Comparing Prostate Cancer Treatment Decision Making in a Resource-rich and a Resource-poor Environment: A Tale of two Hospitals

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Abstract: Objective: Black men with prostate cancer are diagnosed later, have poorer treatment outcomes, and higher mortality from the disease than all other racial groups. While existing literature has explored differences in the treatment decision making process between black and white men with localized prostate cancer, little is known about how environmental factors may affect the treatment decision process for men with clinically significant disease for whom treatment improves survival. The aim of this study was to compare and contrast the treatment decision process, from both patients' and treating physicians' perspectives, in a resource-rich and a resource-poor hospital.

Methods: Qualitative interviews and focus groups were conducted with patients and their treating physicians from two urban hospitals. Patients were identified through retrospective review of pathology and tumor registries; their charts abstracted to ascertain treatments. Treating physicians were identified and contacted to discuss the treatment decision process. Physicians were also asked to discuss patients who did not receive definitive treatment. Transcripts were analyzed deductively using themes from the Health Belief Model, and inductively to explore emergent themes.

Results: Overall, patients and physicians discussed similar factors that influenced the decision making process at both hospitals. However, a few important differences were found: providers at the resource-poor hospital discussed cost as a barrier, highlighted having limited treatment options for their patients, and noted issues with follow-up as external factors affecting treatment decisions. Patients at the resource-poor hospital expressed greater fear and anxiety, and less self-efficacy and motivation in comparison to patients treated at the hospital with greater resources. Importantly, patients at both hospitals described significant trust in their physician, yet only at the resource-poor hospital did patients suggest that they lacked knowledge regarding treatment side-effects, despite physicians at both hospitals describing their attempt to disclose all side-effects.

Conclusion: These findings identify both medical-system factors, and practice-level factors that can help guide the development of interventions to reduce prostate cancer treatment disparities.

Keywords: Prostate cancer■Decision-making■Disparities■Underserved populations

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INTRODUCTION

Prostate cancer is the most common cancer among men in the United States, and over 25,000 deaths are estimated in 2015 due to the disease.[1] This burden falls disproportionately on black men, who have greater than twice the risk of developing and dying from prostate cancer as all other races or ethnicities.[1] Moreover, black men tend to be diagnosed with prostate cancer at an earlier age, present with more advanced stages of disease, and have poorer treatment outcomes as compared with white men.[2,3] Socio-economic and cultural reasons, including access to and perceptions about screening, distrust of the healthcare system, and lack of knowledge about prostate cancer itself, contribute to the etiology of this disparity.[4–7]

One factor within the medical care arena known to contribute to this disparity is differences in treatment of blacks with prostate cancer.[8] Uncertainty exists around the best treatment option for locally advanced prostate cancer, and patients often defer to their physician's recommendation, or seek advice from external sources such as their spouse or the Internet.[9–12] Physicians typically aim to educate and engage the patient in decision-making about their care,[5,13] but this process can be difficult. As a result of this complexity and uncertainty, several decision aids have been developed to help both clinicians communicate about and patients understand treatment choices.[5,14] Yet despite the availability of these tools, black men continue to make different treatment choices than their white counterparts.[2,15–18]

This study aims to explore the treatment decision-making (TDM) process from the perspectives of both patients and their physicians, and compare this process at a resource-rich versus a resource-poor hospital. Previous literature has evaluated the TDM process for men in general,[9,19] but little is known about how black men specifically, in conjunction with their physician, approach their treatment decisions.[15,20] Moreover, environmental factors such as payer mix, availability of treatment options, or geographic variation in patient and physician preferences, are often correlated with race but may affect the TDM process independent of race.[21] Our study targeted men with intermediate- and high-risk, locally advanced prostate cancer (Gleason scores ≥ 7) who could benefit from active treatment. Through qualitative interviews with both physicians and patients, we sought to obtain their perspectives on facilitators and barriers to receiving treatment, and explore the attitudes that drive treatment recommendations and selection. The results of this study can inform interventions aimed to decrease treatment disparities.

METHODS

Study design

This study used qualitative, semi-structured interviews to explore locally advanced prostate cancer treatment decision-making processes. Two groups of study participants were interviewed: patients who received definitive cancer therapy, and their treating physicians who also treated men who went untreated. We sought to speak with untreated men but were unable to reach any despite at least 10 calls on varying days of the week and times of day (i.e., morning, afternoon, evening, night).

Patients were recruited from two sites selected for their close geographic proximity, yet divergent patient populations: an academic medical center (site 1) and a municipal hospital (site 2); both operate in the same broad metropolitan area, yet serve different demographic populations. Site 1 is a not-for-profit hospital with over 1000 beds, treating a predominantly white population, with roughly one third of patients insured by Medicaid.[22] Site 2 is a safety-net hospital with under 300 beds treating a predominantly black population with roughly two-thirds of patients insured by Medicaid.[22]

At the academic center, we examined pathology records from 2007 to 2012 to identify men who had prostate biopsies with a definitive tissue cancer diagnosis and a Gleason score in the range of 7−10. We identified 345 black men and a random sample of Gleason matched white men within 10 year groups (<60, 60−69, 70−79, 80+) were selected ($N = 339$). At the municipal hospital, we identified all 104 black men with Gleason score of 7−10 from the Tumor Registry from 2007 to 2013. Charts were abstracted; men with metastatic disease and those with poor prognosis due to other illnesses were excluded leaving a final sample of 575 (293 black and 282 white) men from the academic center and 66 black men from the municipal hospital. Patients with a definitive treatment were contacted.

The first phase of the study involved identification of men who received definitive treatment. Definitive treatment was defined as one of the following treatment methods: any form of radical prostatectomy, radiation external beam radiation therapy (EBRT) or brachytherapy with androgen deprivation therapy; or monotherapy with androgen deprivation therapy if prior to 2009 (changes in the field merited the removal of this therapy in 2009, see[23]).

Participant recruitment

Focus group guides included six topics, previously shown to affect the decision-making process in other populations[13,24,25]: understanding the success of different treatment; expectations of side-effects with different treatments; how the treating urologist is determined; attitudes towards living with uncertainty (e.g., active surveillance vs. active treatment); attitudes about the treatment received; and trust of their physician.

Because we were interested in ascertaining black men's barriers to care and treatment decision-making, we identified and preferentially recruited men who had longer times between diagnosis and treatment as these individuals may have wrestled more with their decision-making.

We contacted each focus group participant's physician(s) for his prostate cancer (either medical oncology, urology, and/or radiation oncology) to interview. Physician interviews were conducted from August through December 2014. The physician interview guide was designed to assess the physician's general approach to counsel patients about treatment options, the factors affecting their treatment recommendation, reasons a treatment may be recommended over another, what they believe influences the decisions their patients make, and how referrals are made. Providers were also asked to review patient cases in which the patient did not receive treatment. All focus groups and physician interviews were audio recorded, transcribed verbatim, and coded using Atlas.ti software. Informed consent was obtained for all interviewees and focus group participants.

Data analysis

Analysis of both the focus groups and interviews proceeded using both deductive and inductive approaches.