

# MEP Scholarly and Research Productivity

2018

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## *Journal Articles*

1. Tebo C, Mazer-Amirshahi M, DeGeorge L, Gelfand B, Leak C, Tolliver S, Sauter D. Suspected synthetic cannabinoid receptor agonist intoxication: Does analysis of samples reflect the presence of suspected agents? *Am J Emerg Med* 2018 Dec 24. S0735-6757(18):31006-4. EPub 2018 Dec 24. PMID: 30595429.
2. Mazer-Amirshahi M, Fox ER, Zocchi MS, Pines JM, van den Anker JN. Longitudinal trends in U.S. shortages of sterile solutions, 2001-17. *Am J Health Syst Pharm.* 2018 Dec 1. 75(23):1903-1908. PMID: 30463866.
3. Larsen E, Fong A, Wernz C, Ratwani RM. (2018). Implications of electronic health record downtime: an analysis of patient safety event reports. *Journal of the American Medical Informatics Association.* 25 (2), 187-19. PMID: 28575417.
4. Ratwani RM, Moscovitch B, Rising JP. Improving Pediatric Electronic Health Record Usability and Safety Through Certification: Seize the Day. *JAMA Pediatrics* 2018 Nov 1. 172(11):1007-1008. PMID: 30208476.
5. Leroux E, Houser C, Tabas JA, Mattu A, Brady W, Davis JE. Elderly Man With Chest Pressure. *Ann Emerg Med.* 2018 Nov. 72(5):567-570. PMID: 30342732.
6. Ratwani RM, Savage E, Will A, Fong A, Karavite D, Muthu N, Rivera AJ, Gibson C, Asmonga D, Moscovitch B, Grundmeier R, Rising J. Identifying Electronic Health Record Usability And Safety Challenges In Pediatric Settings. *Health Aff (Millwood).* 2018 Nov. 37(11):1752-1759. PMID: 30395517.
7. Ziesenitz VC, Fox E, Zocchi M, Samiee-Zafarghandy S, van den Anker JN, Mazer-Amirshahi M. Prescription Drug Shortages: Impact on Neonatal Intensive Care. *Neonatology* 2018 Nov 1. 115(2):108-115. EPub 2018 Nov 1. PMID: 30384374.
8. Kelahan, L., Fong, A., Kandaswamy, S., Ratwani, R.M., and Filice, R. Radiologist's Gaze: Mapping Three-Dimensional Visual Search in Computed Tomography of the Abdomen and Pelvis. *J Digit Imaging.* 2018 Oct 4. PMID: 30291478.
9. Monahan BV, Nable JV, WinklerPrins V. Implementation of an Alcohol Medical Amnesty Policy at an Urban University With a Collegiate-Based Emergency Medical Services Agency. *J Adolesc Health.* 2018 Oct 5. 64(1):134-136. PMID: 30293861.
10. Miller K, Dastoli A. Matt's story: learning from heartbreak. *Int J Qual Health Care.* 2018 Oct 01. 30(8):654-657. PMID: 29684143.
11. Abbott L, Bromberek EF, Isserman JD, Davis JE. Tube Feed Malposition and Associated Peritonitis. *J Emerg Med* 2018 Oct. 55(4):e107-e108. PMID: 30122523.

12. Derse R, Moskop JC, McGrath NA, Vearrier LE, Clayborne EP, Goett RR, Limehouse WE Jr, Lynch JJ. Physician-Assisted Death: Ethical Implications for Emergency Physicians. *Acad Emerg Med.* 2018 Sep 19. PMID: 30230665.
13. Bell J, Goyal M, Long S, Kumar A, Friedrich J, Garfinkel J, Chung S, Fitzgibbons S. Anatomic Site-Specific Complication Rates for Central Venous Catheter Insertions *J Intensive Care Med.* 2018 Sep 19. PMID: 30231668.
14. Miller K, Capan M, Mosby D, Noaiseh Y, Kowalski R, Kraft R, Schwartz S, Weintraub WS, Arnold R. The design of decisions: matching clinical decision support recommendations to Nielsen's design heuristics. *Int J Med Inform.* 2018 Sep. 117:19-25. PMID: 30032961.
15. Ratwani RM, Savage E, Will A, Arnold R, Khairat S, Miller K, Fairbanks RJ, Hodgkins M, Hettinger AZ. A usability and safety analysis of electronic health records: a multi-center study *J Am Med Inform Assoc.* 2018 Sep 01. 25(9):1197-1201. PMID: 29982549.
16. Berrigan W, Geer R, Jelnick JS, Davis JE, Bunning R. Visual Diagnosis: Quadriceps Tendon Rupture. *J Emerg Med.* 2018 Aug 30. PMID: 30173963.
17. Tatusov M, Mazer-Amirshahi M, Abbasi A, Goyal M. Clinical effects of reported synthetic cannabinoid exposure in patients admitted to the intensive care unit. *Am J Emerg Med.* 2018 Aug 18. PMID: 30146395.
18. Ordway E, Sarna N, DeGeorge L, Baird A, Reid M, Nable JV. EMS Resource Utilization at College Campus Mass Gathering Events. *J Coll Emerg Med Serv.* 2018 Aug 13.
19. Capan M, Hoover S, Miller KE, Pal C, Glasgow JM, Jackson EV, Arnold RC. Data-driven approach to Early Warning Score-based alert management. *BMJ Open Qual.* 2018 Aug 10. 7(3):e000088. PMID: 30167470.
20. Izzo JA, Watson J, Bhat R, Wilson M, Blumenthal J, Houser C, Descallar E, Hoffman D, Booker E. Diagnostic accuracy of a rapid telemedicine encounter in the Emergency Department. *Am J Emerg Med.* 2018 Aug 7. PMID: 30209006.
21. Wallis MC, Wilson MD, Mete M, Koroshetz L, Soares R, Goyal M. Bedside End-tidal Carbon Dioxide in Evaluation for Pulmonary Embolism. *Acad Emerg Med.* 2018 Aug 6. PMID: 30084149.
22. Cross R, Bhat R, Ying L, Plankey M, Maloy K. Emergency department computed tomography use for non-traumatic abdominal pain: minimal variability. *West J Emerg Med.* 2018 Sep. 19(5): 782-796. PMID: 30202488.
23. Mazer-Amirshahi M, Ladkany D, Mullins PM, Motov S, Perrone J, Nelson LS, Pines JM. Trends in and predictors of hydromorphone administration in US emergency departments (2007-2014). *J Opioid Manag.* 2018 Aug. 14(4):265-272. Epub 2018 July. PMID: 30234923.
24. Yang ZM, Pontius E, Motalib S, Davis JE. Idiopathic Loculated and Septated Pericardial Effusion. *J Emerg Med.* 2018 Aug. PMID: 29871831.
25. Donnelly KA, Zocchi MS, Katy TA, Fox ER, van den Anker JN, Mazer-Amirshahi ME. Prescription Drug Shortages: Implications for Ambulatory Pediatrics. *J Pediatr.* 2018 Aug PMID: 29752177.

