





Unmet Need for Clinician Engagement Regarding Financial Toxicity After Diagnosis of Breast Cancer

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BACKGROUND: Little is known regarding whether growing awareness of the financial toxicity of a cancer diagnosis and its treatment has increased clinician engagement or changed the needs of current patients. **METHODS:** The authors surveyed patients with early-stage breast cancer who were identified through population-based sampling from 2 Surveillance, Epidemiology, and End Results (SEER) regions and their physicians. The authors described responses from approximately 73% of surgeons (370 surgeons), 61% of medical oncologists (306 medical oncologists), 67% of radiation oncologists (169 radiation oncologists), and 68% of patients (2502 patients). **RESULTS:** Approximately one-half (50.9%) of responding medical oncologists reported that someone in their practice often or always discusses financial burden with patients, as did 15.6% of surgeons and 43.2% of radiation oncologists. Patients indicated that financial toxicity remains common: 21.5% of white patients and 22.5% of Asian patients had to cut down spending on food, as did 45.2% of black and 35.8% of Latina patients. Many patients desired to talk to providers about the financial impact of cancer (15.2% of whites, 31.1% of blacks, 30.3% of Latinas, and 25.4% of Asians). Unmet patient needs for engagement with physicians about financial concerns were common. Of 945 women who worried about finances, 679 (72.8%) indicated that physicians and their staff did not help. Of 523 women who desired to talk to providers regarding the impact of breast cancer on employment or finances, 283 (55.4%) reported no relevant discussion. **CONCLUSIONS:** Many patients report inadequate clinician engagement in the management of financial toxicity, even though many providers believe that they make services available. Clinician assessment and communication regarding financial toxicity must improve; cure at the cost of financial ruin is unacceptable. *Cancer* 2018;000:000-000. © 2018 American Cancer Society.

KEYWORDS: breast cancer, cost, finances, financial toxicity, patient-provider communication.

INTRODUCTION

Financial toxicity is increasingly recognized as a serious concern for patients with cancer,^{1,2} even if they have health insurance.^{3,4} Patients with cancer can experience disruptions in employment that affect income⁵⁻¹¹ as well as substantial out-of-pocket costs associated with their care, and studies have shown higher rates of bankruptcy filing among patients with cancer.^{12,13} Financial burden also has been associated with overall distress, lower health-related quality of life,^{14,15} and lower satisfaction with cancer care.¹⁶

The literature currently includes little evidence about whether growing attention to these issues in the medical literature and popular press has motivated physicians to more routinely embrace practices that address and attempt to mitigate financial toxicity. Furthermore, we know virtually nothing concerning the level of cancer physicians' engagement with patients regarding financial toxicity and patients' perceptions about unmet need.

To address these issues, we sought to document the relevant self-reported practices of surgeons, medical oncologists, and radiation oncologists engaged in delivering care to a cohort of patients with breast cancer who were identified through

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population-based sampling from 2 large Surveillance, Epidemiology, and End Results (SEER) catchment areas, along with the experiences of their patients. Specifically, we investigated the frequency of these specialists' reporting that someone in their practice discusses the financial burden of cancer treatments with patients, their awareness of the out-of-pocket costs of the tests and treatments they recommend, and how important they perceived saving money for their patients to be. We further sought to evaluate the financial toxicity experiences of the patients in this modern population-based cohort by race and ethnicity, including perceptions of the extent to which their oncologists, staff, and other professionals had assisted in addressing the impact of breast cancer on employment or finances, the characteristics of those who express a desire for clinician engagement, and the number who continue to have unmet needs.

MATERIALS AND METHODS

Patient Sample and Data Collection

The iCanCare study identified women aged 20 to 79 years diagnosed with early-stage breast cancer between January 2013 and September 2015, as reported to the SEER registries of Georgia and Los Angeles County, using rapid case ascertainment methods.¹⁷ Exclusion criteria included prior breast cancer, AJCC 7th edition stage III to IV disease, or tumors measuring >5 cm.

After institutional review board approval, we surveyed patients (median time to survey response, 7.7 months) and merged responses with SEER data. We provided a \$20 incentive and used a modified Dillman approach to improve response rates.¹⁸ Of 3672 patients surveyed, 2502 (68%) responded.

