

VCLIC News and Happenings, Volume 17

Hello and welcome to the September edition of our newsletter! After a slower summer, our programming is back in full swing, and we are feeling energized after our first workshop this week. Thank you to **Aileen Wright, MD, MS**, and **Allison McCoy, PhD**, for giving a fantastic overview of eStar and some of its clinical decision support capabilities. We hope you join us for our seminar series kick off on Wednesday, September 22nd at 12:00 pm CT, when **Cheryl Cobb, MD**, will present on Innovative Care Delivery Models for Mental Health. Our second workshop of the year will be "Data Resources and Analytics in Mental Health: Basics," given by **Allison McCoy, PhD**, and **Bryan Steitz, PhD**, on October 5th from 9:00 am – 12:00 pm. We hope you'll join us! **Bryan Steitz, PhD**, is also our featured member this month—read on to learn more about Dr. Steitz!

Our VCLIC representatives to **Epic UGM** had a blast (and learned a lot), so we are highlighting some fun photos in hopes that more folks will attend next year. As a reminder, we have established the **Clinical Informatics Core** and are taking service requests. The virtual option for Epic training has been extended, and we have updated the list of **upcoming conferences and conference submission deadlines**. There are also a few announcements from other departments regarding speakers and workshops of interest.

We would also like to welcome and introduce the MSACI students that entered the program this year: Anirban Bhattacharyya, MD, MPH; Jason Chen, MD; Casey Distaso, MD; Holly Ende, MD; Beau Mack, MD; Eddie Qian, MD.

Of course, we wrap up our letter with all the fantastic **news**, **honors**, **awards**, **publications**, **and conference abstract acceptances** of our members. Per usual, y'all have had a busy month! Congratulations!

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

Epic UGM Recap

The VCLIC members presenting at Epic UGM had a fabulous time at the conference! The deadline for abstracts is usually in April—please reach out to <u>Allison McCoy</u> if you need any help shaping projects or determining potential projects for submission. We'd love to see more folks attend!



Thank you and congratulations to all our VCLIC presenters!:

Alrifai, W. "Fetal Care: Delivering Baby's Plan at Delivery." UGM 2021, 25 Aug. 2021, 4:30 PM – 5:10 PM CT, Verona.

Kumah-Crystal, Y. "Using 'Hey, Epic' for Patient Management." UGM 2021, 23 Aug. 2021, 8:50 AM – 9:20 AM CT, Verona.

Osterman, T. "Supporting Each Other with Specialty Operations Community Groups." UGM 2021, 25 Aug. 2021, 2:30 PM – 3:10 PM CT, Verona.

Wright, A, A. McCoy, N. Patel. "Collaborating to Improve CDS: The Clickbusters Initiative." UGM 2021, 23 Aug. 2021, 10:30 AM – 11:00 AM CT, Verona.

Clinical Informatics Core Established



VCLIC is excited to launch the <u>Clinical Informatics Core!</u> This is a VUMC sponsored core under the direction of **Allison B. McCoy, PhD.** Access to electronic health record (EHR) systems and data is essential for researchers across VUMC, but until now, there has been no widely known, standardized process for obtaining data from VUMC's eStar system.

The mission of the Clinical Informatics Core is to enable VUMC researchers to design and implement EHR-related tools, functionalities, and interventions with input and assistance from clinical informatics experts, as well as to gain access to and analyze EHR-based data. Services that the Core offers include 1)

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

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

If you have questions or would like to meet with Core staff to discuss your needs, please contact <u>Allison</u> McCoy and/or Elise Russo.

VANDERBILT CLINICAL INFORMATICS CENTER VCLIC 2021-2022 Theme and Keynote Seminar Innovative Care Delivery Models for Mental Health Wednesday, September 22nd, 2021 12:00-1:00 pm Given by Cheryl Cobb, MD Associate Professor of Clinical Psychiatry and Behavioral Sciences Medical Director, Outpatient Services, Psychiatry and Behavioral Sciences

VCLIC Theme and Keynote for Academic Year 2021-2022

For our second year, VCLIC is focusing our attention on **Innovative Care Delivery Models for Mental Health**. 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). We hope to spend the year learning about how informatics can assist or support care delivery as it pertains to mental health services.

