



**National Association of Chronic Disease Directors (NACDD)  
Breast and Cervical Cancer Consumer Satisfaction Survey for Medicaid Enrollees in  
Erie County**

**New York State Department of Health  
Office of Quality and Patient Safety  
April 2015**

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
METHODODOLOGY .....	3
OVERALL FINDINGS .....	4
NEXT STEPS .....	5
<b>INTRODUCTION.....</b>	<b>6</b>
BACKGROUND .....	6
<b>METHODOLOGY .....</b>	<b>6</b>
POPULATION .....	6
SURVEY DEVELOPMENT .....	6
SURVEY ADMINISTRATION.....	7
ANALYSES.....	9
<b>FINDINGS.....</b>	<b>9</b>
SURVEY RESPONSES BY DOMAIN .....	10
SURVEY RESPONSES BY RACE/ETHNICITY.....	15
SURVEY RESPONSES BY SELF-REPORTED HEALTH STATUS .....	22
SURVEY RESPONSES BY EDUCATION LEVEL.....	27
<b>CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>34</b>
<b>APPENDIX.....</b>	<b>36</b>

## EXECUTIVE SUMMARY

The National Association of Chronic Disease Directors (NACDD) awarded the New York State Department of Health (the Department) funds to develop a series of recommendations and an action plan to enhance patient outreach and increase cancer screenings among high risk populations within existing health care systems in Erie County. In view of the observed screening gaps, one of the objectives of the proposed grant activities was to develop and implement a focused consumer survey of women enrolled in Medicaid managed care in Erie County to assess patient-specific barriers to cancer screening. This report presents results from the 2014 breast and cervical cancer screening consumer survey for Erie County.

### *Methodology*

The survey universe was defined as all Medicaid managed care-enrolled women residing in Erie County who met the 2013 Healthcare Effectiveness Data and Information Set (HEDIS®) measure specifications for breast or cervical cancer screening denominators but did not receive the indicated screening. This population was further restricted to those women who remained continuously enrolled in Medicaid managed care through calendar year 2013 and were residents of Erie County as of May 2014 (the most recent data available). To be consistent with HEDIS®2014 measure specifications, women eligible for breast cancer screening were limited to those ages 52-64 years as of December 31, 2013 and women eligible for cervical cancer screening to those ages 24-64 years. A random sample of 2,000 women meeting the previously described criteria were surveyed.

A total of 370 responses were received, resulting in a 20.2% response rate. Although the response rate for this survey is low, it is consistent with response rates from other surveys conducted in the Medicaid population. For example, the 2013 New York Adult CAHPS® survey, which is administered to Medicaid managed care plan members every other year, had a statewide response rate of 31.8%.

The survey instrument was developed by key staff from the Department's Office of Public Health (OPH) and Office of Quality and Patient Safety (OQPS), with input from four managed care plans in Erie County, the P<sup>2</sup> Collaborative of Western New York (P<sup>2</sup> of WNY), and IPRO (the Department's External Quality Review Organization). The survey questionnaire contained 15 questions that sought to assess perceived barriers to breast and cervical cancer screening.

Differences in demographic characteristics between respondents and the sample frame were evaluated to determine the generalizability of the survey findings. For these analyses, chi-square tests were calculated and proportions deemed significantly different if the corresponding p-value was less than 0.05. Statistically significant differences were observed between respondents and the survey sample for the following characteristics: screening type (eligible for breast cancer screening only, cervical cancer screening only, or eligible for both breast and cancer screening); Medicaid aid category (eligible for Supplemental Security Income (SSI), Temporary Assistance to Needy Families (TANF)/Family Health Plus (FHP)/unassigned (UNAS), or Safety Net (SN)); and health plan enrollment (membership in one of the following health plans: Independent Health, Univera, HealthNow, or Fidelis Care). Based on these findings, survey data were

weighted by these three variables to yield more generalizable results. Weighted data were used in all analyses.

### ***Overall Findings***

- Regarding general health status, 35.1% of respondents reported being in fair to poor health. The majority of respondents spoke English as their primary language at home (87.3%). Additionally, 30.5% were high school graduates or had obtained a GED, and 27.4% had less than a high school diploma.
- Most respondents (64.0%) indicated that they see a family or internal medicine physician for their regular care.
- Only 40.3% of those eligible for cervical cancer screening responded that they had ever been told they should be screened, and 67.8% of those eligible for breast cancer screening responded that they had ever been told they should be screened.
- The three main barriers for cervical cancer screening were: 'I do not have transportation to and from appointments' (25.2%), 'I am not sure how cervical cancer screening is done' (23.4%), and 'I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections' (21.5%).
- The three main barriers for breast cancer screening were: 'I do not have transportation to and from appointments' (26.7%), 'I have heard that breast cancer screening can be uncomfortable or even painful' (11.5%), and 'My doctor has never told me that I needed breast cancer screening' (9.9%).
- Mail was the method preferred by most respondents (67.7%) to receive cancer screening reminders.

### ***Findings by Race/Ethnicity and other factors***

- A higher percentage of the black, non-Hispanic respondents (14.0%) indicated that they saw an obstetrician/gynecologist physician for regular care (versus 6.4% among white, non-Hispanic respondents and 12.6% among Hispanic respondents).
- A higher percentage of the Hispanic respondents (16.1%) indicated that they saw a midwife for regular care (versus 3.2% among white, non-Hispanics respondents and 7.0% among Black, non-Hispanic respondents).
- Regarding cervical cancer screening, only 42.8% of White, non-Hispanic respondents, 38.1% of black, non-Hispanic respondents, and 38.2% of Hispanic respondents indicated that they had ever been told by their health care provider that they should be screened for cervical cancer.
- Higher proportions were reported for breast cancer screening as: 71.5% of white, non-Hispanic respondents, 63.6% of black, non-Hispanic respondents, and 56.7% of Hispanic respondents indicated that they had ever been told by their health care provider that they should be screened for breast cancer.

- When asked how important cervical cancer screening was to them, 53.5% of white, non-Hispanic respondents indicated that screening was ‘very important’ compared to 74.3% of black, non-Hispanic respondents, and 80.3% of Hispanic respondents. Similar proportions were reported for breast cancer screening as: 66.1% of white, non-Hispanic respondents indicated that screening was ‘very important’ compared to 75.1% of black, non-Hispanic respondents and 85.8% Hispanic respondents.
- There were noticeable differences among racial/ethnic groups’ top barrier for cervical cancer screening; whereas white, non-Hispanic respondents selected ‘I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections’ (25.4%), black, non-Hispanic and Hispanic respondents selected ‘I do not have transportation to and from appointments’, 35.7% and 32.2%, respectively.
- Regarding barriers for breast cancer screening, the top choice for all racial groups was ‘I do not have transportation to and from appointments’ (18.0% for the white, non-Hispanic respondents, 33.8% for the black, non-Hispanic respondents, and 39.7% for the Hispanic respondents).
- Mail was the preferred method of receiving screening reminders among all racial/ethnic groups.
- There were no compelling differences for the survey domains when stratified by either self-reported health status or education level, except that higher proportions of respondents in excellent to good health and with at least some college education indicated that they had ever been told by their health care provider that they should be screened for cervical or breast cancer, as compared to those in fair to poor health or with less than a college education.

### *Next Steps*

This report will be made available to stakeholders in Western New York (WNY). In addition, survey results will be used to help shape the development of a compendium of cancer screening resources in Erie County, New York, as well as a package of change ideas and best practices to be disseminated to Erie County health plans, health care providers, and community organizations.

## **INTRODUCTION**

### ***Background***

Although NYS Medicaid managed care breast cancer screening rates consistently outperform national Medicaid managed care rates, significant regional differences exist. Erie County, a Western region county, had a 2012 county-level breast cancer screening rate of 52.0% compared to the 2012 statewide average of 68.0%. Despite the fact that 2012 Erie County cervical cancer screening rates approximated statewide rates, (69.0% and 71.0%, respectively), several large Buffalo-area zip codes had rates under 63.0%.