Physician Sample and Data Collection

Attending surgeons and oncologists were identified primarily through patient report, as well as from information in the SEER database. The vast majority of patients identified an attending surgeon (94%) and medical oncologist (81%); 53% identified a radiation oncologist. From the 510 identified surgeons, 504 identified medical oncologists, and 251 identified radiation oncologists, we obtained survey responses from 370 surgeons (73%), 306 medical oncologists (61%), and 169 radiation oncologists (67%).

Measures

Questionnaires were developed using an iterative design process.¹⁹ We used standard techniques to assess content validity. This included review by survey design experts and cognitive interviewing²⁰ with patients and clinicians

outside the target sample. Several domains relating to finances were evaluated.

Physician-reported communication and attitudes regarding financial issues

Three physician survey measures were related to communication and attitudes regarding patient financial challenges: 1) "How often does someone in your primary practice discuss the financial burden of cancer treatments with your patients?" (never, rarely, sometimes, often, and always); 2) "How aware are you of the out-of-pocket costs of the tests and treatments you recommend?" (not at all, a little, somewhat, quite, or very aware); and 3) "When it comes to breast cancer treatment, how important to you is it to save your patients money?" (not at all, a little, somewhat, quite, or extremely).

Patient report of financial toxicity

Patient survey measures related to financial burdens of the disease and treatment included several independent aspects of this complex construct: 1) lost income since breast cancer diagnosis; 2) out-of-pocket medical expenses related to breast cancer (including copayments, hospital bills, and medication costs); and 3) out-of-pocket non-medical expenses over and above the normal budget related to breast cancer (eg, supplies such as wigs, bras, or bandages; travel; child/elder care; and complementary or alternative medicine). These were categorized as 0, \$1 to \$500, \$501 to \$2000, \$2001 to \$5000, \$5001 to \$10,000, and $> \$10,000$. In addition, we calculated the percentage of respondents for whom $\geq 10\%$ of the household income was in each of these categories (lost income and out-of-pocket expenses).

We also asked whether respondents currently had debt (including unpaid bills, credit card balance, bank loans, or borrowing money from family/friends) from breast cancer treatment (yes or no). We inquired whether, due to the financial impact of breast cancer, respondents had to use savings, could not make payments on credit cards or other bills, cut down on spending for food, had utilities turned off because of unpaid bills, or had to move out of their house or apartment because they could not afford to stay there (yes or no).

We evaluated whether patients perceived themselves to be worse off since their breast cancer diagnosis in terms of employment status and separately in terms of financial status, and we reported the percentage of these who attributed this at least partly to breast cancer and treatment. We further assessed how much patients worried about current or future financial problems as a result of breast cancer

and treatments. Response options for these items were not at all, a little, somewhat, quite a bit, or a lot, and were dichotomized as at least somewhat versus not for analysis.

Patient report of desire for and experiences with clinician engagement

We inquired how much patients wanted to talk to their health care providers regarding the impact of having breast cancer on their employment or finances. Response options for these items were not at all, a little, somewhat, quite a bit, or a lot, and were dichotomized as at least somewhat versus less (ie, a little or not at all) for analysis. We also assessed patient report of engagement with clinicians regarding the financial impact of the disease and treatment. Patients were asked, "During your breast cancer experience, how much did you discuss the impact of having breast cancer on your employment or finances with each of the following people?" Separate items specified "cancer doctors," "social worker or other professional," and "primary care doctor." We further inquired: "How much did your cancer doctors and their staff help you in dealing with the impact of having breast cancer on your employment or finances?" Response options for these items were not at all, a little, somewhat, quite a bit, or a lot.

Patients' unmet needs related to financial toxicity concerns

Finally, we developed 2 measures of unmet need. First, we defined unmet need for communication as having expressed a desire to talk with health care providers regarding the impact of breast cancer on employment or finances at least somewhat, but having failed to discuss this at least somewhat. Second, we defined unmet need for help with finances as expressing worry about financial problems at least somewhat but indicating that cancer physicians and their staff did not help at least somewhat.

Covariates

Surveys also ascertained age, race/ethnicity (white, black, Latina, or Asian), education (\leq high school, some college, or \geq college graduate), household income ($<$ \$20,000, \$20,000 to $<$ \$40,000, \$40,000 to $<$ \$90,000, or \geq \$90,000), employment status before diagnosis (full time, part time, or not working before diagnosis), insurance status (none, Medicaid, Medicare, or private), marital status (married/partnered vs not), and site (Los Angeles vs Georgia). Physician characteristics included specialty (medical oncology, surgery, or radiation oncology), annual volume of new patients with breast cancer, whether in a teaching practice, and years of experience.

