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Trends in Cancer Screening among Medicaid Enrollees in New Jersey: 2011–2017

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Executive Summary

This report summarizes a new analysis of trends in cancer screening among New Jersey Medicaid enrollees following expansions enacted through the Affordable Care Act (ACA). Since ACA expansions implemented in 2014, Medicaid has become an increasingly importance source of coverage within New Jersey, covering 1.8 million, or over 20% of its residents. The ACA also ensured that key preventive services, including important screenings for breast, cervical and colorectal cancer recommended by the United States Preventive Services Task Force (USPSTF) were deemed "essential health benefits," thereby reducing, or eliminating patient cost-sharing for these services in most plans.

Screening finds cancers earlier, improves outcomes, saves lives and reduces costs. Yet, rates of cancer screening remain suboptimal, particularly in racial/ethnic minority, low-income and medically underserved communities. Ensuring that those enrolled in Medicaid are receiving important preventive care, including early detection of cancer through screenings, has great implications for improving population health across New Jersey, which still ranks among the nation's ten worst states for cancer incidence.

Examining recent trends (2011-2017) among New Jersey Medicaid enrollees who became newly "age-eligible" during this time for recommended cancer screenings shows important gains in screening rates for breast, cervical and colorectal cancer. For example, among females enrolled in Medicaid and turning 50, rates of breast cancer screening through mammogram grew from 53% to 65% during this period. Rates of cervical cancer screening through co-testing with Pap and HPV tests increased dramatically among 30 year olds, rising from 7% to 52%. Gains were also made in rates of colorectal cancer screening for both males and females turning 50, which grew from 30% to 42% during the study period.

While these increasing trends are promising there is still more work to be done. Rates of screening among New Jersey's Medicaid enrollees still lag behind New Jersey state averages and remain far below targets within Healthy New Jersey 2020, the State's population health improvement plan. In addition, we see differences in screening rates among Medicaid enrollees by race/ethnicity and across New Jersey's 21 counties. However, these differences are not consistent across cancer screenings, meaning most counties are not performing consistently well or poorly on screening across cancer sites.

These findings point to both the need for, and promise of targeted local-level interventions to make further gains in cancer screening throughout New Jersey. ScreenNJ, which supported this analysis, is a collaboration of academic, clinical, and community organizations working to increase screening for lung and colorectal cancer, to reduce cancer mortality rates, and to educate NJ residents about the importance of cancer screening, early detection, and prevention. ScreenNJ is supported by the State of New Jersey and Rutgers Cancer Institute of New Jersey. Using findings from this report as a roadmap to advance evidence-based, targeted strategies for boosting screening among those enrolled in Medicaid across the state holds great promise for improved health throughout New Jersey.

Trends in Cancer Screening among Medicaid Enrollees in New Jersey: 2011–2017

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Introduction

Increasing cancer screening among individuals enrolled in Medicaid is a critically important step in improving health among New Jerseyans. Screening saves lives, reduces the burden of disease, and can help avoid unnecessary costs and suffering. This report, produced in collaboration with and supported by ScreenNJ and Rutgers Cancer Institute of New Jersey, reviews highlights from new analyses examining patterns of recommended screening for breast, cervical, and colorectal cancer among New Jerseyans enrolled in Medicaid and newly age-eligible for screening between 2011-2017. With over 1.8 million enrollees and climbing, Medicaid continues to be a vital source of coverage throughout the state. Exploring opportunities to improve the early detection of screening-detectable cancers among Medicaid recipients can therefore positively, and significantly, impact population health across New Jersey.

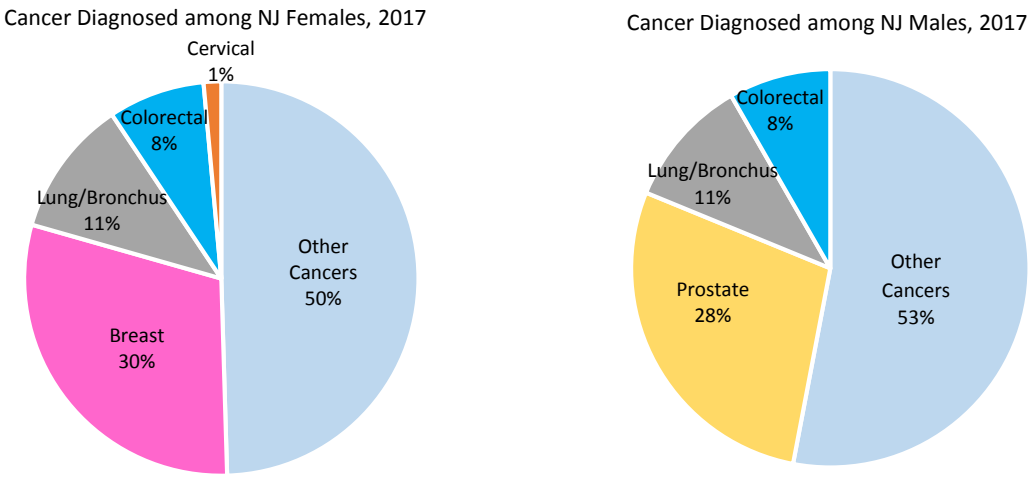
Review of Cancer Burden, Importance of Screening, and Medicaid's Role in New Jersey's Healthcare Landscape

A Brief Review of the Burden of Cancer in New Jersey

One in two men and one in three women will develop cancer in their lifetime. Overall, cancer is the second leading cause of death (behind heart disease) in both the United States and in New Jersey.[1] New Jersey continues to rank among the top ten worst states in cancer incidence, with a slight increase in incidence in 2017.[2,3] Among the 52,653 new cases diagnosed in 2017, common screening-detectable cancers—*such as breast, prostate, colorectal and lung cancers*--accounted for nearly half of all new cases among both males and females in New Jersey (Figures 1 and 2).[4,5]

Figure 1

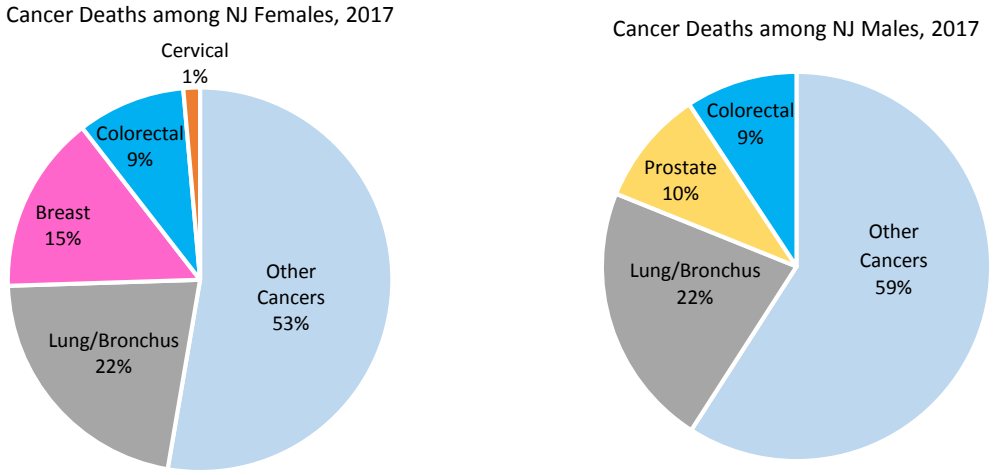
Common Screening-Detectable Cancers Account for Nearly Half of New Diagnoses in 2017



Source: NJ Cancer Registry & NJ Cancer Registry Annual Report Excerpt: Ten Most Common Types of Invasive Cancer by Gender, 2017

Figure 2

Common Screening-Detectable Cancers Accounted for Nearly Half of Cancer Deaths in 2017



Source: NJ Cancer Registry & NJ Cancer Registry Annual Report Excerpt: Ten Leading Sites of New Cancer Deaths by Gender, 2017

Disparities in Cancer Burden Continue to Persist by Race/Ethnicity

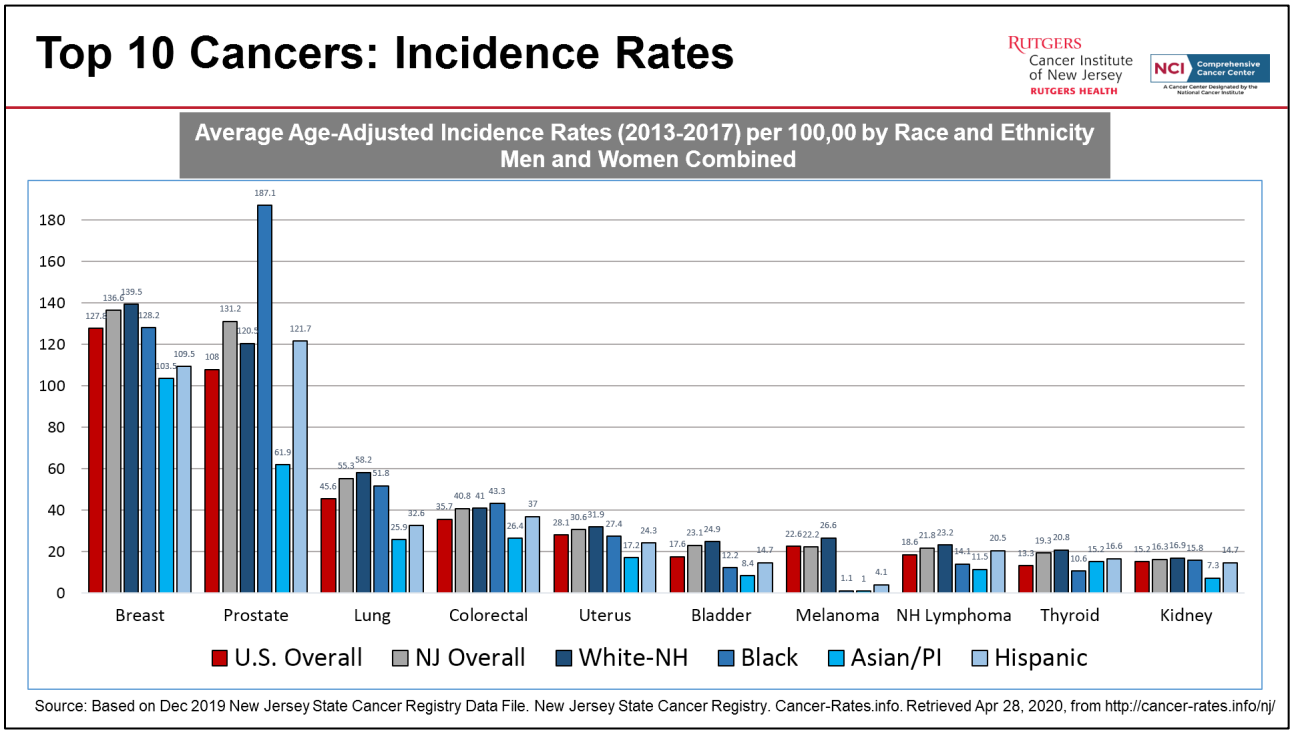
The burden of cancer disproportionately impacts racial/ethnic minority communities. As seen in the chart below, incidence rates among common cancers vary dramatically among race/ethncities inside New Jersey, and often far exceed the national average incidence for these cancers (Figure 3).

For example, among New Jersey males, between 2013-2017, colorectal cancer was the second most common cancer (behind prostate cancer) among Asian/Pacific Islander and Hispanic males. Lung and bronchus cancer was the second most common cancer (again, behind prostate cancer) among the State's Black and white males.[6]

In terms of New Jersey females, lung and bronchus cancer were the second most common cancer among Black and white females (behind breast cancer). Cervical cancer, a cancer deemed almost "entirely preventable" for which widespread screening was launched in the 1960s, was among the ten most common cancers among the State's Black and Hispanic females.[7,8,9]

Disparities in cancer incidence, late-stage diagnosis, and mortality have been linked to differences in health care access, insurance coverage, socioeconomic status, systemic racism, education, geography, contextual factors, and structural inequities.

