

CURRICULUM VITAE

6/2021

Jon Steuernagle

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

2012-present Instructor of Medicine Mayo School of Graduate Medical Education
2015-present Johns Hopkins Medical Institute Intensivist Group
2017-present Clinical Instructor of Medicine Johns Hopkins School of Medicine

Personal Data:

Johns Hopkins School of Medicine
733 N Broadway
Baltimore, MD 21205

Education and Training

2000-2004 Bachelors of Science (BS) Biochemistry (Summa Cum Laude) St. Edward's University Austin, Texas
2004-2008 Doctorate in Medicine (MD) Univ. of Texas Health Science Center at Houston Houston, Texas
2008-2009 Internship Mayo School of Graduate Medical Education, Internal Medicine
2009-2011 Residency Mayo School of Graduate Medical Education, Internal Medicine
2011-2013 Fellowship Mayo School of Graduate Medical Education, Critical Care Medicine
2012-2013 Chief Fellow Critical Care Medicine, Practice/Quality – Mayo Clinic Rochester

Professional Experience

<u>Date</u>	<u>Position, Institution/City</u>
2013-2015	Intensivist/Instructor, ICU St. Agnes Hospital Baltimore, Maryland
2015-2021	Intensivist ICU JHCP at Howard County General Hospital Columbia, Maryland
2015-Current	Clinical Instructor Johns Hopkins School of Medicine Baltimore, Maryland

PUBLICATIONS:

Original Research

1. An unusual case of negative gap metabolic acidosis **Jon H. Steuernagle MD** Critical Care Medicine 2012
2. Intra-abdominal Catastrophe: Celiac Artery Dissection Due to Fibromuscular Dysplasia Srikant Nannapaneni, MBBS, **Jon Steuernagle, MD**, John Park, MD Chest Volume 144, Issue 4, October 2013, Pages 272A, 272B
3. A Quality Improvement Project to Reduce Inappropriate Referrals to a Specialized Ventilation-Weaning Unit Mazen Al-Qadi, MD, Sanjay Chaudhary, MD, Erin Frazee, PharmD, Vicki Loeslie, RN, **Jon Steuernagle, MD**, John Park, MD Chest Volume 144, Issue 4, Supplement, October 2013, Pages 538A, 538B
4. Vascular Surgery Kidney Injury Predictive Score: A Historical Cohort Study Kianoush Kashani, MD, **Jon H. Steuernagle IV, MD**, Abbasali Akhoundi, MD, Anas Alsara, MD, Andrew C. Hanson, Daryl J. Kor, MD J Cardiothorac Vasc Anesth. 2015 Apr 16. pii: S1053-0770(15)00262-1. doi: 10.1053/j.jvca.2015.04.013. (Data analysis, data collection)

5. Approach to AML Treatment. Survey Results from the 6th International Hematologic Malignancies Conference: Bridging the gap 2015 Liu K, Malhotra P, Parmar S, **Steuernagle, J**, Wong R, Kornblau S, et al. Beijing, China. J Leuk 3:186. doi: 10.4172/2329-6917.10001 J. Leuk 7/2015
6. Asia Pacific Hematology Consortium report on approach to multiple myeloma. Survey Results from the 6th International Hematologic Malignancies Conference: Bridging The Gap 2015, Beijing, China. Jin Lu, Jian Hou, Kai-Yan Liu, Simrit Parmar, Adolfo De La Fuente, Börje Andersson, ChenHua Yan, Daobin Zhou, Daryl Tan, David Ritchie, Depei Wu, Elizabeth Shpall, Ginna G Laport, JianYong Li, Jiong Hu, Lian Sheng Zhang, Michael Wang, Pankaj Malhotra, Qian Jiang, Yazhen Qin, Raymond Wong, Richard Champlin, Surapol Issaragrisil, Swaminathan Iyer, Vikram Mathews, Yu Wang, Yu Hu, Zhijian Xiao, Zonghong Shao, Rafael Rosengarten, **Jon Steuernagle**, Jun Huang Xiao, Robert Orłowski, Chor Sang Chim J. Leukemia and Lymphoma 7/2016
7. Spurious Hyperchloremia in the Presence of Elevated Plasma Salicylate: A Cohort Study Kashani K, B, **Steuernagle IV J**, H, Qian Q Nephron 2018;138:186-191
8. MTP simulation and activation in the community setting (In-progress)
9. CVA care On-site neurology vs. telemedicine (BAT) retrospective cohort (In-progress)
10. Site PI for Mayo Convalescent Plasma Study at Hopkins (Ongoing)
11. SCCM ICU-VIRUS study (Ongoing)
12. CCSPEI study assessing risk factors for development of severe COVID-19 disease (Ongoing)

Other Media (Videos, Websites, Blogs, Social Media, etc.)

