



VCLIC News and Happenings, Volume 27

Hi All, and Happy end of Summer! We are happy to be back in your inboxes after a bit of a hiatus and are looking forward to the start of the new academic year. We have several exciting events and lectures planned and are thrilled to be kicking things off with our **InformaticCon** on September 28th, 2022. We hope you have already signed up, but if not, please see additional details in our first blurb below.

While we were on our summer break, it became very clear to us that you all were not! This newsletter is mostly a celebration of accomplishments, starting with our **AHIC Diplomate** members, who were just named in July after passing a certification exam. We are excited for everyone to learn a bit more about one of the recipients of this certification, **Sina Madani, MD, PhD**, as he is our VCLIC Featured Member this month.

In addition to all of our member **honors, awards, news article mentions, publications, grant awards received, and conference abstracts accepted**, we are celebrating our **Clinical Informatics Core** receiving its 100th request and finishing its first year strong! We are a little light on publications in this letter because I only included what our members directly sent me, but we will return next month with an exhaustive list of member publications from the last few months.

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

InformaticCon 2022



Please join us for VCLIC's first **InformatiCon**. This special, two-hour event will include lunch, a sampling of short, dynamic talks, and a poster session to showcase clinical informatics work going on across VUMC! It will take place on **Wednesday, September 28th, 2022, from 12:00-2:00 pm** in the Vanderbilt University Student Life Center Board of Trust Room (address and map below). The first hour, when the talks will occur, is during the standard DBMI seminar time, and the poster session will follow.

Please indicate your interest in attending via the form linked below—we will be serving lunch, so we'd like to get an accurate head count. Additional details about timing and content will be shared as the date draws closer. All VUMC and VU faculty, staff, trainees, and students are welcome to participate and attend, and we hope to see you there on September 28th to kick off our academic year!

Sign up to attend here: <https://redcap.link/informaticon>

If you have already signed up and are interested in submitting an abstract to be presented, please do so here: <https://redcap.link/informaticonpresenter>

We will have a panel of judges review the applications and will get back to anyone who submits by the end of the month (August). **Please submit by August 26th, 2022.**

The Student Life Center Board of Trust Room is located at:

310 25th Ave. S.
Nashville TN 37240

Additional details will be added to our website: <https://www.vumc.org/vcliv/informaticon-fall-2022>

AHIC Diplomates

Congratulations to **Allison McCoy, PhD; Adam Wright, PhD; Scott Nelson, PharmD, MS; Kim Unertl, PhD;** and **Sina Madani, MD, PhD** for passing the [AMIA Health Informatics Certification \(AHIC\)](#) exam! They were among 96 professionals named to the **inaugural class of AHIC diplomates**. AMIA recently established the AMIA Health Informatics Certification (AHIC) program to provide a certification process for health informatics professionals, primarily focused on operational informatics, whose work impacts organizational performance or affects public safety. To become certified, individuals must be determined eligible, at demonstrate competence through examination. [Read more here!](#)

Clinical Informatics Core Hits 100th Request

This month, the [Clinical Informatics Core](#) celebrated both its first year anniversary and its 100th request! The Clinical Informatics Core, directed by **Allison McCoy, PhD**, exists to enable VUMC researchers to design and implement electronic health record (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. The core offers clinical data extraction and analysis, design and build of EHR interventions, predictive model implementation, value set and logic development, and general clinical informatics consultation services to researchers.

VBISP Students work with VCLIC

Each year DBMI provides high school and undergraduate students the opportunity to experience research in Biomedical Informatics through the [Vanderbilt Biomedical Informatics Summer Program](#) (VBISP). This year, two students worked with VCLIC faculty **Allison McCoy, PhD** and **Adam Wright, PhD**.

Caleb Donaldson is a senior at Martin Luther King, Jr. Magnet High School. He worked to review CDS override comments to identify scenarios where alerts could have been suppressed due to improved alert criteria or clinical documentation, or where additional acknowledgment options could be beneficial. After high school, Caleb plans to be a computer science major in college and begin his journey of becoming a software engineer.

