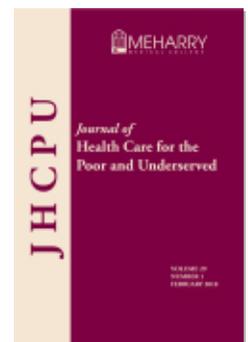




PROJECT MUSE®

Rural Cancer Screening and Faith Community Nursing in the
Era of the Affordable Care Act

Whitney E. Zahnd, Wiley D. Jenkins, Judy Shackelford, Rebecca Lobb, Jo Sanders,
Angela Bailey



Journal of Health Care for the Poor and Underserved, Volume 29, Number
1, February 2018, pp. 71-80 (Article)

Published by Johns Hopkins University Press

DOI: <https://doi.org/10.1353/hpu.2018.0008>

➔ *For additional information about this article*
<https://muse.jhu.edu/article/686955>

Rural Cancer Screening and Faith Community Nursing in the Era of the Affordable Care Act

Whitney E. Zahnd, MS
Wiley D. Jenkins, PhD, MPH
Judy Shackelford, PhD, RN
Rebecca Lobb, ScD, MPH
Jo Sanders, BSN, RN
Angela Bailey, MPH, MSEd

Abstract: Rural populations often face higher cancer rates and have lower cancer screening rates than urban populations. Screening disparities may be mediated by limited access to care, less knowledge of screening, and psychosocial factors. While the improved insurance rates and more comprehensive coverage under the Affordable Care Act may address some of these barriers, rural-urban disparities in cancer screening may not be fully attenuated. Faith-based interventions have been an effective approach to improving cancer screening among rural and underserved populations. Similarly, faith community nurses (FCNs) may be an effective agents for implementing evidence-based cancer screening strategies in rural communities. We provide a model for how FCNs standards of professional performance and practice can enable them to implement screening strategies. We also posit two recommendations of services that FCNs can provide to improve cancer screening in rural areas: educational messaging and patient navigation.

Key words: Rural health, cancer, faith community nursing, Affordable Care Act.

Rural-Urban Cancer Disparities

Nearly one in five Americans (over 59 million people) live in rural areas, which are defined by the U.S. Census Bureau as areas with low population density and less residential, commercial, and non-residential urban land use.¹ Rural residents often experience higher incidence and/or mortality rates for cervical, colorectal, and other cancers than their urban counterparts.² A myriad of overlapping factors contribute to

WHITNEY E. ZAHND is affiliated with Southern Illinois University School of Medicine, Office of Population Science and Policy. WILEY D. JENKINS is affiliated with Southern Illinois University School of Medicine, Department of Family and Community Medicine, and the Office of Population Science and Policy. JUDY SHACKELFORD is affiliated with St. John's College of Nursing. REBECCA LOBB is affiliated with Washington University School of Medicine in St. Louis, Department of Surgery, Division of Public Health Sciences. JO SANDERS and ANGIE BAILEY are both affiliated with Southern Illinois Healthcare, Community Benefits Department. Please address all correspondence to Whitney Zahnd, Southern Illinois University School of Medicine, 201 E. Madison St.; P.O. Box 19664; Springfield, IL 62794-9664. Phone: 217-545-2428; Email: wzahnd@siumed.edu.

rural-urban cancer disparities including higher rates of uninsurance/underinsurance, less access to care, poorer socioeconomic status, and higher rates of individual-level cancer risk factors (e.g., smoking, obesity).^{2,3} Furthermore, rates of cancer screening utilization—such as fecal occult blood tests and colonoscopy for colorectal cancer—are often lower in rural populations than in populations of their urban peers.⁴