Figure 3



Focus on Breast, Cervical and Colorectal Cancers: The Importance of Early Detection in Improving Outcomes, Saving Lives and Reducing the Burden of Disease

Early detection, combined with effective treatment, can improve outcomes, save lives, and reduce costs.

Weighing potential benefits and harms, the United States Preventive Services Task Force (USPSTF) provides evidence-based screening guidelines, for breast, cervical, and colorectal cancers. These guidelines are updated for each cancer site over time as new evidence supports changes in screening tests, as well as the ages or individuals for which these tests are appropriately offered.

With an aim of increasing access to these and other recommended preventive services, the 2010 Affordable Care Act (ACA) reduced or eliminated patient cost-sharing for these procedures in most health insurance plans.

Routine recommended cancer screenings help to detect cancers early, when they are more treatable and likely to have better outcomes. For breast cancer, routine screenings through mammography among women age 50 and older have been shown to detect cancers at earlier stages, when less aggressive treatment is required.[10] For cervical cancer, widespread Pap testing has resulted in dramatic declines, with new cases of cervical cancer dropping by more than 50% between 1975 and 2010.[11,12] Recent evidence has also shown the use of HPV testing in women over 30 can detect high-risk HPV infection associated cervical cancers and other cancers. Over time, new cases of colorectal cancers have dropped (Figure 4), with some attributing roughly half of the decline to increased rates of effective screening, which can detect precancerous polyps—abnormal growths in the colon or rectum—so that they can be removed before they turn into cancer.[13]

ScreeNJ
CANCER PREVENTION EDUCATION AND DETECTION

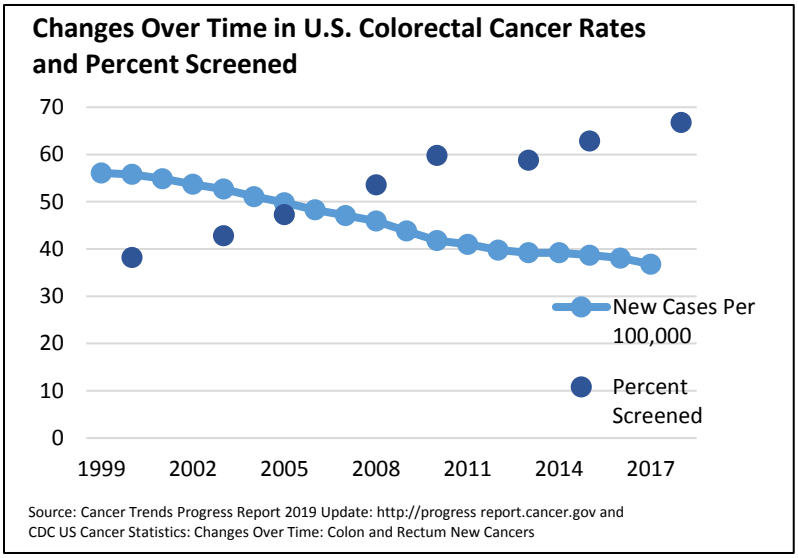
About ScreenNJ
screennj.org

ScreenNJ is a collaborative project of organizations across the state committed to reducing cancer incidence and mortality through an effective cancer prevention and screening program.

Colorectal cancer and lung cancer are among the most prevalent in the State. In order to help improve the health of New Jersey's residents, the initial focus of ScreenNJ is on colorectal cancer and lung cancer. These cancers have better outcomes if detected early through proven screening methods such as colonoscopy for colorectal cancer and low dose computed tomography (CT) scans for lung cancer.

Under the leadership of Rutgers Cancer Institute of New Jersey and working in partnership with the New Jersey Department of Health, primary care providers, and a number of stakeholder organizations throughout the state, the goal of ScreenNJ is to increase screening for colorectal and lung cancer, to reduce cancer mortality rates, and to educate New Jersey residents about the importance of cancer screening, early detection, and prevention. ScreenNJ was launched in 2017 and is funded in part by the State.

Figure 4



We also know that cancer screening saves lives. Screening can reduce breast cancer mortality by approximately 20%.[14] Five-year survival rates for early-stage cervical cancer are over 90%, compared to 15% of those diagnosed at an advanced stage.[15] And colorectal screening among asymptomatic patients has been linked to reductions in mortality of more than 65%.[16]

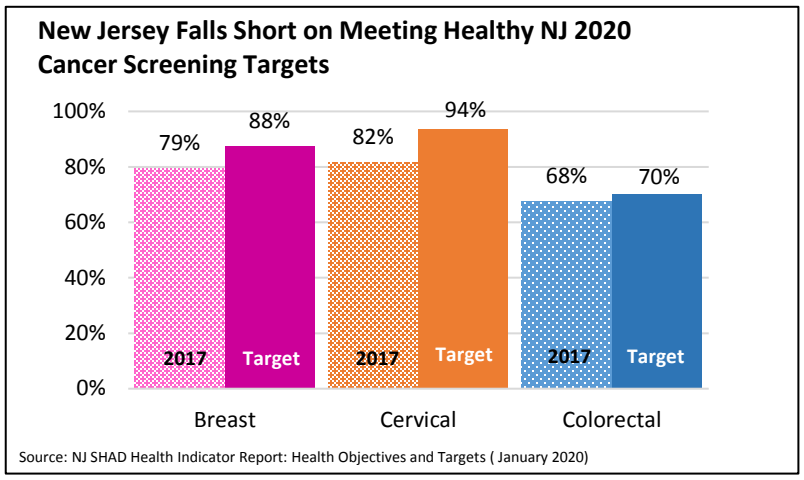
In addition to improving outcomes, early detection can yield substantial savings in treatment costs. Studies among selected countries have shown that treatment for cancer patients diagnosed in early stages is two to four times less costly compared to that of those diagnosed in advanced stages.[17] And some estimate that the U.S. could save over $25 billion through early diagnosis of screening-detectable cancers. [18]

Despite Benefits Screening Continues to Lag as a Strategy to Combat Detectable Cancers

Despite its proven benefits, as the United States Preventive Services Task Force has noted, screening remains a "substantially underused preventive health strategy in the United States."[19] Reviews of progress toward the nation's *Healthy People 2020 (HP2020)* screening targets shows deficiences across rates of breast, cervical, and colorectal screening compared to goals, with 72.8% of women screened for breast cancer (compared to a HP 2020 goal rate of 81.1%), 81.1% screened for cervical cancer (compared to the HP 2020 goal of 93%) and 66.8% screened for colorectal cancer (compared to the HP 2020 goal of 70.5%).[20] Unfortunately, the current pandamic could further hamper progress toward reaching these goals (and perhaps fuel increases in cases of more advanced cancers), with 32% of adults in the U.S. reporting either delaying or avoiding routine medical care due to concerns related to COVID-19.[21]

Like the U.S., NJ has also fallen short of reaching its Healthy New Jersey 2020 breast, cervical, and colorectal cancer screening benchmarks (Figure 5).[22]

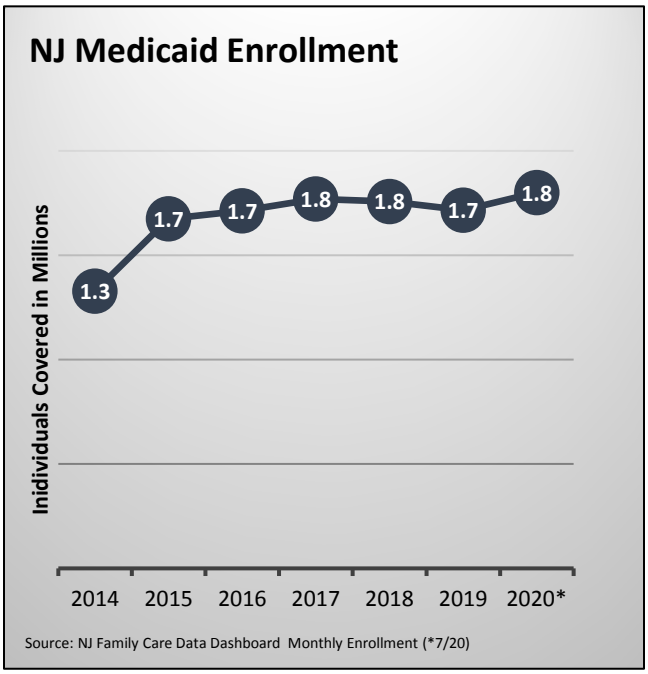
Figure 5



Between 2013-2017, fewer than half of cervical (39%) and colorectal (38% among women and 39% among men) cancer cases within the state were diagnosed at early stages.[23]

Unfortunately, among those enrolled in Medicaid, rates of screening have been found to be even lower than rates among those with private insurance - with Medicaid-insured individuals either missing screenings entirely or not getting screened as frequently as recommended.[24] Leadership at New Jersey's Medicaid program is committed to addressing these disparities and identifying strategies to increase utilization of these potentially live-saving services.

Figure 6



Importance of Medicaid Coverage in New Jersey's Healthcare Landscape

With expansions launched in 2014 through the Affordable Care Act, which extended Medicaid coverage to adults earning up to 138% of the federal poverty level, Medicaid has become an increasingly important source of coverage for the State, insuring nearly a half million more New Jerseyans over the past six years and contributing to the State's drop in uninsured (from 15% in 2013 to 9% in 2017).[25] Economic hardships stemming from COVID-19 have also forced additional families to turn to Medicaid for coverage.[26] In July 2020, more than 1.8 million New Jerseyans - nearly 20% of the State's population - were covered through Medicaid (Figure 6).[27] Given the economic fall-out of the pandemic, which will continue to impact employment, it is reasonable to anticipate further transitions in healthcare coverage, with some estimating more than half of those losing employer-sponsored coverage will turn to Medicaid for coverage in states that opted to expand the program, like New Jersey.[28]

In addition to expanding insurance coverage overall, the Affordable Care Act also ensured that key preventive health services were deemed part of the "essential health benefits" for all plans and eliminated cost-sharing (no copayments or coinsurance) for services, such as breast, cervical, colorectal, and lung cancer screenings, as part of this expansion.[29] New Jersey, along with selected other states, opted to extend coverage of these preventive services without cost-sharing for *all* adults covered through Medicaid (rather than just those newly eligible due to ACA program expansion).[30]

With Medicaid representing nearly a quarter (24%) of the State budget, ensuring early detection and prevention of cancer in those covered through the program has important implications for New Jersey's fiscal health as well as helping to achieve New Jersey's 2020 goal of residents enjoying longer lives free of preventable disease and premature death.[31,32]

Trends in Cancer Screening Rates among New Jerseyans Covered through Medicaid and Newly Age-Eligible for Cancer Screening

New Jersey is ranked in the top ten nationally for cancer incidence. Screening-detectable cancers, including colorectal and lung cancers for both males and females and breast and cervical cancer for females, are among the most prevalent cancer sites in the State. Medicaid populations are at higher risk for underuse of recommended cancer screenings. Using New Jersey Medicaid claims and enrollment files between 2011 and 2017, this analysis examines for Medicaid enrollees who are "newly age-eligible" (meaning, those reaching the age where screenings are routinely recommended) for breast (females, age 50), cervical (females age 21 and age 30), and colorectal (females and males, age 50) cancer screenings.

