



Wisconsin Breast Cancer Task Force Provider Survey

Report of Findings: Dane County

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WI
Breast Cancer TASK FORCE
WBCTF

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Abbreviations

USPSTF – US Preventive Services Task Force
WBCTF – Wisconsin Breast Cancer Task Force
WI CCC Program – Wisconsin Comprehensive Cancer Control Program
NIH – National Institutes of Health
CDC – Centers for Disease Control and Prevention
ACS – American Cancer Society
ACOG – American Congress of Obstetricians and Gynecologists
AAFP – American Academy of Family Physicians
NCCN – National Comprehensive Cancer Network
ACOR – American College of Radiology
MD – Medical Doctor
PA – Physician Assistant
CBE – Clinical Breast Exam
BSE – Breast Self-Exam

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Wisconsin Breast Cancer Task Force Member List

After Breast Cancer Diagnosis (ABCD)	Susan G. Komen for the Cure, Central WI Affiliate
Access Community Health Centers	Susan G. Komen for the Cure, South Central Affiliate
African American Council of Churches	Susan G. Komen for the Cure, Southeast WI Affiliate
Allied Wellness Center	University of Wisconsin - Milwaukee School of Nursing
American Cancer Society - Midwest Division	UW Carbone Cancer Center
Breast Cancer Recovery Foundation	UW Hospital & Clinics Breast Center
Breast Surgery Experts of NE Wisconsin	UW School of Medicine & Public Health
Cardinal Stritch University	UWM House of Peace Community Nursing Center
Center for Patient Partnerships	VA Medical Center
Center for Women's Health Research	WEA Trust
Collaborative Center for Health Equity	Wheaton Franciscan
Froedtert Memorial Lutheran Hospital	WI Dept of Health Services/WI Alliance for Women's Health
Gilda's Club - Madison	Wisconsin Alliance for Women's Health
Gilda's Club - Southeastern WI	Wisconsin Breast Cancer Coalition
Jane Cremer Foundation	Wisconsin Comprehensive Cancer Control Program
Marquette University College of Nursing	Wisconsin Surgical Society
Marshfield Clinic	Wisconsin Well Woman Program (WWWP)
MetaStar, Inc.	Wisconsin Women's Health Foundation
Milwaukee Health Dept. - Breast & Cervical Cancer Awareness Program	YMCA of Metropolitan Milwaukee
Monona Public Library	Young Survival Coalition (YSC) - Milwaukee
Planned Parenthood of WI	
ProHealth Care - Regional Cancer Center	
Public Health - Madison & Dane County	
Sisters Network Inc.	
Stillwaters Cancer Support Services	

Introduction

The Wisconsin Breast Cancer Task Force (WBCTF) is a statewide coalition of breast health organizations, providers, health system representatives, and advocates. Membership in the WBCTF has doubled since the group's first meeting in 2009 and currently includes over 90 representatives from 44 local, regional, and state breast health organizations. The group has established internal working groups to address provider intervention and public education opportunities. By drawing on its collaborative strength as a group and maximizing the dedication, influence, and reputations of its participating organizations, the WBCTF seeks to address and improve breast health and breast cancer screening rates in Wisconsin.

In 2009, in response to a growing body of evidence from the scientific community, the US Preventive Services Task Force (USPSTF) published new statements calling into question the optimal ages that primary care providers should recommend regular mammograms for their female patients.^{1,2} Several other national organizations, such as the American Cancer Society and the American Academy of Family Physicians, disagreed with those recommendations and elected to maintain guidelines for breast health that differ from USPSTF's in significant ways.³⁻⁷

The Wisconsin Breast Cancer Task Force (WBCTF) convened around the concern that conflicting guidelines for breast cancer screening have caused confusion among women's health providers in this state, leading to inconsistent provision of mammography services for Wisconsin women.

Last year, the WBCTF commissioned an online survey of primary care providers in Dane County—including physicians (family medicine, internal medicine, and obstetrics/gynecologists), nurses (practitioners and midwives), and physician assistants—to collect local baseline data about attitudes, beliefs, and practices relevant to breast cancer screening. An online survey was developed by the Wisconsin Comprehensive Cancer Control Program (WI CCC Program) and disseminated using professional contact information

obtained from the Wisconsin Department of Safety and Professional Services. From January to March 2012, survey invitations and follow-up letters were mailed to approximately 1,277 primary care providers in Dane County. Responses were received from 118 of those contacted (9.2% response rate).

Findings from this survey confirm that Wisconsin health providers are indeed diverse in their breast cancer screening beliefs and recommendations. For example, findings reveal a higher than expected confidence in breast self-exam, a screening method that is considered minimally effective in reducing mortality by many breast health advocates. Data also suggest lower than expected confidence in mammography screening, especially with regard to benefits for women outside the age range of 50-75 years old. Additionally, this study reveals widely variable adherence to evidence-based screening guidelines published by national organizations, even when providers are aware of them and report them to be influential in clinical practice.

