



VCLIC News and Happenings, Volume 21

Hello readers! Last month I was wishing everyone happy holidays, and this month it is Happy New Year! It's hard to believe it is already 2022. Welcome to another year of Clinical Informatics content!

This month we are excited to announce our February DBMI Seminar Speakers: **David Marcovitz, MD (VUMC), and Scott Schepers, PhD (Pear Therapeutics)**, who will speak on 2/2/22 about: “Motivational Enhancement Therapy (MET) to Support Adoption of Digital Therapeutics in a Low Threshold Bridge Clinic – A pragmatic trial of Pear Therapeutics RESET-O application.”

We are also inching closer to our [Mental Health Innovation Challenge and Hackathon](#), which will take place from February 25th-26th at the Wond'ry on Vanderbilt University's campus. There is still time to sign up, and we hope you will! There will be prizes AND swag! Prior to this event we are hosting two workshops—one took place Tuesday (January 18th) on App Design, and the other, on **FHIR App Building**, will take place on February 8th, 2022, and be led by **Tim Coffman and Simeon Hearing** of VUMC HealthIT.

We are excited to feature **Alvin Jeffery, PhD, RN-BC, CCRN-K, FNP-BC**, as our VCLIC Member of the month and to showcase some of the fantastic work he is doing at VUMC and beyond. As always, we have a list of **upcoming conference submission deadlines** and are proud to highlight the **awards, news mentions, publications, and abstract acceptances** of our members since last month's letter.

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 the talk on January 12th, 2022, by **John Torous, MD, MBI**, of Beth Israel Deaconess Medical Center, “Beyond Telehealth: Advances in Digital Mental Health Research and Practical Considerations for Smartphone Apps in Care.”

Our February seminar will take place on 2/2/22 from 12:00-1:00 pm CT via Zoom and will be presented by **David Marcovitz, MD**, and **Scott Schepers, PhD**. Dr. Marcovitz is an Assistant Professor of Psychiatry and Behavioral Sciences as well as the Director of the Division of Addiction Psychiatry at VUMC, and Dr. Schepers is the Senior Medical Science Liaison, Head of Medical Affairs Analytics, of Pear Therapeutics. They will present on “Motivational Enhancement Therapy (MET) to Support Adoption of Digital Therapeutics in a Low Threshold Bridge Clinic – A pragmatic trial of Pear Therapeutics RESET-O application.”



The graphic is a promotional poster for a VCLIC February Seminar. It features a light blue and white background with a subtle wave pattern at the bottom. On the left, there is a portrait of Scott Schepers, PhD, a man with glasses and a dark jacket. To his right, his name and title are listed: "Scott Schepers, PhD, Senior Medical Science Liaison, Head of Medical Affairs Analytics, Pear Therapeutics". In the center, the seminar title is written in blue: "VCLIC February Seminar Motivational Enhancement Therapy (MET) to Support Adoption of Digital Therapeutics in a Low Threshold Bridge Clinic – A Pragmatic Trial of Pear Therapeutics RESET-O application". Below the title, the date and time are given: "Wednesday, February 2nd, 2022 12:00-1:00 pm", followed by "Presented by David Marcovitz, MD & Scott Schepers, PhD". On the right, there is a portrait of David Marcovitz, MD, a man in a dark suit and tie. To his right, his name and titles are listed: "David Marcovitz, MD, Assistant Professor of Psychiatry and Behavioral Sciences, Director, Division of Addiction Psychiatry, VUMC". At the top left, the VCLIC logo is displayed, consisting of a stylized 'V' and 'C' followed by the text "VCLIC" and "VANDERBILT CLINICAL INFORMATICS CENTER" below it.

In this session, one of the VUMC addiction psychiatry faculty, **Dr. David Marcovitz**, will partner with **Dr. Scott Schepers**, the chief medical science liaison for Pear Therapeutics, to discuss the use of Pear’s innovative digital app “RESET-O” in the VUMC Bridge Clinic. Dr. Schepers will discuss the infrastructure of the app and the evidence supporting its use for patients with opioid use disorder (OUD). Dr. Marcovitz will provide background information about the VUMC Bridge Clinic and will discuss the development of this industry sponsored research trial in collaboration with Pear and the VUMC Learning Health System.