Trends in screening utilization in this population showed marked upticks following the 2014 ACA expansion period, especially for breast and colorectal screenings.

The relevant *current* (October 2020) recommended guidelines for breast, cervical, and colorectal screenings are summarized below. Rates of screening and demographic characteristics for each specific cancer site among Medicaid-insured individuals who aged into recommended screening categories between 2011 and 2017 are also described below, as well as recommended guidelines for lung cancer screening, although lung cancer screening rates for Medicaid enrollees were not examined. While understanding lung cancer screening rates among those enrolled in Medicaid is an important priority, because this analysis requires detailed information on prior smoking habits and history, it is not included in the current study.

Breast Cancer Screening

Breast Cancer Screening Rates among Newly Age-Eligible Women Enrolled in Medicaid

Current USPSTF Screening Recommendation for Breast Cancer (Published 2016)

Biennial mammography screening is recommended for women between 50 to 74 years old.[33]

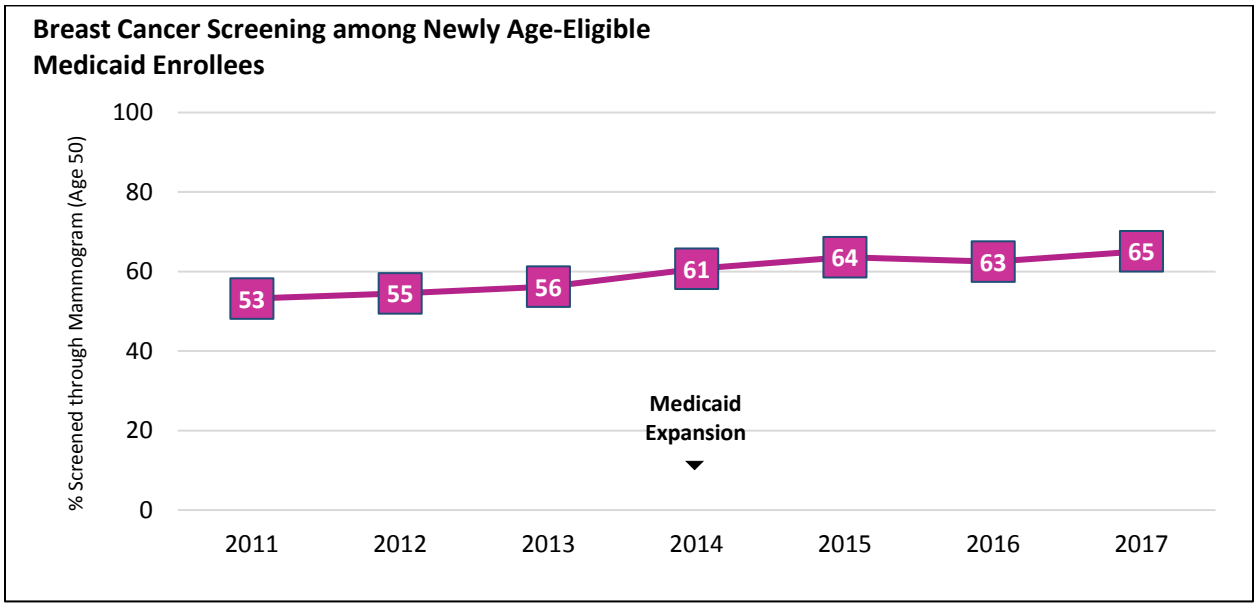
For the full set of recommendations, please visit: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening

Recap of NJ's Breast Cancer Incidence and Deaths

- 30% of new female cancer cases in 2017
- 15% of new female cancer deaths in 2017

This analysis focused on examining receipt of a first mammogram among women turning age 50 and newly age-eligible for breast cancer screening in the NJ Medicaid program. Among nearly 25,000 New Jersey women who were continuously enrolled in Medicaid and turning 50, breast cancer screening rates (i.e., receipt of mammogram upon turning age 50) averaged 61% across the 7 year period and improved by more than 10 percent between 2011 and 2017—rising from 53% to 65% (Figure 7) (See Technical Notes for inclusion criteria).

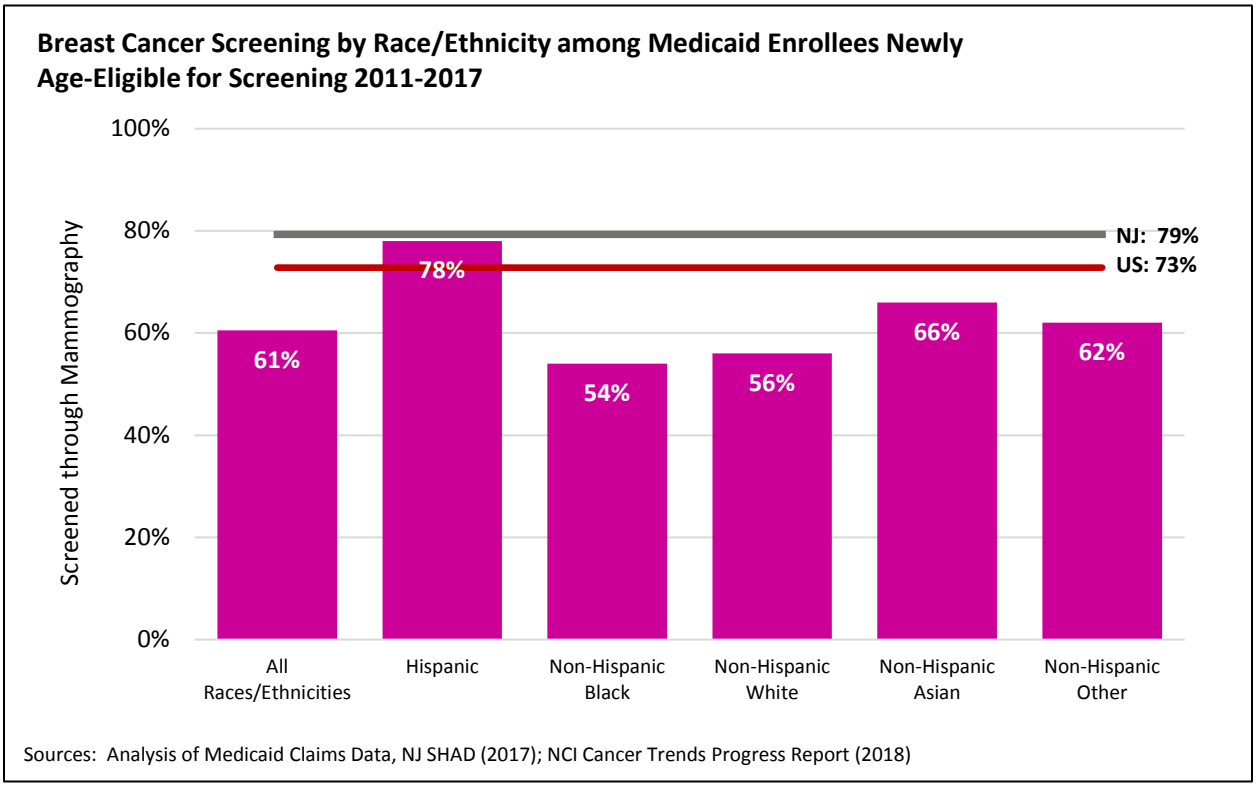
Figure 7



While this is a significant increase, it still falls well below the 79% average screening rate across the state (based on New Jersey Behavioral Risk Factor Survey (NJBRFS) data), and far short of the Healthy NJ 2020 goal of 87.5%.[34]

Examining Differences in Breast Cancer Screening of Women Enrolled in Medicaid Who Are Newly Age-Eligible by Race

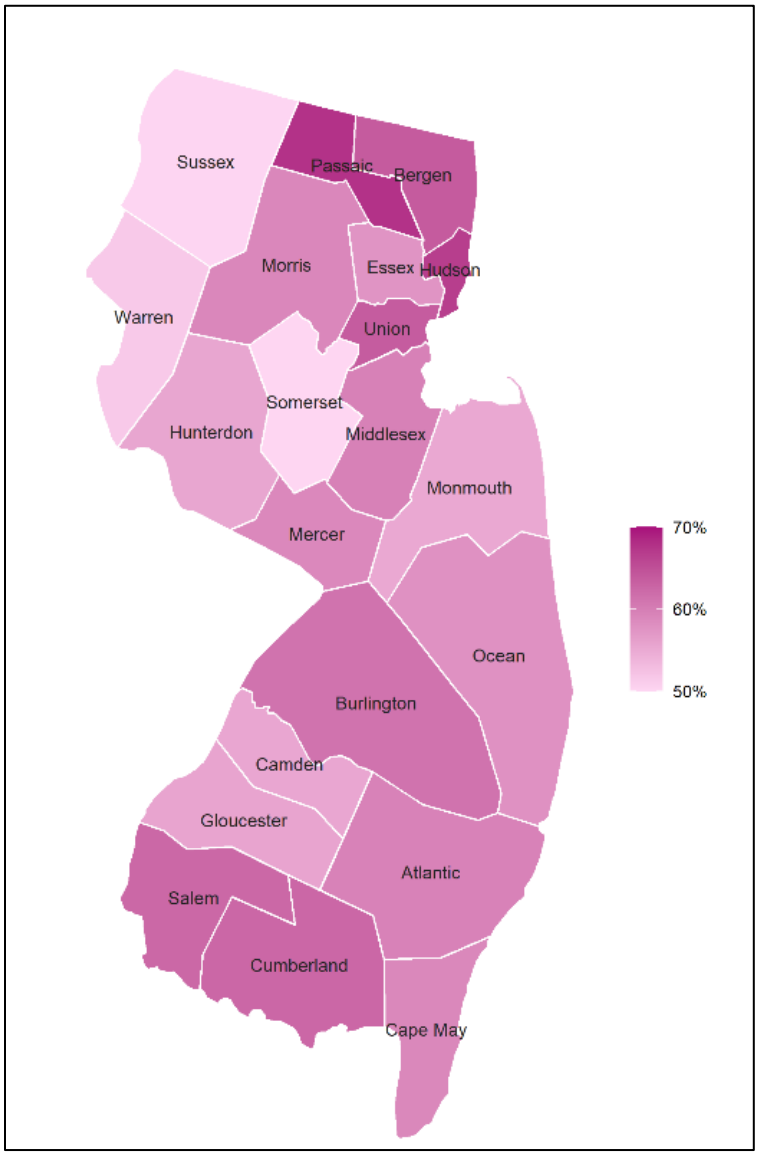
Figure 8



Sources: Analysis of Medicaid Claims Data, NJ SHAD (2017); NCI Cancer Trends Progress Report (2018)

Hispanic New Jerseyans have the highest rates of screening among New Jerseyans covered by Medicaid, with more than three-fourths of Hispanic women (78%) turning 50 over the period screened through mammograms. That is nearly as high as the State average (Figure 8). Non-Hispanic Asian women have the next highest screening rates at 66%. Screening rates among Non-Hispanic Blacks and Whites both hover around 55%.

County Rates and Rankings for Breast Cancer Screening of Women Enrolled in Medicaid Who Are Newly Age-Eligible



County of Residence	Rank	% Medicaid Age 50 Screened
Passaic	1	67.8
Hudson	2	66.8
Bergen	3	63.9
Union	4	63.8
Cumberland	5	62.6
Salem	6	62.5
Burlington	7	61.3
Middlesex	8	59.7
Atlantic	9	59.6
Morris	10	59.1
Cape May	11	59.0
Mercer	12	58.9
Ocean	13	57.9
Essex	14	57.6
Gloucester	15	55.8
Hunterdon	16	55.6
Camden	17	55.5
Monmouth	18	55.3
Warren	19	51.6
Sussex	20	50.2
Somerset	21	50.0

Along with racial/ethnic disparities, there are geographic differences in rates of screening among new-eligible Medicaid enrollees across counties in the State. Looking across the State's 21 counties, rates of breast cancer screening range from a high of 67.8% in Passaic County to a low of 50.0% in Somerset County. Still, even first-ranked Passaic County's screening rates among Medicaid-insured are nearly 20 percent below the Healthy NJ 2020 goal. (Table 1 in the Appendix also shows county rates by race and income).