This survey has generated important baseline data regarding local provider attitudes about breast cancer screening effectiveness, barriers to screening, and patient concerns about risk factors. Findings from this report will serve to inform future WBCTF interventions to reduce breast cancer mortality in Dane County and elsewhere in Wisconsin, and also to identify key areas for more focused future research.

Background

Among women in the United States, breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer deaths. By the end of 2011, approximately 230,480 U.S. women will have been newly diagnosed with breast cancer and nearly 40,000 will have died from the disease.⁸ In Wisconsin, breast cancer was newly diagnosed in approximately 4,120 women every year from 2002-2006, while the disease killed 690 women per year during that same period.⁹ Although mammography screening is not universally beneficial and is not likely to affect the prognosis of fatally aggressive cancer cases,¹⁰ it can provide the life-saving benefit of early detection.¹¹ Screening plays an important public health role in reducing breast cancer mortality and (in conjunction with improved treatment therapies) is largely responsible for U.S. declines in breast cancer mortality that have been observed over the past 30 years.¹²

Despite mammography's proven success in detecting early-stage breast cancer and reducing breast cancer mortality over the past decade,¹³⁻¹⁶ considerable disagreement has arisen among breast health researchers and advocates in response to scientific debates about the relative harms and benefits of screening.¹⁷ As a likely result of this public controversy, screening rates have been gradually decreasing nationwide since the year 2000.¹⁸ Research has found that conflicting influential guidelines can have a "neutralizing" effect on providers, causing them to recommend screening less aggressively than they would if influential screening guidelines were concordant.¹⁹ Declining use of screening mammography reflects a general shift in public perceptions and behaviors related to screening that threatens to undermine historic gains in breast cancer survival through early detection.

Screening has diminished most significantly among women who previously used mammography the most—non-Hispanic white women between the ages of 50 and 64, women with higher educational attainment and higher incomes, and women with health insurance.¹⁸ At the same time, mammography has remained underutilized as a screening tool for underserved women⁸—those with no usual source of health care, no health insurance, and lower education and income levels, as well as recent immigrants to the US. Persistent confusion around guidelines thus threatens to exacerbate existing racial and socioeconomic disparities in breast cancer mortality. There are also ongoing organizational disagreements over the benefits of mammography for older women, although in Wisconsin, the burden of breast cancer mortality among women over 75 is historically similar to that of the 50-74 year-old age group.²⁰

Because health providers play a key role in breast cancer screening, there is a strong case to be made for ensuring that routine recommendations are consistent with evidence-based best practices. It is challenging to assess norms in practice, however, because there is relatively limited empirical evidence about physicians' beliefs and practices on this topic.²¹ According to the Wisconsin Department of Health Services, one of "the best strategies to prevent or control cancer [is] to follow the leading cancer organizations' guidelines for early detection";²² however, it is not yet known how many providers in this state do that consistently, nor whether provider beliefs about the effectiveness of screening guidelines actually translate into evidence-based practice. For example, a 2003 study of the cervical cancer screening practices of primary care providers in Dane County, Wisconsin found "great variability among clinicians in Pap smear collection and management," despite strong guidelines affirming the Pap smear as an effective screening tool.²³ Selective provider promotion of screening guidelines also has important implications for health equality. A recent study in the *Wisconsin Medical Journal* found that

despite statewide reductions in breast cancer mortality over the past decade, significant racial disparities in breast cancer mortality remain—in particular, the delayed detection of malignant breast cancer among African-American women relative to non-Hispanic white women.²⁴

In response to the lack of information about how primary care providers across the country implement screening guidelines, a team of researchers from the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC) recently conducted the first nationwide survey since 1989 examining “the breast cancer screening beliefs, recommendations, and practices of a nationally representative sample of primary care providers.”²⁵ The NIH study established a national baseline from which to monitor changes in physician behaviors and attitudes about breast cancer screening over time; however, it does not provide geographically-specific information for application to individual state contexts. Given that breast cancer incidence and mortality vary considerably throughout the United States, and also because patient barriers to screening often differ based on locality, strategies for improving breast cancer survival rates must be developed on a community-by-community basis, with specific attention to local health disparities and deficiencies in screening.

The WBCTF/WI CCC Program survey of primary care providers in Dane County was developed to supplement the aforementioned national baseline data on breast cancer screening and provide a more localized picture of challenges around breast cancer detection in Wisconsin.

