Family Medicine Education Consortium, Inc.
Hereditary Breast Cancer Quality Improvement Pilot Project

EXECUTIVE SUMMARY

The Family Medicine Education Consortium, Inc. (FMEC) is committed to engaging residency programs in learning networks to advance quality healthcare and medical education. To help residencies meet this commitment, the FMEC launched a Phase I cross-institutional learning collaborative on Hereditary Cancers in Women and Narrative Medicine in early 2023. Through funding provided by the National Association of Chronic Disease Directors (NACDD) and utilizing tools from the Centers for Disease Control and Prevention's (CDC) Bring Your Brave campaign, participating Family Medicine Residency Programs (FMRPs) convened virtually to learn about women's hereditary cancer risk, using videos and stories in training and in clinic, and supporting women to learn about their risk, get testing, and find community supports.

In fall of 2023 through July of 2024, FMEC launched Phase II of our efforts, by implementing a Hereditary Breast Cancer (HBC) Quality Improvement (QI) Pilot Project. Participating FMRPs convened virtually to learn about QI, women's hereditary cancer risk, implementing HBC screening in practice, utilizing Bring Your Brave (BYB) patient education resources, and supporting women to learn about their risk and access counseling or genetic testing, if indicated. FMEC established a Project Advisory Committee (PAC) by recruiting FMRP faculty members who possessed an interest in narrative medicine and hereditary cancers. During Phase II, FMEC initiated, planned, developed, implemented, and evaluated an HBC QI project targeting FMRPs in the northeastern United States, including rural areas. Modest incentives to participate were offered.

Purpose

The PAC developed the following learning objectives: At the conclusion of the pilot, family physicians and residents from participating FMRPs will be able to:

1) Implement the Model for Improvement and conduct Plan, Do, Study, Act (PDSA) cycles of improvement
2) Understand the risk and incidence of breast and ovarian cancers in young women
3) Identify and utilize a breast cancer screening tool in practice
4) Utilize stories, videos, narrative medicine, etc. during patient visits
5) Attain confidence in discussing cancer risk with patients
6) Increase knowledge of genetic counseling and testing and how to make referrals
7) Incorporate *Bring Your Brave* CDC educational resource materials into practice

The QI pilot project was organized into three areas:

1) Identifying and implementing an HBC risk assessment questionnaire in practice (screening)
2) Learning about and utilizing BYB CDC education resources with patients
3) Referring patients who screen positive for HBC for genetic counseling or testing

In October 2023, the FMEC applied through the American Academy of Family Physicians (AAFP) and the American Board of Family Medicine (ABFM) for Continuing Medical Education (CME) and Performance Improvement Credits through their Joint application process and attained approval in November 2023. In November and December, FMEC set out to recruit four to eight FMRPs into the pilot. Eight FMRP

directors expressed interest in participating. Of those, seven completed the QI project from four states: Maine, New York, Pennsylvania, and Virginia, with a mix of FMRPs from urban/inner city, urban/not inner city, small town, and rural. Four of the seven programs advised they see patients from rural areas.

FMRPs Physician Participation Information, December 2023

Name of FMRP	Name of QI Project Leader	Location/ Geographic Region	# Residents Participating for CME/QI Credit	# Faculty Participating for CME/QI Credit	Total # Residents Estimated to Be Impacted	Total # Physician Faculty Estimated to Be Impacted
1. Cornerstone Care Teaching Health Center FMRP	Jihad Irani, MD, Associate Program Director/DIO	Mt Morris, PA RURAL	3	2	3	2
2. Greater Lawrence Family Health Center/Lawrence FMRP	Elise LaFlamme, MD, Associate Program Director of Residency Program	Lawrence, MA URBAN, INNER CITY	4	1	46	30
3. Heritage Valley FMRP	Lindsay Heiple, DO, Dir Osteopathic Curriculum, Assoc Director RP	Beaver Falls, PA SMALL TOWN	18	6	18	5
4. Indiana Regional Medical Center Rural FMRP	Arwen Bassler, MD, FMRP Core Residency Faculty	Marion Center, PA RURAL	3	1	12	3
5. Lewis Gale Community and Family Medicine GME FMRP	Julianna Snow, DO	Roanoke, VA URBAN, NOT INNER CITY	3	0	24	3
6. New York Medical College at Saint Joseph's FMRP	Rodika Coloka-Kump, DO, Associate Program Director	Yonkers, NY URBAN, INNER CITY	2	2	30	4
7. University of Pittsburgh Medical Center McKeesport FMRP	Jeff Jackson, MD, FMRP Program Director	McKeesport, PA URBAN, INNER CITY	3	0	26	6
TOTALS			**36**	**12**	**158**	**53**

