

# Value Added

## Center for Value-Based Care Research

### CVCR Celebrations!

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- Hamlet Gasoyan, PhD, received an award from the National Institutes of Health/National Cancer Institute for his K99/R00 grant proposal entitled, *Modifiable determinants of disparities in multiple myeloma treatment patterns*. This award will support his career development and research examining multiple myeloma treatment.
- Residency match day success for CVCR's medical student researchers:
  - Priscilla Kim**, Emory University School of Medicine, Internal Medicine
  - Lisa Kojima**, Beth Israel Deaconess Medical Center, General Surgery

***Congratulations to all and best wishes to our students, Priscilla and Lisa!***

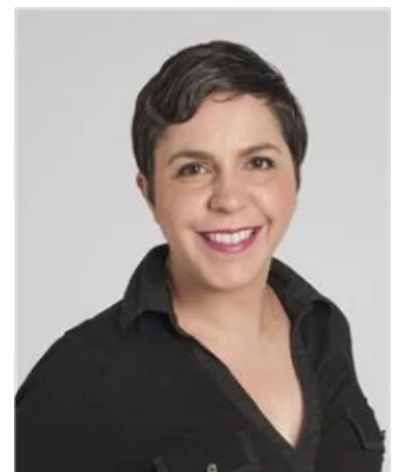
## FEATURED PUBLICATION

### Qualitative Analysis of Patient-Physician Discussions Regarding Anticoagulation for Atrial Fibrillation

*Kathryn Martinez, PhD, MPH*

***What problem were you addressing by studying this topic?***

Patients with atrial fibrillation making decisions about anticoagulation therapy to lower their risk of stroke should consider both the anticipated benefits (stroke risk reduction) against the potential risks (problematic bleeding).



We and others have found from observational studies that patients at high risk of stroke and low risk of bleeding are often not taking anticoagulation, suggesting physicians may not be adequately engaging patients in informed decision making for anticoagulation. There are two types of anticoagulation patients can take: warfarin or direct oral anticoagulants (DOACs). The decision between these drugs requires consideration of different tradeoffs, including cost, the need for routine monitoring, and dietary restrictions. Yet most patients wind up taking DOACs. Whether this is based on their preferences or their physicians' preferences is unknown.

To understand how physicians engage patients in decision making for anticoagulation overall and for anticoagulant type, we obtained real world recorded encounters of physicians making these decisions with patients. These encounters came from practices across the US, and patients and physicians were unaware of what part of the encounter researchers would be interested in. We essentially got to be a fly on the wall during conversations between physicians and their patients about anticoagulation.

***What were the main results? Anything particularly interesting or surprising?***

Overall, physicians emphasized the risk of stroke over the risk of bleeding, apparently in an effort to convince patients to take anticoagulation. When they described strokes, they used scary and evocative language, whereas their discussion of potential bleeding was more lighthearted (e.g. "wear a helmet!") Physicians also emphasized the benefits of DOACs over the drawbacks of warfarin, and a number of physicians told their patients that warfarin was the active ingredient in rat poison. Patients had questions about the different costs of the drugs, which physicians were largely unable to address.

To fill this gap, physicians frequently provided patients with free samples or coupons for DOACs. In some cases, the physicians advised the patients to go to the pharmacy and try to fill their DOAC prescription, and if it was too expensive, they would prescribe warfarin for them instead. Yet, some of these patients had just been told that warfarin is "rat poison." The most surprising finding is how physicians used direct-to-consumer drug commercials about DOACs to orient their patients to the decision to take anticoagulation. In some cases, physicians instructed their patients to pay attention when the commercials come on TV. These commercials are designed to sell drugs, not to help patients making informed choices. Thus, this was a pretty problematic finding.

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### ***What were some limitations to the study?***

We only had one conversation between the patients and physicians at a single point in time. It's possible they had other conversations about the risks and benefits of anticoagulation at another point, which we were unable to account for. We also didn't know the stroke and bleeding risk of the patients. It's possible physicians were emphasizing the risk of stroke over the risk of bleeding because these patients all were at very high risk of stroke and would therefore highly benefit from taking anticoagulation. That said, it's debatable that such persuasive communication practices by physicians are warranted when a patient stands to benefit from an intervention. All patients benefit from a balanced presentation of risks and benefits, irrespective of their risk level.

