New Hampshire
COMPREHENSIVE
CANCER
COLLABORATION
Together-Eliminating Cancer

Examining Preventive Cancer Screening Rates among Vulnerable Adults in New Hampshire

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Executive Summary

This white paper examines cancer prevention and screening rates among hard-to-reach, vulnerable populations in New Hampshire (NH). The NH Comprehensive Cancer Collaboration's (NH CCC) Equity Task Force was convened in 2015 to further the NH CCC's mission to reduce cancer incidence, morbidity, and mortality for the people of NH. The specific focus of the Task Force was to increase the percentage of average-risk NH individuals who receive screening for colorectal, cervical, and breast cancer at the recommended intervals, with an emphasis on disparate and vulnerable populations who—compared with the general population—have been shown to have lower screening rates.[1]

Photo courtesy of the website of the National Cancer Institute (http://www.cancer.gov)

Age-adjusted incidence rates from 2009 to 2013 show that each year, 138 of every 100,000 NH women will be diagnosed with breast cancer; nearly 5 of every 100,000 will be diagnosed with cervical cancer; and 40 of every 100,000 NH men and women will be diagnosed with colorectal cancer.[2]

In 2016, an estimated 2,770 NH residents will die from cancer, and approximately 8,680 new cases of cancer are expected.[3] Since 2005, cancer has been the leading cause of death in NH, accounting for approximately 25% of all deaths in the state.[2] Age-adjusted incidence rates from 2009 to 2013 show that each year, 138 of every 100,000 NH women will be diagnosed with breast cancer; nearly 5 of every 100,000 will be diagnosed with cervical cancer; and 40 of every 100,000 NH men and women will be diagnosed with colorectal cancer.[2] In 2012 alone, nearly 400 individuals in NH lost their lives to breast, cervical, or colorectal cancer.

The financial costs of cancer are high for both the person with cancer and for society as a whole. The National Institutes of Health estimates that by 2020, the overall cost of cancer in the US will be $158 billion.[4] Medical costs associated with cancer are projected to reach $124.6 billion, with the highest costs attributable to breast cancer ($16.5 billion), followed by colorectal cancer ($14 billion).[4] In 2013, 59,300 individuals in NH were treated for cancer with the total cost estimated to be $622,000.[5]

Cancer Screening, Prevention and Early Detection

Prevention and early detection through cancer screenings can prevent suffering on the part of individuals receiving a diagnosis, as well as their families and friends. The current U.S. Preventive Services Task Force (USPSTF) screening recommendations for average-risk individuals for breast, cervical, and colorectal cancer are presented in Table 1.

Table 1. USPSTF Cancer Screening Recommendations[6-8]

Breast	Mammograms beginning at age 50 and every 2 years until age 74[6]
Cervical	Pap test with cytology every 3 years for women age 21 to 65 or, for women age 30 to 65 who want longer intervals between screenings, a combination of cytology and human papillomavirus testing every 5 years[7]
Colorectal	Screening starting at age 50 years and continuing until age 75 years[8]

The USPSTF has found convincing evidence that mammography screening reduces breast cancer mortality, particularly among women aged 50 to 74.[6] Access to breast cancer screening is critical, as breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer deaths among NH females.[1] Since the implementation of widespread cervical cancer screening, deaths from cervical cancer have dramatically decreased.[7] Colorectal cancer screenings can not only detect cancer at an early-stage, but can also prevent cancer through the removal of polyps—small growths on the lining of the colon—some of which can develop into cancer over a period of years.[8] However, the benefits of screening, which include reduced mortality, morbidity, and cost, are not equally accessed by all NH residents.

It is well documented through national studies that vulnerable adults—including individuals from certain racial and ethnic groups, people living in geographically isolated areas, people with low socioeconomic status, and people with disabilities—experience greater cancer-related

health risks than the general population.[9-10] Lower income was also associated with a statistically significant increased risk of distant-stage breast cancer among women.[11] Low socioeconomic status is associated with late stage diagnosis for all cancers.[11] To reduce these cancer-related health disparities, health care and preventive screening services must be accessible to all NH residents, regardless of social, educational, employment, or disability status—factors commonly referred to as social determinants of health.