Join us via [Zoom](#).

VCLIC Mental Health Design Challenge and Hackathon: February 25th and 26th, 2022

VANDERBILT CLINICAL INFORMATICS CENTER PRESENTS

MENTAL HEALTH

INNOVATION CHALLENGE AND HACKATHON

HOW DOES IT WORK?
Teams will work together over 2 days to develop a novel app to support mental health and care delivery

WHO CAN PARTICIPATE?
Vanderbilt clinicians, data scientists, designers, developers, informaticians, project managers, and social and behavioral scientists

DON'T KNOW HOW TO DESIGN OR BUILD FHIR APPS?
Check out upcoming VCLIC workshops:
Design Workshop: January 18
Build Workshop: February 8

February 25-26, 2022
The Wond'ry

More information and interest form can be found on our website: <https://www.vumc.org/vclic/hackathon>

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According to the CDC, “mental health includes our emotional, psychological, and social well-being,” and mental illnesses are “conditions that affect a person’s thinking, feeling, mood or behavior, such as depression, anxiety, bipolar disorder, or schizophrenia” ([cdc.gov](https://www.cdc.gov)). Mental illnesses are some of the most common health conditions in the United States, and “more than 50% of people will be diagnosed with a mental illness or disorder at some point in their lifetime” ([cdc.gov](https://www.cdc.gov)).

Vanderbilt has been a long-time user of electronic health records (EHRs). Vanderbilt’s EHR, eStar, contains data about every patient we treat, and new features can be developed and implemented to support new care models. Vanderbilt also offers our patients MyHealth at Vanderbilt (MHAV), a patient portal where patients can access their medical data, and even connect to external apps. Both the provider and patient-facing components of our EHR support the SMART on FHIR standard, allowing external applications to be seamlessly integrated.

The Vanderbilt Clinical Informatics Center (VCLIC), in partnership with VUMC HealthIT, will host an innovation challenge and hackathon to support development of novel apps for patients and healthcare providers to support our Innovative Care Delivery Models for Mental Health theme.

The innovation challenge and hackathon will take place from a Friday to Saturday, February 25th-26th, 2022, and will be held at The Wond'ry on Vanderbilt University's campus. The event is open to all VUMC and VU affiliates, including students, faculty and staff in all disciplines and departments – whether based at the University of the Medical Center. Participating teams can be comprised of several different types of roles, including developers, clinicians, project managers, social and behavioral scientists, designers, data scientists, informaticians, and others, which you can indicate on the interest form, linked below.

The goal of the innovation challenge and hackathon is for teams to come together and develop a novel apps to support mental health, defined broadly. We welcome apps for patients and providers, apps integrated with or external to the EHR, and apps for any phase of mental health care, including screening, diagnosis, treatment, or wellness. VCLIC will award prizes to the top teams. The applications developed will be judged based on creativity, functionality, design, clinical impact, and relevance to the theme.

If you are interested in participating in the innovation challenge and hackathon, please fill out the interest form, here: <https://redcap.link/VCLICDesignChallengeandHackathon>

RELATED WORKSHOPS

On February 8th, 2022, also from 1:00-4:00 pm **Tim Coffman and Simeon Hearing** of VUMC HealthIT will teach a practical session on developing FHIR applications using the [SMART on FHIR API](#).



Please sign up for this workshop here: <https://redcap.link/FHIRRapps>

Email elise.russo@vumc.org with any questions!

Thank you to our fabulous **App Design Workshop** presenters, **Tom Reese, PharmD, PhD, and Megan Salwei, PhD**. If you missed the workshop (on January 18th, 2022), we will soon provide a link for you to watch it on-demand.

