

Improving Mammogram Screening Rates in Uninsured Women

Brittanie Smith

The George Washington University

Nurs 6202: Concepts in Population Health

### Improving Mammography Screening Rates in Uninsured Women

Mammograms are critical screening tests that have a significant impact on breast cancer mortality. These screening tests can be used to identify the presence of breast cancer in its early stages, improving treatment outcomes and mortality rates (Winner & Lange, 2017). The U.S. Preventive Services Task Force (2016) recommends all women between the ages of 50-74 have a mammogram performed every two years. Despite the importance of mammography screening in women, screening rates in some populations are suboptimal. Unfortunately, uninsured women have the lowest screening rates (American Cancer Society, 2017). Improving mammography use in this population is an important goal of healthcare today. By identifying the problems that impact screening rates in this population, interventions to address these factors can be designed and implemented to improve mammography utilization.

#### **Overview: The Population and the Problem**

The population of focus is uninsured women who are patients of Sentara family practices in Hampton Roads, Virginia. Unfortunately, many individuals in Virginia and the United States remain uninsured, despite the creation of the Affordable Care Act. In 2015, an average of 11% of women in the United States were uninsured and, more specifically, 10% of women in Virginia were uninsured (Kaiser Family Foundation, 2016). Low-income women, African American and Hispanic women, as well as women who immigrated to the United States have the highest probability of being uninsured (Emerson et al., 2012; Kaiser Family Foundation, 2016). Fortunately, resources specifically designed for this population exist in Hampton Roads, and also with Sentara. Sentara offers billing assistance for uninsured patients, which includes a discount program for healthcare services (Access Partnership, 2015). In addition, CommonHelp is a

statewide resource in Virginia that assists patrons with applying for healthcare and medical assistance and the program, Every Woman's Life, offers free mammograms and cervical cancer screenings for uninsured women (Access Partnership, 2015). The amount of resources and assistance offered to uninsured women in the area helps to strengthen this population.

Unfortunately, uninsured women also face many challenges. Although there are programs in place to assist uninsured women, transport to these places may hinder women from utilizing those services. Many uninsured women may not have their own transportation and may not be able to take time off from work for appointments (Tejeda et al., 2013). Additionally, Hispanic women and immigrants comprise the highest proportion of uninsured women, creating a potential language barrier between patients and providers (Emerson et al., 2012). In addition, many uninsured women are in the low-income bracket, making it difficult to afford healthcare (Emerson et al., 2012). These individuals are more likely to be uninsured and less likely to receive preventative care (Kaiser Family Foundation, 2016). Additionally, individuals who are uninsured tend to have low health literacy levels, translating to miscommunication and misunderstandings about adequate health prevention and follow-ups (Brach et al., 2012; Tejeda et al., 2013). The problem of focus in this group is the mammography screening rates in uninsured women who are patients at Sentara Family Practices in Hampton Roads, Virginia needs to be higher to improve breast cancer mortality and patient outcomes in this population.

Many women live in the Hampton Roads area and seek healthcare at Sentara facilities. Sentara is one of the largest not-for-profit healthcare systems in the area, comprised of 3,800 healthcare providers and four medical groups in addition to several hospitals (Sentara Healthcare, n.d.). It has numerous medical offices, including specialty clinics and family

practices. The family practices in the Hampton Roads area serve a variety of patients from mixed backgrounds. The area has a higher proportion of African American females than the United States as a whole and a smaller number of Hispanic women than the United States as a whole (Susan G. Komen Tidewater, 2015). This disproportion is seen in most local areas of Hampton Roads.