The NACDD awarded the Department funds for the period of May 2014 to September 2015 to develop a series of recommendations and an action plan to enhance patient outreach and increase cancer screening within high risk populations. To this end, the Department developed and implemented a consumer survey of Medicaid managed care-enrolled women in WNY/Erie County to assess patient-specific barriers to cancer screening. The Department, in collaboration with various stakeholders, will use this information to develop a compendium of community resources to assist health plans and residents of Erie County to identify cancer screening resources and address identified barriers with a goal of increasing cancer screening rates in the region.

## **METHODOLOGY**

### ***Population***

Health plan-reported quality measurement data and Medicaid eligibility data were used to identify the survey population. All Medicaid managed care-enrolled women residing in Erie County who met the 2013 Healthcare Effectiveness Data and Information Set (HEDIS) measure specifications for breast or cervical cancer screening denominators but did not receive the indicated screening were identified. This population was further restricted to those women who remained continuously enrolled in Medicaid managed care through calendar year 2013 and were residents of Erie County as of May 2014 (the most recent data available). To be consistent with HEDIS 2014 measure specifications, women eligible for breast cancer screening were limited to those ages 52-64 as of December 31, 2013 and women eligible for cervical cancer screening to those ages 24-64.

A random sample of 2,000 women meeting the previously described criteria were surveyed.

### ***Survey Development***

The survey instrument was developed by key staff from the Department's Office of Public Health (OPH) and Office of Quality and Patient Safety (OQPS) with input from four Medicaid managed care plans in Erie County (Independent Health, Univera, HealthNow, and Fidelis Care),

the P<sup>2</sup> Collaborative of Western New York (P<sup>2</sup> of WNY), and IPRO (the Department’s External Quality Review Organization).

The survey questionnaire consisted of 15 questions; where applicable, respondents were free to include a written response. The questionnaire was calibrated to meet the 7<sup>th</sup> grade readability level that is recommended for the Medicaid population.

The survey instrument was designed to assess respondents’ general perceptions, beliefs, and understanding of the need for breast and cervical cancer screening, as well as, perceived barriers to access. The instrument also collected respondents’ demographic information. A copy of the consumer survey questionnaire can be found in Appendix A.

***Survey Administration***

Survey administration consisted of three mailings, one month apart. Initial surveys were mailed on July 11, 2014. Follow-up mailings to non-respondents were sent on August 6, 2014 and September 8, 2014.

The survey resulted in 370 usable surveys. Table A1 displays the number of surveys mailed, the number of undeliverable surveys returned by the post office, the adjusted population, the number of surveys returned, and the response rate. After excluding undeliverable surveys, a total of 1,829 surveys were delivered to valid addresses. A total of 370 enrollees responded for a final response rate of 20.2%.

No financial incentives were offered for the return of completed surveys. Completed surveys were returned in postage-paid envelopes to IPRO. Completed surveys were then scanned and responses entered into an Excel database. The Department’s Institutional Review Board granted the survey exemption status. The cover letter that accompanied the surveys advised enrollees that answers would be confidential, and that non-participation would not affect their Medicaid benefits.

**Table A1: Erie County Consumer Survey Distribution and Response Rate**

Survey Sample		Frequency
<b>Distribution</b>		
	Surveys mailed	2,000
	Undeliverable surveys	171
	Adjusted Population	1,829
<b>Surveys Returned</b>		370
<b>Response Rate</b>		20.2%

## Evaluating Response Bias

Differences in demographic characteristics between respondents and the sample frame were evaluated to determine the generalizability of the survey findings (Table A2).

**Table A2: Demographic Comparison between Respondents and Non-Respondents**

Demographics*	Respondents (n=370)		Non-Respondents (n=1,634)		p-value
	Number	Percent	Number	Percent	
<b>Screening Type</b>					
Breast Cancer Only	90	24.3	276	16.9	0.0026
Cervical Cancer Only	129	34.9	667	40.9	
Both Cervical and Breast Cancer	151	40.8	687	42.2	
<b>Race/Ethnicity</b>					0.9841
White, non-Hispanic	179	48.4	776	47.6	
Black, non-Hispanic	126	34.1	570	35.0	
Hispanic	35	9.5	157	9.6	
Other**	30	8.1	127	7.8	
<b>Medicaid Aid Category</b>					<.0001
SSI	146	39.5	709	43.5	
TANF/FHP/Unassigned	109	29.5	612	37.5	
SN	115	31.0	309	19.0	
<b>Health Plan</b>					0.0465
Independent Health	132	35.7	534	32.7	
Univera Community Health	123	33.2	469	28.8	
Fidelis Care New York	57	15.4	340	20.9	
Health Now	58	15.7	287	17.6	
<b>Residency</b>					0.9244
Buffalo	318	86.0	1,404	86.1	
Suburban	52	14.1	226	13.9	

\*Data source: Office of Health Insurance Programs Data Mart

\*\*Other racial group includes: Asian or Pacific Islanders, Native Americans, other and unknown minority groups

Information on screening type (eligible for breast cancer screening only, cervical cancer screening only, or eligible for both breast and cervical cancer screening), race/ethnicity (white, non-Hispanic; black, non-Hispanic; Hispanic; and Other); Medicaid aid category (eligible for Supplemental Security Income (SSI), Temporary Assistance to Needy Families (TANF), Family Health Plus (FHP), unassigned (UNAS), or Safety Net (SN)); and residency (City of Buffalo or outlying suburbs) was extracted from Office of Health Insurance Programs (OHIP) Data Mart and linked to the survey sample.

For these analyses, chi-square tests were calculated and proportions deemed significantly different if the corresponding p-value was less than 0.05.

As shown in the table, statistically significant differences were noted by sub-samples for screening type, Medicaid aid category, and health plan. Based on these findings, survey data were weighted by these three variables to minimize bias created by the 20.2% survey response rate and yield survey results more generalizable to the full survey population.

### *Analyses*

Univariate analyses were performed on all survey items. Bivariate analyses were conducted to examine the differences in proportions among the following indicators: race/ethnicity, self-reported health status, and level of education. All analyses were performed by Department staff using the Statistical Analysis System (SAS) statistical software version 9.3.

## **FINDINGS**

### *Respondent Demographic Information*

Demographic information collected by the survey tool included self-reported health status (excellent, very good, good, fair to poor); primary language spoken at home (English, Spanish, and Other); and education level of the respondents (at least some college, high school graduate or GED, and less than high school). Frequencies of demographic information are presented in Table A3.

More than one third (35.1%) of respondents reported their general health status to be fair to poor. The majority of respondents (87.3%) reported English to be their primary language spoken at home. Regarding the level of education, 39.4% of the respondents reported they had some college education, 30.5% reported they were high school graduates or had obtained a GED, while 27.4% reported they had less than a high school diploma.

**Table A3: Self-reported Demographic Information**

Survey Question	Category	Number* (N=2,000)	Percent
<b>Q10. Health Status</b>	Excellent	141	7.0
	Very Good	434	21.7
	Good	665	33.3
	Fair	552	27.6
	Poor	150	7.5
	Missing	57	2.8
<b>Q13. Primary Language</b>	English	1,747	87.3
	Spanish	107	5.4
	Other/missing	141	7.1
<b>Q14. Educational Level</b>	At least some college	788	39.4
	High school graduate or GED	609	30.5
	Less than High School	547	27.4
	Missing	60	2.8

\*Number is based on weighted data

### ***Survey Responses by Domain***

#### ***Type of Health care Provider***

Survey respondents were asked to select the type of health care provider they see most often for regular care. Table A4 displays the frequencies by health care provider.

Results indicated that the majority (64.0%) of respondents see a family or internal medicine physician for primary care, followed by obstetrician/gynecologist physician (9.3%).