1. Doximity Physician Leadership Summit Sonoma 2013 California (Silicon Valley)
2. Doximity Physician Leadership Summit 2014 Carmel, California (Silicon Valley)
3. Doximity Physician Leadership Summit 2015 San Francisco, California (Silicon Valley)
4. #FOAMED Leaders on Twitter

Presentations

1. Salicylate Interference with an Indirect ISE Method Causes Falsely Elevated Chloride Results. American Association for Clinical Chemistry (AACC) Annual Meeting and Clinical Lab Expo Houston, Tx 7/2013
2. An unusual Case of Negative Gap Acidosis. SCCM poster presentation San Juan, Puerto Rico 1/2013
3. A Tale of Two Tremors - Graves Hyperthyroidism mimicking essential tremor - Presented at AACE Annual Conference, San Diego, CA 04/14/2011
4. Clinical Indications for Renal Biopsy in Diabetic Glomerulosclerosis with Superimposed Non-Diabetic Renal Disease - Presented at ASN, Philadelphia 11/09/2011
5. Updates to Stroke care, a new DAWN for EVI Howard County Multi-D Conference 10/2018

CLINICAL ACTIVITIES

Clinical Focus: I work as a critical care physician at Johns Hopkins Howard County, where most of my time is dedicated to direct patient care and teaching emergency medicine residents who rotate through the ICU.

Certification

2008-2013	Minnesota Medical License
2008-Present	Federal DEA
2012-Present	FCCS (Fundamentals of Critical Care Support) Instructor
2013-Present	Maryland Medical License
2013-Present	Maryland CDS

Boards, other specialty certification

2011-Current	American Board of Internal Medicine, Internal Medicine Diplomate #321186
2013-Current	American Board of Internal Medicine, Critical Care Medicine Diplomate #321186

Clinical (Service) Responsibilities

Date	Role/time commitment, specialty
2013-2015	ICU Consultant (mixed medical/surgical ICU) with teaching responsibilities to visiting Medical Students, 4 interns and 3 seniors monthly (Mixed medical and surgical residents) – 15 12 hour shifts/monthly
2015-Current	ICU Consultant in mixed medical/surgical/neurological ICU with PA/NP student providers and JHH Emergency Medicine residents rotating through

Clinical (Service) Reputation / Recognition

Date	<i>Awards/honors via national peer review or nomination</i>
2012-2013	Chief Fellow, Mayo Clinic - Rochester

Clinical Productivity

2013-2015	St. Agnes Hospital ICU, average census 12 patients, average RVUs 5000/yr
2015- Current	JHMI, HCGH ICU, average census 11 patients, average RVUs 7000/yr

EDUCATIONAL ACTIVITIES

Educational Focus: I am a committed teacher and in addition to the teaching and mentoring I do for colleagues and learners in my unit, I have developed several innovative curricula related to critical care medicine.

Teaching

Classroom instruction

2011-2013	Sepsis Workshop (Interns, Fellows “bootcamp”) Mayo Multidisciplinary Simulation Center Mayo Clinic Rochester, Minnesota
2012-2013	FCCS Course Instructor, Shock and Resuscitation Mayo Multidisciplinary Simulation Center Mayo Clinic Rochester, Minnesota
2012-2013	FCCS Course Instructor, Burns Mayo Multidisciplinary Simulation Center Mayo Clinic Rochester, Minnesota
2013-2015	Instructor, Critical Care Lecture Series (Residents – 26 courses alternating weeks) St. Agnes Hospital Internal Medicine Residency Program Baltimore, Maryland
2016- Current	Longitudinal Ambulatory Clerkship Johns Hopkins School of Medicine Baltimore, Maryland
2016- Current	Instructor ICU Lectures HCGH Med/Surg ICU Johns Hopkins Dept of Emergency Medicine Columbia, MD
10/2018	Update on Stroke Management Multi-disciplinary lecture HCGH Medical Library Columbia, MD

