

Ten Year Profile of a Best Practice Program Aimed at Rural Women

Adrienne J. Lane, BSN, MSN, EdD, CNE ¹

Madeleine T. Martin, BSN, MSN, EdD ²

¹ Chair and Professor, Department of Advanced Nursing Studies, Northern Kentucky University.

lanea6@nku.edu

² Professor Emeritus, College of Nursing, University of Cincinnati, mimiquilts33@gmail.com

Abstract

Providing the best evidence available is important to insuring rural health needs are being addressed. A best practice program delivering breast cancer education and screening to rural women was designed to address the three key barriers to healthy barriers of cost, distance and fear. The purpose of this article is to describe findings and implications of a 10 year profile of this best practice program. From 2001 to 2011 over 2300 rural women received breast health education and no cost mammography through this project. Data collected in conjunction with the delivery of this best practice program was compared to national indicator data for a ten year period. When reviewing demographic data, the project women were less educated than the women identified in the CDC data. The project and CDC data were similar in terms of poverty and being uninsured. Although there were similarities in the two groups (project and CDC) in terms of poverty and lack of insurance, in the last reported year the project women achieved higher levels of mammography within the past two years even though they were overall less

educated. While such comparisons are useful, of equal significance are the differences that can occur among data sets and the importance of including multiple data sets. Forward movement in the overall national healthcare goals can best be enhanced through the dissemination of grassroots data such as found in this project. Such data have the potential to be substantially useful when planning primary and secondary care outreach programs consistent with the national healthcare agenda. Nurses have the opportunity and responsibility to advocate in the political arena and to be ever cognizant of national healthy behavior goals and objectives. Nurses have a key role in assuring optimum health care is available regardless of one's rurality.

Keywords: Rural health, Breast cancer, Cancer screening, Access to healthcare, Health policy

Ten Year Profile of a Best Practice Program Aimed at Rural Women

Health statistics and data sets are important because they can offer insight into a wide range of population based health indicators. Community based data sets provide a means to study healthcare use among population subsets and, when considered in aggregate, can assist with resource allocation and policy recommendations at local, regional and national levels. Community based data sets can provide baseline data to help providers and community planners identify areas of need. Baseline data from prevention programs are important for program planning and evaluation. Not all health data sets and statistics are freely or publicly available. Our hope is that by dissemination of this 10 year data set, knowledge gained can be reviewed along with other public health data sets to identify shifts in rural community demographics as well as the impact of national programs on rural health care availability and usage. Many committed groups, including the National Rural Health Association (NRHA), remain concerned that national health policy such as Affordable Care Act (ACA) and Healthy People 2020 will not

adequately address critical rural health concerns. Providing the best community based evidence available will be important in insuring current rural health needs are voiced.

Maximizing the percentage of women who overcome breast cancer is dependent on routine breast cancer screening. Rural women are particularly at risk because they do not take advantage of screening procedures that are commonly available to their urban counterparts. Recognizing that three key barriers to healthy behaviors are distance, fear, and cost, we developed a community oriented breast health program. The goal was to develop a best practice program that provided breast health education and screening to women in five rural, medically underserved counties in southeastern Indiana on an annual basis. Best practice is an approach to decision-making in which the clinician uses the best evidence available, in consultation with the patient and the community, to decide upon the option which best suits that patient (Cochrane, 2014). This best practice program focused on addressing the three key barriers to healthy behaviors by partnering with local health departments and other community stakeholders to overcome the barrier of fear, using mobile mammography to overcome the barrier of distance, and securing external funding to offer the service at no cost addressing the barrier of cost. The purpose of this article is to describe findings and implications of a 10 year profile of this best practice program.

