

Identifying Local Barriers to Mammography in Women Served by a Rural Acute Care Hospital

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Background

- Cancer mortality rates are higher in rural areas than urban areas in the United States.¹
- Women living in rural Wisconsin continue to experience later stage diagnoses, have less access to medical treatment, and may receive less chemotherapy compared with women living in urban areas.^{2,3}
- Although breast cancer is the most common type of cancer diagnosed in Columbia County WI, only 40%

Objective

Understand barriers and facilitators to mammography faced by women in rural Wisconsin

Methods

The **University of Wisconsin-Madison (UW)** collaborated with **Prairie Ridge Health (PRH)**. PRH is a rural hospital in Columbus, Wisconsin, which has a population of approximately 5,500 persons. The project qualified for an IRB exemption based on review by the UW IRB.

Data collection

- Our community-based participatory research identified barriers to screening mammography by:
 - Virtual 1:1 interviews with clinicians and clinic staff at PRH
 - Three 60-minute virtual focus groups with women living in the same area (Held 11/2021 to 2/2022)
 - A 25-question survey (online and hardcopy) to collect insights from women at least 40 years old

Recruitment

Clinicians and clinic staff interviews: PRH team members invited their staff to participate in interviews. Suggestions of potential participants created with snowballing approach were also accepted. A list of interested participants was created and shared with the WREN team.

Focus groups: Women were recruited by advertisements informing patients and community members about the study. Advertisements were distributed via social media (PRH website and Facebook page) and US mail.

Survey: The anonymous Qualtrics survey link was available on the PRH website. A list of 1,800 residents within the PRH service area who were 40 years and older and eligible for mammography were mailed a paper version of the survey.

Tools

Interview guide: Questions probed on PRH practices for mammography and barriers for rural women

Focus group guide: Designed to uncover attitudes towards screening mammography, including facilitators and barriers

Survey: Collected demographic data, attitudes toward and barriers to breast cancer screening

Analyses

Clinic and staff interviews: Interviews with PRH clinicians and staff as well as focus groups were conducted virtually and transcribed for qualitative analysis. Three researchers independently coded responses.

Focus groups: Three researchers created a codebook for responses and assigned codes for responses that were facilitators and barriers to mammography. Each researcher independently coded responses and met to finalize coding by reaching consensus on each code.

Survey: Results of the online and hardcopy surveys were combined and analyzed for descriptive statistics

Acknowledgments

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- Our sincere thanks to the study participants for their time, engagement, and contributions to this work.

PRH Staff Interview Results

11 PRH staff were interviewed: 4 physicians, 3 mammography technicians, 2 schedulers/registration, 1 medical assistant, 1 advanced practice nurse

Top facilitators (% of responses coded as facilitators):

- Scheduling process - 23%
- Marketing/advertising - 15%
- Clinician communication/recommendation - 12%
- Flexibility of scheduling - 9%
- Walk-in Wednesdays - 9%
- Patient education or resources - 9%



PRH uses strategies to facilitate mammograms, such as:

- Walk-in appointments
- Follow-up calls for overdue mammograms
- Having a breast health navigator on staff to help increase breast cancer screenings

Top barriers (% of responses coded as barriers):

- Insurance - 19%
- Lack of appointments/convenient appointment times - 15%
- Transportation - 12% COVID-19 - 11%
- Discomfort/pain from procedure - 9%

Focus Group Results

- Three focus groups were with 1, 9, and 11 participants.
- Participants in focus groups placed high value on screening mammography:
 - 80% (162/203) of quotes coded from the focus groups were facilitators to screening mammography

Facilitators for mammography	% of Quotes (n=162)
Clinician recommendation/patient education	23%
Screening mammography (Annual)	14%
Family history of breast cancer	11%
Scheduling - positive experience	10%
Knowing somebody with breast cancer	8%
Appointment reminders - mail	7%
Annual wellness visits	6%
Advertisement - mass media	6%
Appointment reminders - EHR alert	4%
Early detection	3%
Advertisement - office	2%
Advertisement - social media	2%
Advertisement - print	2%
Appointment reminders - phone	0%

