VCLIC

VANDERBILT CLINICAL INFORMATICS CENTER

VCLIC News and Happenings, Volume 9

Hi Everyone, and Happy Holidays and (almost) New Year! As 2020 winds down, we are announcing a few of our upcoming events for 2021 and are looking forward to an increase in our participatory programming in addition to our regularly scheduled lecture series (with a few surprises to come). We are particularly excited for our **Design Challenge** but are also looking forward to our first lecture of 2021, given by **Sigall Bell, MD**, and **Liz Salmi**, both of OpenNotes and Beth Israel Deaconess Medical Center. Our first lab activity will be taught by **Allison McCoy, PhD**, and **Bryan Steitz, PhD**, and will provide an overview and then participatory segment on the various data sources available at VUMC.

We also briefly cover the new way for VUMC personnel to **send PHI via email**, **upcoming conferences** (some, including AMIA's Clinical Informatics Conference and Epics XGM, with recently extended deadlines), **virtual Epic training**, **using Epic screenshots** in our work, our database access program (**VDAWGs**), and the **Clinical Informatics Resident Elective**.

Our featured member this month is **Justin Bachmann, MD, MPH**, and we are celebrating several awards, honors, publications, and presentations, as usual! Our membership is certainly finishing the year strong! Notably, **Scott Nelson PharmD, MS** and the Medication Alerts Workgroup, which includes VCLIC members **Allison McCoy, PhD**, and **Adam Wright, PhD**, were recently awarded the **DBMI Team Award** for their work to reduce medication alerts and overrides at VUMC, among other initiatives. **Matthew Weinger, MD, MS** was recently elected as a 2020 Fellow of the American Association for the Advancement of Science (AAAS), and **Adam Wright, PhD** was appointed to the Vanderbilt University School of Medicine Faculty Advisory Council.

Our membership had several notable presentations, workshops, and posters at this year's AMIA Symposium, and a group including **Laurie Novak, PhD, MHSA** and **Colin Walsh, MD, MA**, won the Harriet Werley Award for their presentation, first authored by VUMC informatics researcher Carrie Reale, MSN, RN-BC. It was also announced that **Gretchen Jackson, MD, PhD**, is the Chair-Elect and will be the future Chair of the Board of Directors for AMIA.

Of course, there are several publications, presentations, and news stories of note as well. We will be adding these accomplishments to the News and Publications pages of our website as well.

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

Upcoming Events and Initiatives

VCLIC Design Challenge, kicking off in January 2021

VCLIC Design Challenge: Do you (or your colleagues) find yourselves thinking of creative solutions to problems or inefficiencies facing our technology-enabled healthcare system? VCLIC would love for you to participate in our upcoming Design Challenge!

This Challenge, kicking off in January 2021, invites teams of students, clinicians, faculty, and staff from different scientific disciplines and of various backgrounds to propose novel solutions to problems related to healthcare equity and technology. We welcome a range of informatics and technical approaches, and submissions from teams with and without technical experience are welcome. Applications for teams are due January 30th, 2021, and once in the program, teams will work with each other as well as with mentors from VCLIC, to develop either a low-or high-fidelity prototype of their solution to present on April 2nd, 2021 to a panel of judges. Of course there will also be prizes!

For more information, please go to https://www.vumc.org/vclic/vclic-design-challenge or email elise.russo@vumc.org.

OpenNotes Overview Seminar, January 27th, 2021 at 12:00 pm central

We are honored that this talk will be given by **Sigall Bell, MD** and **Liz Salmi**, both of OpenNotes and Beth Israel Deaconess Medical Center in Boston, MA.
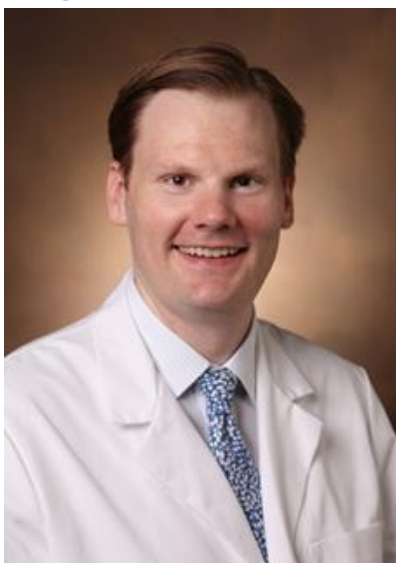
We will share more details and a registration link for the seminar very soon! For now, we have a bit more information on our website.

