

ASTHMA IN CALIFORNIA: Laying the Foundation for a Statewide Strategy

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On May 29, 1998, in response to a growing public health concern about asthma, more than 60 academic and clinical scholars, government agency heads, public health practitioners, health foundation managers, voluntary health organization leaders, and legislative staff met to discuss the state of knowledge about asthma and its implications for research and public policy in California.

Kim Belshé, director of the California Department of Health Services (DHS), had laid the foundation for the conference in June 1997 by requesting planning and organizing assistance from the California Policy Seminar of the University of California. Belshé proposed four objectives for the meeting:

1. Articulating a prioritized research and policy agenda to delineate the dimensions of asthma prevalence, morbidity, and disability in California, as well as what, if any, statewide primary, secondary, or tertiary prevention efforts are warranted.
2. Estimating the magnitude of the resources required to undertake any such preventive measures and identifying realistic strategies for obtaining such resources.
3. Identifying the extent to which local and regional initiatives have begun to address asthma as a public health issue.
4. Producing a report to DHS summarizing the above, including broad recommendations for supporting legislation, if appropriate.

This Brief presents an overview of the conference: its agenda, policy framework, and recommendations to policy makers.

ASTHMA IN CALIFORNIA

Compared to the capacity to monitor national asthma trends, the capacity to follow changes in its prevalence and incidence in California is extremely limited. Complete statewide data are available only for hospital discharges and deaths. Without incidence and prevalence estimates at the state and local levels, health planners cannot accurately gauge the full extent of the disease burden, nor can they estimate the scope of the measures necessary to combat this illness.

The limited data that we do have on the occurrence, trends, and impacts of asthma in California tend to corroborate troublesome nationwide trends. More adult Californians, for example, are reporting that they have had asthma. In 1984, 7.6% of adults reported through the statewide Behavioral Risk Factor Survey (California Department of Health Services) that they had had

asthma at some point. This figure rose to 12.1% in 1996, a 60% increase. Based on a national estimate of asthma prevalence, 1.8 million Californians have asthma, including half a million children. As one of the most common chronic conditions in children, asthma is a leading cause of school absences and hospital admissions for children.

In 1995 there were 42,333 asthma-related hospitalizations in California, 42% of which (17,860) were among children (newborns to 14-year-olds). The hospitalization rate for blacks, especially black children, remained very high. The majority of hospitalizations are thought to be preventable. Thus, the \$350 million direct costs associated with these events are likely to be preventable as well.

Over 600 people die from asthma each year in California. This number reflects the national rise in asthma deaths since 1975. The asthma mortality rate rose faster among the state's blacks than among whites, and among females faster than among males. For people under 65, the asthma mortality rate for blacks was two to four times higher than whites in 1985-89, while that for Hispanics was lower than for non-Hispanic whites. As was true nationally, mortality rates increased with age. The risk factors underlying the more than 600 annual asthma-related deaths in California have not been systematically explored; nevertheless, most such deaths, like hospitalizations for asthma, are theoretically preventable.

PANEL DISCUSSIONS

The discussions were conducted around five panels.

Overview of Asthma: Natural History and Epidemiology

Definition, Pathogenesis, and Prognosis of Asthma: Dr. Homer Boushey, UC San Francisco

Epidemiology, Economic Impacts, and Trends in Asthma: Julie Von Behren, MPH, California DHS

- Trends in asthma prevalence, morbidity, and mortality
- Disease burden on lower-income and non-white populations
- Direct and indirect economic impact of asthma
- Data needed for effective surveillance of asthma

Risk Factors for Child and Adolescent Asthma

Speaker: Dr. Neal Halfon, UC Los Angeles

Discussants: Dr. Ira Tager, UC Berkeley; Dr. Maria Elena Lara, UC Los Angeles

- Roles of genetic, immunological, infectious, environmental, and behavioral factors
- Assessment and distribution of exposures
- Risk factors susceptible to modification
- Data availability and gaps

Risk Factors for Adult Asthma

Speaker: Dr. Paul Blanc, UC San Francisco

Discussants: Dr. John Balmes, UC San Francisco; Dr. Molly Osborne, Veterans Administration Medical Center, Portland, Oregon

- Epidemiology of adult-onset versus childhood asthma
- Risk factors, including occupational, and prevalence of exposure to such factors
- Data availability and gaps

Interventions to Prevent and Manage Asthma

Environmental Interventions: Dr. Thomas Platts-Mills, University of Virginia, Charlottesville

Educational and Community Interventions: Dr. Susan Janson, UC San Francisco

Discussants: Dr. Sandra Wilson, Stanford; Dr. Diane McLean, Montefiore Medical Center, New York; Dr. Paul Blanc, UC San Francisco

- Provider, patient, and family education with respect to overall disease management
- Environmental interventions to reduce asthma incidence and exacerbations
- Strategies to increase awareness and use of effective asthma management practices

Policy Alternatives to Address Asthma in California

Discussion Leader: Dr. Talmadge King, UC San Francisco

- Based on current knowledge, what policies and programs might be of greatest benefit in the prevention and management of asthma?

