VCLIC News and Happenings, Volume 18

Hi and welcome to the October edition of VCLIC News! As I was drafting this, I kept saying "wow there is a lot going on this month!"--I know everyone is usually very busy, but my team and I were blown away by all the projects, papers, presentations, awards, honors, etc. that we were sent (or stumbled upon) for inclusion in this letter, and we know this is not an exhaustive list.

To start, we would like to invite you to our upcoming **seminar** (on October 27th) with **Colin Walsh, MD, MA** "**Vanderbilt SafeCourse: Multidisciplinary Informatics to Prevent Suicide**," as well as our upcoming **workshop** on (November 16th), "**Data Resources and Analytics: Intermediate**," presented by **Bryan Steitz, PhD, and Sanjay Mishra, PhD**.

This month we are also featuring the **Clinical Informatics Integrated Science Course**, an elective available to medical students and run by VCLIC members **Dara Mize, MD, and Travis Osterman, DO, MS**. Our **featured member** this month is **Allison McCoy, PhD**, who is telling us all a little bit more about the **Clinical Informatics Core**.

We are also including our round up of **upcoming conferences** and conference submission deadlines as well as a **schedule of VCLIC member presentations (of all types) at the AMIA National Symposium** in a few weeks! We are looking forward to seeing other Center members, collaborators, and friends in San Diego.

Finally, the bulk of this month's newsletter is comprised of several awards, honors, presentations, papers, and news involving our members. We are thrilled to celebrate **Patty Sengstack, DNP, and Martin Were, MD, MS** as they were elected ACMI Fellows; **Sharidan Parr, MD, MSCI, MS and Michael Matheny, MD, MPH** (an honorary VCLIC member) who are being inducted as Fellows of AMIA; and of course, our Center Director **Adam Wright, PhD,** who won the Donald A.B. Lindberg Award for Innovation in Informatics by AMIA. There are several other newsworthy items in this section this month as well as a lengthy list of publications. Congratulations to all!

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

VCLIC Events

Thank you to everyone who attended **Cheryl Cobb, MD's** outstanding talk on September 22nd, 2021, which addressed our 2021-2022 theme of "Innovative Care Delivery Models for Mental Health." We are so grateful to Dr. Cobb for giving such a fantastic overview of the prevalence of mental illness, the current state of mental health care delivery at VUMC, and the many ways technology can be leveraged to improve the delivery of care.

We hope you can join us at our next seminar on October 27th, 2021 at 12:00 pm, when **Colin Walsh, MD, MA** will talk about "Vanderbilt SafeCourse: Multidisciplinary Informatics to Prevent Suicide."

For our October seminar, we are thrilled to welcome **Colin Walsh, MD, MA**, Assistant Professor of Biomedical Informatics, Medicine, and Psychiatry at VUMC. Dr. Walsh and his team have several completed and ongoing projects that focus on topics related to optimizing mental healthcare delivery through informatics and using artificial intelligence approaches to predict suicide risk at point-of-care. For this seminar, Dr. Walsh will discuss Vanderbilt SafeCourse: Multidisciplinary Informatics to Prevent Suicide. Vanderbilt SafeCourse is a multidisciplinary, cross-cutting collaboration to enable suicide prevention with provider-designed clinical workflow along with real-time artificial intelligence and user-centered implementation science. He will outline an overview of the program including multiple recent studies of predictive model validity in clinical production, the interplay of automated risk prediction with face-to-face screening, and usability testing of novel information summarization tools at the point of care. Finally, he will place this program in the context of larger informatics-driven efforts at other hospitals, the state of TN, and other countries.

Please join us on October 27th from 12:00-1:00 pm central via [Zoom](#).

In our October 5th workshop on Data Resources and Analytics for Mental Health Data (Basic course), participants learned the different Epic and non-Epic data resources available to VUMC (and sometimes VU) researchers, staff, students, and faculty. **Allison McCoy, PhD, and Bryan Steitz, PhD** did a phenomenal job outlining the "basics" of data analytics. If you would like a more advanced approach, make sure you sign up for our next workshop:

To expand on skills and topics covered in our Data Resources and Analytics: Basics workshop, **Bryan Steitz, PhD, and Sanjay Mishra, PhD,** will present a more advanced workshop, focusing on R and the R Shiny platforms. In order to participate, it is suggested that you have some basic experience with STATA, R, Python, and/or SQL.

