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Prostate Cancer

White Paper

Missouri Department of Health and Senior Services
STATE OF MISSOURI

Report Information

Title: Prostate Cancer White Paper

Description: This white paper provides an overview of the burden of prostate cancer in Missouri and in comparison to the nation, identifies priority populations, discusses prevention and treatment options, and suggests continued monitoring and research.

Audience: This paper is intended for use by the Missouri Cancer Consortium (MCC) members and other partners, state and local policy makers, researchers, local public health agencies, health care clinicians, voluntary organizations and the public.

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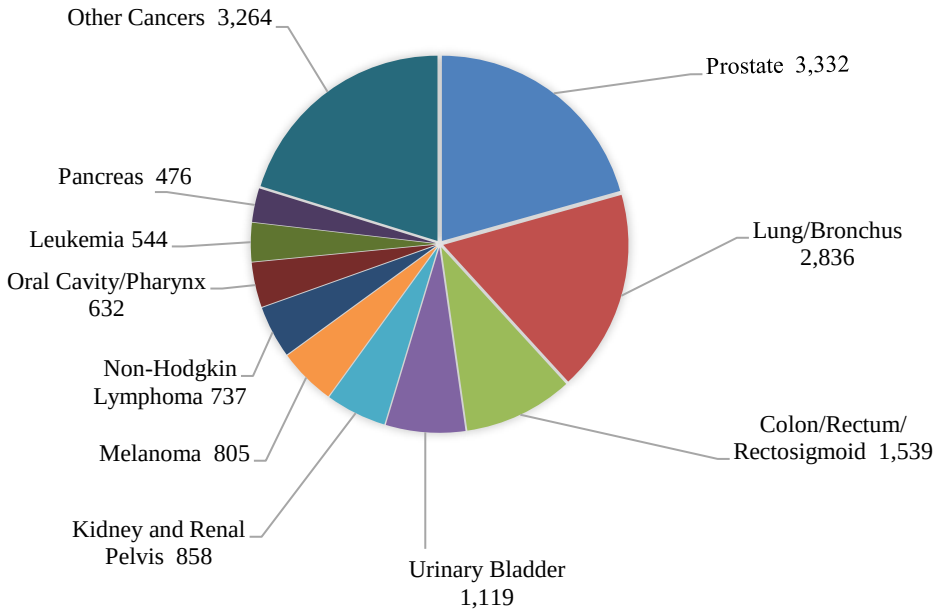
Introduction

The top five health risks cited for men are cardiovascular disease, skin cancer, depression, problem drinking or alcoholism, and diabetes according to this Healthy Living brief.[1] However, prostate cancer is the most common cancer after skin cancer in men and the second most deadly cancer after lung cancer.[2] While prostate cancer is the leading invasive cancer diagnosed among men in Missouri and is the focus of this paper, several other cancers influence the lives of men as well.

Incidence

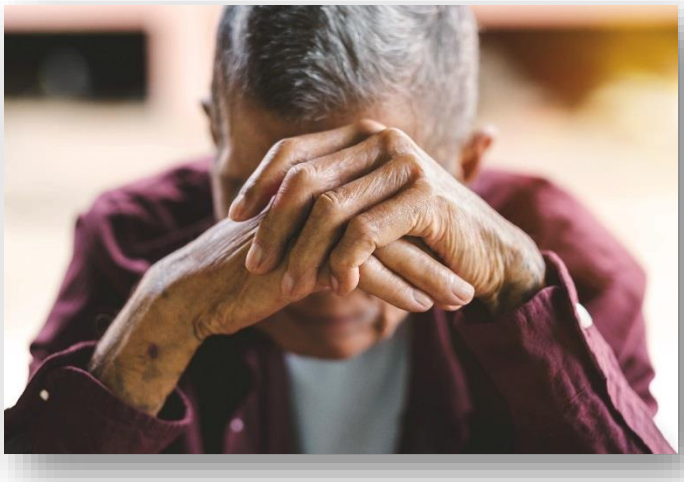
The 10 leading types of new invasive cancers among males in Missouri begin with prostate cancer, followed by lung and bronchus; colorectal (i.e., colon, rectum and rectosigmoid); urinary bladder; kidney and renal pelvis; melanoma of the skin; Non-Hodgkin lymphoma; oral cavity and pharynx; leukemia; and pancreas (Figure 1).[3] In total, there were 16,142 new cases of invasive cancer diagnosed among males in Missouri in 2015.