Cervical Cancer Screening

Cervical Cancer Screening Rates among Newly Age-Eligible Women Enrolled in Medicaid

Current USPSTF Screening Recommendation for Cervical Cancer (Published 2018)

For women 21-29 years old, cervical cancer screening is recommended every 3 years, with cervical cytology alone.

For women aged 30 to 65 years, screening every 3 years with cervical cytology alone, every 5 years with high-risk human papillomavirus (hrHPV) testing alone, or cotesting every 5 years with hrHPV testing and cytology.[35]

For the full set of recommendations, please visit: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/cervical-cancer-screening

Recap of NJ's Cervical Cancer Incidence and Deaths

- 1% of new female cancer cases in 2017
- 1% of new female cancer deaths in 2017

There are two screening tests available to detect cervical cancer early or prevent it: Pap tests (or Pap smears) detect precancerous changes on the cervix that might become cervical cancer if left untreated; and human papillomavirus (HPV) tests detect the types of HPV associated with the development of cervical and other cancers.[36]

In this examination, we focus on receipt of cervical cancer screening for women turning age 21 and women turning age 30, two age groups that are newly age-eligible for specific cervical cancer screening guidelines based on USPSTF recommendations for ages 21-29 and ages 30-65 in 2012. For women turning age 21, we examine whether there was receipt of first Pap test. For women turning age 30, we examine whether there was receipt of a Pap test alone or receipt of Pap test and HPV test in combination.

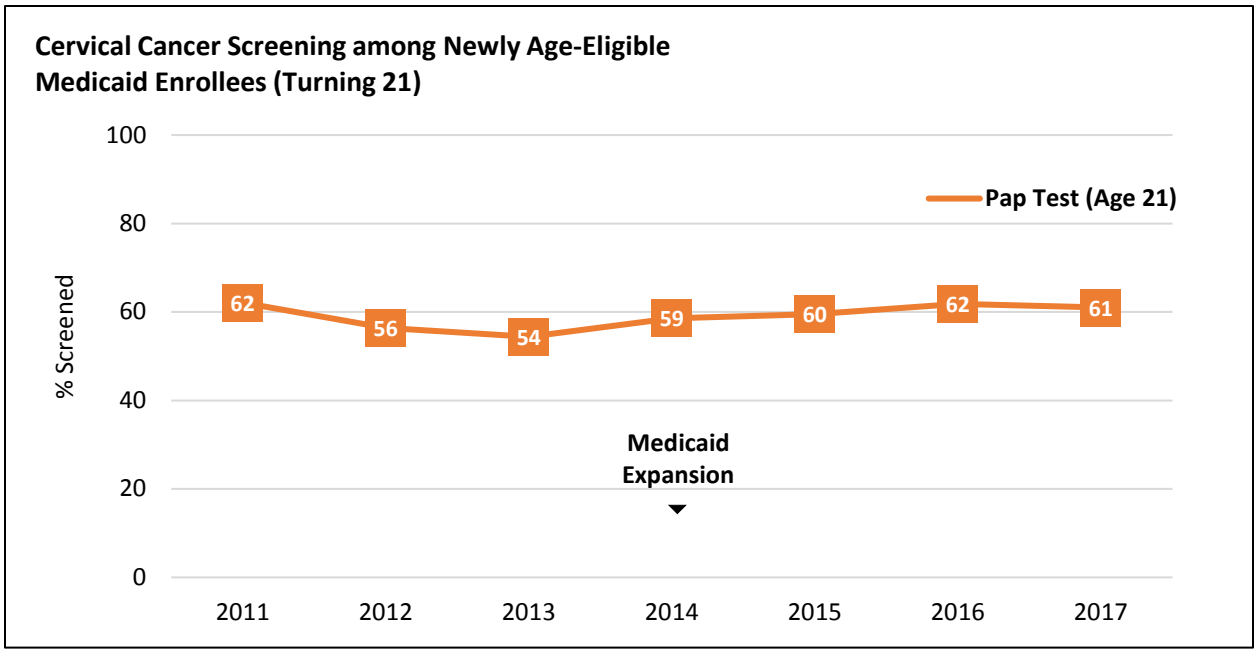
Examining Trends in Cervical Cancer Screening of Women Enrolled in Medicaid Who Are Newly Age-Eligible (Age 21)

Among over 25,000 Medicaid enrollees newly age-eligible (turning 21), cervical cancer screening rates dipped and then subsequently rebounded over the period studied (2011-2017). (See Appendix Technical Notes for more details).

In, 2011, rates of Pap testing among newly age-eligible women turning 21 were 62%. They declined to 54% in 2013 (just before the ACA expansions took effect) and then rose back up again to 61% in 2017 (Figure 9).

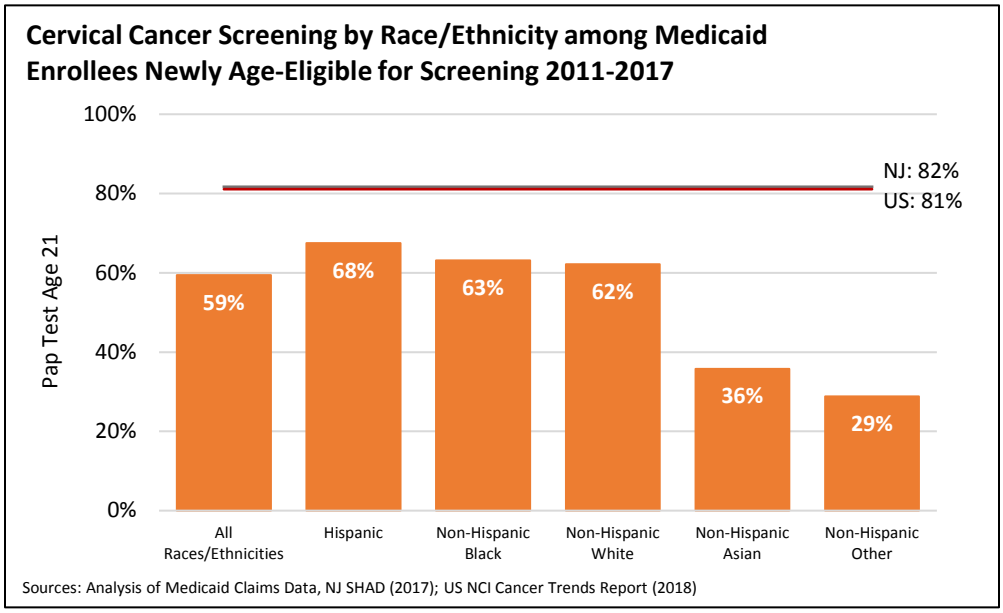
2017 cervical cancer screening rates among newly age-eligible Medicaid enrollees turning 21 were more than 20% below the NJ State average and more than 30% below the 2017 Healthy NJ 2020 target.

Figure 9



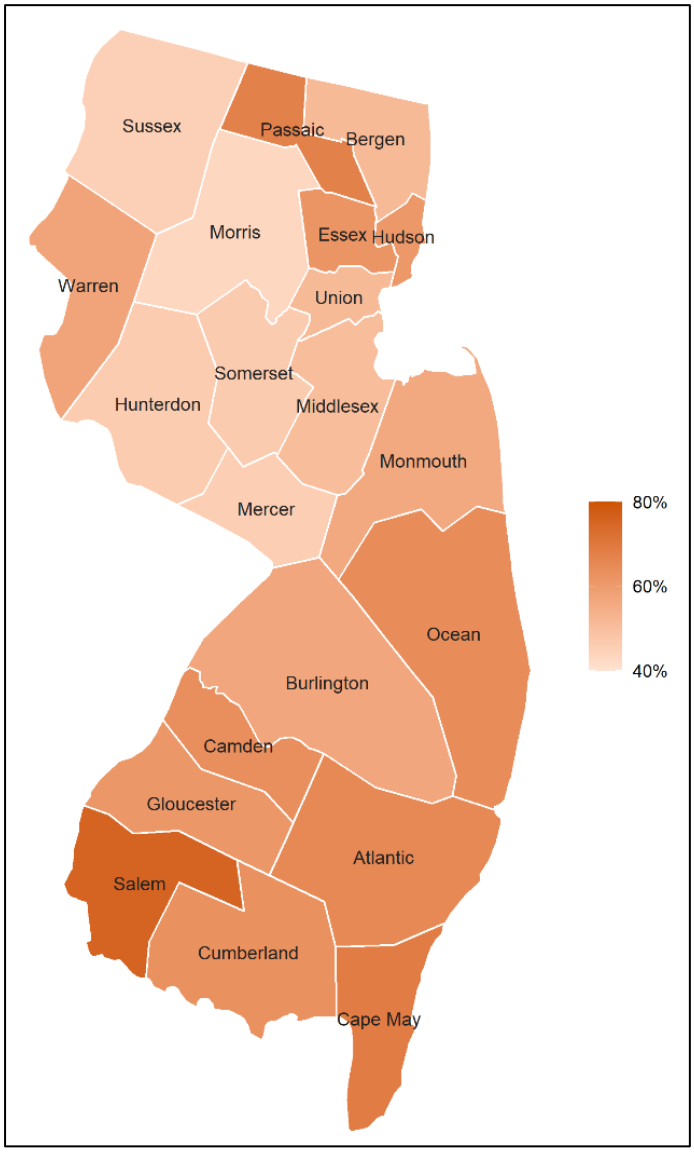
Examining Differences in Cervical Cancer Screening of Women Enrolled in Medicaid Who Are Newly Age-Eligible (21) by Race

Figure 10



As with breast cancer screening, Hispanic women turning 21 have the highest rates of cervical cancer screening (i.e., receipt of Pap test upon turning age 21) among New Jerseyans covered through Medicaid, with nearly 70% of those turning age 21 screened over the period 2011-2017, followed by rates among Non-Hispanic Black women and Non-Hispanic white women, at 63% and 62% respectively. Rates among Non-Hispanic Asian women and Non-Hispanic women of other races/ethnicities were much lower, underscoring the importance of culturally-competent care in addressing disparities in screening (Figure 10).

