

Using the ACR Learning Network ImPower A3 to Increase Mammography Screening Percentages in Patient Populations Living in Areas with High Neighborhood Deprivation

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Purpose

- There have been limited studies using structured quality improvement methods to address health disparities.
- Our purpose is to describe the integration of the ACR ImPower A3 template with our ongoing collaborations with population health to increase mammography screening percentages in patient populations living in high levels of neighborhood deprivation.

Methods

Context

- Academic tertiary care center with academic and community screening sites in the Upper Midwest.
- Ongoing collaboration between population health, radiology, and primary care to leverage quality improvement processes to drive performance improvement.
- Our institution joined the ACR ImPower program in 2025 to integrate our ongoing efforts with the ACR Learning Network's Mammography Health Equity Quality Improvement Collaborative.
- Study was reported using SQUIRE 2.0 guidelines

Intervention

- A3 Quality Improvement Process to leverage Lean quality improvement methods and techniques to drive process improvement.

Study of the Intervention

- Quantitative data was derived from the EMR
- Women between the ages of 50-74 years old who had a primary care provider were included
- Women with histories of mastectomies were excluded
- Neighborhood deprivation was measured by the Area Deprivation Index

Analysis

- Chi square tests were used to evaluate differences in mammography screening percentages before and after the first year of the A3 process comparing highest state deciles (6-10) of neighborhood deprivation vs lowest state deciles (1-5) of neighborhood deprivation (control comparison)

Results

Problem Statement

There are health disparities in the utilization of our mammographic screening programs in women living in the highest deciles of neighborhood deprivation, possibly leading to missed opportunities for early cancer detection.