Member Spotlight: Alvin Jeffery, PhD, RN-BC, CCRN-K, FNP-BC



[Dr. Alvin Jeffery](#) is an Assistant Professor with the School of Nursing and the Department of Biomedical Informatics. He recently completed a Master of Science in Biomedical Informatics from Vanderbilt University as well as a Medical Informatics Post-Doctoral Fellowship with the U.S. Department of Veterans Affairs in Nashville, TN. He has a background in pediatric critical care nursing and as a staff educator at Cincinnati Children's Hospital Medical Center. Dr. Jeffery focuses on the design, development, and evaluation of probability-based clinical decision support tools. He leverages machine learning and data science techniques for developing prediction models, and he incorporates qualitative methods for exploring how to implement CDS tools within nurses' cognitive and physical workflows. Dr. Jeffery has been elected to serve a 3-year term (2020-2023) on the Board of Directors for the American Association of Critical-Care Nurses.

What I'm working on:

- I'm currently funded on the Learning Health Systems K12 from AHRQ/PCORI where I'm working on 2 major tasks: (1) predictive modeling of acute clinical deterioration within a national cohort of hospitalized Veterans and (2) exploring how graphical presentation of quantitative risk [for clinical deterioration] is associated with nurses' preference and performance. This project encompasses my 2 research passions: playing with data in hopes of uncovering meaningful insights and getting those insights into the hands of the clinicians that would benefit from having them.
- I have a couple other areas where I'm attempting to diversify my research portfolio. I'm working with several folks in the genetics of substance use disorders and have a grant under review that focuses on developing richer phenotypes of substance use disorder using a breadth of EHR data. I'm also seeking funding for a novel method I'm developing that uses a quantitative approach to designing and evaluating clinical decision support tools.

VCLIC Involvement:

- I've primarily been involved in the VDAWGs (Vanderbilt Database Access Working Group) program and meetings because I have completed Epic training for the Clinical Data Model and Cognitive Computing, so I can query Clarity and play with the predictive models. I did all my training virtually during Covid, but I'm hoping to visit Verona in-person this year and take some of the Physician Builder classes.

Collaboration Opportunities:

- Regarding things others are doing, there's a lot of discussion around Epic's Deterioration Index, and I'd welcome opportunities to get involved in the evaluation of that model in the clinical setting. With my Epic certifications, implementation science training, K12 focus on in-hospital deterioration, and clinical background as a critical care nurse, that project checks a lot of the boxes for things that excite me.
- Regarding work I'm starting where I'd welcome help from others, the substance use disorder phenotyping project currently has many more ideas and tasks than I have bandwidth, even though I have several VU undergrad students pitching in. For those interested in complex phenotyping, particularly when text notes are involved, please feel free to contact me. Once the phenotyping work is further along, we'll do some genotyping work, and then the goal would be to develop decision support tools for clinicians who manage patients with chronic pain.

Upcoming Conference Submission Deadlines

- [Society for Industrial and Applied Mathematics \(SIAM\)](#):
 - [Minisymposium Proposal Submission Deadline](#): January 10th, 2022, 11:59 pm ET
 - [Contributed Lecture, Poster, Minisymposia, and Minisymposium Presentation Abstracts Submission Deadline](#): January 31st, 2022, 11:59 pm ET
- [International Conference on Machine Learning \(ICML\)](#):
 - [Abstracts Submission Deadline](#): January 20th, 2022
 - [Papers Submission Deadline](#): January 27th, 2022
 - [Workshop Application Deadline](#): February 23, 2022
 - [Tutorial Proposal Submission Deadline](#): February 26, 2022
- [Medical Informatics Europe \(MIE\)](#):
 - [Full papers, Short Communication papers Submission Deadline](#): January 23rd, 2022
 - [Workshops, Panels, Demonstrations Submission Deadline](#): February 27th, 2022
 - [Resubmission Deadline for Full Papers, Short Communication papers / Posters](#): March 20, 2022
- [Anesthesiology Annual Meeting \(ASA\)](#):
 - Problem-Based Learning Discussion Submissions: February 7, 2022, 11:59 pm CT
- [American Society of Clinical Oncology \(ASCO\) Annual Meeting](#):
 - [Abstract Submission Deadline](#): February 15th, 2022, 11:59 pm ET
- [Epic UGM](#):
 - Presentations: March 2022
- [Pediatric Academic Societies \(PAS\) Meeting](#):
 - Last Call for Ancillary Events: March 1, 2022
- [American Academy of Pediatrics \(AAP\) National Conference & Exhibition](#):