Methods

Data collection for the *Dane County Survey of Primary Care Providers’ Breast Cancer Screening Recommendations and Practices* was conducted from January through March 2012. This study was approved by the University of Wisconsin Health Sciences Human Subjects Committee. The Wisconsin Department of Safety and Professional Services provided contact information for 20,497 licensed health professionals registered with the state as current medical doctors, nurse practitioners, nurse midwives, or physician assistants. Of these, 3,417 health professionals were identified as practicing in Dane County, using zip codes listed in their contact information. The Dane County list was further narrowed to specialties that are likely to refer women for mammograms on a regular basis as part of their routine practice. Specialties selected for inclusion in this group consisted of general medicine, family medicine, obstetrics/gynecology, preventive medicine, internal medicine, and related gerontology fields. Specialties such as allergists, rheumatologists, and pediatricians that were unlikely to refer women for mammograms were excluded. The final target sample for this survey was therefore restricted to 1,391 women’s health primary care providers in Dane County.

In February 2012, providers on the target list were mailed an invitation letter containing a description of the study and a web address to access the survey online. No personally identifying information was collected by the survey. Survey respondents were asked to confirm that they currently have an active practice in Dane County that includes female patients over 30. The survey was primarily multiple choice, although several questions allowed for additional qualitative input from respondents. Study coordinators received feedback from several ineligible providers who were retired, deceased, no longer practiced in Dane County, did not see female patients over the age of 30, or thought that the survey was not appropriate for them (n=45). Several mailed letters were also returned due to inadequate addresses (n=69). All of these individuals were removed from the study population, leaving an eligible sample of 1,277.

Within two weeks of the initial invitation letter mailing, a reminder letter was mailed. The online survey remained open from January 15 to March 21, so all invited respondents had 9 weeks to complete the questionnaire.

A total of 118 eligible providers responded to the survey, for a response rate of 9.2% (118/1,277).

Results

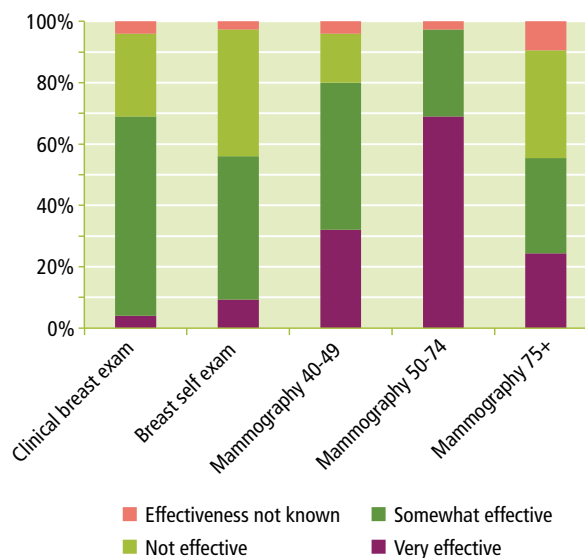
Of the eligible respondents, 48% were doctors, 30% were nurses, and 22% were physician assistants. The group contained a moderate underrepresentation of doctors and overrepresentation of nurses compared to the overall distribution of health professionals in Dane County (58% doctors, 24% nurses, and 18% physician assistants). Most (74%) respondents were employees of large health systems (medical group/health care system, health maintenance organization, or university hospital/clinic), 11% were owners or employees of physician-owned practices, 9% were employees in organizations not associated with a university (including community health clinics), and the remaining 6% claimed other affiliations or employment situations (e.g. state employees, *locum tenens*, etc.). The survey respondents were predominantly female (75%).

Thirty-five percent of respondents reported that they participate in the Wisconsin Well Woman program, which provides mammograms and other preventive health services to women with little or no health insurance coverage. Forty percent of respondents reported they did not know if they were part of the Wisconsin Well Woman program and 25% said they were not participating providers. Two thirds of respondents (66%) said their main primary care practice had agreed to implement nationally-recognized guidelines for breast cancer screening.

Primary care providers reported that they treat a diverse population of women: the average *patient* racial distribution among respondents was 76% white, 15% African American, 7% Asian, and 2% American Indian. About 13% of respondents reported treating patients of Hispanic ethnicity.

Dane County primary health care providers expressed a wide range of opinions about the effectiveness of different breast cancer screening options. Respondents were asked how effective several types of breast cancer screening modalities are in reducing mortality among average-risk women (**Figure 1**). Providers expressed highest confidence in the effectiveness of mammography for women 50-74 years old, with 97% reporting that they thought mammography was somewhat or very effective in reducing mortality for these age groups (70% responded 'very effective' and 27% responded 'somewhat effective').