This workshop focuses on using R for large scale data analysis and statistical computing. Through hands-on experience, participants will learn about data structures; important packages for analytics and visualization; and scaling analyses using the R Shiny platform.

If you have questions, please email elise.russo@vumc.org or complete this REDCap form to sign up: https://redcap.link/intermediateanalysisworkshop

Clinical Informatics Integrated Science Course for Medical Students

Did you know that there is a Clinical Informatics-focused elective course for Vanderbilt University Medical Students? Helmed by **Dara Mize, MD**, and **Travis Osterman, DO, MS**, and supported by VCLIC, this program connects medical students interested in clinical informatics with faculty who engage with students via lectures and various observation-based opportunities throughout the course duration. The course, which just completed its second occurrence, was initially conceived of by Anderson Spickard, MD, (who has since left Vanderbilt) and Kevin Johnson, MD, MS, and was carried out with the assistance of Kim Dahlman, PhD.

The purpose of the Clinical Informatics Integrated Science Course (ISC) is to allow students to participate in the daily work at VUMC to improve the healthcare system. Students receive a focused educational experience with exposure to multiple informatics topics that transcend medical specialty. Emphasis is placed on the real-world application of concepts including clinical decision support, genomic medicine, data science, workflow design, and data privacy. Learners engage through "informatics clinic" with clinical informaticists, case-based learning activities, didactics, working with clinical teams to understand informatics quality improvement opportunities, and hands-on project work.

Learners complete this course with an understanding of the related disciplines necessary to analyze and solve complex biomedical informatics problems in a clinical setting. Additionally, they gain an understanding of the role clinicians can play in applying the principles of biomedical informatics in clinical practice.

The 4-week course is currently offered twice per year and includes didactic sections as well as observational components, such as shadowing and real-world workflow observations, making it a combination of lectures and case-based learning.

Three students participated in the pilot course last May, and 6 students participated in September 2021. So far, all the feedback has been extremely positive. We reached out to the participating students to hear what they had to say about the program, and many have been spurred to pursue future work in clinical informatics!

"I especially enjoyed learning about how modeling can be used to inform decisions about workflows and various clinical interventions. I am in a master's program in health policy this year and am building on that modeling knowledge to conduct cost-effectiveness and other evaluations of clinical interventions/new technology. Informatics has such wide-ranging applications!" --Megan McLeod, pilot program participant, MD student

The clinical informatics elective really opened my eyes to how broad clinical informatics is. Before the course, I thought clinical informatics was just coding at a computer, but the course showed me that it encompasses much more and influences the healthcare system in many ways."-- Elizabeth Moore, MD/PhD student.

"I really enjoyed my course in Clinical Informatics with Dara and Travis! I really enjoyed not only exploring the broader concepts of the field but also being immersed in the day-to-day life of a clinical informatician. It was incredibly valuable to see the diverse perspectives necessary for solving problems within clinical informatics as well as the many skillsets that are required to solve complex problems. I also really appreciate seeing the variety of professional paths within clinical informatics so that I can figure out a way to incorporate clinical informatics into my future career path."--Emily Thomas, MIDP program participant, MD student.

"One of my favorite elements of the course was learning about the diversity of career opportunities available within Clinical Informatics directly from faculty members who have embarked on those careers. I am definitely considering Informatics as a future career path after taking the course."-- Morgan Shannon, MD student.

"From our first day in the Clinical Informatics ISC, we talked about taking the healthcare system as our patient. I finished the course with an expanded sense of what is possible in informatics, familiarity with resources available for aspiring informaticians, and more developed skills and perspectives for serving our shared patient."--Graham Treasure, MD Student

"The ISC amplified my already strong interest in pursuing clinical informatics as a career. The breadth of activities in the course, from attending "informatics clinics" with faculty to working on my own clinical needs identification projects, gave me new perspective on the day-to-day work of a clinical informatician. More than ever, I'm able to envision what my own career could look like. The skills learned in this course would be equally useful for students with an interest in quality improvement work, evidence-based practice, or the business of medicine."--Michael Clark, MD Student.