Access to care, screening knowledge, and individual psychosocial factors disproportionately affect cancer screening utilization among rural populations. Rural residents often have limited supply of specialty physicians (e.g., gastroenterologists) which may affect their access to screening services (e.g., colonoscopy).³ Furthermore, rural primary care providers are less likely to recommend colorectal cancer screening than urban health care providers.⁵ This is significant as provider recommendation is identified as one of the strongest predictors of screening uptake. Rural residents often have less knowledge of screening recommendations compared with their urban peers, which may couple with psychosocial factors, including both fear and fatalism, to limit cancer screening and preventive behaviors in rural populations.⁶ Jilcott-Pitts and colleagues found that rural residents identified three fears as barriers to colorectal cancer screening—fear of colonoscopy, fear of cancer diagnosis, and fear of burdening families.⁷ One study has also shown that rural residents have more fatalistic beliefs towards cancer prevention behaviors than their urban counterparts.⁸

The Affordable Care Act (ACA) has made tremendous strides toward closing the rural-urban gap in access to care for millions of rural Americans. However, health professional shortages remain a challenge in many rural settings.⁹ Faith community nursing has the potential to fill the need for health professionals in rural areas by using evidence-based practices to reduce barriers to cancer screening (e.g., education, small media, navigation of structural barriers) for community members. The combination of the ACA and faith community nursing to use evidence-based practices for cancer screening could make a major improvement to early detection of cancer in rural communities, and to reducing the rural-urban disparity in cancer outcomes. There is a strong need to investigate ways in which faith community nursing can be scaled-up in rural areas and to evaluate the impact of this health resource.

The Potential of the Affordable Care Act to Reduce Rural-Urban Cancer Disparities

Implementation of the ACA has the potential to reduce rural-urban cancer screening disparities through increased coverage options via the marketplace and Medicaid expansion, improved guidelines for preventive services, and extended coverage for young adults. Historically, rural residents have higher rates of uninsured status than their urban peers. The enactment of the ACA has begun to attenuate this disparity in rural areas, but not all rural areas have equal access to insurance coverage. A 2016 report from the U.S. Department of Health and Human Services indicated that there was a 33% decrease in the uninsured rate in rural areas between 2013 and 2015, and an overall 8 percentage point increase in rural coverage between the first open enrollment period through early 2015.⁹ However, the magnitude of insurance coverage improvement was dependent upon whether or not a state expanded Medicaid. Nearly two

out of three (65%) uninsured rural individuals live in states that have not expanded Medicaid, and the percentage point improvement in insurance coverage was larger in rural areas in Medicaid expansion states compared with non-expansion states (9.1 vs 5.7 percentage point increases, respectively).^{1,10}

The ACA mandates that preventive services, such as cancer screenings recommended by the U.S. Preventive Services Task Force, be covered by insurance without cost to the patient. Recent research has shown that the ACA has had an effect on cancer screening and early detection rates. A study by Sabik and colleagues found that women in states that had not expanded Medicaid had lower odds of receipt of mammography and pap smears, an effect that was seen more strongly among uninsured women.¹¹ Another recent study indicated a post-ACA increase in the proportion of cervical cancer cases diagnosed at an early stage among women aged 21–25 who, due to the ACA, can remain on their parents' insurance until age 26.¹² A study by Hamman and Kapinos found that reduced out-of-pocket expense for colonoscopies for Medicare patients may have helped facilitate an increase in colonoscopy rates for men on Medicare.¹³

Evidence-based Practices to Address Rural Disparities in Cancer Screening

While the ACA mandates that recommended screening measures be cost-free to the patient, increased screening rates have yet to be realized across in all populations.¹⁴ Wider and more comprehensive health insurance coverage is not a panacea to eliminate rural-urban cancer disparities. In order to improve screening rates additional barriers to screening must be addressed, such as limited screening knowledge and individual psychosocial barriers, which may have disproportionate effect on rural residents. In clinical settings, patient navigation programs can mitigate these barriers through the evidence-based strategies of one-on-one education, patient reminders, and other approaches.¹⁵ For example, an intervention that utilized patient navigation in community health centers in rural Georgia was effective in improving colorectal cancer screening rates.¹⁶ This patient navigation program assisted patients directly through service coordination, one-on-one patient education, and aid in overcoming barriers related to literacy.