Social Determinants of Health

According to *Healthy People 2020*, "Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[12] Health disparities, related to cancer and other conditions, stem from systematic discrimination or exclusion of individuals or groups based on characteristics such as income, age, race, ethnicity, education, gender, sexual orientation, geographic location, and disability.[13] Table 2 summarizes some population characteristics of NH adults relative to the social determinants of health.[14]

Table 2. Sociodemographic Characteristics of NH Population (%)[10,14]

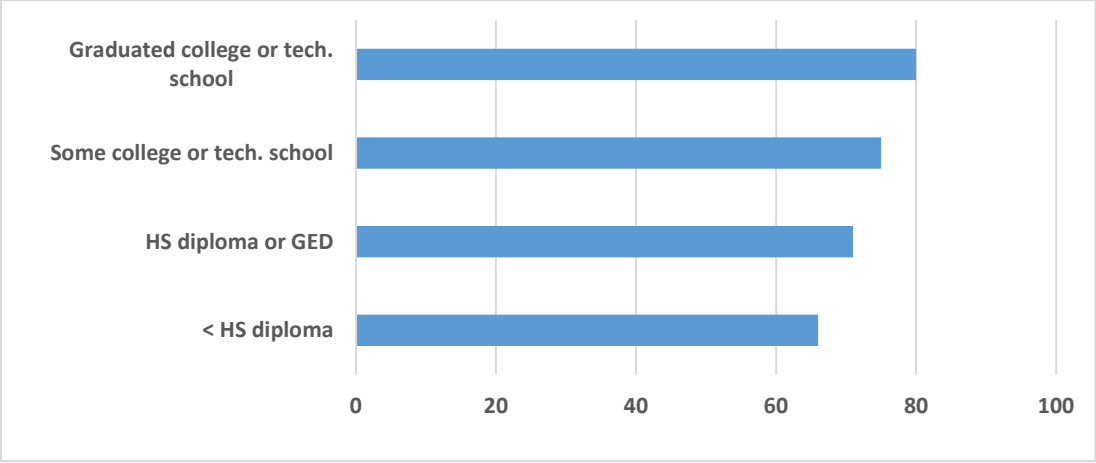
Female	51	[14]
Racial/Ethnic Minority	9	[14a]
With a disability	18	[11]
No high school diploma	6	[14b]
Persons in poverty	8	[14c]
No health insurance	7.5	[14d]
Resident of rural county	39.7	[14e]

While each of the sociodemographic groups presented in Table 2 is at risk for health inequity, social vulnerability is often compounded when multiple social determinants interact. For example, 48% of NH adults with disabilities report having an annual household income less than $25,000, compared to 14% of NH adults without disabilities.[11] These and other sociodemographic factors contribute to cancer-related health disparities that are evident when examining preventive cancer screening rates and cancer prevalence among adults in NH.

Cancer Screening Rates by Sociodemographic Group

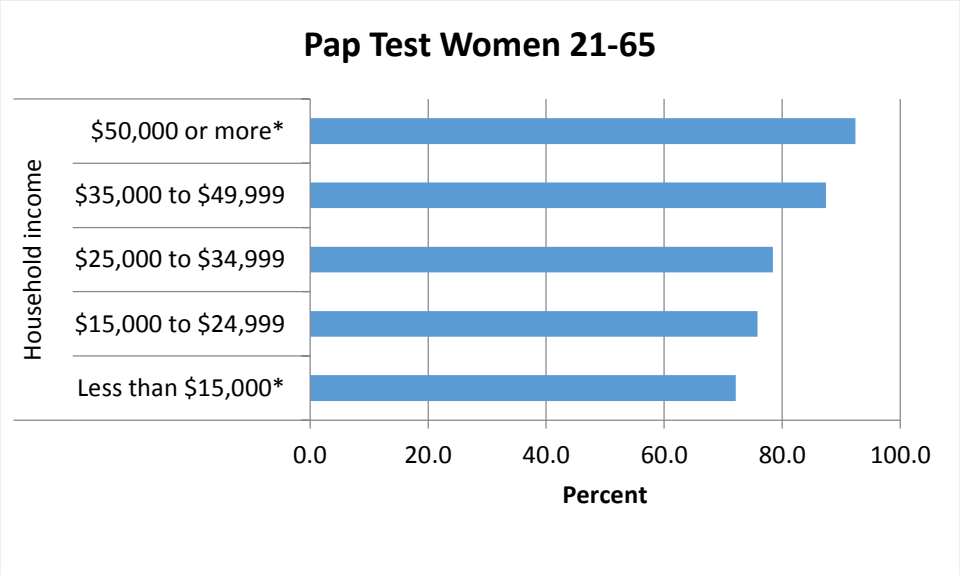
In NH, health disparities in preventive cancer screening rates vary by sociodemographic status. For example, nearly 80% of NH adults who graduated from college or technical school reported being up to date with colorectal cancer screening, compared to only 66% of NH adults who had not graduated high school.[1] Figure 1 shows these and related statistics.