Barriers to mammography	% of quotes (n=41)
Insurance/financial	39%
Scheduling	17%
Fear of procedure (eg, pain/discomfort)	15%
Fear of results	7%
Age extremes (perception of "too young" or "too old" for mammogram)	7%
Necessity of "self advocacy" to get mammogram	7%
COVID-19	5%
Lack of transportation	3%

"... and then also the fear of finding out what the answer is going to be can really put some women off on not wanting to get this done"

"People that don't have health insurance, they probably aren't going to pay for it ... if they don't think that they're sick or have any symptoms"

"I really appreciate my medical team just reminding me"

"I like the discussion in that my doctor always talks about the risks, the positives and negatives...of getting certain screenings or tests"

Summary and Conclusions

	PRH staff interviews (N=11)	Focus groups (N=21)	Surveys (N=307)
Facilitators	<ul style="list-style-type: none"> • Scheduling process • Marketing/advertising • Clinician recommendation • Flexibility of scheduling 	<ul style="list-style-type: none"> • Clinician recommendation/patient education • Screening mammography • Family history • Scheduling - positive experience 	<ul style="list-style-type: none"> • Doctor referred me • Family history • Personal Decision • Found a lump or something concerning
Barriers	<ul style="list-style-type: none"> • Insurance • Lack of convenient appointment times • Transportation • COVID-19 	<ul style="list-style-type: none"> • Insurance/financial issues • Scheduling • Fears about the procedures • Fear of results 	<ul style="list-style-type: none"> • Put it off • Haven't had any problems • Pandemic/COVID • Not necessary

Participation bias was suggested by results such as: a majority (80%) of responses in focus groups were facilitators of mammography and survey participants were highly engaged with the healthcare system.

Future projects should include efforts to:

- Reach rural women not engaged with the healthcare system
- Address gaps in patient education
- Explore strategies to address the identified barriers

Survey Results

307 women responded to the survey (140 online and 167 paper copy)

- Women were not eligible included: 9 who were part of our focus groups; 4 who were younger than 40 yo, and 12 who had a history of breast cancer (n=282)

Demographic data	Respondents, n	Results
Mean age, y (Range)	266	58.7 (40-82)
Identified as White	266	98%
Menopausal	265	62%
Anyone in your family had/had breast cancer?	270	Yes - 42%
Knows someone who has/had breast cancer	270	93%

Reasons for first mammogram	Responses, n	% of respondents
Doctor told me to/referred me	181	70%
Family history	50	19%
Personal decision	47	18%
Found a lump or something concerning	32	12%
Know someone with breast cancer	14	5%
Family/friend referral	4	2%
Other	3	1%
Heard an advertisement	1	<1%
Prefer not to answer	1	<1%