In addition to clinically-based interventions, interventions that are community-based have been effective. Of particular salience to rural populations are programs that are specifically set among faith communities. The National Cancer Institute has identified numerous research-tested intervention programs (RTIPs) that are evidence-based and have been proven effective for improving cancer screening rates.¹⁷ Some of these interventions have utilized lay advisors and religious leaders to provide culturally tailored educational messages about screening that help overcome the barriers faced by rural individuals. For example, the Witness Project, is a faith-based breast cancer education program that effectively increased screening rates in underserved, rural, African American women.¹⁸ This program engaged role models (i.e., cancer survivors) and lay health advisors to provide culturally relevant education about breast cancer screening in a church setting. Similarly, the Targeting Cancer in Blacks program utilized faith-based setting churches for workshops and presentation on cancer prevention.¹⁹

Additionally, ministers served on the program's community-based steering committee and often reinforced cancer prevention and screening messaging from the pulpit. Both of these programs facilitated improved cancer screening rates among the engaged populations and communities. Lay health advisors and ministers can effectively deliver cancer screening messages, but there may also be other faith-based individuals—such as faith community nurses—who may be able to deliver such messages with relevant clinical knowledge.

Faith Community Nurses

Faith community nurses (FCNs) have the skills, experience and mission to use evidence-based practices to improve the health of the community they serve. Faith community nursing is defined as by the American Nurses Association and Health Ministry Association as, “a specialized practice of professional nursing that focuses on the intentional care of the spirit as well as on the holistic health and prevention or minimization of illness within the context of a faith community.”²⁰[pg.55] Faith community nurses often act as personal health counselors, health educators, advocates, referral sources to congregational and community programs, and facilitators and interpreters of the relationship between faith and health. It is preferred that FCNs have a baccalaureate or higher degree in nursing and current status as a registered nurse. Currently, there is no professional certification for FCNs, but there are Foundations of FCN courses provided by the Westberg Institute that can provide registered nurses with continuing education.²¹ These are available online or provided by nursing schools or health care systems.

To our knowledge, no official, nationwide census of FCNs has been performed in the U.S., but multiple efforts have been made to characterize FCNs demographically. In 2008, the Center for Health Workforce Studies conducted a survey of more than 500 FCNs affiliated with Ascension Health, the nation's largest Catholic and non-profit health system.²² This survey found that FCNs are largely female (99%), White (93%), and 55 years of age or older (67%). Fifty-eight percent of FCNs serve Catholic congregations, and 31% serve Protestant congregations. Twenty-three percent of FCNs serve rural or small town congregations. Of those surveyed, 50% practiced in the Northeast, 27% in the Midwest and 23% in the South. In 2016, the organization, Faith Community Nursing International (FCNI) surveyed their membership.²³ The demographic findings of FCNI survey mirrored the Center for Health Workforce Studies findings in that FCNs were mostly female, White, and over the age of 55, and that a similar proportion of them served a rural congregation (22.5%). This survey found that more than half of those surveyed (57.5%) had a graduate degree, and more than two-thirds (67.5%) indicated that they assisted individuals with chronic disease.

Most commonly, FCNs are members or parishioners of the churches they serve. As we noted previously, faith community settings have been effective for cancer screening interventions.^{18,19} In that same vein, FCNs may be particularly effective conduits for educational messaging and care coordination/patient navigation related to cancer screening because of their clinical expertise and their rapport with the communities they serve. While FCNs have long provided care and counseling related to chronic

disease management and mental health, limited studies have reported provision of cancer screening education and care coordination administered by FCNs.^{22,24,25} However, FCNs are particularly well-situated to address barriers to cancer screening that remain even after the implementation of the ACA.