Disparities Data Lab, February 9th, 2021 at 1:00 pm central

Allison McCoy, PhD and **Bryan Steitz, PhD** will offer an interactive, hands-on session for anyone interested in learning about available data sources at VUMC within Epic (e.g., SlicerDicer, Reporting Workbench, Clarity) and developed locally (e.g., Synthetic Derivative and Research Derivative). Participants will receive de-identified data sets from these sources and will gain hands-on experience in manipulating the data sets in programs such as Microsoft Excel and Tableau to answer questions about health disparities, patient portals, and telemedicine.

More information on this session (and other, future sessions) can also be found on the Events page of our website.

Member Spotlight: Justin Bachmann, MD, MPH

Justin Bachmann, MD, MPH is Assistant Professor of Medicine and Biomedical Informatics at Vanderbilt University Medical Center. A cardiologist and specialist in cardiac rehabilitation, he serves as **Medical Director of the Vanderbilt Cardiopulmonary Rehabilitation Program**, where he is working with VCLIC to automate inpatient referrals to outpatient cardiac rehabilitation programs. Participation in cardiac rehabilitation programs has similar efficacy to major drug therapies (such as aspirin) with regards to cardiovascular disease, and referral to cardiac rehabilitation programs is a quality measure for numerous clinical registries.

Dr. Bachmann is also **Medical Director for Patient-Reported Outcomes Measurement** in the VUMC Office of Population Health, where he leads an enterprise-level initiative to integrate the measurement of patient-reported outcomes into routine clinical practice. Dr. Bachmann and his team have deployed patient-reported outcome measures (PROMs) in over 15 clinics using a My Health at Vanderbilt and Welcome deployment strategy, and patients have completed nearly 100,000 PROMs during clinic visits. He has obtained Basic, Advanced, and Healthy Planet Physician Builder certification through Epic, and is currently working on Clinical Data Model for Physician Builders certification to assist with extracting PROM data for analysis.

Dr. Bachmann particularly enjoys interdisciplinary research and has learned a great deal from his colleagues in the Department of Biomedical Informatics. He welcomes opportunities to collaborate with regards to clinical decision support in cardiac rehabilitation referral or projects leveraging the growing repository of patient-reported outcomes data in eStar.

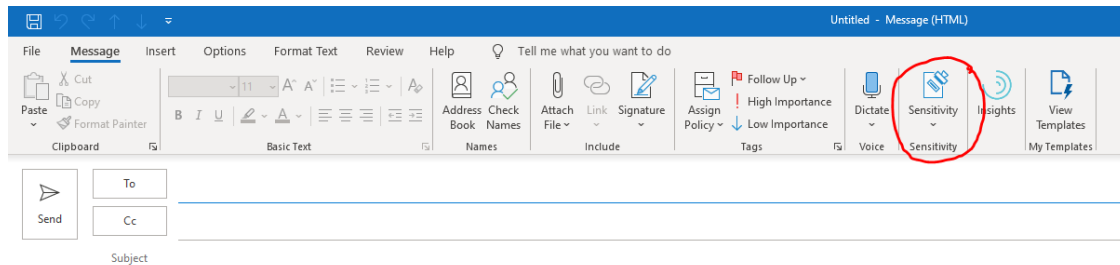# Sending PHI via Email: Using Outlook Sensitivity Labels

VUMC employees no longer need to use Accellion to send emails containing PHI (protected health information) or PII (personally identifiable information). Using the new label system in Microsoft Outlook, those wishing to send sensitive information can choose the "Restricted" label to encrypt content that VUMC has a contractual, legal/regulatory obligation to safeguard.

"Use the Restricted label for sensitive content like PHI, PII, data covered by non-disclosure agreements, or Research Health Information.

Recipients of email with a Restricted label cannot forward or edit content. External recipients without Microsoft Outlook will receive a link to authenticate and open the message."

To read the MyVUMC article with additional information on this switch, you can go here.

Training on how to use sensitivity labels can be found in Learning Exchange by searching "Sensitivity Labels." There is also more information on the Enterprise Cybersecurity website.

