



## VCLIC News and Happenings, Volume 11

We hope this February newsletter finds all our readers safe and warm! What a storm Nashville (and much of the country) saw last week! As we move into (hopefully) warmer months, we have many exciting events planned: our March workshop will teach you **how to build a FHIR App**, and our March seminar will help you determine what **career options in clinical informatics** might be right for you. We also think you should save the date (April 15<sup>th</sup>, 2021) for the **April Discovery Lecture Series** session, featuring **Donald Berwick, MD, MPP**, co-sponsored by VCLIC and DBMI.

We kicked off our **Techquity Design Challenge** this month and are excited to see what our participants ideate and create over the next month and a half, and we are recapping the seminars (**Sigall Bell, MD**, and **Liz Salmi**, of Open Notes, and **Judy Faulkner**, CEO of Epic) and workshop (Disparities Data Lab, hosted by VCLIC's own **Allison McCoy, PhD**, and **Bryan Steitz, PhD**) we held in January and February.

This month's featured VCLIC Member is **Wael Alrifai, MD, MS**, whose work we are thrilled to showcase! We also excited to show off some of the informatics work that has been going on behind the scenes at VUMC related to the roll out of the COVID-19 vaccine. Thank you to our guest columnist, **Fehintola Olumide**, Communications Specialist from VUMC HealthIT, for putting this article together (and to Madison Agee, Lead IT Communications Manager for VUMC HealthIT, for her help in coordinating this article's publication).

As always, we have aggregated an incredible number of publications, accepted conference abstracts, book chapters, news articles, and even a neat collage of all our Clickbuster Program participants for our readers to review. And if you'd like to see more of VCLIC, you can also follow us on **Twitter** [@VUMC\\_VCLIC](https://twitter.com/VUMC_VCLIC).

If you have any questions or would like to engage with our team, please email Elise ([elise.russo@vumc.org](mailto:elise.russo@vumc.org)).

## Upcoming Events

FHIR App Building Workshop, March 10<sup>th</sup> from 1:00-4:00 pm Central



The FHIR App Building Workshop will be a wonderful opportunity to get hands-on experience with FHIR App development! VCLIC and HealthIT (**Tim Coffman and Simeon Herring**) will cohost a 3-hour workshop for those wishing to learn how to conceptualize, build/develop, test, and put into production a FHIR application that meets all standards and interfaces with Epic. Participants will build an app, which will involve a user interface for summarization and visualization.

To sign up, please complete this REDCap form: <https://redcap.vanderbilt.edu/surveys/?s=C3HAJLLNJM>

**We will be in touch with those who did sign up to participate with details, including how to set your computer up, soon.**

“How to Kick-Start Your Career in Clinical Informatics,” March 10<sup>th</sup>, 2021 at 12:00pm Central



Technology now touches almost everything we do in healthcare. The world of clinical informatics can be a new experience for many of us, with all the additional education requirements, new terms, and new ways of seeing the world all around us. However, once you have the training and desire needed to pursue a career in clinical informatics, how do you kick-start your career? This panel of experts will help to answer this question, and many more you may be having. How can I get my department to buy down my time to do more informatics work? How can I become more integrated with HealthIT at my organization? Where do I go now that I finished my training? How can I get connected to the data? Come join us and bring your questions for this interactive discussion with panelists from several different backgrounds and experiences.

### Moderator

Scott Nelson, PharmD, MS, CPHIMS, FAMIA

### Speakers

Dara Mize, MD, MS, FAMIA

Yaa Kumah-Crystal, MD, MPH, MS, FAMIA

Lindsey Knake, MD

Jake Lancaster, MD, MS

Claude Pirtle, MS, MS

Sharidan Parr, MD, MSCI, MS

Josh Peterson, MD, MPH

Please note that details of all our upcoming events can also be found on the [Events page](#) of our Website.

Save the Date! Discovery Lecture: “Next Steps in Health Care Transformation: The Moral Determinants of Health,” by Donald Berwick, MD, MPP.

VCLIC and the Department of Biomedical Informatics (DBMI) will be co-sponsoring the Discovery Lecture featuring **Donald Berwick, MD, MPP**, President Emeritus and Senior Fellow at the Institute for Healthcare Improvement (IHI). Please mark your calendars for **4:00pm CT on April 15, 2021**. This will be an event you won't want to miss!