For our kick-off, we are honored and excited to welcome VUMC's own **Cheryl Cobb**, **MD**, who is the Associate Professor of Clinical Psychiatry and Behavioral Sciences as well as the Medical Director of Outpatient Services for Psychiatry and Behavioral Sciences. Dr. Cobb will give an overview of mental health, including definitions, prevalence, burden on the system, etc., and will discuss the ways that technology impacts (including benefits and challenges) the provision of mental health care as well as some potential ideas for a way forward using technology and innovative care delivery methods to enhance this area.

Please join us for this talk, which will take place during the DBMI Seminar time (12:00-1:00 pm on Wednesday, September 22^{nd} , 2021) via \underline{Zoom} .

VCLIC Workshops

Data Resources and Analytics in Mental Health: Basics Workshop on October 5th, 2021 from 9:00 am to 12:00 pm

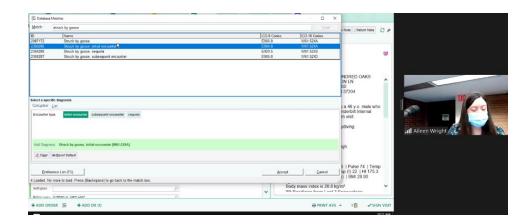


Please join **Allison McCoy, PhD**, and **Bryan Steitz, PhD** for our October workshop. In this workshop, participants will learn about available data sources at VUMC within Epic (SlicerDicer, Reporting Workbench, Clarity) and developed locally (Synthetic Derivative, Research Derivative) and gain hands-on experience in manipulating data. This workshop will cover similar concepts to the Disparities Data Lab workshop from February 2021 but will use mental health data and examples.

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

Intro to eStar Workshop a Success

Thank you to **Aileen Wright, MD, MS**, and **Allison McCoy, PhD**, for a fabulous workshop on clinical workflows in eStar as well as clinical decision support development. Dr. Wright came up with some creative scenarios during her demonstration—this poor (test) patient was "struck by a goose," but luckily escaped with his life. In case you missed it, you can watch the recording any time, <u>here</u>.



Virtual Epic Training Extended

Due to recent developments with the COVID-19 pandemic and updated guidelines from the CDC, all classes in Epic's training catalog will be available virtually until further notice.

Since in-person training provides the best possible learning experience, Epic will continue to offer inperson classes in a way that is safe for all attendees. Effective October 4th, trainees must be vaccinated in order to attend in-person classes. They encourage organizations to send at least some of their project team members to in-person training when possible.

Member Spotlight: Bryan Steitz, PhD



Bryan Steitz, **PhD** is a Postdoctoral Research Fellow in the Department of Biomedical Informatics. He completed his PhD in Biomedical Informatics at Vanderbilt University in 2020 as a fellow on the NLM training grant. He is an active VCLIC member, working at the intersection of data science and collaboration analytics.

Dr. Steitz's research focuses on improving communication, coordination, and information sharing during transitions between care teams and environments. During his master's work, he developed models to quantify care team structures and understand patient sharing relationships across clinical teams treating patients with breast cancer. His doctoral research, for which he developed a framework to evaluate the scope, volume, and content of clinical messaging across ambulatory care teams, expanded upon his research on care team structures. Dr. Steitz currently leads several ongoing projects to evaluate and improve communication and coordination between clinical teams. One project develops dashboards that visualize organizational stress to improve efficiency and information sharing throughout the workflow to deliver discharge medications to patients at the bedside (Meds to Beds). A second project seeks to understand how patients interact with their clinical team after receiving test results through the patient portal.

Dr. Steitz has been working with Dr. Adam Wright to develop transformer-based natural language processing models and evaluate transfer learning performance between clinical documents and organizations. He is applying these models to identify inpatients at risk of clinical deterioration. Recognizing the impact of implementing research outputs in Epic to improve healthcare delivery, Dr. Steitz is an active physician builder and VDAWG member.

Welcome, MSACI Students!