Background

In November 1998 an accord was reached, The Master Settlement Agreement (MSA), between the state Attorneys General of forty-six states and the five largest tobacco companies in America (Public Health Law Center, 2010). Through this agreement states would receive more than \$206 billion over 25 years. Indiana was one of these states and received more than \$1.9 billion from the tobacco companies. In addition to funding a Tobacco Settlement Fund, money was transferred to other funds for health programs which included initiatives such as cancer

detection, women's health, etc. Health departments and community health centers across various states became involved in designing health promotion programs to address the identified health needs (Public Health Law Center, 2010)

In 2000, Indiana started making this Tobacco Settlement money available for cancer detection programs. Disbursement of money was in some cases organized through a system of grants which included those for women's health. Three nurse faculty from the University of Cincinnati, who also were residents of rural southeastern Indiana, became aware of one of the MSA grant opportunities funded through the Division of Women's Health, State of Indiana. The grant guidelines identified the purpose as targeting a women's health promotion issue. This is significant today because: 1) one of these early grants led to the data which will be reported here, 2) this project being reported demonstrates that money did go directly to Indiana rural citizens, and 3) long term impact was realized and magnified in an underserved area by leveraging the original success and securing ongoing money from other sources for over the 10 years of 2001 to 2011.

For that initial grant the project team elected to focus on breast cancer screening and education in rural medically underserved counties in southeastern Indiana. Focusing on breast cancer (BC) was supported based on the nurses' community work with the Indiana Chapter of the American Cancer Society (ACS) and local health departments. Both groups identified that there were limited efforts in the targeted geographic area to promote healthy behaviors of women regarding breast cancer risk factor awareness, early detection and screening. Over time a logic model was developed by the project team to serve as the foundation and structure for the best practice program. Further, the not-for-profit organization, Southeastern Indiana Cancer Health Network, Inc. (SEICHN), was formed by the team with the key goals of providing cancer

education and screening programs, securing funding to support the programming, and sustaining the program overtime. SEICHN had two primary activities across the ten years. One was a day long education and lunch session for rural county health department nurses on current BC risk factors and current screening guidelines and techniques. This activity also included purchasing breast self-exam (BSE) models and educational materials for each health department for ongoing educational use.

The second component, which generated the data presented here, was education and breast screening days for rural community women. The full day program, which focused on education and screening, was structured so that the project team was paired with county health department nurses to deliver the programming. These teams work together to provide a Breast Cancer Screening Program that included mobile mammography and breast health education. Mammography was provided by mobile van that came to a central location in each of the counties. The educational component included teaching Breast Self-Examination technique and providing information on Clinical Breast Exam (CBE) and breast cancer risk factors. The team modeled their definition of rural after the US Department of Agriculture Economic Research Services (USDA, ERS) and the US Department of Veterans Affairs (n.d.), Office of Rural Health (USDA, ERS, n.d.). Rural was defined as non-urban, non-metropolitan with open country-sides. Rural residents were living in areas of lower population density with some distance between homes and businesses and whose some source of income was based on farming and agriculture. Four of the five counties targeted were 60 or more miles from a major city and the nearest medical centers were 50 - 60 miles away making distance an issue. Of the counties targeted, one was fully medically served, one partially underserved and two fully underserved.

Need

Of the 250 poorest counties in America, 244 are rural (Mathis, 2003). Economic factors, cultural and social differences, educational shortcomings, lack of recognition by legislators, and isolation of living in more remote areas combined to impede primary screening and health promotion activities for rural populations. Demographics for “rural” vary over time, however some representative numbers include that in 2008 an estimated 70.5 million persons lived in rural areas (23 % of the population).

Indiana was reported to have the 10th highest overall cancer mortality rates among states and D.C. with 4,680 new cases and 900 deaths estimated for 2006 by the ACS. During the 10 year period of our project, health care needs in the five counties were met by 2 small community hospitals, 25-30 miles away whose medical staff come primarily from either Cincinnati or Louisville. As noted, the nearest medical centers are 50-60 miles away. Other agencies such as YWCA and the Indiana Rural Health Initiatives did not provide services to this part of the state. No mobile mammography units were available in the area other than that brought by this project. In two counties, free lunches were reported significantly over the state average rates of 25% (free), and 7% (reduced). Free and reduced school lunches are often noted as an acceptable indicator of poverty in an area. Switzerland County reported a mean income of 35% below \$25,000.00.

The major goals of Breast Education and Screening programs remained constant overtime and included: 1) increase the number of resources (personnel and materials) available to provide ongoing breast screening education programs; 2) increase the number of women who attended a program on BC screening and cancer risk factors; 3) increase access to mammography and CBE screening to women in the identified rural counties; and 4) increase linkages among health care

professional services and community organizations in the southeastern Indiana area.