Statistical Analysis

Results from the physician survey were weighted to account for differential nonresponse.²¹ Results are presented as unweighted number values, with weighted percentages to describe responses regarding physician-reported communication and attitudes.

Results from the patient survey were weighted to account for sampling design and differential nonresponse. To correct for potential bias due to missing data in the patient surveys, values for missing items were imputed using multiple imputation. Results are presented as unweighted, nonimputed number values, with weighted imputed percentages. For the patient-level analyses, we described patient reports of financial toxicity, patient report of clinician engagement, and unmet needs by race/ethnicity. We also constructed a multiple variable regression model to evaluate the correlates of desire for discussion regarding finances, using theoretically prespecified independent variables: age, race/ethnicity, education, household income, employment status before diagnosis, insurance status, marital status, and site.

Analyses were conducted using SAS statistical software (version 9.4; SAS Institute Inc, Cary, North Carolina).

RESULTS

Physician Surveys

Of the responding surgeons, 92 (21.3%) were female; 98 (31.6%) of the responding medical oncologists were female and 46 (26.8%) of the responding radiation oncologists were female. The mean numbers of years in practice were 21.6 (standard error [SE], 0.6) for surgeons, 15.7 (SE, 0.7) for medical oncologists, and 17.2 (SE, 0.9) for radiation oncologists. Of the responding surgeons, 110 (28.2%) were in teaching practices, as were 60 of the medical oncologists (21.0%) and 46 of the radiation oncologists (27.1%). Of the responding surgeons, 109 (24.8%) saw $>$ 50 new patients with breast cancer within the past year, as did 109 medical oncologists (34.4%) and 93 radiation oncologists (53.5%) (see Online Supporting Table).

As shown in Table 1, many physicians reported engagement and concern regarding costs and financial burden. Of responding medical oncologists, 50.9% reported that someone in their practice often or always discusses the financial burden of cancer with patients, as did 15.6% of surgeons and 43.2% of radiation oncologists. Of the medical oncologists, 40.0% believed themselves to be quite or very aware of the out-of-pocket costs of the tests and treatments they recommend, as did 27.3% of surgeons and 34.3% of radiation oncologists. Finally,

TABLE 1. Self-Reported Physician Practices, Knowledge, and Attitudes Regarding Financial Toxicity

| | Surgeon ^a | Medical Oncologist ^a | Radiation Oncologist ^a |
|---|----------------------|---------------------------------|-----------------------------------|
| Frequency of discussing financial burden of cancer treatments with patients | | | |
| Never | 63 (18.2%) | 10 (3.5%) | 5 (2.8%) |
| Rarely | 133 (36.9%) | 40 (13.5%) | 36 (23.0%) |
| Sometimes | 110 (29.2%) | 94 (32.2%) | 49 (30.0%) |
| Often | 54 (13.8%) | 113 (40.3%) | 48 (31.0%) |
| Always | 7 (1.8%) | 33 (10.6%) | 23 (13.2%) |
| Awareness of out-of-pocket costs of tests and treatments they recommend | | | |
| Not at all | 41 (10.5%) | 9 (3.1%) | 7 (3.6%) |
| A little | 100 (26.5%) | 50 (17.3%) | 39 (23.3%) |
| Somewhat | 123 (35.7%) | 111 (39.6%) | 62 (38.8%) |
| Quite | 76 (19.0%) | 89 (30.1%) | 39 (26.1%) |
| Very | 26 (8.3%) | 28 (9.9%) | 15 (8.2%) |
| Importance of saving patients money | | | |
| Not at all | 45 (13.3%) | 3 (1.0%) | 6 (3.5%) |
| A little | 68 (20.3%) | 35 (11.8%) | 15 (8.4%) |
| Somewhat | 115 (31.1%) | 86 (30.2%) | 53 (32.3%) |
| Quite | 121 (31.6%) | 120 (41.3%) | 63 (40.0%) |
| Extremely | 15 (3.7%) | 45 (15.7%) | 24 (15.8%) |

^a Unweighted number and weighted percentage.

approximately 57.0% of medical oncologists viewed it as quite or extremely important to save their patients money, as did 35.3% of surgeons and 55.8% of radiation oncologists.