### **Epidemiology, Demography, and Impact of the Problem**

As discussed previously, mammography rates in the uninsured population are well below ideal. According to the American Cancer Society (2017), only 30.7% of uninsured women in the United States aged 40 years and older had a mammogram in the past two years compared to 67.8% of insured women. In addition, only 20.9% of uninsured women aged 40 years and older had a mammogram in the last year compared to 52.5% of insured women (American Cancer Society, 2017). In Virginia, the most recent data from 2014 reveals that only 50.2% of uninsured women in Virginia had a mammogram in the past two years compared to 74.1% of insured women (American Cancer Society, 2017). In addition, a lack of insurance has been cited as a major barrier for women to receive mammograms in the Hampton Roads area (Susan G. Komen Tidewater, 2015). The data highlight the obvious disparity among uninsured and insured women regarding mammography screenings.

In regards to ethnicity, Hispanic citizens in Virginia have the highest uninsured rate at 21% compared to 14% of African Americans and 8% of Caucasians (Kaiser Family Foundation, 2015). Furthermore, a study by Morrison (2012) that focused on mammography screening rates at a clinic offering free mammograms for uninsured women found the majority of the participants to be Hispanic. Out of the 223 participants in the study, 58.7% were Hispanic, a

finding that reflected the majority of the population that sought care at the clinic (Morrison, 2012). Additionally, Hispanic women have also been found to have lower mammography screening rates than their Caucasian and African American counterparts. In 2013, only 60.8% of Hispanic women aged 40 and older had a mammogram in the last two years, compared to 64.8% of Caucasian women and 68.8% of African American women (American Cancer Society, 2016). Also, out of the 20,838 women who received a mammogram through the National Breast and Cervical Cancer Early Detection program from 2011-2015, only 7.7% were Hispanic women (Centers for Disease Control and Prevention [CDC], 2017). The statistics clearly demonstrate that Hispanic women not only comprise a large proportion of uninsured women as a whole, but also have consistently low mammography screening rates. Furthermore, the statistics provided for Virginia closely match the national data, suggesting this problem is not only local, but national as well.

Although Hispanic women have the highest rate of being uninsured and not screened, African American women comprise a more significant percentage of the women in the Hampton Roads area. They also have the second highest rate of being uninsured in Virginia, increasing their risk of missed screenings. While many factors may contribute to breast cancer mortality, it is important to note that African American women have the highest death rate from breast cancer in the United States and in the Hampton Roads area (CDC, 2016; Susan G. Komen Tidewater, 2015). Locally, the cities in Hampton Roads that have significantly less favorable breast cancer outcomes are Southampton County and Portsmouth City, where the population is mainly African American (Susan G. Komen Tidewater, 2015). A lack of insurance may play a role in the high

mortality rates of African American women with breast cancer due to missed screenings and diagnosis of the disease at more advanced stages.

A population that might also be in the area that is not identified in the available data includes non-English speaking women. As mentioned previously, women who have immigrated to the United States comprise a significant portion of uninsured women and it is likely English is not their primary language (Emerson et al., 2012). Assessing this group would be difficult due to the probable language barrier and lack of available data. The most logical method for assessing this group would be to have the Sentara family practice offices collect data in the office when women of this population had an office visit. This approach would allow the most accurate depiction of local mammography screening rates in uninsured immigrant women who received care at the Sentara family offices and also give a general idea of mammography screening rates for this population in Hampton Roads.

### **Clinical Quality Measures**

In order to assess the effectiveness of interventions designed to improve mammography screening rates, rates will be measured using a national quality measure. This measure is from the National Committee for Quality Assurance (NCQA). It is a HEDIS measure that measures breast cancer screening rates in women aged 50-74 years (NCQA, 2016). According to the NCQA website, this HEDIS measure “assesses women 50-74 years of age who had at least one mammogram to screen for breast cancer in the past two years” (NCQA, 2016). This measure focuses on the problem situation of low mammography screening rates and can be applied to the uninsured women population.

## **Root Cause Analysis**

### **Patient Factors**

#### **Lack of education regarding importance of mammography screenings**

- Patients not understanding the magnitude and purpose of screenings to detect breast cancer has been found to be a barrier to screening among uninsured women (Tejeda et al., 2013).

