## **University** of **California** Agriculture and Natural Resources

## Creating a movement to reduce obesity: Transforming communities

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The rising prevalence of obesity among California children has led to serious concerns about their future health as well as the state's health care budget. Fortunately, recent research has provided new hope that programs can be implemented to slow the development of obesity among school-aged children. According to the evidence, these programs should emphasize four messages: (1) reducing consumption of soda and other sugar-sweetened beverages, (2) limiting fast food consumption, (3) decreasing time spent in sedentary pursuits, and (4) increasing time spent in moderate to vigorous physical activity. While fruit and vegetable consumption will be encouraged in this study, research has not shown that increasing fruit and vegetables alone will decrease rates of obesity without a significant parallel decrease in calories from high sugar/high fat snack foods and beverages. Our proposal utilizes a socio-ecological model to develop a coordinated community-wide intervention that will effectively deliver these messages to 3rd and 4th grade students in their schools, afterschool programs, homes and communities. Although there is a substantial body of literature demonstrating the impact of the targeted dietary and activity behaviors on the development of obesity, this proposal is unique insofar as it uses the socio-ecoological model to ensure that we educate children and their families while at the same time working with a broader range of community institutions. This program will provide a community context that will surround the child with consistent messages. The study is also unique in that local Extension personnel and youth participants in the 4-H program will play leading roles in program delivery.

The aim of the intervention is twofold: first, to change student attitudes, knowledge and behaviors in ways that are conducive to healthier dietary and physical activity patterns; and second, to strategically use the infrastructure of Cooperative Extension to effect the desired changes. The effectiveness of the program will be evidenced by reduced BMI change from baseline to program endpoint. The intervention spanning two school years, to be implemented in a minimum of six schools and their surrounding diverse communities in two or three California counties, will include nutrition education delivered to children in their classrooms; a physical activity curriculum to be supplied to teachers; work with school leaders, teachers, administrators and school Wellness Committees to promote a healthful school environment; afterschool and summer programs to reinforce the school messages; parent/family activities designed to influence the home environment; and outreach to engage local business leaders and encourage their involvement in changing the community milieu to one that better supports healthful eating and activity behaviors. Materials for outreach to families will be culturally tailored in both English and Spanish.

The infrastructure for the program currently exists in California communities, but has not been mobilized in a cohesive fashion for a multi-faceted program to prevent child obesity. Programs including EFNEP, FSNEP, 4-H, Farm to School, and Community Coalitions will be utilized, each with a new or increased emphasis on the four health messages. The research team, uniting NFCS, 4-H advisors, CE specialists, and AES faculty will evaluate the program. 4-H youth will play particularly important roles as peer leaders in student afterschool and summer activities, and as youth ambassadors for the program in meetings with community business and policy leaders. As important as reducing the prevalence of childhood obesity will be, the civic pride and ownership in creating a movement one community at a time will help to ensure that the program is sustainable over time.