More details to follow on the [Discovery Lecture Series website](#).


## VCLIC's Recent and Ongoing Events

### Techquity Design Challenge Underway



The application period for our Techquity Design Challenge ended on January 31<sup>st</sup>, 2021, and we had several groups from across the medical center apply, with 6 currently competing. We will have more details on when and how to watch the final presentations, where the groups will outline their prototypes for improving technology-enabled care for increased equity at VUMC. The teams are incredibly passionate about their chosen projects, and we can't wait to see what they present in early April!

## Disparities Data Lab



VCLIC PRESENTS

# HEALTH DISPARITIES DATA LAB

In this virtual lab, participants will learn about available data sources at VUMC within Epic (SlicerDicer, Reporting Workbench, Clarity) and developed locally (Synthetic Derivative, Research Derivative) and gain hands-on experience in manipulating data.

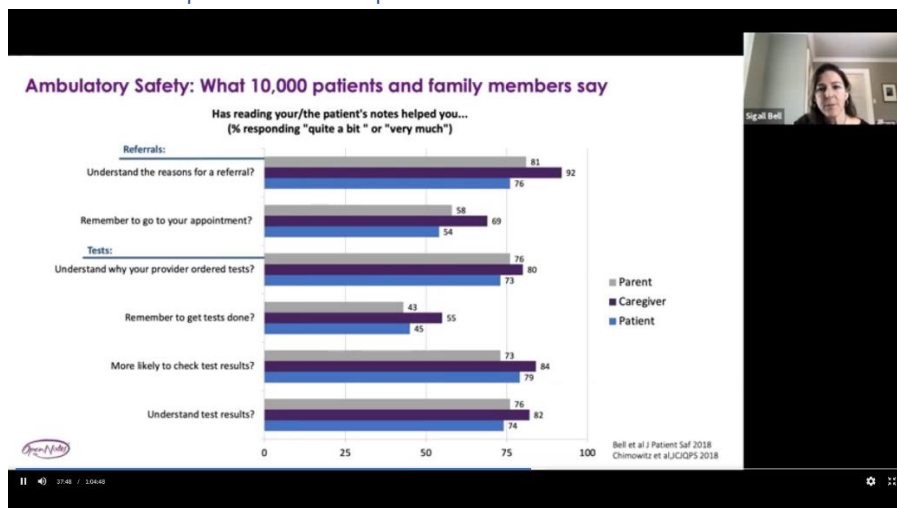
To sign up, e-mail Elise Russo:  
elise.russo@vumc.org

We held VCLIC's first workshop, the Data Disparities Lab, on February 9<sup>th</sup> and believe it was an incredible success! This workshop was 2 hours long and had around 80 people from across VU and VUMC in attendance. **Allison McCoy, PhD**, and **Bryan Steitz, PhD**, did a phenomenal job leading the session, and we received mostly positive feedback from attendees, who learned about Epic and non-Epic data sources, how and where to access these sources, and a bit about report writing and analysis in general. We hope to improve on this session in the future!

## VCLIC Seminars

We had several renowned speakers present over the course of January and February. We hope you enjoyed these outstanding presentations!

## Patient and Clinician Perspectives on Open Notes



Thank you for joining us for "Patient and Clinician Perspectives on Open Notes: How Note Transparency Can Forge Better Care and Stronger Relationships," presented by **Sigall Bell, MD**, and **Liz Salmi**, of Open Notes (on January 27, 2021). We had outstanding participation, with over 70 attendees and plenty of questions from the audience.

To recap, Ms. Salmi shared her own story as a patient with cancer, and how Open Notes empowered her to actively participate in her treatment and recovery. Dr. Bell presented her research findings, outlining the data supporting the efficacy of Open Notes.

### In Conversation with Judy Faulkner



On February 17<sup>th</sup>, we had the privilege of hearing from **Judy Faulkner, CEO of Epic**.

During the talk, Ms. Faulkner told the story of how she came to found Epic and also described the unique culture of the company. She outlined new and upcoming developments that might be of interest to clinicians and researchers alike, including tools like Cosmos and [EHRN](#) (Epic Health Research Network). She also discussed Epic's role in fighting the COVID-19 pandemic alongside clinicians and answered several questions from the host and participants.

