

**Award: Promising Medical Student Surgery  
Education Research : Entry # 15572****Basic Information****Your name:**

Gifty Kwakye MD MPH

**Your title:**

Associate Professor; Clerkship Director for Surgery

**Your institution**

University of Michigan

**Your email address:**[gkwakye@umich.edu](mailto:gkwakye@umich.edu)**Nominee Information****Name of nominee:**

Serena Bidwell

**Nominee's institution**

University of Michigan

**Nominee's title**

Medical Student

**Nominee's email address:**[sbidwell@med.umich.edu](mailto:sbidwell@med.umich.edu)**Eligibility****Has the nominee completed at least two years of medical school?**

Yes

**Has the nominee been an author on a peer-reviewed manuscript or curricular project in surgical education?**

Yes

**Has the nominee held a leadership role in a course or group related to surgery or surgical education?**

Yes

**Is the nominee planning to do surgical residency (any specialty)?**

Yes

**Short Essays**

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### **Why do you think the nominee deserves this award?**

I can think of no one more deserving of the Promising Medical Student Surgery Education Research Award than Serena Bidwell. Not only is she one of the clinically strongest students we have had in a long time, but she has also demonstrated an ongoing commitment to impacting education for most of her adult life, culminating in a focus on surgical education. She began by teaching English abroad as an undergraduate and exploring work in the area of public health outreach. This early work led to a passion for creating more equitable educational opportunities, specifically for underserved communities. While working as an analyst at Stanford University, she worked with the Surgery Department to develop a medical exposure program (SMASH-MED) for high school students, in collaboration with a non-profit organization called SMASH. This 5-week interactive program offered exposure to clinical activities and an opportunity to work with a diverse group of surgeons. She received a Stanford Teaching and Mentorship Innovation Grant for this work. In her first year of medical school at the University of Michigan, Serena became the director of operations for Doctors of Tomorrow (DoT), a partnership between the medical school and Detroit Public Schools, providing high schoolers with longitudinal mentorship and experiential learning throughout high school and into college. She was instrumental in adapting the DoT curriculum to a virtual format to accommodate the new reality of the Covid-19 Pandemic. As a medical student, Serena also collaborated with other students to develop a health disparities curriculum focused on understanding the lack of workforce diversity in medicine as well as disparities in patient care across several medical specialties. She also sits on the Research Innovation Scholarship Education council, advising the medical school on strategies to advance the strategic vision of the educational program and evaluating grants for education funding. As Serena's clinical interests turned toward surgery, she began work with Drs. Brian George and Grace Kim at the Center for Surgical Training and Research (CSTAR) on understanding how surgical trainees achieve operative autonomy at community and academic programs in the US, as well as in training programs in lower resourced countries. Serena has very clearly dedicated herself to making a lasting impact on medical education, both in and out of the operating room. Serena is destined to become a major force in surgical education and I give her my strongest support for this award.

### **How has the nominee demonstrated passion and enthusiasm for surgery and surgical education research?**

Serena doesn't just participate in educational activities. She works to ensure that they have the greatest impact possible, through careful research and dissemination. When developing the SMASH-MED program, she continually evaluated the implementation of the program to ensure that it met the needs of the students and identify areas of improvement. She then presented this work at the ASE meeting in 2019, leading to 2 peer-reviewed publications. Her work helped highlight the importance of pipeline programs in early education to help ensure a more diverse medical workforce in the future. With regard to DoT, she collaborated with members of the leadership team behind her to assess the conversion to a virtual format and identify strategies for strengthening the virtual programming for the future. This work also led to publication of their findings. In order to ensure that the work of DoT could be scaled nationally, Serena presented a DoT Toolkit at the ASE meeting in 2021, detailing the steps required to offer outreach programs at medical schools across the country. She is currently working with a team of undergraduate DoT participants on an ambitious project to track all of the previous DoT graduates to both determine the impact of the program and understand the barriers for underserved students to achieving careers in medicine.