Recruitment for programs in rural areas differs from recruitment in urban locals. This program was implemented in such a way that a wide “net” was cast to make the program known and appealing to broad cross-section the county populations including Appalachian, Hispanic and African American residents living within these rural communities. The County Health Department nurses were included to insure their commitment to the project. Churches, post offices, civic organizations and community events such as bingos were used to present publicity and information about these upcoming education programs and mammography opportunities. Programs were advertised in the local newspapers and in local restaurants which often serve as communication hubs. Those women deciding to participate in the screening were instructed to contact the Health Department by phone to register. Each was screened during the call to insure eligibility for screening mammography. At the predetermined date, women came to the scheduled site, took part in the educational program, and then went on the mobile van for the mammogram. All educational materials were from ACS and the ACS Screening Guidelines for Mammography were used for determining participant eligibility. In the event that any participant at any point in this project identified a potential breast related condition, a referral was made to an appropriate health care facility in the community.

Since its beginning, the staff utilized a data collection form to collect demographic information regarding breast cancer risk, personal and family history, and factors influencing breast cancer screening practices. The data form and process were submitted annually to the University of Cincinnati Research Institutional Review Board. When the woman arrived for screening, she was given forms to complete. The format of the data forms changed over time to incorporate the needs of our various provider and funding partners so that necessary data were

gathered while minimizing the time spent by the women. Following each screening date, the mobile screening provider agency reported the total number of women needing follow-up. Since the project team was essentially “brokers “for the services, the team did not receive results for specific women or the names of women needing follow-up.

Results

From 2001-2011 two thousand three hundred and ninety-four women completed a demographic survey as part of the registration for the SEICHN breast cancer education and screening event. The results, as displayed on Table 1, demonstrate that the typical profile of the women served is over age 50 (56%), Caucasian (94.5%), married (63%), and living with a partner (71.2 %). Nearly 1/2 of the women have either a high school or GED (49.1%), 1/3 work full-time for pay (33.4%), and over 40% are either retired or receiving no income for work.

Table 2 displays additional characteristics of participants in 2001, 2003, 2005, 2008, and 2011. The women represented in the aggregate data were from Dearborn, Franklin, Ripley, Ohio, and Switzerland counties. Data on those served by SEICHN in these counties remained fairly consistent over time. When SEICHN began their breast education and screening programs in 2001, 68% of the women who participated had never had a mammogram. In 2011 this percentage had decreased to 29%. Specifically, in 2001 two in three women had never had a mammogram and in 2011 greater than two in three women had received a mammogram. Additionally, of the women who reported previously having a mammogram in 2001, 63% reported they had not had one within the past 2 years.

By 2011, of the women who reported having previously had a mammogram, only 26% reported not having had one within the past two years. This is in stark contrast to the national rate of 15% during the program period. Throughout the program period approximately one half

of the women served had total family incomes less than \$25,000, with a range from 57 to 41 %.

Table 1

Demographics: 2001-2011 (N=2394)

<i>Characteristics</i>	<i>Percent (%)</i>
Age (Years)	
30-39	5.8
40-49	31.3
50-59	27.2
60-69	21.9
Over 70	6.9
No Response	6.9
Race	
Caucasian	94.5
African American	0.8
Hispanic	0.2
Native American	0.4
No Response	4.1
Marital Status	
Married	63.0
Widowed	9.8
Divorced	13.8
Separated	1.6
Never Married	2.5
No Response	9.3
Living with Partner	
Yes	71.2
No	26.0
No Response	2.8
Highest Education Level	
Some Grade School	2.2
Some High School	11.8
High School Graduate/GED	49.1
Some College	16.7
College graduate	8.8
Some graduate	0.5
Graduate/Professional Education	3.1
Technical School	2.1
No Response	5.7
Work Status	
Working Full time for Pay	33.4
Working Part time for Pay	15.0
Not Working for Pay	14.6
Retired	15.6
Homemaker	12.1
No Response	9.3

Further from 32% to 48 % of the women who participated in the screening program reported having no insurance. Over 55% had annual incomes of less than \$25,000 and only 60% reported they had health insurance. Of those with insurance less than half reported that the insurance paid for mammograms. Anecdotal reports from the women indicated that during the 2009 many had lost jobs with the economic downturn. From 2001 to 2011 the screening mammography follow-up rate decreased from 21% to 4% as compared to a national average of 5-10% during the same period.