**Table A4: Type of Health care Provider**

Survey Question	Number	Percent
<b>Q1. What type of health care provider do you see most often for regular care?</b>		
Family or Internal Medicine Physician	1,275	64.0
Obstetrician/Gynecologist Physician	186	9.3
Physician Assistant	175	8.7
Nurse Practitioner	156	7.8
Midwife	113	5.6
Other	96	4.8

***Told by a Provider that Cervical and Breast Cancer Screening was Needed***

Respondents were asked if they had ever been told by their health care provider that they should be screened for cervical and/or breast cancer. Data for these items were limited to women eligible for each screening. Table A5 displays the frequencies of their responses.

Only 40.3% of those identified as eligible for cervical cancer screening responded they had ever been told they should be screened while 67.8% of those identified as eligible for breast cancer screening responded they had ever been told they should be screened.

**Table A5: Told by a Provider that Cervical and Breast Cancer Screening was Needed**

Survey Question	Number*	Percent
<b>Q2a. Have you ever been told by your health care provider that you should be screened for cervical cancer?</b>		
No	717	43.9
Yes	659	40.3
I don't remember	208	12.8
Missing	50	3.1
<b>Q2b. Have you ever been told by your health care provider that you should be screened for breast cancer?</b>		
No	288	23.9
Yes	816	67.8
I don't remember	38	3.2
Missing	61	5.1

\*Responses limited to women eligible for each screening.

### ***Importance of Cancer Screening and Perceived Value of Screening***

Respondents were asked how important breast and cervical cancer screening was to them and their perceived value of screening. Table A6 displays the frequencies of their responses.

The majority of respondents (63.3%) indicated that cervical cancer screening was very important to them. Similarly, 71.5% of respondents indicated that breast cancer screening was very important to them.

Additionally, respondents were asked to identify the reasons why cancer screening was important to them. The top three reasons were as follows: ‘early detection/prevention of cancer’ (71.1%), ‘I have a family history of cancer’ (40.3%), and ‘every woman has some risk’ (35.6%).

**Table A6: Importance of Cancer Screening and Perceived Value of Screening**

<b>Survey Question</b>	<b>Number</b>	<b>Percent</b>
<b>Q3. How important is cervical cancer screening to you?*</b>		
Not important	182	9.1
Somewhat important	457	22.9
Very important	1,267	63.3
Missing	94	4.7
<b>Q4. How important is breast cancer screening to you?*</b>		
Not important	132	6.6
Somewhat important	347	17.3
Very important	1,429	71.5
Missing	92	4.6
<b>Q5. Why is cancer screening important to you? Check all that apply:**</b>		
Early detection/prevention of cancer: <i>Yes</i>	1,421	71.1
I have a family history of cancer : <i>Yes</i>	806	40.3
Every woman has some risk: <i>Yes</i>	712	35.6
Cancer screening has been recommended by my doctor: <i>Yes</i>	549	27.4
Cancer screening has been recommended by friends/family/other trusted source: <i>Yes</i>	363	18.1
I have a history of cancer: <i>Yes</i>	140	7.0
Cancer screening is not important to me: <i>Yes</i>	123	6.2

\*Responses limited to women eligible for the specific type of cancer screening.

\*\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

### ***Barriers to Cervical Cancer Screening***

Respondents were asked to identify factors that prevented them from going for cervical cancer screening. Respondents could select multiple factors. Data were limited to women eligible for cervical cancer screening. Table A7 presents the frequencies of their responses.

The three top barriers selected were: ‘I do not have transportation to and from appointments’ (25.2%); ‘I am not sure how cervical cancer screening is done’ (23.4%); and ‘I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections’ (21.5%).

**Table A7: Barriers to Cervical Cancer Screening**

<b>Survey Question</b>	<b>Number*</b>	<b>Percent</b>
<b>Q6. Do any of the following factors prevent you from going for cervical cancer screening? Check all that apply:**</b>		
I do not have transportation to and from appointments	412	25.2
I am not sure how cervical cancer screening is done	383	23.4
I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections	351	21.5
My doctor has never told me that I needed cervical cancer screening	296	18.1
I am unable to get an appointment at a time or location that is good for me	199	12.2
I do not want a male provider to do my cervical cancer screening	168	10.3
I am unsure if cervical cancer screening is paid for by my health plan	159	9.7
I have heard that cervical cancer screening can be uncomfortable or even painful	158	9.7
I am not at risk for cervical cancer	133	8.1
There is confusing information about breast/cervical cancer screening	124	7.6
I am embarrassed to go for cervical cancer screening	106	6.5
I do not want to find out if I have cervical cancer	95	5.8
I am concerned that I will not be treated with courtesy and respect	65	4.0
I have had a partial hysterectomy (still have my cervix) and thought cervical cancer screening was no longer needed	64	3.9
I had a bad experience with a provider during a cervical cancer screening	64	3.9
I do not have care for my child or parent	59	3.6
I am unable to take time off from work	58	3.6
Women indicating they had no barriers to cervical cancer screening	246	15.1

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

\*\*Responses limited to women eligible for cervical cancer screening.

### ***Barriers to Breast Cancer Screening***

Respondents were asked to indicate factors that prevented them from going for breast cancer screening. Respondents could select multiple factors. Data were limited to women eligible for breast cancer screening. Table A8 displays the frequencies of their response.

Among the top three factors selected were: ‘I do not have transportation to and from appointments’ (26.7%), ‘I have heard that breast cancer screening can be uncomfortable or even painful’ (11.5%), and ‘My doctor has never told me that I needed breast cancer screening’ (9.9%).

**Table A8: Barriers to Breast Cancer Screening**

<b>Survey Question</b>	<b>Number*</b>	<b>Percent</b>
<b>Q7. Do any of the following factors prevent you from going for breast cancer screening? Check all that apply:**</b>		
I do not have transportation to and from appointments	322	26.7
I have heard that breast cancer screening can be uncomfortable or even painful	138	11.5
My doctor has never told me that I needed breast cancer screening	120	9.9
I am not sure how breast cancer screening is done	110	9.1
I am unable to get an appointment at a time or location that is good for me	104	8.7
I do not want a male provider to do my breast cancer screening	86	7.1
I am not at risk for breast cancer	70	5.8
I am unsure if breast cancer screening is paid for by my health plan	67	5.6
There is confusing information about breast cancer screening	64	5.3
I do not have care for my child or parent	43	3.6
I do not want to find out if I have breast cancer	30	2.5
I am concerned that I will not be treated with courtesy and respect	32	2.6
I am unable to take time off from work	32	2.6
I had a bad experience with a provider during a breast cancer screening		
Women indicating they had no barriers to breast cancer screening	345	28.7

\*Responses limited to women eligible for breast cancer screening

\*\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

### ***Preferred Way to Receive Reminders for Breast and Cancer Screening***

Respondents were asked to identify their preferred method for receiving reminders for cervical and/or breast cancer screening. Table A9 presents the frequencies of their selections.

Over two thirds of the respondents (67.7%) preferred mail reminders, followed by telephone calls (36.3%), text messages (13.6%), and email reminders (12.6%).

**Table A9: Preferred Way to Receive Reminders for Breast and Cancer Screening**

<b>Survey Question</b>	<b>Number*</b>	<b>Percent</b>
<b>Q8. What is the best way for you to receive reminders that it's time for your breast and/or cervical cancer screenings? Check all that apply.*</b>		
Mail	1,354	67.7
Telephone call	727	36.3
Text message	272	13.6
E-mail reminders	253	12.6
Other	126	6.3

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

### ***Bivariate Analyses***

In this section of the report, cross-tabulations are presented for all survey questions by race/ethnicity (white, non-Hispanic; black, non-Hispanic; Hispanic, and other), self-reported health status (excellent/very good/good and fair/poor), and level of education (high school graduate or less, and at least some college).

#### ***Survey Responses by Race/Ethnicity***

A cross tabulation of race/ethnicity and all survey domains was run to determine the relationship between race/ethnicity and cancer screening barriers and beliefs. Race/ethnicity was classified as either white, non-Hispanic; black, non-Hispanic; Hispanic, and other.

#### ***Type of Health care Provider by Race/Ethnicity***

Table B1 displays the frequencies of health care provider by race/ethnicity.