26. Johnston SC, Farrant M, Barsan W, Conwit RA, Elm JJ, Lindblad AS, Palesch YY, Clinical Research Collaboration, Neurological Emergencies Treatment Trials Network, and the POINT Investigators. Clopidogrel and Aspirin in Acute Ischemic Stroke and High-Risk TIA. *N Engl J Med*. 2018 Jul 9. 379(3):215-225. Epub 2018 May 16. PMID: 29766750.
27. Kellogg K, Puthumana J, Fong A, Adams K, Ratwani R. Understanding the Types and Effects of Clinical Interruptions and Distractions Recorded in a Multihospital Patient Safety Reporting System *J Patient Saf*. 2018 Jul 7. PMID: 29994817.
28. Galarraga JE, Frohna WJ, Pines JM. The Impact of Maryland's Global Budget Payment Reform on Emergency Department Admission Rates in a Single Health System. *Acad Emerg Med*. 2018 Jun 22. PMID: 29931705.
29. Fong A, Ratwani RM. Understanding Emergency Medicine Physicians Multitasking Behaviors Around Interruptions. *Acad Emerg Med*. 2018 Jun 11. PMID: 29888519.
30. Oyegbile, T, Delasobera, BE, Zecavait, N . Postconcussive Symptoms After Single and Repeated Concussions in 10- to 20- Year Olds: A Cross Sectional Study. *J Child Neurol*. 2018 May: 33(6): 383-388. PMID: 29552934.
31. Mazer-Amirshahi M, Porter R, Dewey K. Prolonged QRS Widening After Aripiprazole Overdose. *Pediatr Emerg Care*. 2018 May 5. PMID: 29746361.
32. Khairat S, Burke G, Archambault H, Schwartz T, Larson J, Ratwani RM. Perceived Burden of EHRs on Physicians at Different Stages of Their Career. *Appl Clin Inform*. 2018 Apr. 9(2):336-347. PMID: 29768634.
33. Wynn RM, Howe JL, Kelahan LC, Fong A, Filice RW, Ratwani RM. The Impact of Interruptions on Chest Radiograph Interpretation: Effects on Reading Time and Accuracy. *Acad Radiol*. 2018 Mar 28. PMID: 29605562.
34. Howe, J., Adams, K., Hettinger, A.Z., & Ratwani, R.M. Electronic Health Record Usability Issues and Potential Contribution to Patient Harm. *JAMA*. 2018 Mar 27. 319(12): 1276-1278. PMID: 29584833.
35. Wiesner L, Kappler S, Shuster A, DeLuca M, Ott J, Glasser E. Disaster Training in 24 Hours: Evaluation of a Novel Medical Student Curriculum in Disaster Medicine *J Emerg Med*. 2018 Mar. 54(3):348-353. PMID: 29395693.
36. Warner LSH, Galarraga JE, Litvak O, Davis S, Granovsky M, Pines JM. The Impact of Hospital and Patient Factors on the Emergency Department Decision to Admit. *J Emerg Med*. 2018 Feb. 54(2):249-257.e1. PMID: 29428057.
37. Pourmand A, Liao J, Pines JM, Mazer-Amirshahi M. Segway® Personal Transporter-Related Injuries: A Systematic Literature Review and Implications for Acute and Emergency Care. *J Emerg Med*. Epub 2018 Jan 8. PMID: 29321106.
38. Ahmed S, Bromberek E, Borhart J. Exaggerated Arthropod Bite: A Case Report and Review of the Mimics. *Clinical Practice and Cases in Emergency Medicine*. 2018; 2(1):58-50. PMID: 29849262.

