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TITLE: Influence of Prostate Cancer Treatment on Work Experiences with Focus on Race and Income

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CONTRACTING ORGANIZATION: Wake Forest University Health Sciences, Winston-Salem, NC

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14. ABSTRACT The objective of this study is to determine how a prostate cancer diagnosis, its treatment, and side-effects from treatment influence African American survivors' work ability and experiences. More specifically, the study is examining factors that influence desired and actual length of sick leave; work-related challenges following treatment; and changes in work ability and status following treatment, and compare how African American and white prostate cancer survivors experiences are similar or different. Data for the quantitative component continue to be collected. Qualitative data is being analyzed.						
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1. INTRODUCTION:

The objective of this study is to determine *how* a prostate cancer diagnosis, its treatment, and side-effects from treatment influence African American survivors' work ability and experiences. More specifically, the study will examine changes in work ability and status following treatment; factors that influence desired and actual length of sick leave; and work-related challenges following treatment. The sample for the quantitative component is stratified by race (African American and white) and income (lower and higher). Two-hundred and fifty-five men who were working prior to primary treatment for prostate cancer will be administered structured questionnaires prior to primary treatment initiation, and 3 and 6 months following primary treatment completion, with the expectation that 185 of these men will be retained through completion of the 6-month interview. A separate sample of prostate cancer survivors, also stratified by race and income will complete one semi-structured, in-depth interview. Quantitative and qualitative analyses will be conducted to achieve project goals.

2. KEYWORDS:

Prostate cancer; cancer survivorship; African American; men; men's health; employment; race; work ability; sick leave; medical leave; cancer treatment.

3. ACCOMPLISHMENTS:

Quantitative Project Protocol A-19466.1B (PCW– the quantitative study)

- **What were the major goals of the project?**

During the Project Year 5 (second no cost extension) we moved toward our goal of enrolling 255 participants, administering a set of three interviews, with at least 185 participants completing the six-month follow-up questionnaire, and pulling data from their charts for protocol, WF_1802. With the exception of higher income white men, each of the four income-race stratum will enroll 55 participants. Through an approved amendment, the number of higher income white men was increased to 90 because all 55 men in that stratum were recruited prior to March 15th, 2020 when the labor market was severely disrupted by the COVID-19 pandemic.

Specific Aim 1b: Delineate and compare the factors identified by African American and white prostate cancer survivors that influence (a) desired and actual length of sick leave and (b) work status (e.g., full-time, part-time, unemployed) following treatment for prostate cancer. (Quantitative)

Major Task 1: Collect Quantitative Data

Major Task 2: Analyze Quantitative Data that Addresses Preferred & Actual Length of Sick Leave & Work Status

Specific Aim 3: Describe and compare changes in work ability by African American and white prostate cancer survivors before treatment, and at 3 and 6 months after treatment, including the effects of (a) prostate cancer treatment-related function, (b) work environment, and (c) type of treatment, accounting for individual factors such as age, race, education, income. (Quantitative)

Major Task 1: Analyze quantitative data that address revised Specific Aim 3.

- **What was accomplished under these goals?**

Data collection continued. As of September 29, 2021, 143 participants had been enrolled, 136 participants had completed the baseline questionnaire, 98 had completed the 3-month questionnaire, and 73 had completed the 6-month questionnaire. Our goal is to have 185 participants complete the 6-month questionnaire. We are approximately 40% of the way to having 185 participants complete the six-month interview, with many enrolled participants in the pipeline.

More specifically, as of September 29, 2021, we had enrolled 24 AA lower income men, 29 higher income AA men, 16 lower income white men, and 74 higher income white men.

National Cancer Institute Community Oncology Research Program (NCORP) sites are continuing to recruit and enroll participants.

The analyses will be completed when data collection is complete. However, we have been addressing basic data cleaning issues throughout the process.

- **What do you plan to do during the next reporting period to accomplish the goals?**

We will continue to recruit participants and collect data with the assistance of the Wake Forest (WF) NCORP Research Base (RB), and NCORP sites across the country. We presented the protocol at the WF NCORP RB Virtual Annual Meeting in October, 2021 and will do so again in October, 2022. We will continue to advertise the study to NCORP sites and address any questions or concerns they might have. We will continue to have regularly meetings both with the WF NCORP RB team to oversee progress and address relevant issues and quarterly meetings designed for NCORP sites across the country to address questions and encourage participation.

When all data has been collected, we will analyze the data and submit manuscripts, and present our research findings at conferences. We may also present preliminary research results based on baseline data before data collection is complete.