Figure 1: Beliefs of primary care providers regarding breast cancer screening effectiveness, Dane County, WI, 2012



Mammography was perceived as less effective in reducing mortality in the younger age group (women between 40 and 49), with 79% of providers rating that practice as somewhat or very effective. Clinical breast exams, mammography for women over age 75, and breast self-exam were the options with lower perceived effectiveness, with 63%, 51% and 53% (respectively) reporting those methods as being somewhat or very effective in reducing mortality.

Dane County providers reported being influenced by several national cancer prevention screening guidelines (Figures 2, 3, and 4). A majority of providers (61%) reported the U.S. Preventive Services Task Force screening guidelines to be ‘most influential’ in their clinical practice. The next most influential were screening guidelines published by the American Cancer Society (ACS) and the American Congress of Obstetricians and Gynecologists (ACOG). Despite clear guidance regarding appropriate ages for average-risk women to begin routine mammograms for breast cancer screening in each of the national guidelines, Dane County providers reported overwhelmingly that they only ‘usually’ follow the guidelines they rated most influential (84% reported ‘usually’, 7% reported ‘always’, and 8% reported that they ‘sometimes’ followed their chosen most influential national screening guidelines).

Figure 2: Reported influence of breast cancer screening guidelines in clinical practice, Dane County, WI, 2012

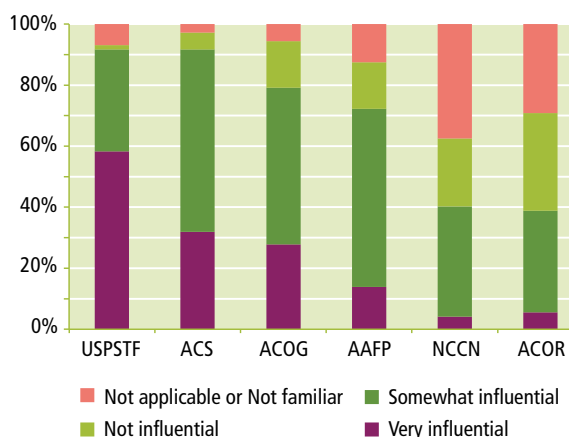


Figure 3: Percentage of primary care providers who reported each organization’s breast cancer screening guideline to be “most influential,” Dane County, WI, 2012

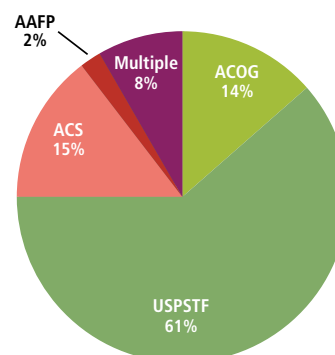
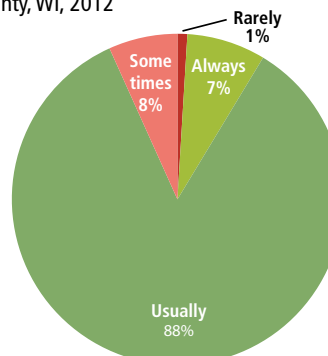


Figure 4: Adherence to breast cancer screening guidelines reported as “most influential” by primary care providers, Dane County, WI, 2012



All types of providers were supportive of recommending clinical breast exams to average risk women 40-49 years old (88%, 93%, and 85% among doctors, nurses, and physician assistants, respectively) (Table 1). Support for recommending breast self-exams was lower for this age group (47% of doctors, 57% of nurses, and 65% of physician assistants). Providers were also more cautious about recommending mammography to women 40-49 years old, with doctors being least likely (67%) and nurses most likely (80%) to recommend this type of screening to average-risk patients.

There are no discrepancies among national breast cancer advocacy organizations about the use of mammography for women in the 50-to-75 year old age group, and our survey reflected this consensus. Additionally, provider support for all of the most effective screening modalities was strong, with over 90% of providers recommending regular clinical breast exams and mammography for this age group (Table 2). Reported recommendation of breast self-exam was relatively high, considering that clinical trial evidence suggests that this mode of screening does not significantly reduce mortality. Doctors were least likely (51%) and physician assistants were most likely (68%) to recommend breast self-exam to women over the age of 50.