Learn more about the MSACI (Master's of Science in Applied Clinical Informatics) program here.

Name	What I hope to learn from or become involved in via the program:
Anirban Bhattacharyya, MD, MPH	I am a ICU trained physician. My interest is in translational informatics and hoping to enhance how we care for our ICU patients.

Zhengfeng (Jason) Chen, MD	Aiming to understand clinical informatics and contribute to the field at my home institution as we head towards an "EPIC" Go-Live. Learning how to manage large databases, techniques to analyse large datasets (clinical and investigative), day-to-day issues of CDS development, user access governance, and EMR training for providers are my main objectives.
Casey Distaso, MD	My goal is to apply the foundational informatics knowledge learned in the MSACI program to my patients in the emergency department and beyond. I hope to leverage innovation with sustainable improvements in healthcare delivery through a deeper understanding of the EHR, EHR-integrated web and mobile applications, workflows, and user-centered design.
Holly Ende, MD	My initial goal in pursing the MSACI was to gain skills in research informatics to complement my ongoing clinical research projects. In addition, I have interests in predictive analytics and clinical decision support and how we might begin to leverage those technologies more in women's health.
Peter (Beau) Mack, MD	In this program, I hope to learn about creating ambulatory clinical decision support tools that are more usable for clinicians and using predictive analytics as part of these clinical decision support tools.



Edward (Eddie) Qian, MD

I hope to gain experience in all parts of the informatics process so I can be the front line for informatics questions for my division and know who I can reach out to for help for questions that I may have!

Upcoming Conferences and Conference Submission Deadlines

- International Medical Informatics Association (IMIA) MedInfo: October 2-4th, 2021, Virtual
- Anesthesiology Annual Meeting (ASA): October 8-12th, San Diego, CA
- American Academy of Pediatrics (AAP) National Conference & Exhibition: October 8-12th,
 Philadelphia, PA (Hybrid)
- Symposium on Artificial Intelligence for Learning Health Systems (SAIL): October 18-20th, 2021, Hamilton, BMU
- AMIA 2022 Clinical Informatics Conference (CIC): May 24-26th, 2022, Houston, TX
 - o Submission Deadline: November 30th, 11:59 pm ET

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

Link to VCLIC poster templates

Attending an upcoming conference and need to use a poster template to present your work? VCLIC has several options, which can be found on our Confluence page, here.

VU Data Science Institute Fall Workshop Schedule

The Data Science Institute is pleased to announce its Fall workshop schedule!

A limited number of seats are available for in person registration, or you can attend virtually. Join us on Wednesday's from 3 – 4:30pm in the 2001A classroom at 1400 18th Avenue South.

https://www.vanderbilt.edu/datascience/events/data-science-workshops/



Publications, Presentations, Interviews, and Awards

Additional Awards, Honors, Presentations, and News Mentions

Jeremy Warner, MD, MS, started the <u>ASCO Leadership Development Program</u>, in which participants learn valuable leadership skills, gain exposure to the roles and mission of ASCO, and learn about the Society's place in developing the future of cancer care.

Lee Wheless, MD, PhD, was mentioned in an article for the VUMC Reporter: <u>"Using billing codes to count cancers."</u>

Siru Liu, PhD, is one of 8 recipients of the <u>AMIA Leadership and Education Award Donation (LEAD) Fund</u>. The purpose of the award program is to cover trainee registration for the <u>2021 AMIA Annual Symposium</u> in order to present their research.

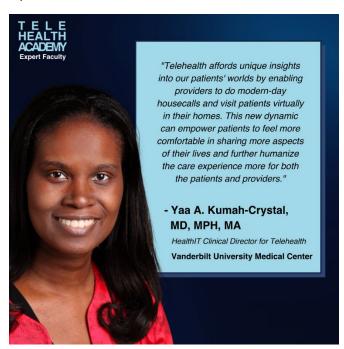
Stuart Weinberg, MD, was featured in "Improving the EHR, Longitudinal Outcomes of MIS-C", an episode of the American Academy of Pediatrics' Pediatrics On Call Podcast. He described ways pediatricians can use Web applications and services to improve functionality of the Electronic Health Record.

