

Heaney—Develop a Mentoring Program for Underrepresented Minority Students to Improve Community-Engaged Research Competencies

Specific Educational Aims: Despite decades of efforts to promote healthy lifestyle behaviors in order to reduce chronic diseases, 60% of deaths globally are due to preventable conditions.¹ To address this invisible epidemic, researchers at the Stanford Prevention Research Center (SPRC) are focusing on an innovative approach to chronic disease prevention with the WELL for Life (WELL) initiative. WELL aims to enhance our understanding of a comprehensive and subjective concept of well-being in order to use this concept to tailor chronic disease prevention initiatives more effectively. Our proposed program will be a collaboration between WELL, SPRC's Master's program that trains students in Community Health and Prevention Research (CHPR), and community-based organizations that serve local under-resourced communities. **CHPR has the highest proportion of underrepresented minority (URM) students (25%) of any Master's program on campus. Medical students in the Community Health scholarly concentration can also participate in the program as part of their course requirements.** An innovative shared mentorship approach will be used with the URM students by involving both WELL faculty and community partners. WELL for Life has community partnerships throughout the 9 Bay Area Counties that are managed by the WELL Community Partner Program. **Students will collaborate with WELL community partners to learn about the lived experiences of members of under-resourced communities, the determinants of their well-being, and the implications for tailoring health promoting interventions for these community members (an innovative approach to precision health). Students will enroll community members into WELL and ensure that underrepresented groups are included in this important research. Receiving funds for this program will allow the WELL Community Partner Program Administrator to work closely with students in building new community partnerships and sustaining them once the students have moved on.**

The goal of the WELL Mentor Program is to mentor URM students to conduct ethically based and scientifically rigorous community engaged research.

Aim 1: Develop and expand a WELL Mentor Program to empower URM students to conduct scientifically rigorous, ethically based community-engaged research with underrepresented groups.

Aim 2: Build URM student competencies in conducting community engaged research.

Aim 3: Evaluate success of WELL mentor program and student achievement.

Project Rationale: URM students may come from disadvantaged backgrounds without equal access to higher education; the transition to an unfamiliar environment at a research institution may be difficult.² URM students are more likely than non-URM students to enter freshman year with substandard high school preparation for university, and so research experiences in faculty-led centers/laboratories are often students' first exposure to research as a potential career path.³ Although consistent satisfying interaction with a mentor may be associated with positive career attitudes for students of any background, the development of these attitudes is particularly important for URM students, who are lost in significant numbers at each stage in the process of attaining advanced degrees, despite institutional efforts.² The WELL Mentor Program, a group based initiative, will support URM students to conduct community engaged research at the Stanford School of Medicine. Lessons learned from the WELL Mentor Program will advance the understanding of how to teach and mentor URM students to be better community engaged scientists. We want to further explore methods to ensure that a group based mentoring program can be sustained. Initial work in developing a group based mentoring program for WELL was previously done with 7 WELL URM student interns. This experience will inform the further development of the WELL Mentor Program.

Approach: The WELL mentor program will support students throughout the community outreach, partnership building and community engaged research processes. Students will begin by selecting an underrepresented population of interest. In the formative work done with the 7 WELL URM students, the target populations included communities such as the urban homeless population, African Americans, South Asians, and the rural underserved. Students will be mentored as they prepare an overview of demographic data and conduct a literature review about the well-being of the target population to identify gaps in the literature. Next, the students will be mentored by both the WELL Community Partner Program Administrator and a representative from an already established

group of community partners. Students will research new potential community partners who work with their target population and receive training to help them develop the skills needed to build and enhance these community relationships. In the initial pilot, the Office of Community Engagement provided training materials and support. Once the partnerships are established, the students will work with the community partner to enroll participants to WELL. Students will also conduct semi-structured interviews that will enhance their understanding of the lived experiences of individual's in their selected URM communities, with the assistance of a mentor. Once this recruitment phase is over, each student will analyze the data gathered from their target population and prepare a poster, report and, if possible, a manuscript for publication, that will describe the results of their research activities and will satisfy the academic requirements of their program. The WELL Mentor Program activities and outcomes will be documented and analyzed to improve understanding of how to mentor URM students to be better scientists.

Timeline

Student Activities	WELL Mentor Program Activities
Sept-Dec, 2018	
<i>Laying the Framework</i> <ul style="list-style-type: none"> • Orient URM Students to WELL • Choose a target population • Conduct background demographic and literature review • Prepare a list of potential community partners 	<i>Laying the Framework</i> <ul style="list-style-type: none"> • Develop evaluation measures • Assemble supporting WELL Mentor Program materials • Recruit UMR students • Meet weekly with mentees
Jan-Feb, 2019	
<i>Partnership Development</i> <ul style="list-style-type: none"> • Community engaged research and partnership development training • Contact desired partner • Establish goals and timeline with partner 	<i>Partnership Development</i> <ul style="list-style-type: none"> • Meet weekly with mentees • Facilitate community partner identification and relationship development
March-May, 2019	
<i>Recruit participants into WELL</i> <i>Conduct semi-structured interviews with community members</i>	<ul style="list-style-type: none"> • Meet weekly with mentees • Evaluate student and program accomplishments • Obtain feedback from community partners to improve WELL mentor program
June-August, 2019	
<i>Analyze findings and prepare presentations/publications</i> <i>Evaluate WELL Mentor Program</i>	<i>Analyze findings and prepare presentations/publications</i>

Anticipated work product

- Establish a group-based WELL mentor program for URM students for conducting community-engaged research that can be expanded over time.
- Prepare posters, reports and/or manuscripts: by URM students to meet academic requirements and by WELL Mentor Program staff.

Evaluation Plan: To determine the success of the WELL Mentor Program, we will gather process data including how many URM students were recruited and retained in the program, did they successfully conduct all aspects of the program, were they able to produce a publishable product, how many participants did they recruit and how many new community partnerships were formed. Additionally, we will evaluate whether the students learned community-engaged research skills through a pre and post survey. We will also collect qualitative feedback from the community partners that the URM students worked with.

Similarly, students will be given an opportunity to provide feedback on their experience with the WELL mentor program and their work with the community partners. Based on all the findings collected, we will be able to better tailor the program for the next cohort of students.

Dissemination Results: We plan to share the success of the WELL Mentor Program via oral presentations, posters and publications, within and beyond Stanford. Examples are the SPRC Research Symposium and Seminar Series, the Clinical Teaching Seminar Series, at the Society of Behavioral Medicine Annual Conference and the Office of Community Engagement Research Symposium. We will prepare a paper for publication on the lessons learned in teaching and mentoring URM's to be better scientists. URM students will have the opportunity to share the findings of their research in similar settings.

Appendix A

- ¹ World Health Organization. Chronic diseases and health promotion. *World Health Organization*. Retrieved from <http://www.who.int/chp/en/>
- ² Engstrom, C. M. (2008). Curricular learning communities and unprepared students: How faculty can provide a foundation for success. *New Directions for Teaching and Learning*, 115: 5-19.
- ³Hurtado, S., Cabrera, N. L., Lin, M. H., Arellano, L., & Espinosa, L. L. (2008). Diversifying science: underrepresented student experiences in structured research programs. *Research in Higher Education*, 50: 129-214.
- ⁴Davidson, M. N., Foster-Johnson, L. (2001). Mentoring in the preparation of graduate researchers of color. *Review of Educational Research*, 71(4): 549-574.