Conceptual Model for Faith Community Nursing Roles in Cancer Screening

We propose a conceptual model (Figure 1) for the use of FCNs to implement two evidence-based strategies for cancer screening based upon FCN standards of professional performance and practice.^{15,20} Three standards of FCN professional performance provide the foundation for this framework: culturally congruent practices, communication, and evidence-based practice and research.²⁰ Culturally congruent practices integrate the FCN competencies related to utilization of skills and tools appropriate for the culture and literacy of their population which can guide their communication—the next standard of professional performance in our model.²⁰ Communication competencies consider health literacy, resources, preferences of patients, and cultural empathy, all of which are key in addressing the barriers to cancer screening faced by rural individuals.^{7,20} Evidence-based practice and research competencies are centered on using current, evidence-based research findings to inform one's practice.²⁰ Building upon the foundation of these three standards of professional performance, FCNs can engage in the practice standards of health teaching/promotion and coordination of care that are particularly germane to the two evidence-based cancer screening strategies we identified. These practice standards are also congruent with the constructs of health promotion and access to health care proposed by Ziebarth in her conceptual model of faith community nursing as a method of holistic health care delivery.²⁶ Health teaching and health promotion competencies note that FCNs provide health teaching on

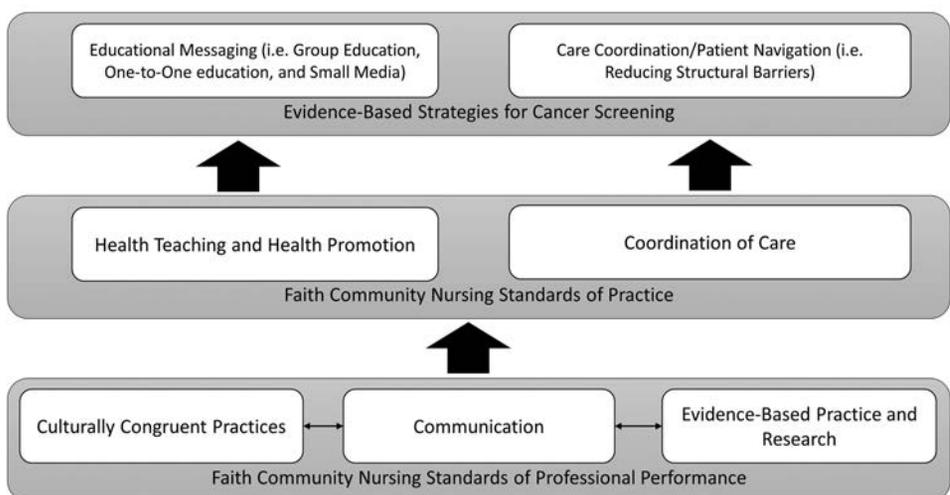


Figure 1. A Model for Faith Community Nurse Implementation of Evidence-Based Cancer Screening Strategies

healthy lifestyles and risk reducing behaviors and that this information be presented in a variety of settings.²⁰ The coordination of care competencies include implementation of a plan of care through coordination of health care and organization of a care plan.²⁰ These standards of practice are directly relevant to evidence-based strategies for cancer screening, and as such, we provide two recommendations for how these standards can be the foundation or FCNs role in these strategies.

Recommendation #1: Faith Community Nurses Can Provide Educational Messaging on Cancer Screening. Faith community nurses' standard of practice—health teaching and health promotion—directly informs evidence-based strategies for educational messaging: group education, one-to-one education, and small media. All of these are recommended strategies for breast, cervical, and/or colorectal cancer screening interventions.¹⁵ Increased coverage provided by the ACA may improve access to cancer screening for rural individuals. However, if individuals are not aware of cancer screening recommendations or experience psychosocial barriers to seeking screening, both of which are more prevalent in rural areas, then they still may not seek screening even if it is more accessible.^{5,7,8} Building on the competencies of the standards of culturally congruent practice, communication, and evidence-based practice and research, FCNs can provide health teaching and health promotion in the form of evidence-based education messaging approaches. Furthermore, 71%, 69%, and 25% of FCNs report providing information/referrals, individual health counseling, and group health counseling, respectively, indicating that such activities are common FCNs' standard of practice.²²

A case study illustrates the effectiveness of an educational messaging intervention administered by FCNs. This intervention used group education, an evidence-based strategy for breast cancer screening.¹⁵ St. John's Hospital in Springfield, Illinois received funding to provide outreach and assistance with screening in populations at risk for breast cancer.²⁷ Working with St. John's College of Nursing, the hospital targeted nine counties in Illinois within their service area to improve screening in both underserved minority and rural populations. FCNs played an instrumental role in identifying local churches that might be well served by the intervention. They effectively engaged nearly 600 women in 33 education sessions led or facilitated by FCNs who provided educational messaging on breast cancer screening guidelines. These sessions were often conducted in conjunction with other church events, which enabled the nurses to reach women who might not actively have sought such information. In a response to a question—"What is your plan for breast care after attending the education session?"—on a post-educational session survey, 28% of participants indicated that the session prompted them to schedule a mammogram, which is notable as 36% of participants also indicated that they did not receive regular mammograms.

