



## UCSF Benioff Children's Hospital Oakland Researchers Find "Park Prescriptions" Can Reduce Stress Among Low Income Patients

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Newswise — Oakland, CA (February 20, 2018) – A study by UCSF Benioff Children's Hospital Oakland researchers, has found that "park prescriptions" provided by physicians to their low-income patients can help reduce stress and improve physical well-being in patients and their families.

The study, "Effect of park prescriptions with and without group visits to parks on stress reduction in low-income parents: SHINE randomized trial," is the first randomized clinical trial that has tested whether a physician's recommendation encouraging visits to nature can improve stress, increase park visits, decrease loneliness, improve moderate physical activity, physiologic stress, and nature affinity. The study was conducted by UCSF Benioff Children's Hospital Oakland's Dr. Nooshin Razani and UCSF's Dr. George Rutherford and is published in the digital journal *PLOS ONE* (February 15, 2018).

"SHINE" refers to "Staying Healthy In Nature Everyday" and examines exposure to nature as a health outcome. The trial followed 78 families over three months. Families were recruited from a low-income, racially and ethnically diverse patient population at UCSF Benioff Oakland's pediatric primary clinic. Like other low-income populations, the patients in this sample reported higher average levels of stress as compared to the national average.

The study divided patients into two groups – an "independent" park prescription group and a "supported park prescription group. In the "independent" control group, a pediatrician reviewed the benefits of time in nature and gave each participant a park prescription recommending spending time in nature three times a week, for at least one hour at a time. The pediatrician talked about the health benefits of nature for stress relief and for spending time together outside as a family. Parent of pediatric patients received a postcard, which included a map and bus routes to seven local parks, a journal to document their visits, and a pedometer.

The "supported" park prescriptions parents were invited to three group outings, three weeks in a row with their families. On the day of the outing, participants arrived at the clinic where they met the physician, several hospital volunteers, and other enrolled families. A bus transported the group to three local parks consecutively over the three weeks: a bayfront park with a beach, a lake with woodlands, and a redwood forest. At the parks, participants were greeted by park staff, played games, picnicked, had unstructured play, and a light walk. Outings concluded with quiet reflection and an opportunity to share experiences before a bus took participants back to the clinic. The study was conducted in three recruitment periods waves in order to keep the group number to 30-50 people per outing.

The researchers found a significant decrease in physiologic stress and loneliness, and an increase in physical activity and nature affinity over the three months of the trial. The study showed that park prescriptions are a promising tool for addressing stress in low-income parents, a population at high-need for community-based supports for stress. There was, however, no significant difference between groups in stress relief. This study raises important questions as to the role of clinics in leading park outings.

The study also suggests that the clinician-patient relationship is an important one in encouraging outdoor time for stress relief. The researchers identified primary care visits as an important opportunity to screen for social determinants of health such as stress.

They emphasized the importance of including low-income populations in research and recommendations about nature and health, as this population has been lacking in previous studies, and suffers health inequities that can be addressed through the availability of nature.

“Our study shows that nature is a low cost, readily available resource for stress relief, and therefore, for preventing and treating chronic illness and decreasing health inequities,” says Dr. Nooshin Razani, director of the Center for Nature and Health at UCSF Benioff Oakland. “The aim of the study was to show how nature can be integrated into clinical care, in resource poor settings, and also to work hand in hand with community partners to ensure our patients have access to green places to play and grow.”

Dr. Razani has been trained as a “Nature Champion” by the United States Bureau of Fish and Wildlife. In 2009, she began using her expertise at UCSF Benioff Oakland’s primary care clinic to refer patients to the outdoors as a clinical intervention. By 2013, the hospital’s primary care clinic and East Bay Regional Parks District and Foundation collaborated to create the hospital’s groundbreaking park prescription program. Now in its third year, the program has conducted more than 1000 park visits and more than 50 outings to local parks for patients and families.

The study was funded by East Bay Regional Parks District, East Bay Regional Parks Foundation, National Recreation and Parks Administration, and the REI Foundation.

### **About UCSF Benioff Children’s Hospital Oakland**

UCSF Benioff Children’s Hospital Oakland (formerly Children’s Hospital & Research Center Oakland) is a premier, not-for-profit medical center for children in Northern California, and is the only hospital in the East Bay 100% devoted to pediatrics. UCSF Benioff Children’s Hospital Oakland has a long history of serving its community and addressing health where people live, learn and play. The hospital plays a special role as the largest “safety net” medical center serving the diverse and low-income communities of Alameda County and beyond. The hospital’s Department for Community Health and Engagement (DCHE) is the bridge between the hospital and the broader community. DCHE strengthens the hospital’s focus on community needs, health equity, disease prevention and promotion of healthy kids in today’s rapidly changing environment. UCSF Benioff Children’s Hospitals (Oakland and San Francisco) are among the nation’s finest pediatric medical centers, according to U.S. News & World Report’s annual rankings. Their expertise covers virtually all pediatric conditions, including cancer, heart disease, neurological disorders, pulmonology, diabetes and endocrinology, as well as the care of critically ill newborns. They are known nationally and internationally for basic and clinical research, and are at the forefront of translating research into interventions for treating and preventing diseases. The Oakland campus has a highly regarded pediatric residency program and is one of only five ACS Pediatric level I trauma centers in California.