Table 1: Primary care providers' breast cancer screening recommendations for average risk women **40-49 years old**, Dane County, WI, 2012

	Percentage of Providers		
	MDs	Nurses	PA's
Routinely recommend mammography	67.3	80.0	75.0
Frequency of screening recommended, in months			
< 12 months	0.0	0.0	0.0
12 months	38.2	45.8	42.9
>12 to <24 months	0.0	12.5	0.0
24 months	61.8	41.7	57.1
>24 months	0.0	0.0	0.0
Routinely recommend CBE	88.2	93.3	85.0
Routinely recommend BSE	47.1	56.7	65.0

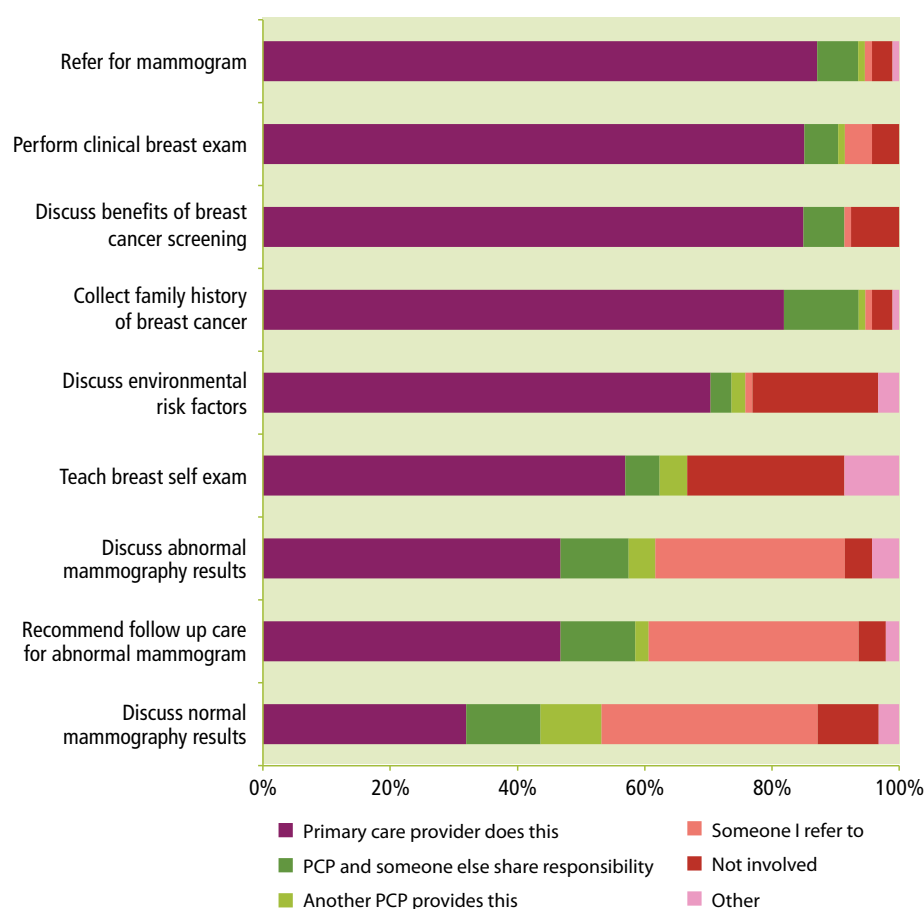
Table 2: Primary care providers' breast cancer screening recommendations for average risk women **50+ years old**, Dane County, WI, 2012

	Percentage of Providers		
	MDs	Nurses	PA's
Age 50+			
Routinely recommend mammography	98.1	96.7	100.0
Frequency of screening recommended, in months			
< 12 months	0.0	0.0	5.9
12 months	74.0	58.6	82.4
>12 to <24 months	2.0	0.0	5.9
24 months	24.0	41.4	5.9
>24 months	0.0	0.0	0.0
% of PCPs who no longer recommend mammography screening when patients reach a certain age	77.6	60.7	61.1
Age at which PCPs no longer recommend mammography screening			
< 70	0.0	0.0	0.0
70-74	10.5	5.6	0.0
75-79	39.5	44.4	66.7
80-84	26.3	27.8	22.2
85-90	2.6	11.1	0.0
90+	2.6	5.6	11.1
Routinely recommend CBE	90.4	93.3	94.7
Routinely recommend BSE	51.0	66.7	68.4

Providers disagreed about the appropriate age to stop recommending mammograms to women over the age of 50. Doctors were the most likely group to believe that there is an age at which mammography should be discontinued (78%), although a lesser majority of nurses and physician assistants also said they would stop recommending mammograms as a form of regular screening at some age (60% and 61%, respectively). Of providers who stated that they would stop recommending mammograms at any age, the modal response was 75 years old for all types of providers.