#### **Lack of education regarding healthcare services for uninsured individuals**

- A study examining barriers to breast cancer screening found that patients reported a lack of information about low-cost or free breast cancer screening options as a reason for not undergoing screening (De Jesus & Miller, 2015).

#### **Fear of pain or having an abnormal test result**

- Research has found that fear of pain has been a barrier to undergoing screening (Fernandez-Feito, Lana, Baldonado-Cernuda, & Mosteiro-Diaz, 2015). In addition, patients have stated a fear of dying is one of the most common reasons for women not following up after an abnormal breast exam as they do not want know what further testing may find (Tejeda et al., 2013).

#### **Lack of a regular healthcare provider**

- Women who are uninsured are less likely to have a regular healthcare provider than their insured counterparts (Kaiser Family Foundation, 2016). As a result, they do not readily have access to routine mammography screenings.

#### **Lack of provider trust**

- As a result of not having a regular healthcare provider, uninsured women may find it difficult to trust the healthcare providers they do see.

**Employment conflicts**

- While the women in this population may not have insurance, they may still be employed. Inability to have time off from work to attend doctor appointments has been found to affect screening rates (Tejeda et al., 2013).

**Health literacy**

- Low literacy levels and a lack of understanding medical information have contributed to low mammography rates in this population (Tejeda et al., 2013). In addition, individuals with low health literacy are less likely to receive preventative care (Brach, et al., 2012).

**Socioeconomic status**

- According to Davis and Chapa (2015), socioeconomic status can affect an individual's health status. Women from a low socioeconomic status are more likely to be uninsured and less likely to undergo regular mammography screening (Kaiser Family Foundation, 2016).

**Potential language barrier**

- Because a significant portion of uninsured women are Hispanic and immigrants, a language barrier between the patient and provider may cause confusion regarding the importance of mammography screenings.

**Provider Factors**



**Poor patient communication**

- Provider miscommunication negatively affects patient care and leads to poor health outcomes, such as failure to relay the significance of mammography screening (Brach et al., 2012).

**Lack of adequate follow-up**

- Interventions addressing follow-up strategies and reminders for patients that are due for mammograms have improved screening adherence (Morrison, 2015). This finding indicates that a lack of follow-up from healthcare providers negatively impacts breast cancer screening rates.

**System Factors****Lack of adequate insurance coverage options**

- Although the integration of the Affordable Care Act offered insurance options to many citizens who were not eligible before, some citizens still fall into the coverage gap where they make too much income to qualify for Medicaid, but do not make enough to afford the premiums offered through the Marketplace (Garfield & Damico, 2016).

**Scheduling conflicts**

- Inconvenient scheduling availability can interfere with scheduling patient appointments, especially if the patient is employed (Tejeda et al., 2013).

**Poor healthcare provider education**

- According to Plumb, Plumb, Roy, and Salzman (2016), education for healthcare providers does not focus enough on the principles of population health nor health prevention, leading to inadequacies in patient care.

#### **Cost of screening tests**

- Without health insurance to relieve some of the cost of mammograms, uninsured patients may not have the means to pay for the test out of pocket. The costs of the screening test have also been identified from past research as a barrier to screening (De Jesus & Miller, 2015).

#### **Availability of screening sites and adequate transportation**

- The lack of screening sites in close proximity to many women in the Hampton Roads area has been cited as a barrier to screening (Susan G. Komen Tidewater, 2015). In addition, because screening sites are not conveniently located near these women, difficulty finding transportation to those sites has interfered with mammography appointments (Susan G. Komen Tidewater, 2015).

Numerous factors impact mammography screening rates in uninsured women with a majority of factors stemming from patient elements. However, it is important to remember that patients are not the only barriers to adequate health screening. As seen above, provider and system factors significantly impact patient outcomes as well. In addition, it is even more crucial to note that some factors are linked to others, such as the lack of patient education as a result of poor provider communication, stemming from poor healthcare provider education. Furthermore, the lack of follow-up from providers encourages the lack of a regular healthcare provider for uninsured women due to insufficient communication. Addressing a select number of essential

factors to improve screening rates would be an effective strategy to reduce disparities in this population.