Ms. Faulkner shared some invaluable advice during the presentation, including:

- The importance of understanding Epic's functionalities by engaging in XGM and UGM, attending workshops on Epic's campus (once it's safe to do so), and more.
- (To young or aspiring IT professionals): The value of taking ownership for one's project, and understanding the reasons people might disagree with your ideas

Thanks to all our attendees for coming! We hope you enjoyed hearing from Ms. Faulkner as much as we did!

## Member Spotlight: Wael Alrifai, MD, MS



**Wael Alrifai, MD, MS** is an Assistant Professor of Pediatrics and Biomedical Informatics. He is a board-certified neonatologist in the Division of Neonatology at VUMC and a board-certified clinical informatician. He was a member of the inaugural class of the VUMC Master's in Applied Clinical Informatics (MSACI) program. Currently, Dr. Alrifai is the Medical Director of Inpatient Pediatric Informatics at the Vanderbilt Children's Hospital. He designed EHR clinical content for the VUMC neonatal intensive care unit (NICU) and multiple NICUs in Tennessee. He is a member of the Epic Neonatology Steering Board.

Dr. Alrifai's research focus is clinical decision support (CDS) for neonatal and pediatric care. He designed and published randomized clinical trials in the evaluation of clinical information systems in pediatric care. Over the last two years, he has focused on modeling pediatric care to provide a real-time objective assessment of patients' illness acuity and provider workload. He developed new tools to achieve these goals and integrated them within eStar. Dr. Alrifai has also provided consults to organizations inside and outside the USA for the implementation of similar models, and he has worked with academic children's hospitals to publish the evaluation of patients' acuity assessment tools.

In addition, Dr. Alrifai has assembled a team of members from DBMI, HealthIT, the Pediatrics Department, and the Vanderbilt Center for Research and Innovation in Systems Safety (CRISS). The team is developing and evaluating a "workload dashboard" that measures and displays providers' and teams' task loads to assist in resource allocation. He has received support from the Catalyzing Informatics Innovations Program for his workload projects.

Dr. Alrifai is mentoring trainees at multiple educational levels in their research projects to evaluate health information technology tools for pediatric care. The ongoing projects include decision support for the diagnosis of bronchopulmonary dysplasia, management of mechanical ventilation, and discharge prediction and coordination.

## Vaccine Informatics: IT teams implement strategies to contribute to successful vaccination efforts

**Contributed by Fehintola Olumide, Communications Specialist, HealthIT**

Collaboration among clinical operations, pharmacy operations, and VUMC IT and HealthIT teams led to successful efforts to vaccinate employees, patients, and the general population against COVID-19. Though teams had been discussing approaches to vaccination efforts since the beginning of the pandemic, the initiative kicked off in earnest on December 4, 2020, soon after the FDA granted emergency authorization to new vaccines and when the Medical Center received notification that a shipment earmarked for employees would arrive soon. Teams immediately went to work determining how to vaccinate a large portion of the VUMC workforce by the end of the month, plan for future employee vaccinations based on anticipated supply, and test a scheduling and distribution model that would allow the Medical Center to vaccinate thousands of patients and community members every day.

The employee vaccination program had two primary complicating factors: 1) keeping staffing levels stable for patient care and 2) complying with federal and state guidance to follow prioritization criteria for vaccine order. HealthIT quickly developed a scheduling tool that would meet the challenge, launching its initial version on Sunday, December 13, just one week from first being tasked with its creation.

Critical to the development of the scheduling tool was the guidance of partners from Occupational Health, who provided the prioritization criteria used to classify the order in which employees would be eligible to receive vaccines. The resulting scheduling tool leveraged this criteria, along with other important data elements:

- Back-end logic from human resources systems, including COVID-19 exposure related to patient care responsibilities
- Confidential employee-provided data
- Information on available and anticipated vaccine supply (including shelf life of the vaccine once it was pulled from deep freezers) from pharmacy systems
- Anticipation of space requirements to maintain social distancing parameters
- Visibility into upcoming schedules through staff scheduling systems

With this precise combination of information from various sources, the scheduling tool presented managers with clearly prioritized lists of employees, along with open slots for vaccinations, that allowed them to select dates and times that would maintain stable staffing levels throughout the Medical Center. Within 72 hours of launching the scheduling tool, nearly 5,000 employees were scheduled for their vaccination. The program was quickly expanded to include other members of the VUMC community, including medical and nursing students, affiliate staff, and volunteers.

