



SOCIETY OF BEDSIDE MEDICINE



Annual Report 2020

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Introduction

The Society of Bedside Medicine is a global community of physician educators dedicated to bedside teaching and improving physical examination and diagnostic skills. The purpose of the Society of Bedside Medicine is to foster a culture of bedside medicine through deliberate practice and teaching, and by encouraging innovation in education and research on the role of the clinical encounter in 21st century medicine.

Mission and Vision

The bedside encounter between a patient and physician is central to the practice of medicine. Its role is foundational to accurate diagnosis and high-quality patient-centered care. The bedside encounter provides the basis for trust and healing for the patient but is also an important source of fulfillment and satisfaction for the physician. The Society for Bedside Medicine was formed by a global community of physician educators dedicated to bedside teaching and improving bedside diagnostic skill. The purpose of the society is to foster a culture of bedside medicine through deliberate practice and teaching at the bedside, and by encouraging innovation in education and research on the role of the clinical encounter in 21st century medicine.

Board Members

We currently have 12 board members and 3 Advisory Council Members.

Brian Garibaldi	Co-President
John Kugler	Co- President
Timothy Niessen	Treasurer
Stephen Russell	Director of Education
Maja Artandi	Director of Member Engagement/Acting Secretary
Errol Ozdalga	Director of Communications
Lars Osterberg	Founding Board Member
Sonoo Thadaney	Founding Board Member
Junaid Zaman	Director of Research
Andrew Elder	Founding Board Member
Sharon Onguti	Founding Board Member
Nicola Zammit	Board Member
Anna Dover	Board Member
Abraham Verghese	Advisory Council
Nayan Kothari	Advisory Council
Stephen McGee	Advisory Council

Table 1. Board and Advisory Council Members

Membership

The Society of Bedside Medicine offers 2 different membership options: institutional and individual.

Institutional Members

Institutional memberships cost \$4,000 for a two-year membership period. This institutional membership comes with 10 individual faculty memberships, as well as recognition on the Society of Bedside Medicine website. We currently have 10 institutional members with more on the way!

1. Johns Hopkins University School of Medicine (Founding)
2. Stanford University School of Medicine (Founding)
3. University of Alabama, Birmingham School of Medicine (Founding)
4. Lahey Hospital
5. Wake Forest University School of Medicine
6. University of Edinburgh School of Medicine
7. The Royal College of Physicians of Edinburgh
8. Texas Tech University Health Sciences Center
9. St. Peter's University Hospital
10. Johns Hopkins Bayview Medical Center

Individual Members

Individual memberships cost \$100 and come with access to member-only content including a library of 5-Minute Moments, the Blaufuss Multimedia cardiovascular assessment and interactive tutorial, opportunities to submit workshop proposals for the Stanford 25 Bedside Medicine Symposium, and the ability to submit 5-minute Moment ideas for publication on the website. As of October 20, 2019, we have 259 individual members representing almost 150 institutions across 19 countries.

Medical students and graduate trainees can join at a discounted rate of \$50. Developing country membership cost is based on the World Bank Development Classification. Band A and B countries pay the full price membership fee of \$100, while B and C and D countries pay a reduced fee of \$50.