1. Pourmand A, Jasani G, Shay C, Mazer-Amirshahi M. The Evolving Landscape of Acute Pain Management in the Era of the Opioid Crisis. *Curr Pain Headache Rep* 2018 Aug 27. 22(11):73. PMID: 30151792.
2. Henke RM, Tehrani AB, Ali MM, Mutter R, Mazer-Amirshahi M, O'Brien PL, Mark TL. Opioid Prescribing to Adolescents in the United States from 2005 to 2016. *Psychiatr Serv* 2018 July 9. PMID: 29983109.
3. Pourmand A, Robinson H, Mazer-Amirshahi M, Pines JM. Pulmonary Embolism Among Patients With Acute Exacerbation Of Chronic Obstructive Pulmonary Disease: Implications For Emergency Medicine. *J Emerg Med* 2018 Jun 23. EPub 2018 Jun 23. PMID: 29945817.
4. Paige JT, Terry Fairbanks RJ, Gaba DM. Priorities Related to Improving Healthcare Safety Through Simulation. *Simul Healthc* 2018 Jun. 13(3S Suppl 1):S41-S50. PMID: 29905627.
5. Pourmand A, Robinson C, Syed W, Mazer-Amirshahi M. Biphasic anaphylaxis: A review of the literature and implications for emergency management. *Am J Emerg Med* 2018 May 9. EPub 2018 May 9. PMID: 29759531.
6. Mazer-Amirshahi M, Stolbach A, Nelson LS. Correction to: ACMT Position Statement: Addressing the Rising Cost of Prescription Antidotes. *J Med Toxicol* 2018 Feb 9. EPub 2018 Feb 9. PMID: 29427266.
7. Pourmand A, Mazer-Amirshahi M, Caggiula A, Nawab A, Payette C, Johnson S. Targeted Glycemic Control for Adult Patients with Type 2 Diabetes Mellitus in the Acute Care Setting. *Can J Diabetes* 2018 Feb 8. EPub 2018 Feb 8. PMID: 29807752.
8. Mazer-Amirshahi M, Motov S, Nelson LS. Hydromorphone use for acute pain: Misconceptions, controversies, and risks. *J Opioid Manag* 2018 Jan/Feb. 14(1):61-71. PMID: 29508897.
9. Mazer-Amirshahi M. Experts Weigh in on Planned FDA Drug Shortages Task Force. *Modern Medicine Network* 2018 Jul 20.

### *Abstracts (Regional/Local)*

1. DeGeorge L, Gardner S, Page E, Izzo J, Wilson M. Antibiotic Prescribing Patterns in the Emergency Department for Uncomplicated Urinary Tract Infection MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
2. Will A, Kim T, Fong A, Kellogg K. Investing Factors Related to Emergency Medicine Physician Stress. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
3. Jefferies C, Mosby D, Kowalski R, Blumenthal J, Fong A, O'Mara S, Fairbanks R, Miller K. These are Not the Triads You're Looking For: Updating Clinician Mental Models of Acute Spinal Cord Compression MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
4. Jefferies C, Mosby D, Hoffman D, Blumenthal J, Fong A, Naber A, Ratwani K, Ratwani J, Miller K. From Novice to Expert: Designing Situational Judgment Test to Inform Predictive Models of Triage Nurse Proficiency MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.

5. Thomas A, Krevat S, Morales C, Mayer D, Smith L, Fairbanks R. Demonstration of Measurable Impact after Implementation of a Safety Science HRO Program at MedStar Health. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
6. Love J, Furth P, Fitzgibbons S, Sava J, Philips George, Iglesia C, Gross R, Santen S. A Novel Approach to Faculty Development in Bedside Teaching: The Teaching Essentials Program for Clinical Faculty-A Feasibility Study. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
7. Kowalski R, Mosby D, Blumenthal J, Arnold R, Capan M, Miller K. Signaling Sepsis: Predictors Included in Prognostic Scoring Systems. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
8. Kowalski R, Mosby D, Jefferies C, Weyhrauch P, Neihaud J, Ratwani R, McDermott A, Miller Kristen. A Framework for Assessing Situational Awareness in Medical Team Training Digital Simulations. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
9. Kim T, Ratwani R, Fong A, Goldstein A, Howe J. Looking at the bigger picture: Analysis of of patient safety event reports in mental health units. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
10. Kim T, Kellogg K, Nare M, Blumenthal J, Fong A. Understanding the noise: Categorizing the impact of clinical workflow, behavioral and environmental factors on physiological sensors. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
11. Kiechle E, McKenna C, Carter H, Gelfand B, DeGeorge L, Sauter D, Amirshahi M. Prevalence of Medication Allergy and Adverse Drug Event Reconciliation Discrepancies in an Urban, Academic Emergency Department. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
12. Howe J, Stets A, Kellogg K. Evaluating MedStar's Prototype Event Review Toolkit: Feedback from Patient Safety Professionals. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
13. Howe J, Adams K, Hettinger A, Ratwani R. Electronic Health Record Usability as a Contributing Factor to Patient Harm. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
14. Hoffman D, Blumenthal J, Mosby D, Distaso C, Hettinger A. A Novel Method in Building an Active Health IT Surveillance BlackBox: Medical Intelligence. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
15. Hoffman G, Blumenthal J, Hettinger A. The Opioid Crisis: Understanding MedStar's Naloxone Prescription Program MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
16. Hoffman G, Blumenthal J, Hettinger A. The Opioid Crisis: Understanding MedStar's Naloxone Prescription Program MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
17. Galarraga J, Black B, Pimentel L, Venkat A, Frohna W, Sverha J, Lemkin D, Pines J. The Effects of Global Budgeting on Emergency Department Admission Rates. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
18. Blumenthal J, Benda N, Hoffman D, Lavergne D, Franklin E, Fairbanks R, Roth E, Perry S, Bisantz A, Hettinger A. Visualizing Workload Drivers in Emergency Medicine MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.

19. Fong A, Hoffman D, Kellogg K. Effective Computing for Interruption Management Tool Evaluation. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
20. Amirshahi M, Koroshetz L, Soares R, Kumar A, Calleo D, Perrone J, Nelson L. Emergency Department Patients? Perception of the Efficacy and Safety of Opioid Analgesics. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
21. Adams K, Wald J, Marcial L, Kim T, Rizk S, Samarth A, Fairbanks R, Ratwani R, Hettinger A. Improving EHR Usability through the Development of a Change Package Toolkit. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
22. Butler R, Roy B, Kothera C, Shah A, Abts N. Human Factors Validation of the SureCRIC Device. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
23. Hiller M, Descallar E, Gray A, Tsipis N, Wilson M, Booker E, Marchand G, Dubin J. Prospective Implementation of EMR Based HEART Score Form Increased Chest Pain Admissions. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
24. DeGeorge L, Sauter D, Mazer-Amirshahi M, Leak C. A Descriptive Study of the Clinical Characteristics of Emergency Department Patients Intoxicated with Synthetic Cannabinoids. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
25. Fairbanks R, Lin L, Higginbotham J, Bisantz A. Improving and Understanding Communication with Emergency Department Patients with Limited English Proficiency. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
26. Izzo J, Bromberek E, Wallis M, Graham A, O'Mara S, Noga N, Goyal M. Effectiveness of a Sepsis Alert Program Within the Emergency Department. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.
27. Wallis M, Wilson M, Koroshetz L, Soares R, Goyal M, Mete M. Bedside End Tidal Carbon Dioxide in Evaluation for Pulmonary Embolism. MedStar Health Research Symposium, Bethesda, MD. 2018 Apr 30.