Ashley Spann, MD, MS, was selected as the social media editor for the Journal of Medical Systems (JOMS), led by Jesse Ehrenfeld.

In addition, **Dr. Spann** created the Hepatology Sub-specialty Steering Board for Epic, which is a national group, containing about 8-12 members from Epic sites with a focus on hepatology. Ashley noticed that a hepatology steering board was missing, and she worked with Epic and hepatologists from other sites to bring a group together to create the Hepatology Steering Board. They had their first meeting 8/19/21, and haven't quite made it to the landing page yet on Galaxy, but here's the link for that on Userweb: https://galaxy.epic.com/?#Browse/page=1!68!601!2290373,3774815. The group's focus is developing CDS for providers across the Epic ecosystem taking care of patients with liver disease or those undergoing evaluation for or have received liver transplants.

Alvin Jeffery, PhD presented at the Sepsis Alliance Summit on September 15th, 2021, participating on a panel entitled "Al and Sepsis: How Can It Inform Bedside Care?"

Yaa Kumah-Crystal, Michelle Griffith, and Amber Humphrey were on a virtual panel presenting at the Telehealth Academy on September 14, 2021.



Vanderbilt Tullahoma Go-Live

Multiple teams from across VUMC. Including several VCLIC members, recently led a transition of the clinical and IT systems at Vanderbilt Tullahoma-Harton Hospital (VTHH) in Tullahoma, TN. This effort represented a critical step in fully integrating the hospital into the Vanderbilt family. The IT transition brought several new systems and tools to VTHH, including eStar, laboratory and imaging systems, pharmacy systems, new clinical equipment, and faster and more reliable wireless networks. Read more in the VUMC Reporter, here.

Accepted Abstracts

Colin G. Walsh, Michael A. Ripperger, Drew Wilimitis. Implementing Real-time Risk Prediction for Clinical Decision Support to Prevent Suicide. Accepted for Poster Presentation at the 2021 Symposium on Artificial Intelligence for Learning Health Systems (SAIL).

Fleenor M, McCluggage L, Schell R, VanCleave H, **Nelson SD**. Evaluation of a Prior to Admission Medication List Risk Scoring Tool. Poster at the 2021 ACCP Annual Meeting. Oct 2021.

Guilherme Del Fiol, MD, PhD, Chelsey R. Schlechter, PhD, MPH, Bryan Gibson, DPT, PhD, **Thomas J. Reese, PharmD, PhD**, David W. Wetter, PhD. Addressing the Digital Divide to Promote Health Equity. AMIA Symposium. Oct. 2021.

Spann A, Montgomery G, Coe C, Ajayi T, Shwetar M, Oje A, Slaughter J, Annis J, Dreher A, Brittain E, Gupta D, Alexopoulos S, Izzy M. Septal e' is the Strongest Echocardiographic Predictor of the New Diagnostic Criteria for Cirrhotic Cardiomyopathy for Prediction of Major Adverse Cardiovascular Events after Liver Transplantation. Accepted for poster presentation, AASLD The Liver Meeting 2021.

Spann A, Montgomery G, Coe C, Ajayi T, Shwetar M, Oje A, Slaughter J, Annis J, Dreher A, Brittain E, Gupta D, Alexopoulos S, Izzy M. The Utility of New Versus Old Diagnostic Criteria for Cirrhotic Cardiomyopathy in Predicting Major Adverse Cardiovascular Events after Liver Transplantation. Accepted for poster presentation, AASLD The Liver Meeting 2021.

