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COVERING CALIFORNIA'S KIDS
EVALUATION

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CHILDREN'S HEALTH INITIATIVES HAVE HELPED PREVENT OVER 1,000 UNNECESSARY CHILD HOSPITALIZATIONS ANNUALLY

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Common chronic conditions in childhood, such as asthma or diabetes, can usually be managed with adequate primary care. Without primary care, these problems become more severe and may eventually require hospitalization. Twenty-five California counties have formed Children's Health Initiatives (CHIs) to improve children's access to primary care by increasing enrollment into Medi-Cal and Healthy Families, and expanding coverage via locally funded "Healthy Kids" programs that are designed to provide coverage for low-income uninsured children ineligible for other programs.[1] In this brief, we examine the relationship between the growth of CHIs and rates of preventable hospitalizations.

➢ Over 333,000 preventable child hospitalizations occurred in California between 2000 and 2005.

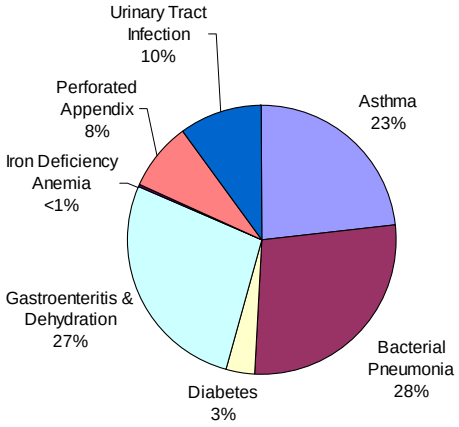

Figure 1. Distribution of Preventable Hospitalization by Condition

- During the six-year period, there were roughly 5.4 million child hospitalization discharges in California, of which, over 333,000 (or 6.2%) were for one of seven identified child health conditions for which hospitalization is widely considered unnecessary if managed well in primary care.

- Most of the preventable child hospitalizations were for bacterial pneumonia (28%), gastroenteritis/dehydration (27%) and asthma (23%). The fewest hospitalizations were for perforated appendix (8%), diabetes (3%), and iron deficiency anemia (<1%) (*Figure 1*).

➢ Lower-income children did not experience the same decreases in preventable hospitalizations over a six-year period that higher-income children experienced.

- While rates of preventable hospitalizations among children were similar for lower- and higher-income families in 2000, the gap between them increased over the six-year to period, resulting in lower-income children having about a 50% higher hospitalization rate compared to higher-income children by 2005.

- Rates of preventable hospitalizations increased just slightly for children in lower-income families from 15 to 16 hospitalizations per 10,000 children, while the rate for children in higher-income families decreased from about 14 to 10 hospitalizations per 10,000 children between 2000 and 2005.

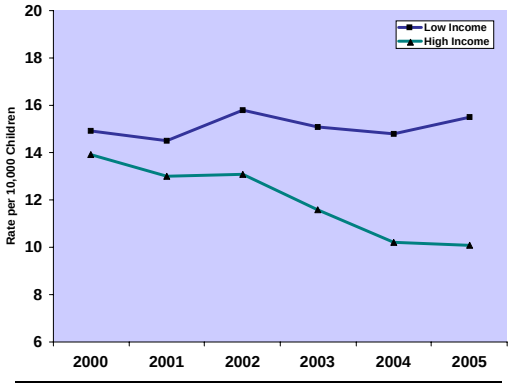

Figure 2. Rates of Preventable Child Hospitalizations by Family Income

➢CHIs contributed to a reduction in preventable hospitalizations for lower-income children.

- A comparison of preventable hospitalization rates pre and post implementation of nine CHIs that were operational by 2005 reveal that rates were no different for higher-income children, but significantly lower after implementation for lower-income children (a decline of about 25% or 3.5 hospitalizations per 10,000 children).
- The absence of a CHI effect among higher-income children suggests that the observed effect for lower-income children was not due to hospitalization trends over time. The results are, nonetheless, statistically adjusted for the effects of time and county differences.

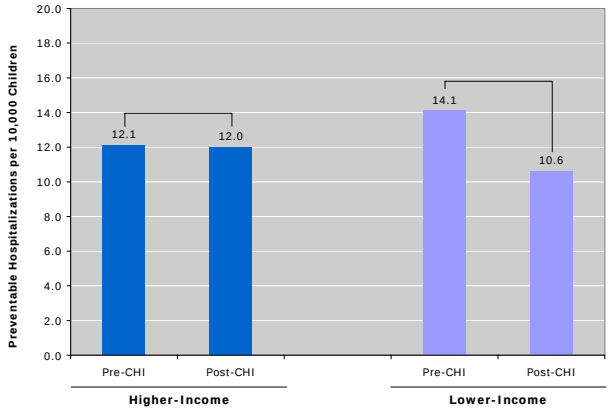

Figure 3. Preventable Hospitalization Rates Pre and Post CHI Implementation by Income

- We estimate that the nine CHIs contributed to a reduction of 1,050 preventable hospitalizations per year over the six-year study period. If the nine CHIs had all been operational for the full six years, we estimate that an additional 2,050 preventable hospitalizations might have been averted annually.

➢Policy Implications

- Increasing health insurance coverage rates for children through CHIs (including greater enrollment in Medi-Cal and Healthy Families, and expanding coverage through Healthy Kids) has significant impacts on health and health care costs by improving access to primary care,[2] and thus potentially treating and managing conditions such as asthma before they require hospitalization.
- The CHIs face major financial sustainability challenges over the next few years and will require state investments to maintain the benefits accruing to children. Some of the costs of expanded coverage, however, may be offset by the unnecessary hospitalizations that are prevented. If the average cost of a child hospitalization is roughly $7,000, the nine CHIs may save upwards of $7.35 million per year.

➢Methods

- Data were obtained from the Office of Statewide Health Planning and Development (OSHPD) for 2000 to 2005. All licensed hospitals are required to submit to OSHPD a discharge summary for each patient hospitalized in their facility on a quarterly basis.
- Analyses were limited to children 18 years of age and under. For analyses by income, the study was limited to the nine county CHIs that had a Healthy Kids program in operation for at least two quarters by the end of 2005, including Kern, Los Angeles, Riverside, San Bernardino, San Francisco, San Joaquin, San Mateo, Santa Clara, and Santa Cruz.
- The definitions of preventable hospitalizations were developed by the federal Agency for Healthcare Research and Quality and are based on ICD-9-CM codes for principal and secondary diagnoses.[3] Rates of hospitalizations were developed using county-level census data.

Note: Full results from this study will be available in the March 2008 issue of the journal *Medical Care.*

1. Stevens GD, Rice K, Cousineau MR. Children's Health Initiatives in California: the experiences of local coalitions pursuing universal coverage for children. *Am J Public Health.* Apr 2007;97(4):738-743.
2. Trenholm C, Howell E, Hill I, Hughes D. *Three Independent Evaluations of Healthy Kids Programs Find Dramatic Gains in Well-Being of Children and Families.* Washington, DC: Urban Institute and Mathematica Policy Research, Inc.; November 2007.
3. Anonymous. *AHRQ Quality Indicators: Pediatric Quality Indicators Overview.* Rockville, MD: Agency for Healthcare Research and Quality; February 2006.

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