Also essential to the vaccination efforts were the establishment and set-up of various sites throughout Middle Tennessee where vaccines could be administered. This work included staffing, training, distributing supplies, technical support, providing proper technology equipment and data

connections, and offering “customer” service. Careful coordination among IT, clinical, pharmacy, and operational teams was necessary to stand up multiple sites.

HealthIT’s work on employee vaccinations, combined with its strong operational partnerships, maximized use of the available vaccine supply earmarked for VUMC employees and helped maintain stable staffing levels throughout the Medical Center. Furthermore, vaccinated employees were able to perform essential responsibilities without fear of serious illness or death. The teams’ efforts proved that the Medical Center could safely vaccinate around 1,200 employees per day. By late February 2021, nearly three-quarters of the VUMC workforce has been vaccinated against COVID-19.

The employee vaccination efforts also offered a proven methodology for expanding the program more broadly to patients and other members of the communities VUMC serves. The insights from and ongoing fine-tuning of the employee program were instrumental to launching these “mass” vaccinations.

While preparations to expand the vaccination program to patients and community members had been underway for weeks, the timeline had to be compressed when the state notified VUMC of a vaccine shipment arriving nearly a month earlier than expected. Teams across the Medical Center had to work together seamlessly to quickly deliver a solid mass vaccination program.

This work included:

- Establishing stable workflows through various eStar modules and My Health at Vanderbilt (MHAV)
- Setting up multiple physical sites throughout the region, including plans for future sites
- Identifying patients who meet vaccination eligibility criteria and then sending them clear communications to explain how to schedule an appointment
- Enabling MHAV to support self-scheduling for available vaccination appointments and ensuring the platform could handle a sharp increase in account enrollments
- Integrating with pharmacy systems to ensure available appointments aligned with available vaccine inventory and updating on a daily basis
- Enabling “silent scheduling,” so a patient’s second dose is automatically scheduled when selecting an appointment date and time for the initial dose
- Supporting different vaccine types based on available supply and differing timeframes for second doses (i.e., three weeks vs. four weeks)
- Ensuring recipients do not receive a bill for their vaccines
- Building data reports to estimate vaccine needs across the staff and non-employee populations for all sites
- Creating reports and dashboard so the Pharmacy team can carefully manage limited vaccine inventory and plan next day’s vaccine thaws

Mass vaccinations began January 14, 2021, with a “soft launch” in which around 70 Vanderbilt medical students received their first of two doses in Light Hall. The following day, the effort was quickly scaled up, and the team vaccinated nearly 400 patients, aged 75 or older, in a single day. When vaccine inventories are adequate, approximately 3,000 individuals can be vaccinated per day across multiple sites in Middle Tennessee. These efforts can also be scaled up or down as needed based on vaccine supply.



The development, roll-out and continual refinement of the COVID-19 vaccination efforts for employees, VUMC patients and community members serve as great examples of the close partnership between IT teams and operations at the Medical Center. This work demonstrates how innovation, focus and collaboration of dedicated colleagues can meet urgent needs.

## Upcoming Conferences and Conference Deadlines

- [AMIA Annual Symposium](#): Abstracts due **March 10, 2021 at 11:59pm ET**
- [ACM-BCB](#): Workshop Submissions due **March 31, 2021**
- [HIMSS](#): Poster Proposals due **March 10, 2021**; Proposals to Present due by **February 24, 2021 at 11:59pm ET**
- [MIE](#): Panel, Workshop, Tutorial, and Demonstration applications due **March 10, 2021**
- [ICML](#): Tutorial Proposals due **February 26, 2021**; Workshop applications due **March 5, 2021**
- [Machine Learning for Healthcare](#): Deadline for submission is **March 19, 2021**
- [Southern Region SGIM](#): Conference Dates are **February 24-25, 2021** (Virtual)

Details on upcoming conferences and conference deadlines can be found on our Confluence page, [here](#).