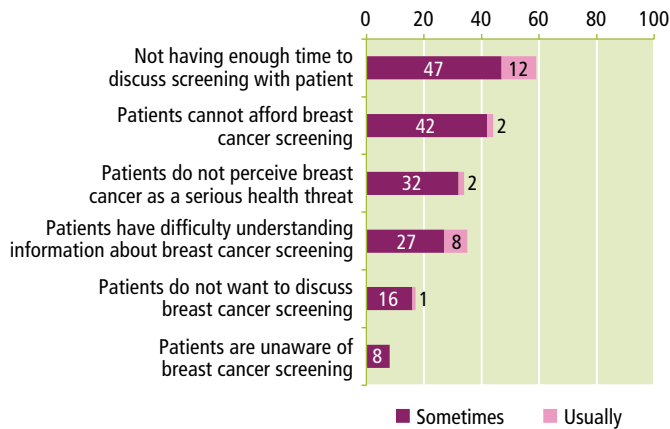
Providers reported personally providing many important types of care related to breast cancer screening. For instance, over 80% of respondents reported performing clinical breast exams, referring patients for mammography, collecting family history of breast cancer, and discussing the benefits of breast cancer screening (Figure 5). Respondents were also very likely to discuss environmental risk factors with patients (70%) and teach breast self-exam (56%). Other services, including reviewing mammography results, discussing abnormal screening findings, and recommending follow up care for a positive mammogram, were equally likely to be handled by another health professional to whom providers referred their patients. Only about 40-50% of providers reported personally providing those services.

Figure 5: Breast cancer screening services performed by primary care providers, Dane County, WI, 2012



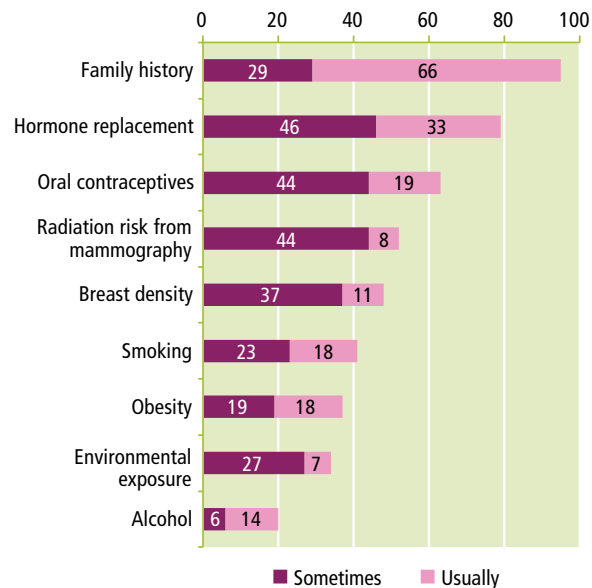
The most commonly reported barrier to providing breast cancer screening was not having enough time to discuss screening with patients (59% of providers reported encountering this problem ‘sometimes’ or ‘usually’), followed by patients’ inability to afford screening (44% of providers reported that this was ‘sometimes’ or ‘usually’ a problem) (Figure 6). Other barriers, such as patients not perceiving breast cancer as a serious health threat, patients having trouble understanding information about screening, and patients not wanting to discuss breast cancer screening were less common, with less than 40% of providers reporting that they ‘sometimes’ or ‘usually’ encounter these issues with patients.

Figure 6: Percentage of primary care providers who reported barriers to breast cancer screening, Dane County, WI, 2012



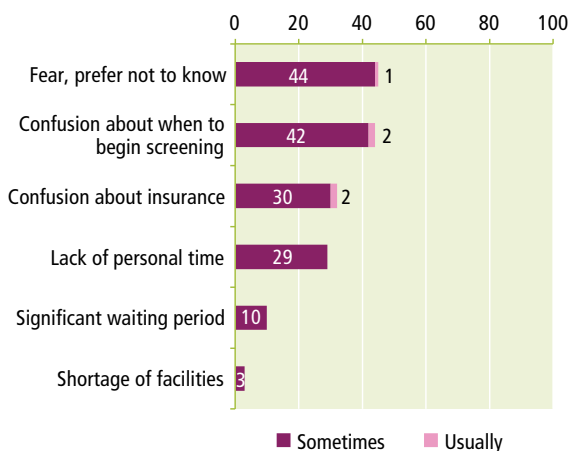
Providers reported that their patients raised a number of concerns about breast cancer risk factors (Figure 7). The most commonly reported patient concern was the relationship between family history and breast health, with 29% of providers reporting that their patients ‘sometimes’ asked about family history and 66% reporting that their patients ‘usually’ ask about it. The next most common concerns were risks related to hormone replacement therapy (79% said patients asked about it ‘sometimes’ or ‘usually’) and oral contraceptives (63% said patients asked about it ‘sometimes’ or ‘usually’). Providers also said that patients raised concerns about radiation risk from mammography (52%), breast density (48%), smoking (41%), and to a lesser extent, environmental exposure, obesity, and alcohol (less than 40% said patients ‘sometimes’ or ‘usually’ ask about these concerns).

