to NAEPP guidelines (all ages):			
a. Persons with asthma who receive written asthma management plans from their healthcare provider [^]	34.2% (29.1-39.3) ^o	32%	38%
b. Persons with asthma with prescribed inhalers who receive instruction on how to use inhaler properly [^]	96.5% (94.7-98.4)	96.0%	98.8%

* 95% confidence interval

Rate is based on fewer than 20 deaths and may be unstable.

† Age-adjusted to the U.S. 2000 standard population

‡ Includes ED visits that resulted in a hospitalization.

§ Comparable data not available to measure this objective at the state level

[∞] Age-adjusted mean number of days missed

[^] Age-adjusted percent

^o 2010 target falls within the margin of error (95% CI) of the Minnesota estimate

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<i>Healthy People 2010 Asthma Objectives</i>	Minnesota (95% CI)*	U.S. baseline	2010 Target
c. Persons with asthma who receive education about recognizing early signs and symptoms of asthma episodes and how to respond appropriately^	63.9% (58.7-69.1)	68%	71%
d. Persons with asthma who receive medication regimens that prevent the need for >1 canister of short-acting inhaled β-agonists per month for relief of symptoms^	§	80%	92%
e. Persons receiving follow-up medical care for long-term asthma management after any asthma hospitalization^	§	76%	87%
f. Persons with asthma who receive assistance with assessing and reducing exposure to environmental risk factors in their home, school, and work environments^	35.8% (30.7-40.9)	42%	50%

*95% confidence interval

^Age-adjusted percent

§Comparable data not available to measure this objective at the state level

Data Sources:

Obj. 1-9a: Minnesota Hospital Association (MHA), 2007; Agency for Healthcare Research and Quality, 2003; National Hospital Discharge Survey (NHDS), 1998

Obj. 24-1: Minnesota Center for Health Statistics, 2004-2007; National Vital Statistics System-Mortality, 2003

Obj. 24-2: MHA, 2007; NHDS, 1998

Obj. 24-3: MHA, 2007; NHDS, 1995-1997

Obj. 24-4, 24-5, 24-6, 24-7: National Health Interview Survey, 2003

Obj. 24-5, 24-6, 24-7a, 24-7b, 24-7c, 24-7f: Minnesota Asthma Callback Survey, 2005

Summary

Minnesota still has room for improvement on many of the *Healthy People 2010* measures. The biggest gaps are in formal patient education, number of days of missed school or work due to asthma, and assistance with environmental risk factors. Rates of asthma hospitalizations and ED visits for children under 5 and adults 65 and older are more than 30% higher than the *Healthy People 2010* targets.

Even for the objectives that have been met at the statewide level, there may be regions of the state that have not yet met the targets. Indeed, rates of asthma hospitalizations and ED visits are consistently higher in the 7-county Twin Cities metropolitan area than in Greater Minnesota. Unfortunately there is little data available to track regional differences in the measures related to asthma management and missed school and work.

Technical Notes

Rates for *Healthy People 2010* objectives 1-9a, 24-1, 24-2, and 24-3 were calculated using annual population estimates from the U.S. Census. Rates for hospitalizations/ED visits were based on counts of hospitalizations/ED visits for which asthma was the principal diagnosis (ICD-9-CM 493) and represent the number of asthma hospitalizations/ED visits, not the number of individuals hospitalized/visiting the ED for asthma. Estimates and confidence intervals for objectives 24-5 through 24-7f were calculated using complex survey methods in SAS version 9.2 (SAS, Incorporated; Cary, NC). Age-adjusted rates were standardized to the 2000 U.S. population. Age distributions varied by objective according to *Healthy People 2010* operational definitions.

References

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Data 2010: the Healthy People 2010 Database. Centers for Disease Control and Prevention. May 2009, accessed at <http://wonder.cdc.gov/data2010/focus.htm> on December 8, 2009.

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For more information about *Healthy People 2010*, go to
<http://www.healthypeople.gov>.

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