Patient Surveys

Table 2 shows the diversity of the patient sample, which included 463 black, 516 Latina, and 240 Asian individuals. Approximately one-quarter (785 patients; 28.9%) had a ≤high school education, and 760 (37.2%) had household income <\$40,000 per annum.

As shown in Table 3, all measures of patient-reported financial toxicity varied significantly by race/ethnicity ($P<.01$). Many women reported debt from treatment, including 27.1% of white, 58.9% of black, 33.5% of Latina, and 28.8% of Asian women. Many patients also had substantial lost income and out-of-pocket expenses that they attributed to breast cancer. Overall, 14% of patients reported lost income that was ≥10% of their household income, 17% of patients reported spending ≥10% of household income on out-of-pocket medical expenses, and 7% of patients reported spending ≥10% of household income on out-of-pocket nonmedical expenses (data not shown).

Privations attributed to breast cancer varied by race/ethnicity. Few white (1.4%) or Asian (1.0%) patients lost their home, but approximately 4.7% of black and 6.0% of Latina patients did. Similarly, although only 1.7% of whites and 0.5% of Asians had utilities turned off for unpaid bills, 5.9% of blacks and 3.2% of Latinas did. One

in 5 whites (21.5%) and Asians (22.5%) cut down spending on food, as did nearly one-half of black individuals (45.2%) and greater than one-third of Latinas (35.8%). Many women were at least somewhat worried about finances as a result of breast cancer or its treatment (31.9% of white, 48.9% of black, 49.7% of Latina, and 35.2% of Asian women).

A substantial minority expressed desiring, at least somewhat, to talk to health care providers regarding the impact of breast cancer on their employment or finances, and this was more common among nonwhites (15.2% of whites, 31.1% of blacks, 30.3% of Latinas, and 25.4% of Asians). On multivariable analysis, as shown in Figure 1 (and detailed in the Online Supporting Table), the following characteristics were found to be independently associated with the desire for a discussion with health care providers regarding the impact of breast cancer on their employment or finances: younger age, nonwhite race, lower income, being employed (full time or part time), receiving chemotherapy, and Georgia residency.

Unmet patient needs for engagement with physicians regarding financial concerns were common. Of the 945 women who expressed worrying at least somewhat, 679 (72.8%) indicated that cancer physicians and their staff did not help at least somewhat. Of the 523 women who expressed a desire to talk to health care providers regarding the impact of breast cancer on employment or finances, 283 (55.4%) reported that they had not had a relevant discussion with their cancer physicians, primary

TABLE 2. Characteristics of Responding Patients

| Characteristic | No. | Weighted % |
|---------------------------------|------|------------|
| Age, y | | |
| <40 | 57 | 2.5 |
| 40-49 | 305 | 14.2 |
| 50-59 | 629 | 26.1 |
| 60-69 | 843 | 36.0 |
| ≥70 | 667 | 21.2 |
| Missing data | 1 | |
| Race | | |
| White | 1227 | 56.7 |
| Black | 463 | 17.5 |
| Latina | 516 | 14.9 |
| Asian | 240 | 10.9 |
| Other/unknown/missing data | 56 | |
| Education | | |
| ≤High school | 785 | 28.9 |
| Some college | 720 | 30.2 |
| ≥College graduate | 922 | 40.9 |
| Missing data | 75 | |
| Income | | |
| <\$20,000 | 382 | 18.8 |
| \$20,000 to <\$40,000 | 378 | 18.4 |
| \$40,000 to <\$60,000 | 329 | 16.0 |
| \$60,000 to <\$90,000 | 339 | 17.7 |
| ≥\$90,000 | 578 | 29.1 |
| Don't know or not reported | 496 | |
| Employed before diagnosis | | |
| Full time | 931 | 49.5 |
| Part time | 256 | 11.0 |
| Not employed | 1015 | 39.5 |
| Missing data | 300 | |
| Insurance | | |
| None | 110 | 5.3 |
| Medicaid | 242 | 10.9 |
| Medicare | 630 | 29.2 |
| Private | 1196 | 54.6 |
| Missing data | 324 | |
| Marital status | | |
| Not married or partnered | 961 | 39.1 |
| Married or partnered | 1496 | 60.9 |
| Missing data | 45 | |
| Site | | |
| Georgia | 1261 | 49.0 |
| Los Angeles | 1241 | 51.0 |
| Surgery | | |
| BCS | 1566 | 65.9 |
| Mastectomy | 883 | 34.1 |
| Missing data | 43 | |
| Chemotherapy | | |
| Not initiated by time of survey | 1695 | 73.1 |
| Yes | 732 | 26.9 |
| Missing data | 75 | |
| Radiotherapy | | |
| Not initiated by time of survey | 1158 | 46.3 |
| Yes | 1284 | 53.8 |
| Missing data | 60 | |