Figure 1. Ten leading new invasive cancers in males, Missouri, 2015*



*Number of cases; Excludes basal and squamous cell skin cancers and in situ cancer except for urinary bladder.
Source: Missouri Department of Health and Senior Services. Cancer Registry Missouri Information for Community Assessment (MICA). Retrieved July 24, 2019, from https://healthapps.dhss.mo.gov/MoPhims/MICAHome

For the period 2011 to 2015, the age-adjusted incidence rate for prostate cancer was significantly lower among males in Missouri than in the United States (98.0, 95% confidence interval (CI) 96.5 - 99.5 vs 109.0, 95% CI 108.8 - 109.2 per 100,000 population, respectively).[4] However, for the same 5-year time period, the age-adjusted incidence rates of invasive prostate cancer in Missouri increased with age until 75 years. In addition, the rates were significantly higher among males 65 to 74 years of age compared to other age groups, and African-American compared to white males (Table 1).[3] The rate was less than 100 per 100,000 males for the age groups ≤ 54 years.



Prostate cancer incidence rates highest among seniors (age 65 to 74) and African-American males

Table 1. Invasive prostate cancer incidence by age and race, Missouri, 2011-2015

Characteristic	Count	Rate*	95% Confidence Interval
Age			
≤ 34	--	--	--
35 – 44	71	3.90	3.05 – 4.92
45 – 54	1,619	78.32	74.51 – 82.14
55 – 64	5,906	314.99	306.96 – 323.03
65 – 74	6,618	561.58	548.05 – 575.11
75 – 84	2,433	407.72	391.52 – 423.92
≥ 85	624	309.55	285.27 – 333.84
Race			
White	14,648	93.04	91.54 – 94.55
African American	2,327	157.25	152.78 – 165.72
Others	298	--	--

*Age: crude and Race: age-adjusted, rates per 100,000 males, -- Suppressed, < 6 cases or not calculated

Source: Missouri Department of Health and Senior Services. Cancer Registry Missouri Information for Community Assessment. Retrieved July 24, 2019, from https://healthapps.dhss.mo.gov/MoPhims/MICAHome

The majority of prostate cancers (75.5%) were diagnosed at the localized stage, followed by regional (14.6%) and distant (6.7%) stages, 2011-2015 (Table 2).[3] A small proportion had an unknown (3.3%) or an in situ (0.02) stage at diagnosis.

Table 2. Prostate cancer incidence by stage at diagnosis, Missouri, 2011-2015

Stage of diagnosis		*Count*	*Percent**
	In situ	**	0.02
Invasive	*Localized*	13,044	75.5
	Regional	2,514	14.6
	Distant	1,149	6.7
	Unknown	566	3.3

*Invasive cancers may not sum to 100 due to rounding, **Suppressed < 6 cases.
Source: Missouri Department of Health and Senior Services. Cancer Registry Missouri Information for Community Assessment. Retrieved July 24, 2019, from https://healthapps.dhss.mo.gov/MoPhims/MICAHome

Survival Rates

Survival rates provide an estimate of what percentage of people are still alive a certain amount of time (usually 5 years) after they were diagnosed. The rates cannot tell how long a person will live, but they may help provide a better understanding of how likely treatment will be successful.[5]

5-year Relative Survival Rate

A relative survival rate compares men diagnosed with a specific cancer to men in the general population who are the same age and race, but who have not been diagnosed with cancer. For example, if the 5-year relative survival rate for a specific stage of prostate cancer is 90 percent, it means that men who have that cancer are on average about 90% as likely as men who do not have that cancer to live for at least 5 years after being diagnosed.[6] The Surveillance, Epidemiology, and End Results (SEER) database tracks 5-year relative survival rates for prostate cancer in the United States, based on how far the cancer has spread. For localized and regional prostate cancers, the 5-year relative survival rate is nearly 100 percent (2009-2015). However, if the cancer has spread to distant parts of the body, the relative 5-year survival declines to 30.5 percent. Overall, for all stages combined, the relative 5-year survival of prostate cancer is 98.0 percent.