### *Abstracts (National/International)*

1. Ali M, Cutler E, Mutter R, Henke R, Mazer-Amirshahi, Pines J, Cummings N. Opioid prescribing rates from the emergency department: down, but not out APHA Annual Meeting, San Diego, CA. 2018 Nov 11.
2. Marcial L, Hettinger AZ, Rizk S, Wald J. The Making of an Interactive EHR Usability Change. American Medical Informatics Association Annual Conference. San Francisco, CA (Poster Presentation). 2018 Nov 5.
3. Woo S, Brenner N, Chong S, Benz P, Wilson M, Thorne J, Dubin J, Goyal M. Abstract Poster # 239: Advance Care Planning Amount Patients with In-Hospital Cardiac Arrest. ACEP Scientific Assembly. San Diego, CA. 2018 Oct 02.
4. Kim T, Bisantz A, Benda N, LaVergne D, Blumenthal J, Hoffman D, Chow K, Fairbanks RJ, Hettinger AZ. Assessing the Usability of a Prototype Emergency Medicine Patient-Centered Electronic Health

Record Display. Sixth IEEE International Conference on Healthcare Informatics 2018. New York, NY (Poster Presentation). 2018 Jun 4.

5. Paik M. Ankle fractures: utility of Ottawa ankle rules and clinical practice. SAEM Annual Meeting, Indianapolis, IN. 2018 May 18.
6. Loughran G. The effect of artificial turf vs natural grass on the incidence of knee injuries in national collegiate athletic association football: 2004 - 2014 seasons. SAEM Annual Meeting, Indianapolis, IN. 2018 May 18.
7. Koroshetz L, Mazer-Amirshahi M, Soares R. Emergency department patients' perceptions of the efficacy and safety of opioid. SAEM Annual Meeting, Indianapolis, IN. 2018 May 18.
8. Lombardi K, Mazer-Amirshahi M. Pattern of antibiotic resistance of urinary tract infections in the emergency department. SAEM Annual Meeting, Indianapolis, IN. 2018 May 17.
9. DeGeorge L, Gelfand B, McKenna C, Carter H, Sauter D, Kiechle E, Mazer-Amirshahi M. Prevalence of self-reported drug allergies and adverse drug events in an urban, academic emergency department. SAEM Annual Meeting, Indianapolis, IN. 2018 May 16.
10. Wallis M, Wilson M, Soares R, Koroshetz L, Goyal M. Bedside end tidal carbon dioxide in evaluation for pulmonary embolism. SAEM Annual Meeting, Indianapolis, IN. 2018 May 16.
11. Descallar E, Booker E, Dubin J, Gray A, Hiller M, Marchand G, Tshipis N, Wilson M. Prospective implementation of electronic medical records-based HEART score form increased chest pain admissions. SAEM Annual Meeting, Indianapolis, IN. 2018 May 16.
12. Page E, Izzo J, DeGeorge L, Wilson M, Gardener S. Antibiotics prescribing patterns in the emergency department for uncomplicated urinary tract infections. SAEM Annual Meeting, Indianapolis, IN. 2018 May 16.
13. Lombardi K, Mazer-Amirshahi M. Analyzing the dynamics of homeless patient visits to United States Emergency Departments: 2005-2015. SAEM Annual Meeting, Indianapolis, IN. 2018 May 16.
14. DeGeorge L, Kiechle E, Mazer-Amirshahi M. Prevalence of medication allergy and adverse drug event reconciliation discrepancies in an urban, academic emergency department. SAEM Annual Meeting, Indianapolis, IN. 2018 May 16.
15. Kiechle E, McKenna C, Zeymo A, Carter H, Gelfand B, DeGeorge L, Sauter D, Mazer-Amirshahi M. Prevalence of self-reported drug allergies and adverse drug events in an urban, academic emergency department. American College of Medical Toxicology, Washington, DC 2018 May 16.
16. Hoffman D, Blumenthal J, Mosby D, Distaso C, Ratwani R, Hettinger AZ. A Novel Method in Building an Active Health IT Surveillance BlackBox: Medical Intelligence. AMIA 2018 Clinical Informatics Conference. Scottsdale, AZ (Poster Presentation). 2018 May 9.
17. Nuber, Erika, Delasobera, BE. "Persistent Neck Pain and Weakness in a Young Female Basketball Player." Medical Society for Sports Medicine Annual Conference, Orlando, FL. 2018 Apr 26.
18. Antonis, M. Hudson, K, Delasobera, BE. "An Unusual Case of Low Back Pain". Medical Society for Sports Medicine Annual Conference. Orlando, FL. 2018 Apr 26.

