

Value Added

Center for Value-Based Care Research

FEATURED PUBLICATION

Primary care physician referral practices regarding BRCA1/2 genetic counseling in a major health system

Katie Martinez, PhD

What prompted you to study physician referrals for BRCA1/2 testing?

In 2019, the U.S. Preventive Services Task Force (USPSTF) released a recommendation that primary care physicians identify patients at high risk of hereditary risk of breast or ovarian cancer for referral to Genetics for BRCA1/2 testing. We have done a number of studies on physician responsiveness to USPSTF recommendations, including for mammography and PSA screening. Yet to understand how physicians respond to guideline changes such as this, we need to establish what their referral practices were like prior to 2019. We were lucky to have a fourth year CCLCM medical student, Dr. Debra Linfield, take this on as her thesis project. She examined 10 years of Cleveland Clinic data to describe BRCA1/2 referral practices by physicians, and to identify which patient factors were associated with referrals.



What did you find?

Out of 279,568 eligible patients, five percent met criteria for being at high risk of breast cancer (either family history documented in the chart, Ashkenazi Jewish ancestry, or both) and therefore eligible for referral to BRCA1/2 testing. Of these, only 22% were ultimately referred. Having a family history of breast cancer was the strongest predictor of whether a woman was referred by her physician. Compared to non-Jewish patients, Jewish patients were also more likely to be referred for testing, irrespective of family history. It appears that, despite overall low rates of referral, primary care physicians are risk stratifying their referrals by appropriate criteria. However, we also found that black patients were significantly less likely than white patients to be referred, despite the fact that black patients are no less likely to be BRCA mutation carriers than white patients. Over a ten year period, less than a quarter of physicians ever referred a patient for testing.

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Was there anything unexpected or novel about your findings?

To our knowledge, ours is the first study to describe primary care physician referral practices for BRCA1/2 testing. That we found the pre-2019 referral rate was so low, even among patients who were high risk for hereditary breast and ovarian cancer, was surprising. This may reflect a knowledge gap among primary care physicians about which patients are eligible for referral. While studies have shown that black women who were diagnosed with breast cancer are less likely than their white counterparts to be referred for BRCA1/2 testing, ours is the first study to demonstrate such a disparity among breast cancer naïve patients.

What do your findings indicate for future work either in your research or within the clinical setting?

That less than a quarter of primary care physicians ever referred a patient for testing over a decade suggests that physicians likely need assistance in identifying the appropriate patients to refer to Genetics. The USPSTF recommends physicians use a brief familial risk assessment tool to identify potentially eligible patients, but these have never been tested in the real world. Our next steps in this project include qualitative interviews with physicians to understand the barriers and facilitators to referring appropriate patients for BRCA1/2 testing, as well as pilot testing different risk assessment tools with patients, to understand which tool may be most useful for routine use in clinical care.

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ONGOING WORK

S.E.N.D.: Developing a web-based, interactive guide to enhance patient-clinician electronic communication by focusing on specificity, expressing concerns, need, and directness

Jordan Alpert, PhD

What prompted this investigation? What is unique about the topic?

The use of secure messaging (SM), asynchronous electronic communication between patients and clinicians occurring through the electronic health record (EHR), is increasingly being relied upon. In the oncology setting, patients with cancer utilize the patient portal more often than other patient populations and rely on it to stay on track with their treatment regimens. However, patients receive little to no training about how to effectively communicate with clinicians using SM. In previous studies I've conducted, patients have expressed the need to learn how to effectively convey their emotional state and concerns through SM. Similarly, clinicians have difficulty understanding what patients are asking and as a consequence, are unable to adequately address patients' concerns and fear it could negatively affect the patient-clinician relationship. There is an abundance of research to improve patient-clinician communication, but nearly all of it has focused on face-to-face communication, rather than digital communication.



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

The goal of the project is to help patients craft more effective messages so that their question gets answered to their satisfaction with just one reply from the clinician. Another goal is to relieve clinician burden. My hypothesis is that if patients write more effective messages that include aspects of S.E.N.D. (specificity, expressing concerns, stating needs, and directness), clinicians won't have to spend as much time trying to figure out what the patient is really asking about, and subsequent messages won't be necessary. An educational module will be developed that includes videos with tips for patients. Acceptability, feasibility, and appropriateness of the tool will be measured, along with measuring patients' self-efficacy towards communicating with clinicians, and their satisfaction with the tool. Lastly, clinicians will rate the quality of patients' message by examining messages sent prior to the intervention and after the intervention. Evaluation will focus on 1) clarity, 2) directness, 3) structure/language, 4) information organizing, and 5) specificity.