County Rates and Rankings for Cervical Cancer Screening Rates among Women Enrolled in Medicaid Who Are Newly Age-Eligible (Turning 21)



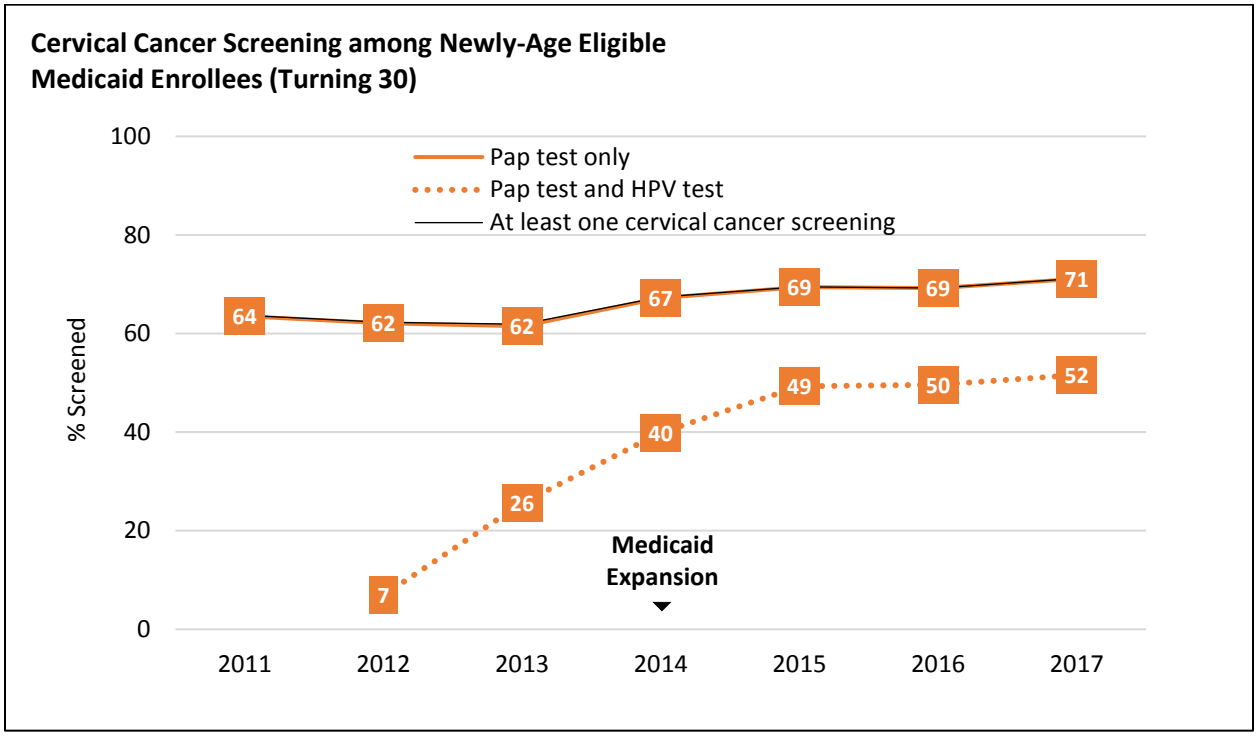
County of Residence	Rank	Cervical Screening % for Medicaid-Insured Women Turning 21
Salem	1	75.6
Cape May	2	68.8
Passaic	3	67.7
Atlantic	4	65.2
Ocean	5	64.5
Camden	6	63.7
Cumberland	7	63.2
Essex	8	61.9
Gloucester	9	61.4
Hudson	10	61.2
Warren	11	57.8
Burlington	12	57.0
Monmouth	13	56.4
Bergen	14	51.6
Union	15	51.5
Middlesex	16	50.7
Somerset	17	46.8
Hunterdon	18	46.5
Mercer	19	45.9
Sussex	20	45.4
Morris	21	43.3

Among those Medicaid-covered women turning 21, rates also vary across the counties, with a high in Salem County topping 75%, and a low in Morris County of 43%--a gap of over 30%. Interestingly, as indicated on the shaded maps, counties are generally not performing uniformly well on screenings. Only five of the "top ten" breast cancer screening counties were among the top ten for cervical cancer screening in the 21 year-old cohort of Medicaid enrollees. (Appendix Table 2a has additional information by county and race/ethnicity.)

Examining Trends in Cervical Cancer Screening of Women Enrolled in Medicaid Who Are Newly Age-Eligible (Age 30)

Trends among over 37,000 women, newly age-eligible for cervical cancer screening (turning age 30), show an increase overall in cervical cancer screening—rising from 64% in 2011 to 71% in 2017. When examining whether women received Pap testing and HPV testing in combination among newly age-eligible women turning 30, there was a dramatic increase--rising from 7% in 2012 to 52% in 2017. While the 30 year-old cohort screening rates were 10% higher than the 21 year-old cohort rates in 2017, despite gains over time, cervical cancer screening rates among newly age-eligible Medicaid enrollees turning 30 were still more than 10% below State average rates and 20% below Healthy New Jersey 2020 targets (Figure 11).

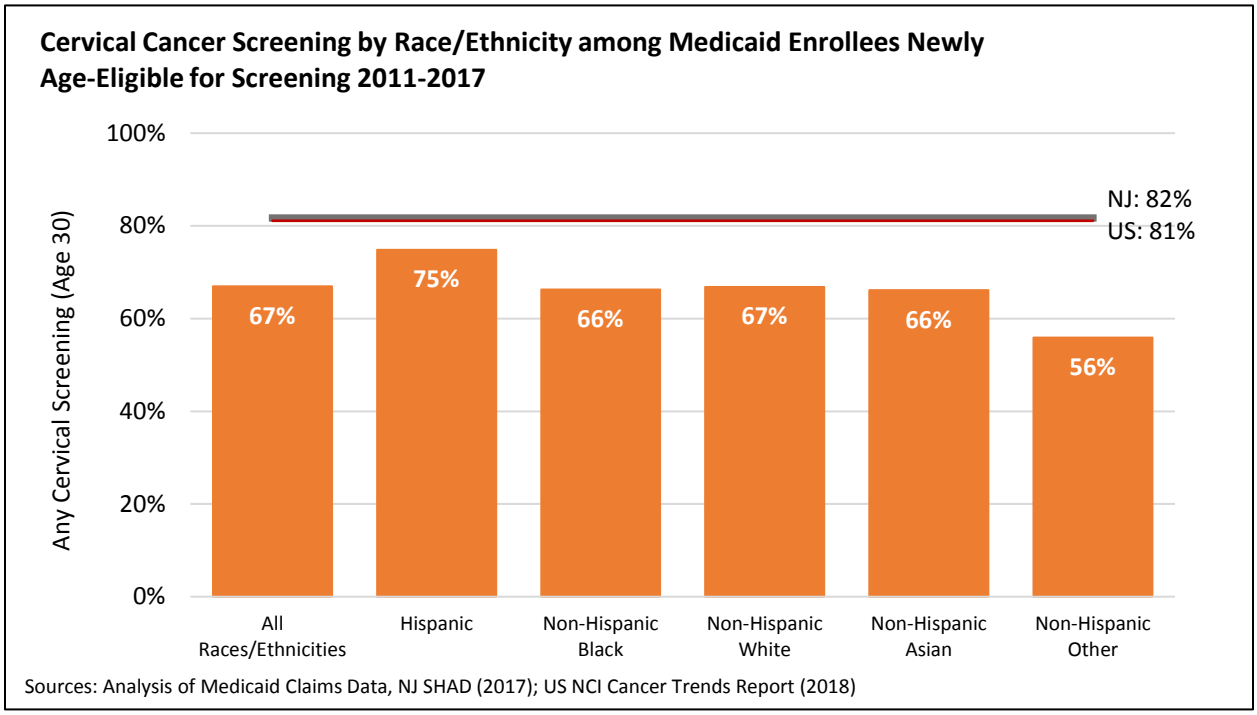
Figure 11



Note: The "Pap test only" and "at least one cervical cancer screening" lines substantially overlap.

Examining Differences in Cervical Cancer Screening of Women Enrolled in Medicaid Who Are Newly Age-Eligible (Age 30) by Race

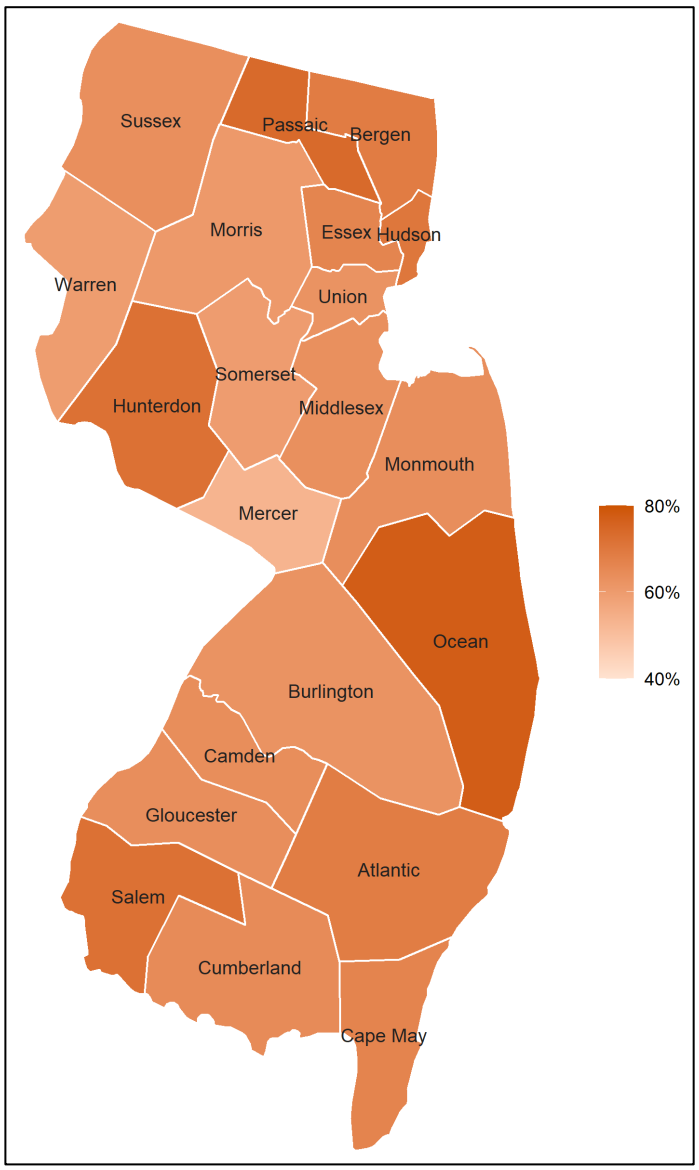
Figure 12



Among the 30-year old cohort, Hispanic women are again the most frequently screened (75%) (i.e., receipt of Pap test or Pap and HPV test in combination upon turning age 30), and at a higher rate than Hispanic women in the 21 year-old cohort.

Unlike the 21 year-old cohort, however, Non-Hispanic white women have the next highest rates of cervical cancer screening (at 67%). Non-Hispanic women of other races still trail more than 10% below average rates (at 56%) (Figure 12).

County Rates and Rankings for Cervical Cancer Screening of Women Enrolled in Medicaid Who Are Newly Age-Eligible (30)



County of Residence	Rank	Any Cervical Screening for Medicaid-Insured Women Turning 30 (%)
Ocean	1	77.5
Passaic	2	73.9
Hunterdon	3	72.1
Salem	4	72.1
Hudson	5	70.5
Bergen	6	69.1
Atlantic	7	68.8
Cape May	8	66.7
Essex	9	66.6
Cumberland	10	64.7
Camden	11	64.0
Gloucester	12	63.9
Monmouth	13	63.9
Sussex	14	63.6
Middlesex	15	63.4
Union	16	62.6
Burlington	17	62.5
Morris	18	60.8
Somerset	19	59.9
Warren	20	59.8
Mercer	21	53.3

Looking across counties at the cohort of women newly age-eligible (turning 30) and covered through Medicaid, Ocean County has the highest rates of cervical cancer screening (women receiving Pap test or combined Pap and HPV tests upon turning age 30) at 77.5%, while Mercer County's screening rate is 53.3% more than 20% below Ocean's.

There is more consistency within cervical cancer screening ranks among counties, with eight of the "top ten" performing counties for the 21-year-old cohort also ranked among the top ten for the 30 year old cohort (and eight of the bottom ten counties similarly ranked among both age cohorts). (Apprendix Table 2b has additional data by county and race/ethnicity.)