## VCLIC Twitter

VCLIC is working to up our Twitter game. Please follow [@VUMC\\_VCLIC](#), and we will make sure to follow you back. If you have any exciting news, including new publications, interesting projects, or professional achievements, please email [Elise Russo](#) -- we'll be happy to tweet for you.

## Publications, Presentations, Interviews, and Awards

Celebrating the Achievements of our Clickbusters Program Participants



Thank you to all our participants from Rounds I and II of Clickbusters. We had such a great time working with you, and your work has undoubtedly supported improved provider workflow and patient care throughout VUMC. Overall, we “busted” around 60,000 clicks per week!

### In The News

The *VUMC Reporter* showcased several VCLIC Members:

- 1/28/21: [Diabetes Day focuses on diversity, inclusion in research.](#) **Lindsay Mayberry, PhD**, was a member of the event’s planning committee.
- 2/4/21: [Process ensures follow-up of incidental radiology findings.](#) **Travis Osterman, DO, MS**, was part of the team that created a streamlined follow-up process for patients with incidental radiology findings.
- 2/5/21: [Convalescent plasma improved survival in COVID-19 patients with blood cancers.](#) **Jeremy Warner, MD, MS**, who is the corresponding author of the study, is quoted.
- 2/11/21: [Study will delve into EHR for signs of suicidality](#) **Colin Walsh, MD, MA**, and his team received a \$1 million contract from the FDA’s Sentinel Innovation Center to study how NLP can identify suicidal ideation and suicidal attempts in the EHR.
- 02/11/21: [Ancker named vice chair for Educational Affairs in the Department of Biomedical Informatics.](#) **Kevin Johnson, MD, MS**, is quoted on Jessica Ancker, PhD, MPH’s new appointment in DBMI.

## Accepted Abstracts

Several VCLIC Members, including Wael Alrifai, MD, MS, and Scott Nelson, PharmD, MS, had abstracts accepted for Epic's XGM (April 26-May 6, 2021):

- **Wael Alrifai, MD, MS:** "The Neonatal Sequential Organ Failure Assessment (nSOFA): Defining Sepsis and Illness Severity in Neonates"
- **Scott Nelson, PharmD, MS:** "Making BPA SmartText smarter"

## Accepted Publications

### February

**Anders S**, Patterson ES, Catchpole KR, Holden RJ, Gurses A, **Weinger MB**, Xiao Y. [Patient Safety Learning Labs: What are we actually learning](#). *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 2020; 64(1): 593-97.

Bejan CA, Cahill KN, Staso PJ, Choi L, **Peterson JF**, Phillips EJ. [DrugWAS: Leveraging drug-wide association studies to facilitate drug repurposing for COVID-19 \[preprint\]](#). *medRxiv*. 2021.

Brown AR, **McCoy AB**, **Wright A**, **Nelson SD**. Decluttering the problem list in electronic health records. Accepted by *AJHP*.

Carayon P, **Salwei ME**. [Moving toward a sociotechnical systems approach to continuous health information technology design: the path forward for improving electronic health record usability and reducing clinician burnout](#). *Journal of the American Medical Informatics Association*. 2021.

Chen B, **Alrifai W**, Gao C, Jones B, **Novak L**, Lorenzi N, France D, Malin B, Chen Y. [Mining tasks and task characteristics from electronic health record audit logs with unsupervised machine learning](#). *J Am Med Inform Assoc*. 2021.

Fleiss N, Coggins SA, Lewis AN, Zeigler A, Cooksey KE, Walker LA, Husain AN, de Jong BS, Wallman-Stokes A, **Alrifai MW**, Visser DH, Good M, Sullivan B, Polin RA, Martin CR, Wynn JL. [Evaluation of the Neonatal Sequential Organ Failure Assessment and Mortality Risk in Preterm Infants With Late-Onset Infection](#). *JAMA Netw Open*. 2021; 4(2):e2036518.

Funke BE, Jackson KE, Self WH, Collins SP, Saunders CT, Wang L, Blume JD, Wickersham N, Brown RM, Casey JD, Bernard GR, Rice TW, Siew ED, Semler MW; Smart Investigators (including **Jon Wanderer, MD, MPhil**) and the Pragmatic Critical Care Research Group. [Effect of balanced crystalloids versus saline on urinary biomarkers of acute kidney injury in critically ill adults](#). *BMC Nephrology*. 2021; 22(1): 54.