In medical school, Serena's focus turned quickly toward surgery. She has been an active member of SCRUBS, our medical student surgery interest group, as well as Anastomosis, our department's medical student and resident mentorship program. As a former athlete and high school athletic coach, Serena's interests within surgery naturally turned toward understanding how surgical trainees are coached in the operating room and how they progress to autonomy during their training. Her work included an assessment of the differences in achieving operative autonomy at community vs. university-based training programs. She was also able to marry her interest in operative skills training with her passion for equitable access to medical education through work in the surgery department of a teaching hospital in Kenya. One study focused on the process for achieving operative autonomy and a more recent project focused on implementing a Smartphone-based application (SIMPL) for providing feedback on operative performance.

In everything Serena does, she gives everything she has. Her focus, whether with high school pipeline programs or understanding the operative training process, is always on making the biggest impact possible. Serena is passionate, resourceful and a shining star of our medical school

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### **Additional Information**

#### **Please list the nominee's peer-reviewed manuscripts related to surgical education.**

- o Bidwell SS, Miller MO, Lee EW, Yelorda K, Koshy S, Hawn M, Morris AM. Development and Implementation of a Hands-on Surgical Pipeline Program for Low-Income High School Students. JAMA Network Open. 2019. DOI: 10.1001/jamanetworkopen.2019.9991
- o Yelorda K, Bidwell SS, Fu S, Miller MO, Merrell SB, Koshy S, Morris AM. Self-Efficacy Toward a Healthcare Career Among Minority High School Students in a Surgical Pipeline Program: A Mixed Methods Study. Journal of Surgical Education. 2021. DOI: 10.1016/j.jsurg.2021.04.010
- o Irani S, Bidwell SS, Solano Q. High School Medical Pipeline Programs: Challenges and New Opportunities in the Virtual Environment. Academic Medicine. 2021. DOI: 10.1097/ACM.0000000000004473
- o ACCEPTED: Gates B, Bidwell SS, Chen X, Thelen A, George BC, Krumm AE, Kim GJ. Resident Operative Autonomy: Do Community-Based Programs Offer more than University-Based Programs? Global Surgical Education. 2022.
- o UNDER REVISION: Parker RP, Mwachiro M, Sylvester K, Mwachiro E, Parker A, Bidwell SS, Chen X, George B, Kim GJ. Achieving Progressive Operative Autonomy at a Teaching Hospital in Kenya. Global Surgical Education. 2022.
- o IN PROCESS: Bidwell SB, Gates B, Mwachiro M, Parker A, Sylvester K, George BC, Kim GJ, Parker RK. Implementation of a Smartphone-based App for Operative Feedback at a Teaching Hospital in Kenya. Plan to submit to Global Surgical Education.

#### **Please list any education or teaching awards the nominee has received.**

- o Teaching and Mentorship Innovation Grant, Stanford University - Stanford Medicine Teaching and Mentoring Academy, 2019

#### **Please list the nominee's education-related activities (e.g., lectures, programs, presentations, curricula, innovations for teaching or assessment, education-related research).**

##### o Extracurricular Activities

Doctors of Tomorrow – developed virtual curriculum for high schoolers during the pandemic, led several hands-on workshops and field trip days for high schoolers, mentor undergraduate pre-med students one-on-one, organize study tables and pre-med sessions for undergraduate students, presented to departments during their grand rounds and other administrative meetings to highlight ways in which faculty can support Doctors of Tomorrow and other mentorship programs

HOPE Collaborative – working to create a post-baccalaureate program for undergraduate students from underserved communities who struggled with college science courses (includes a partnership between the surgery department, the medical school administration, and the medical school admissions team), led breakout sessions at the annual HOPE Symposium dedicated to development of pipeline and mentorship programs at institutions around the country

Student Diversity Council – collaborated with other students to develop a health disparities curriculum which highlighted various issues related to lack of workforce diversity or disparities in patient care across several different medical specialties, member of multiple medical school curriculum review committees to ensure topics address DEI perspectives and are evolving to reflect our changing society, revamped a first year medical student mentorship program with faculty to connect students with mentors early on in their training

SMASH – created SMASH-MED at Stanford University for high school students from underserved areas in California, developed full curriculum for SMASH-MED high schoolers along with a program for alumni of SMASH who were in college and interested in health care, organize events for SMASH students at the University of Michigan site including sessions with leaders in the COVID-19 pandemic response at the university

RISE (Research Innovation Scholarship Education) – member of the advisory council for medical school education innovation, participate in quarterly meetings to advance the strategic vision of the medical education, evaluate grants for education funding