Among all racial groups, family or internal medicine physician was the provider type most often seen for regular care. Specifically, 65.3 % of white, non-Hispanic, 63.4% of black, non-Hispanic, 54.0% of Hispanic respondents, and 66.2% of other respondents visited a family or internal medicine physician for their regular care.

A higher percentage of black, non-Hispanic respondents indicated that they saw an obstetrician/gynecologist physician (14.0% versus 6.4% among white, non-Hispanic respondents and 12.6% among Hispanic respondents), whereas a higher percentage of Hispanic respondents indicated that they saw a midwife (16.1% versus 3.2% among white, non-Hispanic respondents, and 7.0% among black, non-Hispanic respondents).

**Table B1: Type of Health care Provider by Race/Ethnicity**

Survey Question	Race/Ethnicity							
	White, Non-Hispanic (n=1,023)		Black, Non-Hispanic (n=640)		Hispanic (n=191)		Other (n=146)	
	n	%	n	%	n	%	n	%
<b>Q1. What type of health care provider do you see most often for regular care?</b>								
Family or Internal Medicine Physician	667	65.3	408	63.4	103	54.0	96	66.2
Physician Assistant	121	11.9	32	4.9	5	2.7	17	11.5
Nurse Practitioner	108	10.6	38	6.0	9	4.9	0	0.0
Obstetrician/Gynecologist Physician	65	6.4	90	14.0	24	12.6	7	4.7
Midwife	32	3.2	45	7.0	31	16.1	5	3.6
Other	28	2.8	28	4.4	19	9.8	20	14.0

***Told that Screening was Needed and Perceived Value of Screening by Race/Ethnicity***

Table B2 displays the frequencies of responses regarding ever being told that screening was needed and perceived value of screening by race/ethnicity.

Only nearly half (42.8%) of white, non-Hispanic respondents indicated that they had ever been told by their health care provider that they should be screened for cervical cancer.

Approximately, one third of black, non-Hispanic (38.1%), Hispanic (38.2%), and other racial group respondents (34.8%) indicated they had ever been told they should be screened for cervical cancer.

Regarding breast cancer screening, 71.5% of white, non-Hispanic respondents, 63.6% of black, non-Hispanic respondents, 56.7% of Hispanic respondents, and 81.3% of other racial group respondents indicated that they had ever been told by their health care provider that they should be screened for breast cancer.

**Table B2: Told that Screening was Needed and Perceived Value of Screening by Race/Ethnicity**

Survey Question	Race/Ethnicity							
	White, Non-Hispanic (n=1,426)		Black, Non-Hispanic (n=902)		Hispanic (n=283)		Other (n=228)	
	n	%	n	%	n	%	n	%
<b>Have you ever been told by your health care provider that you should be screened for cervical and breast cancer (Q2a and Q2b) :</b>								
<b>Cervical Cancer*:</b> <i>Yes</i>	368	42.8	192	38.1	51	38.2	47	34.8
<b>Breast Cancer*:</b> <i>Yes</i>	403	71.5	253	63.6	85	56.7	76	81.3
<b>How important is cervical and breast Cancer screening to you (Q3 and Q4):</b>								
<b>Cervical Cancer*:</b> <i>Very important</i>	547	53.5	476	74.3	153	80.3	90	62.1
<b>Breast Cancer*:</b> <i>Very important</i>	677	66.1	481	75.1	164	85.8	108	74.1
<b>Q5. Why is cancer screening important to you? Check all that apply:**</b>								
Early detection/prevention of cancer: Yes	723	70.7	473	73.9	138	72.1	87	59.6
I have a family history of cancer: Yes	423	41.4	286	44.7	77	40.2	20	13.8
Every woman has some risk: Yes	393	38.4	226	35.3	48	25.4	44	30.5
Cancer screening has been recommended by my doctor: Yes	269	26.3	208	32.5	28	14.6	44	29.9
Cancer screening has been recommended by friends/family/other trusted source: Yes	195	19.1	120	18.7	27	14.3	20	14.0
I have a history of cancer: Yes	89	8.7	41	6.4	7	3.8	3	2.2
Cancer screening is not important to me: Yes	73	7.2	34	5.3	7	3.8	9	6.4

\*Responses limited to women eligible for the specific type cancer screening.

\*\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

When asked how important cervical cancer screening was to them, 53.5% of white, non-Hispanic respondents selected ‘very important’ compared to 74.3% of black, non-Hispanic respondents, 80.3% of Hispanic respondents, and 62.1% of other racial group respondents.

Higher proportions were reported for breast cancer screening with 66.1% of white, non-Hispanic respondents selecting ‘very important’ compared to 75.1% of black, non-Hispanic respondents, 85.8% of Hispanic respondents, and 74.1% of other racial group respondents.

### ***Barriers to Cervical Cancer Screening by Race/Ethnicity***

Table B3 displays the frequencies of responses on barriers to cervical cancer screening by race/ethnicity.

Group comparisons by race show that while white, non-Hispanic respondents selected ‘I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections’ as their top barrier (25.4%), all other racial groups selected ‘I do not have transportation to and from appointments’ (black, non-Hispanic 35.7%, Hispanic 32.2%, and other racial group 29.0%) as their top barrier.

The second most selected barrier among all the racial groups other than the other group was ‘I am not sure how cervical cancer screening is done’ (white, non-Hispanic 17.1%, Black, non-Hispanic 31.8%, Hispanic 22.4%, and other racial group 11.1%).

### ***Barriers to Breast Cancer Screening by Race/Ethnicity***

Table B4 displays the frequencies of responses on barriers to breast cancer screening by race/ethnicity.

Across racial/ethnic groups, the most commonly cited barrier was ‘I do not have transportation to and from appointments’ white, non-Hispanic 18.0%, black, non-Hispanic 33.8%, Hispanic 39.7%, and other racial group 28.3%).

White, non-Hispanic respondents and Hispanic respondents both selected ‘I have heard that breast cancer screening can be uncomfortable or even painful’ (11.3% and 17.2%, respectively) as the second most common barrier.

Whereas the third selection for white, non-Hispanic respondents was ‘I am not at risk for breast cancer’ (8.0%), Hispanic respondents chose ‘I am not sure how breast cancer screening is done’ (13.1%).

The second and third most commonly cited barriers for black, non-Hispanic respondents were, ‘My doctor has never told me that I needed breast cancer screening’ (15.3%) and ‘I am unable to get an appointment at a time or location that is good for me’ (14.0%), respectively.

**Table B3: Barriers to Cervical Cancer Screening by Race/Ethnicity**

Survey Question	Race/Ethnicity*							
	White, Non-Hispanic (n=862)		Black, Non-Hispanic (n=504)		Hispanic (n=135)		Other (n=134)	
	n	%	n	%	n	%	n	%
<b>Q6. Do any of the following factors prevent you from going for <u>cervical cancer screening</u>? Check all that apply:**</b>								
I do not have transportation to/from appointments	150	17.4	180	35.7	43	32.2	39	29.0
I am not sure how cervical cancer screening is done	150	17.1	160	31.8	30	22.4	42	11.1
I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections	219	25.4	115	22.8	13	9.5	5	3.7
My doctor has never told me that I needed cervical cancer screening	117	13.4	142	28.2	19	14.5	18	13.1
I am unable to get an appointment at a time or location that is convenient for me	77	9.0	72	14.4	24	18.1	26	19.0
I do not want a male provider to do my cervical cancer screening	93	10.8	46	9.1	11	8.1	18	13.4
I am unsure if cervical cancer screening is paid for by my health plan	70	8.1	70	14.0	10	7.9	9	6.9
I have heard that cervical cancer screening can be uncomfortable or even painful	92	10.7	56	11.1	0	0.0	10	7.4
I am not at risk for cervical cancer	65	7.5	41	8.1	15	10.9	12	9.2
There is confusing information about cervical cancer screening	74	8.6	44	8.7	0	0.0	7	5.2
I am embarrassed to go for cervical cancer screening	77	8.9	24	4.9	0	0.0	5	3.8
I do not want to find out if I have cervical cancer	52	6.0	28	5.5	5	3.7	10	7.5
I am concerned that I will not be treated with courtesy and respect	15	1.8	33	6.5	5	3.6	12	9.1
I have had a partial hysterectomy (still have my cervix) and thought cervical cancer screening was no longer needed	5	0.5	32	6.4	22	16.5	5	3.6
I had a bad experience with a provider during cervical cancer screening	39	4.6	19	3.8	5	3.6	0	0.0
I do not have care for my child or parent	35	4.1	7	1.3	5	3.8	13	9.5
I am unable to take time off from work	25	2.8	16	3.3	0	0.0	17	12.7

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

\*\*Responses limited to women eligible for cervical cancer screening.

