

PROJECT TITLE: SERVICE THROUGH SURGERY: SURGEONS WITH AN IMPACT

PI Names: James N, Lau, MD, MHPE Director, Surgery Core Clerkship, Paloma Marin-Nevarez BA, Medical Student, Jecca Steinberg, MSc, MSc, Medical Student,

I. SPECIFIC EDUCATIONAL AIMS (1) Design and facilitate a weekly seminar course that introduces medical students to diverse surgeons who are passionate about improving equity in the field of surgery as it relates to patients, communities, professional institutions, health policy and global health; **(2)** Facilitate student reflections to examine the surgeon's role in impacting social justice, diversity, and health inequities; **(3)** Measure the impact of the seminar on medical students' perspectives and career trajectories through quantitative and qualitative data collection and analysis; **(4)** Disseminate findings and engage the surgical education community in discussions on the importance of mentorship and promotion of surgery's role in diversity, inequity and social justice in patient care.

II. PROJECT RATIONALE Despite decades of interventions to diminish inequities in health care, low-income, minority communities continue to receive inadequate surgical services and bear unconscionable health burdens.¹ Research has demonstrated that increasing diversity among surgeons improves healthcare access and outcomes for traditionally disenfranchised communities,² but surgery continues to trail behind other medical specialties in racial, socioeconomic and gender diversity.^{3,4} Surgeons who endeavor to diminish poverty exemplify the essential part that surgeons can play improving health outcomes for low-income populations, but they comprise only a small fraction of their community.³ The role of all surgeons and the surgical workforce must evolve to further prioritize changing the inequities that impact their field and their patients.

We propose a new educational seminar to expose medical students to diverse surgical leaders and inspire them to consider their potential social justice impact through surgery. When underrepresented students connect with role models of a similar background, they are more likely to follow in the trajectory of that role model and consider careers that might have previously seemed unattainable.⁵ We hope for this seminar to provide that initial connection.

The seminar creates an opportunity for Stanford medical students to meet and form relationships with accomplished physicians who harnessed their passions for diminishing inequities and for surgery to impact their community. Through the lectures, we hope to broaden students' perspective on the relationship between surgeons and underrepresented, low-income communities and on their own potential as future surgeons. For students discounting surgery because they consider it incompatible with their background or passion for affecting poverty, the course will dismantle these misconceptions and reveal several paths towards social service in surgery. For students already interested in surgery, the course will demonstrate the importance of social issues for their future career and introduce them to diverse role models and potential mentors. We will assess the impact of the seminar on enrolled students' perceptions and actions. The course and its findings will contribute to our understanding of how to affect diversity in surgery applicants and increase future surgeons' contribution to social justice and poverty amelioration.

III. APPROACH Our seminar capitalizes on the diversity and leadership among Stanford and Bay Area surgeons and connects them to future physicians through weekly lectures and reflection sessions. We will design, implement and assess the impact of this new seminar on medical students' perception of the relationship between surgery and health inequities.

Aim 1: We will collaborate with the Department of Surgery to develop and pilot a weekly seminar course that features diverse surgeon leaders giving lectures and answering questions on their journey and how it relates to health inequities in the winter quarter of 2018. The course, Service through Surgery: Surgeons with an Impact, SURG 234, has been created by the Stanford Registrar for winter quarter.

The seminar will consist of eight lectures and two reflection sessions. Topics covered in the lectures will include: Building Diversity in Surgery; Immigration and Surgery; Surgery and Global Health Inequities; Policy Impact and Surgery; LGBTQ Advocacy and Surgery; Race Inequities and Surgery; Women in Surgery; Inequities and Neurosurgery. Students from the class will be recruited to lead the class implementation for future years and ensure sustainability.

Aim 2: During course reflections, students will discuss how the lecturers' stories demonstrate the potential and the limitations of surgeons' impact. Reflections will help students connect the accomplishments and barriers of the speakers to their own journey. The value of these reflections will be assessed during in-depth focus groups. We hope to foster camaraderie, generate empathy and facilitate cross-cultural connections among medical students by drawing on their unique passions and their collective interest in changing the field of surgery.

Aims 3 and 4 are detailed in section VI Evaluation Plan and VII Dissemination of Results respectively.

