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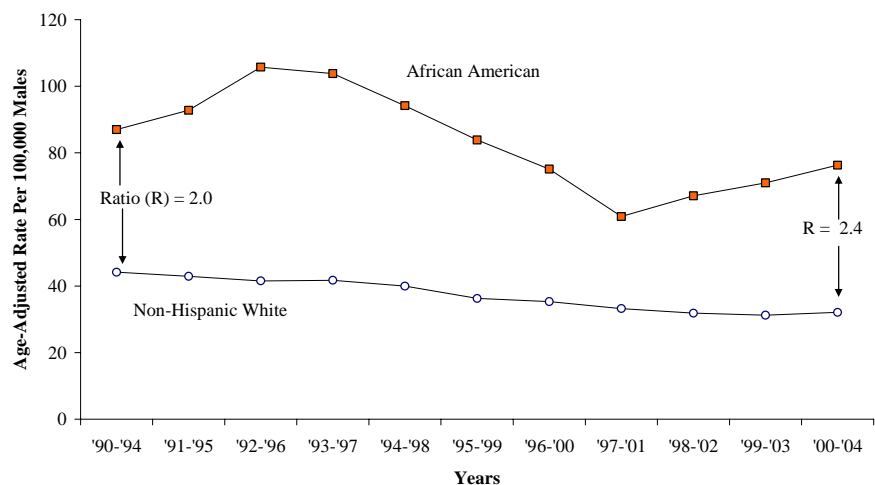
Prostate Cancer Disparities among African American and Non-Hispanic White Men in Multnomah County

Prostate cancer is one of the most commonly diagnosed cancers – and the second leading cause of cancer death – in Oregon men; one in six men will get prostate cancer in his lifetime. And it gets worse: African American men have the world's highest prostate cancer rate – one in four African American men will get the disease in his lifetime – and they die at twice the rate of Whites¹. This racial health disparity* is one of many disproportionately affecting the African American community.

We examined incidence and mortality data for African American and non-Hispanic White men in Multnomah County, with the goal of documenting prostate cancer trends and disparities. Disparities were identified by calculating the African American: White rate ratio; that is, the African American rate was divided by the White rate, and numbers significantly greater than 1 were counted as evidence for a disparity.

Unfortunately, the limited data we had available did not allow for an understanding of the causes of these disparities. However, we also reviewed dozens of research papers examining prostate cancer disparities in an earnest attempt to summarize the current view on the causes. The results of that effort are shared in this fall edition of the Quarterly.

Prostate Cancer Mortality and Rate Ratios By Race
Multnomah County Residents



Graph 1. Prostate Cancer Deaths by Race.
Note: "Ratio" refers to the African American: White Rate Ratio.
All rate ratios are significantly greater than 1, at $p < 0.05$.

Persistent Prostate Cancer Disparities Found Among African American Men

According to the most recent data on new cases of prostate cancer, Multnomah County men had a rate** of 146 per 100,000 in 2000-2002; on average, 373 men are diagnosed with prostate cancer every year in Multnomah County. Examining this data by race, African American men had a 40% higher incidence rate (209 per 100,000) than did Whites (150 per 100,000) in the Portland metropolitan area.

An examination of 1,250 prostate cancer deaths[†] to Multnomah County residents from 1990 to 2004 revealed some interesting findings. First, prostate cancer is clearly a disease of the elderly. Multnomah County men are 80 years old, on average, when they die from prostate cancer, and close to 75% of deaths are to those ages 75 and older (Table 1). Second, non-Hispanic Whites accounted for the vast majority of prostate cancer deaths – 88% – with African Americans making up over 9% of deaths. Finally, prostate cancer deaths declined in Multnomah County in the 15-year period examined. Between 1990 and 2004, the prostate cancer death rate fell

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25%, from 42 to 31 male deaths per 100,000 Multnomah County men.

Examining this data by race, non-Hispanic White prostate cancer mortality rates fell 26% from 1990 to 2004 (from 42 to 31 deaths per 100,000), while African American rates remained roughly the same, at 75 deaths per 100,000. The disparity between African American and non-Hispanic White death rates persisted in the 15-year period. African American prostate cancer mortality rates ranged from 2 to 2½ times the non-Hispanic White rate; significant disparities were found in all years examined (Graph 1).

Further analysis of 15 years of prostate cancer deaths by age group reveals that the racial disparity was greatest for those aged 75-79: African Americans in this age group were three times more likely to die of prostate cancer than non-Hispanic Whites. Significant disparities were found for all age groups examined (Table 2). African Americans also died at a younger age; the average African American man dying of prostate cancer was five years younger than the average non-Hispanic White man (Table 1).

What are the Causes of Prostate Cancer Disparities?