Reasons women did not have a mammogram annually included:*

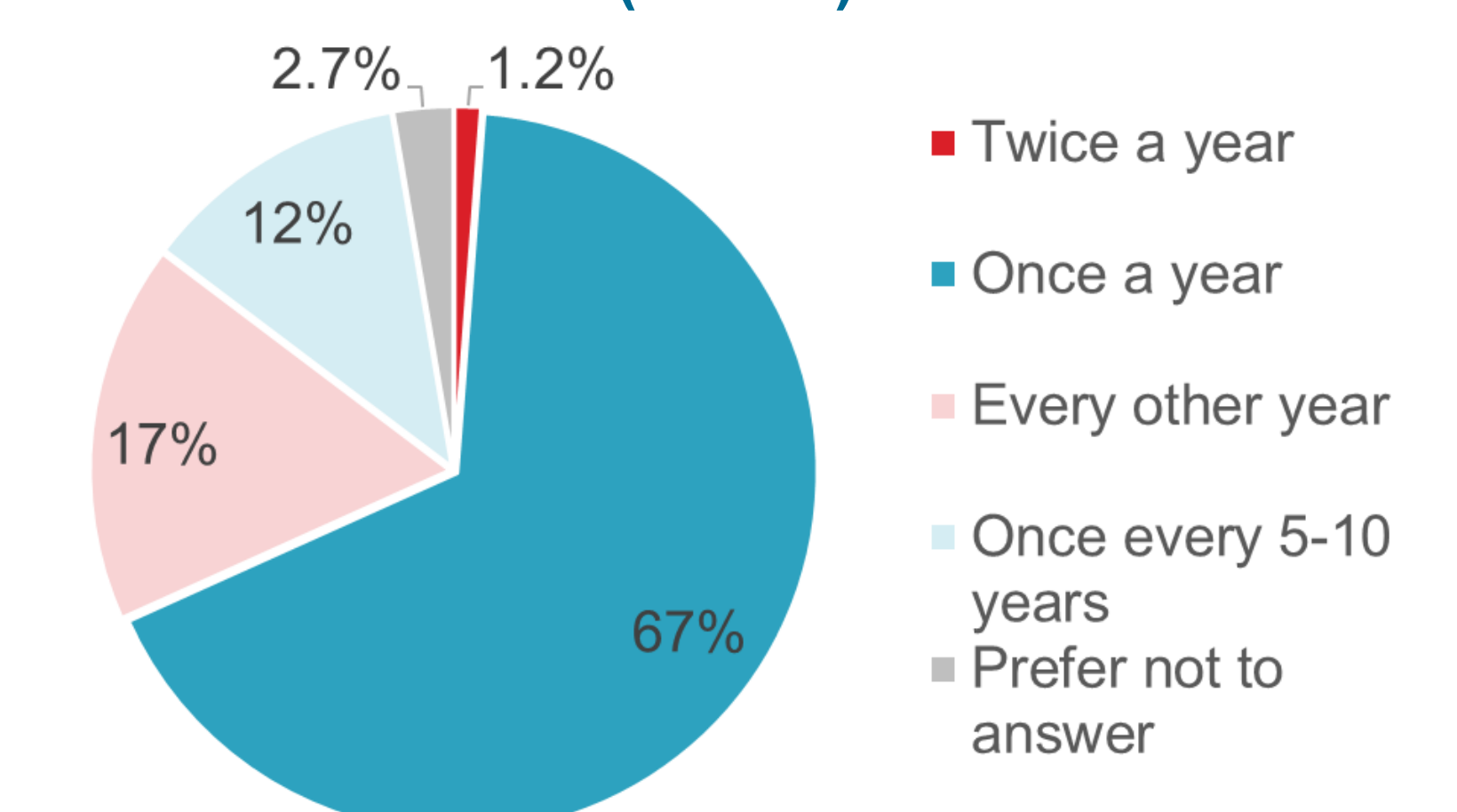
- 23% (43/184) Put it off
- 17% (31/184) Haven't had problems
- 15% (28/184) COVID pandemic
- 11% (21/184) Not needed or necessary
- 10% (19/184) No family history of breast cancer
- 9% (17/184) Not recommended by my doctor/PA/NP
- 8% (14/184) Painful procedure
- 6% (11/184) Didn't know that I should
- 6% (10/184) Fear of cancer

*Top reasons shown; Respondents could select multiple answers

Engagement with the healthcare system

- 91% (246/270) of women reported seeing a healthcare provider in the past year
- Awareness of and experience with mammography was high:
 - 90% (240/268) of respondents reporting that they had seen or heard an advertisement that encouraged them to get tested for breast cancer
 - 85% (227/268) a healthcare provider recommend that they get screened for breast cancer

How often are you having a mammogram? (N=256)



Attitudes about mammography

- 50% (129/259) noted that women should start getting mammograms at 40 years old
- 73% (195/268) thought that women should get mammograms every year
- 50% (128/256) had their last mammogram at PRH
- Responses regarding mammography at the rural hospital (including scheduling) were favorable

References

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