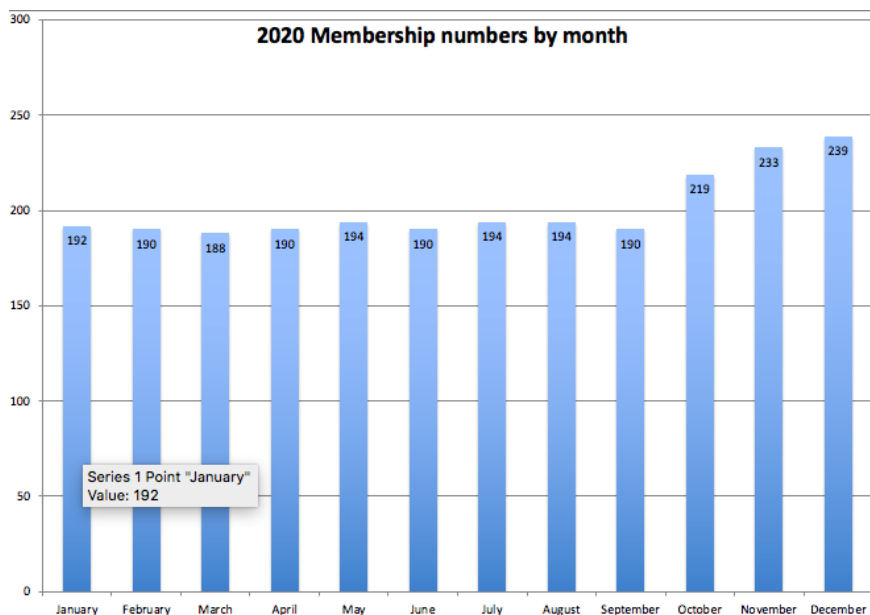


Figure 1. Membership Numbers by Month

Professional Specialties

Anesthesia
Cardiology
Critical Care
Dermatology
Emergency Medicine
ENT
Family Medicine
Gastroenterology
Geriatrics
Heme
Infectious Disease
Internal Medicine
Nephrology
Neurology
Ob/Gyn
Oncology
Ortho
Other
Palliative Care
Pediatrics
Pulmonary
Rheumatology
Surgery

Resources

Society of Bedside Medicine members have access to high quality teaching and assessment resources including a library of Five-minute Moment (5M2) teaching vignettes and Blaufuss multimedia cardiovascular software.

The Minute Moment (5M2)

The 5M2 Working Group is led by board member Stephen Russell. Members are given the opportunity to contribute unique 5M2 ideas, which are then edited by the working group for publication on the Society of Bedside Medicine website. A template is available on the Society of Bedside Medicine website for submission. We currently have 20 5M2s on the website.

Blaufuss Multimedia Software

Blaufuss Multimedia partnered with the Society of Bedside Medicine to make two outstanding teaching and assessment tools available to our members as part of their membership benefits. Members can use the validated Cardiovascular Examination (CE) to assess the cardiovascular skills of their learners and colleagues. Members can also use the Cardiac Interactive software to teach

elements of the cardiac examination using real patient cases that incorporate video, auscultation recordings with a moveable stethoscope, electrocardiograms, echocardiograms and hemodynamic tracings.

Murmurs of the Month

Members have access to 11 “Murmurs of the Month” cases that have been compiled and edited by University of Minnesota Cardiology fellow Juliette Power, a former chief resident at Allegheny General Hospital in Pennsylvania.

Social Media

The Society of Bedside Medicine has an account on Twitter, Facebook and Instagram. The Twitter followers grew from 98 followers in October 2018 to 1021 followers in December 2020.

Coalition To Improve Diagnosis

The Society of Bedside Medicine joined the Coalition to Improve Diagnosis in August 2018. The Coalition, formed and led by the Society to Improve Diagnosis (SIDM), increases awareness and actions that reduce diagnostic error.

The Graduate Medical Education Laboratory (GEL)

The Society of Bedside Medicine is a proud member of the Graduate Medical Education Laboratory (GEL). GEL is a partnership with the internal medicine residency programs at The Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center, Stanford University and the University of Alabama at Birmingham as well as the Human Diagnosis Project and the Society of Bedside Medicine. This group was awarded a 5-year \$1.8million grant as part of the Reimagining Residency Initiative by the American Medical Association. The goal of the proposal is to examine the modifiable aspects of the residency training environment that impact trainee wellness and clinical skill. As part of the project, SBM faculty members will help to set up APECS clinical skills assessments at all 4 residency programs to provide real-time assessment of bedside clinical skills as well as feedback to improve resident performance. The hope is that the SBM can then expand APECS to other member institutions interested in improving trainee clinical skills.

Gordon and Betty Moore Foundation scholarship

SBM partnered with the GBM foundation for a one year scholarship to foster clinical understanding in bedside medicine through the execution of a new project related to the clinical encounter in the time of COVID-19.

After a wide search process Caitlin Hicks MD MS (Johns Hopkins University) was awarded the scholarship. She is studying Telemedicine use among Medicare beneficiaries. Her project will complete in summer 2021 with a presentation to follow.

Non-Profit Status

The Society of Bedside Medicine is a 501c3 organization registered in Maryland (EIN 81-5330550) since April 2017. The board secured nonprofit liability insurance in June 2018.