Prevalence

In 2016, there were an estimated 3.1 million men living with prostate cancer in the United States.[6] In Missouri, the prevalence of prostate cancer was approximately 2.3 percent or more than 52,000 men in 2016.[7]

Vital Statistics - Hospitalizations

The age-adjusted inpatient hospitalization rate in Missouri for prostate cancer was 3.95 per 100,000 population (2011-2015).[8] The charges for these hospital stays totaled $225.5 million. Almost one-half of these charges were submitted to commercial insurance (48.6%), followed by Medicare (44.3%) and Medicaid (2.6%) with the remaining 4.5% were to other government sources, self-pay, unknown, or other.

Vital Statistics - Mortality

The age-adjusted cancer mortality rates among males for 2011 to 2015 was significantly lower in Missouri than in the U.S. (18.0, 95% CI 17.3-18.7 vs 19.5, 95% CI 19.4-19.6 per 100,000 males, respectively).[4] However, the age-adjusted prostate cancer mortality rates were significantly higher (more than double) among African-American than white males both in Missouri and the U.S. (Table 3). The age-adjusted prostate cancer mortality rate was highest among the 65 and older age group in Missouri (116.60 per 100,000 males) and was low among men aged 45 – 64 years at 7.26 per 100,000 males (2011-2015). There were fewer than six deaths from prostate cancer among men younger than 45 years of age in Missouri during this 5-year period.

Table 3. Age-adjusted prostate cancer mortality rates by race, Missouri and U.S., 2011 - 2015

Race	Missouri		U.S.	
	Rate*	95% CI	Rate*	95% CI
White	16.7	16.0 - 17.4	18.2	18.1 - 8.3
Black or African-American	38.4	34.4 - 42.6	39.9	39.4 - 40.5

*Age-adjusted rate per 100,000 males using 2000 standard population.
Source: National Cancer Institute. State Cancer Profiles https://statecancerprofiles.cancer.gov/index.html

Healthy People

Healthy People 2020 is a set of goals for the nation set forth by the U.S. Department of Health and Human Services. Missouri, at 16.8 per 100,000 males in 2017, has met the Healthy People 2020 target to reduce the mortality of prostate cancer to 21.8 deaths per 100,000 males.[9] In addition, the Healthy People 2020 has a goal of increasing the proportion of men aged 40 and older who have discussed with their health care provider the advantages and disadvantages of the prostate-specific antigen (PSA) test to screen for prostate cancer. In 2016, 57.7 percent of Missouri men aged 40 and older affirmed that a doctor, nurse, or other health professional had ever talked with them about the advantages of the PSA test, but fewer had received information about the disadvantages of the test (21.1%).[10]

Prostate Cancer Screening and Early Detection

To screen or not to screen

Prostate-specific antigen is a protein produced by the prostate gland. Since 1994, the Federal Drug Administration approved the use of the PSA test in conjunction with a digital rectal exam (DRE) to test asymptomatic men for prostate cancer.[11] The PSA test measures the level of PSA in a man's blood and is usually reported as nanograms of PSA per milliliter (ng/ml) of blood. PSA is often elevated in men with prostate cancer. PSA levels may fluctuate, but most providers consider a PSA level above 4.0 ng/ml elevated and often recommend further testing or biopsy. An elevated PSA level can lead to a cancer diagnosis and treatment even before the onset of symptoms. However, other causes can also create a high PSA level, which may lead to unnecessary further testing.[9,12] These noncancerous causes may include benign prostatic hyperplasia (BPH), prostatitis or inflammation of the prostate, medical procedures, urinary tract infection, vigorous exercise, activities that force the prostate to contract such as sex and ejaculation, activities that put pressure on the prostate such as riding a bike, and age, and may lead to a false-positive diagnosis.[9,10,13] So, as more information on false positive results for benign causes as well as the documented side effects of treatments (e.g., urinary incontinence or urgency, erectile dysfunction, hot flashes, weight gain, hair loss, diarrhea, etc.), a debate has ensued and continues regarding population-based screening and the risks and benefits of screening, and medical organizations differ on their recommendations.