Rachel Curci is a junior at Miami University – Ohio majoring in Data Analytics Bioinformatics. She reviewed override comments and conducted interviews to better understand how clinicians interact with CDS alerts. In the future, she I hopes to work as a clinical informaticist while focusing on human factor studies to better the EHR.



Member Spotlight: Sina Madani, MD, PhD, FAMIA



Sina Madani, MD, PhD is a clinical informatician and principal knowledge engineer with HealthIT, who works on data standardization, clinical terminologies, and natural language processing as they apply to automated clinical decision support systems. He currently works on knowledge modeling, with a focus on pharmacogenomics and terminological bindings. He received his PhD in Biomedical Informatics from The University of Texas School of Biomedical Informatics in Houston. He is a current fellow of the American Medical Informatics Association with research interests in natural language processing, standards & terminologies, and knowledge management within Electronic Medical Record systems. He is the inaugural recipient of ACHIP Diplomate in 2022.

The main projects I am working on right now are:

1. PeriOp concept alerting: extracting perioperative health conditions, critical for anesthesiologist, from patient charts through enterprise NLP application (Word Cloud)
2. Acute heart failure predictive model: optimizing underlying knowledge base through terminological analysis on medication, lab, procedure, and diagnosis domains
3. Event-Driven CDS: extracting epilepsy related disease information from epilepsy reports through NLP app and evaluating results.
4. Identification of perioperative patients with cardiac implants: optimizing dictionary-based NLP approach for extraction concepts relevant to Cardiovascular Implantable Electronic Device.
5. Clinical data capture: evaluating (semi) automated ontology-based phenotyping approaches under clinical genomics pipeline. The results are encouraging and shaping the direction of the knowledge engineering & Word Cloud integration.
6. Word Cloud projects that require creating domain specific knowledge base, optimization, pipeline analysis, and validation of NLP performance metrics
7. TopBraid knowledge integration & portal expansion: developing data integration framework between Word Cloud and knowledge engineering platform (TopBraid) as well as developing terminological value sets required for knowledge extraction

Collaboration Opportunities: I am interested in operational and/or research activities that include optimizing knowledge management frameworks, adapting clinical data standards within enterprise

applications such as clinical decision support systems, augmenting patient data extraction from VUMC enterprise natural language processing application (Word Cloud) with an emphasis on enhancing entity recognition capabilities, and developing semantic data models. As a knowledge engineering team member, I'd would be happy to collaborate with any faculty or staff with any interest or need within clinical terminology/ontology and NLP domains.

Welcome New MSACI Students!

Welcome Fall 2022 MSACI Students!



Julie Bauml, MD



Adam Broslat



Eric Brown, MD, PhD



Nicholas Goldsmith,
PharmD, MHSA



Jay Patel, PharmD



Hanna Semega, PharmD, MBA

Upcoming Conference Submission Deadlines

- [American College of Cardiology \(ACC\)](#)
 - Abstracts & Cases: September 22, 2022

- [Conference on Neural Information Processing Systems \(NeurIPS\)](#)
 - Camera-ready, poster, and video submission: October 12, 2022, 1 pm PDT
- [Institute for Healthcare Improvement \(IHI\) Forum](#)
 - Poster deadlines: October 21, 2022

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

Publications, Presentations, Interviews, Honors, and Awards

A note from Elise: This month, I am combining several accolade-related categories, and graciously thanking Mia Garchitorena from DBMI for letting me borrow from her material so readily/heavily. We will be welcoming a new VCLIC staff member in a few weeks, so the September newsletter will be a bit more organized! Also note, this is a collection of awards, honors, publications, etc. since our last letter came out in June, so this list includes an extended timeline.

Travis Osterman, DO, MS, spoke at the American Society of Clinical Oncology (ASCO) 2022 conference on [“Unlocking the Promise of Data-Driven Medicine in Cancer Care, Together”](#).

Eric Tkaczyk, MD, PhD, shared a photo from Vanderbilt’s presence at SIIM (Society for Imaging Informatics in Medicine) annual meeting, which occurred in May, 2022.