Colorectal Cancer Screening

Colorectal Cancer Screening Rates among Newly-Eligible Men and Women Enrolled in Medicaid

Current USPSTF Screening Recommendations for Colorectal Cancer (Published 2016; Update Currently in Progress)

Screening is recommended starting at age 50 years and continuing until age 75 years. Recognizing that "there is no 'one size fits all' approach to colorectal cancer screening,"[37] below are recommended frequencies for screening tests for average-risk adults*:

- Colonoscopy: Every 10 years
- FIT: Every year
- gFOBT (guaiac-based fecal occult blood test): Every year
- FIT-DNA: Every 1 or 3 years, as suggested by the manufacturer
- CT Colonography: Every 5 years
- Flexible Sigmoidoscopy: Every 5 years
- Flexible Sigmoidoscopy with FIT (fecal immunochemical test): Flexible sigmoidoscopy every 10 years, with FIT every year[38]

*ACS guidelines call for starting screening at age 45. Screening is also recommended earlier and more frequently for those in higher-risk groups.

For the full set of recommendations, please visit: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening

Recap of NJ's Colorectal Cancer Incidence and Deaths

- 8% of new female cancer cases in 2017
- 8% of new male cancer cases in 2017
- 9% of new female cancer deaths in 2017
- 9% of new male cancer deaths in 2017

Screening guidelines for colorectal cancer includes the option of multiple testing modalities with varying frequencies. In this examination, we assess receipt of any type of initial colorectal cancer screening upon turning age 50 as well as focusing specifically on trends in colonoscopy and FIT/FOBT for our years of study.

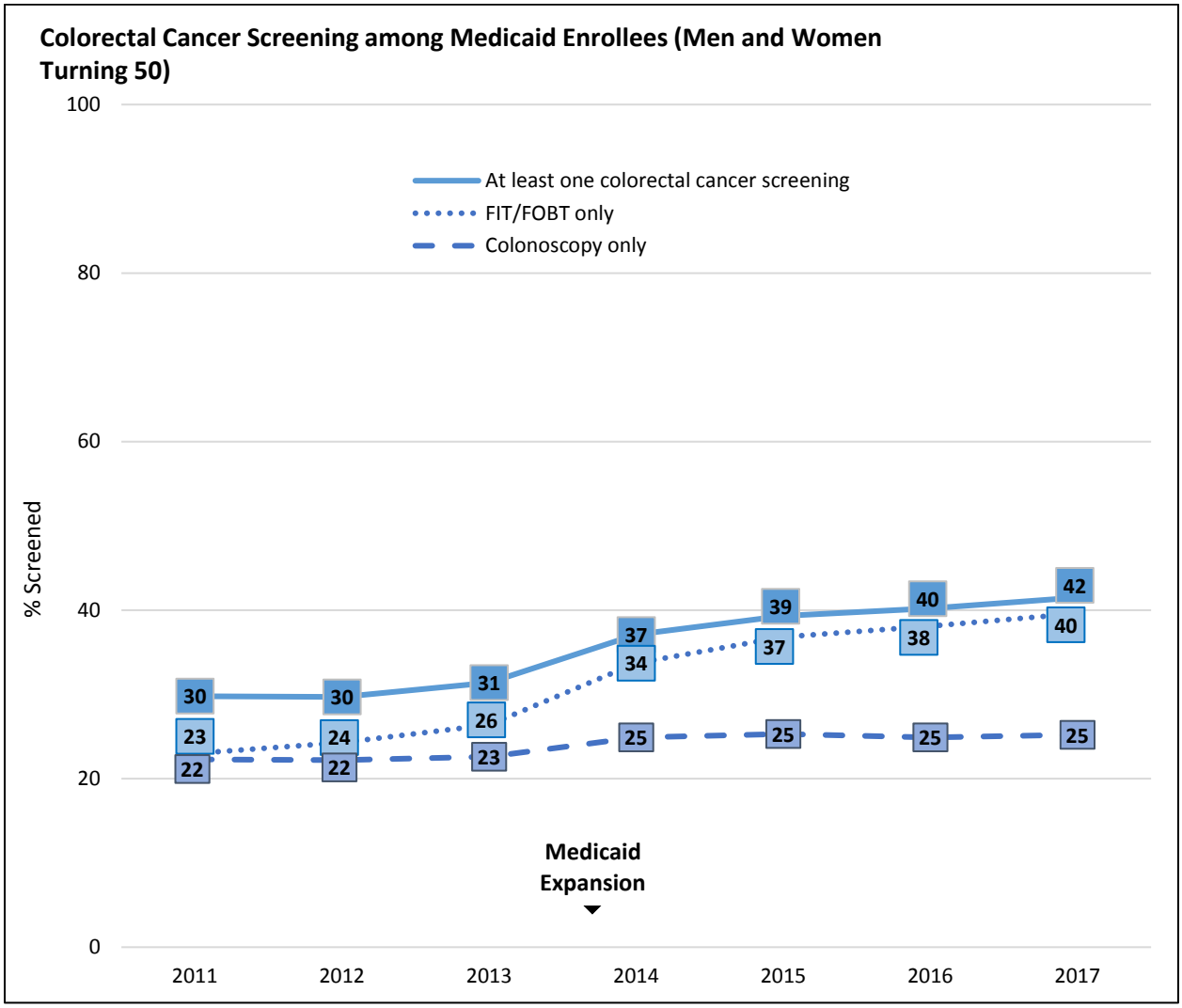
Overall, receipt of initial colorectal cancer screenings (i.e., either through colonoscopy or FIT/FOBT testing upon turning age 50) among over 41,000 Medicaid-insured men and women turning age 50 grew from 30% to 42% between 2011 and 2017. While improving, these screening rates still trail significantly behind both breast and cervical cancer screening rates.

Among those screened, the share of Medicaid enrollees screened through colonoscopy grew just slightly from 22% to 25%, while those screened through FIT/FOBT testing increased dramatically from 23% to 40% over the study period (Figure 13). As there is no one size fits all to these screening modalities, it will be important to note patient and health system factors that contribute to routine/adherent testing with either modality over time in the Medicaid population.

Again, while there has been considerable progress over time, rates of colorectal screening overall with any screening modality among those "newly age-eligible" insured through Medicaid are still

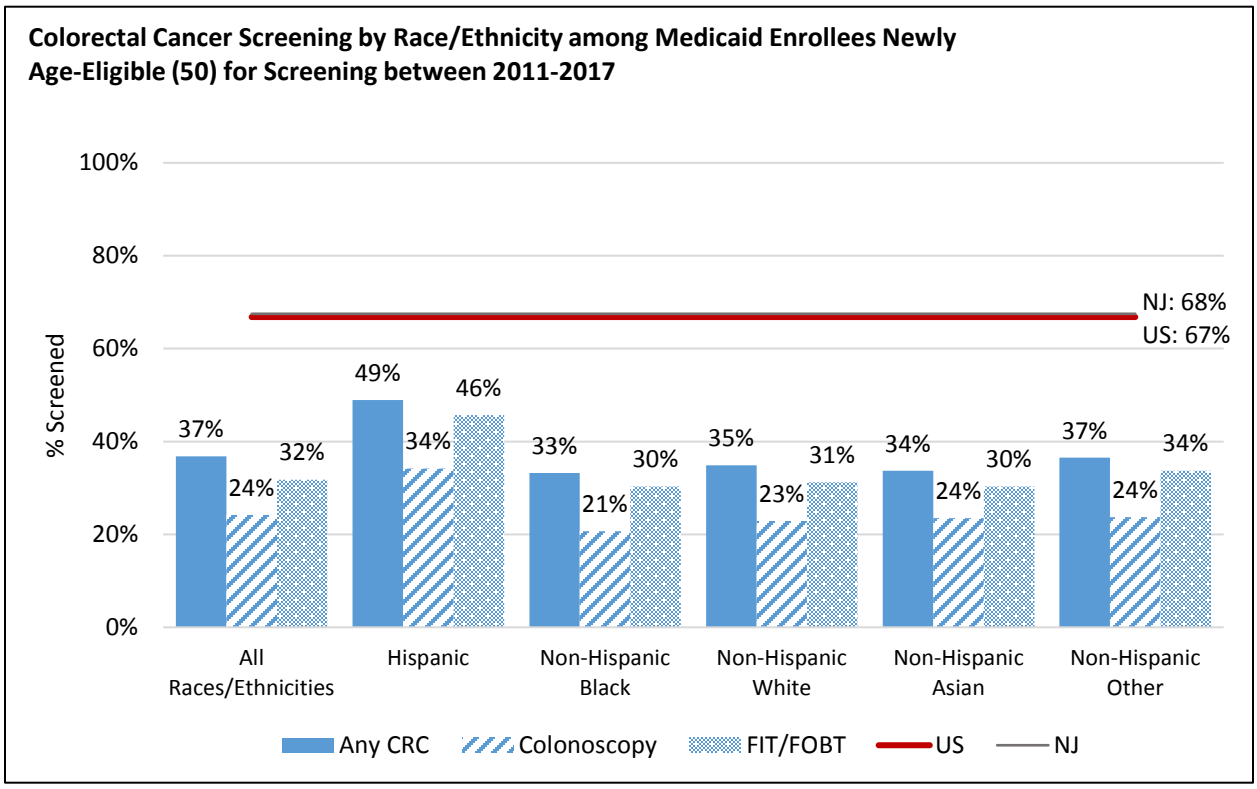
well below the NJ average rate of 67.5% and also fall far short of the Healthy New Jersey 2020 70.2% benchmark (by nearly 30%).[39]

Figure 13



Examining Differences in Colorectal Cancer Screening among Women and Men Enrolled in Medicaid Who Are Newly Age-Eligible (50) by Race

Figure 14

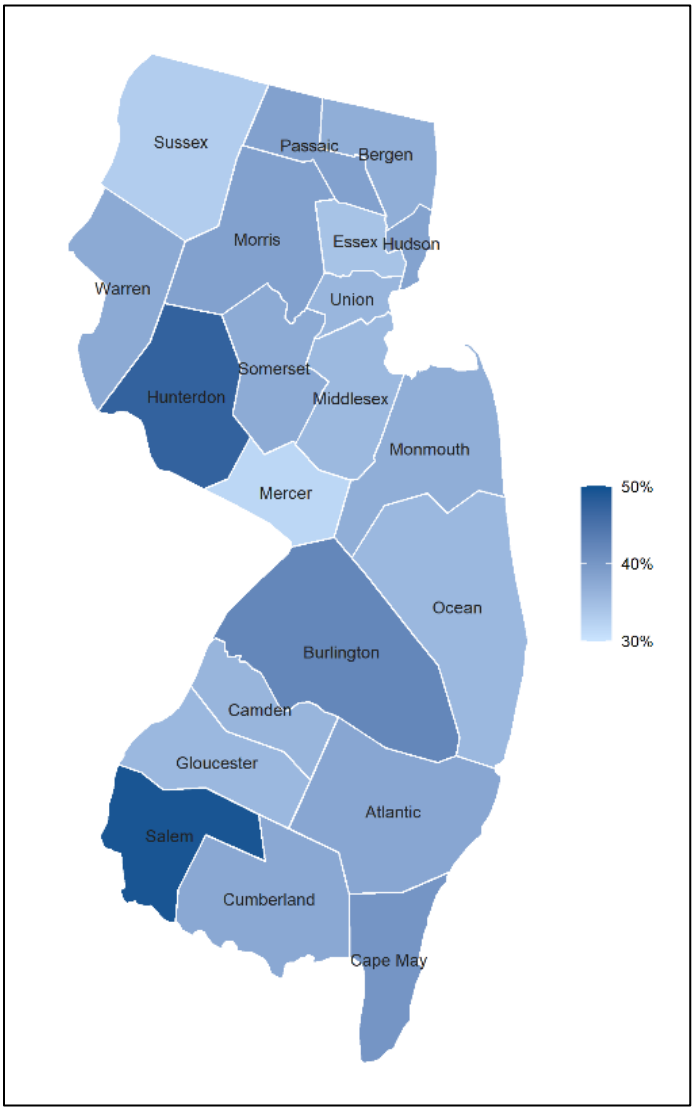


As with breast and cervical cancer, Hispanic men and women who are newly age-eligible (age 50) have the highest rates of colorectal cancer screening overall, with nearly half getting the recommended screening.