Hyman SA, Card EB, De Leon-Casasola O, Shotwell MS, Shi Y, **Weinger MB**. [Prevalence of burnout and its relationship to health status and social support in more than 1000 subspecialty anesthesiologists](#). *Regional Anesthesia & Pain Medicine*. 2021.

Lopez MG, Shotwell MS, Morse J, Liang Y, **Wanderer JP**, Absi TS, Balsara KR, Levack MM, Shah AS, Hernandez A, Billings FT. [Intraoperative venous congestion and acute kidney injury in cardiac surgery: an observational cohort study](#). *British Journal of Anaesthesia*. 2021.

- McKeithan L, Duvernay M, Tadepalli V, **Moore-Lotridge SN**, Gibson B, Borst A, Schoenecker J. [Platelet Dysfunction in Major Pediatric Scoliosis Surgery: A Cause of Common Surgical Bleeding Phenotypes](#). *Journal of the Pediatric Orthopaedic Society of North America*. 2021;3(1).
- Sartori LF, Zhu Y, Grijalva CG, Ampofo K, Gesteland P, Johnson J, McHenry R, Arnold DH, Pavia AT, Edwards KM, **Williams DJ**. [Pneumonia Severity in Children: Utility of Procalcitonin in Risk Stratification](#). *Hospital Pediatrics*. 2021.
- Schrag M, Schoenecker JG, Williams S, Romero Fernandez W, Gibson BH, Eaton J, Coogan A, Mittal S, Stubblefield K, Espallat K, Closser J, Kirshner H, O'Duffy A, **Misulis K**, Gaines K, Ely W. Cerebrovascular events complicating COVID-19 infection correlate with peak acute phase response and abnormal platelet function.
- Semanik MG, Kleinschmidt PC, **Wright A**, Willett DL, Dean SM, Saleh SN, Co Z, Sampene E, Buchanan JR. [Impact of a problem-oriented view on clinical data retrieval](#). *Journal of the American Medical Informatics Association*. 2021.
- Stone AL, Qu'd D, Luckett T, **Nelson SD**, Quinn EE, Potts AL, Patrick S, Bruehl S, Franklin A. Leftover opioid analgesics and disposal following ambulatory pediatric surgeries in the context of a restrictive opioid prescribing policy. Accepted by *Anesthesia & Analgesia*.
- Tadepalli V, **Moore-Lotridge SN**, Schoenecker J, Rees AB, Schultz J, Wollenman L. [Non-Accidental Trauma in Pediatric Elbow Fractures — Beware of Non-Ambulatory Elbow Fractures](#). *Journal of the Pediatric Orthopaedic Society of North America*. 2021; 3(1)
- Thompson MA, Henderson JP, Shah PK, Rubinstein SM, Joyner MJ, Choueiri TK, Flora DB, Griffiths EA, Gulati AP, Hwang C, Koshkin VS, Papadopoulos EB, Robilotti EV, Su CT, Wulff-Burchfield EM, Xie Z, Yu PP, Mishra S, Senefeld JW, Shah DP, **Warner JL**. [Convalescent Plasma and Improved Survival in Patients with Hematologic Malignancies and COVID-19](#). *medRxiv* 2021.
- Unertl KM**, Abraham J, Bakken S. [Building on Diana Forsythe's legacy: the value of human experience and context in biomedical and health informatics](#). *Journal of the American Medical Informatics Association*. 2021: 28(2).
- Wanderer JP**, Rathmell JP. [Bursting the Liposomal Bubble: Sustained-release vs. Plain Bupivacaine](#). *Anesthesiology*. 2021; 134(2): A17.
- Wanderer JP**, Rathmell JP. [Postoperative Pain: A Map with Five Distinct Trajectories](#). *Anesthesiology*. 2021; 134(3): A19.
- Ward M**, Froehler M, Scheving WL, Hart K, McNaughton CD. [Inter- ED transfer for patents with acute large vessel stroke: Efficiency vs thoroughness tradeoff](#). *The American Journal of Emergency Medicine*. 2021; 40: 201.
- Wu P, **Nelson SD**, Zhao J, Stone C, Feng Q, Chen Q, Larson EA, Wilke RA, Li B, Cox N, Phillips EJ, Roden DM, Denny JC, Wei WQ. DDIWAS: leveraging EHR allergy lists to identify clinically significant drug-drug interactions. Accepted by *JAMIA*.
- Yan L, **Nelson SD**, Reese T. Review of clinical decision support for inpatient clinical pharmacists. Accepted by *ACI*.