Recommendation #2—Faith Community Nurses Can Provide Patient Navigation. The FCN standard of practice of coordination of care and corresponding competencies can be integrated into coordination of care and navigation. Patient navigation is a specific approach to reduce structural barriers, which is a recommended strategy for breast and colorectal cancer screenings.¹⁵ Although patient navigation is more commonly provided in clinical settings, FCNs have the rapport and expertise, as known members of the community with recognized clinical training, to complement services provided

in more traditional care settings. Secondly, a weakness of the ACA is that it does not mandate coverage for follow up of positive screenings, which are often considered diagnostic in nature. While individuals in any location receiving a positive screen report may require health care navigation to manage follow-up, this may be especially true of rural residents who live further from healthcare services and have lower educational attainment and lower health literacy.^{28,29} Addressing these barriers are direct ways for FCNs to apply their standards of professional performance.

Navigation and case management by nurses and other trained professionals have been proven effective in increasing cancer screening in underserved populations.³⁰ While, to our knowledge, there are no examples in the literature of FCNs providing patient navigation for cancer screening, we present a case study of an effective, community-based cancer navigation program situated in a rural community. A community-based, non-profit organization employed registered nurses to provide care navigation services to 103 women newly diagnosed with breast cancers.³¹ These nurse navigators provided support and helped cancer survivors and their families address barriers-to-care. After receipt of these services, 89% of cancer survivors strongly agreed that follow-up calls from the navigator were valuable; 86% strongly agreed that navigation services were necessary; and 82% strongly agreed that navigation services improved their cancer experience. While this case study did not utilize FCNs, nor was it relevant to the screening piece of the cancer continuum, it does indicate that patient navigation services are well received by rural cancer patients. This shows potential promise for the utilization of FCNs as community-based navigators for cancer screening.

Conclusion

While the ACA may increase access to care through improved insurance rates and more comprehensive guidelines, certain rural barriers to screening still must be addressed. Because faith-based settings have been effective for cancer screening interventions, we posit that FCNs specifically may similarly be an effective resource, but they have been underused. We provide a conceptual framework and two recommendations for how FCN standards of professional performance and practices provide the foundation for FCNs to implement evidence-based cancer screening intervention strategies. Furthermore, this framework and our subsequent recommendations are grounded in FCN standards and evidence-based strategies, which indicate that they would remain sound regardless of the health care policy climate. Should the entirety of the ACA or even parts of it be repealed, FCNs' role as implementers of evidence-based strategies to improve cancer screening use will remain valuable and potentially become more valuable. Finally, because of the paucity of research testing such recommendations, future studies should consider this framework and recommendations to test whether FCN-driven implementation of evidence-based cancer screening strategies is effective.

Acknowledgments

Wiley D. Jenkins is supported in part by a grant from the National Cancer Institute (1P20CA192987-01A1).