"The Clinical Informatics ISC provided insight into aspects of healthcare delivery that we do not explicitly learn or think about in traditional clinical rotations, but that have an immense impact on clinical care. I particularly enjoyed being a part of conversations about the process of transitioning community hospitals to Epic, thinking more deeply about privacy and security, and activities that allowed us to identify areas for clinical workflow improvement then propose a solution."--Gabrielle Davis, MD student

Many VCLIC members participated this year, providing the students with invaluable didactics as well as opportunities to learn in more applied settings, such as in clinical informatics-focused meetings or while practicing clinically. We'd like to thank VCLIC Members: **Allison McCoy, PhD; Adam Wright, PhD; Sharidan Parr, MD, MSCI, MS; Jon Wanderer, MD; Yaa Kumah-Crystal, MD, MPH, MS; Sara Horst, MD, MPH; Josh Smith, PhD; and Asli Weitkamp, PhD** for welcoming the students into your clinics, meetings, and lectures!

The next course will take place in February 2022. Please reach out to Dara, Travis, and Elise if you'd like to participate in any way or learn more about how you can be involved.

Member Spotlight: Allison McCoy, PhD

Our featured member this month is our own Director of the Clinical Informatics Core, **Allison McCoy, PhD**. Dr. McCoy is an Assistant Professor in the Department of Biomedical Informatics. She is also a founding member and Director of Technology for the Clinical Informatics Research Collaborative (CIRCLE). She received her MS and PhD in Biomedical Informatics from Vanderbilt University and completed a postdoctoral fellowship at The University of Texas School of Biomedical Informatics in Houston. Her research, funded by NLM and AHRQ, focuses on developing and implementing novel, generalizable approaches to evaluating and improving electronic health records and clinical decision support using existing data sources to promote safer and more affordable healthcare.

We asked Allison a few questions about her work with the new Core:

Why did we start the Clinical Informatics core?

One of the goals of VCLIC is that "Faculty, students, and staff in DBMI and Vanderbilt clinical departments find it easy to access data, test innovations, and evaluate results." During the first year of VCLIC, we realized that this was a really important goal that wasn't being met as well as we'd like, and we needed a new approach to meet that goal. By creating the CI core, we are now able to meet the needs of researchers across VUMC relevant to this goal in a way that is sustainable and accountable.

 What is your role in the Core (and how did you prepare for it)?

I am the Scientific Director of the CI Core. I developed expertise in clinical informatics in general through my MS and PhD training at Vanderbilt, as well as my time as a faculty member focused on clinical informatics. I developed skills to extract data out of the EHR and build interventions in the EHR primarily to accomplish my own research objectives, such as developing and evaluating clinical decision support tools. When I came back to Vanderbilt, I became certified in Epic's Clarity data model to be able to extract data out of eStar, and in Epic's clinical content build, BestPractice advisories, and cognitive computing platforms so that I could build innovative tools in eStar. Over time, as I began to collaborate with more and more researchers in DBMI and clinical departments, I became more comfortable with applying this skills not only for my own research, but for others as well.

What do you hope to accomplish through the core?

When I was a graduate student at Vanderbilt, and we had StarPanel and WizOrder, it truly was easy to access data, test innovations, and evaluate results for students and researchers. Vanderbilt was a leader in innovative clinical informatics research. Through the core, I believe we can empower researchers to carry out highly impactful research using our Epic EHR to meet that first goal of VCLIC, as well as inspire other institutions to establish similar initiatives so that we can further innovation that may seem impossible with commercial EHRs and separate academic and applied informatics departments.

If someone wants to make a request or learn more about the core, what should they do?

If you are interested in engaging with us or obtaining a quote for one of our services, please fill out our REDCap form: https://redcap.link/vclic_core

If you have questions or would like to meet with Core staff to discuss your needs, please contact Allison McCoy and/or Elise Russo. More information can be found on our website.