Screening rates among all other races/ethnicities were just around 35%, with Non-Hispanic individuals of other races being the second highest screened at 37%.

Across all races/ethnicities, screening through FIT/FOBT was more common than through colonoscopy (Figure 14).

County Ranking for Colorectal Cancer Screening among Men and Women Enrolled in Medicaid Who Are Newly Age-Eligible (Turning 50)



County of Residence	Rank	Colorectal Cancer Screening % among Medicaid-Insured Men and Women Turning 50
Salem	1	49.4
Hunterdon	2	47.4
Burlington	3	42.2
Cape May	4	40.3
Morris	5	38.7
Passaic	6	38.7
Hudson	7	38.5
Atlantic	8	38.0
Cumberland	9	37.8
Warren	10	37.5
Somerset	11	37.4
Bergen	12	37.0
Monmouth	13	37.0
Camden	14	36.1
Union	15	36.0
Gloucester	16	35.7
Ocean	17	35.7
Middlesex	18	35.6
Essex	19	34.3
Sussex	20	33.0
Mercer	21	31.8

As with the aforementioned screenings, across counties there was a wide range of colorectal screening rates—from close to half of those Medicaid-insured turning 50 in Salem County getting screened to less than a third of Medicaid-insured turning 50 in Mercer County getting screened. (Appendix Table 3 has additional information by county and race/ethnicity.)

Even the highest performing counties are well-below the Healthy New Jersey target of 70.2%. With no county in New Jersey reaching even half of the Medicaid target population, there are plenty of opportunities to boost rates throughout the state.

A Need for Future Examination of Lung Cancer Screening among Medicaid Enrollees

USPSTF Screening Recommendations for Lung Cancer (Published 2013; Update in Progress)

The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults 55 to 80 years-old who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.[40]

Lung cancer screening guidelines are currently in the process of being updated to start screening earlier and for fewer pack-years.For more information on recommendations, please visit: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/lung-cancer-screening

Recap of NJ's Lung Cancer Incidence and Deaths

- ⇨ 11% of new female cancer cases in 2017
- ⇨ 11% of new male cancer cases in 2017
- ⇨ 22% of new female cancer deaths in 2017
- ⇨ 22% of new male cancer deaths in 2017

Lung cancer is the leading cause of deaths due to cancer for both men and women, in New Jersey and in the nation as a whole, in part because it is often not diagnosed until after it has spread outside the lungs, making early detection incredibly important. Lung cancer screening is underutilized and nearly all of the patients who would benefit from screening are not being reached -- approximately 3% of all New Jersey residents who meet the USPSTF lung screening eligibility criteria are receiving the recommended screening, and only an estimated 4.4% are screened nationally.[41]

While a more granular understanding of the variation in lung cancer screening rates, both generally and among those who are Medicaid-insured, is critically important, this analysis was not possible given the information available in the Medicaid claims dataset analyzed, as determining eligibility for lung cancer screening requires not only age data and procedure codes but also historical information on smoking habits and exposure to identify screening-eligible patients.

ScreenNJ is working closely with healthcare provider agencies across the state to modify electronic medical record fields, prompts, and data entry processes to support collection about patient tobacco use and to help identify patients who may benefit from shared decision making, referral to lung cancer screening, and referral to tobacco cessation resources. Increasing prevention and screening for lung cancer, which remains New Jersey's deadliest cancer, continues to be a top priority for ScreenNJ. In addition to the EMR interventions noted above, ScreenNJ also delivers healthcare professional education and technical support to improve guidelines for patient assessment, referral, and billing for lung cancer screening, distributes educational content in a variety of formats to raise awareness of screening services, and connects

both patients and providers to tobacco cessation resources, including the Quitline and Quit Centers, that can help reduce the incidence of lung cancer over the longer term.

Opportunities for Increasing Cancer Screening in New Jersey

While improvements in screening for breast, cervical, and colorectal cancer among those Medicaid-insured and newly-age eligible for these screenings over the period following the ACA expansion are promising, there are still opportunities to boost rates overall in New Jersey, focusing on key differences in screening rates by both race/ethnicity and among the state's 21 counties.

The goals of ScreenNJ are to increase screening for colorectal and lung cancer, to reduce cancer mortality rates through both increased screening and wider adoption of preventive measures such as smoking cessation, and to educate New Jersey residents about the importance of cancer screening, early detection, and prevention. Through collaborations with providers, public health agencies, and community organizations throughout the state, ScreenNJ is working to expand screening through outreach, resource sharing, provider education and clinical practice improvement, as well as advancing research to better understand barriers and facilitators to cancer screening.

To date, ScreenNJ partnership efforts have been launched statewide, with special focus in the counties identified in this brief as lagging behind others in meeting colorectal cancer screening goals among those covered through Medicaid as well as in counties with high incidence and mortality rates for colorectal and lung cancer. ScreenNJ has supported multi-modal efforts to improve screening rates statewide, including:

- Coordination with state chapters of national organizations such as the American Cancer Society (ACS) to promote and share evidence-based guidelines and interventions that increase screening, such as helping to bring the FluFIT program to health systems and other sites with significant volumes of annual flu vaccinations for staff who are also eligible for colorectal cancer screening. A successful pilot implementation was run at a partner site in fall 2019 for part of their flu vaccination program, and ScreenNJ staff worked closely with ACS to provide guidance on both the pilot and how to expand the effort to additional sites (unfortunately COVID-19 has delayed the expansion and rollout efforts at many sites).
- Provision of training resources to community health centers and federally qualified health centers (FQHCs) to support increased access to colorectal and lung cancer screening as well as cancer prevention interventions such as tobacco cessation – at one partner organization, ScreenNJ support enabled multiple staff pharmacists, who provide direct

tobacco cessation interventions to patients at a high-contact point of care in their workflow, to attend the Certified Tobacco Treatment Specialist (CTTS) program.

- Collaboration and supplemental supports for Cancer Education and Early Detection (NJCEED) agencies to increase staffing capacity for community education and patient recruitment, provide educational materials that complement existing NJCEED resources, provide patient transportation funding for those where transportation to and from a colonoscopy is a significant barrier to screening, and train staff on recommended assessment and screening practices for patients with personal or family history that puts them at higher risk for developing colorectal cancer – these supports have helped NJCEED staff to guide high-risk patients for whom stool-based testing is not guidelines-concordant through colonoscopy.
- Regional coordination with Low-Dose CT (LDCT) providers to cover lung cancer screening costs for uninsured patients and to connect FQHC and NJCEED agencies to these locations for referral of un- and under-insured patients who meet screening eligibility criteria for lung cancer screening.
- Educational and outreach collaboration with Regional Chronic Disease Coalitions to plan and deliver in-person and virtual education to community members to improve awareness of cancer screening and prevention services and how community members can access those services most easily.
- Operational and staffing support for county and regional patient navigation to cancer screening services – such as screening navigators placed in hospitals with colonoscopy and LDCT services and with transportation and other barrier-reduction tools to support navigation, and who focus on connecting with county and regional FQHC, NJCEED, and other community health centers to ensure screening navigation is available to the patients most likely to face barriers to accessing care.

Along with the data analysis presented in this brief, ScreenNJ is supporting additional data collection, analysis, and evaluation efforts that provide information and strategies to help ScreenNJ and statewide partners focus on those areas where the greatest progress can be made in reducing health disparities and improving screening access and rates throughout the state. More details in these efforts are included in the appendix.

Conclusion

With Medicaid's role as a cornerstone of insurance coverage throughout New Jersey, it is critical to ensure access to, and utilization of, recommended preventive care, including life- and cost-saving cancer screenings. This analysis, which examined trends among New Jerseyans covered through Medicaid and newly-eligible for important cancer prevention screenings shows that, while considerable progress has been made since expansions under the Affordable Care Act to improve rates for breast, cervical, and colorectal cancer screenings, rates among those who are Medicaid-insured remain well below State and national averages and far below cancer screening benchmarks that the State has targeted to improve health.

In addition, there are considerable disparities among rates of screening across various racial/ethnic populations, and we find inconsistent patterns of screening throughout the state's 21 counties. For example, variation in screening rates across counties were observed, with Medicaid enrollees in more urban areas sometimes having higher screening rates. This may be attributed to contextual factors, such as having access to screening supports (transportation, etc.) in densely-concentrated areas compared to those low-income Medicaid enrollees living in more affluent or suburban counties across the state. These findings also point to the need to expand ongoing deeply rooted engagements with local stakeholder groups (like those currently underway through ScreenNJ and Rutgers Cancer Institute) to tailor community-level, and population specific strategies for improving cancer screening. A multi-sector policy response is critical to closing some of these gaps. Lessons from this analysis, along with additional efforts also sponsored by ScreenNJ focused on identifying and resolving patient and practice barriers to recommended screenings, can help guide targeted and multi-level efforts to improve cancer screening and cancer outcomes throughout New Jersey.

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Technical Notes:

Breast Cancer Screening: We included all female Medicaid enrollees newly age-eligible (turning age 50) for breast cancer screening and enrolled in Medicaid continuously for three consecutive years starting with the calendar year they turn 50. For breast cancer screening this includes all female enrollees turning age 50 between 2011 and 2017 and continuously enrolled for two additional calendar years. Dual enrollees in Medicare and Medicaid as well as those with prior breast cancer or mastectomies were excluded.

Cervical Cancer Screening: We included all female Medicaid enrollees newly age-eligible (age 21 and age 30) for cervical cancer screening and enrolled in Medicaid continuously for three consecutive years starting with calendar year they become age-eligible. For cervical cancer screening, this includes all females enrollees turning either age 21 (for which Pap test alone were examined) or age 30 (for which Pap, and Pap in combination with HPV tests were examined) between 2011 and 2017 and continuously enrolled for two additional calendar years. Dual enrollees in Medicare and Medicaid as well as those with prior cervical cancer or hysterectomies were excluded. The "Any Cervical Cancer Screening" totals for the 30 year-old cohort may capture a small number of individuals getting HPV testing only.

Colon Cancer Screening: We included all Medicaid enrollees newly age-eligible (turning age 50) for colorectal cancer screening and enrolled in Medicaid continuously for three consecutive years starting with the calendar year they become age-eligible. For colorectal cancer screening this includes all female and male enrollees turning age 50 between 2011 and 2017 and continuously enrolled for two additional calendar years screened either through colonoscopy or FIT/FOBT testing. Dual enrollees in Medicare and Medicaid as well as those with prior colon or rectal cancers or prior colectomies were excluded.