Presentations at Regional and National Meetings

The Society of Bedside Medicine proudly co-sponsored several national and international meetings over the last year including:

- 5th Annual Stanford 25 Bedside Medicine Skills Symposium - Nov 1-2, 2019
- SBM@theBedside During COVID-19 - May 12, 2020
- SBM@theBedside During COVID-19- June 9, 2020
- SBM@theBedside During COVID-19- July 7, 2020
- SBM@theBedside During COVID-19, August 4, 2020
- AMA GME Innovations summit, October 5, 2020

Margaret Rock Memorial Award

The winner of the annual poster session at the Stanford Clinical Skills Symposium received the inaugural Margaret Rock award, named in honor of a patient whose family donated in her honor to the Society of Bedside Medicine.

Publications

Below is a list of high profile publications by Society of Bedside Medicine members since our last annual report.

Artandi, Maja:

Kendra M, Dang J, **Artandi M**, Vemuri M
Connecting tobacco users in the primary care setting to comprehensive tobacco treatment: a quality improvement initiative
Journal of Public Health, October 2020
<https://doi.org/10.1007/s10389-020-01401-0>

Srinivasan M, Asch S, Vildendrer S, Thomas S, Bajra R,
Barman L, Edwards L, Filipowicz H, Giang L, Jee O, Mahoney M
Nelligan I, Phadke A, Torres E, **Artandi M**

Qualitative Assessment of Rapid System Transformation to Primary Care Video Visits at an Academic Medical Center

Annals of Internal Medicine, July 2020

<https://doi.org/10.7326/M20-1814>

Srinivasan M, Phadke A, Zulman D, Thadane S, Madill E,

Savage T, Downing N, Nelligan I, **Artandi M**, Sharp C

Enhancing patient engagement during virtual care: A conceptual Model and rapid implementation at an academic medical center

NEJM Catalyst July 10 2020

<https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0262>

Artandi M, Russell S

Telemedicine paradoxically deepened our connections with patients

Editorial, AAMC June 18th 2020

Artandi M, Thomas S, Shah N, Srinivasan M

Rapid System Transformation to More than 75% Primary Care Video Visits within three weeks at Stanford: Response to Public Safety Crisis during a Pandemic

NEJM Catalyst April 21 2020

<https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0100>

Thomas S, Carmichael H, Vilendrer S, **Artandi M**

Integrating Telemedicine Triage and Drive-Through Testing for COVID-19

Rapid Response

HMPI COVID-19 Special issue, 3/18/2020

CBSN Bay Area Medical Mondays: Multiple TV interviews

Dover, Anna

Stimson RH, **Dover AR**, Ritchie SA, Wright RJ, McKnight JA, **Zammit NN**, Gibb FW. HbA1c response and hospital admissions following commencement of flash glucose monitoring in adults with type 1 diabetes. *BMJ Open Diab Res Care*. 2020. 8:e001292.doi:10.1136/bmjdr-2020-001292_

Dover AR, Ritchie SA, McKnight JA, Strachan MWJ, **Zammit NN**, Wake D, Forbes S, Stimson RH, Gibb FW. Assessment of the effect of COVID-19 lockdown upon glycaemic control in people with type 1 diabetes using flash glucose monitoring. *Diabet Med*. 2020 Aug 2:e14374. Doi: 10.1111/dme.14374. Online ahead of print_

Elder, Andy

<https://www.heraldscotland.com/opinion/18355250.agenda-families-really-talk-end-life-care/>

<https://www.heraldscotland.com/opinion/18383044.agenda-let-us-find-ways-allow-families-together-end-life/>

Garibaldi, Brian

Clark BW, Lee YZ, Niessen T, Desai SV, **Garibaldi BT**. Assessing physical examination skills using direct observation and volunteer patients. *Diagnosis*. 13 March 2020. PMID: **32167926**

Lin CT, Czarny MJ, Hussien A, Hasan RK, **Garibaldi BT**, Fishman EK, Resar JR, Zimmerman SL. Fibrotic Lung Disease at CT Predicts Adverse Outcomes in Patients Undergoing Transcatheter Aortic Valve Replacement. *Radiology: Cardiothoracic Imaging*. Volume 2, Issue 2, Apr 1 2020.

