

USING SURVEILLANCE DATA TO IDENTIFY ASTHMA MORBIDITY GEOGRAPHIC DISPARITIES FOR PROGRAM PLANNING

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Background: Asthma is a potentially life threatening condition and the mortality risk increases with uncontrolled disease and as exacerbations occur. In Missouri, the Patient Abstract System (PAS) through a web-based query system provides emergency department (ED) visit data for program planning. These surveillance data were used to identify population groups and geographic areas with high asthma health care utilization as an indicator of poor asthma control to target asthma school-based interventions in Missouri.

Method: The number, age-adjusted rate and 95% confidence interval of ED visits with asthma as the principal diagnosis were obtained by county and age groups for 2006-2008. For the two counties with the highest rate of asthma ED visits among children age 14 and younger, the asthma ED visit rate was calculated to identify the high care utilization geographic areas for school age groups.

Results: Eleven counties had significantly higher asthma ED visits for all ages combined. Of these, three counties (St. Louis City, St. Louis County and Jackson County) had significantly higher age-adjusted asthma ED visit rates than the state rate (9.6 per 1,000 [95% CI 9.5 to 9.8]) for children age 14 and younger. St. Louis City, classified as a county by Missouri Statute, had the highest rate of asthma ED visits in Missouri for this population (28.8 per 1,000 population [95% CI 27.8 to 29.8]). In St. Louis City and County school children age 5-9 had the highest age-adjusted ED visit rates followed by age 10 to 14. The leading zip codes for asthma ED visits in St. Louis City and County were identified and prioritized for school-based asthma interventions (Table).

Conclusions: Surveillance data can be useful in identifying asthma morbidity geographic disparate areas and at-risk populations for program planning as well as define and monitor disparities over time.

Asthma Emergency Department Visit Rates for children age 5-14 by leading zip codes*, St. Louis City and County, 2006-2008

St. Louis City			St. Louis County		
Zip Code	Number	Rate	Zip Code	Number	Rate
63106	270	53.1	63133	154	38.3
63113	251	38.9	63121	347	28.6
63107	239	32.5	63134	198	28.6
63104	228	31.9	63136	696	24.7
63112	241	31.6	63138	266	24.6

*Zip codes with 100 or more asthma ED visits among children age 5-14; rates per 1,000 population.