

VCLIC News and Happenings, Volume 44

Welcome to VCLIC's February newsletter! We are excited to bring you this month's updates and hope you are enjoying this sunny February weather.

This month, we are featuring **Allison (Ali) Carroll, MD, MPH,** Assistant Professor of Pediatrics, Hospital Medicine. We are so grateful for Ali's wonderful contributions to VCLIC and are happy to spotlight her this month!

Finally, and per usual, we have several Center members who have **received awards**, been mentioned in the **news**, presented **lectures** and at conferences, **published papers**, have had **abstracts** accepted to conferences, and had **honors or fellowships** bestowed on them.

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

2024 VCLIPS



<u>Vanderbilt Clinical Informatics Center</u> (VCLIC) is proud to announce or next round of <u>Vanderbilt Clinical Informatics Practical Shorts</u> (VCLIPS). These are bite-size instructional videos on practical clinical informatics topics from expert VCLIC faculty (and staff). This semester, we've added:

- Agile Methods for Leading a Clinical or Research Informatics Team (Alvin Jeffery, PhD)
 - o Learn about Agile methodology for product management to optimize team performance and project success
- Medication Data Tools (Joey LeGrand, PharmD, MS)
 - o Learn about drug terminology and classification using RxNorm as well as how to use the tool SageRx to work with drug data more easily
- Patient Reported Outcome Measures (Justin Bachmann, MD; Emily Burnell; Emma Barnes, MPH)

 Learn about Patient Reported Outcome Measures (PROMs), the process for requesting PROMs at Vanderbilt, and how to leverage PROM data

These build on our prior releases: Introduction to Epic and Build Capabilities, Data Resources, Human Centered Design Principles and Processes, Evaluation and Dissemination of HealthIT Interventions, Exempt IRB Research, Address Geocoding, Using Epic to Support Clinical Research, and Signal Data.

We're also finalizing some additional VCLIPS on qualitative research and SlicerDicer, and hope to release these a bit later in the semester.

We also have two requests for you. First, we'd love to collect some VCLIPS success stories, so if you viewed any of these and found them helpful or shared them, please let us know – that helps build momentum for new content. Second, if you have ideas for additional VCLIPS topics, please send them our way – if it's something you know well, feel free to self-nominate :-). If it's something you'd just like to learn, we will track down the VUMC experts and invite them to make a video.

Thanks for your support of VCLIC and clinical informatics activities at Vanderbilt!

VCLIC Events

If you missed the **Clinical Informatics Update Grand Rounds on February 7**th, you can view the recording <u>here</u>. Thank you so much again to all our speakers!

We are excited to announce an upcoming Grand Rounds talk: Please join us and former VCLIC Member (now a Clinical Assistant Professor of Pediatrics-Neonatology at University of Iowa Health Care), **Lindsey Knake, MD, MS,** on March 6th, 2024 in person and via Teams as she talks us through the work she is doing using Epic's Cosmos tool.

Her talk, "A Guide to exploring Epic's Cosmos universe: Insights from studying tiny babies" will discuss real-world scenarios of how neonatologists and obstetricians use Epic's deidentified Cosmos database to research maternal and neonatal issues. This presentation will review the potential of Cosmos to answer important questions, as well as some of the limitations of the Cosmos database. We will compare and contrast the data available from both the SlicerDicer and the data science platforms to highlight the benefits of each. Additionally Dr. Knake will discuss how she works with the Epic research and Cosmos teams to try to improve the database and usability for researchers.



2024 Learning Health Systems Symposium

The Center for Clinical Quality and Implementation Research is hosting a symposium on May 14 and is currently accepting poster submissions. <u>See here for more information!</u>



Featured Member: Allison R. Carroll, MD, MPH



Dr. Allison (Ali) Carroll, MD, MPH is an Assistant Professor of Pediatrics in the Division of Hospital Medicine and a health services researcher. She completed her undergraduate degree in Psychology from Davidson College where she also played Division I soccer. She then completed her MD from the University of North Carolina at Chapel Hill in 2015, followed by her residency in pediatrics (2015-2018) and chief residency (2019), also at the University of North Carolina at Chapel Hill. She moved to Nashville in 2019 and completed her pediatric hospital medicine fellowship at Vanderbilt in 2022. She joined the faculty in the Department of Pediatrics in July 2022 as an Assistant Professor on the Investigator (tenure) Track.