### **Possible Actions**

While not every factor that impacts mammography screenings for uninsured women can be addressed and resolved, there are a few key factors that can be acknowledged for further intervention. Addressing patient education would be important to improve patients' understanding of the purpose and importance of a mammogram as well as healthcare services tailored toward uninsured women. Providing education regarding mammography screenings has shown to increase screening rates in immigrant and low-income women (Dunn et al., 2017). In addition, designing appropriate follow-up programs to remind patients when they are due for a mammogram would be important to implement as well. Research has shown that simple reminders, such as a reminder card or phone call, significantly improve screening adherence (Gardner, Adams, & Jeffreys, 2013; Morrison, 2015). Follow-up reminders also encourage regular patient-provider communication to further increase screening rates.

Another important root cause to address would be the fear of pain and having an abnormal result. Research has found that providing emotional support prior to the procedure has reduced test anxiety and pain associated with mammograms, thus supporting future adherence (Fernandez-Feito et al., 2015). Also, improving provider communication with patients regarding breast cancer screening would be important to address. Because provider communication has such a significant impact on patient follow-up and can lead to poor patient outcomes, improving communication techniques can have a powerful impact on mammography screening compliance (Brach et al., 2012). Focusing on patient factors, such as education and anxiety, as well as

provider factors, such as reminders and communication, are important components to boost mammography screening rates in this population.

### **Summary**

Increasing mammography screening rates in uninsured women is pertinent to improve health outcomes for this vulnerable population. Research highlights the obvious disparity between insured and uninsured women regarding mammograms, with Hispanic and African American women affected the most. With multiple factors at play, including patient, provider, and system factors, it is key to focus on a few significant factors that can make a difference. Through patient education, anxiety reduction, clear communication, and adequate follow-up, mammography rates can be significantly improved. Society should not have to live in a healthcare system where individuals are penalized for being unable to afford health insurance. Striving to improve screening rates in this population is critical to give these women an equal fight against breast cancer as their insured counterparts.

## References

- Access Partnership. (2015). *Provider resources*. Retrieved from <http://www.accesspartnership.org/provider-resources>
- American Cancer Society. (2017). *Cancer prevention & early detection: Facts & Figures 2017-2018* [PDF document]. Retrieved from <https://www.cancer.org/research/cancer-facts-statistics/cancer-prevention-early-detection.html>
- Brach, C., Keller, D., Hernandez, L. M., Baur, C., Parker, R., Dreyer, B.,... Schillinger, D. (2012). *Ten attributes of health literate health care organizations* [PDF document]. Retrieved from [www. http://www.nationalacademies.org/hmd/](http://www.nationalacademies.org/hmd/)
- Centers for Disease Control and Prevention [CDC]. (2016). *Breast cancer rates by race and ethnicity*. Retrieved from <https://www.cdc.gov/cancer/breast/statistics/race.htm>
- Centers for Disease Control and Prevention [CDC]. (2017). *Virginia five-year summary: January 2011 to December 2015*. Retrieved from <https://www.cdc.gov/cancer/nbccedp/data/summaries/virginia.htm>
- Davis, S. L. & Chapa, D. W. (2015). Social determinants of health: Knowledge to effective action for change. *Journal of Nurse Practitioners*, 11(4), 424-429. Retrieved from <http://www.npjjournal.org/>
- De Jesus, M. & Miller, E. B. (2015). Examining breast cancer screening barriers among Central American and Mexican immigrant women: Fatalistic beliefs or structural factors?. *Health Care for Women International*, 36, 593-607. doi: 10.1080/0739932.2014.973496

