Racial Disparities in Urologist Visits Among Elderly Men with Prostate Cancer: A Cohort Analysis of Patient-Related and County of Residence-Related Factors

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Racial disparities in urologist visits among elderly men with prostate cancer: a cohort analysis of patient-related and county of residence-related factors

Running title: Disparities in urologist visits

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Precis: The study investigated novel social environment factors including crime, housing, and household characteristics. We found that social environment characteristics and their relationship with urologist visits differed between AA and white men.

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Keywords: prostate cancer, disparities, urologist, social environment
Abstract

Introduction: Factors contributing to the lower likelihood of urologist follow up among African American (AA) men diagnosed with prostate cancer (PCa) may not be strictly patient-related. We investigated the relationship between crime, poverty, poor housing, among others, and post-diagnosis urologist visits among AA and white men.

Methods: We utilized linked cancer registry and Medicare claims data from 1999-2007 for men diagnosed with stage I-III PCa. The USA Counties and County Business Patterns datasets provided county-level data. Variance-components models reported percent of variation attributed to county of residence. Post-diagnosis urologist visits for AA and white men were investigated using regression models.

Results: We identified 65,635 patients: 87% were non-Hispanic white and 9.3% were non-Hispanic AA. Sixteen percent of men diagnosed with stage I-III PCa did not visit a urologist within one year following diagnosis: 22% among AA and 15% among white men. County of residence accounted for 10% of the variation in the visit outcome: 13% for AA and 10% for white men. AA men were more likely to live in counties ranked highest in terms of poverty, occupied housing units with no telephone, and crime. AA men were less likely to see a urologist (OR = 0.65, 0.6 – 0.71; RR=0.94, 0.92 – 0.95). The sign and magnitude of the coefficients for the county-level measures differed across race-specific regression models of urologist visits.

Conclusion: Among older men diagnosed with stage I-III PCa, the social environment contributes to some of the disparities in post-diagnosis urologist visits between AA and white men.
Introduction

Prostate cancer (PCa) is the most common cancer in men in the United States, and is a particularly significant problem in the African American (AA) population. Compared to white men, AA men exhibit higher rates of PCa incidence, more advanced stage at diagnosis, and higher disease-specific mortality\textsuperscript{1-3}. Such disparities also extend to specialist follow-up visits. Specifically, older AA men with incident advanced-stage PCa are less likely to visit a urologist following diagnosis compared to older white patients\textsuperscript{4}. To date, limited attention has been paid to the role of community-level factors in explaining disparities in PCa process measures such as urologist visits. Yet the patient’s social environment may affect access to health care and impact health outcomes\textsuperscript{5-7}. Prior literature, focused on survival, indicates that an unequal burden of PCa can arise if community-level poverty independently correlates with health status and AA are generally more likely to live in poor communities\textsuperscript{8}. Also, differences in the observed PCa-related outcomes can arise if the experience of poverty differs between AA and white men living within the same community\textsuperscript{9}. Building on this reasoning, we investigated whether AA and white men differ in the poverty-related metrics that characterize their community, whether community-level poverty is associated with the probability of a post-diagnosis urologist visit, and whether the relationship between community-level poverty and the urologist visit depends on race/ethnicity.

We utilized a broader conceptualization of poverty than has been used in most previous studies of PCa. We used the following five domains from the English Indices of Multiple Deprivation (IMD)\textsuperscript{10}: Income, Education, Access to Services, Living environment, and Crime. These five domains were used to characterize the individual’s
social environment and build the conceptual framework for the study. The framework (Figure 1) highlights the role of the social environment as an independent factor explaining the probability of a follow-up urologist visit following diagnosis of PCa: a visit to the urologist following a diagnosis of PCa is affected by residence in an area that is ranked low in terms of the overall household income levels, educational attainment, access to services (health and social), housing quality, and/or safety. Figure 1 also indicates that there are potential differences in the contributing role of social environmental factors between AA and white men. These differences are due in part to differences between AA and white men in the likelihood of living in a deprived area and in their experience of living conditions.