Abbreviation: BCS, breast-conserving surgery.

care providers, social workers, or other professionals. Figure 2 shows, by race/ethnicity, the percentage of patients with unmet needs for communication among those with

the desire to discuss and the percentage with unmet needs for assistance among those with worry.

DISCUSSION

In this recent, population-based sample of patients with breast cancer diagnosed in 2 large SEER catchment areas of the United States and surveyed <1 year after diagnosis, financial toxicity and a desire for clinician engagement already were substantial and varied by race/ethnicity, with vulnerable groups including the young and those who receive chemotherapy. Although many physicians, particularly medical oncologists, have reported attempting within their practices to help manage financial issues with their patients, marked unmet need remains. Greater than two-thirds of patients who were worried about finances as a result of breast cancer or its treatment reported that their cancer physicians and staff did not help substantially. Moreover, greater than one-half of those who expressed a desire to discuss the impact of breast cancer on employment or finances reported that they had not had such a discussion.

The privations observed in the current study are sobering and consistent with studies published before the widespread awareness of the potential for financial toxicity after the diagnosis and treatment of cancer. In a similar population-based sample of patients with breast cancer diagnosed a decade ago, our own group demonstrated concerning rates of serious privations during survivorship, such as economically motivated treatment nonadherence or the loss of one's home.²² However, with growing awareness of financial toxicity and attempts to mitigate it by providers, we had hoped that these experiences would be rare in a more modern sample surveyed relatively soon after diagnosis. Disappointingly, we observed that 1 in 20 black or Latina patients already had lost their home due to breast cancer diagnosis or treatment. Nearly 1 in 5 whites and Asians had to cut down spending on food, and nearly one-half of blacks and greater than one-third of Latinas reported this privation.

The current study also offers important insights regarding the extent to which the medical community has begun to attempt to address these major concerns. An intriguing analysis of videotaped interactions between African American patients and oncologists at 2 urban cancer hospitals suggested that cost discussions occur in approximately 45% of clinical interactions.²³ The current study builds on these findings and suggests that certain providers (medical oncologists) are more likely to have someone in their practice who routinely addresses these issues. Unfortunately, unmet needs for discussion persist, as does unresolved worry. The percentage of patients who

TABLE 3. Patient-Reported Financial Toxicity and Clinician Engagement by Race/Ethnicity