Upcoming Conferences and Conference Deadlines

- AMIA CIC: Deadline extended- submissions now due by **January 5th, 2021**
- Epic XGM: Deadline extended- presentation submissions now due by **January 7th, 2021**
- SGIM: Round 2 Submissions Deadline is **January 6th, 2021**
- PAS Meeting: Abstracts due **January 5th, 2021**
- MIE**:** Deadline for Full papers and Short Communication papers / Posters is **January 15th, 2021**
- SIAM Annual Meeting: Minisymposium Proposal Submissions due **January 13th, 2021;** Contributed Lecture, Poster and Minisymposium Presentation Abstracts due **February 3, 2021**
- ICML**:** Abstracts due **January 28, 2021**; Papers due **February 4, 2021**

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

Epic XGM 2021 Extended Deadline for Abstract Submissions

As noted in the brief bullet above, **Epic's Expert Group Meeting (XGM)** is now accepting presentation submissions. Please visit their website to submit your presentation ideas. **The call for presentations closes January 7th, 2021 at midnight, and the conference will be April 26th-May 7th, 2021 (Epic has not yet decided whether it will be in-person or virtual).**

XGM is Epic's annual conference where application developers and other IT-focused roles explore the known and unknown in the worlds of software build, training, performance, and workflow. App-based and role-focused sessions are designed to probe universal truths that you can put to use back at VUMC.
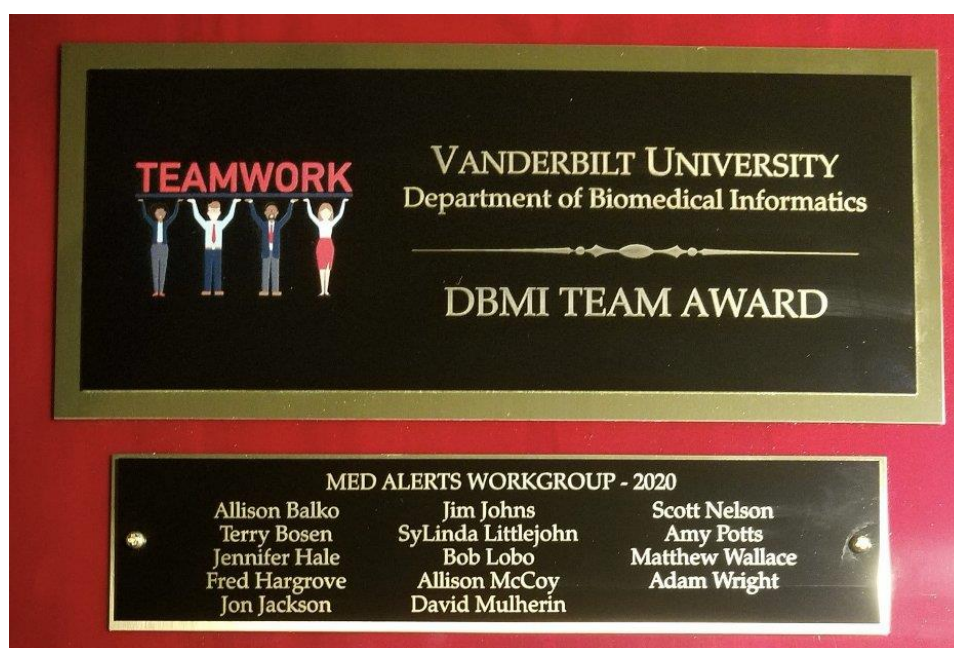
Reminder about Epic Virtual Training

Epic has a variety of **training and certification programs** (Epic Training Resources) that may be of interest to VCLIC members, some of which we list on our Confluence site. Epic has always required travel to Verona, WI to complete trainings. Although Verona is lovely (especially in warmer months!) this travel requirement has sometimes been a barrier to completing training. Since COVID-19, Epic has temporarily started offering trainings remotely, through April 2, 2021.

This virtual option may be your chance to complete certifications like Physician Builder, Clinical Content Builder, Physician Builder Analytics, Chronicles Programmer, Research Informatics, or Cogito Clarity Clinical Data Model without needing to travel. In person training continues to be offered, so if you'd rather learn in person, you can still travel to Verona and take a course on Epic's campus, with enhanced cleaning and safety protocols.