Qualitative Project: *Influence of Prostate Cancer on Work Experience with Focus on Race and Income: A Qualitative Study.* Protocol A-19466.1b

- **What were the major goals of the project?**

Specific Aim 1a: Delineate and compare the factors identified by African American and white prostate cancer survivors that influence (a) desired and actual length of sick leave and (b) work status (e.g., full-time, part-time, unemployed) following treatment for prostate cancer. (Qualitative)

Major Task 1: Collect Data

Major Task 2: Conduct Qualitative Analyses that Address Preferred & Actual Length of Sick Leave & Work Status

Specific Aim 2a: Delineate and compare the work-related challenges experienced by African American and white prostate cancer survivors at different periods following completion of treatment, and formal and informal accommodations initiated by survivors, supervisors, or coworkers to address these challenges. (Qualitative only)

Major Task 1: Analyze transcripts as they relates to Specific Aim 2.

- **What was accomplished under these goals?**

We continued to recruit through our sites in North and South Carolina. Twenty-three participants were enrolled and interviewed during Project Year 4, for a total of 45 participants, with roughly similar numbers of African American and white participants. All of the interviews have been transcribed and codes (tags that represent a concept or theme) have been attached to each transcript as part of the process of analyzing the data. Further analysis is occurring as we prepare manuscripts to address the aim

- **What opportunities for training and professional development has the project provided?**

A medical school student worked with the team to analyze qualitative data, which culminated in a paper presentation to the National Medical Association Virtual Convention and Scientific Assembly in July. He also conducted some semi-structured, in-depth interviews with participants. These experiences expanded his knowledge about prostate cancer survivors' experiences as they are diagnosed, treated, experience side effects, and address work-related challenges. This knowledge will benefit him and his future patients as he provides care to cancer survivors. Also, an undergraduate student who is interested in pursuing a career as a physician or other health professional worked on the project for a substantial percentage of her time during her two months internship during the summer, advancing her knowledge about research methods, particularly in the context of qualitative research, and men's experiences with prostate cancer diagnosis and treatment.

- **How were the results disseminated to communities of interest?**

The medical student reported on his research to National Medical Association Virtual Convention and Scientific Assembly in July. The undergraduate research student shared her research with other students who participated in the Summer Research Symposium at Wake Forest School of Medicine.

- **What do you plan to do during the next reporting period to accomplish the goals?**

We will continue to systematically analyze the transcripts, and prepare manuscripts to submit to one or more academic journals.

4. **IMPACT:**

- **What was the impact on the development of the principal discipline(s) of the project?**

Analysis during this current year should advance our knowledge on main focus of project.

- **What was the impact on other disciplines?**

Nothing to report.

- **What was the impact on technology transfer?**

Nothing to Report

- **What was the impact on society beyond science and technology?**

Knowledge gained from the project has the potential to improve prostate cancer survivors' work-related experiences during and following treatment as this knowledge is shared with them, their health care providers, and employers.

5. CHANGES/PROBLEMS:

- **Changes in approach and reasons for change**

Quantitative Project

- The COVID-19 pandemic continued to slow recruitment during the fall of 2020 and winter months for our project as it did for other studies. Recruitment for the quantitative projects slowed down substantially during March and subsequent months due to COVID-19 as medical centers and practices reduced non-emergency procedures as the COVID-19 epidemic, and then adjusted their processes and procedures to address the epidemic.
- In response to the COVID-19 pandemic, we submitted an amendment that was approved by the USAMRDC's HRPO in March 2021, after having been approved by the NCI Central CIRB. Men who lost their jobs due to the pandemic, have not been able to find a new job, and expect to be working in 6 months, are eligible to participate. Minority men's employment was particularly affected by the pandemic; this strategy was an attempt to address the unusual circumstances of the pandemic. Also, approval was given for the consent process to be conducted remotely; therefore, no in-person contact is required of participants, which can be particularly beneficial during a pandemic. The same amendment also increased the size of the stratum for white, moderate to high income men from 55 to 90. All men in this stratum were recruited before March 15, 2020, when the pandemic led to widespread job loss. We therefore wanted to include men in that stratum who were recruited after the pandemic affected the labor market. We also added questions related to the pandemic to questionnaires.
- Sites reported difficulty recruiting low-income participants despite substantial effort. In response to this challenge, we submitted an amendment to raise the income cut-off point from 200% to 300% of the federal poverty guideline, thereby increasing the number of participants in the newly named "lower" income category. The other income category became the "higher income" category. The amendment was approved by the NCI, including the NCI CIRB, at the end of August, 2021. It was subsequently approved by USAMRDC's HRPO, and the change was implemented in September, 2021.