Table 2

Characteristics of Rural Women Seeking Mammograms

	2001	2003	2005	2008	2011
N	141	215	177	221	257
Never had Mammogram	68%	11%	10%	34%	29%
Income <\$25,000	48%	55%	57%	41%	41%
No Mammogram in past 2 years (National rate: 15%)	63%	30%	33%	50%	26%
No Insurance (National rate for women: 11%)	N/A	40%	33%	48%	32%
Insurance pays for Mammogram	N/A	47%	40%	33%	45%
Follow Up Necessary (National norm: 5-10%)	21%	11%	1%	13%	4%
Top Reasons for Not Getting Mammogram	N/A	Cost a lot/No Insurance	Cost a lot/ Kept Forgetting	Cost a lot/No Insurance Afraid to find a problem	No Insurance/ Cost too much Never had breast cancer in family/ Too busy
Top Reasons for Participation	Time due to get a Mammogram	Free Mammo Van Nearby	Free Mammo Van Nearby	No Cost/ Free Service Easy to get to	No Cost/ Free Service Concern about health

Throughout the years the women reported the number one reason for not seeking mammography was that mammography ‘cost a lot’ and the top reasons for participating in the SEICHN program was that the program was ‘free or no cost’ and ‘easy to get to’.

Discussion

Data Set Comparisons

Since 1987, the Centers for Disease Control and Prevention (CDC) has collected selected data on the use of mammography for women 40 years of age and older (National Center for Health Statistics [NCHS], 2011, 2013; Miller, King, Joseph, & Richardson, 2012). Several of the data categories collected by the CDC are similar to those categories addressed in data collected by the SEICHN. Table 3 displays CDC data on similar characteristics as seen in Table 4 displaying SEICHN data for select years. A comparison of the SEICHN and the CDC data yields a variety of contrasts. According to the CDC in 2000 seventy % of women reported having had a mammogram within the past two years as compared to 37% of the women who participated in the SEICHN programming (Khajuria, 2013). The national rate of mammography dipped to 67% in 2010 compared to the SEICHN rate increased to 74% in 2011.

Table 3

CDC Use of Mammography and Selected Characteristics in women 40 and over

	Mammogram within last 2 years	Income <200% Poverty level for family of 2	Un-Insured	High School graduate/GED	Some College Education
2000	70%	58% (\$22478)	41%	70%	76%
2003	70%	61% (\$24030)	42%	68%	75%
2005	67%	55% (\$25510)	38%	65%	73%
2008	68%	56% (\$28102)	40%	65%	73%
2010	67%	54% (\$28432)	36%	64%	72%

Table 4

SEICHN Use of Mammography and Selected Characteristics in women 40 and over

	Mammogram within last 2 years	Family Income less than \$25,000/yr	Un-Insured	High School graduate/GED	Some College Education
2001	37%	48%	N/A	45%	26%
2003	70%	55%	40%	54% (2004)	18% (2004)
2005	67%	57%	33%	51%	33%
2008	50%	41%	48%	43%	29%
2010	44%	50%	37%	56%	36%
2011	74%	41%	32%	49%	44%

When looking at demographics, the SEICHN women were less educated than the women identified in the CDC data. For the CDC group, 64 to 70 % of the women had at least a high school diploma or GED as compared to a range of 43 to 56 % of the SEICHN women. Even though the percent of women having such education decreased over time in the CDC group from 70 to 64%, the 64% was much higher than the highest report for the SEICHN data at 56%. Further the CDC data revealed that over 70% of the women had some college compared to substantially fewer than 50% of the SEICHN women reporting any college. The SEICHN and CDC data were similar in terms of poverty and being uninsured: 40 to 60 % of the women lived in households with total incomes less than \$30,000 and 32 to 48 % reported being uninsured. Although there were similarities in the two groups in terms of poverty and lack of insurance, in the last reported year the SEICHN women achieved higher levels of mammography within the past two years even though they were overall less educated.