Her clinical interests include mitigating modifiable factors that drive disparate healthcare utilization for children through hospital-based, patient- and systems-level interventions using clinical informatics and implementation science. Her research program focuses on risk prediction modeling, transitions of care, and social determinants of health.

During her pediatric hospital medicine fellowship she worked closely with Dr. Allison McCoy (before the Clinical Informatics Core formally existed!) on a quality improvement project which successfully reduced unnecessary fasting times for hospitalized children by 40%. During fellowship she also completed an AHRQ T32 Patient/pRactice Outcomes and Research in Effectiveness and Systems Science (PROgRESS) post-doctoral research fellowship and obtained an MPH in Epidemiology from Vanderbilt. During this time she completed a randomized controlled trial comparing a health literacy-informed communication intervention to usual care for discharge medication teaching. This recently published trial in *JAMA Network Open* demonstrated that a 5 minute communication intervention significantly reduced liquid medication dosing errors following discharge in hospitalized children. She was recently awarded a position as a Vanderbilt Faculty Research Scholar and is submitting a career development award to support her work to develop and validate an EHR-ready reutilization risk prediction model for unplanned pediatric ED revisits and hospitalizations that is accurate, aligns with the needs of individual patients and

their caregivers, useful to clinicians and health systems, and linked to actionable interventions at the patient, health system, and community levels.

As a part of her career development plan she will take several clinical informatics courses and work closely with VCLIC to integrate an EHR-enabled risk prediction tool and clinical decision support for hospital-to-home transition interventions in hospitalized children. She looks forward to obtaining more formal training in clinical informatics (including becoming an Epic Physician Builder) and one day leading a pragmatic, randomized clinical trial through the Vanderbilt Learning Healthcare System.

Upcoming Conference Submission Deadlines



- o AMIA 2024 Annual Symposium
 - Submission Deadline: March 18, 2024
- Medical Informatics Europe (MIE)
 - Full papers and Short Communication Papers /Posters Deadline: 18 March, 2024
 - Workshops, Panels, Demonstrations, and Tutorials Deadline: 15 April, 2024
- Anesthesiology Annual Meeting (ASA)
 - Scientific Abstracts and Education Exhibits: April 1, 2024
 - Medically Challenging Cases and Quality Improvement Projects: April 11, 2024
- o American Academy of Pediatrics (AAP) National Conference & Exhibition
 - Plenary session proposal deadline: March 15, 2024
 - Abstract submission deadline: April 12, 2024
- o International Medical Informatics Association (IMIA) Medinfo
 - Submission Open: April 1, 2024 December 4, 2024
- o Machine Learning for Healthcare
 - Paper Submission Deadline: April 9, 2024
- o Epic UGM
 - Presentation Proposal Submission Deadline: April 1, 2024

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

For those of you attending conferences and presenting posters, we have a template on our **Confluence page** that we would encourage you to use.