References

1. U.S. Census Bureau. 2010 Census urban and rural classification and urban area criteria. Washington, DC: U. S. Census Bureau, 2015. Available at: <https://www.census.gov/geo/reference/ua/urban-rural-2010.html>.
2. Singh GL, Williams SD, Siahpush M, et al. Socioeconomic, rural-urban, and racial inequalities in US cancer mortality: part I—all cancers and lung cancer and part II—colorectal, prostate, breast, and cervical cancers. *J Cancer Epidemiol*. 2011;2011:107497. Epub 2012 Feb 14.
3. Aboagye JK, Kaiser HE, Hayanga AJ. Rural-urban differences in access to specialist providers of colorectal cancer care in the United States: a physician workforce issue. *JAMA Surg*. 2014 Jun;149(6):537–43. <https://doi.org/10.1001/jamasurg.2013.5062> PMID:24740165
4. Cole AM, Jackson JE, Doescher M. Urban-rural disparities in colorectal cancer screening: cross-sectional analysis of 1998–2005 data from the Centers for Disease Control’s Behavioral Risk Factor Surveillance Study. *Cancer Med*. 2012 Dec;1(3):350–6. Epub 2012 Oct 30. <https://doi.org/10.1002/cam4.40> PMID:23342284 PMCID:PMC3544460
5. Davis TC, Rademaker A, Bailey SC, et al. Contrasts in rural and urban barriers to colorectal cancer screening. *Am J Health Behav*. 2013 May;37(3):289–98. <https://doi.org/10.5993/AJHB.37.3.1> PMID:23985175 PMCID:PMC3759820
6. Bardach SH, Schoenberg NE, Fleming ST, et al. Relationship between colorectal cancer screening adherence and knowledge among vulnerable rural residents of Appalachian Kentucky. *Cancer Nurs*. 2012 Jul–Aug;35(4):288–94. <https://doi.org/10.1097/NCC.0b013e31822e7859> PMID:21946905 PMCID:PMC3248994
7. Jilcott Pitts SB, Lea CS, May CL, et al. “Fault-line of an earthquake”: a qualitative examination of barriers and facilitators to colorectal cancer screening in rural, Eastern North Carolina. *J Rural Health*. 2013 Winter;29(1):78–87. Epub 2012 Aug 1. <https://doi.org/10.1111/j.1748-0361.2012.00424.x> PMID:23289658
8. Befort CA, Nazir N, Engelman K, et al. Fatalistic cancer beliefs and information sources among rural and urban adults in the USA. *J Cancer Educ*. 2013 Sep;28(3):521–6. <https://doi.org/10.1007/s13187-013-0496-7> PMID:23813489 PMCID:PMC3768251
9. Avery K, Finegold K, Xiao X. Impact of the Affordable Care Act coverage expansion on rural and urban populations. Washington, DC: Department of Health and Human Services, 2016. Available at: <https://aspe.hhs.gov/sites/default/files/pdf/204986/ACARuralbrief.pdf>.
10. Newkirk V, Damico A. The Affordable Care Act and insurance coverage in rural areas. Menlo Park, CA: The Henry J. Kaiser Family Foundation, 2014. Available at: <http://kff.org/uninsured/issue-brief/the-affordable-care-act-and-insurance-coverage-in-rural-areas/>.
11. Sabik LM, Tarazi WW, Bradley CJ. State Medicaid expansion decisions and disparities in women’s cancer screening. *Am J Prev Med*. 2015 Jan;48(1):98–103. Epub 2014 Oct 30.