Flinn JB, Benza JJ, Sauer LM, Sulmonte C, Hynes NA, **Garibaldi BT***. (2020). "The Risk of Not Being Ready: A Novel Approach to Managing Constant Readiness of a High-Level Isolation Unit During Times of Inactivity." *Health Security* 18(3): 212-218. PMID: **32559152 (*corresponding author)**

Flinn JB, Hynes NA, Sauer LM, Maragakis LL, **Garibaldi BT***. The role of dedicated biocontainment patient care units in preparing for COVID-19 and other infectious disease outbreaks. *Infect Control Hosp Epidemiol*. 2020 Sep 4:1-14. doi: 10.1017/ice.2020.451. Online ahead of print. PMID: 32883382 (*corresponding author)

Gupta S, Hayek SS, Wang W, et al (STOP COVID Investigators*). Factors Associated With Death in Critically Ill Patients With Coronavirus Disease 2019 in the US. *JAMA Intern Med*. 2020 Jul 15. PMID **32667668. (* BTG is a site co-investigator for Stop COVID).**

Beigel JH, Tomashek KM, Dodd LE, et al (ACTT-1 Study Group*). Remdesivir for the Treatment of Covid-19 - Preliminary Report [published online ahead of print, 2020 May 22]. *N Engl J Med*. 2020 PMID: **32445440 (*BTG is a site co-investigator for ACTT-1).**

Garibaldi BT*, Fiksel J, Muschelli J, Robinson ML, Rouhizadeh M, Perin J, Schumock G, Nagy P, Gray JH, Malapati H, Ghobadi-Krueger M, Niessen TM, Kim BS, Hill PM, Ahmed MS, Dobkin ED, Blanding R, Abele J, Woods B, Harkness K, Thiemann DR, Bowring MG, Shah AB, Wang MC, Bandeen-Roche K, Rosen A, Zeger SL, Gupta A. Patient Trajectories Among Persons Hospitalized for COVID-19 : A Cohort Study. *Ann Intern Med*. 2020 Sep 22. doi: 10.7326/M20-3905. Epub ahead of print. PMID: 32960645.(***corresponding author**)

Review Articles [RA]

Jacobsen AP, Khiew YC, Murphy SP, Lane CM, **Garibaldi BT**. The Modern Physical Exam – A Transatlantic Perspective from the Resident Level. *Teaching and Learning in Medicine*. 24 Feb 2020.

Russell SW, **Garibaldi BT**, Elder AT, Verghese A. The power of touch. *The Lancet*. 4 April 2020.

Russell SW, Desai SV, O'Rourke P, Ahuja N, Patel A, Myers CG, Zulman D, Sateia HF, Berkenblit GV, Johnson EN, **Garibaldi BT**. The genealogy of teaching clinical reasoning and diagnostic skill: the GEL Study. *Diagnosis (Berl)*. 2020 Mar 9. PMID: 32146439

Russell SW, Ahuja N, Patel A, O'Rourke P, Desai SV and **Garibaldi BT**. Peabody's Paradox: Balancing Patient Care and Medical Education in a Pandemic. *Journal of Graduate Medical Education*, 2020 In-Press.

Goldhaber-Fiebert SN, Greene JA, **Garibaldi BT**. Low-flow nasal cannula and potential nosocomial spread of COVID-19. *British Journal of Anaesthesia*. 2020 May 17.

Ehmann MR, Zink EK, Levin AB, Suarez JI, Belcher HM, Daugherty Biddison EL, Doberman DJ, D'Souza K, Fine DM, **Garibaldi BT**, Gehrie EA, Golden SH, Gurses AP, Hill PM, Hughes MT, Kahn J, Koch CG, Marx JJ, Meisenberg BR, Natterman J, Rushton CH, Sapirstein A, Selinger SR, Stephens RS, Toner ES, Unguru Y, van Stone M, Kachalia A. Operational recommendations for scarce resource allocation in a public health crisis. *Chest*. 2020 Sep 26. PMID: **32991873**

Garibaldi BT, Masur S, Watto M, Williams P, Brigham S, Berk J. #236 Physical Exam Series: Approach to Shortness of Breath. *The Curbsiders Internal Medicine Podcast*. <https://www.thecurbsiders.com>. 13 Oct 2020. [podcast]

Israni, Sonoo Thadaney

Aggarwal, Nakul and Ahmed, Mahnoor and Basu, Sanjay and Curtin, John and Evans, Barbara and Matheny, Michael and Nundy, Shantanu and Sendak, Mark and Shachar, Carmel and Shah, Rashmee and **Thadaney-Israni, Sonoo**