- Plenary session proposals & keynote ideas: March 25, 2022

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

Publications, Presentations, Interviews, and Awards

Additional Awards, Honors, Presentations, and News Mentions

Congratulations to **Siru Liu, PhD** for being selected to the National Cancer Institute (NCI) Multilevel Intervention Training Institute, a 4-month program to build capacity and skills for researchers in the field of cancer care and to further multilevel intervention research! She was also selected to the Women in AMIA Awards and Leadership Subcommittee.

Siru Liu, PhD was also nominated by the University of Utah for the American Medical Informatics Association (AMIA) Doctoral Dissertation Award, and finally, was also nominated by Vanderbilt University for the National Cancer Institute (NCI) Pathway to Independence Award for Outstanding Early-Stage Postdoctoral Researchers.

Jeremy Warner, MD is quoted and pictured in the VUMC Reporter article, "[Study of fully vaccinated patients with cancer who had breakthrough COVID-19 shows 13% mortality rate.](#)"

Josh Peterson, MD, MPH is mentioned in the VUMC Reporter article, "[Two VUMC papers named among genomic medicine's top 10.](#)"

Derek Williams, MD, MPH is pictured and featured in the VUMC Reporter article, "[Ess, Warren, Williams elected to American Pediatric Society.](#)"

The VUMC Reporter article, "[New faculty awards honor clinical, research, teaching missions.](#)" mentioned two new awards that are being introduced for the 2022 award cycle, one of which is named the **Kevin B. Johnson, MD** Award, given for innovative approaches advancing clinical practice and/or biomedical research.

Publications

January

Berman L, Renaud E, Pace D, Downard CD, Nwomeh BC, **Huang EY**, Weatherall YZ, Gadepalli SK, Mollen KP, Mak GZ, Newman E. (2022). [Inclusion and Representation in the Pediatric Surgery Workforce: Strategies to Mitigate Bias in the Fellowship Application Process.](#) *Journal of Pediatric Surgery.*

Bernstam EV, **Warner JL**, Krauss JC, Ambinder E, Rubenstein WS, Komatsoulis G, Miller RS, Chen JL. (2022). [Quantitating and assessing interoperability between electronic health records](#). *Journal of the American Medical Informatics Association*.

Hawley JE, Sun T, Chism DD, Duma N, Fu JC, Hatson NTN, Mishra S, Nguyen RH, Reid SA, Serrano OK, Singh SRK, Venepalli NK, Bakouny Z, Bashir B, Bilen MA, Caimi PF, Choueiri TK, Dawsey SJ, Fecher LA, Flora DB, Friese CR, Glover MJ, Gonzalez CJ, Goyal S, Halfdanarson TR, Hershman DL, Khan H, Labaki C, Lewis MA, McKay RR, Messing I, Pennell NA, Puc M, Ravindranathan D, Rhodes TD, Rivera AV, Roller J, Schwartz GK, Shah SA, Shaya JA, Streckfuss M, Thompson MA, Wulff-Burchfield EM, Xie Z, Yu PP, **Warner JL**, Shah DP, French B, Hwang. (2022). [Assessment of Regional Variability in COVID-19 Outcomes Among Patients With Cancer in the United States](#). *JAMA Netw Open*.

Hodges B, Ivy. ZK, **Cronin RM**, Rodeghier M, DeBaun MR, Willen S. (2022). [Annual decline in lung function in adults with sickle cell disease is similar to that observed in adults with cystic fibrosis](#) *Blood Adv*.

Holder JT, **Mayberry LS**, Gifford René. (2022). [The Cochlear Implant Use Questionnaire: Assessing Habits and Barriers to Use](#). *Otology & Neurotology*.