Ten Year Span--Intervening Factors

Across the ten years of this project, having no insurance or being underinsured remained an issue for the women who participated in the project programming. This was consistent with national reporting. According to the Kaiser Family Foundation “the number of employers who
Online Journal of Rural Nursing and Health Care, 15(2)
<http://dx.doi.org/10.14574/ojrnhc.v15i2.363>

offer health insurance has declined and costs for employer-paid health insurance are rising: from 2001 to 2007, premiums for family coverage increased 78%, while wages rose 19% and prices rose 17%. Even for those who are employed, the private insurance in the US varies greatly in its coverage; one study by the Commonwealth Fund published in Health Affairs estimated that 16 million U.S. adults were underinsured in 2003” (Schoen, Doty, Collins, & Holmgren, 2005). Interventions that reduce delays in diagnosing and treating illness have been identified as meaningful across both social and political agencies. In 2001, the major federal programs available to address access to healthcare were Medicare and Medicaid. These two programs address income issues for some but were not designed to impact non-economic barriers to healthcare such as distance and fear. By 2011, national initiatives such as Electronic Health Records were seen as having the potential to improve the delivery of health care services.

Healthy People

To coincide with the SEICHN data collection period, a look at Healthy People criteria related to breast cancer screening for 2000, 2010, and 2020 reveals a number of points of interest for the advanced practice nurse. Be aware that Healthy People was planned as a nationwide program focusing on health promotion and disease prevention. Healthy People goals were first referenced in 1979 in the MMRW which introduced a new series, "Health Objectives for the Nation." For more than 3 decades, Healthy People has established benchmarks and monitored progress over time in order to: 1) Encourage collaborations across communities and sectors; 2) Empower individuals toward making informed health decisions; and 3) Measure the impact of prevention activities” (U.S. Department of Health and Human Services [USDHHS], n.d.).

In the Healthy People 2000 (HP) report, the objective specific to breast cancer screening was to “increase the percent of women 50 years of age and older who received a mammogram

and clinical breast exam within past 2 years with a target of 60%,” noting a 1987 baseline of 25%. The CDC data reveals that the rate of mammography use in women 50 and older “within the past 2 years” in 2000 was 73.6% and 68.8% in 2010 (Miller et al., 2012). In this same 2000 report another objective was to “increase to at least 60% women aged 70 and older who have received a CBE and mammogram within past 2 years”. The 2000 CDC data revealed a rate of mammogram within the past 2 years as 74% for women 65-74 and 61.3% for women over 75 years of age and in 2010 was 71.9% and 55.7%, respectively. SEICHN data showed a reported screening rate of 37% in 2001 and 74% in 2011 for women 40 and over. While specific number comparisons are useful, of equal significance is that this highlights the differences that can occur among data sets and the importance of including as many data sets as possible in national reporting. For Healthy People 2010 the 2000 objectives were revised into a single objective, which was to “ Increase percent of women receiving mammogram within the past 2 years age 40 and over” with a target of 70%. The 2010 CDC data revealed that the target was not met and the rate for women over 40 was 67.1%. Even though the target was not met, the objective was revised in Healthy People 2020.

To ensure the needs of rural health are represented in national health planning, rural health advocates have worked diligently to outline benchmarks for rural populations in Rural Healthy People (USDHHS, 2015). Rural Healthy People documents efforts to address the health needs of rural residents. Their most recent strategic plan includes assessment of the extent to which previous Rural People objectives were met, engagement of rural stakeholders, work with the CDC’s guide for preventive services, and inclusion of rural health research.

Health care providers need to be cognizant of how the Healthy People goals have been and are being revised overtime as found in Healthy People 2000 to Healthy People 2020 and the

direction of Rural Healthy People 2020. Reflecting on the content of the Healthy People and the Rural Healthy People documents, it becomes apparent that forward movement in the overall national healthcare goals can best be enhanced through supportive evidence found in the dissemination of grassroots data. Such data have the potential to be substantially useful when planning primary and secondary care outreach programs consistent with the national healthcare agenda.