Advancing Artificial Intelligence in Health Settings Outside the Hospital and Clinic

NAM Perspectives November 30 2020

<https://nam.edu/advancing-artificial-intelligence-in-health-settings-outside-the-hospital-and-clinic/>

Cahan, Eli and Mittal, Vandna and Shah, Nirav and **Thadaney-Israni, Sonoo**

Achieving a Quintuple Aim for Telehealth in Pediatrics

Pediatric Clinics of North America June 11 2020

<https://pubmed.ncbi.nlm.nih.gov/32650867/>

Cahan, Eli and Hernandez-Boussard, Tina and **Thadaney-Israni, Sonoo**

Ethical considerations for monetizable big data in healthcare (Preprint)

JMIR Publications January 23 2020

<https://preprints.jmir.org/preprint/17948>

Osterberg, Lars

Schwartz R, Shanafelt T, Gimmler G, Osterberg, L. "Developing Institutional infrastructure for physician wellness: qualitative insights from VA Physicians." *BMC Health Services Research* (2020) 20:7

<https://doi.org/10.1186/s12913-019-4783-9>

Russell, Stephen

Artandi M and **Russell SW**. Telemedicine Paradoxically Deepened Our Connection with Patients.

AAMC.org. June 18, 2020. <https://www.aamc.org/news-insights/telemedicine-paradoxically-deepened-our-connections-patients>

Russell, SW, Ahuja N, Patel A, O'Rourke P, Desai SV, and Garibaldi BT. Peabody's Paradox: Balancing Patient Care and Medical Education in a Pandemic. *J Grad Med Educ*. Jun 2020. DOI:

<http://dx.doi.org/10.4300/JGME-D-20-00251.1>

Russell SW, Desai SV, O'Rourke P, Ahuja N, Patel A, Myers CG, Zulman D, Sateia HF, Berkenblit GV, Johnson EN, and Garibaldi BT. The Genealogy of Teaching Clinical Reasoning and Diagnostic Skill: the GEL Study. *de Gruyter DIAGNOSIS*. April 2020. doi.org/10.1515/dx-2019-0107

Russell SW, Garibaldi BT., Elder A, and Verghese A. The Power of Touch. *The Lancet*. April 2020.

Zammit, Nicola

Grecian SM, McLachlan S, Fallowfield JA, Kearns PKA, Hayes PC, Guha NI, Glancy S, Williamson RM, Reynolds RM, Frier BM, **Zammit NN**, Price JF, Strachan MWJS. Non-invasive risk scores do not reliably identify future cirrhosis or hepatocellular carcinoma in Type 2 diabetes: The Edinburgh Type 2 Diabetes Study" *Liver Int*. 2020 Sep;40(9):2252-2262. doi: 10.1111/liv.14590. Epub 2020 Jul 22. PMID:32638496_

Stimson RH, **Dover AR**, Ritchie SA, Wright RJ, McKnight JA, **Zammit NN**, Gibb FW. HbA1c response and hospital admissions following commencement of flash glucose monitoring in adults with type 1 diabetes. *BMJ Open Diab Res Care*. 2020. 8:e001292.doi:10.1136/bmjdr-2020-001292_

Dover AR, Ritchie SA, McKnight JA, Strachan MWJ, **Zammit NN**, Wake D, Forbes S, Stimson RH, Gibb FW. Assessment of the effect of COVID-19 lockdown upon glycaemic control in people with type 1 diabetes using flash glucose monitoring. *Diabet Med*. 2020 Aug 2:e14374. Doi: 10.1111/dme.14374. Online ahead of print_

Kugler, John

Jacobs KG, **Kugler J**, Chi J, Stuart E, Berekyei Merrell S, Rassbach C. A Mixed Methods Approach to Understanding Curricular Impact of a Capstone Course on the Self-Efficacy of Fourth-Year Medical Students. *Cureus*. 2020 Aug 3;12(8):e9537. doi: 10.7759/cureus.9537. PMID: 32905172; PMCID: PMC7465827.