| Characteristic | Weighted % ^a | | | |
|--|-------------------------|-------------|--------------|-------------|
| | White N=1227 | Black N=463 | Latina N=516 | Asian N=240 |
| Lost income | | | | |
| 0 | 73.8 | 62.9 | 58.4 | 59.6 |
| \$1-\$500 | 3.5 | 3.0 | 5.1 | 2.9 |
| \$501-\$2000 | 6.1 | 9.6 | 9.8 | 9.3 |
| \$2001-\$5000 | 5.4 | 10.9 | 10.2 | 10.8 |
| \$5001-\$10,000 | 5.6 | 7.8 | 7.7 | 8.6 |
| >\$10,000 | 5.6 | 5.8 | 8.9 | 8.8 |
| Out-of-pocket medical expenses | | | | |
| 0 | 11.7 | 12.7 | 28.9 | 15.0 |
| \$1-\$500 | 23.6 | 28.1 | 27.0 | 28.9 |
| \$501-\$2000 | 19.4 | 26.3 | 18.3 | 21.7 |
| \$2001-\$5000 | 23.9 | 17.8 | 15.7 | 18.1 |
| \$5001-\$10,000 | 16.3 | 12.0 | 7.5 | 12.3 |
| >\$10,000 | 5.1 | 3.2 | 2.6 | 4.0 |
| Out-of-pocket nonmedical expenses | | | | |
| 0 | 24.3 | 19.5 | 29.9 | 16.7 |
| \$1-\$500 | 46.0 | 45.6 | 38.4 | 43.0 |
| \$501-\$2000 | 19.1 | 21.7 | 21.2 | 23.1 |
| \$2001-\$5000 | 7.6 | 8.9 | 7.4 | 10.3 |
| \$5001-\$10,000 | 2.1 | 2.8 | 2.8 | 5.0 |
| >\$10,000 | 0.9 | 1.5 | 0.3 | 1.9 |
| Current debt from treatment | 27.1 | 58.9 | 33.5 | 28.8 |
| Had to use savings | 35.6 | 52.3 | 46.8 | 43.8 |
| Could not make payments on bills | 11.6 | 32.1 | 19.3 | 9.0 |
| Cut down spending on food | 21.5 | 45.2 | 35.8 | 22.5 |
| Utilities turned off for unpaid bills | 1.7 | 5.9 | 3.2 | 0.5 |
| Lost home | 1.4 | 4.7 | 6.0 | 1.0 |
| Employment status worse off at least partly due to breast cancer | 13.2 | 23.5 | 28.5 | 15.2 |
| Financial status worse off at least partly due to breast cancer | 37.3 | 54.7 | 48.8 | 34.8 |
| Worry about finances | | | | |
| Not at all | 41.4 | 29.2 | 26.2 | 34.6 |
| A little | 26.7 | 21.9 | 24.1 | 30.2 |
| Somewhat | 15.2 | 18.0 | 21.2 | 14.4 |
| Quite a bit | 9.7 | 17.0 | 15.2 | 8.1 |
| A lot | 7.0 | 13.9 | 13.3 | 12.7 |
| Desire to talk to health care providers about impact of breast cancer on employment or finances | | | | |
| Not at all | 72.2 | 55.7 | 55.7 | 57.1 |
| A little | 12.7 | 13.3 | 13.9 | 17.4 |
| Somewhat | 8.0 | 13.9 | 12.6 | 13.0 |
| Quite a bit | 4.3 | 9.9 | 12.1 | 5.9 |
| A lot | 2.8 | 7.3 | 5.6 | 6.5 |
| Discussed impact of breast cancer on employment or finances with cancer physicians | | | | |
| Not at all | 75.0 | 66.6 | 66.7 | 66.6 |
| A little | 14.5 | 15.2 | 10.4 | 17.9 |
| Somewhat | 6.0 | 10.1 | 10.4 | 9.1 |
| Quite a bit | 2.4 | 4.4 | 8.3 | 2.8 |
| A lot | 2.1 | 3.7 | 4.3 | 3.6 |
| Discussed impact of breast cancer on employment or finances with social worker or other professional | | | | |
| Not at all | 84.9 | 70.8 | 73.9 | 77.3 |
| A little | 7.4 | 9.6 | 8.6 | 7.9 |
| Somewhat | 3.6 | 9.0 | 7.0 | 6.7 |
| Quite a bit | 2.5 | 7.1 | 6.4 | 3.8 |
| A lot | 1.7 | 3.6 | 4.1 | 4.4 |
| Discussed impact of breast cancer on employment or finances with primary care physician | | | | |
| Not at all | 89.2 | 78.6 | 74.8 | 77.4 |
| A little | 5.3 | 9.4 | 7.2 | 12.0 |
| Somewhat | 3.2 | 6.9 | 7.2 | 6.0 |
| Quite a bit | 1.1 | 2.2 | 5.5 | 1.9 |
| A lot | 1.1 | 2.9 | 5.4 | 2.7 |

All comparisons were statistically significant ($P<.01$) in chi-square tests.

^aAll comparisons are statistically significant ($P<.01$) in Chi-square tests.

