

# Research Brief



## Comparisons of Provider Access and Screenings for Women with and without Disabilities in Kentucky

---

Research Brief  
Winter 2021

Jeremiah Pope, MSPM  
Danielle Augustin, MS, CHWC, CHES®  
Lindsey Mullis, MS  
Jennifer Piatt, PhD  
Tiffany Opii, MPA  
Chithra Adams, PhD

Improving the rate of routine medical screenings for cervical and breast cancer among women living with a disability requires a better understanding of the access barriers to these services. To better understand this phenomenon, we examined public data from the Behavioral Risk Factor Surveillance System (BRFSS) of the Centers for Disease Control and Prevention (CDC) for the state of Kentucky. Results indicate that women with a disability, when compared to those without a disability, over the age of 50 were more likely to be unable to see a healthcare provider due to the barrier of cost. Regardless of age, women with disabilities were more likely to answer “yes” when asked if they had previously been diagnosed with cancer compared to non-disabled women. Future studies should examine more specifically what barriers exist for women with disabilities to obtain routine and early screenings for cancer.

## Introduction

The state of Kentucky has one of the highest rates of disability in the nation with 35% of the adult population having a disability, compared to 26% of adults nationally (CDC, 2019). In Kentucky, 37.3% of women experience a disability, which is higher compared to their male counterparts at 33%. Additionally, in Kentucky, the cancer prevalence for women with disabilities, excluding skin cancer, is 11.9% compared to only 6.6% of women without a disability.

Early breast and cervical cancer detection increase survival rates and positive health outcomes, however women with disabilities are less likely than women without disabilities to receive screenings as recommended by the medical community. In Kentucky, screening disparities for this population are amplified by the fact that 14.3% of the people living with a disability are in rural Appalachia, where access to health services is decreased and the cancer death rate is as high as 35% in certain areas of the region (Appalachian Regional Commission, 2017). A number of factors, including social determinants of health, societal norms, financial barriers, and environmental factors all contribute to decreased screening rates within this female population (Akinlotan et al., 2017, Magasi, et al., 2019a &b, Merten et al., 2015, Reis, et al., 2015, Todd & Stuijbergen, 2012, Yankaskas, et al., 2010).

There is currently no data in Kentucky related to the barriers women with disabilities experience when accessing breast and cervical cancer screenings. The Kentucky Inclusive Health Collaborative (KIHC) at the University of Kentucky's Human Development Institute has partnered with the Kentucky Women's Cancer Screening Program (KWCSPP) to identify these access barriers for women with disabilities across the state, laying the foundation to address cancer screening disparities in this population.

## Methods

The 2019 Behavioral Risk Factor Surveillance System (BRFSS) was used to examine the research questions (CDC, 2019). The BRFSS is an annual, landline and cellular telephone-based self-reported survey of noninstitutionalized United States adults aged  $\geq 18$  years. The data were obtained from the CDC website where it is accessible to the public. For the purpose of our analysis, we only included respondents who resided in Kentucky and identified as women. Respondents were identified as persons with a disability if they responded "yes" to having one or marked one of the six disability types listed (e.g., hearing, vision, cognition, mobility, self-care, or independent living). While the BRFSS categorize age in a five-year step-wise format (e.g., 25-29, 30-34), in this analysis age data was dichotomized into five groups (18-34, 35-49, 50-64, 65-79,

80+ years). This categorization allowed for sufficient respondent numbers in each category.

In addition to the demographics of age and disability, seven items from the BRFSS were examined to answer the overarching research question. Descriptive statistics were conducted with 4 of the items regarding time in years. For the questions that asked about the length of time, "About how long has it been since you last visited a doctor for a routine checkup? [A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.]," "How long has it been since you had your last mammogram?," "How long has it been since you had your last Pap test?," and "How long has it been since you had your last H.P.V. test?," responses were recoded to compare the average difference in lengths of times between the five groups. The BRFSS responses to these items included: less than 12 months ago, 1 year but less than 2 years ago, 2 years but less than 3 years ago, 3 years but less than 5 years ago, 5 or more years ago, and don't know/not sure. In this analysis the midpoint of the response was assigned for each response, so less than a year ago was assigned 0.5, 1 year but less than 2 years ago was assigned 1.5, 2 years but less than 3 years ago was assigned 2.5, 3 years but less than 5 years was assigned 4, and 5 or more years was assigned 6. Respondents who chose 'don't know/not sure' were not assigned a number and not included in the analysis. The proportion of the population within each age group was used to calculate the overall weighted average.

## Results

Approximately, 1,999 women in the Kentucky sample had a disability based on answering "yes" to one or more of the 6 disability questions. A smaller proportion of women with a disability in most age groups reported having a relationship with a health care provider compared to women without a disability. Overall, a larger proportion of women with a disability reported a time within the past 12-months where they could not visit the doctor because of cost. However, women with a disability reported a shorter average length of time since their last doctor visit than women without a disability.