Laws J, Vance H, Anderson J, Betters K, Fleishman S, Bonfield C, Wellons J, **Giuse D**, **Patel N**, Jordan L, Wolf M. (2022). [62: EFFECTS OF KETAMINE ON INTRACRANIAL PRESSURE IN CHILDREN WITH SEVERE TRAUMATIC BRAIN INJURY](#). *Critical Care Medicine*.

Liu S, Kawamoto K, Del Fiol G, Weir C, Malone DC, **Reese TJ**, Morgan K, ElHalta D, Abdelrahman S. (2022). [The potential for leveraging machine learning to filter medication alerts](#). *J Am Med Inform Assoc*.

Lowen GB, Garrett KA, **Moore-Lotridge SN**, Uppuganti S, Guelcher SA, Schoenecker JG, Nyman JS. (2022). [Effect of Intramedullary Nailing Patterns on Interfragmentary Strain in a Mouse Femur Fracture: A Parametric Finite Element Analysis](#). *J Biomech Eng*.

Pregnall AM, Gupta RK, Clifton JC, **Wanderer JP**. (2022). [Use of provider education, intra-operative decision support, and an email-feedback system in improving compliance with sugammadex dosage guideline and reducing drug expenditures](#). *J Clin Anesth*.

Rees AB, Schultz JD, Wollenman LC, **Moore-Lotridge SN**, Martus JE, Schoenecker JG, Mencio GA. (2022). [A Mini-Open Approach to Medial Pinning in Pediatric Supracondylar Humeral Fractures May Be Safer Than Previously Thought](#). *The Journal of Bone & Joint Surgery*.

Weinger MB, Shanafelt T. (2022). [A Perspective on COVID's Effects on Clinician Burnout in 2020 and 2021 in the US](#). *ASA Monitor*.

December

Cole HA, **Moore-Lotridge SN**, Hawley GD, Jacobson R, Yuasa M, Gewin L, Nyman JS, Flick MJ, Schoenecker JG. (2021). [The Deleterious Effects of Impaired Fibrinolysis on Skeletal Development Are Dependent on Fibrin\(ogen\), but Independent of Interlukin-6](#). *Front Cardiovasc Med*.

Dunham WC, Lombard FW, Edwards DA, Shi Y, Shotwell MS, Siegrist K, Eagle SS, Pretorius M, McEvoy MD, Gillaspie EA, Nesbitt JC, **Wanderer JP**, Kertai MD. (2021). [Effect of Regional Analgesia Techniques on Opioid Consumption and Length of Stay After Thoracic Surgery](#). *Semin Cardiothorac Vasc Anesth*.

Elkrief A, Wu JT, Jani C, Enriquez KT, Glover M, Shah MR, Shaikh HG, Beeghly-Fadiel A, French B, Jhavar SR, Johnson DB, McKay RR, Rivera DR, Reuben DY, Shah S, Tinianov SL, Vinh DC, Mishra S, **Warner JL**. (2021). [Learning through a Pandemic: The Current State of Knowledge on COVID-19 and Cancer](#). *Cancer Discov*.

Frazier SB, Fitzgerald NM. (2021). [Hypernatremia in a Sleepy 2-Month-Old With Mention of Abnormal Eye Movements](#). *Pediatric Emergency Care*.

Gibson BHY, Wollenman CC, **Moore-Lotridge SN**, Keller PR, Summitt JB, Revenko AR, Flick MJ, Blackwell TS, Schoenecker JG. (2021). [Plasmin drives burn-induced systemic inflammatory response syndrome](#). *JCI Insight*.

Jaafa NK, Mokaya B, Savai SM, Yeung A, Siika AM, **Were M**. (2021). [Implementation of Fingerprint Technology for Unique Patient Matching and Identification at an HIV Care and Treatment Facility in Western Kenya: Cross-sectional Study](#). *J Med Internet Res*.

Jacobsohn GC, Leaf M, Liao F, Maru AP, Engstrom CJ, **Salwei ME**, Pankratz GT, Eastman A, Carayon P, Wiegmann DA, Galang JS, Smith MA, Shah MN, Patterson BW. (2021). [Collaborative design and implementation of a clinical decision support system for automated fall-risk identification and referrals in emergency departments](#). *Healthc (Amst)*.