There is theoretical motivation for considering the social experiences of AA men separately from that of white men. Feminist sociological theorists propose a perspective known as “intersectionality” to describe how systems of inequality (race/ethnicity, class, and gender) overlap to produce unequal outcomes in society. For example, the intersectionality perspective would explore gender differences within racial groups, racial differences within gender groups, as well as class\textsuperscript{11}. The intersectionality perspective underscores the value of investigating the experiences of AA men separately from the experiences of white men. African American men are unique due to their dual position in an advantaged group (men) and a disadvantaged group (racial minority). As a result of this dual position, the ‘compounding effect’\textsuperscript{12} of deprivation (due to residence in an area in which a majority of individuals are experiencing deprivation) may be further intensified for AA men compared to white men. The AA man’s experience living in a deprived area may differ from the white man’s experience living in
a deprived area. If area-level deprivation is negatively associated with the probability of a post-diagnosis urologist visit (and AA are more likely to live in deprived areas), the negative relationship between area-level deprivation and the probability of a visit may be intensified for AA compared to white men.

This study posits that the relationships between area-level deprivation and the likelihood of a urologist visit depends on race/ethnicity. Using stage I-III PCa as a model, we investigated the role of patient- and community-related factors with the long term goal that identification of differential effects may inform development of patient-centered programs focused on addressing barriers to care.

Material and Methods

Population

This retrospective analysis of linked cancer registry and Medicare claims data examined treatment of men at least 66 years of age diagnosed with incident PCa between 2000 and 2005 as listed in the Surveillance Epidemiology and End Results (SEER) cancer registry. Cases were limited to those diagnosed with stage I-III PCa as identified by the American Joint Committee on Cancer Tumor-Node-Metastasis (AJCC-TNM) stage (3rd edition) and with continuous Medicare Parts A and B coverage for the 13 months prior to and including the SEER diagnosis month. Patients were required to have 12 months of follow-up data to be included in the sample. Treatment-related data from 1999 to 2007 were extracted from linked Medicare claims files. Exclusion criteria included: 1) health maintenance organization (HMO) enrollment during the 12 months prior to and including the month of diagnosis since HMO claims
can be unreliable due to missing data; 2) history of other cancers within 5 years prior to 
PCa diagnosis; 3) PCa diagnosis made at autopsy. Patients were censored if they 
enrolled in an HMO or lost coverage at any time following the diagnosis date, or if the 
end of the study period (December, 2007) was reached. The SEER-Medicare dataset 
was augmented with data from the USA Counties dataset and the County Business 
Patterns dataset.

Variables

The main outcome variable was a dichotomous variable modeling a post-
diagnosis urologist visit occurring within twelve months of diagnosis. All claims, 
including Medicare Provider Analysis and Review, Carrier (National Claims History) and 
outpatient claims were examined to identify evaluation and management records as well 
as the HCFA specialty code. Physician specialty was identified using the Health Care 
Financing Administration specialty codes provided in Medicare claims. The key 
independent variable used in the urologist visit models was the individual's 
race/ethnicity as documented in the SEER dataset. The following potentially 
confounding measures (variables) at baseline were included in the urologist visit 
models: age group at diagnosis (RC = 66-69), marital status (RC = not married), poorly 
or not differentiated tumor (RC = well or moderately differentiated), positive number of 
months of state buy-in (RC = zero months of state buy-in), comorbid conditions based 
on the Charlson Comorbidity Index (RC = CCI score of 0), visit to primary care physician 
(RC = no PCP visit), a single proxy measure for poor performance status, and living
area (RC = rural living area). The regression models also controlled for census tract-level measures of median income and proportion speaking English.

County-level measures were based on the English Indices of Multiple Deprivation\textsuperscript{10} which include seven domains. Two domains from the English IMD (Employment and Health) were assumed to be less relevant for a study involving a population of Medicare-insured individuals diagnosed with PCa. The remaining five domains were utilized: Income, Education, Access to Services, Living environment, and Crime. We also included a measure of the number of vehicles available at the household level. Continuous variables were converted into binary variables; cut points were created at the 75\textsuperscript{th} or 25\textsuperscript{th} percentiles for all individual variables entered directly in the regression models and for all variables that were considered in factor analyses (see following section). Some variables likely did not reflect a deprived state and were reverse-coded so that values greater than the 25\textsuperscript{th} percentile represented the reference group (i.e., medical and social services (including nonfederal physicians, total physicians, health care and social assistance establishments)).