Oje A, Ying X, Pan S, **Spann A**, Kim K, Ng C, Sholle E, Fortune B, Rosenblatt R, Izzy M. The Association of Cirrhotic Cardiomyopathy with Liver Disease Severity. Accepted for poster presentation, AASLD The Liver Meeting 2021

Ying X, Oje A, Pan S, **Spann A**, Kim K, Ng C, Sholle E, Annis J, Brittain E, Rosenblatt R, Izzy M, Fortune B. Impact of Cirrhotic Cardiomyopathy on the Development of Acute Kidney Injury Among Patients with Cirrhosis. Accepted for poster presentation, AASLD The Liver Meeting 2021

Brown S, Richardson B, Bouquet E, Reid E, Mercer E, Goncalves M, **Spann A**, Annis J, Brittain E, Dreher A, Alexopoulos S, Slaughter J, Silver H & Izzy M. Cirrhosis-related Sarcopenia May Never Resolve After Liver Transplant. Accepted for poster presentation, AASLD The Liver Meeting 2021

Izzy M, Reid E, **Spann A**, Slaughter J, Tamboli R, Conway D, Murry V, Alexopoulos S, Kripalani S. The Impact of Rural Residence, Geoeconomics and Health Literacy on Liver Transplant Outcomes. Accepted for poster presentation, AASLD The Liver Meeting 2021.

Publications

September

Ahlers, C., & Wheless, L. (2021). <u>25655 Treatment of hidradenitis suppurativa in immunosuppressed transplant patients</u>. Journal of the American Academy of Dermatology, 85(3), AB64.

Desai A., Mohammed T.J., Duma N., Garassino M.C., Hicks L.K., Kuderer N.M., Lyman G.H., Mishra S., Pinato D.J., Rini B.I., Peters S., **Warner J.L**., Whisenant J.G., Wood W.A., Thompson M.A. (2021). <u>COVID-19 and Cancer: A Review of the Registry-Based Pandemic Response</u>. JAMA Oncology.

Kavoussi, N., Silva, A. D., **McCoy, A**., Koyama, T., & Hsi, R. (2021). <u>MP54-11 5-YEAR RECURRENCE RISK STRATIFICATION USING THE RECURRENCE OF KIDNEY STONE (ROKS) NOMOGRAM</u>. Journal of Urology, 206(Supplement 3), e953-e953.

Li, P., Chen, B., Rhodes, E., Slagle, J., **Alrifai, W., France, D.**, Chen Y. (2021). <u>Measuring Collaboration</u> <u>Through Concurrent Electronic Health Record Usage.</u> JMIR Med Inform.

Lindsell, C. J., Gatto, C. L., Dear, M. L., Buie, R., Rice, T. W., Pulley, J. M., Hartert, T. V., **Kripalani, S.**, Bernard, G. R. (2021). <u>Learning From What We Do, and Doing What We Learn: A Learning Health Care System in Action</u>. Academic Medicine, 96(9).

Reese T. J., Del Fiol, G., Morgan K, Hurwitz, J. T., Kawamoto K., Gomez-Lumbreras A., Brown M. L., Thiess H., Vazquez S. R., Nelson S., Boyce R., Malone, D. (2021). <u>"Shared Decision Making for Drug Interactions: Design and Usability of an Application for Warfarin and Non-steroidal Anti-inflammatory Drugs."</u> JMIR Human Factors.

Steitz, BD., Unertl, KM., Levy, MA. (2021). <u>"An Analysis of Electronic Health Record Work to Manage Asynchronous Clinical Messages among Breast Cancer Care Teams." Applied Clinical Informatics.</u>

August

Anand, N., Edwards, L., Baker, L. X., Chren, M.-M., & Wheless, L. (2021). <u>Validity of Using Billing Codes</u> <u>From Electronic Health Records to Estimate Skin Cancer Counts.</u> JAMA Dermatology.

Carayon, P., Wust, K., Hose, B.-Z., & **Salwei, M. E.** (2021). <u>HUMAN FACTORS AND ERGONOMICS IN</u> <u>HEALTH CARE</u>. In HANDBOOK OF HUMAN FACTORS AND ERGONOMICS (pp. 1417-1437).

Ende H.B., Dwan R.L., **Freundlich R.E.**, Dumas S., Sorabella L.L., Raymond B.L., Lozada M.J., Shotwell M.S., **Wanderer J.P.**, Bauchat J.R. (2021). <u>Quantifying the incidence of clinically significant respiratory depression in women with and without obesity class III receiving neuraxial morphine for post-cesarean analgesia: a retrospective cohort study. Int J Obstet Anesth.</u>

Haas, J. S., Atlas, S. J., **Wright, A**., Orav, E. J., Aman, D. G., Breslau, E. S., . . . Tosteson, A. N. A. (2021). Multilevel follow-up of cancer screening (mFOCUS): Protocol for a multilevel intervention to improve the follow-up of abnormal cancer screening test results. Contemporary Clinical Trials, 109, 106533.