Figure 1. Colorectal Screening by Education Level among Adults Age 50 and Over, NH, 2015[1]



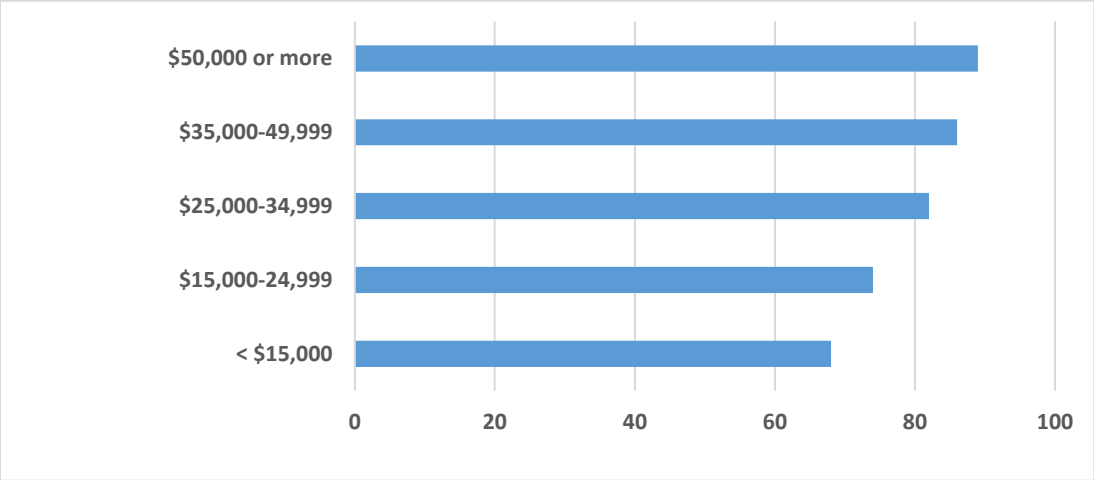
Income levels are also associated with the likelihood of receiving recommended cancer screening. Figure 2 shows the income levels of NH women, ages 21 to 65, who report having a Pap test within the past three years. Approximately 92% of women with household incomes of $50,000 or more per year reported having a Pap test, compared to 72% of women whose income was less than $15,000 per year.[1]

Figure 2. Pap Test by Income Level among Women Ages 21-65, NH, 2015[1]



A similar disparity in breast cancer screening rates was found among women of differing income brackets. Figure 3 shows that approximately 89% of NH women of the highest income level reported having a mammogram in the past 2 years, which dropped to 68% among women of the lowest income level.[1]

Figure 3. Mammography Screening by Income, Ages 50-74, NH, 2015[1]



Pushing Past Data Limitations to Understand Disparities in Cancer Screening Rates

Because NH is a small state, certain groups are difficult to characterize and understand with currently available data sources. For example, Table 2 refers to demographic modeling which estimated that in 2015, 9% of the NH population would be comprised of individuals who were either Hispanic and/or a race other than white. Available data sources, such as the state conducted CDC Behavioral Risk Factor Surveillance System (BRFSS)[15] telephone survey, do not provide meaningful or reliable information about these minorities, because they do not reach enough people from these groups to draw accurate conclusions. Furthermore, small numbers of the NH minority population fall within the age when cancer screenings are recommended, thus they would not be asked about screenings in the survey.

In an effort to advance health equity, by improving knowledge about cancer screening among multiple disparate groups, the NH Comprehensive Cancer Collaboration's (NH CCC) Equity Task Force took an innovative approach to "finding" some of the people missed by existing data sources. The Equity Task Force focused on employment as a key social determinant of health and used industry and occupation data to identify workplaces that might serve as fruitful intervention sites for promotion of preventive cancer screening messages, in a way that includes disparate populations.