Affordable Care Act

The Affordable Care Act (ACA) was signed into law by President Obama on March 23, 2010. A section of the Act reads “Through the Affordable Care Act, women’s preventive health care services – such as mammograms, screenings for cervical cancer, and other services – are covered with no cost sharing under some health plans.” As of June 2014 the United States Preventive Services Task Force (USPSTF) 2002 guidelines, not the 2009, are followed regarding BC screening under the ACA. The 2002 USPSTF guidelines recommend screening mammography, with or without clinical breast examination, every 1-2 years for women aged 40 and older (USPSTF, 2014). In 2009, the USPSTF updated their guidelines for breast cancer screening and recommended biennial screening mammography for women 50 to 74 years of age (USPSTF, 2009). The 2009 recommendation was met with controversy from numerous groups including the American Cancer Society (Oncology, 2009). By adopting the 2002 guidelines, women 40 and older are eligible under the ACA to receive a mammogram every 1-2 years. The ACA addresses the barrier of cost by providing payment coverage for preventive services. With the implementation of the ACA, the number of uninsured Americans has decreased from 16.4% in 2010 to 13.4% in 2014 (Levy, 2014). In 2013 Health and Human Services reports that nearly 1 in 5 of those uninsured lived in rural areas (USDHHS, 2013). Our data are reflective that one or

more of uninsured Americans were in a rural area. SEICHN data reveals that 2 in 5 of those served by the project were uninsured. The ACA brought an expectation that the ability to compete in the marketplace for healthcare plans would increase for rural Americans. As the nation moves forward with ACA, it is crucial to know how the numbers of uninsured rural people has changed. Such as expectation can only be assessed if data ‘that was’ is available.

Rural stakeholders have the ability to affect the impact of the ACA through the ‘promoting promising practices by sharing successful ideas’ for insuring the ACA for rural Americans. SEICHN provided services in five rural counties through the delivery of a best practice program based on a logic model. The SEICHN program is a ‘promising practice’ that can be adapted to other initiatives for expanding or insuring ACA for rural Americans. The SEICHN program was built on addressing barriers of cost, distance, and fear. The primary focus of the ACA is ‘affordable care’, providing access to insurance to all Americans, i.e. addressing cost. A lesser ACA focus is on increasing access to care. The ACA does not specifically address the barrier of seeking healthcare from those trusted providers or the factor of fear.

Healthcare providers must be vigilant when implementing components of the ACA and be cautious of possible pitfalls. Recall that the ACA provision for providing preventive coverage for women is for ‘some health plans’. Our appraisal is that the major national initiative, ACA, primarily addresses cost and thus will be minimally effective in rural areas if the barriers of fear and distance (accessibility) are not addressed. Questions, such as how will access be increased in rural areas, what is the impact for women seeking preventive healthcare such as mammography when monitoring occurs for only those 50 to 75 or what does it mean when preventive services for ‘some health care plans’, need to be asked. Addressing healthcare needs is beyond simply providing payment. Effective strategies for increasing access, particularly for those in rural areas,

must be attained. Health indicators as found in Healthy People and Rural Healthy People need to be not only be monitored for trends in results, but the verbiage of the indicators need to be closely reviewed to assure that the data being collected is reflective of the information that is truly needed.

Implications for Practicing Nurses

The obstacles and barriers to proving health care to rural populations are not going away any time soon. Rural residents are a minority in the nation reporting only 25% of the US population. Rural residents are older (18% / 15% over 65). Rural residents are poorer (19K / 26K per capita income). Rural residents claim only 10% of the total number of physicians practicing in the US. The aging/retiring rural physician workforce and the growth in the rural elderly population are increasing the demand for primary care services in rural communities (Size, 2002).

In both rural and urban areas, nurses are often the point of contact between the patient and the health care system. This provides both challenges and rewards for the nurse. In order to maximize what resources exist, the nurse needs to be knowledgeable about availability of services and the processes necessary to access them. One approach to meeting the need for health services is a redefinition, and often expansion, of the scope and standards of practice for non-physician practitioners. A recent survey found that 41 % of rural Medicare beneficiaries saw a nurse practitioner or non MD provider for all (17 %) or some (24 percent) of their primary care in 2012 (Bloniarz & Hayes, 2013). State legislators are increasingly willing to expand Scope of Practice definitions. In the 2012, National Conference of State Legislators (NCSL) tracked 827 bills to redefine providers' scopes of practice in 29 states, 154 of which were enacted in 24 states and the District of Columbia (NCSL, 2013). Multiple studies have supported that access to and

the quality of primary care services can be improved and certain costs can be reduced with targeted expansions of scope of practice for non-physician practitioners. “The IOM also found that nurses working as care coordinators and primary care clinicians can reduce hospitalization and re-hospitalization rates for elderly patients” (Institute of Medicine, 2010). Data suggest that nurse practitioners were found to spend more time in consultation with patients and generate greater overall levels of patient satisfaction” (NCSL, 2015).