Publications, Presentations, Interviews, and Awards

Med Alerts Workgroup Wins DBMI Annual Team Award

Congratulations to the Med Alerts Workgroup, who won the Department of Biomedical Informatics' First Annual Team Award! VCLIC Members include **Scott Nelson, PharmD, MS** (who, along with David Mulherin, PharmD, BCPS, led the team), **Allison McCoy, PhD, MS**, and **Adam Wright, PhD**. This group is an excellent example of a partnership across operations, research, and clinical practice, with some participants from DBMI, some from HealthIT, and others from clinical departments.
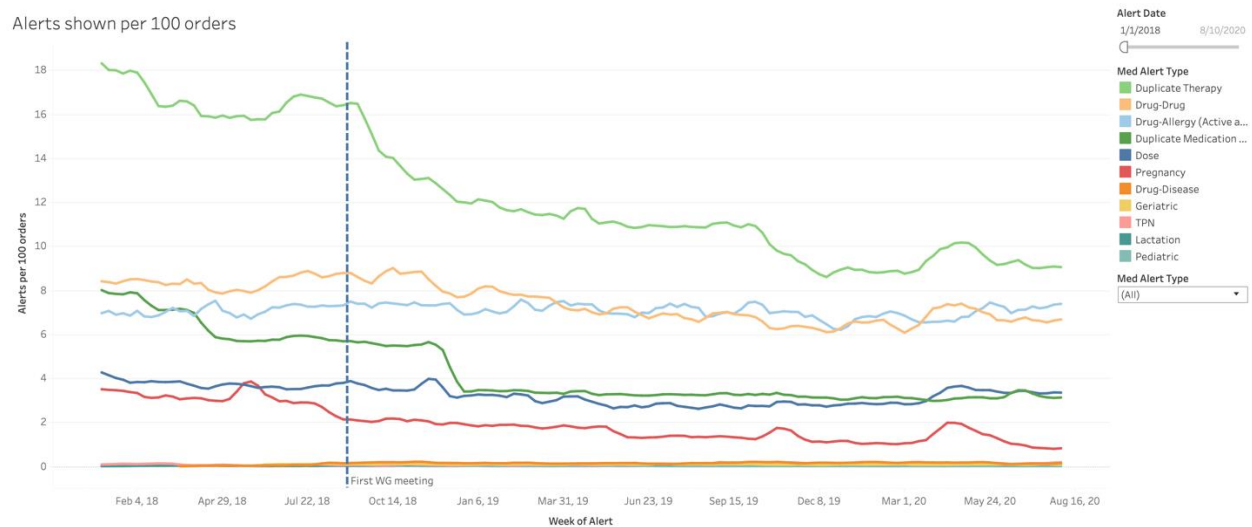

The Med Alerts Workgroup seeks to provide accurate and meaningful medication alert clinical decision support at VUMC; reduce alert burden and fatigue for clinicians; monitor, report, and analyze medication alert rates; engage stakeholders and subject-matter experts for medication alert decision making and approval; and review, approve, and prioritize medication alert optimization in eStar.

The team has made substantial improvements at VUMC. For example, they worked together to review alert data and make recommendations on medication alerts shown to users, thus reducing alert burden by:

- 2,000 fewer Drug-Drug interaction alerts per week
- 6,500 fewer Duplicate med alerts per week
- 9,000 fewer Duplicate therapy alerts per week, and
- 2,000 fewer Pregnancy alerts per week.

As a result of their effort, **VUMC is now in the top 20 Epic organizations with the fewest number of alerts and lowest override rate.**

The figure shows this reduction in alerts over time, following the institution of the workgroup.

In addition, the team has taken on several other initiatives, including:

- Governance and process around medication alerts in eStar
- Dashboards and reporting on medication alerts
- Order set optimization to reduce alerts
- Helped pass VUMC's LeapFrog testing
- Customization of duplicate therapy allowance settings
- Reviewed and turned off frequent nuisance alerts
- Allowed providers to filter select alerts on their own
- Made some alerts much more specific by converting them to BPAs
- Cleaned up and codified many "other" free-text allergies
- Cleaned up alpha-gal allergies on patient lists
- Drug-disease alerting for rare chronic conditions

Matthew Weinger, MD, MS, elected as 2020 AAAS Fellow

Matthew Weinger, MD, MS was recently elected as a 2020 Fellow of the American Association for the Advancement of Science (AAAS), an honor bestowed upon AAAS members by their peers. Dr. Weinger was elected for distinguished contributions to the fields of human factors, clinician performance, and patient safety. Fellows will be inducted to the AAAS virtually on Feb. 13. For more information on this incredible achievement, please read the AAAS News Article here. Congratulations, Dr. Weinger!