Table 1 displays the proportion of women that answered affirmatively when asked "Do you have one person you think of as your personal doctor or health care provider?" In every age group, with the exception of the 50-64 age group, a smaller proportion of women with a disability had a person that they think of as their personal doctor. Within the population of 50 to 64-year-olds, a larger proportion of women with a disability (90%) reported that they have a person they think of as a health care provider than women without a disability (86%). The overall percentage is the same for women with and without a disability because the 50-64 and 65-74 age groups had a larger number of respondents and there were very few respondents in the 18-34 age group with a disability, thereby skewing the overall percentage towards the older age groups.

**Table 1.**  
**Able to identify personal doctor or health care provider**

Age	Percentage that answered yes	
	Disability	No Disability
18-34	65%	71%
35-49	82%	83%
50-64	90%	86%
65-79	86%	92%
80+	83%	89%
Overall	85%	85%

Table 2 shows the proportion of women with and without a disability that answered yes when asked “Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?” Overall, a larger percentage of women with a disability (14%) answered yes to this question than women without a disability (8%). When disaggregated by age group, the 50-64 age group had the greatest differences in the percentages between women with a disability (19%) and women without a disability (9%).

**Table 2.**  
**Unable to see a doctor in the past 12 months due to cost**

Age	Percentage that answered yes	
	Disability	No Disability
18-34	6%	14%
35-49	10%	11%
50-64	16%	9%
65-79	8%	3%
80+	9%	1%
Overall	14%	8%

Table 3 shows the mean responses to the question “About how long has it been since you last visited a doctor for a routine checkup? [A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition].” Overall, the average length of time since the last routine checkup was shorter for women with a disability (Mean=0.79) than for women without a disability (Mean=0.96).

**Table 3.**

**Time since last visit to a doctor for a routine check-up [A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.]**

	Approx. Avg. Year	
Age	Disability	No Disability
18-34	1.30	1.49
35-49	0.97	1.06
50-64	0.73	0.89
65-79	0.69	0.68
80+	0.73	0.60
Overall	0.79	0.96

A larger proportion of women with a disability reported being told they have cancer. The average length of time since the last mammogram was shorter for women with a disability than for women without a disability. However, women with a disability had a longer average length of time since the last Pap test and last H.P.V. tests than women without a disability. Tables 4 -7 display responses for questions about screenings and screening results.

Table 4 shows the proportion of women with and without a disability that answered yes when asked if they were “(Ever told) you had any other types of cancer. [Not skin].” Overall, a larger proportion of women with a disability (16%) reported being told that they have cancer than women without a disability (9%). When disaggregated by age group, a larger proportion of women with a disability in every age group reported being told they have cancer than women without a disability.

**Table 4.**

**Has or had any type of cancer. [Not skin]**

	Percentage that answered yes	
Age	Disability	No Disability
18-34	5%	2%
35-49	12%	4%
50-64	15%	8%
65-79	18%	16%
80+	22%	18%
Overall	16%	9%

Table 5 shows the mean responses to the question “How long since you had your last mammogram?” Women with a disability reported a longer length of time since their last mammogram (1.70) than women without a disability (1.33). When disaggregated by age group, women with a disability reported a longer time since their last mammogram than women without a disability in most age groups, with the exception of the 18-34 age group where the average length of time since the last mammogram was shorter for women with a disability (1.55) than for women without a disability (1.62). The greatest differences occurred in the 65-79 and 80 and above age groups.

**Table 5.**  
**Length of time since last mammogram**

Age	Avg. # of Years	
	Disability	No Disability
18-34	1.55	1.62
35-49	1.72	1.58
50-64	1.52	1.21
65-79	1.59	1.18
80+	2.49	2.08
Overall	1.70	1.33

Table 6 shows the mean responses to the question “How long has it been since you had your last Pap test?” Overall, women with a disability reported a longer average length of time since their last Pap test (3.20) than women without a disability (2.25). When disaggregated by age group, means were higher for women with a disability in every age group.

**Table 6.**  
**Length of time since last Pap Test**

Age	Avg. # of Years	
	Disability	No Disability
18-34	1.28	1.12
35-49	2.48	1.84
50-64	2.86	2.08
65-79	3.72	3.16
80+	4.96	4.19
Overall	3.20	2.25

Table 7 shows the mean responses to the question “How long has it been since you had your last H.P.V. test?” for women with and without a disability by age group. Overall, women with a disability reported a longer average length of time since their last H.P.V. test than women without a disability (Mean 2.56 and respectively 2.09). The greatest difference in responses occurred within the subgroup of women aged 80 and above, the mean was 3.97 for women with a disability as opposed to 2.25 for women without a disability.