\textit{Statistical analysis – county-level dataset}

Exploratory factor analysis (EFA) was used to combine multiple domain indicators into a smaller number of conceptually and theoretically relevant factors. EFA was conducted for three domain areas: Crime, Facilities, and Services. Several competing EFA models were developed and compared for each domain. Final models were chosen based on three criteria: 1) percent variance explained, 2) achieving a “simple solution”, and 3) interpretability of the factors. Achieving a simple solution meant
that each indicator only loaded on a single factor. Competing measurement structures for indicators were considered for quantifying deprivation; the three types of structures evaluated were continuous-level data, rank-ordered data using quintiles, and binary data using a 75\textsuperscript{th} or 90\textsuperscript{th} percentile. EFA models were evaluated using each type of data structure. The 90\textsuperscript{th} percentile binary classification structure yielded the best EFA model based on the criteria outlined above. This measurement structure indicates whether counties fell in the top 10\% of highest deprivation or the lower 90\% for each indicator.

Statistical analysis – patient-level dataset

Descriptive statistics were calculated for the AA and white subgroups. Statistical analyses examined the association between AA race/ethnicity and a post-diagnosis urologist visit using logistic and modified Poisson regression\textsuperscript{14} to provide adjusted odds and rate ratios. Race-specific regression models were estimated for the AA and white sample. Multilevel hierarchical logistic models also were estimated to calculate the percent of variation in urologist visits that is attributable to county-level variation for the entire group as well as for the AA and white subgroups. The median odds ratio (MOR) was reported, providing an odds ratio interpretation for the effect size associated with the county-level residual.

The cut-off value for statistical significance was 0.05. All statistical analysis was conducted using Version 9.1.3 of the SAS System for Unix. This study was approved by the University of Maryland Baltimore Institutional Review Board (HP-00042760).
Results

Descriptive results

Application of the inclusion criteria resulted in 65,635 patients diagnosed with incident AJCC stage I-III PCa between 2000 and 2005. Average age at diagnosis in the sample was 74 years, 87 percent were non-Hispanic white and 9.3 percent were AA. Overall, sixteen percent of men diagnosed with stage I-III PCa did not visit a urologist within one year following diagnosis: 22 percent among AA and 15 percent among white men. Descriptive statistics stratified by non-Hispanic white and non-Hispanic AA race (Table 1) highlight differences between AA and white men in their counties of residence. Additional detail regarding the specific county-level measures that contributed to each domain is available upon request.

Multivariable regression models

Using the full sample, AA race was associated with a statistically significant lower likelihood of urologist visits compared to white patients (OR = 0.65, 0.6 – 0.71; RR=0.94, 0.92 – 0.95). Results from race-specific regression models are reported in Table 2. In the AA sample, residence in a county with a high number of individuals living below the poverty level was positively associated with a post-diagnosis urologist visit (OR = 1.75, 1.27 – 2.4; RR = 1.1, 1.04 – 1.17). On the other hand, residence in a county with a high number of housing units lacking telephone service was negatively associated with a post-diagnosis urologist visit (OR = 0.63, 0.47 – 0.85; RR = 0.93, 0.89 – 0.99). In the white subgroup, residence in a county with a high number of individuals living below the poverty level was not associated with a post-diagnosis urologist visit
Residence in a county with a high number of housing units lacking telephone service was negatively associated with a post-diagnosis urologist visit among white men (OR = 0.82, 0.74 – 0.9; RR = 0.98, 0.96 – 0.99).

Random intercept logistic regression model

Variation across counties of patient residence accounted for 10% of the variation in the likelihood of a urologist visit. In subgroup analyses, variation at the county level accounted for 13% and 10% of the variation in the likelihood of a urologist visit among AA and white men, respectively. The median odds ratio (interval odds ratio) associated with the county-level residual was 1.8 (0.3 – 2.9). The covariate-adjusted odds ratio (95% confidence interval) for the AA variable was 0.46 (0.42 – 0.5) in the multilevel model.