The mission of the Clinical Informatics Core is to enable VUMC researchers to design and implement EHR-related tools, functionalities, and interventions with input and assistance from clinical informatics experts, as well as to gain access to and analyze EHR-based data. Services that the Core offers include 1) clinical data extraction and analysis, 2) design and build of EHR interventions, including clinical decision support tools, 3) predictive model implementation, 4) value set and logic development, and 5) general clinical informatics consultation. Core staff are certified in all aspects of VUMC's Epic EHR, including data extraction, building clinical decision support tools, integrating external applications, and extending the EHR through custom programming; they have extensive experience carrying out this work in support of both research and operational needs. The Core is supported by a project manager (Elise Russo) and cloud-based infrastructure for tracking projects and ensuring prompt and accurate delivery of requests. Work completed by the Core is billed through iLab at a rate of $130/hour. Payment can be made from federal grants, institutional funds, or VICTR vouchers.

Upcoming Conferences and Conference Submission Deadlines

- Symposium on Artificial Intelligence for Learning Health Systems (SAIL): October 18-20th, 2021, Hamilton, BMU
- American Medical Informatics Association (AMIA) Annual Symposium: October 30th – November 3rd , 2021, San Diego, CA
- Conference on Neural Information Processing Systems (NeurIPS): November 27th - December 5th, 2021, virtual
- AMIA 2022 Clinical Informatics Conference (CIC): May 24-26th, 2022, Houston, TX
  - Submission Deadline: November 30th, 11:59 pm ET
- Institute for Healthcare Improvement (IHI) Forum: December 5-8th, 2021, virtual

Details on upcoming conferences and conference deadlines can be found on our Confluence page, here.

AMIA Schedule (VCLIC Member Presentations)

Saturday, October 30th

1:00 PM – 4:30 PM

Ancker, J., K. Unertl, T. Veinot. "Publishing Your Qualitative Research in Health Informatics Journals (sponsored by People and Organizational Issues Working Group)." AMIA 2021 Annual Symposium, 30 Oct. 2021, 1:00 PM - 4:30 PM PDT, San Diego.

Sunday, October 31st

8:00 AM – 11:00 AM

Khan, M. "Intrinsic Evaluation of Contextual and Non-contextual Work Embeddings using Radiology Reports." Student Paper Competition.

8:00 AM – 11:30 AM

Hollis, K.F., M. Haendel, D. Korngiebel, **S.T. Rosenbloom,** Sheets, A. Solomonides. "Research Data Governance: A Tutorial Introduction (sponsored by Clinical Research Informatics Working Group)." AMIA 2021 Annual Symposium, 30 Oct. 2021, 8:00 AM – 11:30 AM PDT, San Diego.

Monday, November 1st

8:30 AM – 10:00 AM

Rizvi, R., D. Wei, K. Taylor, O. Ogunyemi, B. Alghamdi, W. Hersh, **G.P., Jackson**, P. Kukhareva, D. Pandita, M. Sordo, D. Tao. "Career Development Issues for Women in Biomedical Informatics within Professional Organizations." Accepted as Panel Presentation, AMIA 2021 Annual Symposium, 1 Nov. 2021, 8:30 AM – 10:00 AM PDT, San Diego.

1:45 PM – 3:15 PM

Wright, A. "Improving Clinical Decision Support by Empowering Users: The Clickbusters Program."

3:30 PM – 5:00 PM

Demiris, G., **L. Novak,** C. Perissinotto. "The Role of Informatics in Addressing Social Isolation and Loneliness: Implementing Recommendations from the 2020 National Academies Report with Lessons from the COVID-19 Pandemic." Accepted as Panel Presentation, AMIA 2021 Annual Symposium, 1 Nov. 2021, 3:30 PM – 5:00 PM PDT, San Diego.

5:00 PM – 6:30 PM (Poster Session)

Anders, S. "Understanding the use pharmacological knowledge bases in clinical care."

Lee, K., **C.G. Walsh**. "Predictive Modeling of Healthcare Utilization Metrics Identifies Adult Patients at High Risk for Suicide Attempt in the Primary Care Setting."

McCoy, A. "Electronic Health Record-Based Risk Stratification for Recurrence of Kidney Stones: A Feasibility Implementation."

Nimocks, AE., **BD. Steitz, A. Wright.** "Evaluating the Scope of Collaboration Among Primary Care Teams through Electronic Asynchronous Communication."