PRINCIPAL CONFERENCE CONCLUSIONS: A POLICY FRAMEWORK

Asthma policy should be driven by a vision with two goals. The long-term goal should be reduction in the prevalence of asthma, and ultimately perhaps its eradication. The shorter-term goal should be the appropriate transfer and application of current knowledge to reduce morbidity among people with asthma.

Six important policy objectives are implied by these goals, and provide a framework for the recommendations in the next section.

First, there should be more research on the causes of asthma that will result in primary prevention¹ strategies directed toward reducing asthma incidence and prevalence. To improve secondary and tertiary prevention, there should be additional research on modifiable asthma risk

factors and disabling factors (those that influence a person's perception of health, functionality, and social role).

Second, a surveillance capability (ongoing systematic collection and analysis of data) must be developed to monitor geographic, temporal, and demographic trends in asthma as a means of targeting secondary and tertiary interventions and evaluating their success.

Third, medical care services for asthmatics must be reshaped to make all effective treatment modalities available to any asthma patient. Access to and utilization of asthma care services should be facilitated for California's diverse population.

Fourth, community structures outside the traditional hospital- and clinic-based system, such as school-based asthma care and education or mobile respiratory clinics, should be created in appropriate and promising settings to augment the effectiveness of traditional secondary and tertiary prevention strategies.

Fifth, asthma education should be made more broadly available to health care providers, patients, and the general population, using educational tools and methods demonstrated to be most effective.

Sixth, guidelines or performance standards on the care and prevention of asthma should be developed for health care professionals and institutions, and information about successful community projects for asthmatics should be made available to local officials.

RECOMMENDATIONS FOR STATE POLICY ACTION

Asthma represents a broad, multidimensional problem that will require a multidisciplinary approach to understand it and to address its many consequences. In the setting of the conference discussions, including a plenary session on policy directions, conference participants recommended that the State of California--through its Department of Health Services--pursue the following lines of action:

Research

Seek university collaboration in a program of research on:

Asthma etiology--to guide primary prevention efforts to substantially decrease the prevalence of this disease and its attendant costs.

Secondary and tertiary asthma prevention--to reduce morbidity among individuals with asthma.

Case definitions and measures for asthma surveillance--to allow tracking of this disease throughout the state, determine patterns of occurrence, and target appropriate interventions to the most severely affected populations.

Surveillance

Create an efficient asthma surveillance program to collect and disseminate the following information periodically (the information could be collected directly by DHS or from multiple sources in a DHS-standardized format):

1. Objective correlates of disease occurrence and severity, in order to derive estimates of incidence and prevalence.
2. Dimensions of health services impacts such as deaths, hospitalizations, emergency room and office visits.
3. Quality of asthma care, including access to care, provider performance, and availability of educational programs.
4. Risk factors for subpopulations.

Provide assistance to local government, managed care institutions, and the state with the analysis and interpretation of surveillance data.

Continue programs that monitor asthma in the workplace, and target occupational interventions.

Health Services

Conduct policy analysis to clarify asthma prevention and control strategies and their expected costs and benefits; provide recommendations on how to implement such strategies; and produce a report for use in a DHS strategic plan. Such a report would, for example, clarify the relationship between DHS and managed care institutions (this could include a description of treatments and practices that constitute a standard of care) and indicate where the responsibility lies to provide a "safety net" for indigent and uninsured asthmatics.

Community Programs

Work with public- and private-sector organizations to support asthma intervention programs outside of DHS, particularly those that tailor current asthma-control knowledge to the specific needs of the local community.

Explore how to combine asthma prevention and control strategies with other public health programs, such as childhood immunization or lead poisoning case management, in order to decrease costs and increase secondary benefits.

Create an inventory of successful community-based asthma programs, and publicize them.

Education

Promote asthma educational programs for health providers, patients, and community members. DHS could provide this information directly or partner with medical schools, voluntary health

agencies, community organizations, managed care institutions, and school systems to design and provide educational programs. DHS would distribute user-friendly tools for health care providers to facilitate appropriate asthma care, education, and communication with asthma patients.

In partnership with the American Academy of Allergy, Asthma, and Immunology and other groups, provide information to building inspectors and the public on potential effects of exposures in the built environment (e.g., wall-to-wall carpeting, mold).

Enhance coverage of the effects of tobacco smoke on asthma in state tobacco-control educational and media campaigns.

Guidelines

Develop and disseminate model asthma policies for use by the state Department of Education, school districts, public and private schools, and child-care providers.

Establish health plan and provider performance guidelines for asthma health care and education.

Promote the National Asthma Education and Prevention Program Report II: Guidelines for the Diagnosis and Management of Asthma published by the National Heart, Lung and Blood Institute.

Develop measures of health plan and physician performance and community programs that indicate additional areas where asthma-management interventions of proven effectiveness can be applied.

NOTE

1. *Primary prevention* refers to measures that prevent initiation of disease; *secondary prevention*, to measures that keep preclinical disease from developing into the full clinical picture (e.g., reducing exposure to known asthma-provoking allergens); *tertiary prevention*, to measures that keep the disease under control (e.g., patient education, use of inhaled medications).

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