**Table 6.**  
**Length of time since last Pap Test**

Age	Avg. # of Years	
	Disability	No Disability
18-34	1.51	1.52
35-49	2.29	2.15
50-64	2.69	2.33
65-79	3.25	2.74
80+	3.97	2.25
Overall	2.56	2.09

## Discussion

The descriptive results revealed that regardless of age, women with a disability were more likely to be diagnosed with cancer compared to women without a disability. Furthermore, a higher percentage of women with a disability aged 50 and higher could not see a physician within the past 12 months due to the cost when compared to the same age group of women living without a disability. It is unclear exactly what barriers are in place, beyond the cost of a physician visit, to why women with disabilities are experiencing higher cancer diagnosis rates.

In order to further explore the barriers experienced by women with disabilities when it comes to cervical and breast cancer screenings, through the partnership with KWCS, the KIH team at HDI has created an assessment to learn about the lived experiences and access barriers of women with disabilities. This assessment will be disseminated through various partners across the state targeting women who experience poverty and are uninsured. Additionally, women who complete the assessment will also have the opportunity to connect to services provided by KWCS including screenings, diagnostics, and treatment. The data collected will then help inform strategic initiatives aimed at decreasing access barriers, increasing screening rates for this population, and thus addressing the startling cancer disparities experienced by women with disabilities.

**HDI Research Briefs highlight the research activities at the Human Development Institute. Projects at HDI focus on building inclusive communities, addressing inequities, and improving the lives of all people who experience disability across the lifespan. Research priority areas include: early childhood and education, leadership and self advocacy, employment, health, universal design and assistive technology. With each issue of HDI Research Briefs, we will provide a cross-section of HDI's research activities. The brief reports are intended to give an overview of the research and emphasize the implications of the studies.**

**You can find more examples of our research at [www.hdi.uky.edu](http://www.hdi.uky.edu)**



# References

- Akinlotan, M., Bolin, J. N., Helduser, J., Ojinnaka, C., Lichorad, A., & McClellan, D. (2017). Cervical cancer screening barriers and risk factor knowledge among uninsured women. *Journal of Community Health, 42*(4), 770-778. doi:10.1007/s10900-017-0316-9
- Appalachian Regional Commission (ARC; 2017). Creating a culture of health in Appalachia: Disparities and bright spots, key findings, Appalachian Kentucky. Washington, DC: ARC. Retrieved from ARC website [https://www.arc.gov/wp-content/uploads/2020/06/Health\\_Disparities\\_in\\_Appalachia\\_August\\_2017.pdf](https://www.arc.gov/wp-content/uploads/2020/06/Health_Disparities_in_Appalachia_August_2017.pdf)
- Centers for Disease Control and Prevention (CDC; 2019). Behavioral risk factor surveillance system survey data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
- Magasi, S., Banas, J., Horowitz, B., Reis, J. P., The, K., Wilson, T., & Victoson, D. (2019a). WeCanConnect: Development of a community-informed mHealth tool for people with disabilities and cancer. *Progress in Community Health Partnerships: Research, Education, and Action, 13*(5), 39-40. doi:10.1353/cpr.2019.0033
- Magasi, S. P., Rosen, A., Ferlin, A., Reis, J., Wilson, T., & Vanpuymbrouck, L. (2019b). ScreenABLE: Breast cancer screening among women with disabilities from community identified challenges to community-based programs. *Progress in Community Health Partnerships: Research, Education, and Action, 13*, 41-42.
- Merten, J. W., Pomeranz, J. L., King, J. L., Moorhouse, M., & Wynn, R. D. (2015). Barriers to cancer screening for people with disabilities: a literature review. *Disability Health Journal, 8*(1), 9-16. doi:10.1016/j.dhjo.2014.06.004
- Reis, J., Martin, M., Wilson, T., Vanpuymbrouck, L., Beaumont, J., & Magasi, S. (2015). Screen-ABLE: A mixed-methods study on breast and cervical cancer screening disparities among women with disabilities. *American Journal of Occupational Therapy, 69*(Suppl. 1), 6911510131p1.
- Todd, A., & Stuiifbergen, A. (2012). Breast cancer screening barriers and disability. *Rehabilitation Nursing: The Official Journal of the Association of Rehabilitation Nurses, 37*(2), 74–79. <https://doi.org/10.1002/RNJ.00013>
- Yankaskas, B., Dickens, P., Bowling, J., Jarman, M., Luken, K., Salisbury, K., Lorenz, C. (2010). Barriers to adherence to screening mammography among women with disabilities. *American Journal of Public Health, 100*(5), 947-953