Using the Employment Sector to Address Cancer Screening Disparities in NH

Employment is a key social determinant of health because individuals' occupation and employment status are often linked to education level, income, and likelihood of having health insurance coverage. First, educational attainment (how many years of education an individual has completed) shapes occupational opportunities and earning potential. Second, approximately 89% of NH residents receive health insurance through an employer.[16] Table 3 indicates the number of employed and unemployed adults who have insurance in NH. About 12% of employed adults 18 to 64 years of age do not have health insurance.[16] Uninsured adults

are less likely to receive preventive care and services, and often go without needed medical care due to cost.[17]

Table 3. Health Insurance Coverage Status and Type by Employment Status, NH, 2014[16]

	NH Estimate
Total population	1,045,088
In labor force	729,751
Employed	694,396
18 to 64 years	652,280
With health insurance coverage	577,166 (88%)
No insurance coverage	75,114 (12%)
65 years and over	42,116
With health insurance coverage	41,670 (99%)
No insurance coverage	446 (1%)
Unemployed	35,355
18 to 64 years	33,939
With health insurance coverage	22,582 (67%)
No insurance coverage	11,357 (33%)
65 years and over	1,416
With health insurance coverage	1,416 (100%)
No insurance coverage	0

The Equity Task Force examined employment data as a way to delve deeper into the prevalence of cancer screening rates and explore opportunities to reach vulnerable populations. In 2011, NH began asking industry and occupation questions in the BRFSS survey. The questions were asked again from 2012-2016. Survey respondents were asked about the kind of work they do and what kind of business or industry they represent.[18] Then, preventive cancer screening rates were analyzed for each of the primary industries (see Figures 4 through 6). Focusing on breast, cervical, and colorectal cancer screenings, the Task Force considered industries with both male and female workers across the span of adulthood, with the highest likelihood of social diversity. Figure 4 shows the percentage of employed and self-employed NH residents ages 50-75 who did not have colorectal screening as recommended by the USPSTF.[18] Compared with the state rate of 73.7% of people meeting the recommended colorectal cancer screening, only 39% of those working in accommodation and food services met the recommendation.

Figure 4. Employees or self-employed NH residents (age 50-75) who did not have colorectal screening as recommended by the USPSTF[19]

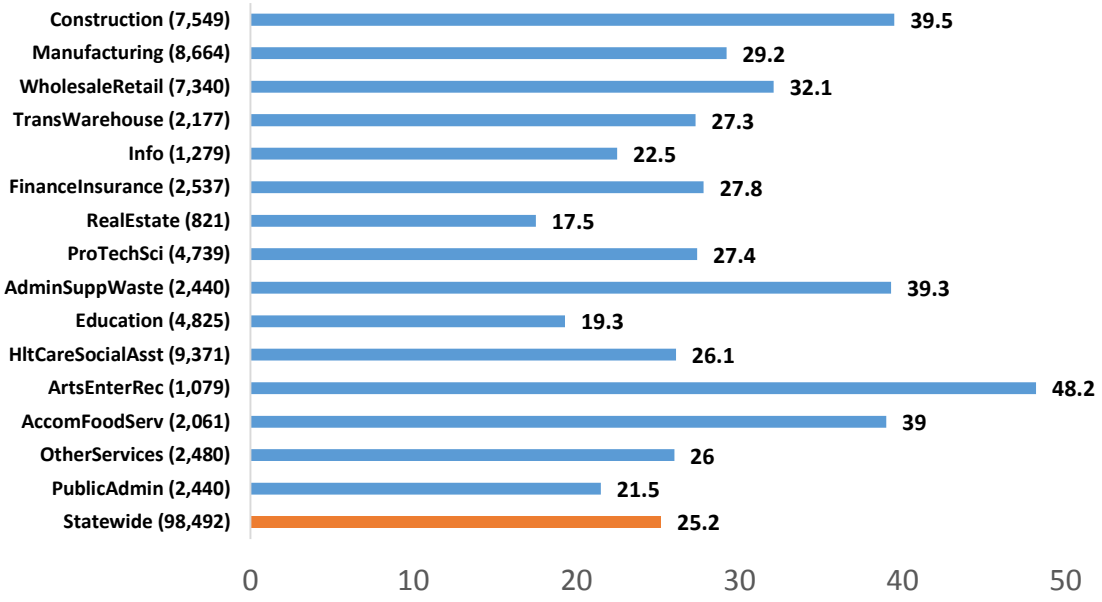


Figure 5 shows the percentage of employed or self-employed NH women ages 50-74 who did not have a mammogram in the past two years.[18] The least likely to have had a mammogram within the last two years were women employed in arts, entertainments, and recreation (48%); accommodations and food services (39%); and wholesale retail sectors (31%).[18]