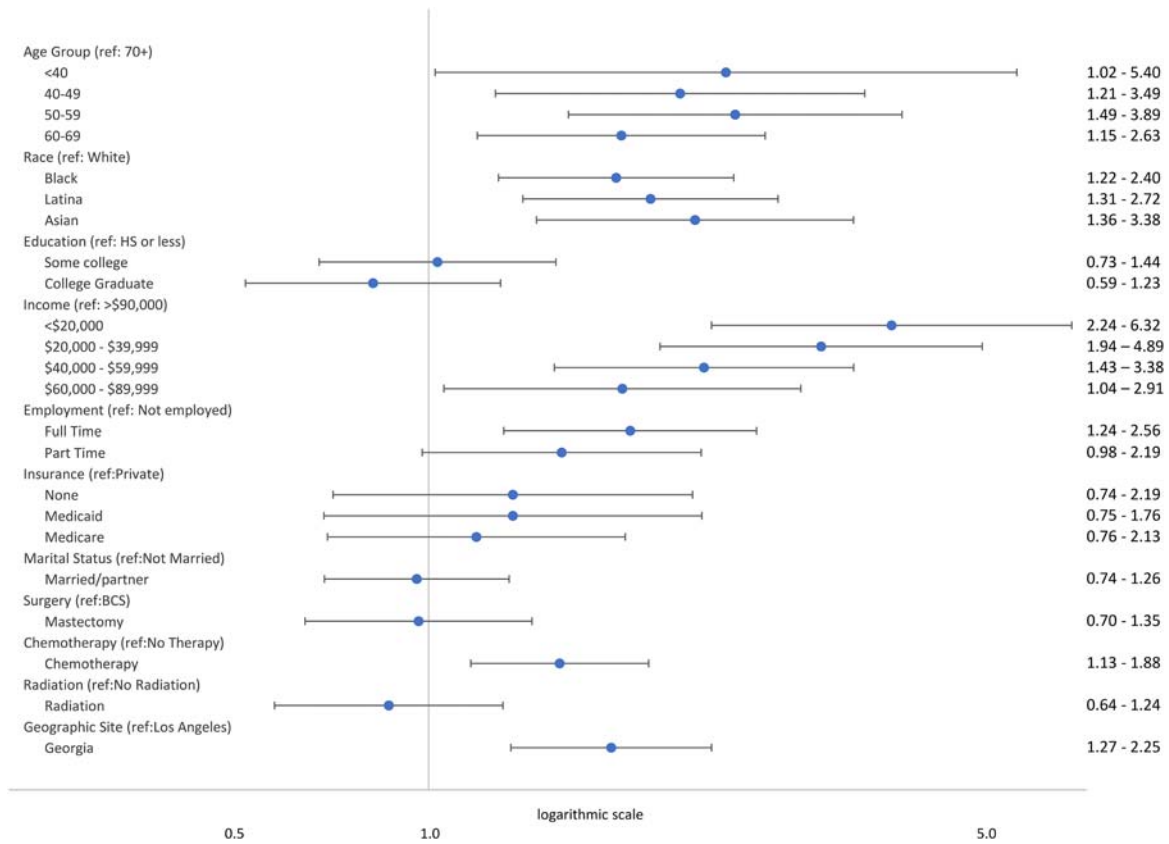


Figure 1. Factors associated with the need for communication regarding the financial impact of breast cancer. Odds ratios and 95% confidence intervals were derived from a multivariable logistic regression. Estimates are from a multiple variable regression model that evaluated the correlates of patients' self-reported desire to talk to health care providers regarding the impact of having breast cancer on employment or finances (model more fully detailed in data supplement available online only). Obtained from 2502 patients diagnosed with breast cancer in the iCanCare study. BCS indicates breast-conserving surgery; HS, high school; ref, referent.

perceive meaningful clinician engagement is low, with far fewer than one-quarter of respondents reporting more than a little discussion of these issues, which is strikingly lower than the percentage of providers (greater than one-half of medical oncologists) who perceive routinely making services available.

Given these findings, it is clear that thoughtfully designed, prospective interventions are necessary to address the remarkably common experiences of financial burden that patients report even in the modern era. These interventions might include training for physicians and their staff regarding how to have effective conversations in this context, in ways that are sensitive to cultural differences and needs. Other promising approaches might include the use of advanced technology to engage patients in interactive exercises that elicit their financial concerns and experiences and alert providers to their needs. Scholars already have developed useful tools for the rigorous evaluation of financial

experiences that are ideally suited as endpoints in studies that seek improvements of financial burden.²⁴