Adam Wright, PhD, appointed to Faculty Advisory Council

VCLIC Director **Adam Wright, PhD** was recently appointed to the Vanderbilt University School of Medicine Faculty Advisory Council. Dr. Wright's appointment was fueled by his commitment to excellence in teaching, research, and service at Vanderbilt. Congratulations, Dr. Wright!

AMIA Annual Symposium Highlights

VCLIC Members represented VUMC very prominently at AMIA's Annual Symposium, showcasing 5 workshops, 13 presentations, and 9 posters. The following team, led by Carrie Reale, MSN, RN-BC, won the Harriet Werley Award for their presentation. VCLIC Members **Laurie Novak, PhD, MHSA**, and **Colin Walsh, MD, MA**, collaborated:

Reale C, **Novak LL**, Robinson K, Simpson CL, Ribeiro JD, Franklin JC, Ripperger MA, **Walsh CG**. *User-Centered Design of a Machine Learning Intervention for Suicide Risk Prediction in a Military Setting.*

Furthermore, **Gretchen P Jackson, MD, PhD**, was appointed Chair-elect for 2021 and Chair for 2022-23 of the Board of Directors for AMIA. Congratulations to all on an extremely successful AMIA Symposium!

Other Achievements

- **Scott Nelson, PharmD, MS,** received a certification as CPHIMS (Certified Professional in Healthcare Information and Management Systems). This certification spans three main content areas:
  - General IT and healthcare environment knowledge
  - Systems knowledge related to analysis, design, selection, implementation, testing and evaluation, and privacy and security
  - Administration, including leadership and management

  Congratulations, Dr. Nelson!

In The News

The *VUMC Reporter* included many stories about VCLIC Members:

- **Jacob Hughey, PhD,** made the "front page" of the Reporter! [Team tracks sources of false positives in urine drug screens](#)
- [Implementation research focus of symposium hosted by VUMC](#) (**Sunil Kripalani, MD, MSc** is quoted, and **Lyndsay Nelson, PhD's**, Best Poster Award is highlighted)
- [Model students: improving clinical decision-making](#) (features a *JAMIA* paper co-authored by **Colin Walsh, MD, MA,** and **Thomas Lasko, MD, PhD**)
- [Peterson tapped to direct VUMC's Center for Precision Medicine](#) (highlights **Josh Peterson, MD, MPH**, and quotes **Kevin Johnson, MD, MS**)
- [My Health at Vanderbilt adds End of Life Care Plan](#) (**Trent Rosenbloom, MD, MPH**, is quoted)
- [Six Vanderbilt faculty elected as 2020 fellows of the AAAS](#) (**Matthew Weinger, MD, MS**)

Other news sources:

- Newsweek quoted **Melissa McPheeters, PhD, MPH**: ["3 Cities Saw COVID Cases Increase By Triple Digits Over 8 Weeks Despite Mask Mandates"](#)
- **Colin Walsh, MD, MA** was a guest in the Radio Show "AirTalk": [Can AI Technology Help Prevent Suicide In Veterans And What Are The Ethical Considerations?](#)

Accepted Presentations

Accepted Publications

December

Albaugh VL, Williams DB, **Aher CV**, Spann MD, English WJ. [Prevalence of thiamine deficiency is significant in patients undergoing primary bariatric surgery.](#) *Surgery for Obesity and Related Diseases.* 2020.

Baker LX, Chen F, Ssempijja Y, Byrne M, Kim TK, Vain A, Jagasia M, **Tkaczyk ER**. [Longitudinal tracking of skin dynamic stiffness to quantify evolution of sclerosis in chronic graft-versus-host disease](#). *Bone Marrow Transplantation.* 2020.