**Table B4: Barriers to Breast Cancer Screening by Race/Ethnicity**

Survey Question	Race/Ethnicity*							
	White, Non-Hispanic n=(564)		Black, Non-Hispanic (n=398)		Hispanic (n=149)		Other (n=93)	
	n	%	n	%	n	%	n	%
<b>Q7. Do any of the following factors prevent you from going for <u>breast cancer screening</u>? Check all that apply:**</b>								
I do not have transportation to and from appointments	102	18.0	135	33.8	59	39.7	26	28.3
I have heard that breast cancer screening can be uncomfortable or even painful	64	11.3	44	11.0	26	17.2	5	5.6
I am not sure how breast cancer screening is done	24	4.3	46	11.7	20	13.1	20	18.1
My doctor has never told me that I needed breast cancer screening	33	5.8	61	15.3	13	8.9	13	13.8
I am not at risk for breast cancer	45	8.0	18	4.6	0	0.0	7	7.1
I do not want a male provider to do my breast cancer screening	30	5.3	25	6.3	17	11.3	14	14.8
There is confusing information about breast cancer screening.	28	5.0	27	6.9	9	5.7	0	0.0
I am unable to get an appointment at a time or location that is good for me.	26	4.6	56	14.0	8	5.5	14	15.6
I am unsure if breast cancer screening is paid for by my health plan	15	2.7	49	12.2	3	1.7	0	0.0
I do not have care for my child or parent	21	3.7	0	0.0	12	8.2	10	10.3
I do not want to find out if I have breast cancer	10	1.7	7	1.7	9	5.7	5	5.6
I am concerned that I will not be treated with courtesy and respect	15	2.6	17	4.3	0	0.0	0	0.0
I had a bad experience with a provider during a breast cancer screening	17	3.0	12	3.1	0	0.0	0	0.0
I am unable to take time off from work	15	2.6	8	1.9	0	0.0	10	10.3

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

\*\*Responses limited to women eligible for breast cancer screening.

***Preferred Way to Receive Reminders for Breast and Cervical Cancer Screening by Race/Ethnicity***

Table B5 displays the frequencies of responses for preferred way to receive reminders for breast and cervical cancer screening by race/ethnicity.

Consistent across racial/ethnic groups, mail was the preferred method for receiving screening reminders (white, non-Hispanic 67.6%, black, non-Hispanic 66.1%, Hispanic 75.4%, and other 65.8%) followed by telephone reminders (white, non-Hispanic 31.1%, black, non-Hispanic 46.0%, Hispanic 36.5%, and other 30.6%).

However, unlike white, non-Hispanic respondents who preferred email over text message (email 15.5%, text message 13.3%), all the other racial/ethnic groups preferred text message to email (black, non-Hispanic (text message 17.0%, email 11.8%), Hispanic (text message 7.8%, email 5.1%), and other racial group (text message 8.2%, email 6.5%)).

**Table B5: Preferred Way to Receive Reminders for Breast and Cervical Cancer Screening by Race/Ethnicity**

Survey Question	Race/Ethnicity							
	White, Non-Hispanic (n=1,023)		Black, Non-Hispanic (n=640)		Hispanic (n=191)		Other (n=146)	
	n	%	n	%	n	%	n	%
<b>Q8. What is the best way for you to receive reminders that it's time for your breast and/or cervical cancer screenings? Check all that apply:*</b>								
Mail	691	67.6	423	66.1	144	75.4	96	65.8
Telephone call	318	31.1	294	46.0	70	36.5	45	30.6
E-mail reminders	158	15.5	76	11.8	10	5.1	10	6.5
Text message	136	13.3	109	17.0	15	7.8	12	8.2
Other	87	8.5	9	1.4	0	0.0	30	20.8

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

### *Survey Responses by Self-Reported Health Status*

Cross tabulations of self-reported health status and all survey domains were run to determine the relationship between self-reported health status and cancer screening barriers and beliefs. Health status was classified as either excellent/very good/good or fair/poor.

### *Type of Health care Provider by Health Status*

Table C1 displays the frequencies of responses for healthcare provider by health status.

The majority of respondents in both the excellent to good (63.7%) and fair to poor (63.8%) general health saw a family or internal medicine physician for regular care.

**Table C1: Type of Health care Provider by Health Status**

Survey Question	Health Status			
	Excellent/Very Good/Good (n=1,240)		Fair/Poor (n=760)	
	n	%	n	%
<b>Q1. What type of healthcare provider do you see most often for regular care?</b>				
Family or Internal Medicine Physician	790	63.7	485	63.8
Nurse Practitioner	130	10.5	26	3.4
Obstetrician/Gynecologist Physician	113	9.1	73	9.6
Physician Assistant	111	9.0	64	8.4
Midwife	37	3.0	76	10.0
Other	59	4.8	37	4.8

### *Told that Screening was Needed and Perceived Value of Screening by Health Status*

Table C2 displays the frequencies of responses about ever being told that screening was needed and their perceived value of screening by health status.

Less than half (43.1%) of respondents in excellent to good health and approximately one third (35.5%) of respondents in fair to poor health, indicated that they had ever been told by their health care provider that they should be screened for cervical cancer.

The majority of respondents reporting excellent to good health (71.4%), and 63.2% of respondents in fair to poor health, indicated they had ever been told by a health care provider that they should be screened for breast cancer.

Similar proportions of respondents from both groups indicated that cervical cancer screening was important to them (excellent to good, 63.9% and fair to poor, 62.5%) as did those who reported breast cancer screening was important (excellent to good, 73.9% and fair to poor, 67.5%).

The top three choices for both groups on why cancer screening was important to them were: ‘Early detection/prevention of cancer’ (excellent to good, 75.0% and fair to poor, 64.6%), ‘I have a family history of cancer’ (excellent to good, 36.6% and fair to poor, 46.3%), and ‘Every woman has some risk’ (excellent to good, 34.3% and fair to poor, 37.8%).

**Table C2: Told that Screening was Needed and Perceived Value of Screening by Health Status**

Survey Question	Health Status			
	Excellent/Very Good/Good (n=1,240)		Fair to Poor (n=760)	
	n	%	n	%
<b>Q2a. Have you ever been told by your health care provider that you should be screened for cervical cancer and breast cancer?(Q2a and 2B):</b>				
<b>Cervical Cancer*:</b> <i>Yes</i>	443	43.1	216	35.5
<b>Breast Cancer*:</b> <i>Yes</i>	480	71.4	336	63.2
<b>How important is screening to you (Q3 and Q4):</b>				
<b>Cervical Cancer*:</b> <i>Very Important</i>	792	63.9	474	62.5
<b>Breast Cancer*:</b> <i>Very Important</i>	917	73.9	512	67.5
<b>Q5. Why is cancer screening important to you? Check all that apply:**</b>				
Early detection/prevention of cancer: Yes	931	75.0	491	64.6
I have a family history of cancer: Yes	454	36.6	353	46.3
Every woman has some risk: Yes	425	34.3	287	37.8
Cancer screening has been recommended by my doctor: Yes	329	26.5	220	28.9
Cancer screening has been recommended by friends/family/other trusted source: Yes	214	17.3	149	19.6
Cancer screening is not important to me: Yes	73	5.9	50	6.7
I have a history of cancer: Yes	75	6.1	65	8.5

\*Responses limited to women eligible for the specific type cancer screening.