##### o Research

Evaluation of pipeline and mentorship programs – publications listed below; constantly reviewing feedback of Doctors of Tomorrow curriculum to make updates and improve the experience for high schoolers, undergraduate students, and medical school mentors

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Use a phone-based application (SIMPL) to evaluate improve intraoperative feedback – presented at ASE in 2022 on the difference in operative autonomy between community-based and university-based programs, currently working on an evaluation of progressive operative autonomy with the SIMPL app in Kenya (under revision with Global Surgical Education) and writing a mix-methods study evaluating the implementation and feasibility of using the SIMPL app in Kenya

Evaluation of “distance traveled” – qualitative study looking at how medical students view the term “distance traveled” in the medical school application process and how they believe medical schools should assess “distance traveled”

### o Presentations

Designing, implementing, and evaluating a medical outreach program for local high school students. Stanford Surgery Policy Improvement Research and Education (S-SPIRE) Work in Progress Meeting. Stanford University School of Medicine. January 2017.

A pipeline to surgery: development and implementation of an experiential program for low-income high school students. Association for Surgical Education Annual Meeting. April 2019.

Doctors of Tomorrow: A Model for Longitudinal Investment in Pipeline Programs. University of Michigan Diversity in Medicine Conference. March 2020.

Doctors of Tomorrow: What We Can Do Today. Michigan Medicine Department of Radiology Grand Rounds. July 2020.

Self-Efficacy Toward a Healthcare Career Among Low-Income Minority High School Students: A Mixed Methods Study. Academy Health Virtual Conference. August 2020. (presented by Dr. Kirbi Yelorda)

Doctors of Tomorrow: Inspiring the Future Leaders in Healthcare. Preventive Medicine & Rehabilitation Faculty Meeting. September 2020.

Doctors of Tomorrow: Transitioning to a Virtual Program. 2020 Student Leadership Symposium. University of Michigan Medical School. October 2020.

Optimization of a Virtual Platform for Pipeline Programs: A Collaboration Between Doctors of Tomorrow and the Healthcare Equity and Quality Scholars Program. University of Michigan Diversity in Medicine Conference. March 2021. (presented by Dr. Catherine McDermott)

Doctors of Tomorrow: Virtual Programming for a Medical Pipeline Model. University of Michigan Diversity in Medicine Conference. March 2021 (presented by Sanaya Irani)

Innovations in Equity, Diversity, Justice, and Inclusion Across the Medical Education Spectrum Plenary Speaker. 2021 AAMC GEA Spring Conference. April 2021.

Health Professions Outreach to Disadvantaged and Underrepresented Minority Students: A Toolkit for Starting an Early Outreach Program in Your Community. Association for Surgical Education 2021 Annual Meeting Workshop. April 2021.

How do medical students conceptualize their “distance traveled” and how should it be assessed? A National Qualitative Study. Diversity in Medicine Conference at the University of Michigan. March 2022. (presented by Brandon Ellsworth)

The role of “distance traveled” in medical school applications: a national qualitative study. Central Group on Educational Affairs (AAMC) Regional Conference. March 2022. (presented by Brandon Ellsworth)

Resident operative autonomy: does training program type matter? Association for Surgical Education Annual Meeting, plenary session. May 2022.

Laparoscopic surgery case distribution among surgical residents: competency or cumulative? Association for Surgical Education Annual Meeting. May 2022.

### **Please list the nominee’s leadership roles in courses or groups related to surgery and surgical education.**

- o Doctors of Tomorrow – Director of Operations, Senior Oversight
- o Diversity in Medicine Conference – Chair of Logistics
- o HOPE Collaborative – Medical Student Mentor, Curriculum Development Committee Member, Elementary Outreach Committee Member
- o SCRUBS (medical student surgery interest group) – Senior Medical Student Member
- o Anastomosis (medical student and resident mentorship program) – Medical Student Liaison

### **File Uploads**

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Please upload the nominee's CV.

- [Bidwell-Serena-CV-10.1.22.pdf](#)

**Personal Statement**

- [ASE-Med-Student-Award-Personal-Statement\\_Bidwell.docx](#)

**Notes****Admin Notification (ID: 5ba969832d2f1)**

added October 3, 2022 at 5:38 am

WordPress successfully passed the notification email to the sending server.