Kim E, Bitterman DS, Kann BH, Mak RH, Moreno AC, Upadhyay VA, **Warner JL**, Zhang HM. [Hidden in Plain Sight: Clinical Informaticians are the Oncology Subspecialists You Did Not Know You Needed](#). *Clin Oncol (R Coll Radiol)*.

Liu J, **Liu S**, Zheng T, Fang J. (2021). [Development of Nursing Informatics in Mainland China: A Bibliometric Analysis](#). *Studies in Health Technology and Informatics*.

Liu J, **Liu S**, Shi Q, Wang M. (2021). [Bibliometric Analysis of Nursing Informatics Research](#). *Studies in Health Technology and Informatics*.

Martinez W, Pichert JW, Hickson GB, Braddy CH, Brown AJ, Catron TF, Moore Ilene N, Stampfle MR, Webb LE, Cooper WO. (2021). [Qualitative Content Analysis of Coworkers' Safety Reports of Unprofessional Behavior by Physicians and Advanced Practice Professionals](#). *Journal of Patient Safety*.

McNeil AJ, House DW, Mbala P, Tshiani O, Dodd L, Cowan E, Chen Z, Marks M, Saknite I, **Tkaczyk E**, Dawant B. (2021). [Application of U-Net with Inceptionv4 Encoder for Localizing and Counting Monkeypox Lesions in Patient Photographs](#).

Ngugi PN, **Were MC**, Babic A. (2021). [Users' perception on factors contributing to electronic medical records systems use: a focus group discussion study in healthcare facilities setting in Kenya](#). *BMC Med Inform Decis Mak*.

Salwei ME, Carayon P, Wiegmann D, Pulia MS, Patterson BW, Hoonakker PLT. (2021). [Usability barriers and facilitators of a human factors engineering-based clinical decision support technology for diagnosing pulmonary embolism](#). *Int J Med Inform*.

Schmidt AL, Labaki C, Hsu C-Y, Bakouny Z, Balanchivadze N, Berg SA, Blau S, Daher A, El Zarif T, Friese CR, Griffiths EA, Hawley JE, Hayes-Lattin B, Karivedu V, Latif T, Mavromatis BH, McKay RR, Nagaraj G, Nguyen RH, Panagiotou OA, Portuguese AJ, Puc M, Santos Dutra M, Schroeder BA, Thakkar A, Wulff-Burchfield EM, Mishra S, Farmakiotis D, Shyr Y, **Warner JL**, Choueiri TK. (2021). [COVID-19 vaccination and breakthrough infections in patients with cancer](#). *Annals of Oncology*.

Schultz JD, Rees AB, Wollenman LC, Lempert N, **Moore-Lotridge SN**, Schoenecker JG. (2021). [Bruise Location in Supracondylar Humerus Fractures Predicts Specific Neurovascular Injuries](#). *J Pediatr Orthop*.

Smith CM, Friedman DL. (2021). [Hodkin lymphoma](#). *Lanzowsky's Manual of Pediatric Hematology and Oncology*.

Were MC, Savai S, Mokaya B, Mbugua S, Ribeka N, Cholli P, Yeung A. (2021). [mUzima Mobile Electronic Health Record \(EHR\) System: Development and Implementation at Scale](#). *J Med Internet Res*.

Accepted or In Press

Zhang P, Schmidt D, White J, Fonnesebeck C, Kleinberg S, **Mulvaney S**. Understanding barriers to self-management using machine learning and momentary assessment in youth with diabetes: an observational study. *JMIR mHealth uHealth*. In Press.

Conference Abstracts

Liu S, McCoy AB, Schlesinger JJ, **Wright A**. Leveraging Explainable Machine Learning to Predict New Onset of ICU Delirium. *Accepted for podium abstract presentation at the AMIA 2022 Artificial Intelligence Evaluation Showcase*. Chicago, IL, March 21-24, 2022.

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!