Dr. Eric Tkaczyk (right) giving an invited talk at the first dermatology imaging informatics session

Yaa Kumah-Crystal, MD, MPH, MS, announced that some of her voice work is featured in a new book, which was released the week of 6/24, titled "[Voices of Healthcare: The Digital Acceleration](#)"

Colin Walsh, MD, MA, was one of 13 faculty who were named [2022 Chancellor Faculty Fellows](#).

Colin Walsh, MD, MA, presented on "Opportunities for Public Health Policy to Enhance Effective Detection and Response to Suicide Risk". [Click to read more](#).

Dara Mize, MD, was interviewed as part of a podcast on the **Clinical Informatics Fellowship program**. Who can be a part of the fellowship? How does it differ from a traditional clinical fellowship? What are some next steps and challenges she is seeing for the fellowship? [Click to listen here](#).

Congratulations to **Josh Peterson, MD, MPH**, who received a **five-year, \$4.5 million grant** from the National Human Genome Research Institute to assess clinical outcomes and economic value of screening large, diverse health care populations for disease risk using polygenic risk scores. He will collaborate with colleagues from the University of Washington and Geisinger Health System. [Read more!](#)

Yaa Kumah-Crystal, MD, MPH, MS, work is discussed in "[Hey Epic!](#)" story in VUMC's *Discover*.

Colin Walsh, MD, MA, received a renewal of the Discovery Award to support his project "Predicting and Preventing Suicide in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) in the COVID Era" for an additional year.

Adam Wright, PhD, had a subaward with Oregon Health and Science University awarded for the project "Collaboration Oriented Approach to Controlling High blood pressure (COACH)".

Lee Wheless, MD, PhD, will have his VA Career Development Award will funded!

The first phase of **Lindsey Knake's** fellowship project on [tidal volume use when starting volume-targeted ventilation](#) was featured in "[The Incubator](#)" podcast. Co-authors include **Allison McCoy, Adam Wright** and **Wael Alrifai**.

Alvin Jeffery, PhD, was [awarded a grant to develop a novel substance use disorder \(SUD\) phenotyping method](#). The framework will assist geneticists in comparing SUD phenotypes across multiple organizations.

Scott Nelson, PharmD, MS, discussed a [new two-year pharmacy informatics fellowship](#), which was established by VUMC, the MSACI program, and Omnicell, in the *VUMC Reporter*.

Martin Were, MD, MS, be talking about [ethical considerations when using mobile technology for HIV care delivery](#) for the Vanderbilt-Nigeria Research Administration and Management Training Program (V-RAMP) on August 19.

Trent Rosenbloom, MD, MPH, discussed the next stage of Cures Act as it relates to pediatrics in an article titled "[Next stage of Cures Rule Expands Patient Access to their Health Information](#)".

Colin Walsh, MD, MA, presented "Prediction and Phenotyping with Mental Health Data" to the University of Alaska, Fairbanks, and the Alaska Native Tribal Health Consortium funded by [AIM-AHEAD](#).

Ashley Spann, MD, MSACI, is the recipient of the [AASLD Foundation Award](#). Award recipients were selected from a highly competitive applicant pool, and demonstrate not only an exceptional aptitude, but a deep interest in liver disease research and treatment.

Siru Liu, PhD, received a K99/R00 grant from the National Library of Medicine for her research project “Optimizing Clinical Decision Support Alerts Using Explainable Artificial Intelligence (XAI).” She received this award on her first NIH submission, which is fairly unheard of and also incredible! Congratulations, Siru!



Accepted Conference Abstracts

Mcllroy DR, Shotwell MS, Lopez M, Housey S, Olsen J, Hennessy C, **Wanderer JP**, Semler M, Kheterpal S, Billings F. International Anesthesia Research Society Annual Meeting. Virtual Meeting 2022 May; Oxygen Administration Practices during Surgery in the United States.

Billings FT, Mcllroy DR, Shotwell MS, Lopez M, Housey S, **Wanderer JP**, Semler M, Wunsch H, Kheterpal S. International Anesthesia Research Society Annual Meeting. Virtual Meeting 2022 May; Oxygen Administration during Surgery and Postoperative Organ Injury.