Photo courtesy of Pixabay Photos

Figure 5. Employed or self-employed NH women (age 50-74) who did not have a mammogram in the past two years[18]

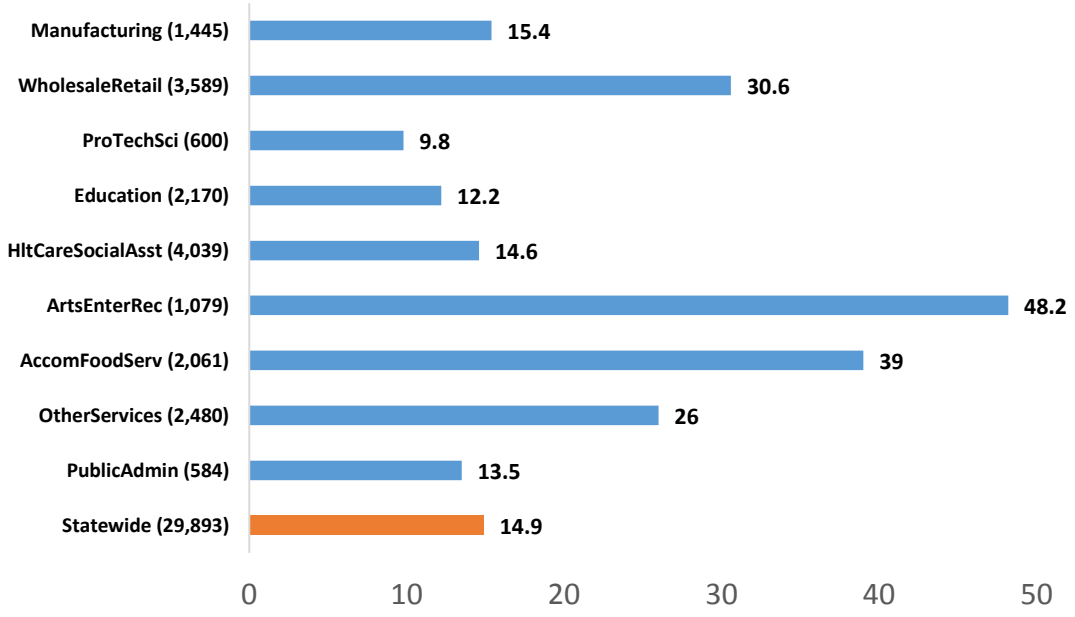
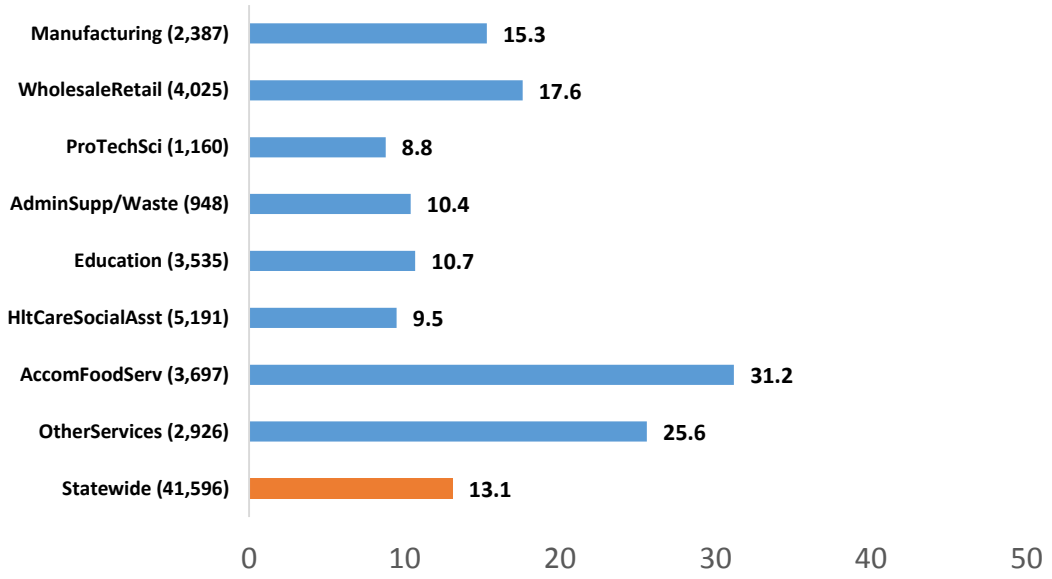


