JOINT INFORMATIONAL HEARING

ASSEMBLY COMMITTEE ON HEALTH
ASSEMBLY COMMITTEE ON EDUCATION
ASSEMBLY COMMITTEE ON HOUSING AND COMMUNITY DEVELOPMENT

Tackling the Childhood Obesity Epidemic

February 8, 2005
1:30 p.m.
State Capitol, Room 4202

This hearing will examine a range of strategies and model programs to address the epidemic of childhood obesity in California through schools, health providers, and communities.

Background

According to the federal Health and Human Services Department, 64% of Americans (approximately 129.6 million people) are overweight or obese. Obesity is considered a risk factor for a number of diseases, including diabetes, cardiovascular disease, and cancer. The Center for Disease Control and Prevention (CDC) released a study in 2004 that found that obesity and smoking contributed to the largest number of preventable death in the United States. The difference in the two, however, is that obesity is rising in numbers. According to the study, poor diet and inactivity caused 15% of deaths (approximately 365,000 people) in the United States in 2000. Results from the 1999-2002 National Health and Nutrition Examination Survey (NHANES) indicate that 16% of children and adolescents ages six to 9 years are overweight. This represents a 45% increase from the overweight estimates obtained from NHANES III (1988-94). According to a national study of costs attributed to being overweight and obesity, medical expenses accounted for 9.1% of total U.S. medical expenditures in 1998 and may have reached as high as $78.5 billion ($92.6 billion in 2002 dollars). Obesity and being overweight are chronic conditions, and result from a variety of factors including behavior, environment, and genetics. The two factors that play the largest roles in obesity are behavior and environment, which are also considered the best areas for prevention and treatment.

According to the California Center for Public Health Advocacy (CCPHA), the numbers of overweight and inactive children have reached an all-time high in California. CCPHA found that statewide, approximately 27% of children are overweight and 40% are unfit. They reported that legislative districts that have higher diabetes-related death rates also tend to have a higher prevalence of overweight and unfit children. Diabetes-related deaths climbed every year between 1996 and 2000 while overall mortality in the state declined over the last decade. Researchers and the medical community agree that this may be an indication of the long-term effects of growing rates of obesity. In 2002, the Select Committee on California Children's School Readiness and Health held a series of hearings where it was reported that healthy children attend school more regularly; and students' absenteeism rates appear to have a direct correlation to their academic performance. Additionally, the Select Committee found that active, well-nourished children are more likely to attend school and be more prepared and motivated to learn. There are several areas that present opportunities for addressing obesity in California's children. This hearing will focus on three: school-based and after-school programs; health providers; and communities.

School and After-School Programs

Children benefit from moderate physical activity on most, if not all, days of the week. According to the CDC, children should have between 15 to 45 minutes of physical activity per day depending on the intensity. Increasing the frequency, intensity, and time of the activity in a measured way can bring more health benefits.

California law requires schools to provide students with physical education for 200 minutes every ten school days in grades one through six and for 400 minutes every ten school days in grades seven through 12. A study published by RAND in September 2004 found that expanding physical education programs in schools, in the form in which they currently exist, may be an effective intervention for combating obesity in the early years, especially among girls. However, due to an increased emphasis on core academic work and financial constraints, these requirements are not enforced and many schools do not meet them, especially in urban and low-income communities. Schools that do offer physical education classes do not necessarily teach fitness-building skills that children can integrate easily into everyday life and take into adulthood. For instance, many schools still use team sports such as football or baseball as a core component of their physical education programs. These types of sports are more difficult for children to duplicate outside of school, as they require large numbers of children to play. School programs that offer more diverse curriculum for students, such as biking, skating, swimming, and running offer children more options to be active on their own.

In those cases where limited resources prohibit schools from offering physical education classes, after-school programs and/or park and recreation centers are often the only source for physical activity. According to a 2000 CDC report, less then 10% of elementary, junior high, middle and high schools surveyed nationwide provided daily physical education. In terms of other overall health indicators, low-income communities have higher percentages of uninsured individuals and greater health disparity gaps. According to a 2002 Public Health Institute report, low-income communities, and especially Latino children, are most at risk for being overweight. Physical

activity needs are of particular concern to low-income communities where options for affordable programs and competitive leagues are extremely limited.

Health Provider Role

The dramatic increase in the prevalence of childhood obesity and the fact that it is associated with significant health risks prompted the American Academy of Pediatrics (AAP) to develop a number of policy statements on childhood obesity prevention efforts. In 2003, the AAP proposed strategies for the prevention and early identification of overweight and obese children. The AAP recommended that, as part of their health supervision, pediatricians take a well-rounded approach to prevention, including:

- Identifying and tracking patients at risk by virtue of family history, birth weight, or socioeconomic, ethnic, cultural, or environmental factors.
- Calculating and plotting body mass index (BMI) once a year in all children and using changes in BMI to identify rate of excessive weight gain relative to linear growth.
- Encouraging parents and caregivers to promote healthy eating patterns by offering nutritious snacks, encouraging children's autonomy in self-regulation of food intake, and modeling healthy food choices.
- Promoting physical activity, including unstructured play at home, in school, in child care settings, and throughout the community.
- Recommending limiting television and video time to a maximum of two hours per day.