Discussion

There is increasing interest in the impact of community-level factors on health outcomes for various cancers. In PCa, studies have focused largely on mortality outcomes, where the role of community-level socioeconomic status (SES) may account for some of the disparities in PCa mortality between AA and white men. Given that urologists are often the gatekeepers in orchestrating the management of men diagnosed with PCa, particularly those with earlier stages of the disease, in this report we focused on disparities in post-diagnosis urologist visits among men with stage I – III PCa. Racial differences in specialist visits are of concern as they may lead to disparities
in treatment receipt. For example, whether or not a patient diagnosed with localized PCa opts for watchful waiting, active surveillance or active treatment, contact with a urologist following the initial diagnosis of PCa is important for ensuring that the patient makes fully informed decisions. We find that characteristics of the social environment and its relationship with urologist visits differed between AA and white men. Results regarding race differences in physician visits are consistent with prior findings regarding AA and white differences in physician visits among older adults.\textsuperscript{17, 18}

A driving postulate in this study was that community-level factors can influence a patient’s health-related decisions and actions, including visits to a physician. We sought a more complete characterization of the patient’s community than has been done in most prior studies. The county-level measure of the proportion of households without a telephone, for example, is one measure of an individual’s environment. The hypothesis is not that an individual without a telephone is less likely to see a urologist following diagnosis of PCa. Rather, it is postulated that individuals living in a county ranked high in terms of the proportion of households without a telephone may have pre-existing competing personal and social needs that reduce the likelihood that they will follow up with a urologist. The same reasoning applies to other area-level measures investigated such as high crime or a high number of households without a vehicle. Thus, the focus is not whether a man diagnosed with PCa has been a crime victim or lives in a house without a working telephone. Rather, it is the surrounding environment created by these factors that may influence a patient’s personal priorities as they relate to seeking healthcare. Burdens borne at different times by people in an individual’s broader support network may slowly re-align the individual’s priorities over time such that at the
time that he is diagnosed with a particular disease (e.g., PCa), a follow up visit to a
physician (e.g., urologist) assumes a low priority. We found that more AA than white
men live in counties ranked high in terms of the measures of deprivation examined in
this study. As such, it is possible that a typical member of an AA man’s support network
is more likely to be a crime victim, without access to a vehicle, or without home
telephone access, compared to the typical member of a white man’s support network.
These differences in living experiences may have implications for individual prioritization
and decision making.

Focusing on post-diagnosis urologist visits, this study employed a conceptual
framework (Figure 1) that emphasized the multi-level nature of factors that differ
between AA and white men. Such multi-level focus is appropriate given that observed
health behavior and outcomes are shaped by a complex interaction of individual (e.g.,
demographic, socioeconomic) and social environmental factors (e.g., access to
healthcare, work environment, living environment, access to social services)\textsuperscript{19-21}. The
multi-level view also highlights the inter-relatedness between individuals and their
community, as suggested by one study’s finding that “the [mortality] consequences of
neighborhood deprivation may be particularly exacerbated for Blacks, compared with
whites”\textsuperscript{22}.

Those patients who did not see a PCP or who did not have reimbursed health
services (despite insurance coverage) in the months leading up to the PCa diagnosis
were less likely to follow up with the urologist following the cancer diagnosis. Further,
these effects were larger for AA men than for white men. These results highlight the
importance of patient engagement in the health care system prior to the PCa diagnosis.
A patient who has not received health services or seen his PCP in the twelve months prior to the diagnosis of PCa may be more difficult to engage in a management plan once a cancer diagnosis is made. Based on our conceptual framework, there could be potential differences in the factors characterizing the experience of AA men and white men during this twelve month baseline period.

The finding with respect to geographic location (i.e., urban vs. rural residence) is consistent with prior research that identified a lower likelihood of treatment receipt among rural residents compared with urban residents among older men diagnosed with early-stage PCa\textsuperscript{23}. White men residing in counties ranked high on poverty were less likely to follow up with the urologist while the opposite was true among AA men residing in counties ranked high on poverty. White men residing in counties ranked low on services were more likely to follow up with the urologist while there was no relationship among AA men. These differences in effect between AA and white men are intriguing and warrant further investigation.