Liu, S., & Liu, J. (2021). <u>Public Attitudes toward COVID-19 Vaccines on English-language Twitter: A Sentiment Analysis</u>. *Vaccine*.

Mayberry, L., Nelson, L. A., & Gonzalez, J. S. (2021). <u>Adults with type 2 diabetes benefit from self-management support intervention regardless of depressive symptoms</u>. Journal of Diabetes and its Complications, 108024.

Nelson S.D., Kumah-Crystal Y. (2021). <u>Underuse of Electronic Health Record Features-The Case for CancelRx</u>. JAMA Intern Med. Epub ahead of print.

Rahimian, M., Warner, J. L., Salmi, L., Rosenbloom, S. T., Davis, R. B., & Joyce, R. M. (2021). <u>Open notes sounds great, but will a provider's documentation change? An exploratory study of the effect of open notes on oncology documentation</u>. JAMIA Open, 4(3).

Ramakrishnan A., Fontes M.L., Lombard F.W., Abdelmalak M., Hong Y., Shi Y., Shotwell M.S., Billings F.T. 4th, Pretorius M., **Wanderer J.P.**, Vyas R., Absi T..S, Shah A.S., Kertai M.D. (2021). <u>Mean Platelet Volume and Cardiac Surgery-Associated Atrial Fibrillation</u>. J Cardiothorac Vasc Anesth.

Reese TJ, Schlechter CR, Kramer H, Kukhareva P, Weir CR, Del Fiol G, Caverly T, Hess R, Flynn MC, Taft T, Kawamoto K. (2021). <u>Implementing lung cancer screening in primary care: needs assessment and implementation strategy design</u>. Transl Behav Med.

Roddy, M. K., **Nelson, L. A.**, Greevy, R. A., & **Mayberry, L. S.** (2021). Changes in family involvement occasioned by FAMS mobile health intervention mediate changes in glycemic control over 12 months. Journal of Behavioral Medicine.

Shepherd ME, Lecorps A, Harris-Shapiro J, Miller-Wilson LA. (2021). <u>Evaluating Outreach Methods for Multi-Target Stool DNA Test for Colorectal Cancer Screening Among an Employer Population</u>. J Prim Care Community Health.

Steitz, B. D., Sulieman, L., **Warner, J. L.**, Fabbri, D., Brown, J. T., Davis, A. L., & **Unertl, K. M.** (2021). Classification and analysis of asynchronous communication content between care team members involved in breast cancer treatment. JAMIA Open, 4(3).

Test, M. R., Mangione-Smith, R., Zhou, C., Wright, D. R., Halvorson, E. E., **Johnson, D. P.,** . . . Tieder, J. S. (2021). <u>Obesity and Health-Related Quality of Life in Children Hospitalized for Acute Respiratory Illness</u>. Hospital Pediatrics, 11(8), 841.

Thakkar A., Mishra S., **Warner J.L.** (2021). <u>COVID-19 Vaccine among Actively-Treated People with Cancer: A Glimpse into the Known Unknowns?</u> J Natl Cancer Inst. Epub ahead of print.

Yan C., Zhang X., Gao C., Wilfong E., Casey J., **France D.**, Gong Y., Patel M., Malin B., Chen Y. (2021). Collaboration Structures in COVID-19 Critical Care: Retrospective Network Analysis Study. JMIR Hum Factors 8(1):e25724.

Zhao, Z., Patrinely Jr., J. R., Saknite, I., Byrne, M., & **Tkaczyk, E. R**. <u>Guideline for In Vivo Assessment of Adherent and Rolling Leukocytes in Human Skin Microvasculature via Reflectance Confocal Videomicroscopy</u>. Microcirculation, e12725.

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 next month!