Clinical instruction

Date	Role, learner level, course title, venue; notes
2010-2013	Instructor, Introduction to Physical Exam (MS 1) year Mayo Multidisciplinary Simulation Center Mayo Clinic Rochester, Minnesota
2011-2013	Instructor, Difficult Airway Lecture Series (Residents) Mayo Multidisciplinary Simulation Center Mayo Clinic Rochester, Minnesota
2011-2013	Sepsis workshop, Medical Residents (PGY1) Mayo Multidisciplinary Simulation Center , Mayo Clinic Rochester, Minnesota
2013-2015	Instructor, Daily ICU Teaching Topics (Medical/Surgical Residents) St. Agnes Hospital Baltimore, Maryland
2016-Current	Instructor, Daily ICU Teaching Rounds (Emergency Medicine Resident) Howard County General Hospital, Med/Surg ICU Columbia, Maryland
2016-Current	LTAC Clerkship Program JHU SOM

Mentoring

Post-doctoral Advisees /Mentees

2011	Anna Swatikova (Resident) Description: Project: Clinical Decision Making/Journal Club Presentation Current Status: Fellow, Mayo Clinic
2014	Chintan Patel (Resident) Description: ACP Oral Presentation “A Clean End”, Awarded First Place for Oral Clinical Vignette Current Status: Graduated, now in Fellowship
2015	Su-Sang Limbu (Resident) Description: Journal Club, PROCESS Trial Current Status: In training, project completed
2014-2015	Mohammad Mahfoud (Resident) Description: QI Project (ABCDE implementation in ICU) Current Status: In training, project ongoing

Educational Program Building / Leadership

2014-2015	Designer/Creator ICU Resident Curriculum and Lecture Updates St. Agnes Medical/Surgical ICU Baltimore, Maryland
2013-2015	Developed a 52 week, 26 lecture course on ICU topics for a biweekly resident lecture on the basic management of ICU patients in a mixed Medical/Surgical ICU
2017-Current	Design and maintenance of ICU curriculum for EM residents rotating through to HCGH ICH

RESEARCH ACTIVITIES

Research Focus

Initial research in residency and fellowship focused on acute kidney injury (AKI) and continuous renal replacement therapy (CRRT) in the ICU. Since graduation I have focused on mobile application development and building electronic tools to improve the dissemination of medical knowledge worldwide and thereby improving the delivery of healthcare and associated outcomes. I remain interested in delirium and long-term outcomes in the ICU and multimodality approaches to reduce its incidence – noise reduction, music, non-GABA sleep aids in ICU patients. Non-invasive cardiac output monitoring techniques (NICOM, POC ultrasound). UI/UIX in electronic medical interfaces, human interface design in EMR, QI in the ICU, AI/data synthesis aids in complex environments (early assistance with Mayo AWARE project,) and now with the Hopkins TREWs project.

Technology Transfer Activities (Company Start-ups)

Date	Role, title, notes
2011-Present	Physician Advisor Doximity Inc.
2015-Present	Co-Founder MDRing
2018- Present	98point6 Primary Care Council, Startup Advisor
2018- Present	GLG Consultant

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

System Innovation Focus

Lean processes in the ICU focused on improved communications, minimizing and standardizing hand-offs and use of electronic aids to facilitate both. Pandemic has brought much focus on minimizing iatrogenic harm in the ICU setting for patients with COVID-19. Coordinating ICU leadership for physician and non-physician extenders in ICU setting.

System Innovation and Quality Improvement efforts within JHM:

2015-2017	Use of fitness trackers with goals to quantify ICU mobility
2016	Use of Chromecast with familiar pictures/music to reduce ICU delirium for ICU patients
2017-Current	Sleep Enhancement in ICU patients (HCGH ICU/IMCU)
2018	Harmonization and update/adoption of ADA guidelines for management of DKA/HHS and Epic order set creation
2018	Harmonization and standardization of Post-PCI patient's order set from HCGH cardiac catheterization Unit to ICU (CHAMPS project)
2020	Co-wrote COVID ICU Biocontainment policy/flow for COVID and non-COVID ICU
2020	Wrote ICU sedation protocol for mechanically ventilated patients with COVID-19
2020	Wrote ICU ventilator protocol for mechanically ventilated patients with COVID-19
2020	Wrote Neuromuscular blockade protocol
2020	Co-wrote Proning protocol for mechanically ventilated patients with COVID-19
2020	Wrote Guidelines on the treatment of COVID-19 for non-ICU providers (Surgery/Anesthesia extenders)

System Innovation and Quality Improvement efforts outside of JHM:

2011	3 member team, equally shared workload. Designing and Implementing an ICU checklist for Vascular/Thoracic ICU and Mixed Transplant/Heme/Onc ICU Mayo Clinic – Rochester Thoracic/Vascular ICU Checklist implemented and integrated into bedside rounds.
2012	Improving team communication via templated EMR notes. Mayo Clinic – Rochester Medical and Home-Onc ICU. This prepared fellows for the reality of post training practice and improved communication regarding interventions undertaken by overnight fellows in the Medical and Hem-Onc ICUs. Changed fellow practice and improved documentation.
2013	Mentor, supervisory. Reducing inappropriate consultations with the chronic ventilator unit. Mayo Clinic – Rochester Respiratory Care Unit (vent weaning unit) This process improvement lead to reduced team fatigued by educating various stakeholders on criteria for consultation for the ventilator weaning unit team.