January

- Berry JM, **Weinger MB**. [Vigilance, Alarms, and Integrated Monitoring Systems](#). In: Ehrenwerth J, Eisenkraft JB, Berry JM, eds. *Anesthesia Equipment (Third Edition)*. Philadelphia: W.B. Saunders, 2021:371-406.
- Freeman CL, Miller NM, Bastarache L, **Peterson J**, Self WH, Barrett TW, **Ward MJ**. [Co-detection of SARS-CoV-2 with Secondary Respiratory Pathogen Infections](#). *Journal of General Internal Medicine*. 2021.
- Hicks JK, El Rouby N, Ong HH, Schildcrout JS, Ramsey LB, Shi Y, Tang LA, Aquilante CL, Beitelshes AL, Blake KV, Cimino JJ, Davis BH, Empey PE, Kao DP, Lemkin DL, Limdi NA, Lipori GP, Rosenman MB, Skaar TC, Teal E, Tuteja S, Wiley LK, Williams H, Winterstein AG, Van Driest SL, Cavallari LH, **Peterson JF**. [Opportunity for Genotype-Guided Prescribing Among Adult Patients in 11 U.S. Health Systems](#). *Clin Pharmacol Ther*. 2021.
- Johannet P, Coudray N, Donnelly DM, Jour G, Illa-Bochaca I, Xia Y, Johnson DB, **Wheless L**, Patrinely JR, Nomikou S, Rimm DL, Pavlick AC, Weber JS, Zhong J, Tsirigos A, Osman I. [Using Machine Learning Algorithms to Predict Immunotherapy Response in Patients with Advanced Melanoma](#). *Clinical Cancer Research*. 2021; 27(1): 131.
- Kostelanetz S, Di Gravio C, Schildcrout JS, Roumie CL, Conway D, **Kripalani S**. [Should We Implement Geographic or Patient-Reported Social Determinants of Health Measures In Cardiovascular Patients](#). *Ethn Dis*. 2021; 31(1).
- Prusick VW, Gibian JT, Ross KE, **Moore-Lotridge SN**, Rees AB, Mencio GA, Stutz CM, Schoenecker JG. [Surgical Technique: Closed Reduction and Percutaneous Pinning of Posterolaterally-Displaced Supracondylar Humerus Fractures](#). *Journal of Orthopaedic Trauma*. 2021.
- Saiz FS, Sanders C, Stevens R, Nielsen R, Britt M, Yuravlivker L, Preininger AM, **Jackson GP**. [Artificial Intelligence Clinical Evidence Engine for Automatic Identification, Prioritization, and Extraction of Relevant Clinical Oncology Research](#). *JCO Clinical Cancer Informatics*. 2021; (5):102-11.
- Suwanvecho S, Suwanrusme H, Jirakulaporn T, Issarachai S, Taechakraichana N, Lungchukiet P, Decha W, Boonpakdee W, Thanakarn N, Wongrattananon P, Preininger AM, Solomon M, Wang S, Hekmat R, Dankwa-Mullan I, Shortliffe E, Patel VL, Arriaga Y, **Jackson GP**, Kiatikajornthada N. [Comparison of an oncology clinical decision-support system's recommendations with actual treatment decisions](#). *Journal of the American Medical Informatics Association*. 2021.
- Tackenberg MC, **Hughey JJ**, McMahon DG. [Optogenetic stimulation of VIPergic SCN neurons induces photoperiodic changes in the mammalian circadian clock \[preprint\]](#). *bioRxiv*. 2021.
- Tantisook T, Aravapalli S, Chotai PN, Majmudar A, Meredith M, Harrell C, Cohen HL, **Huang EY**. [Determining the Impact of Body Mass Index on Ultrasound Accuracy for Diagnosing Appendicitis: Is It Less Useful in Obese Children?](#) *Journal of Pediatric Surgery*. 2021.