Figure 6 shows the percentage of NH women ages 21-65 (employed or self-employed) who did not meet the USPSTF recommendation for Pap tests. Women working in accommodation and food services were the least likely to have met the recommended Pap test screening (31%), followed by those working in other services (26%) and wholesale retail (18%).[18]

Photo courtesy of Pixabay Photos

Figure 6. Employed or self-employed NH women (age 21-65) who did not meet USPSTF Pap test Recommendations[18]



Ultimately, the restaurant and food service industry was selected as the target for intervention because of the demonstrated disparities in screening rates, relatively high prevalence of social diversity, and because the Task Force felt it had the most in-roads and the greatest opportunity to connect with small business owners and managers of restaurants. Table 4 shows a demographic summary of the NH restaurant industry.[18]

Assessing Cancer Screening among Restaurant Industry Employees

To better understand how to improve screening rates in the restaurant industry, the Task Force conducted focus groups/interviews with restaurant owners and managers. The Task Force explored questions about the worksite culture related to health discussions, insurance coverage, sick time, willingness to participate in health promoting activities (e.g. hang posters, provide information), and demographics of the employee population. Outreach was conducted to over 24 restaurants in the North Country, and six restaurants in southern NH. Each of the southern NH restaurants was managed by native Spanish or Portuguese speakers, and interviews were conducted in their preferred language, by bilingual interviewers. Eleven owners and managers from both regions

Table 4. Demographics of NH Restaurant Industry[18]

	Restaurant & Food Services	
	18-64	50+
Percent of population	29	13
Female	56	61
Non-White	7	3
Hispanic	4	2
With a disability	7	14
Less than HS diploma	14	19
No health insurance	33	25

contributed information through individual interviews or focus group participation. The restaurants ranged in size from small, with five or fewer employees, to larger, with 50+ employees in establishments that include lodging. Many of the restaurants were family-owned and managed; a few had family member employees only, and the remainder had a mix. In the North Country, where many businesses are seasonal, a higher turnover of employees was cited.

Focus Group Findings

Observations and concerns about employee health

The theme 'reactive rather than preventive' regarding employee health was mentioned repeatedly by owners/managers in both regions. Employee access to healthcare, or health insurance, was the major concern for employers. Employees were often categorized as two different groups: those with insurance and those without. Financial stress, poverty and limited health choices were also described. Employers noted that many employees have tight budgets, and some live from paycheck to paycheck. Financial and workplace stress make it difficult to prioritize health. Employees may fail to implement healthy behaviors because there are other immediate needs and stressors.

Employer Health and Wellness Policies and Initiatives

Employers' perception of promoting health and wellness within their businesses was construed narrowly to mean, offering health insurance to their employees. While many cannot afford to offer insurance to their full- or part- time employees, they care about the health of their employees, recognize the benefits of insurance, and hope that employees are able to access it through the Health Insurance Marketplace.

Employers described policies to schedule around employees' medical appointments, as requested by the employee. Employees can take time off, or they can get someone to cover their shift. Owners and managers have a difficult time scheduling their own appointments, due to the demands of running a business. Employers are not able to pay workers to go to appointments or get screened if they are part-time and/or earn an hourly wage.

Some employers have tried health initiatives like discounted gym memberships or reduced employee meal prices for salads, but employees often did not choose to participate in such efforts. Employers have sometimes placed informational flyers provided by insurance companies in break rooms, but they have not noticed any impact resulting from these.

Promoting Cancer Screening Among Employees

Although employers recognize the benefits of cancer screening, they cited several challenges inherent to promoting screening among employees. Primary among them is the fact that health in general and cancer, specifically, is not something that is discussed at work.

Employers perceived that employees' concerns about getting cancer were low, so promotion of preventive cancer screening has not arisen as a priority issue. Employers do care about the

health of their employees, and some managers have discussed healthy living and weight with employees on a personal basis, but have not included cancer screenings in their conversations. Overall, employers' approach to health is that they hope employees are taking care of themselves.