Qualitative Project

- The pandemic prevented recruitment at in-person events, such as health fairs, etc. Despite reduced options for recruitment, we recruited a total of 45 participants and are now analyzing the data for manuscripts.

- **Actual or anticipated problems or delays and actions or plans to resolve them**

Quantitative Project:

- The COVID-19 pandemic continued to slow recruitment during the fall of 2020 and winter months for our project as it did for others studies. Rates of enrollment have increased in recent months, possibly due in part to the amendments that were approved and implemented. We are hopeful that we will continue to recruit and retain participants.

- In October 2021, the WF NCORP RB held a virtual version of its Annual Meeting which is attended by physicians and research staff from sites across the country. As part of that meeting, Dr. Sandberg gave short presentation to provide updates about our study, encourage staff to continue to recruit participants for this study, and answer any questions they might have. In addition, the WF NCORP RB continues to hold quarterly webinars with sites to provide updates about this study, share strategies that different sites have used to recruit participants, and encourage sites to continue to recruit participants.
- The co-PI of the WF NCORP RB remains committed to completing data collection, data cleaning, and data analysis.

Qualitative Project:

- We are now focused on manuscript preparation and do not anticipate delays.
- **Changes that had a significant impact on expenditures**
 - Nothing to report
- **Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**
 - **Significant changes in use or care of human subjects**

No significant changes in the use or care of human subject occurred, although the protocol was modified with approval from WFUHS IRB and HRPO regarding recruitment and the consent processes. (See Changes in approach and reasons for change.)
 - **Significant changes in use or care of vertebrate animals.** Not applicable
 - **Significant changes in use of biohazards and/or select agents.** Not applicable.

6. PRODUCTS:

- **Publications, conference papers, and presentations**
 - **Journal publications.**

Carriere PP, Hernandez G, Owens OS, Mayfield A, Dressler, Sandberg JC. Meeting Abstract: Exploring themes of disclosure in the workplace among prostate cancer survivors with a focus on race and income. *Journal of the National Medical Association*. Published online in advance of print on 20 October 2021. <https://doi.org/10.1016/j.jnma.2021.07.011>
 - **Books or other non-periodical, one-time publications.** Nothing to report.
 - **Other publications, conference papers, and presentations.**

Carriere PP, Hernandez G, Owens OS, Mayfield A, Dressler EV, Sandberg JC. Exploring themes of disclosure in the workplace among prostate cancer survivors with a focus on race and income. National Medical Association Virtual Convention and Scientific Assembly. July 18, 2021

Hopper M, Sandberg JC. Aspects of Effective Patient-Provider Communication Between African American Prostate Cancer Patients and Physicians. Summer Research Poster Symposium at Wake Forest School of Medicine, Winston-Salem, NC. July 30, 2021
NOTE: This was a symposium where undergraduate students interning at Wake Forest School of Medicine presented their research.

- **Website(s) or other Internet site(s)** Nothing to report.
- **Technologies or techniques.** Nothing to report.
- **Inventions, patent applications, and/or licenses.** Nothing to report.
- **Other Products** Nothing to report.

7. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS

- **What individuals have worked on the project?**

Name: Joanne C. Sandberg
Project Role: Principal Investigator
ORCID ID: 0000-0001-6056-6186
Nearest person month worked: 2.4 calendar months
Contribution to Project: No change.

Name: Emily Van Meter Dressler – No change
Project Role: Co-Investigator
ORCID ID: 0000-0002-6054-7839
Nearest person month worked: 0.6 calendar months
Contribution to Project: No change.

Name: Andrew Mayfield
Project Role: Project Manager
Nearest person month worked: 4.0 calendar months
Contribution to Project: No change

Name: Guadalupe Hernandez
Project Role: Assistant Project Manager
Nearest person month worked: 3.3 calendar months
Contribution to Project: No change

Name: Tammy Vogler
Project Role: WF NCORP RB Clinical Studies RN
Nearest person month worked: 1.0 calendar month
Contribution to Project: Ms. Vogler has performed work in the area of site coordinator, site activation activities, training, and issues raised at individual sites for quantitative study.
Funding support Wake Forest NCORP Research Base which is funded by the National Cancer Institute National Cancer Institute

Name: Eden Gurganus – No change
Project Role: NCORP Assistant Project Manager
Nearest person month worked: 1.0 calendar months
Contribution to Project: No change
Funding support Wake Forest NCORP Research Base which is funded by the National Cancer Institute National Cancer Institute

Name: Otis Shaun Owens
Project Role: PI of subcontract prior year – University of South Carolina
ORCID ID: 0000-0002-1023-1449
Nearest person month worked: 1.1 calendar months

Contribution to Project: Dr. Owens has overseen recruitment and data collection efforts in South Carolina; he has conducted research interviews and assisted in the qualitative coding of interviews.