The American Cancer Society recommends that asymptomatic men who have at least a 10-year life expectancy have an opportunity to make an informed decision with their health care provider about screening for prostate cancer after they receive information about the uncertainties, risks, and potential benefits associated with prostate cancer screening.[14] Because prostate cancer often grows slowly, men without symptoms of prostate cancer who do not have a 10-year life expectancy are not likely to benefit from screening.

The American Urological Association recommends against performing all routine PSA-based screening for prostate cancer, as well as all screening in men older than 70, men younger than 40 and average-risk men ages 40-54.[15] The current United States Preventive Service Task Force (USPSTF) recommends that the decision to undergo periodic screening using PSA for men aged 55 to 69 years be an individual one.[16] Before deciding whether to be screened, men should have an opportunity to discuss the potential benefits and harms of screening with their clinician and to incorporate their values and preferences in the decision. The USPSTF recognizes that screening offers a small potential benefit of reducing the chance of death from prostate cancer in some men. In this age group, screening has a C grade, which recommends selectively offering or providing the service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small. In men 70 years and older, the USPSTF recommends against PSA-based screening for prostate cancer and has a grade

of D which indicates there is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.

The American College of Physicians (ACP) developed two guidance statements for clinicians.[17] ACP believes that it is more valuable to provide clinicians with a rigorous review of available guidelines rather than develop a new guideline on the same topic when several guidelines are available on a topic or when existing guidelines conflict. The main goal of the guidance statements was to help guide internists and other clinicians in making decisions about screening for prostate cancer. The target patient population for this guidance statement is all adult men.

Guidance Statement 1: ACP recommends that clinicians inform men between the age of 50 and 69 years about the limited potential benefits and substantial harms of screening for prostate cancer. ACP recommends that clinicians base the decision to screen for prostate cancer using the PSA test on the risk for prostate cancer, a discussion of the benefits and harms of screening, the patient's general health and life expectancy, and patient preferences. ACP recommends that clinicians should not screen for prostate cancer using the PSA test in patients who do not express a clear preference for screening.

Guidance Statement 2: ACP recommends that clinicians should not screen for prostate cancer using the PSA test in average-risk men younger than age 50, men over the age of 69 years, or men with a life expectancy of less than 10 to 15 years.

Overall health status, and not age alone, is important when making decisions about screening. Even after a decision about testing has been made, the discussion about the pros and cons of testing should be repeated as new information about the benefits and risks of testing becomes available. Further discussions are also needed to take into account changes in a man's health, values and preferences.[18] In 2016, 43.2 percent (95% CI 40.1% - 46.3%) of men age 40 and older in Missouri indicated that they had a PSA test within the past two years, a significant decline from 50.2 percent (95% CI 47.0% - 53.4%) in 2012.[19] A large study conducted in Sweden recently reported that in a group of men offered organized PSA screening (i.e., biennial PSA testing up to the median age of 69 years) had a significant reduction in prostate cancer mortality compared to a control group (i.e., not offered screening or had only opportunistic screenings).[20]

Risk Factors

"A risk factor is anything that increases a person's chance of developing cancer. Although risk factors often influence the chance to develop cancer, most do not directly or by themselves cause cancer".[21] Some individuals with several known risk factors never develop cancer, while others with no known risk factors do. Having one or more of the risk factors is not a guarantee that a

man will get prostate cancer, but it does mean the chances of developing prostate cancer are higher.[22] Knowing one's risk factors and discussing them with a health care provider may help a person make more informed lifestyle and health care choices. The main risk factors for prostate cancer include age, race, lifestyle, family history, geographic location, and consuming a diet low in fruits and vegetables, and rich in red meats and dairy.[23,24,25] According to the American Cancer Society, the following risk factors have less clear effects on prostate cancer risk: the role of calcium as part of an average diet, obesity, smoking, chemical exposures, inflammation of the prostate, sexually transmitted infections and having had a vasectomy.[26]