System Innovation and Quality Improvement Program Building/Leadership:

2012-2013 Chief Fellow at Mayo Clinic whose focus was QI. Involved with curriculum and instruction of fellows with the Mayo Clinic Quality Academy. Curriculum similar to Six-sigma.

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

Date

2013-2015 Infection Control Committee St. Agnes Hospital – ICU Representative
2016- Current Antibiotic Stewardship Committee, member, HCGH
2016- Current Transfusion Committee, member, HCGH
2018-Current JHH Stroke Workgroup
(Johns Hopkins systemwide workgroup to improve stroke outcomes and design/ implement clinical trials)
2018-Current Hopkins Brain attack performance improvement committee (BAPIC)
(Local Howard county specific quality team for improved stroke outcomes and clinical trials/ research)
2020-Curent Maryland Hospital Acquired Conditions (MHAC) Review Committee (Physician Lead)
(This team reviewed hospital acquired conditions as necessary for revenue purposes and quality improvement)
2020-Current Systemwide Formulary Committee
2020-Current COVID-19 Novel Therapeutics Committee
2020-Current Tocilizumab approval committee (5 person systemwide committee)
2020-Current Therapeutics and Clinical Trials for COVID-19 committee

Advisory Committees, Review Groups/Study Sections

Date

Role, sponsor/organization/group
2011-2013 Doximity, Inc. Fellow
2013-Current Doximity Inc., Physician Advisor
2015-Current Co-Founder, Chief Medical Officer, MDRing (mobile Medical Education platform)
2015-2016 Buoy Health, Physician/Startup Advisor
2018-Current 98point6, Physican Advisor
2018-Current Athenum Business/Physician Consultant

RECOGNITION

Awards, Honors

JHMI/Regional

8/2012 “Are barrier practices effective?” (A pro-con debate of modern isolation practices), Mayo Clinic Critical Care Grand Rounds
5/2014 “Beyond 28 Days – Neuropsychiatric Burdens of ICU Survivors”, St. Agnes Hospital, Medical Grand Rounds

National

4/2012 “An Unusual Case of Negative Gap Acidosis” Monthly Acid-Base Conference, Dept. Of Nephrology and Hypertension Mayo Clinic - Rochester
4/2015 Doximity Panel on Technology in Medicine (panel) San Francisco, CA

9/2015 Oral presentation "...with respect to time. Mobile Learning in a JIT World" MEST Conference Houston, TX

OTHER PROFESSIONAL ACCOMPLISHMENTS

01/1999 – 07/2004 **Apple Inc. Austin, Texas/Cupertino, California**

My work with Apple started with the Worldwide AppleCare group taking support calls from end-users. I quickly was promoted to senior support (Tier 2) supporting technical support agents worldwide, Apple certified service providers, and Mac Genius personnel in Apple retail stores. From there I was again promoted to developing internal support tools – real time web based chat (prototype, which is present, albeit in different form on Apple's website today), internal websites for rapid distribution of new and updated technical information.

From there I was able to join the support-engineering group for Mac OS X. I served as the liaison between the Mac OS X software engineering teams and worldwide AppleCare (Europe, Asia, Americas). There I developed an application that collected system level information and logs from Mac OS X and delivered that data to Apple secure servers for QA, bug hunting and technical support assistance.

On the AKI-EPI project I was a contributor but not a named author.

Epidemiology of acute kidney injury in critically ill patients: the multinational AKI-EPI study Hoste EA, Bagshaw SM, Bellomo R, Cely CM, Colman R, Cruz DN, Edipidis K, Forni LG, Gomersall CD, Govil D, Honoré PM, Joannes-Boyau O, Joannidis M, Korhonen AM, Lavrentieva A, Mehta RL, Palevsky P, Roessler E, Ronco C, Uchino S, Vazquez JA, Vidal Andrade E, Webb S, Kellum JA. *Intensive Care Med.* 2015 Aug;41(8):1411-23. doi: 10.1007/s00134-015-3934-7. Epub 2015 Jul 11. PMID: 26162677

(1 of 3 Fellows for Data collection, database management, patient identification at Mayo Clinic in Rochester)