### ***Moving forward, how can this topic be studied further?***

I want to understand how much physicians are aware of their own communication practices. It would be interesting to show physicians transcripts of their own encounters and see if they could identify themselves. I suspect some are not even aware of the things they say to patients, particularly those who call warfarin "rat poison." Health systems often give physicians feedback on prescribing practices in efforts to improve prescribing. I would love to do a study where we gave physicians feedback on their communication regarding anticoagulation to see if we could improve their informed decision making practices. I don't think this is a problem limited to physicians. We would all be surprised to hear some of the things we say to other people!

## **ONGOING WORK**

### **Understanding the impact of messaging on care management and provider workload**

*Elizabeth Pfoh, PhD*

#### ***What was the motivation behind studying this topic?***

In the summer of 2020, it was clear that the importance and use of MyChart messaging was growing. Traditionally, discussion of major health concerns (i.e., a new or worsening health condition) occurred face-to-face, and communication about minor concerns occurred via telephone or email.



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With the expanding use of patient portals (like MyChart) and patients' increased comfort with electronic communication, we realized that number of health discussions that occur outside the office had likely grown. Thus, we submitted a grant to the Healthcare Delivery and Implementation Science Center to study changes in messaging volume over time and across primary care providers and to quantify the burden messaging places on providers. We thought our findings would enable a more accurate measurement of clinician workload and inform efforts supporting payment for work conducted outside of the traditional office setting.

***What are your major goals? What outcomes do you anticipate, if any?***

Our major goals were to explore the change in the volume of medical advice messages that providers received between 2019 and 2021, the variation in volume, and the relationship between message volume and time spent working on the electronic health record (EHR) outside clinical hours. Dr. Tang is leading our study focused on pediatric providers. Dr. Martinez is leading our study on internal medicine and family medicine providers.

***What is unique about your approach?***

We used group-based trajectory modeling (GBTM) to categorize providers into groups based on their volume of clinical advice messages over the study period. The goal of GBTM is to classify individuals who have similar trajectories of a single outcome (e.g., number of medical advice messages) into a finite number of groups. It is useful to group providers because it allows us to see which individuals follow the same pattern in receiving messages over time.

***How will your work impact scientific literature, and if applicable, clinical practice?***

We presented our results at the Society of Medical Decision Making's International Conference in 2022. In both studies, we found that messages for medical advice significantly increased between January 2019 and December 2021, and the increase in messaging volume was not uniform across providers in either population. In the pediatric-focused study, a small percentage of providers (8%) received a disproportionate number of messages and spent more time on EHR outside clinical hours than providers who received the lowest volume of messages. The adult-focused study found that each additional MyChart message received was associated with 2.2 minutes of physician time spent on the EHR outside of scheduled working hours ( $p < 0.001$ ). Health systems can use this information to identify which providers may need additional support due to their disproportionate burden of MyChart messages.

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## **Check out the Center for Value-Based Care Research's recent publications!**

**Prevalence of at-risk NASH and its association with metabolic syndrome in US adults with NAFLD, 2017–2018, *Hepatology Communications***

**Protection Against the Omicron Variant Offered by Previous Severe Acute Respiratory Syndrome Coronavirus 2 Infection: A Retrospective Cohort Study, *Clinical Infectious Diseases***

**Protection conferred by Delta and BA.1/BA.2 infection against BA.4/BA.5 infection and hospitalization: A Retrospective Cohort Study, *The Journal of Infectious Diseases***

**Validation of a Health-Related Quality of Life Questionnaire in Patients With Recurrent *Clostridioides difficile* Infection in ECOSPOR III, a Phase 3 Randomized Trial, *Clinical Infectious Diseases***

**Relationship Between Primary Care Providers' Perceptions of Alcohol Use Disorder And Pharmacotherapy Prescribing Rates, *Alcohol and Alcoholism***

**Long-term Outcomes of a 1-year Hypertension Quality Improvement Initiative in a Large Health System, *Medical Care***

**Assessment of Quality of Life Among Patients With Recurrent *Clostridioides difficile* Infection Treated with Investigational Oral Microbiome Therapeutic SER-109: Secondary Analysis of a Randomized Clinical Trial, *JAMA Network Open***

**Racial, ethnic and neighborhood socioeconomic differences in incidence of dementia: A regional retrospective cohort study, *Journal of the American Geriatrics Society***

**Health-Related Social Needs: Which Patients Respond to Screening and Who Receives Resources? *Journal of General Internal Medicine***

We'd love to hear from you!

Questions or comments? Email us at [research4c@ccf.org](mailto:research4c@ccf.org) or call 216-445-0719.

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