Presentations, Interviews, Honors, and Awards

Honors/Awards



- Ashley Spann, MD, MSACI received the American Association for the Study of Liver Diseases (AASLD) Harold Amos Medical Faculty Development Program Hepatology Award. Congrats Ashley!
- Ashley Spann, MD, MSACI also received the Robert A. Winn Diversity in Clinical Trials Career Development Award!
- Dan Byrne's second book, "Artificial Intelligence for Improved Patient Outcomes —Principles for <u>Moving Forward with Rigorous Science"</u>, has just been published and is available to purchase on Amazon!
 - o He also had a book review published in the The American Journal of Managed Care
 - Furthermore, Congratulations to him on his retirement!
- Congratulations to Scott Nelson, PharmD, MS, FAMIA, ACHIP for being appointed as part of the ASHP's new Section of Digital and Telehealth Practitioners Executive Committee!
- Mike Ward, MD, PhD, MBA, Sunil Kripalani, MD, MSc, and Alan Storrow, MD are Pls on a T32 grant from NHLBI to establish the Vanderbilt Interdisciplinary Hospital-based Systems of Care Research Training ProgrAm (VISTA). VISTA will train 2-3 postdoctoral investigators per year with a focus on patient-oriented and health systems research for acute heart, lung, or blood disorders in the hospital setting. Congratulations!
- Congrats to Jon Wanderer, MD and Alex Langerman for receiving funding from VU's Innovation Catalyst Fund for their project "GownCard Perioperative Workflow App"!
- Sunil Kriplani, MD, MSc, SFHM, FACP received an award for Excellence in Mentoring Translational Scientists at the Vanderbilt Translational Research Forum held on 2/2/24 congratulations!
- Congrats to Megan Salwei, PhD, Matt Weinger, MD, MS and Adam Yock for receiving a Vanderbilt Innovation Catalyst Award for their project, "Personalized training on deep

inspiration breath hold (DIBH) to improve radiation therapy outcomes in breast cancer patients"!

Conferences and Other Presentations

- **Jon Wanderer, MD** presented Grand Rounds, "Perioperative Informatics Innovation: For Patient Care, Research and Education" at OHSU on 1/22/24.
- **Kipp Shipley, DNP** presented an abstract, "The Impact of Dedicated Just-in-Time ICU Beds for Adult Patients During Rapid Response Activations," at the Society of Critical Care Medicine Conference (SCCM) in Phoenix on 1/21/24.
- Patricia Sengstack, DNP, RN-BC, FAAN was invited to speak at the Society of Urologic Nursing (SUNA) on March 3rd at their national conference in Nashville, TN. She will be presenting "Navigating the AI Landscape: Essential Applications for Advanced Practice Nursing."
- Patricia Sengstack, DNP, RN-BC, FAAN and Dr. Kelly Aldrich co-hosted a webinar, "Al Integration and Innovation in Nurse Practitioner Education and Practice" for The National Organization for Nurse Practitioner Faculties (NONPF) conference on January 30th.
- Tom Reese, PharmD, PhD and Mike Ward, MD, PhD, MBA presented at the CCQIR Scholarly Series to discuss Using Intervention Mapping to Cope with Complexity.
- Martin Were, MD, MS and Chao Yan presented at the AIM-AHEAD Ethics and Equity Seminar Series to discuss "Use and Role of Race in AI/ML Models for Health" on Feb. 8.
- Alvin Jeffery, PhD, RN-BC presented his talk "From Database to Decision-Making: An Early Career Scientist's Journey in Clinical Prediction, Probabilistic Phenotyping & Information Visualization" at the DBMI Special Seminar on February 13th.
- Yaa Kumah-Crystal MD, MPH, MS gave a <u>community-friendly overview of ChatGPT and Al</u>, designed to demystify "Al" and to show how tools like ChatGPT can be helpful for creative things, at the Nashville Public Main Library on February 3rd from 1-2 PM.
- Lee LH, Hirbo J, Joos K, **Brown EN**. "Structured data extraction from visual field reports: PaddleOCR for end-to-end automated layout recognition and optical character recognition." Poster presentation, Collaborative Community on Ophthalmic Imaging, January 18, 2024.
- Carro S.E., Gargurevich N, Sekmen M, Williams D.J. "Evaluating the Antibiotic Spectrum Index as an Outcome in the Context of a Randomized Clinical Trial." Accepted poster presentation, Pediatric Academic Societies. May 3-6, 2024. Toronto, Canada.
- McCoy AB, Zahn L, Russo EM, Patel N, Mize D, Embi P, Wright A. "Bridging the Gap between Informatics Operations and Academics: The Vanderbilt Clinical Informatics Center + HealthIT Evaluation and Dissemination Program." Podium Presentation, AMIA Clinical Informatics Conference. 2024.
- Kandaswamy S, Mrosak J, Fortunov R, Fallon A, McCoy AB. "Creative Decision Support Stories: Pivoting Away from Pop Up Alerts." Panel Presentation, AMIA Clinical Informatics Conference. 2024.
- Steitz BD, Padi-Adjirackor NA, Griffith KN, Reese TJ, Rosenbloom ST, Ancker JS. "Incorporating Patient Preference into Open Results: Impact of Notification Policy on Review of Immediately Released Test Results." Abstract, AMIA Clinical Informatics Conference. 2024.
- **Steitz BD**, Sulieman L, McDonald SA, Turer RW. "Zero-Shot Classification of Health Information Needs in Clinical Messages." Poster Presentation, AMIA Clinical Informatics Conference. 2024.

