

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF SURGERY
DEPARTMENT OF LEARNING HEALTH SCIENCES

Brian C. George, M.D., M.A.Ed., assistant professor of surgery, Department of Surgery, and assistant professor of learning health sciences, Department of Learning Health Sciences, Medical School, is recommended for promotion to associate professor of surgery, with tenure, Department of Surgery, and associate professor of learning health sciences, without tenure, Department of Learning Health Sciences, Medical School.

Academic Record:

M.A.	2016	University of California, Berkeley
M.D.	2008	University of California, San Francisco
B.S.E.	1996	University of Michigan

Professional Record:

2016-present	Assistant Professor of Surgery, University of Michigan
2017-present	Assistant Professor of Learning Health Sciences, University of Michigan

Summary of Evaluation:

Teaching: Dr. George engages in numerous teaching activities directed at multiple levels of learners in various local and national settings. At the University of Michigan, he teaches medical students, residents, and fellows in both formal didactic and clinical environments. He served as faculty for the Science and Practice of Medicine course for medical students and regularly teaches courses to residents and fellows about bedside procedures, trauma, and quality improvement. In his role as the program director for the Center for Surgical Training and Research (CSTAR) Fellowship, he developed and coordinates a biweekly educational seminar series and a weekly research workshop series. Dr. George actively mentors dozens of students, residents, fellows, and faculty, including faculty from other departments. A large majority of his research mentees have published first-author papers and presented at professional conferences. Nationally, he is also recognized as an exceptional teacher and is frequently invited to teach others how to teach, including as faculty for the annual Residents as Teachers and Leaders course conducted by the American College of Surgeons.

Research: Dr. George's research is focused on improving surgeon performance by improving the system of surgical education. He has made important scientific contributions in this domain by developing an innovative approach to accurately measure surgical trainee performance in the clinical workplace. Furthermore, he implemented this approach as a software platform and disseminated it to thousands of surgical trainees through the Society for Improving Medical Professional Learning (SIMPL) research consortium—an international consortium of 125 institutions that Dr. George also founded and directs. Data from this platform provides Dr. George and many other researchers around the world a means to investigate and address larger problems in surgical education. More recently, he has also been linking educational outcomes to patient

outcomes, an entirely novel line of inquiry that builds on methods originally developed for health services research and data science. He has been awarded external funding by numerous key stakeholders in medical education, including the American Board of Surgery, the National Board of Medical Examiners (NBME), and the Association for Surgical Education. He was also awarded a career development award from the Agency for Healthcare Research and Quality to support his work using patient outcomes. Dr. George has published 54 peer-reviewed articles, co-authored a book, and has been invited to present his research nationally at dozens of organizations and institutions as well as internationally as a visiting professor to the Imperial College of London and as the keynote speaker for the International Association of Medical Regulatory Authorities.

Recent and Significant Publications:

Williams RG, George BC, Bohnen JD, Dunnington GL, Fryer JP, Klamen DL, Meyerson SL, Swanson DB, Mellinger JD: A Proposed Blueprint for Operative Performance Training, Assessment, and Certification. *Annals of Surgery* 273(4): 701-708, 2021. PMID: 33201114

Kendrick DE, Chen X, Jones AT, Clark M, Fan Z, Bandeh-Ahmadi H, Wnuk G, Kopp JP, Moreno BI, Scott JW, Sandhu G, Buyske J, Dimick JB, George BC: Is Initial Board Certification Associated with Better Early-Career Surgical Outcomes? *Annals of Surgery*: Aug 1;274(2):220-226, 2020. PMID: 33351453

George BC, Bohnen JD, Schuller MC, Fryer JP: Using smartphones for trainee performance assessment: A SIMPL case study. *Surgery* 167(6): 903-906, 2020. PMID: 31668358

Meyerson SL, Odell DD, Zwischenberger JB, Schuller M, Williams RG, Bohnen JD, Dunnington GL, Torbeck L, Mullen JT, Mandell SP, Choti MA, Foley E, Are C, Auyang E, Chipman J, Choi J, Meier AH, Smink DS, Terhune KP, Wise PE, Soper N, Lillemoe K, Fryer JP, George BC: The effect of gender on operative autonomy in general surgery residents *Surgery* 166(5): 738-743, 2019. PMID: 31326184

George BC, Bohnen JD, Williams RG, Meyerson SL, Schuller MC, Clark MJ, Meier AH, Torbeck L, Mandell SP, Mullen JT, Smink DS, Scully RE, Chipman JG, Auyang ED, Terhune KP, Wise PE, Choi JN, Foley EF, Dimick JB, Choti MA, Soper NJ, Lillemoe KD, Zwischenberger JB, Dunnington GL, DaRosa DA, Fryer JP, on behalf of the Society for Improving Medical Professional Learning (SIMPL): Readiness of US General Surgery Residents for Independent Practice. *Annals of Surgery*. 266(4): 582-594, 2017. PMID: 28742711