Gregory JM, Slaughter JC, Duffus SH, Smith TJ, LeStourgeon LM, Jaser SS, **McCoy AB**, Luther JM, Giovannetti ER, Boeder S, Pettus JH, Moore DJ. COVID-19 Severity Is Tripled in the Diabetes Community: A Prospective Analysis of the Pandemic's Impact in Type 1 and Type 2 Diabetes. *Diabetes Care.* 2020.

Luedi MM, **Weinger MB**. Emergency Manuals in Context: One Component of Resilient Performance. *Anesthesia & Analgesia.* 2020; 131(6).

McKillop M, South BR, Preininger A, Mason M, **Jackson GP**. Leveraging Conversational Technology to Answer Common COVID-19 Questions. *Journal of the American Medical Informatics Association.* 2020.

Vater MR, Herndon A, Browning W**, Johnson DP**. Implementing and Maintaining an Increased Frequency of Nighttime Education Sessions. *Hospital Pediatrics.* 2020; 10(12):1102.

Wanderer JP, Nathan N. Turn, Baby, Turn: Anesthesia for Extracephalic Version. *Anesthesia & Analgesia.* 2020;131(6).

Wanderer JP, Rathmell JP. Peer Review…to the Rescue! *Anesthesiology.* 2021;134(1):A17.

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

Ward M, Froehler M, Scheving WL, Hart K, McNaughton CD. Inter- ED transfer for patents with acute large vessel stroke: Efficiency vs thoroughness tradeoff. *The American Journal of Emergency Medicine.* 2020.

Yankova LC, Neuman MI, Wang ME, Woll C, DePorre AG, Desai S, Sartori LF, Nigrovic LE, Pruitt CM, Marble RD, Leazer RC, Rooholamini SN, Balamuth F, Aronson PL. Febrile Infants ≤60 Days Old With Positive Urinalysis Results and Invasive Bacterial Infections. *Hospital Pediatrics*. 2020; 10(12): 1120. Acknowledged: Group authors from the Febrile Young Infant Research Collaborative, including **Derek J. Williams, MD, MPH**.

Young AL, Doughty CB, **Williamson KC**, Won SK, Rus MC, Villarreal NN, Camp EA, Lemke DS. Workload of learners during simulated paediatric cardiopulmonary resuscitation. *BMJ Simulation and Technology Enhanced Learning.* 2020.

Zakria D, Patrinely JR, Jr., Dewan AK, Albers SE, **Wheless L**, Drolet BC. 12712 Use of local anesthetic for intralesional corticosteroid injections: A double-blinded randomized controlled trial. *J Am Acad Dermatol.* 2020; 83(6): AB110.

November

Ammenwerth E, Duftschmid G, Al-Hamdan Z, Bawadi H, Cheung NT, Cho K-H, Goldfarb G, Gülkesen KH, Harel N, Kimura M, Kırca Ö, Kondoh H, Koch S, Lewy H, **Mize D**, Palojoki S, Park H-A, Pearce C, de Quirós FGB, Saranto K, Seidel C, Vimarlund V, **Were MC**, Westbrook J, Wong CP, Haux R, Lehmann CU. International Comparison of Six Basic eHealth Indicators Across 14 Countries: An eHealth Benchmarking Study. *Methods Inf Med.* 2020.

Barnado A, Eudy AM, Blaske A, **Wheless L**, Kirchoff K, Oates JC, Clowse MEB. Developing and Validating Methods to Assemble Systemic Lupus Erythematosus Births in the Electronic Health Record. *Arthritis Care & Research.* 2020.

Bitterman D, Miller T, Harris D, Lin C, Finan S, **Warner J**, Mak R, Savova G. Extracting Relations between Radiotherapy Treatment Details. *Proceedings of the 3rd Clinical Natural Language Processing Workshop*. 2020:194-200.

Collins SP, Liu D, Jenkins CA, Storrow AB, Levy PD, Pang PS, Chang AM, Char D, Diercks DJ, Fermann GJ, Han JH, Hiestand B, Hogan C, Kampe CJ, Khan Y, Lee S, Lindenfeld J, Martindale J, McNaughton CD, Miller KF, Miller-Reilly C, Moser K, Peacock WF, Robichaux C, Rothman R, Schrock J, Self WH, Singer AJ, Sterling SA, **Ward MJ**, Walsh C, Butler J. Effect of a Self-care Intervention on 90-Day Outcomes in Patients With Acute Heart Failure Discharged From the Emergency Department: A Randomized Clinical Trial. *JAMA Cardiology.* 2020.