IV. TIMELINE AND PLAN FOR IMPLEMENTATION

Fall Quarter 2017

Aim 1: Develop course content. Complete course logistics (i.e confirm speakers; book room and food; advertise).	Aim 2: Develop reflection content.	Aim 3: Develop and validate metrics. Complete Stanford IRB.	Aim 4: Complete Background and Methods for manuscript.
--	---	--	---

Winter Quarter 2018

Aim 1: Complete course.	Aim 2: Complete Reflections.	Aim 3: Complete pre-survey and focus groups.	Aim 4: Submit abstract to conferences.
--------------------------------	-------------------------------------	---	---

Spring Quarter 2018

Aim 1: Recruit course leaders for 2018-2019. Evaluate course content for improvement.	Aim 2: Evaluate reflections for improvement.	Aim 3: Complete analysis of surveys and focus groups.	Aim 4: Complete manuscript and submit for publication.
--	---	--	---

V. ANTICIPATED WORK PRODUCT:

1. An annual surgery seminar on the surgeon's role in poverty, social justice and diversity;
2. A completed analysis, report and manuscript on the impact of the course on student perspectives and actions associated with the course.

VI. EVALUATION PLAN (*Aim 3*) We plan to evaluate the impact of the seminar through quantitative and qualitative methods and a pre-post analysis of participants. We are collaborating with Dr. James Lau to develop validated metrics. All participants will complete informed Stanford IRB-approved consent. Pre-Post surveys will examine students' demographics, career ambitions, extracurriculars, and perceptions of issues related to surgery, poverty, underrepresented minorities and social justice. Survey data will be triangulated with in-depth focus groups about their perceptions prior to the course and after the course. Survey results will be analyzed with a t-test of participants' pre and post evaluations and chi-square test. Focus group data will be transcribed and evaluated with iterative qualitative analysis.

VII. DISSEMINATION OF RESULTS (*Aim 4*) We will summarize all key findings in a report and seek presentations and publication in academic conferences and journals respectively. Any impact of this seminar course as revealed by a mixed methods program evaluation will be presented to the Department of Surgery either through a Grand Rounds Presentation or in the next annual Surgery Education Retreat.

VIII. BUDGET AND JUSTIFICATION

SERVICE THROUGH SURGERY: SURGEONS WITH AN IMPACT			
ITEM	UNIT COST	UNITS TOTAL	TOTAL
<i>Aim 1 and 2: Seminar Course Implementation</i>			
Room Reservation	In Kind	1	0
Lunch	\$22.50-\$350.00 per class (\$7.50-\$10.00 per lunch per student)	10 Classes (35 students)	\$3500.00
Visitor Parking for Speakers	\$12.00	10 Speakers	\$120.00
<i>Aim 3: Evaluation and Analysis</i>			
Compensation for Survey Participation	\$10.00 Amazon gift card/survey	105 (35 Pre Surveys, 35 Post Surveys, 35 Follow Up Surveys)	\$1050.00
Compensation for Focus Group Participation	\$25.00 Amazon gift card/participant for 1.5 hour focus group	70 (35 pre focus group participants, 35 post focus group participants)	\$1750.00
Transcription of Focus Groups	\$0.89/minute (Standard transcription service cost)	900 minutes (ten 1.5 hour focus groups)	\$801.00
Dedoose Qualitative Analysis Software	\$10.95/month per researcher	3 months, 2 researchers	\$65.70
STATA Quantitative Analysis Software	\$225.00 for Stata/IC	1 Stata/IC	\$225.00
<i>Aim 4: Dissemination</i>			
Abstract Submissions *	\$100.00 per abstract	1 abstract	\$100.00
Conference Registration*	\$500.00 per student	2 students	\$1000.00
Stanford Poster Printing	\$50.00 per poster	1 poster	\$50.00
Transport to Conferences* Conference Accommodation*	\$473.00 per round trip flight	2 students	\$946.00
Conference Meal Reimbursement*	\$150.00 per hotel room per night	1 hotel room for 2 students over 3 nights	\$450.00
	\$12.00 per meal during conference	3 meals a day for 3 days for 2 students	\$216.00
			OVERALL TOTAL \$10273.70

*Based on costs for AAMC Conference In Boston

References

1. Ravi P, Sood A, Schmid M, et al. Racial/ethnic disparities in perioperative outcomes of major procedures: results from the National Surgical Quality Improvement Program. *Annals of surgery*. 2015;262(6):955-964.
2. Marrast LM, Zallman L, Woolhandler S, et al. Minority physicians' role in the care of underserved patients: diversifying the physician workforce may be key in addressing health disparities. *JAMA internal medicine*. 2014;174(2):289-291.
3. Abelson JS, Symer MM, Yeo HL, et al. Surgical time out: Our counts are still short on racial diversity in academic surgery. *The American Journal of Surgery*. 2017.
4. Butler PD, Longaker MT, Britt LD. Major deficit in the number of underrepresented minority academic surgeons persists. *Annals of surgery*. 2008;248(5):704-709.
5. Dan Goldhaber RT, Christopher Tien. The Theoretical and Empirical Arguments for Diversifying the Teacher Workforce: A Review of the Evidence. In *Research TCFEda*, (Ed). University of Washington 2015.