Although the current study has considerable strengths, including its large, population-based sample; its evaluation of several both objective and subjective measures of financial burden; and its inclusion of both physicians and the patients they serve, it also has limitations. All data regarding finances were derived from self-report, but measures were developed in accordance with principles of rigorous survey design and demonstrated strong face and internal validity. Not all sampled patients or physicians responded to our surveys, and this may introduce bias, but the rates of response were substantial and to our knowledge considerably higher than those in most other patient and physician studies. Not all patients saw all types of providers (particularly radiation oncologists), but the vast majority did see both surgeons and medical oncologists. We were unable to conduct linked multilevel analyses due to the biases that would be introduced by the

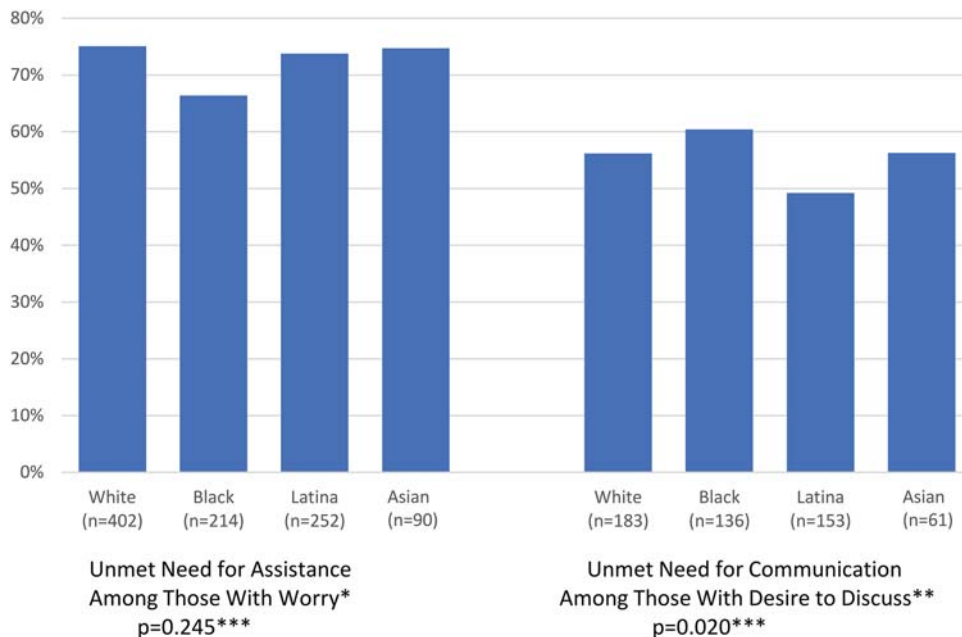


Figure 2. Unmet need for assistance and communication regarding finances. *Indicates the percentage of patients who reported receiving little or no help from their physicians and staff in dealing with the financial impact of cancer among those who expressed somewhat or greater worry about financial problems. *P* value was derived from the Pearson chi-square test. **Percentage of patients who reported little or no discussion of the financial impact of cancer among those who expressed somewhat or a greater desire to talk with health care providers about financial issues. ****P* values were derived from the Pearson chi-square test.

different provider mix of each patient. Finally, the study was based in 2 regions; although these are large catchment areas, experiences in other regions of the United States might differ, and the results should not be extrapolated to other countries, where costs, health care systems and coverage of care, policies, and culture differ markedly in ways that likely affect financial experiences and outcomes.

Implications

For many women, a breast cancer diagnosis no longer causes the physical devastation that it once did. Advances in early detection and less extensive surgery, radiotherapy, and systemic therapy have transformed a disease that once left patients disfigured at best, and at worst took their lives after terrible morbidity. Although progress in breast cancer treatment is laudable, the results of the current study demonstrate that we have gone only part of the way toward our goal. Efforts must now turn to confront the financial devastation that many patients face, particularly as they progress into survivorship. The first steps for clinical practice and policy are clear: all physicians must assess patients for financial toxicity and learn how to communicate effectively about it. To cure a patient's disease at the cost of financial ruin falls short of the physician's duty to

serve, and failure to recognize and mitigate a patient's financial distress is no longer acceptable.

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AUTHOR CONTRIBUTIONS

All authors: Conceptualization, methodology, investigation, and writing-review and editing. **Reshma Jagsi:** Writing-original draft and funding acquisition. **Paul H. Abrahamse:** Data curation and formal analysis.

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