Kumar A, Weng Y, Wang L, Bentley J, Almlı M, Hom J, Witteles R, Ahuja N, **Kugler J**. Portable Ultrasound Device Usage and Learning Outcomes Among Internal Medicine Trainees: A Parallel-Group Randomized Trial. *J Hosp Med*. 2020 Feb 11;15(2):e1-e6. doi: 10.12788/jhm.3351. Epub ahead of print. PMID: 32118565.

Kumar A, Weng Y, Graglia S, Chung S, Duanmu Y, Lalani F, Gandhi K, Lobo V, Jensen T, Nahn J, **Kugler J**. Interobserver Agreement of Lung Ultrasound Findings of COVID-19. *J Ultrasound Med*. 2021 Jan 11. doi: 10.1002/jum.15620. Epub ahead of print. PMID: 33426734.

Kumar A, **Kugler J**, Jensen T. Evaluation of Trainee Competency with Point-of-Care Ultrasonography (POCUS): a Conceptual Framework and Review of Existing Assessments. *J Gen Intern Med*. 2019 Jun;34(6):1025-1031. doi: 10.1007/s11606-019-04945-4. PMID: 30924088; PMCID: PMC6544692.

Jessica Buesing, Yingjie Weng, **John Kugler**, Libo Wang, Ondrej Blaha, Jason Hom, Neera Ahuja, Andre Kumar; Handheld Ultrasound Device Usage and Image Acquisition Ability Among Internal Medicine Trainees: A Randomized Trial. *J Grad Med Educ* 1 February 2021; 13 (1): 76–82.
doi: <https://doi.org/10.4300/JGME-D-20-00355.1>

Financial Report

This year has continued to be a year of financial growth for the Society of Bedside Medicine and we deeply thank our individual and institutional members who have contributed to our organization's financial solvency. We have also had several generous donors who have given gifts in honor of patients who have passed away. With the funding we have received we are dedicated to using our assets to promote our mission of fostering a culture of bedside teaching through deliberate practice and teaching, and encouraging innovation in education and research on the role of the clinical encounter in 21st century medicine.

The organization began the year of 2020 with a balance of \$66,183.20 and our current net account balance was \$ 118,117.04 as of December 31, 2020. The income earned by our organization has contributed to promoting bedside teaching through the licensing of Blaufuss software that helps our individual members improve cardiac examination skills at the bedside and supporting education through funding faculty travel to teach across the country and the world.

Goals for 2021-2022

Throughout the course of the year, we will continue to engage in the four core missions of the society: education, innovation, diversity/inclusion and research on the role of the clinical encounter in 21st century medicine.

Education

We will develop and administer teaching and faculty development activities on a national and international level. In addition to our annual meeting at Stanford, we will sponsor a number of educational activities.

Innovation

We will continue to partner with our institutional and individual members to create innovative content that can be used to both teach and assess bedside clinical skill. The Assessment of Physical Examination and Communication Skills (APECS) is an important component of the Graduate Medical Education Laboratory (GEL) study. This formative clinical skills assessment is an exciting way to teach fundamental bedside skill while also providing a way to gauge the "pulse" of bedside skill at a given institution. Johns Hopkins is in its third year of APECS where it has received rave reviews from both housestaff and faculty alike. UAB and Stanford started APECS in 2020 and are planning to offer many more sessions throughout 2021. We have plan to offer APECS to a wider audience in the coming years.

Diversity/Inclusion

We will continue to focus on emphasizing diversity, equity, inclusion and racial justice in teaching and researching bedside medicine skills. In January 2021, the SBM board launched a new DEI Initiative led by Board Members: Anna Dover, Lars Osterberg, Sonoo Thadaney Israni. We hope to attract new board members from diverse ethnic and cultural backgrounds who have a passion to bring bedside medicine skills to their communities.

Research

We hope to continue to collaborate with our institutional members to conduct research on the current state of bedside clinical skills teaching in both undergraduate and graduate medical education. We hope to build a body of evidence supporting the enduring importance of bedside clinical skills. We believe that improving bedside skill will reduce diagnostic error, decrease cost of care, and improve both patient and provider satisfaction with the clinical encounter. We are uniquely positioned as a society to conduct multi-center research projects in each of these important areas. The GBM fellowship and The GEL study are the first in what we hope will be many multi-center collaborations featuring the Society of Bedside Medicine. We are also hoping to kick off a small grants program in 2020 to support small innovative projects by Society members.