Although a relatively large population-based dataset was used in this study, one of its potential limitations is that it utilized Medicare claims data, so that the results may not generalize to younger men diagnosed with PCa. Further, patient-level factors relating to culture and trust of the medical community may impact white and AA communities differently but were not available for analysis. While the results indicated that there is a role for factors measured at the county level, the area size is larger than the typical size for defining a community. Ideally, the measures of deprivation would be measured at a smaller area-level such as has been investigated in prior studies\textsuperscript{24, 25}. One advantage of analyses conducted at the smaller area level is that concerns with the
ecological fallacy are reduced, although not eliminated, with respect to understanding the individual patient’s experience with deprivation. While the findings reported herein may also apply to certain other solid tumors such as that of the colon or lung, they may not be applicable to metastatic stages of cancer regardless of cancer type since prioritization among competing needs may differ once a patient is faced with advanced disease.

**Conclusion**

This study examined patient- and community- level factors that could in part account for race disparities in post-diagnosis urologist visits among older men with PCa. The conceptual framework highlighted the race differences among men when considering their living environment as a factor potentially contributing to differences in follow up visits with the urologist after a diagnosis of PCa was made. Whether using a single-level model with contextual fixed effects or a multi-level model with separate estimates of patient- and community-level variation, the consistent observation was that AA/white disparities in post-diagnosis urologist visits cannot be explained solely by patient-level factors. Rather, the patient’s community is also important in understanding some of the disparities associated with individual health-related decisions and warrants further study, not only in PCa but perhaps other malignancies as well.
References


Figure 1: Conceptual framework for investigating factors that differentially correlate with urologist visits among African American (AA) and white (W) men
Table 1: Descriptive statistics by race for patient and county characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>African American sample (N=6,115)</th>
<th>White sample (N=56,995)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean or %</td>
<td>N or SD</td>
</tr>
<tr>
<td>At least one urologist visit within one year post diagnosis</td>
<td>77.5%</td>
<td>4,740</td>
</tr>
<tr>
<td>Missing CCI score</td>
<td>9.2%</td>
<td>565</td>
</tr>
<tr>
<td>Hospitalization or walking aid or SNF or oxygen use or wheelchair use in 12 months pre period</td>
<td>19.8%</td>
<td>1,208</td>
</tr>
<tr>
<td>Visit to primary care physician 12 months before diagnosis</td>
<td>70.1%</td>
<td>4,286</td>
</tr>
<tr>
<td>Percent Population below poverty level 1999 (1 if &gt;75th percentile)</td>
<td>45.6%</td>
<td>2790</td>
</tr>
<tr>
<td>Educational attainment - persons 25 years and over completing less than 9th grade 2000 (1 if &gt;75th percentile)</td>
<td>20%</td>
<td>1,222</td>
</tr>
<tr>
<td>Occupied housing units with no vehicles available 2000 (1 if &gt;75th percentile)</td>
<td>54%</td>
<td>3,302</td>
</tr>
<tr>
<td>Occupied housing units with no telephone service available for 2000 (1 if &gt;75th percentile)</td>
<td>48.3%</td>
<td>2,953</td>
</tr>
</tbody>
</table>