Ripperger, M.A., D. Wilimitis, W.W. Stead, **K.B. Johnson, C.G. Walsh**. "Action-oriented Artificial Intelligence for Suicide Risk Prediction: Prospective EHR-based Validation in a Large Clinical System."

Salwei, M., L. Novak, S. Anders, K. Unertl, C. Reale, J. Harris, J. Slagle, L.A. Tang, M. Gomez, **M. Weinger, D. France**. "User Centered Design of a Clinical Deterioration Response System for Outpatient Cancer Patients."

Smith, J. "Predictive Model for Inpatient Mortality."

Walsh, C. "Action-oriented Artificial Intelligence for Suicide Risk Prediction: Prospective EHR-based Validation in a Large Clinical System." Accepted as Poster Presentation, AMIA 2021 Annual Symposium, 1 Nov. 2021, 5:00 PM - 6:30 PM PDT, San Diego.

Wilimitis, D., **R. Turer,** M. Ripperger, **A.B. McCoy,** S.H. Sperry, **C.G. Walsh**. "Complementing Automated Risk Prediction with Face-to-face Screening Improves Suicide Risk Prediction."

Tuesday, November 2nd

10:30 AM – 12:00 PM

Ancker, J., C. Lyles, S. Nosal, J. Rodriguez, A. Sheon. "Practical Approaches to Telehealth Equity." Panel Presentation.

3:30 PM – 5:00 PM

Agunwa, C., T. Bright, Y. Senathirajah, **K. Unertl.** "Representation Requires Intentionality: Our Journey to Creating a Diverse Informatics Workforce." Accepted as Panel Presentation, AMIA 2021 Annual Symposium, 2 Nov. 2021, 3:30 PM - 5:00 PM PDT, San Diego.

Turer, R., CM. DesRoches, L. Salmi, T. Helmer, **T. Rosenbloom.** "Patient Perceptions of Receiving COVID-19 Test Results via an Online Patient Portal."

Jones, B., **Walsh, C.G**. "Unsupervised characterization of Major Depressive Disorder medication treatment pathways."

5:00 PM – 6:30 PM (Poster Session)

McCoy, A. "Approaches to Clinical Decision Support Alert Evaluation and Optimization."

Russo, E., Nimocks, A.E., Sittig, D.F., **Wright, A.** "Content Analysis and Development of a Taxonomy for Value Set Issues."

Steitz, BD., A. Wright. "Comparing Language Model Vocabulary Coverage on Clinical Documents."

Williamson, K. "Classifying Infection Risk Following Pediatric Cardiac Surgery."

Wednesday, November 3rd

8:30 AM – 10:00 AM

Wright, A., A. Boyd, K.D. Lopez, B. Middleton, M. Ozkaynak. "Adaptable Patient facing and Clinical Decision Support Systems: The Next Frontier." Accepted as Panel Presentation, AMIA 2021 Annual Symposium, 3 Nov. 2021, 8:30 AM - 10:00 AM PDT, San Diego.

10:30 AM – 12:00 PM

Steitz, BD., E. Alsentzer, HC. Shin, BC. Wallace, **A. Wright.** "Applying State of the Art Language Models to Enable Better Clinical Natural Language Processing." Accepted as Panel Presentation, AMIA 2021 Annual Symposium, 3 Nov. 2021, 8:30 AM - 10:00 AM PDT, San Diego.

1:45 PM – 3:15 PM

Steitz, BD., A. Wright. "Evaluating Primary Care Provider Work of Managing Asynchronous Messages through Electronic Health Record Access Logs."

Publications, Presentations, Interviews, and Awards

Additional Awards, Honors, Presentations, and News Mentions
Adam Wright Receives Donald A.B. Lindberg Award for Innovation in Informatics
Adam Wright, PhD, FACMI, FAMIA, FIAHSI, will be presented the Donald A.B. Lindberg Award for Innovation in Informatics at the AMIA 2021 Annual Symposium in San Diego. The award is given annually to an individual for advancing biomedical informatics at the national or international level.

Trent Rosenbloom, MD, MPH, to serve as DBMI Interim Chair
S. Trent Rosenbloom, MD, MPH, FACMI, FAMIA was chosen to serve as the Interim Chair of Biomedical Informatics beginning on November 1st, 2021. He is currently the Vice Chair for Faculty Affairs and a Professor of Biomedical Informatics with secondary appointments in Medicine, Pediatrics, and the

School of Nursing at Vanderbilt University. He also directs the My Health at Vanderbilt patient portal, one of the oldest and best-used patient portals in the country.