\*\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

### ***Barriers to Cervical Cancer Screening by Health Status***

Table C3 displays the frequencies of responses on barriers to cervical cancer screening by health status. The top barrier for respondents in excellent to good health was: 'I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections' (24.3% versus 16.7% for the fair to poor), while the top barrier for respondents in fair to poor health was 'I do not have transportation to and from appointments' (38.8% versus 17.2% for excellent to good).

The second and third most common barriers to cervical cancer screening reported by both health status groups were 'I am not sure how cervical cancer screening is done' (excellent to good 19.6% versus fair to poor 29.9%), and 'My doctor has never told me that I needed cervical cancer screening' (excellent to good 17.9% versus fair to poor 18.4%), respectively.

### ***Barriers to Breast Cancer Screening by Health Status***

Table C4 displays the frequencies of responses to barriers of breast cancer screening by health status. The top choice for all respondents was 'I do not have transportation to and from appointments' (22.5% for excellent to good health versus 32.0% for the fair to poor group).

Both health groups selected for their second choice 'I have heard that breast cancer screening can be uncomfortable or even painful' (excellent to good health 11.4% versus fair to poor 11.6%) and 'My doctor has never told me that I needed breast cancer screening' (excellent to good health 10.2% versus fair to poor 9.6%) as their third.

**Table C3: Barriers to Cervical Cancer Screening by Health Status**

Survey Question	Health Status*			
	Excellent/Very Good/Good (n=1,027)		Fair/Poor (n=607)	
	n	%	n	%
<b>Q6. Do any of the following factors prevent you from going for cervical cancer screening? Check all that apply:**</b>				
I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections.	250	24.3	101	16.7
I am not sure how cervical cancer screening is done.	201	19.6	181	29.9
My doctor has never told me that I needed cervical cancer screening	184	17.9	112	18.4
I do not have transportation to and from appointments.	176	17.2	236	38.8
I am unable to get an appointment at a time or location that is good for me	111	10.8	89	14.6
I have heard that cervical cancer screening can be uncomfortable or even painful	104	10.1	54	8.9
I am unsure if cervical cancer screening is paid for by my health plan	82	8.0	77	12.7
I do not want a male provider to do my cervical cancer screening	75	7.3	94	15.2
I am not at risk for cervical cancer	68	6.7	64	10.6
I am embarrassed to go for cervical cancer screening.	66	6.4	41	6.7
There is confusing information about cervical cancer screening	65	6.4	59	9.3
I do not want to find out if I have cervical cancer.	52	5.1	43	7.1
I am unable to take time off from work	47	4.5	12	1.9
I had a bad experience with a provider during a cervical cancer screening	39	3.8	24	4.0
I do not have care for my child or parent	38	3.7	22	3.6
I have had a partial hysterectomy (still have my cervix) and thought cervical cancer screening was no longer needed	23	2.2	41	6.8
I am concerned that I will not be treated with courtesy and respect	15	1.5	50	8.2

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent

\*\*Responses limited to women eligible for cervical cancer screening

**Table C4: Barriers to Breast Cancer Screening by Health Status**

Survey Question	Health Status**			
	Excellent/Very Good/Good (n=673)		Fair/Poor (n=531)	
	n	%	n	%
<b>Q7. Do any of the following factors prevent you from going for breast cancer screening? Check all that apply:*</b>				
I do not have transportation to and from appointments.	152	22.5	10	32.0
I have heard that breast cancer screening can be uncomfortable or even painful	77	11.4	62	11.6
My doctor has never told me that I needed breast cancer screening	69	10.2	51	9.6
I am not sure how breast cancer screening is done	65	9.6	45	8.5
I am unable to get an appointment at a time or location that is good for me	63	9.3	42	7.9
I am not at risk for breast cancer	50	7.4	20	3.8
There is confusing information about breast cancer screening	44	6.6	20	3.8
I do not want a male provider to do my breast cancer screening	41	6.1	45	8.4
I do not have care for my child or parent	33	4.9	10	1.9
I am unsure if breast cancer screening is paid for by my health plan	24	3.6	43	8.1
I do not want to find out if I have breast cancer	23	3.4	7	1.3
I am unable to take time off from work	19	2.9	13	2.4
I am concerned that I will not be treated with courtesy and respect	15	2.2	17	3.2
I had a bad experience with a provider during a breast cancer screening	3	0.5	26	4.9

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

\*\*Responses limited to women eligible for breast cancer screening.

***Preferred Way to Receive Reminders for Breast and Cancer Screening by Health Status***

Table C5 displays the frequencies of responses for preferred way to receive reminders for breast and cancer screening by health status.

**Table C5: Preferred Way to Receive Reminders for Breast and Cancer Screening by Health Status**

	Health Status			
	Excellent/Very Good/Good (n=1,240)		Fair/Poor (n=760)	
Survey Question	n	%	n	%
<b>Q8. What is the best way for you to receive reminders that it's time for your breast and/or cervical cancer screenings? <i>Check all that apply:</i></b>				
Mail	834	67.2	520	68.5
Telephone call	381	30.7	346	45.6
E-mail reminders	203	16.4	50	6.6
Text message	172	13.9	100	13.1
Other	79	6.4	47	6.2

Mail was the most preferred method to receive communication among both groups of respondents (excellent to good health 67.2% and fair to poor health 68.5%). Telephone call was the second most preferred method of communication with 30.7% of the excellent to good health respondents and almost half (45.6%) of the fair to poor respondents selecting it.

However, respondents in fair to poor health preferred text over email messages (text message 13.1% versus email message 6.6%) whereas the excellent to good health respondents preferred email over text messages (email message 16.4% versus text message 13.9%).

### *Survey Responses by Education Level*

A cross tabulation of self-reported educational level on all survey domains was run to determine the relationship between respondent education level and cancer screening barriers and beliefs. Education level was categorized as: less than college (those that have 8th grade education or less, some high school, but did not graduate, high school graduate or GED), and at least some college (those that have some college education or two-year degree, four year college graduate, and more than four year college degree).

### *Type of Healthcare Provider by Education Level*

Table D1 displays the frequencies of the type of health care provider by education level.

The results show that 61.6% of respondents with less than a college education indicated that they saw a family or internal medicine physician for regular care compared to 66.9% of respondents with at least some college education.

**Table D1: Type of Health care Provider stratified by Education Level**

Survey Question	Education Level			
	Less Than College (n=1,212)		At Least Some College (n=788)	
	n	%	n	%
<b>Q1. What type of health care provider do you see most often for regular care?</b>				
Family or Internal Medicine Physician	748	61.6	527	66.9
Obstetrician/Gynecologist Physician	114	9.4	72	9.1
Physician Assistant	97	8.0	77	9.8
Nurse Practitioner	71	5.9	85	10.8
Midwife	96	8.0	16	2.1
Other	85	7.1	10	1.3

### *Told that Screening was Needed and Perceived Value of Screening by Education Level*

Table D2 displays the frequencies of responses about ever being told that screening was needed and perceived value of screening by education level.

A smaller proportion of respondents with less than a college education (33.7%) indicated that they have ever been told by their health care provider that they should be screened for cervical cancer versus 49.9% of the respondents with at least some college education.

**Table D2: Told that Screening was Needed and Perceived Value of Screening by Education Level**

Survey Question	Education Level			
	Less Than College (n=1,212)		At Least Some College (n=788)	
	n	%	n	%
<b>Have you ever been told by your health care provider that you should be screened for (Q2a and Q2b) :</b>				
<b>Cervical Cancer*:</b> <i>Yes</i>	325	33.7	334	49.9
<b>Breast Cancer*:</b> <i>Yes</i>	497	62.4	319	78.4
<b>How important is screening to you (Q4):</b>				
<b>Cervical Cancer*:</b> <i>Very Important</i>	453	57.5	814	67.1
<b>Breast Cancer*:</b> <i>Very Important</i>	536	68.0	894	73.7
<b>Q5. Why is cancer screening important to you? Check all that apply:**</b>				
Early detection/prevention of cancer: <i>Yes</i>	791	65.3	630	80.0
I have a family history of cancer: <i>Yes</i>	549	45.3	257	32.6
I have a history of cancer: <i>Yes</i>	105	8.7	35	4.5
Every woman has some risk: <i>Yes</i>	386	31.9	326	41.3
Cancer screening has been recommended by my doctor: <i>Yes</i>	346	28.5	203	25.7
Cancer screening has been recommended by friends/family/other trusted source: <i>Yes</i>	234	19.3	129	16.4
Cancer screening is not important to me: <i>Yes</i>	70	5.8	52	6.7

\*Responses limited to women eligible for the specific type cancer screening.