Approximately 211 physicians (158 residents, 53 faculty) and 52 other clinical staff are estimated to be impacted by the collaborative. A subset of forty-eight family physicians and residents from these FMRPs completed the project for 20 Prescribed CME and 20 Performance Improvement credits (12 family physician faculty and 36 residents).

The QI pilot kicked off in January 2024 with three required webinars for physicians participating for credit. Training topics included: 1) Hereditary Breast Cancer Education and Bring Your Brave Resources, 2) QI Basics, and 3) Project Structure, Timeline, and Data Collection. FMRPs embarked on a journey to learn more about HBC, screening, BYB resources, and making referrals for genetic counseling and testing. Six of the seven sites obtained local Institutional Review Board approval to potentially publish their results as well as submit to present sessions or posters at upcoming conferences. HBC Risk assessment tools selected by the programs included: Referral Screening Tool, Gail Model, 7-Question Family History Screening, and myGeneHistory™ (Myriad). Four of the seven FMRPs purchased a Tablet or iPad through

the project to share BYB resources with patients and support cancer screenings. Five of the seven FMRPs conducted PDSA cycles to help guide their QI efforts. Two programs pre-selected project objectives and have been testing workflows to implement in practice. In April 2024, at project mid-point, the FMEC surveyed the QI Leaders to gather their impressions of the BYB materials. Six faculty and seven residents also completed the same BYB survey questions. Highlights included:

FMRPs' Impressions of BYB Resources

Percent of FMRP Participants who Agreed or Strongly Agreed BYB Materials Will:	% of QI Leaders who Strongly Agree or Agree (N=7)	% of Faculty and Residents who Strongly Agree or Agree (N=13)
Increase Provider Knowledge	100%	100%
Increase Provider Comfort with HBC	100%	100%
Provide Providers with Insight and Increase Empathy	100%	92%
Support Providers through Observing and Learning from the Experiences of Other Physicians	87%	100%
Improve Patient Understanding of HBC Risks	100%	100%
Help Patients Feel Less Along	100%	100%
Increase Patient Self-Efficacy	100%	92%
Help Providers by Showing the Experiences of Other Physicians	86%	100%
Improve Patient-Provider Communication	86%	100%
Patients Have Responded Positively to the BYB Resources	86%	100%

FMEC and NACDD have received many heartfelt and thoughtful comments from family physicians about the impact of the BYB materials. All of the FMRPs are sharing CDC BYB educational resources with patients who screen positive for HBC. The most popular way to share resources is through displaying or distributing the BYB flyer with a QR code that links to the CDC website, followed by sharing BYB resources via a Tablet/iPad, providing information on resources to patients as a handout, or emailing or texting the patient a link to the BYB website.

