

PLUS Legacy Report:

Name: Jessie Duvall, MD

a) *Title:* Improving Physical Activity in San Francisco's Elementary Schools

b) *Key words:* physical activity, PE, health benefits of physical fitness, the impact of physical activity on academic performance, standardized test taking, community-participatory research, policy driven research.

c) *Learning objectives:*

- Gain experience working with and leading an interdisciplinary team committed to discovering innovative solutions to public health dilemmas.
- Design, conduct, and evaluate academic and community-participatory research.
- Increase understanding of how to use research to influence public policy.
- Develop my voice as a physician advocate.

d) *Project objectives:*

- Participate in community-participatory research around physical activity and physical education in SF elementary schools
- Facilitate conversations between UCSF, SF Department of Public Health (DPH), elementary school leaders, and community nonprofits to develop strategies to improve physical activity programs in SF elementary schools
- Develop and lead an interdisciplinary research team
- Create a novel study design that results in outcomes specific to the needs of SF DPH around physical activity in elementary schools
- Engage in reshaping of project goals and designs as dictated by community needs and political reality.
- Obtain grant funding for study design
- Facilitate the implementation of study, aid in interpretation of results, and presentation of findings.
- Use data gained from study to advocate for policy that increases financial and structural support for physical activity/physical education in schools.

e) *Activities*

- Received \$2500 grant from SF Heal Zone to fulfill project's goal to assess the physical activity environment at George Washington Carver Elementary school in the Bay View; included hiring and managing local community advocate in collection of data and project report

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- Joined SF DPH “PE Advocates” subcommittee and facilitated multiple meetings between DPH officials, UCSF public health researchers, elementary school advocates, and community non-profit Playworks to brainstorm ways to work together to bolster physical activity opportunities in SF elementary schools
- Conducted literature review on importance of physical activity for children’s physical and mental health and its potential impact on academic performance
- Developed a novel study with interdisciplinary team to assess impact of physical activity on school performance. Specifically, in order to provide evidence to school administrators that could bolster support for school-based physical activity, we designed a cluster-randomized trial to test the impact of 20 minutes of moderate-to-vigorous physical activity (MVPA) directly prior to standardized test taking on students test scores and test-taking behaviors for 5th grade students.; Study called “IMPACT Study.”
- Obtained a \$50,000 grant from the Spencer Foundation to conduct our study at 20 randomized public elementary schools in 2014-15 school year

f) Outcome:

- Report to the SF Heal Zone and Shape Up San Francisco regarding physical activity environment at Carter Elementary school (report attached)
- Developed a Prezi presentation on importance of physical activity for children’s health and links to their academic performance based on literature reviews and conversations with experts (example presentation attached given for UCSF pediatric residents and includes references)
- Created interdisciplinary research team of UCSF pediatricians, UC Berkeley public health researchers, and nonprofit Playworks leaders to develop novel study
- Applied and received research approval from San Francisco Unified School District (SFUSD) to conduct research in elementary schools (application attached)
- Developed grant application of a pilot IMPACT study for the Spencer Foundation that was funded as a \$50,000 grant to assess impact of physical activity on standardized test taking in 5th grade students in SF (grant attached, includes detailed literature review and references)
- Developed PowerPoint presentation of IMPACT study for SFUSD (presentation attached)

g) Lessons in Implementation

- Scheduling interdisciplinary meetings can be challenging with residency schedule

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- Collaboration and delegation of responsibility/tasks is key to effectively moving a large scale, interdisciplinary project forward.
- Outcomes of interest in a study can vary greatly depending on organization's goals
- It is possible to align the goals of academic research, government officials (e.g., SF DPH), and community organizations, but need to keep goals broad to reach consensus
- Politics and self interests are still a large impediment to collaboration, e.g., the fundraising efforts of non-profit partner nearly caused them pull out of collaboration if study budget did not include enough for them and ultimately San Francisco Unified School District's PE Office has impeded implementation of study this year due to proposition ballot implications and political climate.
- While balancing multiple agendas can be difficult, recognizing and anticipating who will be key players and bringing them into the process early may increase ultimate success of a project.
- When forming partnerships with different organizations, it is important to have more than one key contact with each organization, as different individuals may leave their position before deals are made
- Flexibility and compromise are critical for the success of large scale, interdisciplinary, community based projects.

h) Potential future projects:

- Implement the IMPACT study methodology pilot; depending on results apply for larger grant for same study design but with larger enrollment at multiple different cities and school districts across California or the country
- Study impact of physical activity on learning at different age groups older and younger than 5th grade
- Develop advocacy campaign on benefits of physical activity and physical education programs in elementary schools
- In the near future, utilize topical knowledge and physician voice to advocate for renewal of Proposition H, funding for Physical Education and Activity in San Francisco County.
- Jessie Duvall selected as a Champion Provider, a program developed by the California Department of Public Health, UCSF's Center for Vulnerable Populations, and Public Health Institute. The goal of the program is to train physicians to use their voice to advance obesity prevention policies and advocate for systems and environmental changes that will improve the long-term health of communities. Term will begin in July 2014.

i) Resources:

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- SF DPH's Shape Up San Francisco: <http://shapeupsfcoalition.org/> (key contact: Mary Ann Szeto Marianne.szeto@sfdph.org and Christina Goette, Christina.goette@sfdph.org)
- San Francisco Health Improvement Project (SF HIP): <http://www.sfhip.org/> (key contact: Roberto Vargas MD, rvargas@fcm.ucsf.edu)
- SF Playworks: <http://www.playworks.org/> (key contact: Ben Stein, bstein@playworks.org)
- UC Berkeley Public Health and Nutrition Research (key contact, Kris Madsen, madsenk@berkeley.edu, and Hannah Thompson, thompsonh@berkeley.edu)
- Heal Zones: <http://healzones.org/>
- Spencer Foundation: <http://www.spencer.org/>
- Robert Wood Johnson's Active Living Research: <http://activelivingresearch.org/>