19. Mazer-Amirshahi M, McKenna C, Carter H, Zeymo A, Gelfand B, DeGeorge L, Sauter D. Prevalence of medication allergy and adverse drug event reconciliation discrepancies in an urban, academic emergency department. American College of medical Toxicology Scientific Meeting, Washington, DC 2018 Apr.
20. Hiller M, Descallar E, Tsipis N, Gray A, Dubin J, Marchand E, Booker E, Wilson M. Implementation of an EMR Based HEART Score Tool Affects Patient Disposition. AAEM Academic Assembly, San Diego, CA. 2018 Apr.
21. Mazer-Amirshahi M, Koroshetz L, Soares R, Kumar A, Calello D, Perrone J, Nelson L. Emergency department patients' perceptions of the efficacy and safety of opioid analgesics. American College of Medical Toxicology Scientific Meeting, Washington, DC 2018 Apr 01.
22. Benda N, Blumenthal J, Hettinger AZ, Hoffman D, Franklin E, Lavergne D, Roth E, Perry S, Bisantz A. Investigating Drivers of Clinician Workload in the Emergency Department: An Exploratory Study. Accepted for HFES 2018 International Symposium on Human Factor and Ergonomics in Health Care. Boston, MA (Poster Presentation). 2018 Mar 26.
23. Wallis M, Izzo J, Bromberek E, Noga N, Graham A, Goyal M. Investigation of Effectiveness of a Sepsis Alert Team on Time to Antibiotics. SCCM Annual Congress 2018. 2018 Feb 20.
24. Cairns C, Goyal M, Day J, Kumar A, Winchester Z, Katz J, Bell J, Fitzgibbons S. Impact of Novel CVC Simulation Training Program for Residents on Line Associated Complications. Academic Surgical Congress/Jacksonville, FL 2018 Feb 1.
25. Day J, Cairns C, Goyal M, Kumar A, Winchester Z, Katz J, Bell J, Fitzgibbons S. Impact of Anticoagulation Prophylaxis on Line Associated DVTs: A 3 Year Retrospective Study Academic Surgical Congress/Jacksonville, FL 2018 Feb 01.
26. Wesley, DB; Pantalao, A; Blumenthal, J; Fong, A; Fernandez, S. (January, 2018) Innovative Approach to Improving Diabetes Self-Management among Black Patients. Poster Presentation. MedStar Teaching and Research Scholars Capstone. 2018. Columbia, MD.

### *Alternative Media*

1. Hettinger AZ. Addressing Patient Misidentification: Soother the IT Pain Points, Mitigating Safety Concerns. Fierce Healthcare Webinar. 2018 October 17.
2. Hudson K. Don't Let Concussions Throw You For A Loop. PediMom. 2018 Oct 16. <https://pedimom.com/dont-let-concussions-throw-you-for-a-loop/>
3. Kalsi H. Sports Related Cervical Spine Injuries. Critical Decisions in Emergency Medicine Podcast. ACEP Scientific Assembly. San Diego, CA. 2018 Oct 02.
4. Wynn, R. M., Fong, A., Weldon, D. L., Ratwani, R. M., & Miller, K. Oncology Related Patient Safety Events. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting. Sage CA: Los Angeles, CA: SAGE Publications. 2018 Sep 27. (54)1: 1207-1210.
5. Hudson K. SplintER Series: Tibial Plateau Fractures | Leg Day #1. Academic Life in Emergency Medicine. 2018 Aug 23. <https://www.aliem.com/2018/08/splinter-tibial-plateau-fractures-leg-1/>
6. Mazer-Amirshahi, M. Emergency Providers Sound Alarm on Persistent Critical Drug Shortages ED Management 2018 Aug 1. 30(8):85-96.



7. Kiechle E. Heat Stroke WMAR - 2 News Baltimore. 2018 July 17.
8. Hudson K. SplinER Series: Common ED Splint Techniques | Splint Principles 104. Academic Life in Emergency Medicine. 2018 Jul 4. <https://www.aliem.com/2018/07/splinter-series-104/>
9. Ratwani, R. Health Care Innovators: A Turning Point in Health I.T.? Politico, May 2018. (featured panelist)
10. Ratwani, R. EHR error rates vary widely across systems, JAMIA study finds, Healthcare Dive, July 2018 (featured researcher).
11. Ratwani, R. Different EHR Implementation Strategies May Affect EHR Usability, EHRIntelligence, July 2018.
12. Howe, J., Puthumana, J., Hoffman, D., Kowalski, R., Weldon, D., Miller, K., & Ratwani, R. Development of Virtual Simulations for Medical Team Training: An Evaluation of Key Features. In Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care. SAGE CA: Los Angeles, CA. SAGE Publications. 2018 Jun 29. (7)1: 261-266.
13. Wynn, R. M., Howe, J. L., Kelahan, L. C., Fong, A., Filice, R. W., & Ratwani, R. M. Interruptions Increase Time and Decrease Accuracy of Chest Radiograph Interpretation. In Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care. Sage India: New Delhi, India: SAGE Publications. 2018 Jun 29. 7(1): 95-96.
14. Bauchwitz, B., Lynn, S., Weyhrauch, P., Ratwani, R., Weldon, D., Howe, J., & Niehaus, J. Thematic Issues in Analysis and Visualization of Emergency Department Patient Flow. In Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care. Sage India: New Delhi, India: SAGE Publications. 2018 Jun 29. 7(1): 132-139.
15. Nable, JV. Interviewed by Bloomberg News. "Is There a Doctor Aboard? Airlines Often Hope Note". Published 2018 May 29.
16. Nable, JV. Interviewed by National Public Radio-syndicated show Here and Now. Topic: In-Flight Medical Emergencies. Aired 2018 May 23.
17. Nable, JV. Interviewed by U.S. News and World Report. "What Issues Do Doctors Face When Helping During In-Flight Medical Emergencies. Published 2018 Apr 9.
18. Borhart J. How Do You Tell Your Child's Doctor That You're a Physician? Kevinmd.com. 2018 Apr.
19. Borhart J. The Reveal. FemInEM. 2018 Mar.
20. Hettinger AZ. Preview of the ONC Usability Change Package. National Webinar. 2018 Feb 7.
21. Hettinger AZ. Systems-Based Approach to Opioid Safety: Cerner Opioid Crisis Response Center. National Webinar. 2018 Feb 7.
22. Borhart J. Uterine Bleeding—Deep Dive. EM Sandbox Podcast. 2018 Feb 18.
23. Ratwani, R. Study: Constant ED Interruptions Source of Med/Mal Exposure, ED Legal Letter, March 2018 (featured researcher).