- <https://doi.org/10.1016/j.amepre.2014.08.015>
PMid:25441234 PMCID:PMC4274203
12. Hamman MK, Kapinos KA. Affordable Care Act provision lowered out-of-pocket cost and increased colonoscopy rates among men in Medicare. *Health Aff (Millwood)*. 2015 Dec; 34(12):2069–76.
<https://doi.org/10.1377/hlthaff.2015.0571>
PMid:26643627
 13. Robbins AS, Han X, Ward EM, et al. Association between the Affordable Care Act dependent coverage expansion and cervical cancer stage and treatment in young women. *JAMA*. 2015 Nov 24;314(20):2189–91.
<https://doi.org/10.1001/jama.2015.10546>
PMid:26599188
 14. Richman I, Asch SM, Bhattacharya J, et al. Colorectal cancer screening in the era of the Affordable Care Act. *J Gen Intern Med*. 2016 Mar;31(3):315–20.
<https://doi.org/10.1007/s11606-015-3504-2>
PMid:26349953 PMCID:PMC4762811
 15. Community Preventive Services Task Force. Updated recommendations for client- and provider-oriented interventions to increase breast, cervical, and colorectal cancer screening. *Am J Prev Med*. 2012 Jul;43(1):92–6.
<https://doi.org/10.1016/j.amepre.2012.04.008>
PMid:22704753
 16. Honeycutt S, Green R, Ballard D, et al. Evaluation of a patient navigation program to promote colorectal cancer screening in rural Georgia, USA. *Cancer*. 2013 Aug 15; 119(16):3059–66. Epub 2013 May 29.
<https://doi.org/10.1002/cncr.28033>
PMid:23719894
 17. National Cancer Institute. Research-tested Intervention Programs (RTIPs). Bethesda, MD: National Cancer Institute, 2017. Available at: <http://rtips.cancer.gov/rtips/index.do>.
 18. Erwin DO, Spatz TS, Stotts RC, et al. Increasing mammography and breast self-examination in African American women using the Witness Project model. *J Cancer Educ*. 1996 Winter;11(4):210–5.
PMid:8989634
 19. Blumenthal DS, Fort JG, Ahmed NU, et al. Impact of a two-city community cancer prevention intervention on African Americans. *J Natl Med Assoc*. 2005 Nov;97(11):1479–88.
PMid:16334495 PMCID:PMC2594915
 20. American Nurses Association (ANA). *Faith Community Nursing (FCN): scope and standards of practice* (2nd ed.). Silver Spring, MD: ANA, Health Ministries Association, 2017.
 21. Westberg Institute. *Foundations of Faith Community Nursing Course*. Memphis, TN: Westberg Institute, 2017. Available at: <http://www.churchhealthcenter.org/fcn-foundations-course>.
 22. McGinnis SL, Zoske FM. The emerging role of faith community nurses in prevention and management of chronic disease. *Policy Polit Nurs Pract*. 2008 Aug;9(3):173–80. Epub 2008 Aug 18.
<https://doi.org/10.1177/1527154408322560>
PMid:18711213

23. Faith Community Nursing International. Faith Community nurse continuing education interest survey. St. Paul, MN: Faith Community Nursing International, 2016.
24. Lashley M. Creating a culture for evidence-based practice in the faith community. *J Christ Nurs*. 2013 Jul-Sep;30(3):158–63.
<https://doi.org/10.1097/CNJ.0b013e318293d2df>
PMid:23862282
25. Anaebere AK, Deliliy CR. Faith community nursing: supporting mental health during life transitions. *Issues Ment Health Nurs*. 2012 May;33(5):337–9.
<https://doi.org/10.3109/01612840.2011.631164>
PMid:22545641 PMCid:PMC3710745
26. Ziebarth D. Evolutionary conceptual analysis: faith community nursing. *J Relig Health*. 2014 Dec;53(6):1817–35.
<https://doi.org/10.1007/s10943-014-9936-x>
<https://doi.org/10.1007/s10943-014-9918-z>
PMid:25097106
27. Shackelford JA, Weyhenmeyer DP, Mabus LK. Fostering early breast cancer detection. *Clin J Oncol Nurs*. 2014 Dec;18(6):E113–7.
<https://doi.org/10.1188/14.CJON.E113-E117>
PMid:25427713
28. Charlton M, Schlichting J, Chioreso C, et al. Challenges of rural cancer care in the United States. *Oncology (Williston Park)*. 2015 Sep;29(9):633–40.
29. Zahnd WE, Scaife SL, Francis ML. Health literacy skills in rural and urban populations. *Am J Health Behav*. 2009 Sep–Oct;33(5):550–7.
<https://doi.org/10.5993/AJHB.33.5.8>
PMid:19296745
30. Lobb R, Allen JD, Emmons KM, et al. Timely care after an abnormal mammogram among low-income women in a public breast cancer screening program. *Arch Intern Med*. 2010 Mar 22;170(6):521–8. Epub 2010 Mar 16.
<https://doi.org/10.1001/archinternmed.2010.22>
PMid:20233801 PMCid:PMC2881669
31. Hook A, Ware L, Siler B, et al. Breast cancer navigation and patient satisfaction: exploring a community-based patient navigation model in a rural setting. *Oncol Nurs Forum*. 2012 Jul;39(4):379–85.
<https://doi.org/10.1188/12.ONF.379-385>
PMid:22750896