Based on the results of this project, nurses need to continue to teach the importance of breast cancer screening. Teaching women to be familiar with their own breasts and to understand the need for mammography every one to two years results in increased screening. Nurses should advocate for services that address cost, distance, and fear. Availability of mobile mammography services must be maintained. Project results support mobile mammography access increases breast cancer screening for targeted rural women. Nurses need to be ever cognizant of national healthy behavior goals and objectives and their relationships to morbidity and mortality trends. Nurses need to be aware that depending on the agency, the healthy behavior guidelines including their operationalization and review can vary across both years and agencies. Nurses need to advocate for informed trend reporting.

The goal of this project was to develop a best practice program to provide one type of health screening to a targeted five county rural health area. A logic model was developed to serve as the foundation and structure for the program. Based on ten years of data, the findings support that a best practice program in rural health includes addressing the three key barriers to healthy behaviors of cost, distance, and fear. Over time, such programs can continue to teach the value of screening in overall lowering of health care costs. Evaluation models such as the logic model are useful in guiding program development, obtaining funding sustainability and defining

measurable outcomes within community when resources are limited. Updates to “best practice” programs can help rural communities provide optimum care while identifying key steps or processes to meet the health needs of their citizens.

Summary

Providing the best evidence available is important to insuring rural health needs are being addressed. A best practice program delivering breast cancer education and screening to rural women was designed to address the three key barriers to healthy barriers of cost, distance and fear. From 2001 to 2011 over 2300 rural women received breast health education and no cost mammography through this project. Data collected in conjunction with the delivery of this best practice program was compared to national indicator data for a ten year period. According to the CDC in 2000 seventy % of women reported having had a mammogram within the past two years as compared to 37% of the women who participated in the project programming (Khajuria, 2013). The national rate of mammography dipped to 67% in 2010 compared to the project rate which increased to 74% in 2011. When looking at demographics, the project women were less educated than the women identified in the CDC data (U.S. Census Bureau, n.d.). The project and CDC data were similar in terms of poverty and being uninsured. Although there were similarities in the two groups (project and CDC) in terms of poverty and lack of insurance, in the last reported year the project women achieved higher levels of mammography within the past two years even though they were overall less educated. While such comparisons are useful, of equal significance are the differences that can occur among data sets and the importance of including multiple data sets. Forward movement in the overall national healthcare goals can best be enhanced through the dissemination of grassroots data such as found in this project. Such data have the potential to be substantially useful when planning primary and secondary care outreach

programs consistent with the national healthcare agenda. Health indicators such as those found in Healthy People and Rural Healthy People need to be not only be monitored for trends in results, but the verbiage of the indicators need to be closely reviewed and monitored to assure that the data being collected is reflective of the information that is truly needed.

In both rural and urban areas, nurses are often the point of contact between the patient and the health care system. Multiple studies support that access to quality of primary care services can be improved and certain costs can be reduced with targeted expansions of scope of practice for nurse practitioners. Nurses must advocate expansion of scope of practice and seek answers to such questions as: How will access be increased in rural areas? What is the impact for women seeking preventive healthcare such as mammography when monitoring occurs for only those 50 to 75? What are the implications of the ACA statement that ‘women’s preventive health care services are covered with no cost sharing under some health plans’? Nurses have the opportunity and responsibility to advocate in the political arena and to be ever cognizant of national healthy behavior goals and objectives and their relationships to morbidity and mortality trends. Nurses have a key role in assuring optimum health care is available regardless of one’s rurality.

Supporting Agencies

Greater Cincinnati Affiliate of Susan G. Komen Foundation, Avon Foundation Breast Care Fund, Indiana Breast Cancer Awareness Trust, Brookville Library Foundation, Ripley County Foundation, Health Foundation of Greater Cincinnati, Indiana Commission for Women