24. Ratwani, R. Use Simple Strategies to Manage Frequent Interruptions, Minimize Potential for Errors, ED Management, February 2018 (featured researcher).
25. Ratwani, R. Not Enough Attention to EHR-linked Physician Error, Researchers Say, Politico. 2018 Feb.
26. Ratwani, R. 4 Ways to Reduce EHR Use-Related Patient Safety Threats. EHRIntelligence.com. 2018 Jan.

### *National Presentations*

1. Miller K, Savage E, Will A, Khairat S, Arnold R, Fairbanks R, Hodgkins M, Hettinger A, Ratwani R. Implementation Integrity: A Multisite Analysis of Electronic Health Record Usability and Safety. Academy Health 11th Annual Conference on the Science of Dissemination and Implementation, Washington, DC. 2018 Dec.
2. Samiee-Zafarghandy S, Patel A, Fusch G, Chan A, Van Den Anker J, Mazer-Amirshahi M. The effect of the Pregnancy and Lactation Labeling Rule on labeling data of FDA approved drugs. Hot Topics in Neonatology. Washington, DC. 2018 Dec.
3. Miller K, Blumenthal J, Schubel L, Littlejohn R, Capan M, Arnold A, McKenzie K, Franklin E, Seagull J, Catchpole K, Branaghan R. Signaling Sepsis: Novel Data Collection of Diagnostic Mental Models American Medical Informatics Association 2018 Visual Analytics in Healthcare Workshop. San Francisco, CA. 2018 Nov.
4. Ali M, Cutler E, Mutter R, Henke R, Mazer-Amirshahi M, Pines J, Cummings N. Ali M, Cutler E, Mutter R, Henke R, Mazer-Amirshahi M, Pines J, Cummings N. Opioid prescribing rates from the emergency department: down but not out. American Public Health Association Annual Meeting. 2018 Nov.
5. Herout J, Ander S, Grundmeier R, Hettinger AZ, Patterson E, Saleem J, Weinger M. EHR to EHR Transitions: Establishing and Growing a Knowledge Base. HFES 2018 Annual Meeting, Philadelphia, PA. 2018 Oct 15.
6. Borhart J (lead), Carlberg D, Ladkany D, Palmer J, Pontius E, Soskin P, Vieth J, Voss K. Emergent Vaginal Delivery Lab. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 10.
7. Reed K. AAA...Thunder! Your Patient is Out of Luck and Thunderstruck. ACEP Scientific Assembly. San Diego, CA. 2018 Oct 04.
8. Reed K. When Tickers State to Flicker...Critical Pacemaker Malfunctions. ACEP Scientific Assembly. San Diego, CA. 2018 Oct 04.
9. Carlberg D. Drop the Mic! Building Your Team: How Shooting the Sh\*t and Other Simple Strategies Improve Team Cohesiveness and Ultimately Help Patients. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 03.
10. Kellogg K. Personal Preparedness: Protecting yourself so that you can save others. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 03.
11. Carlberg D. Session moderator: Simulation Research ACEP Scientific Assembly. San Diego, CA. 2018 Oct 02.

12. Kellogg K. Today's System Based Adverse Event Review: Expert tips for improving safety. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 02.
13. Borhart J. FAST FACT: Problems in the Pregnant Patient. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 02.
14. Bhat R, Broder J, McCloskey C. ACEP Connect: Clotted Controversies - PE in the ED ACEP Scientific Assembly, San Diego, CA. 2018 Oct 02.
15. Kellogg K. Cool, Calm and Collected in Chaos: How learned psychological skills enhance performance under pressure. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 02.
16. Borhart J. Late Pregnancy and Postpartum Emergencies ACEP Scientific Assembly, San Diego, CA. 2018 Oct 02.
17. Bhat R. Nontraumatic Back Pain: Reasons why it should tighten your sphincter. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 02.
18. Fairbanks R, Ratwani R, Miller K, Yosaitis J, Sheahan B. Innovations in Patient Safety Crouse Patient Safety Lecture, MedStar Franklin Square Medical Center. Baltimore, MD 2018 Oct.
19. Miller K. The Intersection of Human Factors Engineering and Decision Science. Drexel University LeBow College of Business, Philadelphia, PA. 2018 Oct.
20. Delasobera B. Mind/Body: Exercise in Disease and Injury Prevention ACEP Scientific Assembly, San Diego, CA. 2018 Oct 01.
21. Bhat R. Management of Massive Hemoptysis: Save Your Drowning Patient! ACEP Scientific Assembly, San Diego, CA. 2018 Oct 01.
22. Delasobera B. Panelist: EMRA Sports Medicine ACEP Scientific Assembly, San Diego, CA. 2018 Oct 01.
23. Hack K. Lecture: Rotary Wing Evacuation During the Korea and Vietnam War. ACEP Scientific Assembly, San Diego, CA. 2018 Oct 01.
24. Delasobera B. Focused Orthopedics: A Royal Pain in the Back ACEP Scientific Assembly, San Diego, CA. 2018 Oct 01.
25. Friedrich J, Mazer-Amirshahi M, Geng X, Calello D, Smith M, Medeiros K, Gillam M. Pediatric benzodiazepine exposure and overdose in the United States: 16 years of poison center data. North American Congress of Clinical Toxicology Annual Meeting. 2018 Oct.
26. Mazer-Amirshahi, Maryann. Medical Product Shortages during Disasters: Opportunities to Predict, Prevent, and Respond National Academy of Science. 2018 Sept 6.
27. Borhart J. Obstetric and Gynecologic Emergencies. American Academy of Emergency Medicine Written Board Review Course. 2018 Aug.
28. Borhart J. Musculoskeletal Emergencies. American Academy of Emergency Medicine Written Board Review Course. 2018 Aug.