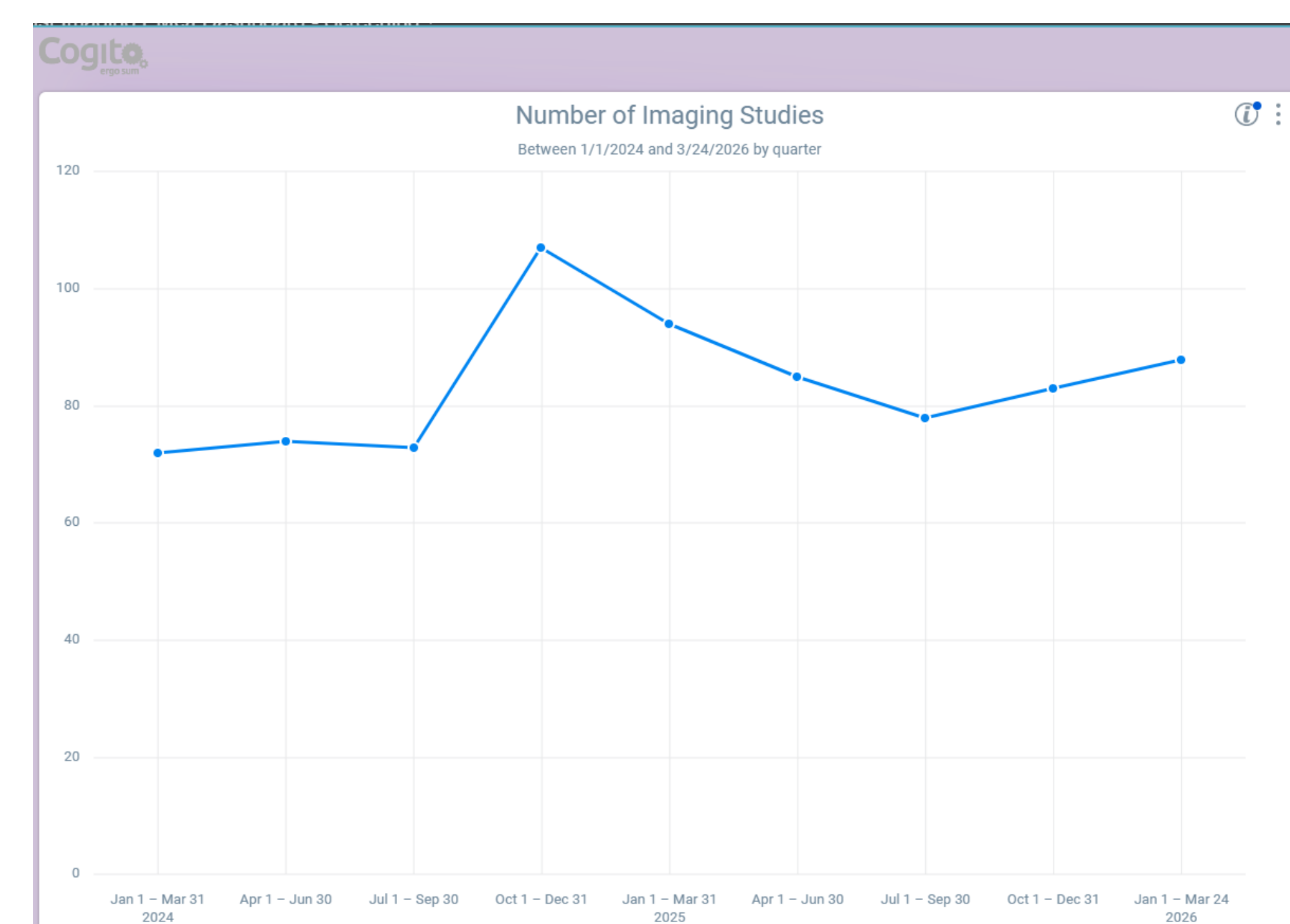