We have shown that African American men in Multnomah County have a 40% higher prostate cancer incidence rate than non-Hispanic Whites, are twice as likely to die from the disease, and African Americans in their later 70's are dying at three times the rate. This leads many to a simple question: why is this happening? As with many other health problems, this turns out to be a difficult question to answer. Health researchers have produced hundreds of studies on prostate cancer disparities trying to find an explanation, and a review of

Table 1. Demographic Characteristics of Prostate Cancer Deaths among Multnomah County Residents: 1999-2004

Demographic	Total	African American	Non-Hispanic White
Avg. age (yr)	79.7	74.8*	80.1
Ages 75 and up (%)	74.9	58.5*	76.2
Avg. education (yr)	12.2	11.1*	12.5
Less than high school educ. (%)	26.7	35.9	25.7
Resided in poorer area [†] (%)	12.8	57.9*	9.5
Married (%)	62.8	51.2	64.0
Contributing causes of death (%)	55.3	56.1	55.2
N	438	41	386

Note: * significant difference at p<0.05. † A poorer area is defined as a census tract with 20% or more of the residents below the federal poverty line (Census 2000 data).

the health literature has found several leading candidates. It appears, however, that the causes of the higher prostate cancer burden in the African American community are still largely unknown. We propose five interrelated explanations for the racial disparity in prostate cancer.

One commonly studied explanation of prostate cancer disparities is differential access to and quality of health care. And indeed, there is evidence supporting this claim. For example,

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African Americans are more likely to present to a doctor with a more advanced stage of prostate cancer than are whites, are significantly less likely to have life-saving treatments performed, and are less likely to undergo screening for prostate cancer. In addition, they are less likely to respond to treatment than their White counterparts¹⁻⁴. Another explanation has to do with the social and economic environment. Several studies have found that the lower socioeconomic status of African Americans (higher poverty and joblessness, lower educational levels, poorer housing) accounts for at least some of the disparities in prostate cancer incidence

and mortality. One large study in 2006, for example, found that the racial disparity in survival among men with prostate cancer disappeared after the researchers factored in education, poverty, and other socioeconomic factors⁵. The third explanation has to do with lifestyle and behavioral factors. For

example, diets high in animal fats have been found to increase the risk of prostate cancer, while tomato products have been shown to reduce a person's prostate cancer risk.

Few studies, however, have examined behavioral factors contributing to prostate cancer by race, and the few that are out there have suggested that this is not a significant cause of prostate cancer disparities⁶. The fourth, and perhaps most controversial explanation, is that there are biological differences that can explain the higher rate of prostate cancer in African Americans. A lot of research has gone into this area. Several studies, for example, have focused on a specific gene that may be contributing to the disparity; but the studies to date have been contradictory and inconclusive⁷.

The fifth possible explanation is the

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least researched: racism. In fact, we could find no prostate cancer studies addressing racism and discrimination as a cause of the higher burden of prostate cancer in African American men. We suspect that this partly stems from the fact that racism is a difficult concept to quantify – the technical term is “operationalize” – in a health study. Racism is not as easy to measure as, say, health care use, or gene length. The most common way in the health literature to quantify racism is through socioeconomic measures. Unfortunately, such measures do not entirely account for racism; for example, the stress of living as an African American in a racist society is not accounted for in socioeconomic measures. Despite the challenges, however, researchers have attempted to measure the health effects of racism. For example, racism has been shown to adversely affect birth outcomes in African American mothers⁸.

Until greater efforts are made to measure the impact of racism on African American health, the full explanation for racial health disparities will most likely remain elusive. In the meantime, researchers and policy makers can begin by acknowledging racism as a potential cause of racial health disparities. Perhaps such a stance will allow us to face honestly the injustices of the past, and to chart a more determined course to eliminate these health inequities for good.

Notes

* Racial health disparities are differences in health outcomes by race. To see a report examining racial health disparities in Multnomah County, see our report at: <http://tinyurl.com/we3w7>

** Rates are age-adjusted to 2000 Standard U.S. Population.

† The following underlying cause of death ICD codes were used: ICD-10: C65. ICD-9: 185.

Table 2. Prostate Cancer Mortality Rates by Age Group among Multnomah County Residents, 1990-2004.

Race	Age Group	No. Deaths	Rate per 100,000	Afr. Amer.:White Rate Ratio
African American	< 69	24	8.1	1.84
	70-74	15	300	1.93
	75-79	29	790	3.09
	80-84	20	1052	2.26
	85+	17	1398	1.71
	Total	105	81.4	2.19
Non-Hispanic White	< 69	153	4.4	--
	70-74	157	155	--
	75-79	219	256	--
	80-84	261	465	--
	85+	331	815	--
	Total	1,121	37.1	--

Note: all rate ratios are significantly greater than 1 at p<0.05.

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