Name: Patrick Carriere
Project Role: WFSM Medical School student
ORCID ID:
Nearest person month worked: 0.9 calendar months
Contribution to Project: He conducted some interviews for the qualitative component and analyzed qualitative data for a conference presentation (and published abstract) that addressed disclosure at the workplace.

Funding support None

Name: Mya Hopper
Project Role: Undergraduate student intern
ORCID ID:
Nearest person month worked: 1.4 calendar months
Contribution to Project: Ms. Hopper check audio recordings against the transcript, and analyzed a subset of interviews for her poster presentation.
Funding support Wake Forest EICS Program (Grant No. R25 HL092618)

- **Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?**

Dr. Emily Dressler is currently at 1.20 calendar months for NCI P50 CA244693, *IDAPT: Implementation and Informatics- Developing Adaptable Processes and Technologies for Cancer Control – Research Program*; 0.60 calendar months for NCI UG1 CA189824S1, *Internet-delivered Management of Pain Among Cancer Survivors (IMPACTS)*; 1.28 calendar months for NCI UG1 CA189824, *Wake Forest NCORP Research Base*; 0.12 calendar months for NHLBI U24 HL141732, *2/2 PROMote weight loss in obese PAD patients to preVEnt mobility loss: The PROVE Trial—DCC*; 1.14 calendar months for NCI R01 CA226078, *Assessing Efficacy and Implementation of an EHR tool to Assess Heart Health among Survivors*; 1.20 calendar months for NCI R01 CA207158, *Implementation of Smoking Cessation Services within NCI NCORP Community Sites with Organized Lung Cancer*; 1.50 calendar months to a project sponsored by Omada Health, Inc., in collaboration with University of Nebraska Medical Center. Preventing Diabetes with Digital Health and Coaching for Translation and Scalability (The PREDICTS Trial).

Dr. Sandberg’s efforts on NSF 1612616, *An Informal STEM Learning Model: Genetics, Genomics, and Adult Bilingual Learners* changed to 4.2 calendar months per year. Her effort is at 1.0 calendar months per year for the NIEHS 2R01ES008739-20, *The Effect of Pesticide Exposure on Cognitive and Brain Development in Latino Children: PACE5*; and 1.0 calendar months for NICHD R01 HD084420, *Hired Youth Farmworkers: Work Organization, Safety, Hazards, and Health*. The grant funding for *A Direct-to-Patient Alert for Glycated Hemoglobin Screening Using Prediction Modeling and Mobile Health (mHealth)*, has ended. She is not on any new grants.

Dr. Otis Shaun Owens at the University of South Carolina does not currently have grant support.

- **What other organizations were involved as partners?**
 - **Quantitative Project**

- **Organization Name:** Wake Forest National Cancer Institute Community Oncology Program Research Base (WF NCORP RB). The WF NCORP RB
- **Location of Organization:** Winston-Salem, NC
- **Partner's contribution to the project** (*identify one or more*)

Collaboration Multiple team members from the WF NCORP RB are assisting with the project so that staff at NCORP sites across the country can enroll and consent participants and collect data.

Qualitative Project: *Influence of Prostate Cancer on Work Experience with Focus on Race and Income: A Qualitative Study.*

- **Organization Name:** University of South Carolina.
 - **Location of Organization:** Columbia, SC
 - **Collaboration.** WFUHS subcontracted with the University of South Carolina to have Dr. Otis Shaun Owens recruit, consent, enroll and interview participants as well as contribute to the analysis of qualitative data.
- **Organization Name:** Gibbs Cancer Center & Research Institute
 - **Location of Organization:** Greer, SC
 - **Collaboration.** Research staff conducted initial screening to identify patients who might be potentially eligible to participate in this qualitative research study. With patient approval, contact information for potentially eligible participant was provided to Dr. Otis Shaun Owens.

Quantitative and Qualitative Projects

- **Organization Name:** Tulane University
 - **Location of Organization:** New Orleans, LA
 - **Collaboration.** Dr. Krane, M.D. is a co-investigator on both the qualitative and quantitative project. He is an Assistant Professor of Urology at Tulane University. He provides expertise in prostate cancer treatment, particularly in respect to prostatectomies.