- Turer RW, OConnell E, Lehmann CU, Willett D, Basit M, Moran B, Kassa S, Valasco F, Masca A,
 Thakur B, Mirus C, Kerich L, Peterson E, Navar AN, Repaske E, Higashi RT, Rosenbloom ST, Steitz
 BD, McDonald SA. "Patient Portal Access and Use Disparities among Patients with Limited
 English Proficiency." Abstract, AMIA Clinical Informatics Conference. 2024.
- Steitz BD, MacDonald S, Emamekhoo H, Wood NM, Rosenbloom ST. "Cancer is Different: Exploring the Impact of Immediate Access to Cancer-Related Test Results on Patients and Clinicians." Panel Presentation, AMIA Clinical Informatics Conference. 2024.
- Turer RW, McDonald SA, Thakur B, Lehmann CU, Dutta S, Taylor RA, Rose CC, Feterik K, Norquist C, Nielson JA, Lin CT, MacDonald S, DesRoches CM, Salmi L, Chen Q, Rosenbloom ST, Steitz BD.
 "FEMOR: A Framework for Efficient Multisite Observational Research in the Vendor-Centric Electronic Health Record Era." Poster Presentation, AMIA Clinical Informatics Conference. 2024.
- Suresh U, **Steitz BD**, **Rosenbloom ST**, **Ancker JS**. "Effect of Immediate Result Release on New Appointment Scheduling." Poster Presentation, AMIA Clinical Informatics Conference. 2024.

Publications

Tang Girdwood S, Hall M, Antoon JW, Kyler KE, **Williams DJ**, Shah SS, Orth LE, Goldman J, Feinstein JA, Ramsey LB. <u>Opportunities for Pharmacogenetic Testing to Guide Dosing of Medications in Youths With Medicaid</u>. *JAMA Netw Open*. 2024;7(2):e2355707. doi:10.1001/jamanetworkopen.2023.55707

Marquis-Gravel G, Stebbins A, Wruck LM, Roe MT, Effron MB, Hammill BG, Whittle J, VanWormer JJ, Robertson HR, Alikhaani JD, **Kripalani S**, Farrehi PM, Girotra S, Benziger CP, Polonsky TS, Merritt JG, Gupta K, McCormick TE 3rd, Knowlton KU, Jain SK, Kochar A, Rothman RL, Harrington RA, Hernandez AF, Jones WS. <u>Age and Aspirin Dosing in Secondary Prevention of Atherosclerotic Cardiovascular Disease</u>. *J Am Heart Assoc*. Published online February 13, 2024:e026921. doi:10.1161/JAHA.122.026921

Sulieman L, Ashworth D, **Wright A**, Cole C, White J, Findley N, Riels G, Riels M, Stegall C, Moran R, Studebaker G, Pirtle CJ. <u>A Case Report on the Effectiveness of Virtual Monitoring of Postdischarge COVID-19 Positive Patients in a Rural Hospital Setting: A Retrospective Review.</u> Published online January 30, doi: 10.1089/tmj.2023.0073