Key Clinical Activities

The key clinical activities (KCAs) for the QI pilot included:

KCA 1

1) Has an HBC screening been documented in the patient record in the past 12 months?
Percent Target Improvement Goal: 50%

KCA 2

2) If HBC screening is positive, has positive result been discussed with patient?
Percent Target Improvement Goal: 50%

KCA 3

3) If HBC screening is positive, has patient been offered/provided with CDC *Bring Your Brave* patient education resources?
Percent Target Improvement Goal: 90%

KCA 4

4) If HBC screening is positive, has the patient been referred for genetic counseling or testing?
Percent Target Improvement Goal: 90%

The patient inclusion criteria for this QI activity were females ages 18 to 44 years being seen for annual physicals or gynecologic visits to coincide with the target audience for the BYB campaign. FMRPs were

asked to pull 10 unique last seen patient records meeting the inclusion criteria at baseline and for two QI cycles (action periods) seven to eight weeks apart.

Data Findings

At **baseline,** most FMRPs submitted 10 patient records for analysis. One FMRP submitted 13 records. Across 73 patient records reviewed from seven programs, one patient had received an HBC screen prior to the start of the project.

At the end of **cycle one**, some of the FMRPs determined that they would like to look at more than 10 records to get a stronger indication as to whether their improvement interventions were making a difference. **After seven weeks, many project targets were already being met or mostly met.**
Across 82 patient records from seven programs:

- 43 patients, or 52% received an HBC screening (project goal = 50%)
- 8 patients, or 10%, screened positive
    - 7 of 8 positive screens (88%) had findings discussed with patients (project goal = 90%)
    - 4 of 8 positive screens (50%) had BYB resources offered or provided (target goal = 90%)
    - 7 of 8 positive screens (88%) had a referral for counseling or testing (target goal = 90%)

At the end of **cycle two**, the PAC and the FMEC requested that each of the programs pull and analyze 20 or more patient records to take a deeper dive into looking at patient management for positive screens. **After 15 weeks, (February - May 2024), project targets were exceeded, met or mostly met.**
Across 196 patient records from seven programs:

- 147 patients, or 75% received an HBC screening (goal = 50%)
- 26 patients screened positive and had finding discussed (13% positive screen rate)
    - 17 of 26 patients with a positive screen (65%) had BYB resources offered or provided (goal = 90%)
    - 23 of 26 (88%) patients with a positive screen received a referral for genetic counseling or testing (goal = 90%)

Data Summary

Between baseline, cycle 1, and cycle 2, looking at the aggregate data, the FMRPs:

- Increased the number of patient records reviewed from 73 at baseline, to 82 at end of cycle 1, to 196 at end of cycle 2
- Reported an increase in the percentage of positive screens from 1% at baseline, to 10% at end of cycle 1, to 13% at end of cycle 2
- Increased sharing of BYB resources with patients with a positive screen from 1 patient at baseline, to 4 patients at end of cycle 1 (50%), to 17 patients at end of cycle 2 (65%)
- Increased referrals for genetic counseling or testing with patients with a positive screen from 1 patient at baseline, to 7 at end of cycle 1 (88%), to 23 at end of cycle 2 (88%)

It is estimated that of the young female patients seen monthly by the participating FMRPs, 10% of female patients were seen for annual physicals and 15% for gynecological visits. Accordingly, by extrapolation, it is estimated that 609 to 676 young female patients across the seven FMRPs had the potential to be impacted monthly by the HBC QI pilot project.

The results shown by the end of the collaborative are impressive for the short period measured. Screening rates, discussing results with patients, sharing CDC Bring Your Brave patient education resources, and referring patients who screened positive for genetic counseling or testing had greatly improved among the FMRPs. All of the participants reported being meaningfully involved in the pilot including learning about and executing the project, reviewing data in keeping with the project's measurement plan, being involved in changes implemented during the project, and participating in meetings or conversations about the project. **When asked whether participants intend to continue to assess patients for risk of hereditary breast or ovarian cancer at the conclusion of the pilot, 96% responded yes. When asked whether participants think they will continue to offer the BYB resources to patients who screen positive, 92% responded yes while 8% were unsure.** The unsure responses were likely due to residents moving to different health systems that may not yet be involved with HBC risk assessment or screening. QI leaders expressed a high degree of satisfaction with the project and recommend this type of a QI activity to their colleagues.

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