\*\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

Similarly, a smaller proportion of respondents with less than a college education (62.4%) indicated that they had ever been told by their health care provider that they should be screened for breast cancer versus 78.4% of the respondents with at least some college education.

Among respondents with less than a college education 57.5% indicated that cervical cancer screening was ‘very important’ to them compared to 67.1% of respondents with at least some college education. Similar proportions were reported for breast cancer screening (68.0% for

respondents with less than a college education versus 73.7% of the respondents with at least some college education.

Respondents were also asked to select reasons why cancer screening was important to them. The top three reasons selected by both groups were: ‘early detection/prevention of cancer’ (65.3% of the respondents with less than a college education versus 80.0% of the respondents with at least some college education), ‘I have a family history of cancer’ (45.3% of the respondents with less than a college education versus 32.6% of the respondents with at least some college education), and ‘every woman has some risk’ (31.9% of the respondents with less than a college education versus 41.3% of the respondents with at least some college education).

### ***Barriers to Cervical Cancer Screening by Education Level***

Table D3 displays the frequencies of responses to barriers of cervical cancer screening by education level. The top three choices are presented below.

Both groups selected the following top three barriers to cervical cancer screening: ‘I do not have transportation to and from appointments’ (30.8% of the respondents with less than a college education versus 17.2% of respondents with at least some college education); ‘I am not sure how cervical cancer screening is done’ (29.5% of the respondents with less than a college education versus 14.7% of respondents with at least some college education); and ‘I do not have any symptoms of cervical cancer, sexually transmitted diseases, or infections’ (23.4% of the respondents with less than a college education versus 18.8% of respondents with at least some college education).

**Table D3: Barriers to Cervical Cancer Screening by Education Level**

Survey Question	Education Level*			
	Less Than College (n=964)		At Least Some College (n=670)	
	n	%	n	%
<b>Q6. Do any of the following factors prevent you from going for <u>cervical cancer screening</u>? Check all that apply:**</b>				
I do not have transportation to and from appointments	297	30.8	115	17.2
I am not sure how cervical cancer screening is done	284	29.5	98	14.7
I do not have any symptoms of cervical cancer, sexually transmitted diseases, or infections	226	23.4	126	18.8
My doctor has never told me that I needed cervical cancer screening	225	23.4	71	10.6
I am unable to get an appointment at a time or location that is convenient for me	130	13.5	69	10.3
I do not want a male provider to do my cervical cancer screening	93	9.7	75	11.2
I am unsure if cervical cancer screening is paid for by my health plan	102	10.6	57	8.5
I have heard that cervical cancer screening can be uncomfortable or even painful.	84	8.7	74	11.1
I am not at risk for cervical cancer	80	8.3	52	7.8
There is confusing information about cervical cancer screening	68	7.1	56	8.4
I am embarrassed to go for cervical cancer screening	24	2.5	82	12.3
I do not want to find out if I have cervical cancer	64	6.6	31	4.7
I am concerned that I will not be treated with courtesy and respect	41	4.3	24	3.7
I have had a partial hysterectomy (still have my cervix) and thought cervical cancer screening was no longer needed	54	5.6	9	1.4
I had a bad experience with a provider during a cervical cancer screening	40	4.1	24	3.6
I do not have care for my child or parent.	38	3.9	22	3.3
I am unable to take time off from work	31	3.2	28	4.2

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

\*\*Responses limited to women eligible for cervical cancer screening.

**Barriers to Breast Cancer Screening by Education Level**

Table D4 displays the frequencies of responses on barriers to breast cancer screening by education level. The top three choices are presented below.

**Table D4: Barriers to Breast Cancer Screening by Education Level**

Survey Question	Education Level*			
	Less Than College (n=796)		At Least Some College (n=408)	
	n	%	n	%
<b>Q7. Do any of the following factors prevent you from going for breast cancer screening? Check all that apply:**</b>				
I do not have transportation to and from appointments	222	27.9	100	24.5
I have heard that breast cancer screening can be uncomfortable or even painful	94	11.9	44	10.8
I am not sure how breast cancer screening is done	91	11.4	19	4.6
My doctor has never told me that I needed breast cancer screening	87	10.9	33	8.2
I am not at risk for breast cancer	47	5.8	23	5.7
I do not want a male provider to do my breast cancer screening	47	5.9	39	9.5
There is confusing information about breast cancer screening	38	4.8	26	6.3
I am unable to get an appointment at a time or location that is good for me	28	3.5	76	18.8
I am unsure if breast cancer screening is paid for by my health plan	28	3.5	39	9.6
I do not have care for my child or parent	26	3.3	16	4.0
I do not want to find out if I have breast cancer	25	3.2	5	1.2
I am concerned that I will not be treated with courtesy and respect	25	3.1	7	1.8
I had a bad experience with a provider during a breast cancer screening	23	2.8	7	1.6
I am unable to take time off from work	14	1.8	18	4.3
I am too young for breast cancer screening	0	0.0	0	0.0

\*Respondents could select multiple factors; therefore, percentages will not add to 100 percent.

\*\*Responses limited to women eligible for breast cancer screening.

Both groups selected ‘I do not have transportation to and from appointments’ (27.9% of respondents with less than a college education versus 24.5% of respondents with at least some college education) as their top barrier. Whereas respondents with less than a college education selected ‘I have heard that breast cancer screening can be uncomfortable or even painful’ (11.9% of the respondents with less than a college education versus 10.8% of respondents with at least some college education) as their second most common barrier; respondents with at least some college education selected ‘I am unable to get an appointment at a time or location that is good for me’ (3.5% of the respondents with less than a college education versus 18.8% of respondents with at least some college education).

***Preferred Way to Receive Reminders for Breast and Cervical Cancer Screening by Education Level***

Table D5 displays the frequencies of responses for preferred way to receive reminders for breast and cervical cancer screening by education level.

The rankings for both groups were similar except for the fact that respondents with less than a college education preferred text messaging over email messages (text message 8.7% versus email message 6.5%) whereas respondents with at least some college education preferred email over text messages (email message 23.7% versus text message 21.7%).

**Table D5: Preferred Way to Receive Reminders for Breast and Cervical Cancer Screening**

	Education Level			
	Less Than College (n=1,212)		At Least Some College (n=788)	
Survey Question	n	%	n	%
<b>Q8. What is the best way for you to receive reminders that it’s time for your breast and/or cervical cancer screenings? Check all that apply:</b>				
Mail	856	70.6	498	63.2
Telephone call	516	42.6	211	26.8
Text message	106	8.7	166	21.1
Other	75	6.2	52	6.6
E-mail reminders	66	5.4	187	23.7

## Conclusions and Recommendations

The purpose of this survey was to assess and better understand patient-specific barriers to cancer screening in order to identify opportunities for engaging Erie County women enrolled in Medicaid managed care plans in cancer screening services. The survey also asked questions related to patient demographics and type of health care provider most often seen for care. The survey was closed out in October 2014 with a final response rate of 20.2%. To minimize bias created by the low response rate and yield survey results more generalizable to the full survey population, survey data were weighted as described in the *Methodology* section of this report.