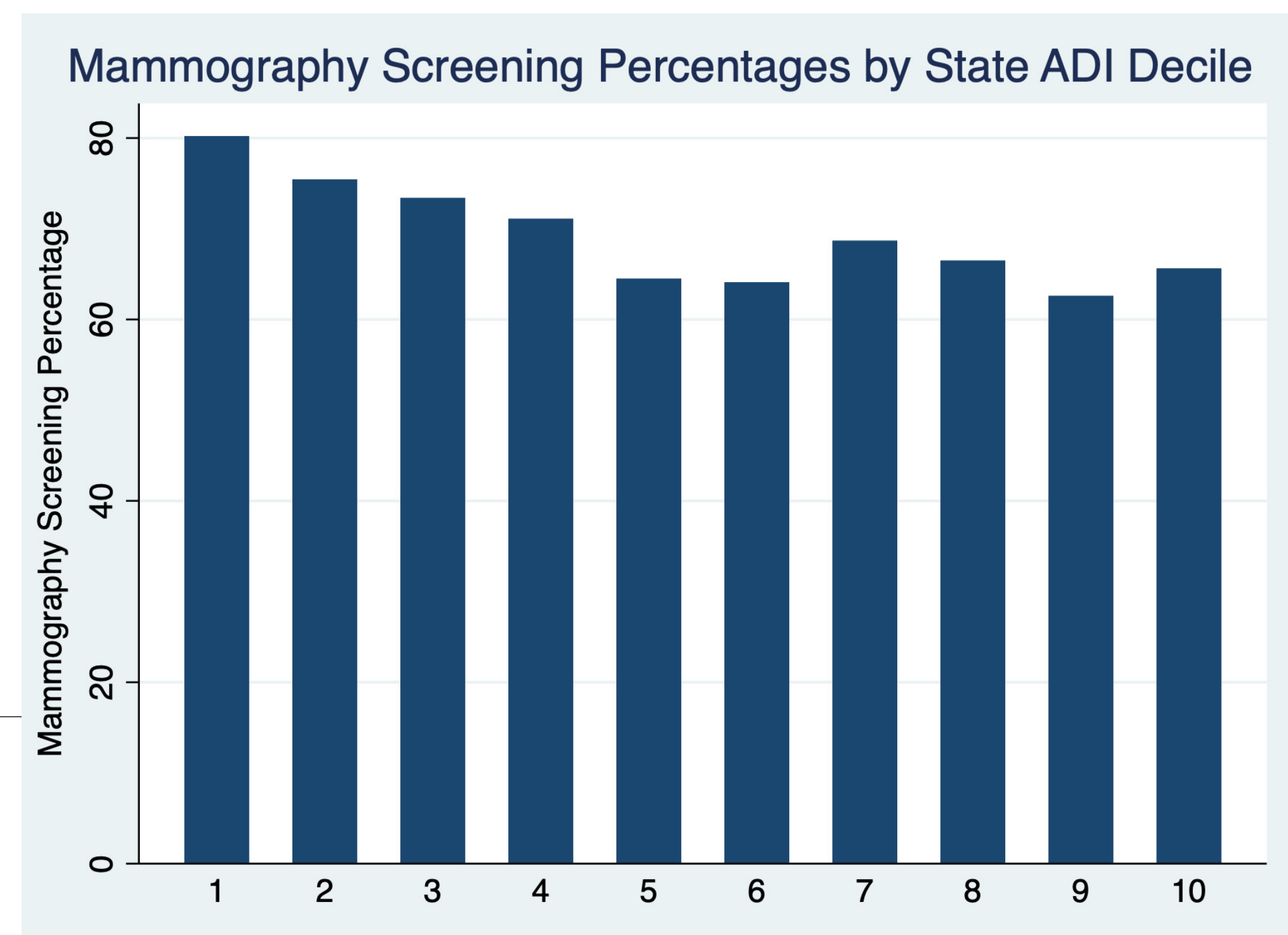
Global Aim

