

The Health Career Collaborative: Remote Mentorship, Healthcare Education Exposure & **Project-Based Learning Focused on Underrepresented High School Students**

Health Career Collaborative AMERICAN COLLEGE OF SURGEONS

Eric Jenkins B.S., Josh Taylor B.S., Liana Gefter M.D., MPH **Stanford School of Medicine**

PROJECT DESCRIPTION

Stanford East Palo Alto Health Career Collaborative (HCC) is a weekly after-school program which exposes underrepresented-minority (URM) and first-generation low-income (FGLI) high school students to healthcare topics, educational pathways, and careers. Stanford HCC's goals are to increase students' feelings of healthcare identity, belonging, and mentorship connection. Due to the COVID-19 pandemic, students were attending school remotely. With guidance from the HCC national team, we developed and implemented a remote curriculum focused on fostering caring and consistent student-mentor relationships, culturally relevant cases, ageappropriate anatomy and physiology, and activities centering critical thinking and creativity.

STATEMENT OF NEED

Baseline pilot survey data from our 2019-2020 cohort revealed that, before participation, HCC participants felt unsure they belonged in a healthcare career and whether people like them belonged in healthcare at rates of 50% and 38%, respectively. Additionally, 62% felt unsure or disagreed that they felt connected to a mentor.

| Question | Mean Pre Score | Mean Post Score | Difference Pre to Post | P-Value | 95% Conf. Interval |
|---|----------------------|-----------------------|---------------------------|---------|--------------------|
| 4) I feel like people like me belong in healthcare/medicine | 3.5 | 4.2 | 0.7 | 0.066 | -0.058 to 1.458 |
| 6) I feel connected to a mentor | 2.7 | 4.1 | 1.4 | 0.001 | 0.709 to 2.091 |
| 7) I feel connected to a mentor within healthcare/medicine | 2.1 | 3.9 | 1.8 | 0.000 | 1.236 to 2.364 |
| 16) I feel like I can obtain a position of leadership in the future | 3.8 | 4.4 | 0.6 | 0.050 | 0 .001 to 1.332 |
| 19) I feel knowledgeable about different career options in healthcare | 3.6 | 4.3 | 0.7 | 0.010 | 0.217 to 1.183 |

Table 1. HCC program graduates increased from a mean score of disagree to a score of agree regarding connection to a mentor in general or in healthcare. Additionally, HCC program graduates increased from a mean score of unsure to agree regarding feeling like people "like them" belong in healthcare, feeling they can obtain a position of leadership in the future, and feeling knowledgeable about different career options in healthcare.

OBJECTIVES OF PIVOT TO REMOTE CURRICULUM

- Maintain student engagement and mentorship at levels comparable to in-person sessions
- Increase health science focus of curriculum with emphasis on relevant health disparities
- Model URM healthcare education success while normalizing struggle and growth
- Provide culturally relevant social capital for college preparation
- Decrease student to mentor ratio while maintaining longitudinal relationships



Figure 1. 10th grade students from East Palo Alto Academy earning AHA CPR and AED certification.

FOUNDATIONS OF REMOTE HCC CURRICULUM



Figure 2. 10th grade students from East Palo Alto Academy practicing checking blood pressure manually.

Practical Foundations

- Longitudinal Mentorship Families (20 sessions)
- Minimum 2 to 1 Mentor to Student Ratio
- Weekly URM Health Professional Pop-In Speakers
- Spiraling Curriculum Promoting Spaced Repetition
- Attendance Incentive Program

Theoretical Foundations

- Nodding's 7 C's and Theory of Care
- Freire's Critical Theory
- Dweck's Growth Mindset Theory

Pedagogical Foundations

- Mindset, Rapport, and Representation- 5 Modules
- College Success- 4 Modules
- Science of Medicine and Disparity- 9 Modules
- Scholarly Presentation Skillset- 5 Modules

---Since 2018, HCC has served 67 predominately URM FGLI participants---

RESULTS

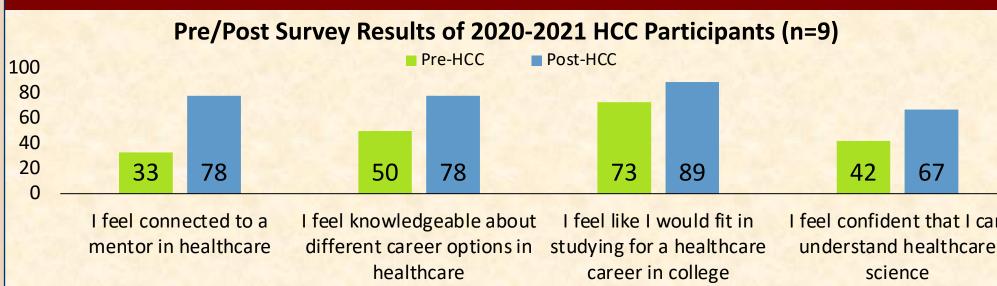


Figure 3. Survey results from 2020-2021 remote cohort. These results suggest that HCC's remote curriculum is increasing student's sense of science efficacy, science identity and belonging as well as connection to a mentor.

How Do Our Students and Staff Partners Feel?

you and others put in to ensure HCC would continue to be great even online. In the beginning I was a little Please know that I am extremely grateful to you all. nervous on how much would change, but I had fun and learned a lot.

So now would be the time I'd say thank you and I'll see you next year... thank you and we'll miss you Also thank you for the year we had in person. " -EPAA Student E

"Thank you all from the bottom of my heart. The HCC "I just wanted to thank you for all the time and work has become a point of great pride for the students and all of us as a school.

> Thank you for joining EPAA in disrupting the cycle of poverty for all communities and diversifying the culture of power. How fun to imagine that one day it will be one of my students, who is helping us at the hospital - as an MD!" -EPAA Staff A

FUTURE DIRECTIONS

Future efforts should investigate the longitudinal impact of the HCC program on students' college enrollment, choice of major, and BCPM GPA two years after high school graduation. These findings highlight the adaptability and sustainability of HCC programming as a meaningful component of the healthcare education pipeline mitigating multiple barriers to entry while also nurturing and developing protective factors for URM and FGLI student persistence towards healthcare careers.

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REFERENCES

Eliason, J., et al. "AAMC Diversity in Medical Education Report: Facts & Figures 2016." 2016.