29. Kellogg K, Miller K. Re-engineering Patient Safety – Application of Human Factors and Safety Systems Principles Maryland Patient Safety Center, Elkridge, MD. 2018 Jun.
30. Davis J. Resident Academic Leadership Forum: Leadership Pearls and Pitfalls SAEM Annual Meeting, Indianapolis, IN. 2018 May 17.
31. Miller K, Kowalski R, Capan M, Mosby D, Arnold R. Sepsis Gamification as a Strategy for Healthcare Improvement National Patient Safety Foundation Congress, Boston, MA. 2018 May.
32. Stehman C, Domingues R, Fernandez-Frackelton M, Hochman S, Love J, Santikul D, Shah K, Soares W, Volz E. Assessment of Accountability and Professionalism Competencies by Emergency Medicine Residency Programs. CORD Academic Assembly, San Antonio, TX. 2018 Apr 30.
33. Abbott L, Borhart J, Palmer J, Ladkany D, Carlberg D, Bhat R, Adelman S. Faking the Friendly Skies: A Simulated In-Flight Emergency Wine & Cheese. CORD Academic Assembly, San Antonio, TX. 2018 Apr 23.
34. Davis J. IDEAS on Building a Highly Rewarding, Productive Team @ EMARC. CORD Academic Assembly, San Antonio, TX. 2018 Apr 22.
35. Davis J. Establish Your Street Cred! Make Yourself Invaluable, Build Success, and Create IDEAS in Academic EM @ Navigating the Academic Waters. CORD Academic Assembly, San Antonio, TX. 2018 Apr 22.
36. Davis J. Transformative Leadership: IDEAS to fine-tune your leadership repertoire and engage your team & Best Practices. CORD Academic Assembly, San Antonio, TX. 2018 Apr 22.
37. Bhat R. Five Things I Wish I knew Before Entering an Academic Career in Teaching @ Navigating the Academic Waters. CORD Academic Assembly, San Antonio, TX. 2018 Apr 22.
38. Nable JV. Is there a doctor on board? Medicine in the friendly skies Maryland ACEP, Baltimore, MD 2018 Apr 19.
39. Jackson M, Shandrowski K, Hieber D, Joy A, Hansen J. Emergency department post-discharge result management Annual Patient Safety Conference 2018, Baltimore, MD 2018 Apr 13.
40. Nable JV. Novel Prehospital Protocols Affecting Patients Coming to Your Emergency Department. AAEM Academic Assembly, San Diego, CA. 2018 Apr 11.
41. O'Mara S. Plenary Avoiding Burnout: Better Living Through Boundaries. AAEM Academic Assembly, San Diego, CA. 2018 Apr 11.
42. Nable JV. Holding Back: When and When Not to Intervene. AAEM Academic Assembly, San Diego, CA. 2018 Apr 10.
43. Borhart J. Nowhere Near L&D: community Obstetrics. AAEM Academic Assembly, San Diego, CA. 2018 Apr 10.
44. Lamare G. Vitamin C and Me. AAEM Academic Assembly, San Diego, CA. 2018 Apr 9.
45. Lamare G. Sepsis in Special Populations. AAEM Academic Assembly, San Diego, CA. 2018 Apr 9.

46. Bhat R. Traumatology: Drugs for the Trauma Bay. AAEM Academic Assembly, San Diego, CA. 2018 Apr 8.
47. Reed K. Ripping, Tearing, Excruciating: Aortic Dissection. Reduce the Risk That You Will Miss! AAEM Academic Assembly, San Diego, CA. 2018 Apr 8.
48. Fairbanks T, Ratwani R, Hettinger Z, Miller K. Human Factors Engineering and its Consequences for Patient Safety 2018 Apr.
49. Hettinger AZ, Adams A, Wald J, Marcial L, Kim T, Rizk S, Samarth A, Fairbanks RJ, Ratwani RM. Real-World Methods to Improve EHR Usability: Creating a Change Package Toolkit HFEM 2018 International Symposium 2018 Mar 27.
50. Perry S, Bisantz A, Hettinger AZ, Carayon P, Roth E. The Historic Scientific Contribution of the Late Robert Wears, MD, MS, PhD. Panel Presentation. HFES 2018 International Symposium on Human Factors and Ergonomics in Healthcare. Boston, MA. 2018 Mar 26.
51. Panel Discussion (Muthu N, Orenstein E, Fong A, Hettinger AZ, Possanza L. Surveillance Methods for EHR Safety Risks: HFES 2018 International Symposium on Human Factors and Ergonomics in Healthcare. Boston, MA. 2018 Mar 26.
52. Roth E, Bisantz A, Hettinger AZ. Using Cognitive Engineering Methods to Evaluate IT Systems: Developing User Feedback Questionnaires Around Cognitive Support Design Objectives. HFES 2018 International Symposium on Human Factor and Ergonomics in Health Care. Boston, MA (Presentation). 2018 Mar 26.

