Oregon Health & Science University
School of Medicine

Scholarly Projects Final Report

Title *(Must match poster title; include key words in the title to improve electronic search capabilities.)*

The Impact of the Affordable Care Act on Cancer Screening Rates and Survivorship

Student Investigator's Name

Lilian Chen

Date of Submission *(mm/dd/yyyy)*

03/10/2022

Graduation Year

2022

Project Course *(Indicate whether the project was conducted in the Scholarly Projects Curriculum; Physician Scientist Experience; Combined Degree Program [MD/MPH, MD/PhD]; or other course.)*

Scholarly Projects Curriculum

Co-Investigators *(Names, departments; institution if not OHSU)*

N/A

Mentor's Name

Heather Angier, PhD

Mentor's Department

Family Medicine

Scholarly Project Final Report

Concentration Lead's Name

Alex Foster

Project/Research Question

What was the impact of the Affordable Care Act on screening rates and survivorship in colorectal and cervical cancer?

Type of Project *(Best description of your project; e.g., research study, quality improvement project, engineering project, etc.)*

Research study

Key words *(4-10 words describing key aspects of your project)*

Affordable Care Act, cancer screening, survivorship, colorectal cancer, cervical cancer

Meeting Presentations
If your project was presented at a meeting besides the OHSU Capstone, please provide the meeting(s) name, location, date, and presentation format below (poster vs. podium presentation or other).

N/A

Publications *(Abstract, article, other)*
If your project was published, please provide reference(s) below in JAMA style.

N/A

Submission to Archive
Final reports will be archived in a central library to benefit other students and colleagues. Describe any restrictions below (e.g., hold until publication of article on a specific date).

N/A

Scholarly Project Final Report

Next Steps

What are possible next steps that would build upon the results of this project? Could any data or tools resulting from the project have the potential to be used to answer new research questions by future medical students?

Investigating other factors that influence patients' ability and willingness to receive cancer screening such as rurality vs urban residence, perception of medicine, ability to access clinics, and more.

Please follow the link below and complete the archival process for your Project in addition to submitting your final report.

https://ohsu.ca1.qualtrics.com/jfe/form/SV_3ls2z8V0goKiHZP

Student's Signature/Date *(Electronic signatures on this form are acceptable.)*
This report describes work that I conducted in the Scholarly Projects Curriculum or alternative academic program at the OHSU School of Medicine. By typing my signature below, I attest to its authenticity and originality and agree to submit it to the Archive.

X _____
Student's full name

Mentor's Approval *(Signature/date)*

X _____
Mentor Name

Scholarly Project Final Report

Report*: Information in the report should be consistent with the poster, but could include additional material. Insert text in the following sections targeting 1500-3000 words overall; include key figures and tables. Use Calibri 11-point font, single spaced and 1-inch margin; follow JAMA style conventions as detailed in the full instructions.*

Introduction

Insufficient medical insurance coverage among the population has been a problem in the United States for years. The cost of medical care to the uninsured has been a prohibitive problem for many Americans that can result in Americans refraining from accessing care due to fears of being unable to afford the subsequent medical bills. The Affordable Care Act (ACA) was enacted in early 2010 and since its enactment, approximately half the uninsured population in the United States became covered under the expansion. States were divided into expansion states and non-expansion states based on whether they adopted the expansion of healthcare coverage under Medicaid and subsequently, the percentage of the uninsured in expansion states was generally lower than that of non-expansion states (Neiman 2021).

Despite the passing of the ACA and the expansion of access to care, access to health care remains a problem suggesting that there are likely barriers in addition to simply insurance coverage that may be limiting the health care that Americans can access. This study seeks to look at cancer screening and cancer survivorship among the health outcomes impacted by the ACA. We hypothesize that while the ACA likely resulted in the increase in cancer screening and subsequently cancer survivorship, that the increase does not match the increase in coverage.

Methods

This study was a scoping review that summarized results of the findings of studies that examined the screenings rates and survivorship of cervical and colorectal cancer pre- and post-ACA. Cervical and colorectal cancer in particular were chosen for this study for multiple reasons. In generalized searches for cancer screening data, those two cancers yielded the highest number of results for a meaningful analysis of the data versus other types of cancer having a significantly smaller pool of studies to compare amongst. Further, cervical and colorectal cancer are two types of cancer that have established screening protocols which make screening a more routine process for the two cancers.