CCI: Charlson Comorbidity Index
SNF: skilled nursing facility
Table 2: Modified Poisson regression model for post-diagnosis urologist visit within one year, African American sample (N=6,115) and white sample (N=56,995)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>African American</th>
<th>White</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Rate ratio (95% CI)</td>
<td>Rate ratio (95% CI)</td>
</tr>
<tr>
<td><strong>County-level fixed effects</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Crime</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crime against persons (&gt;90th percentile)</td>
<td>1.00 (0.98,1.02)</td>
<td>1.00 (1.00,1.01)</td>
</tr>
<tr>
<td>Crime against property (&gt;90th percentile)</td>
<td>0.99 (0.97,1.01)</td>
<td>1.01* (1.00,1.01)</td>
</tr>
<tr>
<td>Generalized crime against persons_factor (&gt;90th percentile)</td>
<td>0.99 (0.98,1.00)</td>
<td>1.00 (0.99,1.00)</td>
</tr>
<tr>
<td><strong>Access to services</strong></td>
<td></td>
<td></td>
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<tr>
<td>Facilities_factor (&lt;10th percentile)</td>
<td>1.02 (1.00,1.04)</td>
<td>1.00 (0.99,1.01)</td>
</tr>
<tr>
<td>Services_factor (&lt;10th percentile)</td>
<td>0.99 (0.96,1.01)</td>
<td>1.00 (1.00,1.01)</td>
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<tr>
<td><strong>Income</strong></td>
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<tr>
<td>Percent Population below poverty level 1999 (1 if &gt;75th percentile)</td>
<td>1.1** (1.04,1.17)</td>
<td>0.99 (0.97,1.00)</td>
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<tr>
<td><strong>Education</strong></td>
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<td>Educational attainment - persons 25 years and over completing less than 9th grade 2000 (1 if &gt;75th percentile)</td>
<td>0.96 (0.91,1.01)</td>
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<td><strong>Living environment</strong></td>
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<tr>
<td>Occupied housing units with no telephone service available for 2000 (1 if &gt;75th percentile)</td>
<td>0.93* (0.89,0.99)</td>
<td>0.98** (0.96,0.99)</td>
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<tr>
<td>Occupied housing units with no vehicles available 2000 (1 if &gt;75th percentile)</td>
<td>1.02 (0.98,1.06)</td>
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<td><strong>Patient-level variables</strong></td>
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<td>Marital status</td>
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<td>1.02** (1.01,1.03)</td>
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<td>Reference</td>
</tr>
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<td>Poorly or not differentiated tumor</td>
<td>1.05** (1.03,1.08)</td>
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<td>Reference</td>
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<td>1.00 (0.99,1.01)</td>
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<td>2+</td>
<td>1.04* (1.01,1.08)</td>
<td>0.98** (0.97,0.99)</td>
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<td>(95% CI)</td>
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<tr>
<td>Yes</td>
<td>0.97 (0.93, 1.01)</td>
<td>0.96** (0.95, 0.98)</td>
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<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Age at diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age below 70</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Age 70-74</td>
<td>1.00 (0.97, 1.03)</td>
<td>0.99** (0.98, 1.00)</td>
</tr>
<tr>
<td>Age 75-79</td>
<td>1.00 (0.97, 1.03)</td>
<td>0.98** (0.96, 0.98)</td>
</tr>
<tr>
<td>Age 80-84</td>
<td>0.98** (0.93, 1.02)</td>
<td>0.96** (0.95, 0.97)</td>
</tr>
<tr>
<td>Age 85+</td>
<td>0.91* (0.84, 0.98)</td>
<td>0.92** (0.9, 0.94)</td>
</tr>
<tr>
<td>Hospitalization or walking aid or skilled nursing facility or oxygen use or wheelchair use in 12 months pre period (morbidity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0.95** (0.92, 0.98)</td>
<td>0.98** (0.97, 0.99)</td>
</tr>
<tr>
<td>No</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Visit to primary care physician 12 months before diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1.11** (1.08, 1.15)</td>
<td>1.06** (1.05, 1.07)</td>
</tr>
<tr>
<td>No</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Urban/rural residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bigmetro</td>
<td>1.00 (0.92, 1.09)</td>
<td>0.97** (0.95, 0.99)</td>
</tr>
<tr>
<td>Metro</td>
<td>1.00 (0.93, 1.08)</td>
<td>1.00 (0.98, 1.02)</td>
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<tr>
<td>Urban</td>
<td>1.1* (1.02, 1.19)</td>
<td>1.02* (1.00, 1.04)</td>
</tr>
<tr>
<td>Rural</td>
<td>Reference</td>
<td>Reference</td>
</tr>
</tbody>
</table>

* = p<0.05  
** = p<0.01
Environmental deprivation defined by county-level measures of: income, education, facilities, services, living environment, and crime.

Negative relationship is intensified for African American men

Prostate cancer diagnosis → Post-diagnosis urologist visit

Probability of visit

W

AA