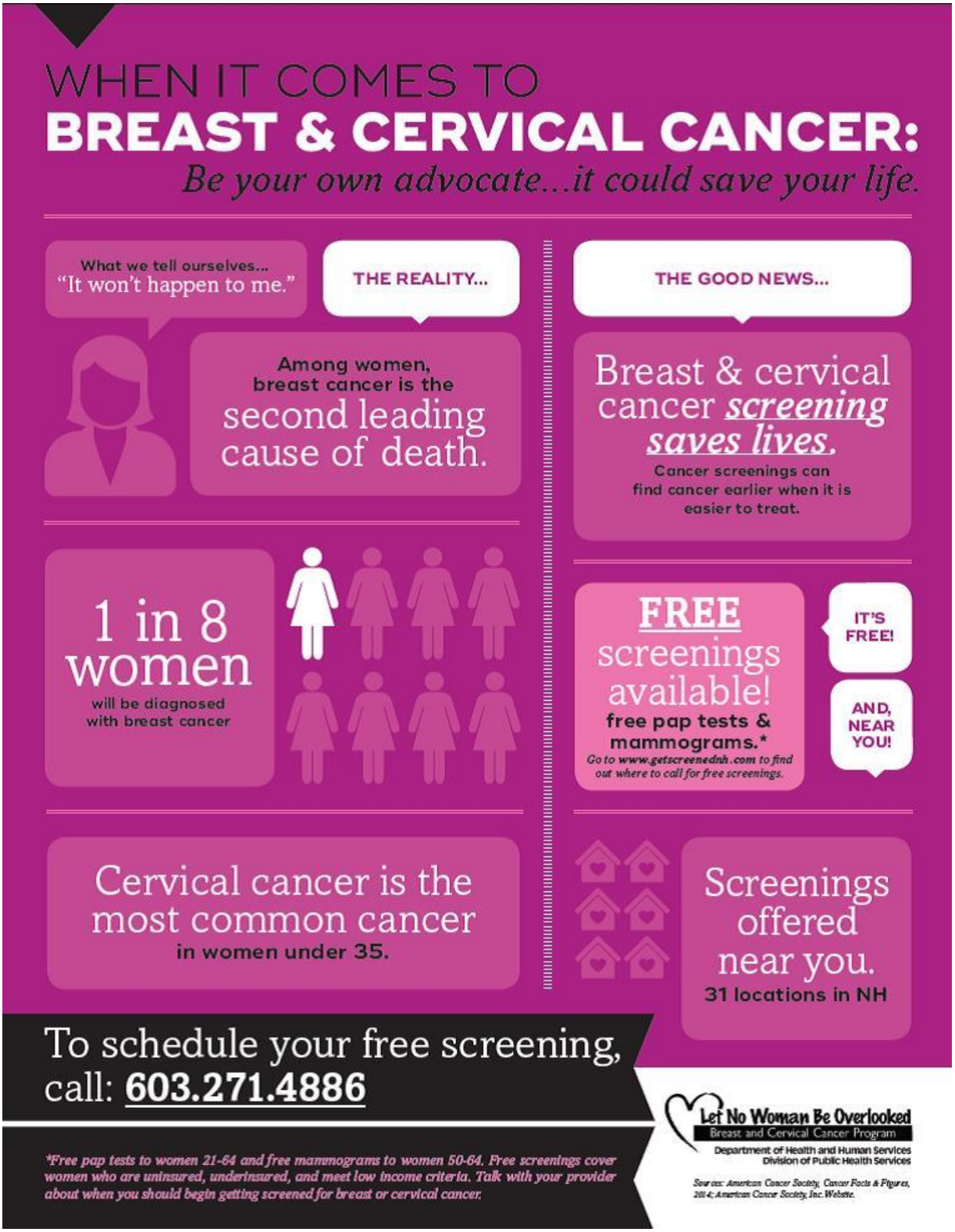
Employers were open to and interested in the need for education and awareness about the importance of cancer screenings and how to access care. People understand that cancer is "bad", and many of the managers recognized the benefit of helping employees learn about cancer screening, especially if FREE services are available. Sharing printed information was identified as the most achievable action step, although there was concern that this approach would have limited impact, unless it provided information about availability of free services, and the messages targeted their employees.

Employers were struck by the fact that restaurant industry workers are screened less frequently than the general population. If employees knew this, it might resonate with some of them and motivate them to get screened. Messaging that promotes screening as lifesaving also resonated as being impactful. Information needs to be accessible during the hours restaurant employees work, such as late at night, or in digital form since many are using their mobile devices. It is important to fit the schedule and lifestyle of restaurant employees. Offering incentives is motivating for most people and using the word 'free' will capture people's attention. Employers noted that anything that could be done to help employees save money would help. The examples of insurance companies paying their members to take a health survey or to go get screened were upheld as ideal examples.