Damron J, **Wanderer JP**, French B, Shi Y, Bauchat J, Dumas S, Ende H. Society for Obstetric Anesthesia and Perinatology (SOAP) Annual Meeting. Chicago, Illinois. 2022 May; Implementation of a Countdown Timer to Standardize Patient Assessment Times during Neuraxial Labor Analgesia.

AMIA Symposium 2022

- Griffin, A., He, L., Sunjaya, A., King, A., Khan, Z., **Douthit, B.**, Nwadiugwu, M., Subbian, V., Braunstein, M., Nguyen, V., Jaffe, C., Schleyer, T. “Assessment of Real-World Health Applications on FHIR. AMIA Annual Symposium Proceedings.” 2022.

- **Winstead R** and Andrews J. “Blood Order Set Modifications for Safer Transfusions.” AMIA Annual Symposium Proceedings. 2022.
- **Winstead R** and Andrews J. “Successful Rollout of a Transfusion Dashboard.” AMIA Annual Symposium Proceedings. 2022.
- **Douthit BJ**, Bashaw K, Gerant K, **Reese TJ**, **Wright A**, **McCoy AB**. “Quality Versus Quantity: Assessing the Impact of Nursing Documentation on Preventing Hospital Acquired Pressure Injuries. Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- **Liu S**, **McCoy AB**, **Steitz BD**, **Wright A**. “Leveraging Natural Language Processing Tool to Identify Eligible Lung Cancer Screening Patients in the Electronic Health Record.” Podium Presentation, AMIA Annual Symposium Proceedings. 2022.
- Powers JS, Rhodes S, **McCoy AB**. “Creation of an Operational Dashboard Facilitates Implementation of 4M’s into Primary Care.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- Qian ET, **McCoy AB**, Casey JT, Semler MW, Rice TW, **Wright A**. “Building and Monitoring an EHR Workflow Embedded Randomized Trial: The ACORN Trial for Antibiotic Choice in Acutely Ill Patients.” Podium Presentation, AMIA Annual Symposium Proceedings. 2022.
- Knake LA, **Alrifai MW**, **McCoy AB**, **Wanderer JP**, **Johnson KB**, Lehmann CU, **Wright A**, Hatch LD. “Lessons Learned from Implementing Clinical Decision Support for Neonatal Ventilation.” Podium Presentation, AMIA Annual Symposium Proceedings. 2022.
- **Russo EM**, **McCoy AB**, **Reese TJ**, Cobb C, **Patel N**, Shave P, **Wright A**. “Hacking Mental Health: A Vanderbilt Clinical Informatics Center Hackathon.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- Slater H, **McCoy AB**, **Wright A**. “Evaluation of Breast and Colon Cancer Screening Order Completion.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- **Reese TJ**, Hernandez A, Byrne DW, Mailloux LP, Domenico H, Moore R, Williams J, **Wright A**, Slayton J, Moore S, **Douthit BJ**, **McCoy AB**, Ivory CH. “Pressure Injury Prevention: A Focused Care Approach Using Predictive Analytics.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- Hatcher L, **McCoy AB**, Marmor H, Fike L, Sandler KL. “Incomplete Smoking History Data Leads to Unknown Lung Cancer Screening Eligibility Status, and a Potential Solution.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- Brown S, Griffith ML, **McCoy AB**, **Horst SN**. “The Impact of Geoeconomics and Health Literacy on Telehealth Success.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- **Alrifai MW**, Dye ME, Scott TA, **McCoy AB**, France DJ. “A Real-Time Model for Neonatal Provider Workload Measurement.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- Becker RA, **McCoy AB**, **Walsh CG**. “External Validation of a Suicide Attempt Risk Model in Transgender Patients.” Poster Presentation, AMIA Annual Symposium Proceedings. 2022.
- **Martinez W**. “Empowering Patients to Address Diabetes Care Gaps: Usability Study of a Novel Patient Portal Intervention.” AMIA Annual Symposium Proceedings. 2022
- **Madani S.**, Pournajati S. “Implementing a Behavioral Health Group Scheduling and Therapy System.” AMIA Annual Symposium Proceedings. 2022
- **Wright A.** and others. “Keyphrase Identification with a Limited Labeled Dataset Using Deep Active Learning and Domain Adaptation.” AMIA Annual Symposium Proceedings. 2022