- Dunn, S. F., Lofters, A. K., Ginsburg, O. M., Meaney, C. A., Ahmad, F., Moravac, M. C.,  
..., Arisz, A. M. (2017). Cervical and breast cancer screening after CARES: A community  
program for immigrant and marginalized women. *American Journal of Preventive  
Medicine*, 52(5), 589-597. Retrieved from <http://www.ajpmonline.org/>
- Emerson, J. S., Hull, P. C., Cain, V. A., Novotny, M. L., Larson, C. O., & Levine, R. S. (2012).  
Challenges and strategies in serving the uninsured in Nashville, Tennessee. *Journal of  
Ambulatory Care Management*, 35(4), 323-334. doi: 10.1097/JAC.0b013e3182649ab1
- Fernandez-Feito, A., Lana, A., Baldonado-Cernuda, R., & Mosteiro-Diaz, M. (2015). A brief  
nursing intervention reduces anxiety before breast cancer screening mammography.  
*Psicothema*, 27(2), 128-133. doi: 10.7334/psicothema2014.203
- Gardner, M. P., Adams, A., & Jeffreys, M. (2013). Interventions to increase the uptake of  
mammography amongst low income women: A systematic review and meta-analysis.  
*PLOS ONE*, 8(2), 1-12. Retrieved from <http://journals.plos.org/plosone/>
- Garfield, R. & Damico, A. (2016). *The coverage gap: Uninsured poor adults in states that do not  
expand Medicaid*. Retrieved from <http://www.kff.org/uninsured/issue-brief/the-coverage-gap-uninsured-poor-adults-in-states-that-do-not-expand-medicaid/>
- Kaiser Family Foundation. (2015). *Uninsured rates for the nonelderly by race/ethnicity*.  
Retrieved from [http://www.kff.org/uninsured/state-indicator/rate-by-raceethnicity/?  
currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D](http://www.kff.org/uninsured/state-indicator/rate-by-raceethnicity/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D)

- Kaiser Family Foundation. (2016). *Women's health insurance coverage*. Retrieved from <http://www.kff.org/womens-health-policy/fact-sheet/womens-health-insurance-coverage-fact-sheet/>
- Morrison, T. L. (2015). Response to breast health screening program at a not-for-profit clinic for working poor, uninsured, ethnically diverse women. *Journal of Clinical Nursing, 21*, 3216-3222. doi: 10.1111/j.1365-2702.2012.04205.x
- Plumb, J. D., Plumb, E., Roy, V., & Salzman, B. (2016). Chapter 4: Population health education. In Nash, D. B., Fabius, R. J., Skoufalos, A., Clarke, J., & Horowitz, M. R. (Eds.). *Population health: Creating a culture of wellness* (pp. 59-92). Burlington, MA: Jones & Bartlett Learning.
- Sentara Healthcare. (n.d.). *About Sentara healthcare*. Retrieved from <https://www.sentara.com/woodbridge-virginia/aboutus/about-sentara.aspx>
- Susan G. Komen Tidewater. (2015). *Community profile report 2015* [PDF document]. Retrieved from [www.komentidewater.org](http://www.komentidewater.org)
- Tejeda, S., Darnell, J. S., Cho, Y. I., Stolley, M. R. Markossian, T. W., & Calhoun, E. A. (2013). Patient barriers to follow-up care for breast and cervical cancer abnormalities. *Journal of Women's Health, 22*(6), 507-517. doi: 10.1089/jwh.2012.3590
- U.S Preventive Services Task Force. (2016). *Final recommendation statement breast cancer: Screening*. Retrieved from <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/breast-cancer-screening1>
- Virginia Department of Health. (2017). *Free breast and cervical screenings*. Retrieved from <http://www.vdh.virginia.gov/every-womans-life/>

Winner, M. & Lange, J. R. (2017). Screening for breast cancer. In Cameron, J. L. & Cameron, A. M. (Eds.). *Current surgical therapy* (12th ed.) (pp. 660-665). Philadelphia, PA: Elsevier.