Figure 7: Percentage of primary care providers who reported that their patients ask about factors influencing breast health, Dane County, WI, 2012



The most common barrier to breast cancer screening that providers reported observing in their patients was fear (preferring not to know about cancer), with 45% of providers reporting that they heard this concern from patients ‘sometimes’ or ‘usually’ (Figure 8). Confusion about when to begin screening (44%), confusion about insurance coverage for mammography (32%), and lack of personal time (29%) were the next most prevalent concerns that patients discussed with providers. Less commonly reported, although potentially important, patient-reported barriers to screening included significant waiting periods and shortage of facilities available to conduct mammograms—with less than 10% of providers reporting that their patients ‘sometimes’ bring up these issues.

Figure 8: Percent of primary care providers who reported that their patients mention barriers to breast cancer screening, Dane County, WI, 2012



The majority of Dane County providers reported that their institutions use full electronic medical records (89%), although a small proportion reported that their systems were in transition from paper to electronic records (8%) and 3% reported that their system uses paper or partial electronic records.

The majority of respondents (92%) reported that their institutions had a reminder mechanism to alert providers when a patient is due for a mammogram. Many providers (42%) responded that the reminder is in the form of a flag on their patient’s chart, followed by a large proportion (38%) who reported the reminder is a computer prompt or computer-generated reminder. About one-third (31%) of respondents claimed they manually check patients’ records at the time of each visit.

The majority of providers (79%) also reported that their institutions use a mechanism for reminding patients directly about regular breast cancer screening. Many institutions instruct providers (41%) to use a verbal reminder during an office visit. The next most prevalent methods reported were reminders by mail (34%), telephone reminders (24%), email reminders (16%), and via a webpage (8%).

Just over half (55%) of respondents reported they did not receive any reports about breast cancer screening rates among their patients in the past year, and two thirds of providers (65%) responded that they did not receive any performance information that would allow them to compare their breast cancer screening rates against those of other practitioners. Both of these reminder and assessment systems are recommended by federal health organizations as tools that help individual providers improve their breast cancer screening rates.^{26,27}

Discussion

Our survey provides local confirmation of two significant nationwide findings regarding breast cancer screening. Like women's health providers surveyed nationally, providers in Dane County are influenced by a variety of breast cancer screening guidelines in clinical practice. Similarly, providers in Dane County possess diverse views regarding the effectiveness of various breast cancer screening modalities.

Specifically, our results suggest that in Dane County, there is considerably more provider support for breast cancer screening of women over age 50 than for women ages 40 to 49, especially among MDs. This finding differs from the national NIH study, where only a small percentage of providers differed on those age-based recommendations. However, it is worth noting that at the time the NIH survey was conducted, all prevailing clinical guidelines recommended starting screening mammography at age 40—an age that has since become a focal point of mammography-related controversy.²¹ This particular age-related opinion gap among providers in our study suggests that the last several years of confusion about screening guidelines for women ages 40 to 49 has had a significant influence on mammography recommendations for that patient demographic. Also, although other research has suggested that obstetrician/gynecologists are more likely than other physicians in the US to promote breast cancer screening,²⁵ only 4 (3% of all respondents) providers in our sample self-identified as obstetrics/gynecology physicians, so we were unable to corroborate this hypothesis with representative data from Dane County.

Very few of the providers we surveyed reported breast self-exam to be very effective in reducing breast cancer mortality—a belief that is reflected in providers' relatively low tendency to recommend this modality in clinical practice. This behavior does not undermine the evidence base; USPSTF recommends against providers teaching breast self-exam to patients, while other leading organizations only recommend breast self-exam as a supplementary option to clinical screening.^{28,29} However, in spite of the lack of supporting evidence for breast self-exam and providers' general skepticism about its effectiveness, over half of providers surveyed reported recommending this modality to their average-risk female patients. This contradictory phenomenon was also observed in the NIH study (though to a lesser degree) and suggests that providers' beliefs are not the sole determinant of their recommendations for or against screening. Particularly when screening guidelines are ambiguous or when providers feel pressure from patients to utilize all available tests, providers may opt to over-recommend breast cancer screening as a precautionary measure—even if that decision conflicts with their personal beliefs about the efficacy of a given method.³⁰

Our study revealed that providers value breast cancer screening guidelines somewhat differently based on professional specialty; generally, however, providers in Dane County reported that USPSTF guidelines were more influential for them than ACS guidelines—the opposite of what was found nationally. It may be true, however, that a provider's personal affinity for one set of guidelines over others does not necessarily result in clinical recommendations that are consistent with those guidelines. For example, our study found that only a very small percentage of providers 'always' follow the guidelines they report as most influential. Individual patient cases as well as socio-cultural pressures can influence providers' recommendations and affect the consistency of guideline use in practice.³¹ A single set of guidelines may be inadequate to address the complexity of the provider-patient conversation about cancer screening.