- **Wright A.** and others. “Genome-wide Association Study of Codeine Prescriptions: An EHR-driven Genomic Study.” AMIA Annual Symposium Proceedings. 2022
- **Steitz BD,** Bell C, Spencer-Smith J, **Wright A.** “Improving the Performance of Large Language Models by Domain-Specific Pre-Training on Clinical Documents.” Poster. AMIA Annual Symposium Proceedings. 2022
- Gomez-Lumbreras A, **Reese TJ,** Del Fiol G, Hurwitz JT, Kawamoto K, Brown ML, Boyce R, Malone, DC. “Evaluation of Shared Decision-Making for Concomitant Warfarin and NSAID Medications using the DDInteract App.” AMIA Annual Symposium Proceedings. 2022

Publications

Barnado A, Hubbard J, Green S, Camai A, **Wheless L,** Osmundson S. (2022). [Systemic Lupus Erythematosus Delivery Outcomes Are Unchanged Across Three Decades.](#) *ACR Open Rheumatol*;4(8):711-720.

Bonds PD, Huang J, Ike J, Mukherjee E, Petukhova L, **Wheless L.** (2022). [International Classification of Diseases codes do not capture all cases of hidradenitis suppurativa in the electronic health record: a retrospective cohort.](#) *Br J Dermatol.*

Chaparro JD, Beus JM, Dziorny AC, Hagedorn PA, Hernandez S, Kandaswamy S, Kirkendall ES, **McCoy AB,** Muthu N, Orenstein EW. “[Clinical Decision Support Stewardship: Best Practices and Techniques to Monitor and Improve Interruptive Alerts.](#)” *Applied Clinical Informatics.* 2022; 13(03):560-568. PMID: 35613913.

Esianor BI, Campbell BR, Casey JD, Du L, **Wright A, Steitz B,** Semler MW, Gelbard A. (2022). [Endotracheal Tube Size in Critically Ill Patients.](#) *JAMA Otolaryngol Head Neck Surg.*

Jeong E, **Nelson SD,** Su Y, Malin B, Li L, Chen Y. (2022). [Detecting drug-drug interactions between therapies for COVID-19 and concomitant medications through the FDA adverse event reporting system.](#) *Front Pharmacol*;13:938552.

Langer LR, Tevaarwerk AJ, Zon R, **Osterman T.** (2022). [The Future of Telemedicine in Oncology.](#) *Journal of the National Comprehensive Cancer Network*;20(5.5):1-5.

Mcneil A, Parks K, Liu X, Saknite I, Chen F, Reasat T, Cronin A, **Wheless L,** Dawant BM, Tkaczyk ER. (2022). [Artificial intelligence recognition of cutaneous chronic graft-versus-host disease by a deep learning neural network.](#) *Br J Haematol*;197(6):e69-e72.

Navsaria LJ, Li Y, Nowakowska MK, Hinkston CL, **Wheless L,** Giordano SH, Wehner MR. (2022). [Incidence and Treatment of Actinic Keratosis in Older Adults With Medicare Coverage.](#) *JAMA Dermatol.*

Sborov KD, Dennis BM, De Oliveira Filho GR, Bellister SA, Statzer N, Stonko DP, Guyer RA, Wanderer JP, Beyene RT, Mcevoy MD, Allen BFS. (2022). [Acute pain consult and management is associated with improved mortality in rib fracture patients.](#) *Reg Anesth Pain Med.*

Weidenbaum C, Cann CG, Osmundson S, Iams WT, **Osterman T.** (2022). [Two Uncomplicated Pregnancies on Alectinib in a Woman With Metastatic ALK-Rearranged NSCLC: A Case Report.](#) *JTO Clin Res Rep*;3(8):100361.

Accepted:

Wheless L, Anand N, Hanlon AM, Chren MM. No difference in skin cancer rates by transplanted organ type after the initial skin cancer. (accepted, JAMA Dermatol)

Wright A, Nelson S, Rubins D, Schreiber R, Sittig DF. Clinical Decision Support Malfunctions Related to Medication Routes: A Case Series. (accepted, JAMIA)

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 soon!