Gesicho M, Babic A, **Were M**. A Retrospective Observational Study of Health Facility Ownership Type and Performance on HIV Indicator Data Reporting in Kenya. In: Jarm T, Cvetkoska A, Mahnič-Kalamiza S, Miklavcic D (eds) *8th European Medical and Biological Engineering Conference. EMBEC 2020. IFMBE Proceedings.* 2021; 80.

Grothen AE, Tennant B, Wang C, Torres A, Bloodgood Sheppard B, Abastillas G, Matatova M, **Warner JL**, Rivera DR. Application of Artificial Intelligence Methods to Pharmacy Data for Cancer Surveillance and Epidemiology Research: A Systematic Review. *JCO Clinical Cancer Informatics.* 2020; (4):1051-58.

Johannet P, Coudray N, Donnelly DM, Jour G, Illa-Bochaca I, Xia Y, Johnson DB, **Wheless L**, Patrinely JR, Nomikou S, Rimm DL, Pavlick AC, Weber JS, Zhong J, Tsirigos A, Osman I. Using Machine Learning Algorithms to Predict Immunotherapy Response in Patients with Advanced Melanoma. *Clinical Cancer Research.* 2020.

Matevish LE, Medvecz AJ, Ebersole JM, **Wanderer JP**, Eastham SC, Dennis BM, Guillamondegui OD. The Silent Majority of Emergency General Surgery: An Assessment of Consult and Operative Volumes. *Journal of Surgical Research.* 2020.

McEvoy MD, **Wanderer JP**, Shi Y, Ramanujan KS, Geiger TM, Shotwell MS, Shaw AD, Hawkins AT, Martin BJ, Mythen MG, Sandberg WS. The effect of adding goal-directed hemodynamic management for elective patients in an established enhanced recovery program for colorectal surgery: results of quasi-experimental pragmatic trial. *Perioperative Medicine.* 2020; 9(1):35.

Nelson LA, Williamson SE, Nigg A, **Martinez W**. Implementation of Technology-Delivered Diabetes Self-care Interventions in Clinical Care: a Narrative Review. *Current Diabetes Reports.* 2020; 20(12): 71.

Patel PD, Kelly KA, Reynolds R, Turer R, Salwi S, **Rosenbloom ST**, Bonfield CM, Naftel RP. Tracking Delays in Neurosurgical Care during the COVID-19 Pandemic. *Neurosurgery.* 2020; 67(S1).

Patel PD, Vimalathas P, Niu X, Shannon CN, Denny JC, **Peterson JF**, Chitale RV, Fusco MR. CYP2C19 Loss-of-Function is Associated with Increased Risk of Ischemic Stroke after Transient Ischemic Attack

in Intracranial Atherosclerotic Disease. *Journal of Stroke and Cerebrovascular Diseases*. 2021; 30(2):105464.

Rogers MC, Wallace MM, **Wheless L**, Dewan AK. Impact of the COVID-19 pandemic on inpatient dermatology consult patterns at a tertiary care hospital: A retrospective cohort study. *J Am Acad Dermatol.* 2020; 84(1):156-58.

Zhang Z, Yan C, **Lasko TA**, Sun J, Malin BA. SynTEG: a framework for temporal structured electronic health data simulation. *Journal of the American Medical Informatics Association.* 2020.

VDAWGs: Getting Access to Clarity

We had a brief article on the **Vanderbilt Database Access Working Group** (VDAWGs) in our initial newsletter, but now that we have four official VDAWG participants, we thought it might be helpful to point everyone to information on the process for gaining access to Epic's data warehouse, Clarity. We have a page in our Confluence Knowledgebase (you need to be on VUMC's network/on the VPN to access). The first step is to complete Epic training for the Clinical Data Model. Following completion of the training, there is a paperwork process through VCLIC that is detailed on the Confluence page linked above. If you have any questions, please reach out to elise.russo@vumc.org.

Reminder about the Clinical Informatics Resident Elective

Drs. Dara Mize and **Travis Osterman** are pleased to announce the start of the **Clinical Informatics Resident Elective**, which is a two-week experience for physicians new to the field or for those who desire to solidify their knowledge in preparation for more advanced study. For more information, please see our website or email Travis or Dara.

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!