### *Regional Presentations*

1. Hettinger AZ. Applying Human Factors Engineering to Healthcare Systems. Cooper University Faculty Development Workshop. Cooper University Healthcare. Camden, NJ. 2018 October 4.
2. Kalsi H, Kaufman E, Hudson K. Sports Related Cervical Spine Injuries. Critical Decisions in Emergency Medicine. October 2018.
3. Borhart J (lead), Carlberg D, Pontius B, Ladkany D, Palmer J, Voss K. Management of Breech Delivery and Shoulder Dystocia. Greater Chesapeake Joint Regional Conference. 2018 Sept.
4. Ratwani R. Health Information Technology and Patient Safety. The Telluride Experience: Transforming Mindsets. The Academy for Emerging Leaders in Patient Safety. Ellicott City, MD. 2018 Jul.
5. Ratwani R. BioHealth Capital Region: Driving Innovation and Entrepreneurship in Maryland, DC, Virginia (panel member). Health Innovation Forum. Baltimore, MD. 2018 Jul.
6. Ratwani R. A New Model for Healthcare Innovation. Universidad Internacional Menendez Pelayo Innovations in Healthcare Conference. Santander, Spain. 2018 Jul.
7. Ratwani R. Electronic Health Record Usability and Safety Policies, AHRQ, SAMHSA, HRSA, & IHS Health Information Technology Meeting, Rockville, MD. 2018 Jun.

8. Ratwani R. Electronic Health Record Usability and Safety, Keynote Speaker, Arden and Greater East Midlands Commissioning Support Unit, Global Digital Exemplar Network Human Factors and Patient Safety Meeting., London, England. 2018 Apr.
9. Ratwani R. A patient-centered approach to developing and delivering patient education. 2018 MedStar Advanced Practice Nurses 2nd Annual Conference. MedStar Harbor Hospital, Baltimore, MD. 2018 Apr.
10. Borhart J. Nowhere Near L&D: Obstetrical Emergencies. Delaware Valley American Academy of Emergency Medicine Resident's Day. 2018 Mar.
11. Ratwani R. Smart Interoperability Requires Usability, 2018 Bipartisan Congressional Health Policy Conference, Warrenton, VA. 2018 Mar.
12. Ratwani R. Electronic Health Record Usability and Safety, Pediatric Emergency Care Applied Research Network Meeting, Crystal City, VA. 2018 Feb.

### *Textbook/Chapters*

1. Nable, JV, Brady WJ. In-Flight Medical Emergencies: A Practical Guide to Preparedness and Response. Edited by Nable JV, Brady WJ. Springer, New York, 2018.
2. Nable JV, Brady WJ. "Setting the Scene", in In-Flight Medical Emergencies: A Practical Guide to Preparedness and Response. Edited by Nable JV, Brady WJ. Springer, New York, 2018.
3. Brady WJ, Brady LB, Nable JV. "Preflight Medical Clearance", in In-Flight Medical Emergencies: A Practical Guide to Preparedness and Response. Edited by Nable JV, Brady WJ. Springer, New York, 2018.

### *Editorial*

1. Mazer-Amirshahi M. Drug Shortages in Emergency Rooms Are More Common Than You Might Think. Healthline 2018 Jul 11.
2. Pontius E. Apollo Ann Emerg Med 2018 Nov. 72(5):616. EPub 2018 Jun. PMID: 30342734.
3. Kellogg KM, Fairbanks RJ. Approaching Fatigue and Error in Emergency Medicine: Narrowing the Gap Between Work as Imagined and Work as Really Done. Ann Emerg Med 2018 Aug. 72(2):181-183. EPub 2018 Apr 6. PMID: 29628191.
4. Dubin J, Wilson M, Frohna W. Comments on "Knowledge Translation of the PERC Rule for Suspected Pulmonary Embolism: A Blueprint for Reducing the Number of CT Pulmonary Angiograms". West J Emerg Med 2018 May. 19(3):474. EPub 2018 Mar 13. PMID: 29762610.
5. Mazer-Amirshahi M, Fox ER. Saline Shortages - Many causes, no simple solution. N Engl J Med. 2018 Mar 21. EPub 2018 Mar 21. PMID: 29561694.
6. Friedman NMG, Dingler BJ, Nable JV, Koenig GJ. Research and Scholarship in Collegiate Emergency Medical Services: Current State and Opportunities for Progress. J Coll Emerg Med Serv. 2018 Feb. 1(1):5-12. EPub 2018.

## *Grants*

1. Ratwani, RM. Improving Patient Safety and Clinician Cognitive Support Through eMAR Redesign Identify health IT related medication errors and prototypes to eliminate errors. Agency for Healthcare Research and Quality 1 R01 HS025136-01A1. End Date 2023 Jul. Start Date 2018 Jul. Amount: \$1,998,000.
2. Wernz, Ratwani RM. Evidence-based contingency planning for electronic health record downtime Agency for Healthcare Research and Quality 1 R21 HS024350-01A1. End Date 2018 Jul. Start Date 2016 Aug.
3. Galarraga, JE. Effects of the global budget revenue model on emergency department returns. MHRI Grant for 2017-2018. End Date 2018 June. Start Date 2017 July.
4. Kriner E, Goyal M, Moriarty T. A pilot study of medicated aerosol delivery using a jet nebulizer versus vibrating mesh nebulizer in COPD exacerbation. Aerogen Medical. End Date 2018 Mar. Start Date 2017 Mar.
5. Graham A, Wood S, Nable JV. Pediatric Resuscitation Reinforcement with Cognitive Aid. Georgetown University School of Medicine CIRCLE Grant Program. End Date 2018 Jun. Start 2017 Jul. Amount: \$15,000.

## *Contracts*

1. Ratwani RM. Predicting Trauma Acuity Through Machine Learning & Develop algorithms to predict trauma patient acuity and resources for treatment. Defense Health Agency (subcontract to Charles River Analytics). End Date 2020 June 01. Start Date 2018 Jun 6. Amount: \$214,109.
2. Ratwani RM. Advancing the Collection Patient Reported Outcomes through HIT. Agency for Healthcare Research and Quality, HHSP233201500022I. End Date 2019 Nov. Start Date 2018.

## *Patents*

1. Fong, Allan, Daniel Hoffman, Raj Ratwani, and A. Zachary Hettinger. "Human-assisted learning in eye tracking applications." U.S Utility Patent No. US 10037479