References

- Bloniarz, K., & Hayes, K. (2013). Assessing payment adequacy: Physician and other health professional services. *Medicare Payment Advisory Commission Meeting Brief*. Retrieved from http://www.medpac.gov/documents/jan_physician_meeting_brief.pdf?sfvrsn=0
- Cochrane, A.L. (2014). *Evidence-based health care and systematic reviews*. Retrieved from <http://community.cochrane.org/about-us/evidence-based-health-care>
- Institute of Medicine. (2010). *The Future of Nursing: Leading Change, Advancing Health*. Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing. Washington, DC: National Academies Press.
- Khajuria, H. (2013). QuickStats: Percentage of women aged 50–64 years who reported receiving a mammogram in the past 2 years, by health insurance status. *Morbidity and Mortality Weekly Report, (MMWR): Centers for Disease Control and Prevention, 62(32)*. 651. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6232a5.htm>
- Levy, J. (2014). U.S. uninsured rate drops to 13.4%: Uninsured rate down nearly four percentage points since late 2013. *Gallup*. Retrieved from <http://www.gallup.com/poll/168821/uninsured-rate-drops.aspx>
- Mathis, W.J. (2003). Financial challenges, adequacy, and equality in rural schools and communities. *Journal of Educational Finance, 29*, 119-136. Retrieved from <http://www.jstor.org/stable/40704199>
- Miller, J.W., King, J. B., Joseph, D. A., & Richardson, L. C. (2012). Breast cancer screening among adult women: Behavioral risk factor surveillance system, United States, 2010. *Morbidity and Mortality Weekly Report (MMWR): Centers for Disease Control and*

Prevention, 61(02), 46-50. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/su6102a8.htm?s_cid=su6102a8_w

National Center for Health Statistics (2011). *Health, United States, 2010: With special feature on death and dying*. Retrieved from <http://www.cdc.gov/nchs/data/hus/hus10.pdf>

National Center for Health Statistics (2013). *Health, United States, 2012: With special feature on emergency care*. Retrieved from <http://www.cdc.gov/nchs/data/hus/hus12.pdf>

National Conference of State Legislatures. (2013). *Scope of Practice Legislative Database, 2011-2013*. Retrieved from: <http://www.ncsl.org/issues-research/health/scope-of-practice-legislation-tracking-database.aspx>

National Conference of State Legislatures (2015). *Meeting the primary care needs of rural America: Examining the role of non-physician providers*. Retrieved from <http://www.ncsl.org/research/health/meeting-the-primary-care-needs-of-rural-america.aspx>

Oncology. (2009, December 15). *Major cancer agencies respond to USPSTF's new mammography guidelines*. Retrieved from <http://www.cancernetwork.com/oncology-journal/major-cancer-agencies-respond-uspstf%E2%80%99s-new-mammography-guidelines>

Public Health Law Center. (2010) *Master Settlement Agreement*. Retrieved from: <http://publichealthlawcenter.org/topics/tobacco-control/tobacco-control-litigation/master-settlement-agreement>

Schoen, C., Doty, M. M., Collins, S. R., & Holmgren, A. L. (2005). Insured but not protected: How many adults are underinsured? *Health Affairs*, 24(4), 289-302.

<http://dx.doi.org/10.1377/hlthaff.w5.289>

- Size, T. (2002). *Rural health can lead the way*. Retrieved from <http://www.rwhc.com/eoh02/September.pdf>
- U.S. Census Bureau. (n.d.). *Poverty thresholds*. Retrieved from <http://www.census.gov/hhes/www/poverty/data/threshld/index.html>
- U.S. Department of Agriculture Economic Research Service. (2013). *Rural classifications: What is rural?* Retrieved from <http://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural.aspx>
- U.S. Department of Veterans Affairs (n.d.). *What is "rural?"* Retrieved from: <http://www.ruralhealth.va.gov/about/rural-veterans.asp>
- U.S. Department of Health and Human Services. (2013, September 20). *The affordable care act- What it means for rural America*. Retrieved from <http://www.hhs.gov/healthcare/facts/factsheets/2013/09/rural09202013.html>
- U.S. Department of Health and Human Services. (n.d.). *About healthy people*. Retrieved from <http://www.healthypeople.gov/2020/About-Healthy-People>
- U.S. Preventive Services Task Force. (2014). *Final recommendation statement: Breast cancer: Screening, 2002*. Retrieved from <http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/breast-cancer-screening-2002>
- U.S. Preventive Services Task Force. (2009, November). *Recommendation summary: Breast cancer: Screening*. Retrieved from <http://www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/breast-cancer-screening>