To reduce breast cancer disparities through screening.

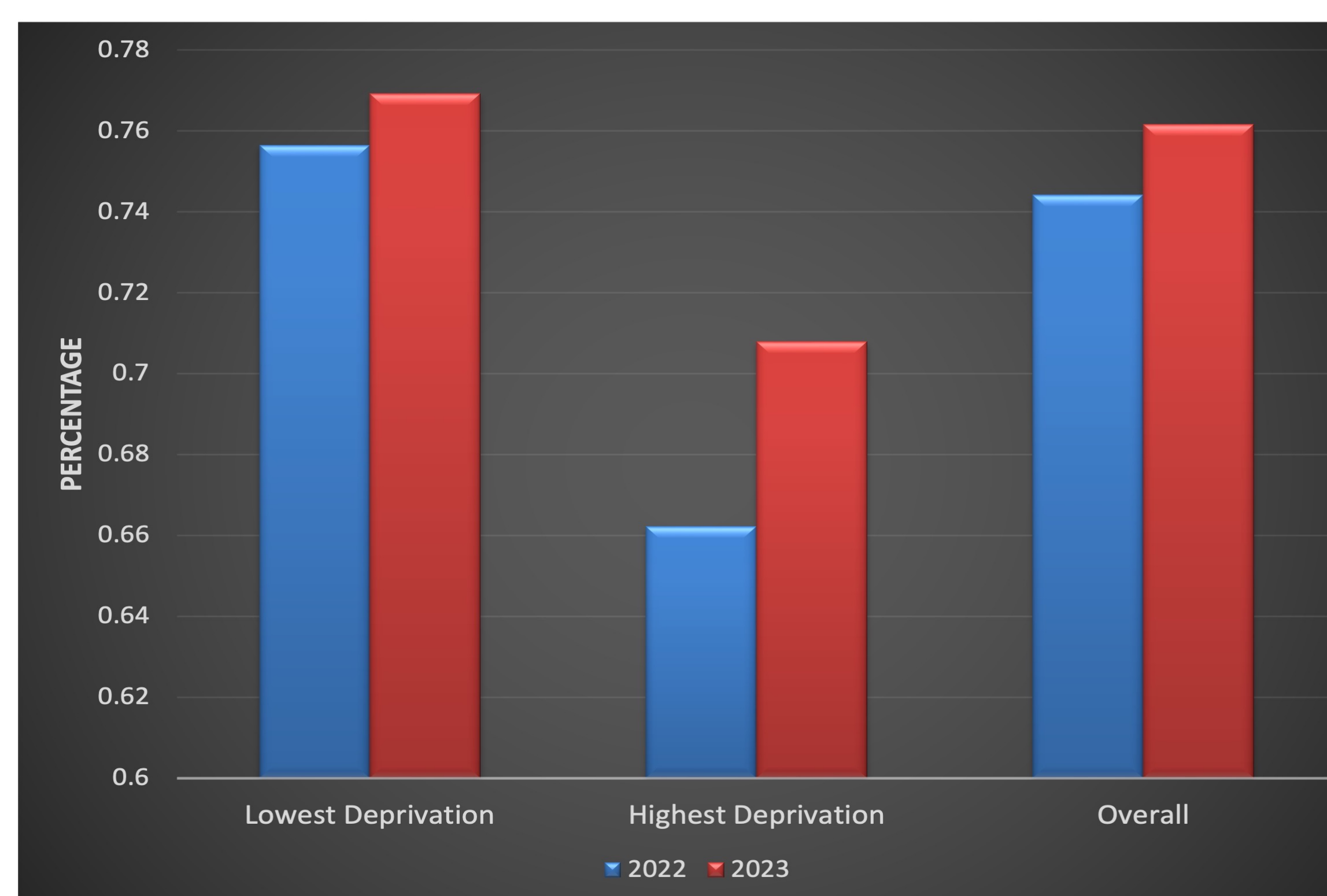
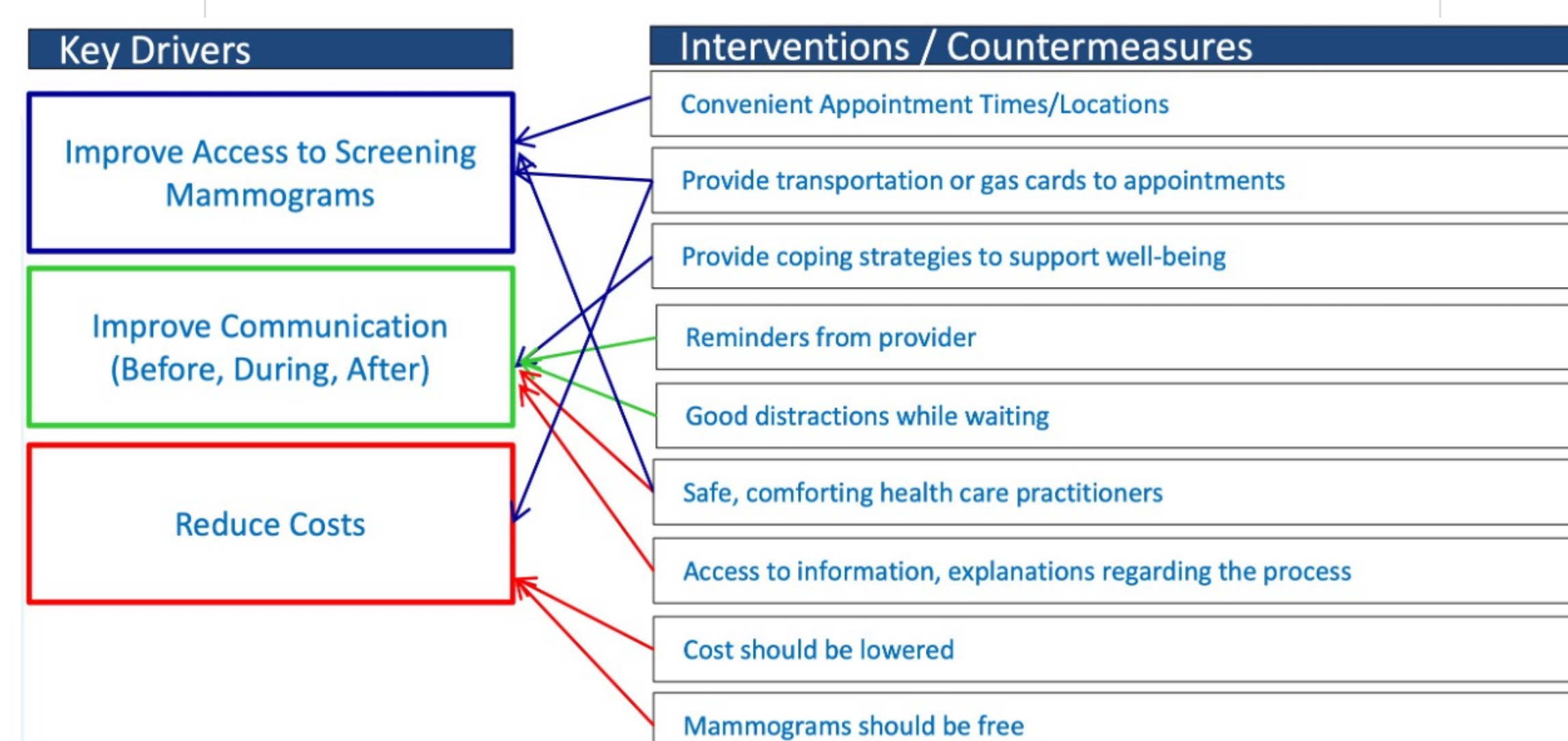
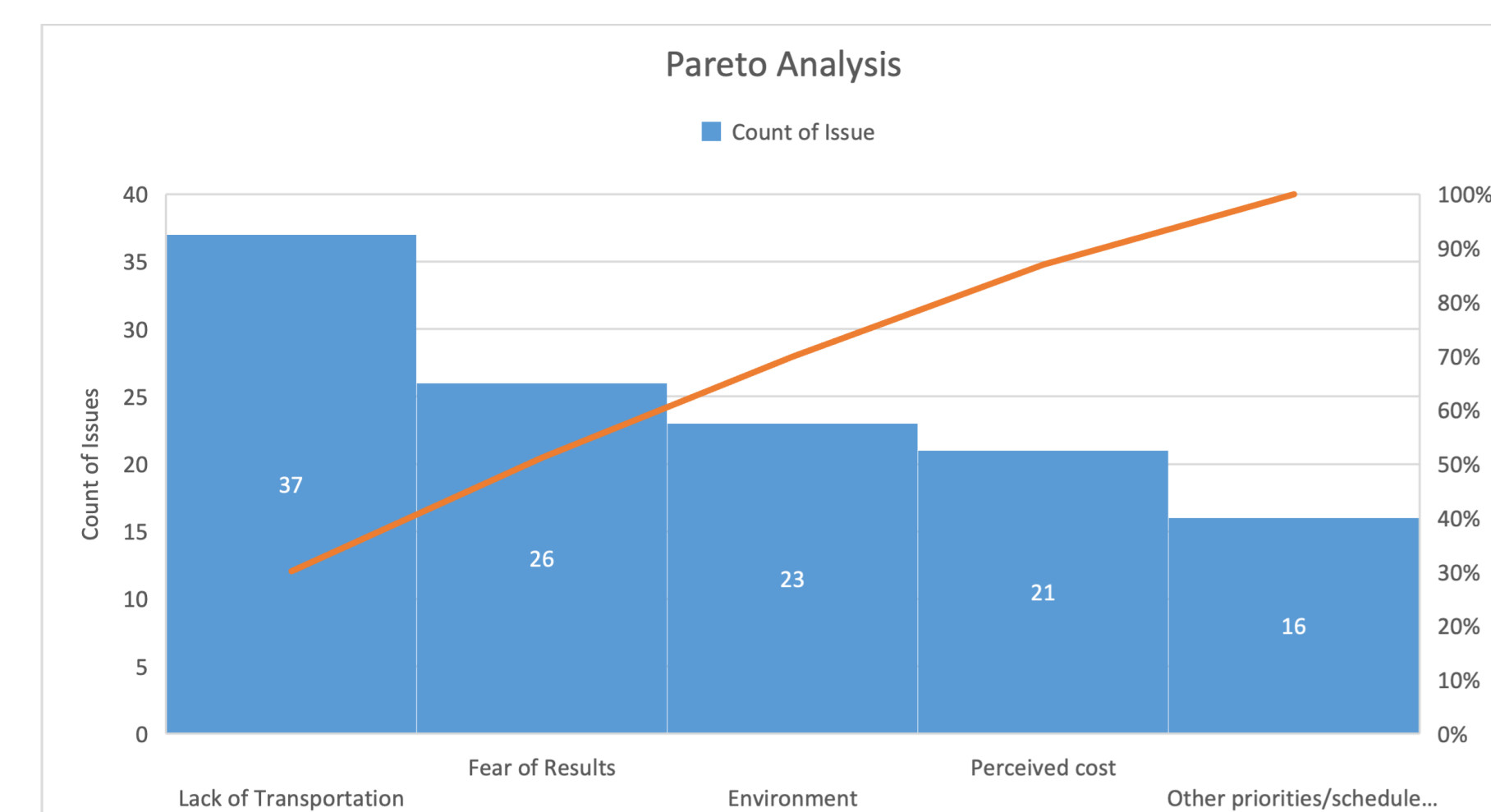
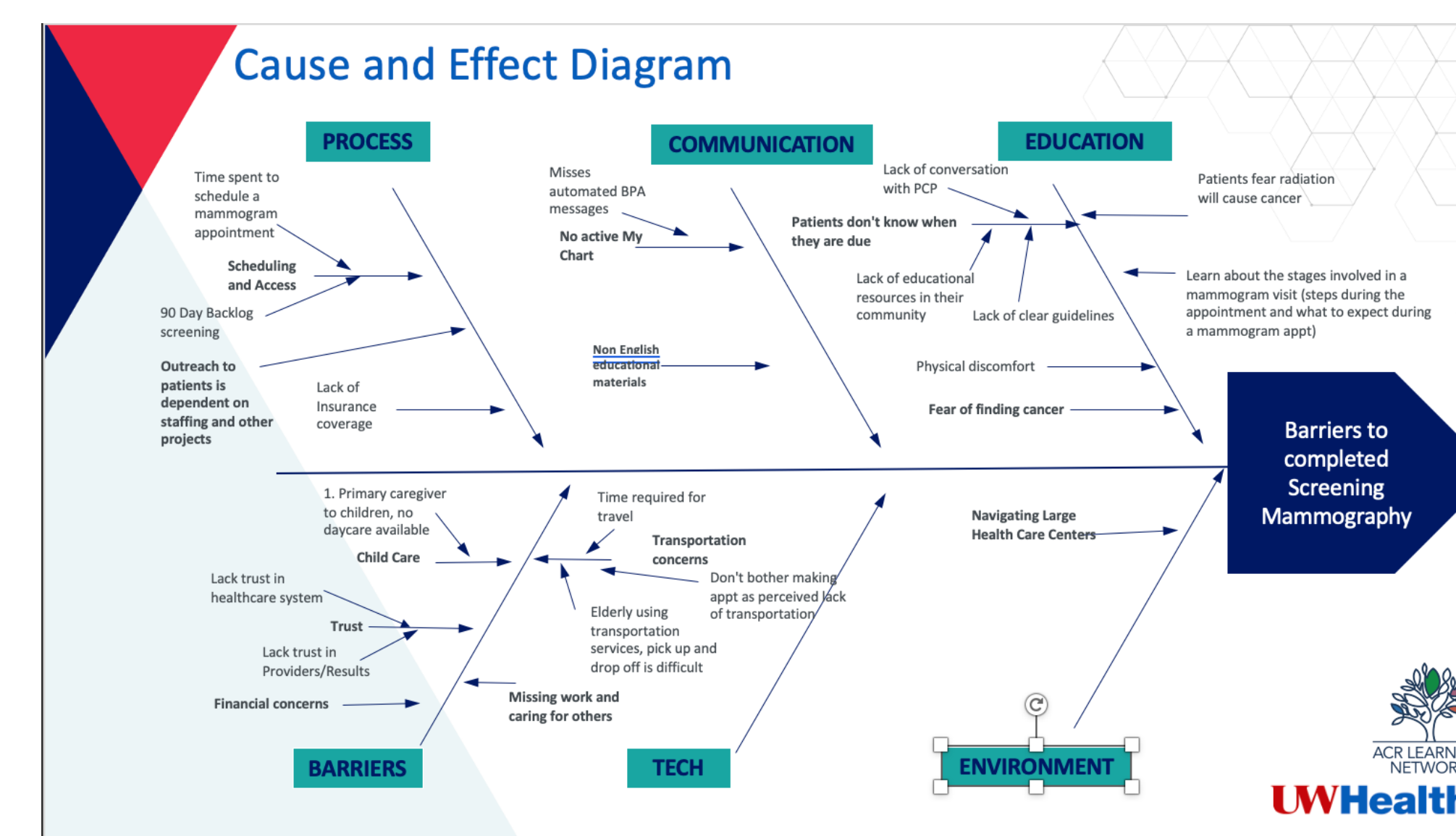
Target State: SMART Goal

Increase percentage of patients (women aged 50-74 years) within the highest deciles of area deprivation index (6-10) undergoing screening within the last two years by 10% (66% to 76%) by December 2027,

Current State: Identify Target / Actual / Gap



Analysis



Results (con't)

- Mammography screening percentages increased from 66% (647/977) to 71% (715/1,010) for women living in the highest 5 deciles of neighborhood deprivation ($p = 0.029$)
- No statistically significant changes in mammography screening percentages for women living in the lowest 5 deciles of neighborhood deprivation ($p = 0.080$).

Conclusions

- A3 Framework was associated with achieving increased mammography screening percentages in patients living in areas of high neighborhood deprivation.
- Participation within the ACR Learning Network represents an opportunity for radiology practices to increase mammography screening percentages in underserved patient populations.

Limitations

- Conducted in large academic medical center with dedicated infrastructure and support that may not be generalizable