Thomas Craig KJ, Willis VC, Gruen D, Rhee K, **Jackson GP**. [The burden of the digital environment: a systematic review on organization-directed workplace interventions to mitigate physician burnout](#). *Journal of the American Medical Informatics Association*. 2021.

Toporek AH, Semler MW, Self WH, Bernard GR, Wang L, Siew ED, Stollings JL, **Wanderer JP**, Rice TW, Casey JD; SMART Investigators and the Pragmatic Critical Care Research Group. [Balanced Crystalloids versus Saline in Critically Ill Adults with Hyperkalemia or Acute Kidney Injury: Secondary Analysis of a Clinical Trial](#). *Am J Respir Crit Care Med*. 2021.

**Wanderer JP**, Rathmell JP. [Spinal Morphine versus Quadratus Lumborum: A C-Section Showdown](#). *Anesthesiology* 2021; 134(1):A18.

**Ward MJ**, Nallamotheu BK. [Building a Better System Through Deliberate Regionalization](#). *Journal of the American Heart Association*. 2021; 10(3):e020113.

**Ward MJ**, Chavis B, Banerjee R, Katz S, **Anders S**. [User-Centered Design in Pediatric Acute Care Settings Antimicrobial Stewardship](#). *Appl Clin Inform*. 2021; 12(01): 34-40.

## Books, Book Chapters, and Reviews:

Zimmerman E, Samuels M, Kirshner H, **Misulis K**. *Neurologic Localization and Diagnosis: How Neurologists Think*. Elsevier 2021.

**Misulis KE**, Sonmezturk H, Ess K, Abou-Khalil BA. *Atlas of EEG, Seizure Semiology, and Management, Third edition*. Oxford University Press 2021.

Johnson E, **Misulis K**. *Practical Neurophysics: The Science and Engineering Behind Neurology*. Oxford University Press [in prep for release Q1 2022].

Murray EL, **Misulis KE**; Chapter 26: Hemiplegia and monoplegia. In *Neurology in Clinical Practice*. 8/e Elsevier 2020

Murray EL, **Misulis KE**; Chapter 31: Sensory abnormalities of the limbs, trunk, and face. In *Neurology in Clinical Practice*. 8/e Elsevier 2020

Murray EL, **Misulis KE**; Chapter 33: Lower back and lower limb pain. In *Neurology in Clinical Practice*. 8/e Elsevier 2020

**Misulis K**. Encephalopathy in patients with COVID-19. *Oakstone's Practical Reviews in Neurology*. Nov 2020.

**Misulis K**. Guidelines for the Acute Treatment of Cerebral Edema in Neurocritical Care Patients. *Oakstone's Practical Reviews in Neurology*. Aug 2020,

**Misulis K**. Neurological Manifestations of COVID-19. *Oakstone's Practical Reviews in Neurology*. May 2020.

**Misulis K**. Predisposing factors and prognosis of status epilepticus in patients with autoimmune encephalitis. *Oakstone's Practical Reviews in Neurology*. Apr 2020.

**Misulis K**. Intubation for Psychogenic Non-Epileptic Attacks: Frequency, Risk Factors, and Impact on Outcome. *Oakstone's Practical Reviews in Neurology*. Jan 2020.

## Reminder to Send Updates for Recognition

**If you (or another VCLIC Member) publishes a paper; has an abstract accepted at a conference; are interviewed for or written up in a news article; receive any awards, accolades, or honors; or completed/are currently undertaking any projects you would like to highlight, please email me with or forward this information:**

- Names of VCLIC members/VUMC staff who participated in or worked on the project, paper, or abstract (or who received the award/honor)
- The title of the Project, Paper, Abstract, Article, or Award
- The journal, conference, or news publication (this can be podcasts, radio, or more “traditional,” news mediums)

Nothing is too big or too small to celebrate, and this information will be featured on the [News section of our website](#) as well. As time goes on, I am hoping to also improve our Twitter presence, so feel free to add, tag, or tweet us at [@VUMC\\_VCLIC](#) too!

**Thank you, and see you next month!**