Over 200 studies were initially collected using search terms focused on the ACA, cancer screening, and cancer survivorship in PubMed and additional studies were collected through references from the found studies in a snowballing pattern. Further studies that were excluded were studies with generalizations and hypothetical models. While those studies were excluded from the data used for this study, references in those studies were also examined to build a larger pool of data. The study summarized findings from 98 studies matching the above criteria. Comparisons between different groups were made by looking at the percentages of the total number of studies that fell into each of the categories examined.

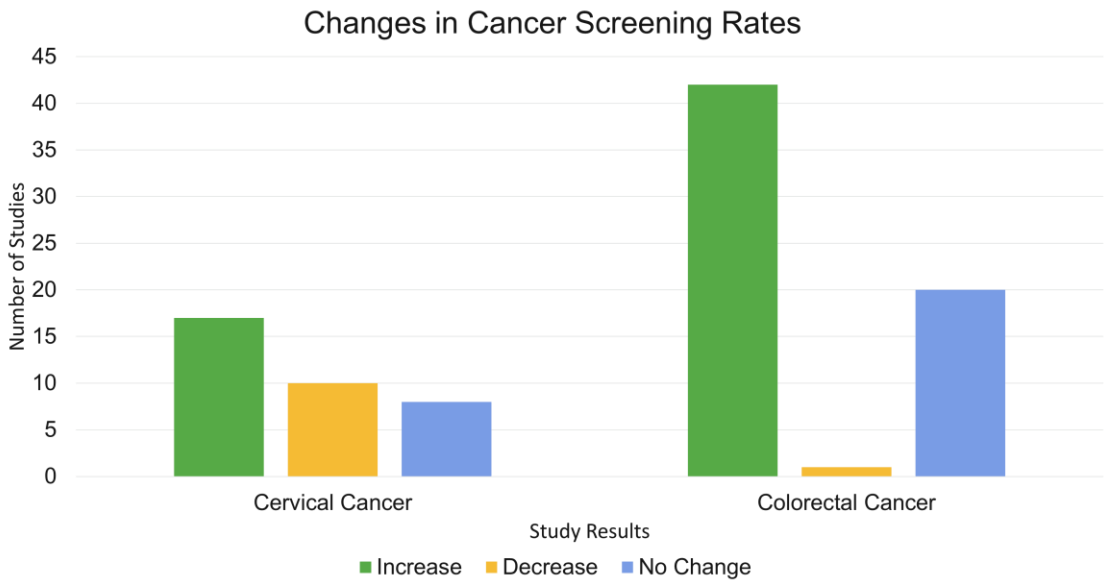
Results

Cervical Cancer Screening

As shown in the graph and data below, cervical cancer screening generally showed an improvement in screening rates in comparisons between the pre-ACA and post-ACA era. However, the results only showed a slight skew in the direction of increases in rates and the distribution of number of studies showing significant number of studies found that there was no increase in cancer screening rates or that cancer screening rates have actually decreased. It should be noted that the majority of studies categorized into the "no change" category had shown an increase in screening rates, but that that increase was not statistically significant.

Colorectal Cancer Screening

Colorectal cancer screening generally showed a significant increase in screening rates following the ACA. The studies uniformly demonstrated an increase in screening rates and that studies that were categorized into "no change" were noted to be non-statistically significant increases in screening rates. There were no studies that demonstrated a non-statistically significant decrease in screening rates. Further, many of the studies that reported a non-statistically significant increase in screening rates were done using large bodies of data that combined urban and rural datasets for screening rates. These studies noted that in breaking down the data, there was an overall statistically significant increase in colorectal cancer screening rates in more urban datasets in comparison to datasets from more rural regions as well and community health centers.