Appendix

County Screening Tables

Table 1. Percent Screened (Receipt of Mammogram) among Medicaid Enrollees, Female, Newly Age-Eligible (50 Years Old) by County, Race/Ethnicity and Zip Code Level Income

	Total	Hispanic	Non-Hispanic White	Non-Hispanic-Black	Non-Hispanic Asian	Non-Hispanic-Other Race	Low-Income Area	Middle-Income Area	High-Income Area
Atlantic	**59.6**	--	53.7	59.0	--	61.5	58.1	62.2	57.2
Bergen	**64.0**	83.2	57.6	60.9	62.0	66.5	78.7	65.3	62.1
Burlington	**61.3**	--	57.0	63.2	--	--	--	--	62.1
Camden	**55.5**	69.1	49.3	52.8	63.2	61.5	56.2	55.6	53.4
Cape May	**59.0**	--	--	--	--	--	67.5	57.4	50.0
Cumberland	**62.6**	72.9	56.2	66.1	--	--	--	63.2	--
Essex	**57.7**	77.3	60.3	51.5	63.6	61.1	56.8	63.4	61.1
Gloucester	**55.8**	100.0	54.4	55.2	--	--	--	--	58.2
Hudson	**66.8**	80.1	60.9	52.4	64.9	61.5	69.2	66.4	63.5
Hunterdon	**55.6**	--	--	--	--	--	--	--	--
Mercer	**58.9**	--	51.2	59.7	--	57.1	56.5	64.8	58.9
Middlesex	**59.7**	74.0	51.9	53.2	64.6	60.6	--	--	58.4
Monmouth	**55.3**	--	54.6	55.8	--	49.7	--	--	55.6
Morris	**59.1**	--	53.4	59.2	--	56.7	--	--	59.5
Ocean	**57.9**	--	56.4	62.7	--	56.5	60.5	55.1	57.9
Passaic	**67.8**	84.2	68.0	47.1	60.7	71.4	67.7	74.2	63.0
Salem	**62.5**	--	54.3	--	--	--	--	59.8	60.3
Somerset	**50.0**	--	42.9	46.9	--	52.8	--	--	49.0
Sussex	**50.2**	--	46.2	--	--	--	--	--	--
Union	**63.8**	74.9	59.9	57.3	--	--	67.6	62.7	60.6
Warren	**51.6**	--	--	--	--	--	--	--	48.4

-- Cells with <11 individuals, as well as related derived and adjacent cells, have been omitted.

Table 2a. Percent Screened (Receipt of Pap Test) among Medicaid Enrollees, Female, Newly Age-Eligible (21 Years Old) by County, Race/Ethnicity and Zip Code Level Income									
	All Eligible Women	**Hispanic**	**Non-Hispanic White**	**Non-Hispanic Black**	**Non-Hispanic Asian**	**Non-Hispanic Other Race**	**Low-Income Area**	**Average Income Area**	**High-Income Area**
Atlantic	**65.2**	81.3	67.5	67.2	45.5	34.4	69.1	62.1	64.6
Bergen	**51.6**	67.1	59.0	64.2	30.1	25.9	--	--	47.2
Burlington	**57.0**	--	59.4	65.1	--	24.6	--	--	56.4
Camden	**63.7**	66.8	63.1	68.5	43.9	34.6	69.9	61.5	55.5
Cape May	**68.8**	--	70.7	--	--	16.7	--	71.4	--
Cumberland	**63.2**	70.0	57.0	64.7	--	50.0	--	64.6	--
Essex	**62.0**	68.6	63.6	62.5	52.2	42.2	66.8	51.1	50.8
Gloucester	**61.5**	--	63.5	70.1	--	--	--	--	61.0
Hudson	**61.2**	68.2	62.0	64.2	37.9	41.4	71.9	59.4	61.9
Hunterdon	**46.5**	--	--	--	--	--	--	--	--
Mercer	**45.9**	58.0	47.2	46.9	--	--	46.4	46.5	39.5
Middlesex	**50.6**	63.4	57.7	51.9	27.9	22.9	60.3	63.2	43.5
Monmouth	**56.4**	68.4	57.1	69.8	--	--	--	--	52.8
Morris	**43.2**	54.5	47.7	55.8	35.9	21.2	--	--	--
Ocean	**64.6**	80.5	67.3	61.5	--	--	68.0	64.0	60.3
Passaic	**67.7**	73.5	67.9	70.9	37.7	31.7	71.8	65.2	53.9
Salem	**75.6**	--	79.2	--	--	--	--	78.7	65.4
Somerset	**46.8**	--	56.1	56.0	--	--	--	--	43.5
Sussex	**45.4**	--	--	--	--	--	--	--	45.2
Union	**51.5**	56.2	59.5	52.3	44.1	25.8	60.6	52.4	44.1
Warren	**57.8**	--	--	--	--	--	--	55.9	62.6

--Cells with <11 individuals, as well as related derived and adjacent cells, have been omitted.

Table 2b. Percent Screened (Receipt of Pap Test *or* Pap+HPV Test) among Medicaid Enrollees, Female, Newly Age-Eligible (30 Years Old) by County, Race/Ethnicity and Zip Code Level Income									
	All Eligible Women	**Hispanic**	**Non-Hispanic White**	**Non-Hispanic Black**	**Non-Hispanic Asian**	**Non-Hispanic Other Race**	**Low-Income Area**	**Average Income Area**	**High-Income Area**
Atlantic	**68.8**	72.3	67.5	72.0	74.0	57.7	69.1	67.4	69.6
Bergen	**69.1**	81.5	68.5	71.6	69.4	58.7	--	--	65.8
Burlington	**62.5**	69.4	62.2	64.2	58.1	56.7	--	--	63.2
Camden	**64.0**	72.6	58.7	67.2	62.0	61.5	66.8	61.4	61.9
Cape May	**66.7**	--	66.8	--	--	--	--	68.2	--
Cumberland	**64.7**	66.5	62.1	68.1	--	--	--	64.3	--
Essex	**66.6**	76.4	66.5	65.9	59.3	54.8	67.1	66.0	63.8
Gloucester	**63.9**	--	63.2	67.7	--	--	--	--	63.8
Hudson	**70.5**	74.8	70.8	70.4	64.4	56.4	76.9	69.6	69.4
Hunterdon	**72.1**	--	--	--	--	--	--	--	--
Mercer	**53.3**	64.5	49.8	53.9	--	--	52.6	52.6	56.4
Middlesex	**63.5**	77.1	58.8	60.9	67.7	51.9	63.3	77.1	58.9
Monmouth	**63.9**	--	61.9	69.7	--	49.1	--	65.5	62.8
Morris	**60.8**	72.6	59.1	72.6	54.8	44.7	--	--	--
Ocean	**77.5**	--	78.3	71.8	--	64.6	82.6	60.7	69.8
Passaic	**73.9**	81.2	74.1	70.0	77.5	59.7	75.3	74.8	66.7
Salem	**72.1**	--	--	--	--	--	--	74.1	65.6
Somerset	**59.9**	--	54.9	68.0	--	46.7	--	63.5	58.2
Sussex	**63.6**	--	--	--	--	--	--	--	--
Union	**62.6**	70.0	62.3	61.4	65.7	52.2	--	63.4	--
Warren	**59.8**	--	--	--	--	--	--	57.1	63.8

--Cells with <11 individuals, as well as related derived and adjacent cells, have been omitted.

Table 3. Percent Screened (Receipt of Any Colorectal Cancer Screening, Including Colonscopy or FIT/FOBT Test) among Medicaid Enrollees, Female and Males, Newly Age-Eligible (50 Years Old) by County, Race/Ethnicity and Zip-Code Level Income									
	All Eligible Adults	**Hispanic**	**Non-Hispanic White**	**Non-Hispanic Black**	**Non-Hispanic Asian**	**Non-Hispanic Other Race**	**Low-Income Area**	**Average Income Area**	**High-Income Area**
Atlantic	**38.1**	47.5	34.2	37.9	41.3	41.3	35.3	42.0	36.0
Bergen	**37.0**	53.3	33.1	34.1	34.4	38.4	39.6	38.7	35.8
Burlington	**42.2**	50.0	39.5	45.4	58.6	40.9	--	--	41.8
Camden	**36.1**	42.8	31.7	34.8	44.4	41.7	36.2	36.1	35.9
Cape May	**40.3**	--	38.6	48.1	--	--	40.7	39.6	45.8
Cumberland	**37.8**	48.6	33.7	36.6	--	--	--	37.7	--
Essex	**34.3**	46.3	34.7	30.5	25.4	38.7	34.0	37.6	33.9
Gloucester	**35.7**	--	35.7	36.0	--	--	34.9	36.3	35.3
Hudson	**38.5**	51.2	35.0	30.3	26.2	34.8	41.0	37.5	39.1
Hunterdon	**47.4**	--	46.7	--	--	--	--	--	--
Mercer	**31.8**	--	29.1	31.6	--	36.3	32.4	31.3	30.4
Middlesex	**35.6**	48.5	32.2	33.6	34.2	31.1	39.5	40.5	33.7
Monmouth	**37.0**	46.7	36.6	35.5	50.0	34.4	--	--	37.6
Morris	**38.7**	61.9	34.3	44.7	37.0	34.8	--	--	38.0
Ocean	**35.7**	--	35.5	36.4	--	32.9	29.8	40.2	38.7
Passaic	**38.7**	51.6	37.4	28.8	34.6	37.3	39.4	42.9	33.4
Salem	**49.4**	--	44.0	59.0	--	--	50.0	53.9	39.0
Somerset	**37.4**	59.5	31.7	38.3	41.2	33.0	--	--	37.3
Sussex	**33.0**	--	31.9	--	--	--	--	--	--
Union	**36.0**	46.1	31.4	33.6	--	--	39.2	35.6	31.6
Warren	**37.5**	--	--	--	--	--	--	--	32.9

--Cells with <11 individuals, as well as related derived and adjacent cells, have been omitted.

Spotlight on ScreenNJ Research Efforts

Along with the data analysis presented in this brief, ScreenNJ is supporting research efforts that inform ScreenNJ and statewide partners on the areas to address health disparities and improve screening throughout the state; these efforts include:

- Stacy Davis, Ph.D., Rutgers School of Public Health, and colleagues are currently interviewing primary care physicians across New Jersey to examine their knowledge, attitudes and beliefs about lung cancer screening through low dose computed tomography (low dose CT), including exploring patient and practice barriers and facilitators to more widespread use of this critical screening.
- Jeanne Ferrante, M.D., M.P.H., Rutgers Robert Wood Johnson Medical School, and colleagues are working on efforts to increase collaboration among screening programs throughout New Jersey to leverage lessons learned in overcoming challenges for both colorectal and lung cancer screening, as well as build and spread the use of evidence-based strategies across programs throughout the state.
- Jill Williams, M.D., Rutgers Robert Wood Johnson Medical School, and colleagues are interviewing stakeholders with mental illness to explore the attitudes, beliefs, and barriers that affect decision-making regarding cancer screening and tobacco treatment-seeking decisions; the findings from this assessment will be used to deliver customized guidance to mental health and addiction/recovery service provider agencies to address identified barriers identified by their patient populations.
- Pauline Thomas, M.D., Rutgers New Jersey Medical School, and colleagues are currently evaluating Newark-area healthcare provider lung cancer screening practices and knowledge gaps so that ScreenNJ educational outreach and practice support outreach can be targeted and customized to address Newark-specific barriers to lung cancer screening.
- Michelle T. Bover Manderski, M.P.H., Rutgers School of Public Health and the Center for Tobacco Studies, and colleagues developed and tested a questionnaire module for estimating lung cancer screening prevalence in New Jersey that can be included in the Behavioral Risk Factor Surveillance System (BRFSS) lung cancer screening module to generate more granular and actionable data on lung cancer screening by location, gender, and race/ethnicity in future BRFSS implementations.
- Regional Health Hubs in Camden, Trenton, and Newark are coordinating with ScreenNJ to identify regional screening needs, gaps, and best practices, and to implement new data tools for clinical partners through their Health Information Exchanges as well as to link clinical sites with educational and process supports to improve screening access and patient monitoring.

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