For the treatment of obese children, the AAP recommends that children with a BMI greater than or equal to the 85th percentile with complications of obesity or with a BMI greater than or equal to the 95th percentile (with or without complications) undergo evaluation and possible treatment. The AAP states that the primary goal of obesity therapy should be healthy eating and activity, and that treatment should begin early, involve the family, and institute permanent changes in a stepwise manner. Key to the AAP recommendations is that parent involvement is the foundation for successful intervention that puts in place gradual, targeted increases in activity and reductions in high-fat, high-calorie foods. They recommend that health care providers offer ongoing support for families after the weight-management program is initiated to help families maintain new behaviors.

Recent studies show that multidisciplinary, chronic care models enable patients with diabetes to modify their diet and that a similar model may be successful for managing childhood obesity. The chronic care model puts the family in charge of making permanent behavior changes in their lives, instead of short-term diets or exercise programs for rapid weight loss. Key principles of the model include:

- The family must be ready for change and all family members and caregivers are involved.
- The role of the health-care provider is to help the family make small, gradual changes.
- Health care should be provided by a multidisciplinary team composed of dietitians, psychiatrists, social workers, health educators, and exercise scientists.
- The health care provider should give support by scheduling frequent visits at a time convenient for the family.

Community Design
Through the first quarter of the last century, the United States developed in the form of compact, mixed-use neighborhoods. The pattern began to change with the emergence of modern architecture and zoning and a rise in the numbers of automobiles. After World War II, a new system of development was implemented, replacing neighborhoods with a separation of uses known as conventional suburban development. Conventional zoning separates residential, retail, commercial, and industrial development into areas away from each other and hinders mixed-use development.

A study published in the American Journal of Health Promotion in 2003 found that "…people living in counties marked by sprawling development are likely to walk less and weigh more than people who live in less sprawling counties." The study concluded that people living in the most sprawling areas weigh six pounds more than people in the most compact counties and that there was a direct relationship between sprawl and high blood pressure. According to the U.S. Department of Transportation, between 1975 and 1995, the average adult took 42% fewer trips on foot and walking trips for children dropped by 37%. The distance from a person's home to work and other daily destinations, the safety of communities and roads for pedestrians and bicyclists, the availability of facilities for physical activity, and the time spent commuting in cars all contribute to how often a person partakes in physical activity.

Several studies have shown that when a community is built to encourage physical activity, people use it in that way. Three major components to incorporating physical activity and community design are mixed-use development, (placing residential, retail, office, and school facilities in close proximity); encouraging multi-modal transportation (public transit, walking, and biking); and safe routes to schools (bicycle and pedestrian safety projects). There are numerous model "walkable communities" that allow residents to incorporate activity into daily tasks by safely walking to school, workplaces, recreational facilities, retail and commercial centers, and mass transit. New Urbanism is a community design model that was developed partly in response to urban sprawl, and is meant to create human-scale, walkable communities. The model takes a wide variety of approaches, including infill projects (development projects on existing urban city/neighborhood lots), transit-oriented development, and the transformation of suburbs. At the heart of the New Urbanism approach are specific design requirements, such as:

- Creating a discernible center to the neighborhood (either a square, green or transit stop) with most dwellings within a five minute walk of the center;
- Locating schools so that children can walk to them; and
- Designing relatively narrow streets that are lined by trees to slow traffic and encourage pedestrian and bicycle use.

Conclusion
In the simplest terms, the cause of obesity at any age is easy to explain: there is an imbalance between the amount of energy (food) consumed compared to the amount of energy expended (through physical activity). The American diet has changed, with high-calorie and high-fat foods eaten as a major part of the typical meal. At the same time, Americans have become much more sedentary. These simple changes in lifestyle have led to an epidemic that threatens the health of

our children and has great costs for our communities. Although the cause of the epidemic may be simple, addressing the problem may not be so straightforward. A number of factors contribute to a child's ability or inability to eat well and exercise regularly, such as socio-economic status, cultural and linguistic factors, and the financial state of a child's school and community. There are a number of pathways to approach this problem and reduce the prevalence and costs of the diseases related to obesity. Change in behavior comes as a result of a number of groups working together. Schools, parents, communities, health providers, and policymakers should all take an active role in promoting healthy eating and living for California's children.