Service: Dr. George serves as the executive director of the Society for Improving Medical Professional Learning (SIMPL), an international research consortium. He is also a senior scholar at the American Board of Family Medicine, a member of the American Board of Medical Specialties Research Advisory Committee, a member of the American Board of Medical Specialties Database and Information Technology Advisory Committee, a member of the American Board of Surgery Entrustable Professional Activities Technology Working Group, and a recent visiting scholar for the American Board of Medical Specialties. Dr. George is an associate editor for the *Annals of Surgery Open* and a reviewer for four other journals including the *New England Journal of Medicine*. Institutionally, he founded and directs the Center for Surgical Training and Research (CSTAR), one of the three major centers in the Department of Surgery, and

in that role, has built a community that includes over 100 students and faculty. He also serves as the program director for the CSTAR Fellowship, is a member of seven departmental committees, participated in three search committees, serves on the Michigan Medicine Research Innovation Scholarship Education (RISE) Advisory Council, was a member of the Michigan Medicine Resident as Educator Task Force, served as the associate program director for the General Surgery Residency, and serves as the associate program director for the Surgical Critical Care Fellowship. As a highly skilled and dedicated trauma, acute care, and surgical critical care (ACS) surgeon, Dr. George plays a key clinical role within the Michigan Medicine health system. The nature of the clinical services he provides was illustrated during the first part of the COVID pandemic, when every general surgery service line except ACS was shut down. For several months during that same period, Dr. George and his ten other partners also ran three separate COVID ICUs—the only surgeons in that role. Dr. George brings that same level of dedication and commitment to every part of the clinical mission. Motivated by his desire to help patients, he further amplifies his clinical impact by actively teaching and mentoring trainees how to effectively do quality improvement (QI), including as course director for the critical care fellowship longitudinal QI course. He continues to grow his practice in ways that benefit our patients and our health system, for example, by learning how to do chest wall reconstructions and by providing orthopedic surgeons with help gaining anterior exposure to the lumbar spine.

External Reviewers:

Reviewer A: “After review of the submitted materials, I have the impression that Dr. George is [a] clinician educator with emerging national and international recognition in competency-based assessment and learning analytics. His leadership, scholarly productivity, impact to-date, and growing recognition would place him in the top 15% of peer surgical clinician-educators at this stage of career.”

Reviewer B: “He has the passion, dedication, and strategic vision to positively impact the field of surgical education and the outcomes of surgical patients. Given his track record of success, federal funding, national and international reputation and, his steep upward trajectory of excellence and impact, Dr. George would qualify for a similar appointment at [my institution]. I recommend him to you for promotion with enthusiasm.”

Reviewer C: “[Dr. George] is incredibly active in his collaborative assessment advocacy, work, and research. He has completed a Master’s in Education, of which, in it of itself is a declaration of a lifelong commitment to medical education. His tenacity with his education research and initiative matches his ferocity as a mindful and caring surgeon. It is because of his thoughtfulness, work ethic, experience, and enthusiasm for patient care and medical education that he would have already been promoted to the rank of Associate Professor at my current institution...and my former institution...”

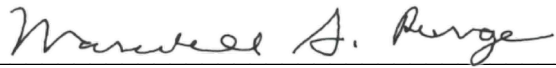
Reviewer D: “Dr. George has clearly established himself in a short time to be one of the most innovative and tireless thought leaders in the field of not only surgical education but medical education in general. Based on [the] last Association of Program Directors in Surgery conference in April of 2021, the education production of Dr. George is quite impressive; he is sponsoring more medical students, graduate students, and residents than anyone else in the field. What becomes even more impressive is the same ideas have migrated out of the operating room to

bedside procedures in the field of Emergency Medicine and to patient assessment in Internal Medicine. Established Chairs and Vice Chairs of Department of Surgery at the highest academic level routinely defer to Brian and look to him for leadership in his area of expertise.”

Reviewer E: “Dr. George possesses a well-established professional position and demonstrated scholarly ability that positively impacts the field of medical education beyond surgery. He has a national reputation with early evidence of an international one. I fully support his dossier for promotion to the rank of Associate Professor, with tenure, in the Department of Surgery, Section of General Surgery; and to the rank of Associate Professor, without tenure, in the Department of Learning Health.”

Summary of Recommendation:

Dr. George is an exceptional clinician, teacher, and researcher who is defining a new line of inquiry at the intersection of surgical education and health services research. He is nationally renowned and provides substantial service and mentoring with great success. I am pleased to recommend Brian C. George, M.D., M.A.Ed. for promotion to associate professor of surgery, with tenure, Department of Surgery, and associate professor of learning health sciences, without tenure, Department of Learning Health Sciences, Medical School.



Marschall S. Runge, M.D., Ph.D.
Executive Vice President for Medical Affairs
Dean, Medical School

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