Introduction

It is well demonstrated in the literature that wide disparities with regard to breast cancer diagnosis, treatment and mortality still exist. Differences in race, insurance type, socioeconomic status, marital status and primary language are associated with significant disparities across breast cancer outcomes. As the largest safety net hospital in Massachusetts, we serve patients from a diverse background. Given that Massachusetts has near-universal health insurance, our institution serves as a unique microcosm to the state of cancer disparities that may exist across institutions throughout the United States with the full implementation of the Affordable Care Act.

Objectives

To analyze the impact of insurance type, race, socioeconomic status, primary language, income as determined by zip code, and marital status on the initial stage of diagnosis and the mortality rate for patients with breast cancer at our institution.

To identify disparities that may impact future approaches to screening and treatment to improve outcomes for all patients.

Materials & Methods

1. 1,046 patients were diagnosed with breast cancer at our institution between 8/1/2004 to 10/11/2011.

2. The patients were stratified by race (White, Black, Hispanic, Other), primary language (English, Spanish, Haitian Creole, Other), marital status (Married, Single, Divorced, Widowed, Other), income (determined by zip code), age, AJCC stage, and insurance type (Private, Medicaid/Uninsured, Medicare).

3. Chi-squared analyses and multivariate logistic regression analyses were performed to analyze the drivers of mortality. Multivariate odds ratios (OR) and 95% confidence intervals (CI) were reported.

4. Fisher’s Exact test or Pearson Chi-square tests were utilized to further explore factors between Haitian Creole- and English-speaking groups.

5. All of the analyses were two-sided, and p-values of less than 0.05 were considered statistically significant.

Results

When compared to Private insurance status, there were no significant differences for Medicaid/Uninsured and Medicare.

When compared to English, primary language was not a significant factor in relation to mortality rate.

When compared to English speakers, Haitian Creole-speakers were more likely to be married (p<0.004), have lower income (p<0.0001), and have insurance status of Medicaid/Uninsured (p<0.001).

Discussion

Race

Recent research has suggested that the trend between race and mortality rate and stage of diagnosis is declining with several studies showing that race is not significantly associated with breast cancer stage of diagnosis or mortality rate.

Our study showed a continuation of this decline with race having no significant correlation to mortality rate.

Income

Research showed that low income patients had a higher mortality rate and a later stage of diagnosis and has suggested that income still remains a barrier to sufficient care. Studies show that poverty, as measured by Medicaid status and census data, continues to be a risk factor for breast cancer diagnosis, treatment and death.

Our study concluded that most groups showed no correlation between income and mortality rate except for patients who earn less than $30,000. Income did not correlate with mortality rate for the other income brackets.

Marital Status

Research has shown that married men and women with cancer have a 15% reduced risk of death than unmarried men and women.

This survival advantage may be due to the social support from having a spouse.

It may be helpful for healthcare providers to assess a patient’s existing social support networks and offer ways to build or use other social groups to improve treatment outcomes for single patients.

Language

Research has shown that language barriers can cause disparities by delaying treatment and diagnosis.

Our institution offers a robust professional interpreter service that involves personal interpreters and phone services. These services may have helped reduce any disparities caused by language barriers in our hospital.

References