Cervical and Colorectal Cancer Survivorship

Very few of the studies addressed cancer survivorship in the pre-ACA versus post-ACA era in both cervical and colorectal cancer. The studies that did investigate survivorship found that there was an odds ratio greater than 1 when comparing survivorship in between these two time periods. There were many limitations that prevented studies from adequately investigating the effect of the ACA on cancer survivorship. One of the first obstacles was a lack of a comprehensive database documenting cancer survivors regardless of type of cancer. The cause of death for patients was not immediately obvious as their cancers may have been managed, but they could have passed from a different co-morbidity. Additionally, the ACA is still a new measure that has only been in effect for less than 10 years. Given that many new cancers may have been diagnosed within this timeframe, it is difficult to fully study the effect of the ACA on survivorship as many patients have only been recently diagnosed and not enough time has passed to see if survivorship has been increased as a result of the ACA.

Discussion

Factors Influencing Cervical and Colorectal Cancer Screening Rates

There were multiple reasons that the studies suggested for the lower degree of increase in cervical cancer screening rates. The most significant reason is that the United States Preventative Services Task Force and the American Cancer Society updated their cervical cancer screening guidelines in 2012 to suggest against the practice of screening for cervical cancer in patients under 21 years old, regardless of whether or not they were sexually active. This effectively raised the age minimum for cervical cancer screening in most

primary care practices which significantly reduced the number of patients who would be receiving the screening in the first place. This change accounted for a large amount of the decrease in screening rates especially among patients who were under 21 years old. It was noted that while cervical cancer screening rates were shown to be increased following the ACA among the rest of the population, this decrease among the younger population resulted in a non-statistically significant increase in screening rates.

It should be noted that while cervical cancer screening rates decreased largely in part to changing guidelines for screening, colorectal cancer screening faced no similar setbacks to decrease the rates. Traditionally colorectal cancer screening was largely done solely through colonoscopies, but as medical technologies have advanced over the years, FIT (fecal immunochemical test) screening tests have become a viable alternative method for initial colorectal cancer screenings which have made the screening process more tolerable to patients.

While there was overall a trend towards increasing screening rates for cervical and colorectal cancer, there were many studies that either showed a decreasing rate or a non-statistically significant increase in screening. This suggests that there are many more factors that influence patients' ability to receiving sufficient cancer screening. Changes and cancer screening guidelines were already noted to be a factor for cervical cancer specifically. While rurality was discussed in the colorectal cancer center, it also had an effect on screening rates for other cancers including cervical cancer. While insurance status is a large factor in a patient's ability to receive screening, a lack of easily accessible health care is also an obstacle that prevents access as seen in those studies that compared urban center datasets versus more rural datasets.

Furthermore, the current COVID-19 pandemic has also had a negative effect on cancer screening rates particularly on more recent studies published in 2021. The pandemic resulted in a significant decrease in non medically-urgent visits to primary care providers which resulted in a significant decrease in screening rates in the past 2 years. This pandemic also highlights the importance of patients' perceptions of healthcare in their willingness to receive screening. Communities that had pre-existing mistrust in the medical system have not had their beliefs changed by the passing of the ACA. This serves as another factor that can impact stagnation in screening rates even as insurance coverage expands and covers those who were previously uninsured.

Limitations and Future Directions

There are many limitations to this study. One of the most prominent limitations is the amount of data examined as just over 200 studies were reviewed for this scoping review and of those studies, only the results of 98 of those studies were included in the final results. Additionally, it is also possible that some of the studies utilized overlapping data with other studies which limits the interpretations that can be made from the number of studies that showed an increase, decrease, or no change in cancer screening rates. As stated in the discussion on cancer survivorship, the ACA is a fairly new measure so a study of this nature can only serve as an initial review of the impact of the ACA and more time is needed to full measure its impact on cancer screening and survivorship moving forward. Future directions for this study include examining other factors that may be impacting cancer screening rates including some of the factors previously discussed such as urban versus rural location, availability of primary care, patient attitudes towards medicine, differences in providers' preferences towards screening, and changes in screening policy. This study would also be meaningful to repeat in the years to come in order to observe the impact of the ACA after it has been around for longer and when there is adequate data for studying survivorship.

Conclusions

- There has been an overall increase in screening rates for cervical and colorectal cancer following the enactment of the ACA, however this increase does not appear to match the increase in insured patients.

- There is not a comprehensive database available to meaningfully investigate the impact of the ACA on cancer survivorship.
- The results of this study suggest that there are further factors that are impacting patients' ability to receive cancer screening.

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