González R, Poenaru D, Woo R, Trappey AF 3rd, Carter S, Darcy D, Encisco E, Gulack B, Miniati D, Tombash E, **Huang EY.** ChatGPT: What Every Pediatric Surgeon Should Know About Its Potential Uses and Pitfalls. *J Pediatr Surg*. Published online January 14, 2024:S0022-3468(24)00010-1. doi:10.1016/j.jpedsurg.2024.01.007

Sartori LF, Nian H, Zhu Y, Johnson J, Stassun J, Ampofo K, Arnold DH, Antoon JW, Pavia AT, Grijalva CG, Williams DJ. Removal of Race and White Blood Cell Count in an Updated Pediatric Pneumonia Severity Model. *Hosp Pediatr*. Published online February 9, 2024:e2023007571. doi:10.1542/hpeds.2023-007571

Jerome RN, **Zahn LA**, Abner JJ, et al. <u>Repurposing N-acetylcysteine for management of non-acetaminophen induced acute liver failure: an evidence scan from a global health perspective</u>. *Transl Gastroenterol Hepatol*. 2024;9:2. doi:10.21037/tgh-23-40

Achola EM, Griffith KN, **Wrenn JO**, Mitchell CR, Schwartz D, Roumie CL. <u>Injuries From Legal Interventions Involving Conducted Energy Devices</u>. *JAMA Intern Med*. Published online February 5, 2024:e238012. doi:10.1001/jamainternmed.2023.8012

Livorsi DJ, Branch-Elliman W, Drekonja D, Echevarria KL, Fitzpatrick MA, Goetz MB, Graber CJ, Jones MM, Kelly AA, Madaras-Kelly K, Morgan DJ, Stevens VW, Suda K, Trautner BW, **Ward MJ**, Jump RLP. Research agenda for antibiotic stewardship within the Veterans' Health Administration, 2024-2028. *Infect Control Hosp Epidemiol*. Published online February 2, 2024:1-7. doi:10.1017/ice.2024.6

Nelson LA, Spieker AJ, LeStourgeon LM, Greevy RA Jr, Molli S, Roddy MK, Mayberry LS. <u>The Goldilocks Dilemma on Balancing User Response and Reflection in mHealth Interventions: Observational Study</u>. *JMIR Mhealth Uhealth*. 2024;12:e47632. doi:10.2196/47632

Koonce TY, **Giuse DA**, Williams AM, et al. <u>Using a Natural Language Processing Approach to Support Rapid Knowledge Acquisition</u>. *JMIR Med Inform*. 2024;12:e53516. doi:10.2196/53516

Bahrami L, Miller CT, Miller H, Carlson KL, Foster TE, Ganesh A, **Johnson D**, Patterson BL, Hine JF.

<u>Enhancing Diagnostic Follow-up and Care Coordination for Children with Autism in a Busy Resident</u>

<u>Continuity Clinic: Leveraging the Electronic Health Record</u>. *J Autism Dev Disord*. Published online January 30, 2024. doi:10.1007/s10803-024-06253-1

Mart MF, Semler MW, Jenkins CA, Wang G, Casey JD, Ely EW, Jackson JC, Kiehl AL, Bryant PT, Pugh SK, Wang L, DeMasi S, Rice TW, Bernard GR, **Freundlich RE**, Self WH, Han JH. <u>Oxygen-Saturation Targets and Cognitive and Functional Outcomes in Mechanically Ventilated Adults</u>. *Am J Respir Crit Care Med*. Published online January 29, 2024. doi:10.1164/rccm.202310-1826OC

Gaston DC, Chiang AD, Dee K, Dulek D, Banerjee R, Humphries RM. <u>Diagnostic Stewardship for Next-Generation Sequencing Assays in Clinical Microbiology: An Appeal for Thoughtful Collaboration</u>. *Clin Lab Med*. 2024;44(1):63-73. doi:10.1016/j.cll.2023.10.002

Walsh CG, Ripperger MA, Hu Y, et al. <u>Development and multi-site external validation of a generalizable risk prediction model for bipolar disorder.</u> *Transl Psychiatry*. 2024;14(1):58. doi:10.1038/s41398-023-02720-y