Conclusion: Equity Task Force Action Steps

As a result of the Industry and Occupation data findings regarding cancer screenings, the Equity Task Force launched two initiatives to reach a disparate population in the work place. This was used in conjunction with the focus group findings to tailor the messages of the initiative to be most impactful to restaurant and food industry employees. The first step was the development of an infographic poster by the NH Breast and Cervical Cancer Program. The Infographic, shown in Figure 7, was distributed in both English and Spanish to 1,500 restaurants statewide with a cover letter to restaurant owners, asking them to display the posters in a location where employees would be most likely to view it. The letter also included an explanation that their employees were less likely to get screened, compared to workers in other industries, since in the focus groups, the industry owners/managers reported that this information was compelling to them. The infographic includes a call to action and provides a NH toll-free number to call and inquire about free breast and cervical cancer screenings offered in the state.

Figure 7. Breast and Cervical Cancer Screening Program infographic mailed to restaurant managers statewide



CUANDO SE TRATA DE EL CÁNCER DE SENO (MAMA) Y CUELLO UTERINO:
Sea su propio defensor...podría salvar su vida.
Lo que nos decimos a nosotros mismos...
"Esto no me va a suceder a mí".
LA REALIDAD...
Entre las mujeres, el cáncer de seno (mama) es la
Segunda causa principal de muerte.
1 de cada 8 mujeres
será diagnosticada con cáncer de seno (mama).
El cáncer de cuello uterino es el tipo más común de cáncer
en las mujeres menores de 35 años.
LAS BUENAS NOTICIAS...
Las pruebas de detección de cáncer de seno (mama) y cuello uterino salvan vidas.
Las pruebas de detección de cáncer pueden encontrar el cáncer más temprano cuando es más fácil de tratar.
¡Las pruebas de detección son GRATIS!
Pruebas de Pap y mamografías gratis*
Ir a www.getscreenednh.com para averiguar dónde llamar para las pruebas de detección gratuitas.
¡ES GRATIS!
¡Y CERCA DE USTED!
Las pruebas de detección se ofrecen cerca de usted.
31 lugares en NH
Para programar su prueba de detección gratuita, llame al: 603.271.4886
*Pruebas de pap gratuitas a las mujeres de 21-64 y mamografías gratuitas a mujeres de 50-64. Las pruebas de detección gratuitas cubren mujeres que no tienen seguro médico, el seguro médico no cubre todos sus costos, y califica por bajos ingresos. Hable con su proveedor acerca de cuando debe empezar a hacerse pruebas de detección para el cáncer de seno (mama) o cuello uterino.
Ninguna Mujer Desatendida
Programa de cáncer de mama y cervicouterino
Departamento de Salud y Servicios Humanos
División de Servicios de Salud Pública
Fuentes de información: Sociedad Americana del Cáncer, Hechos y Cifras del cáncer; Sociedad Americana del Cáncer, Inc. Sitio Web.

Second, the Equity Task Force recognized from the focus group conversations that restaurant owners and managers shared concerns about the high rate of smoking among their employees. Task Force members reached out to the NH Tobacco Prevention and Cessation Program, which provided its smoking cessation poster, that also included a call to action to enroll and receive free cessation products. The poster was mailed out with the Breast and Cervical Cancer Program infographic (Figure 7).

Cancer screening rates in NH are above the national average and paint an inaccurate picture of subpopulations in the state. Because NH lacks data by race and ethnicity, disparities have historically been described by income, education, and geography. Although these are important findings, these data do not easily lend themselves to a targeted intervention. By looking at cancer screening rates by industry and occupation, the Task Force found a disparity that could be impacted by a worksite intervention. Further examination through focus groups with industry owners and managers provided information of cultural norms and the worksite environment. Through understanding the food service industry, the Task Force learned that:

- Employers care about their employees, but have limited resources to address employee health.
- Employers perceive that employees are more reactive than proactive in addressing health needs.
- Many employees lack health insurance.
- Free screening and other health-related services would likely be well-received.

This information was used to target cancer screening messages and free services to a disparate population of restaurant and food industry employees in NH.

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http://factfinder.census.gov

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