Despite the majority of respondents noting that both breast and cervical cancer screening were very important to them, only 40.0% of women identified for cervical cancer screening reported ever being told that they needed screening, with even lower percentages observed among Hispanic and black, non-Hispanic respondents, as well as among those reporting less than a college education and being in fair to poor health. Additionally, 67.8% of those identified for breast cancer screening had never been told they should be screened, with similar differences noted by race/ethnicity, self-reported health status and education level as were seen for cervical cancer screening. Literature shows that a health care provider's recommendation is one of the most commonly cited reasons that individuals obtain cancer screening, and client reminders have been identified as an evidence-based strategy for screening initiation and completion. From the current survey, it is not possible to ascertain whether these survey respondents had truly never been told that they need breast or cervical cancer screening or whether they were told, but not in a manner that was wholly understood. It is recommended that providers, health plans and community organizations in Erie County work together to improve patient education, outreach and opportunities, and coordinate efforts to target specific patient populations with health literacy in mind and using tested messaging.

Another commonly-cited barrier for both cancer screening types was a lack of transportation (25.2 % for cervical cancer and 26.7% for breast cancer). As of January 1, 2015, emergency and non-emergency transportation services for Medicaid managed care enrollees were carved out of the managed care benefit package in seven counties in Western New York, including Erie County. As such, enrollees now must contact the specified transportation vendor to schedule non-emergency transportation. It is recommended that providers, health plans and community organizations in Erie County promote this benefit in conjunction with other patient education.

Structural barriers are non-economic burdens or obstacles that make it difficult for people to access cancer screening. Interventions designed to reduce these barriers may facilitate access to cancer screening services through activities such as reducing time or distance between service delivery settings and target populations, offering services in alternative settings or during modified hours and eliminating or simplifying administrative procedures and other obstacles. The increased use of mobile mammography units, as well as better coordination of the Medicaid transportation benefit may improve access. Additionally, providers can introduce extended office hours, weekend appointments as well as walk-in cancer screening services.

Other commonly cited barriers included lack of information on how breast and cervical cancer screening is done (23.4 % for cervical cancer and 9.1% for breast cancer), not thinking they

needed screening because of a lack of symptoms (21.5 % for cervical cancer) and hearing that cancer screening is uncomfortable (9.7% for cervical cancer and 11.5% for breast cancer). These barriers speak to specific patient education needs and could be addressed through collaborative communication efforts between providers, health plans and community-based organizations. Repeatedly discussing the importance of age-appropriate cancer screening, or any clinical preventive service, at every opportunity is important, as is engaging practice support staff in patient education. Educational materials should be disseminated to enrollees to provide necessary information on breast and cervical cancer screening guidelines, including: why it is recommended, how it is done, and the fact that it is free for the enrollees. Entities can use tools such as the *Make It Your Own* (MIYO) system to create customized, varied health information resources targeted to the specific populations they serve at [miyoworks.org](http://miyoworks.org). Effectively disseminating this information is imperative in order to counter misconceptions surrounding screening and payment requirements. Given the survey finding that most respondents preferred mail communications, dissemination of educational information through the mail may also be helpful.

## Appendix A

## CANCER SCREENING: CONSUMER SURVEY 2014

For each question, please select the best answer from the choices provided.

### YOUR HEALTH CARE PROVIDER

*Your health care provider is the one that you see if you need a check-up, want advice about a health problem, or get sick or hurt. Please think of that person as you answer the following survey questions.*

**1. What type of health care provider do you see most often for regular care?**

- Obstetrician/Gynecologist Physician
- Family or Internal Medicine Physician
- Midwife
- Nurse Practitioner
- Physician Assistant
- Don't know
- Other (please specify): \_\_\_\_\_

### YOUR EXPERIENCE WITH CERVICAL AND BREAST CANCER SCREENING

**2a. Screening tests for cervical cancer include a PAP test and sometimes a test for the Human Papilloma virus (HPV). Have you ever been told by your health care provider that you should be screened for cervical cancer?**

- Yes
- No
- I don't remember

**2b. Screening tests for breast cancer include breast exams and mammograms. Have you ever been told by your health care provider that you should be screened for breast cancer?**

- Yes
- No
- I don't remember

### YOUR OPINION ABOUT CERVICAL AND BREAST CANCER SCREENING

**3. How important is cervical cancer screening to you?**

- Very important
- Somewhat important
- Not important

**4. How important is breast cancer screening to you?**

- Very important
- Somewhat important
- Not important

**5. Why is cancer screening important to you?**  
*Check all that apply:*

- Early detection/prevention of cancer
- I have a family history of cancer.
- I have had cancer.
- Every woman has some risk.
- Cancer screening has been recommended by my doctor.
- Cancer screening has been recommended by friends/family/other trusted source.
- Cancer screening is not important to me.
- Other (please specify): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## CANCER SCREENING: CONSUMER SURVEY 2014

### 6. Do any of the following factors prevent you from going for cervical cancer screening?

*Check all that apply:*

- I do not have care for my child or parent.
  - I do not have transportation to and from appointments.
  - I am unable to take time off from work.
  - I am unable to get an appointment at a time or location that is good for me.
  - I am not sure how cervical cancer screening is done.
  - I am concerned that I will not be treated with courtesy and respect.
  - My doctor has never told me that I needed cervical cancer screening.
  - I am not at risk for cervical cancer.
  - I do not want to find out if I have cervical cancer.
  - I do not want a male provider to do my cervical cancer screening.
  - I had a bad experience with a provider during a cervical cancer screening.
  - There is confusing information about cervical cancer screening.
  - I am unsure if cervical cancer screening is paid for by my health plan.
  - I have heard that cervical cancer screening can be uncomfortable or even painful.
  - I have had a partial hysterectomy (still have my cervix) and thought cervical cancer screening was no longer needed.
  - I am embarrassed to go for cervical cancer screening.
  - I have not had any symptoms of cervical cancer, sexually transmitted diseases, or infections.
  - Other (please specify): \_\_\_\_\_
- 
- 

### 7. Do any of the following factors prevent you from going for breast cancer screening?

*Check all that apply:*

- I do not have care for my child or parent.
  - I do not have transportation to and from appointments.
  - I am unable to take time off from work.
  - I am unable to get an appointment at a time or location that is good for me.
  - I am not sure how breast cancer screening is done.
  - I am concerned that I will not be treated with courtesy and respect.
  - My doctor has never told me that I needed breast cancer screening.
  - I am not at risk for breast cancer.
  - I do not want to find out if I have breast cancer.
  - I do not want a male provider to do my breast cancer screening.
  - I had a bad experience with a provider during a breast cancer screening.
  - There is confusing information about breast cancer screening.
  - I am unsure if breast cancer screening is paid for by my health plan.
  - I have heard that breast cancer screening can be uncomfortable or even painful.
  - I am too young for breast cancer screening.
  - Other (please specify): \_\_\_\_\_
- 
- 
-

## CANCER SCREENING: CONSUMER SURVEY 2014

**8. What is the best way for you to receive reminders that it's time for your breast and/or cervical cancer screenings? *Check all that apply:***

- Mail
- E-mail reminders
- Telephone call
- Text message
- Other (please specify): \_\_\_\_\_

**9. Do you have any additional comments, questions, or concerns about breast and/or cervical cancer screening that you would like to share with us?**

---

---

---

---

---

### QUESTIONS ABOUT YOURSELF

**10. In general, how would you rate your overall health?**

- Excellent
- Very Good
- Good
- Fair
- Poor

**11. Are you of Hispanic or Latino origin or descent?**

- Yes
- No

**12. What is your race?**

- American Indian or Alaskan Native
- Asian
- Black / African American
- Native Hawaiian or Pacific Islander
- White
- Other (please specify): \_\_\_\_\_

**13. What is your primary language spoken at home?**

- English
- Spanish
- Russian
- Chinese
- Other (please specify): \_\_\_\_\_

**14. What is the highest grade or level of school that you have completed?**

- 8th grade or less
- Some high school, but did not graduate
- High school graduate or GED
- Some college or 2-year degree
- 4-year college graduate
- More than 4-year college degree

**CANCER SCREENING: CONSUMER SURVEY 2014**

**THANK YOU FOR PARTICIPATING IN THIS SURVEY. PLEASE RETURN THE SURVEY IN THE ENCLOSED POSTAGE-PAID ENVELOPE AT YOUR EARLIEST CONVENIENCE.**