Bi Y, **Liu S**, Liu J. <u>Development of Ward Visitor Management System in the COVID-19 Epidemic.</u> *Stud Health Technol Inform.* 2024;310:1081-1085. doi:10.3233/SHTI231131

Kirui N, Kamano J, Savai S, Misoi L, Rono S, **Were MC**. <u>Patient-Specific Mobile Phone-Generated Reminders and Quality of Hypertension Care in Western Kenya</u>. *Stud Health Technol Inform*. 2024;310:254-258. doi:10.3233/SHTI230966

Liu J, Wang M, **Liu S**. <u>Telemedicine and COVID-19 Pandemic: Experiences of Western China Hospital</u>. *Stud Health Technol Inform*. 2024;310:1556-1557. doi:10.3233/SHTI231291

Yu J, Petersen C, Reid S, **Rosenbloom ST**, Warner JL. <u>Telehealth and Technology: New Directions in Cancer Care</u>. *Cancer J*. 2024;30(1):40-45. doi:10.1097/PPO.00000000000000092

Smith JR, Baldwin I, Termini KA, McGonigle T, Vandekar S, Luccarelli J. <u>Use of ECT for Children With and Without Catatonia: A Single-Site Retrospective Analysis.</u> *J ECT*. Published online January 25, 2024. doi:10.1097/YCT.0000000000000993

Tinker RJ, Fisher M, Gimeno AF, Gill K, Ivey C, **Peterson JF**, Bastarache L. <u>Diagnostic delay in monogenic disease: a scoping review.</u> *Genet Med.* Published online January 16, 2024:101074. doi:10.1016/j.gim.2024.101074

Carroll AR, Johnson JA, Stassun JC, Greevy RA, Mixon AS, Williams DJ. <u>Health Literacy-Informed</u>

Communication to Reduce Discharge Medication Errors in Hospitalized Children: A Randomized Clinical

Trial. JAMA Netw Open. 2024;7(1):e2350969. doi:10.1001/jamanetworkopen.2023.50969

Suresh U, **Ancker JS**, Zikmund-Fisher BJ, Benda NC. <u>Designing Support to help Health Communication Professionals Convey Numbers Clearly to the Public - A Needs Assessment and Formative Usability Evaluation</u>. *AMIA Annu Symp Proc.* 2023;2023:1277-1286.

Wang CP, Mkuu R, Andreadis K, Muellers KA, **Ancker JS**, Horowitz C, Kaushal R, Lin JJ. <u>Examining and Addressing Telemedicine Disparities Through the Lens of the Social Determinants of Health: A Qualitative Study of Patient and Provider During the COVID-19 Pandemic</u>. *AMIA Annu Symp Proc*. 2023;2023:1287-1296.

Slater H, Yin Z, **Walsh CG**. Characterization of Adult Patients with Autism Spectrum Disorder that Use Patient Portal. AMIA Annu Symp Proc. 2023;2023:1267-1276.

Byrne DW, Domenico HJ, Moore RP. Artificial Intelligence for Improved Patient Outcomes-The Pragmatic Randomized Controlled Trial Is the Secret Sauce. Korean J Radiol. 2024 Feb;25(2):123-125. Published online January 10, 2024. doi: 10.3348/kjr.2023.1016.

Accepted/In Press

Hall, E., Holt, J, & Sengstack, P. (2024). The Catalytic Link: The Role of a Nursing Informatics Specialist in a Simulation Lab.

Jeffery, A.D., Reale, C., Faiman, J., Borkowski, V., Beebe, R., Matheny, M.E., & **Anders, S**. (2024). Inpatient nurses' preferences and decisions with risk information visualization. *JAMIA*, *31*(1), 61-69.

• Also chosen for JAMIA's journal club this month!

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 <u>News section of our website</u> 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 <u>@VUMC_VCLIC</u> too!

Thank you, and see you soon!