Fellows of AMIA Announced

Michael Matheny, MD, MPH (left) and **Sharidan Parr, MD, MSCI, MS** (right) are part of the 2022 class of the Fellows of AMIA (FAMIA). A formal induction ceremony will be held at the 2022 Clinical Informatics Conference May 24-26th in Houston, TX.

Jon Wanderer, MD gave a talk through the Clinical Informatics Program Director's Didactic Series on October 1st, 2021, titled "Individual and Organizational Performance Metrics."

Sunil Kripalani, MD, MSc is part of a multiple-PI team, including Alan Storrow, MD and Dandan Liu, PhD, that was awarded a four-year R01 grant from NIH/NHLBI. The central objective of the project is to develop a multilevel approach and the necessary statistical methods to close the gap in implementation of our AHF risk prediction tool, as a model for other automated risk prediction approaches within an electronic health records system. **Adam Wright, PhD** and **Asli Weitkamp, PhD** are co-Investigators on the grant.

Michael Ward, MD, PhD, MBA was awarded a R34 grant from NIH/NHLBI titled "PORTAL: Patient Outcome Reporting Tool for emergency medicAL services". The project will develop, refine, and implement a scalable feedback system for EMS providers delivering acute cardiovascular emergency care to patients with chest pain.

Megan Salwei, PhD was elected to the Human Factors and Ergonomics Society (HFES) Healthcare Technical Group Executive Committee as the "Student Affairs Chair" from 2021 to 2023.

Joseph Legrand, PharmD, MS was one of six members of CodeRx who won the Synthetic Health Data Challenge, a coding challenge hosted by the Office of the National Coordinator for Health IT (ONC). Their solution was called Medication Diversification Tool (MDT). On October 19th, 2021, Joey presented this work in an informational webinar via healthit.gov. The HealthIT.gov announcement is here, and the challenge.gov announcement is here (in addition to the HHS announcement linked above).

<p style="text-align: center">ACMI Fellows Announced</p>

Patty Sengstack, DNP (left) and **Martin Were, MD, MS** (right) were elected as fellows in the American College of Medical Informatics (ACMI). The induction ceremony will take place on October 31st at the AMIA 2021 Annual Symposium in San Diego.

Stuart Weinberg, MD, was recognized as a contributor to the VUMC Mass Vaccination Project with a VUMC Team Elevate Award.

Publications

October

Brown AR, **McCoy AB, Wright A, Nelson SD.** (2021). Decluttering the problem list in electronic health records. *Am J Health Syst Pharm.*

Steitz BD, Sulieman L, **Wright A, Rosenbloom ST**. (2021) Association of Immediate Release of Test Results to Patients With Implications for Clinical Workflow. *JAMA Netw Open.* 2021;4(10):e2129553.

September

Ancker, J. S., Benda, N. C., Reddy, M., **Unertl, K. M.**, & Veinot, T. (2021). Guidance for publishing qualitative research in informatics. *Journal of the American Medical Informatics Association*.

Baker, L. X., Chen, F., Cronin, A., Chen, H., Vain, A., Jagasia, M., & **Tkaczyk, E. R.** (2021). Optimal Biomechanical Parameters for Measuring Sclerotic Chronic Graft-Versus-Host Disease. *JID Innovations, 1*(3), 100037.

Carroll, A. R., Hall, M., Brown, C. M., **Johnson, D. P.**, Antoon, J. W., Kreth, H., . . . **Williams, D. J.** (2021). Association of Race/Ethnicity and Social Determinants with Rehospitalization for Mental Health Conditions at Acute Care Children's Hospitals. *The Journal of Pediatrics*.

Desai, A., Mohammed, T. J., Duma, N., Garassino, M. C., Hicks, L. K., Kuderer, N. M., . . . **Warner, J.L.**, Whisenant, J.G., Wood, W.A., Thompson, M. A. (2021). COVID-19 and Cancer: A Review of the Registry-Based Pandemic Response. *JAMA Oncology*.