Dane County providers were divided in their opinions about screening recommendations for older female patients, especially concerning mammography. A large proportion of providers said that they would not recommend any kind of breast cancer screening for a healthy 80-year-old woman, while only a few providers selected that option when the question was asked about a healthy 45-year-old patient. Almost all providers surveyed recommended a combination of clinical breast exam plus mammography as their preferred form of screening for healthy patients ages 50-65. With regard to older patients, however, providers were about equally divided in their preferences for clinical breast exam, mammography plus clinical breast exam, and no screening. This split may reflect current guideline discrepancies between USPSTF (which cites “insufficient evidence” for the benefits of mammography for women over age 75) and ACS (which does not specify an upper age at which mammography screening should be discontinued). Providers may also be seeking to avoid the risks associated with over-diagnosis and over-treatment of older patients by relying more heavily on clinical breast exam than mammography screening in this population.

Data from our survey reinforces the uniquely important role of providers in ensuring that female patients receive regular and adequate breast cancer screening. A large majority of providers we surveyed reported that they personally discuss the risks and benefits of screening with patients, perform clinical breast exam, teach breast self-exam, and refer for mammograms. Each of these clinical components represents an opportunity for providers to assess patients’ personal barriers to screening and provide relevant information and counseling to promote preventive care. Previous studies of patients have revealed that women want their primary care providers be their primary source of information about screening mammography,³² and that women who have a regular primary doctor report less confusion about mammography guidelines.³³ According to a systematic review of literature on the determinants of mammography utilization, “Improving the frequency and scope of mammography recommendation by primary care providers is the single most important direct contribution the medical community can make toward increasing mammography use.”³⁴

This is the first study conducted in Wisconsin to report on the breast cancer screening practices of PCPs and supply baseline statistics for monitoring the impact of recent controversial changes in clinical practice guidelines. Provider interpretation and implementation of prevailing guidelines will continue to play a critical role in achieving the best possible outcomes for women of all ages. Findings from this survey point to the same conclusion reached by the authors of that seminal NIH study: “Ongoing monitoring of providers’ beliefs, recommendations, and practices is needed to understand how best to incorporate the latest scientific evidence regarding breast cancer prevention and early detection into healthcare practice.”²¹

Moving forward, we invite the members of the WBCTF and other community partners to draw on information from this study in deciding how to best incorporate the latest scientific evidence regarding breast cancer prevention and early detection into the development of provider-oriented interventions. This survey has generated important data regarding provider beliefs about breast cancer screening, frequency and conditions of mammography recommendations, common barriers to screening, and frequently-reported patient concerns. These findings should inform future programs to reduce breast cancer mortality in Wisconsin, as well as identify key areas for more focused research on the determinants of breast cancer screening and opportunities for improving women’s health in this state.

Appendix: Resources for Future Action

A stated long-term goal of the WBCTF is to increase the percentage of women age 40 and older who have a routine mammogram. To that end, we hope that the results of this study will be used to inform targeted interventions to select and implement appropriate intervention strategies. In addition to the survey data, we recommend that the WBCTF utilize several valuable resources in developing and monitoring evidence-based interventions.

The first is a *Manual of Intervention Strategies to Increase Mammography Rates*, a publication that was jointly developed by the Prudential Center for Health Care Research and the CDC as a practical tool for health systems to help increase screening rates.³⁵ There is also a companion *User's Guide to the Manual*,³⁶ which is a condensed version of the larger report designed to direct readers to the most useful basic information for their organizational needs. These action-oriented resource manuals provide a variety of proven intervention strategies for increasing mammography screening rates among eligible women. Suggested interventions are divided into categories of common health system barriers that inhibit women from getting regular mammograms: provider knowledge/attitude barriers, provider skill barriers, and health care delivery system barriers.

Another resource recommended for use in developing evidence-based interventions is the Guide to Community Preventive Services' webpage on "Provider-Oriented Screening Recommendations"—a federally-sponsored summary of systematic reviews of the evidence around breast cancer screening, geared toward population-based intervention approaches.²⁶ The provider oriented section of the website provides an evidence base for interventions that include provider assessment and feedback mechanisms and provider reminder and recall systems. The website also includes a section on patient-oriented interventions, including reminders, media campaigns, group and individual education programs, options for reducing structural barriers to screening, and reducing out-of-pocket expenses for breast cancer screening.

Finally, the WBCTF may find it useful to consult Cancer Control P.L.A.N.E.T., a website supported by ACS and CDC that aims to connect public health professionals with effective comprehensive cancer control resources.³⁷ Cancer Control P.L.A.N.E.T. outlines a 5-step process for "Effective Cancer Control Planning," generates a state-specific cancer mortality profile to compare individual counties with US rates, and offers research-tested examples of intervention programs to promote breast cancer screening.

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