Is there anything unusual/unexpected about your findings in the work you've done so far?

Three things have surprised me: 1) How meaningful the interactions are for patients that occur through SM. They consider receiving a message from a doctor or nurse through the portal as a medical encounter and look forward to what their clinician writes. Patients were disappointed and questioned their quality of care when they received one-word replies or messages stating, "make an appointment." 2) How excited older adults (65+) are to use SM. Although they're usually thought of as averse to technology, they prefer SM to waiting on the phone and feel relieved by being able to ask their question at any hour of the day, knowing they will get an answer in 24-48 hours. 3) How much certain clinicians enjoy the benefits of SM. Although SM has a negative reputation among most clinicians, those who have "bought in" and accept it as a valid means of patient-clinician communication have used it to form strong relationships with patients, avoid unnecessary appointments, and expedite patient care.

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

There is a lot to learn about digital communication. We send emails and texts every day, but rarely consider how our message will be interpreted and understood. Theories and frameworks around digital communication between patients and clinician can be developed to improve the quality of communication. In clinical practice, this project can contribute to improving aspects of patient-centered communication, such as shared decision-making, partnership building, and facilitating communication that is supportive and empathic.

CVCR Celebrations

- ⇒ Elizabeth Pfoh was appointed to the NIH study section “Science of Implementation in Health and Healthcare – SIHH”
- ⇒ Kathryn Martinez received an R56 award from NHLBI for her application entitled Improving Adherence with Statins Through Use of the Statin Choice Decision Aid
- ⇒ Michael Rothberg received a \$7.4 million grant from NIA to conduct a Randomized Trial of Assisted Ambulation to Improve Health Outcomes for Older Medical Inpatients
- ⇒ Jordan Alpert received an R03 award from NCI to study S.E.N.D.: Developing a web-based, interactive guide to enhance patient-clinician electronic communication by focusing on specificity, expressing concerns, need, and directness
- ⇒ Josh Johnson was promoted to Assistant Professor at the Cleveland Clinic Lerner College of Medicine

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Welcome to CVCR!

- ⇒ Hamlet Gasoyan, PhD has joined the center as a junior investigator after completing his post-doctoral fellowship in Health Services Research and Decision Science.
- ⇒ Jordan Alpert, PhD has joined us from the University of Florida. Jordan has a PhD in Communications and will add depth to CVCR in qualitative research.
- ⇒ Nick Casacchia, PharmD has joined Community Care as a data scientist after completing a Master’s Degree in Translational and Health System Science at Wake Forest University.
- ⇒ Becca Schulte, MPH has joined as a statistical programmer after receiving her degree from the Colorado School of Public Health.
- ⇒ Jeff Kovach, MS has joined as a statistical programmer after receiving his degree in Biomedical and Health Informatics from CWRU.

Recent Publications

Check out the Center for Value-Based Research team's recent published work.

[Early treatment with thiamine and mortality among patients with alcohol use disorder who are hospitalized for pneumonia](#)

[Why Does Doxycycline Pose a Relatively Low Risk for Promotion of Clostridioides difficile Infection?](#)

[Protection Against the Omicron Variant Offered by Previous Severe Acute Respiratory Syndrome Coronavirus 2 Infection: A Retrospective Cohort Study](#)

[Disease state transition probabilities across the spectrum of NAFLD: A systematic review and meta-analysis of paired biopsy or imaging studies](#)

[Primary care physician referral practices regarding BRCA1/2 genetic counseling in a major health system](#)

[Validation of a Health-Related Quality of Life Questionnaire in Patients With Recurrent Clostridioides difficile Infection in ECOSPOR III, a Phase 3 Randomized Trial](#)

[The prevalence of alcoholic and nonalcoholic fatty liver disease in adolescents and young adults in the United States: analysis of the NHANES database](#)

[CBK model composition using paired web services and executable functions: A demonstration for individualizing preventive services](#)

[Change in Physician Burnout between 2013 and 2020 in a Major Health System](#)

[A risk model to identify Legionella among patients admitted with community-acquired pneumonia: A retrospective cohort study](#)

[Association of Physical Therapy Treatment Frequency in the Acute Care Hospital With Improving Functional Status and Discharging Home](#)

[Acute but not chronic heart failure is associated with higher mortality among patients hospitalized with pneumonia: An analysis of a nationwide database](#)

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