Garvey, K. V., Craig, K. J. T., Russell, R. G., **Novak, L.**, Moore, D., Preininger, A. M., . . . Miller, B. M. (2021). The Potential and the Imperative: the Gap in AI-Related Clinical Competencies and the Need to Close It. *Medical Science Educator*.

Haroz E, Grubin F, Goklish N, Pioche S, Cwik M, Barlow A, Waugh E, Usher J, Lenert M, **Walsh C**. (2021). Designing a Clinical Decision Support Tool That Leverages Machine Learning for Suicide Risk Prediction: Development Study in Partnership With Native American Care Providers. JMIR Public Health Surveill; 7(9):e24377.

Holt, M. E., Mittendorf, K. F., LeNoue-Newton, M., Jain, N. M., Anderson, I., Lovly, C. M., **Osterman, T.**, Micheel, C., Levy, M. (2021). My Cancer Genome: Coevolution of Precision Oncology and a Molecular Oncology Knowledgebase. *JCO Clinical Cancer Informatics*(5), 995-1004.

Jeffery, A.D., Werthman, J.A., Danesh, V., Dietrich, M.S., Mion, L.C., & Boehm, L.M. (2021). Assess, prevent, and manage pain; both spontaneous awakening and breathing trials; choice of analgesia/sedation; delirium: assess, prevent, and manage; early mobility; family engagement and empowerment bundle implementation: Quantifying the association of access to bundle-enhancing supplies and equipment. *Critical Care Explorations, 3*(9), 1-12.

Ngugi, P., Babic, A., **Were, M.C.** (2021). A multivariate statistical evaluation of actual use of electronic health record systems implementations in Kenya. *PLOS.*

Shaheen, A. W., Ciesco, E., **Johnson, K.**, Kuhnen, G., Paolini, C., & Gartner, G. (2021). Interactive, on-line visualization tools to measure and drive equity in COVID-19 vaccine administrations. *Journal of the American Medical Informatics Association*.

Steitz, B.D., Unertl, K.M., Levy, M.A. (2021). An Analysis of Electronic Health Record Work to Manage Asynchronous Clinical Messages among Breast Cancer Care Teams. *Appl Clin Inform, 12(04): 877-887.*

Tanenbaum, M. L., Messer, L. H., Wu, C. A., Basina, M., Buckingham, B. A., Hessler, D., **Mulvaney, S.A.**, Maahs, D.M., Hood, K. K. (2021). Help when you need it: Perspectives of adults with T1D on the support and training they would have wanted when starting CGM. *Diabetes Research and Clinical Practice, 180*, 109048.

Walker, S. C., Ransom, M., Sood, S., Andrews, J., & **Smith, C. M.** (2021). Respiratory failure and shock in an infant with severe anemia. *Clinical Case Reports, 9*(9), e04852.

Wanderer, J. P., Li, G., & **Freundlich, R. E**. (2021). Risk of Postoperative Pulmonary Complications: Reply. *Anesthesiology*.

Yoon, B., Weeraratne, D., Arriaga, Y. E., Huang, H., & **Osterman, T. J.** (2021). Evaluating health disparities in access to genomic testing for metastatic non-small cell lung cancer patients. *Journal of Clinical Oncology, 39*(28_suppl), 113-113.

Accepted or In Press

Voon PJ, Riely GJ, Lepisto EM, Lavery JA, **Warner JL**, LeNoue-Newton ML, Sweeney SM, McCarthy CG, Samantha B, Panageas KS, Weiss J, Yu C, Sacher A, Kehl KL, Leighl N, Schrag D, Bedard P. (2021). 1270P Genomic alterations of bone metastases in stage IV non-small cell lung cancer (NSCLC) and real-world outcomes. *Annals of Oncology.*

Garcia ES, Riely GJ, Lepisto EM, LeNoue-Newton ML, **Warner JL**, Sweeney SM, McCarthy CG, Weiss J, Yu C, Voon PJ, Schrag D, Govindarajan A, Bedard P. 474P Genomic characterization and clinical outcomes of patients (pts) with metastatic colorectal cancer (mCRC) with peritoneal metastases (PM) in AACE project GENIE. (2021). *Annals of Oncology.*

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!