Prevention

Researchers are trying to determine the causes of prostate cancer and whether it can be prevented. While there is no absolute prostate cancer prevention intervention, there are some things that can be done to lower the risk of prostate cancer, such as maintaining a healthy body weight, being physical active, reducing dairy products, and eating a wide variety of fruits and vegetables each day.[27,28] Chan et al., concluded that potential prostate cancer protective dietary elements include tomatoes/lycopene, other carotenoids, cruciferous vegetables, vitamin E, selenium, fish/marine omega-3 fatty acids, soy, isoflavones, and polyphenols.[29] However, they caution that until further clinical trial data are available on specific supplements and prostate cancer prevention, it would be prudent to emphasize a diet consisting of a wide variety of plant-based foods and fish; this is similar to what is recommended (and what is more well established)

for the primary prevention of heart disease. A recent study by Harvard Medical School et al., found that moderate alcohol consumption, particularly red wine, might lower the risk of death from prostate cancer.[30] Health care providers often recommend that men with an average risk of prostate cancer make choices that benefit their overall health if they are interested in prostate cancer prevention.

Symptoms

Early prostate cancer usually has no symptoms. More advance prostate cancer sometimes has symptoms such as problems urinating, including a slow or weak urinary stream or frequent urination, particularly at night; hematuria (blood in the urine); blood in seminal fluid, new onset of erectile dysfunction; and pain or burning during urination.[24,31] Other noncancerous conditions of the prostate such as an enlarged prostate (i.e., benign prostatic hypertrophy) or infection can cause similar symptoms. If the cancer has spread beyond the prostate gland, symptoms may include pain in the back, hips, thighs, shoulders or other bones; swelling in the legs or feet, unexplained weight loss, fatigue, or change in bowel habits. If any of these symptoms are experienced, it is important to see a health care provider to determine the cause.

If cancer is detected, a Gleason Score is often provided.[32] The Gleason Score is the grading system used to determine the aggressiveness of prostate cancer and is often used to choose appropriate treatment options. The Gleason Score describes how much the cancer from a biopsy looks like healthy tissue (lower score) or abnormal tissue (higher score). Prostate tumors are often made up of cancerous cells that have different grades, two grades are assigned for each patient. A primary grade is given to describe the cells that make up the largest area of the tumor and a secondary grade is given to describe the cells of the next largest area, combined these two scores make up the total Gleason core. Gleason Scores typically range from 6-10 (or 1-5 for the recent grading system). The higher the Gleason Score, the more likely that the cancer will grow and spread quickly. The interpretation is generally:

- Scores of 6 or less describe cancer cells that look similar to normal cells and suggest that the cancer is likely to grow slowly.
- A score of 7 suggests and intermediate risk for aggressive cancer. Scoring a 7 means that the primary score (largest section of the tumor) scored a 3 or 4. Tumors with a primary score of 3 and a secondary score of 4 have a fairly good outlook, whereas cancers with a

primary Gleason Score of 4 and a secondary score of 3, are more likely to grow and spread.

- Scores of 8 or higher describe cancers that are likely to spread more rapidly, these cancers are often referred to as poorly differentiated or high grade.

Treatment

Different types of treatment are available for prostate cancer.[33,34,35] Patients need to work with their doctors to design a treatment plan that gives them the greatest chance of a longer life while managing side effects and preserving prostate function. Patients are advised to try to learn as much as they can about all the prostate cancer treatment options before visiting with different specialists because this may help make their discussions with their doctors more productive. Several factors such as the stage and grade of the cancer, the patient's age, whether the patient has any other serious health problems, and emotional factors such as how they feel about the treatment, anticipated recovery time, risks of short– and long-term side effects may guide the decision on what type of treatment they decided to use.

Some of the common treatments for prostate cancer are active surveillance, watchful waiting, surgery (radical prostatectomy), radiation and hormonal therapy.[36] Other therapies used in the treatment of prostate cancer include cryotherapy, chemotherapy, biological therapy and high-intensity focused ultrasound therapy. Observation is increasingly being used in younger men with prostate cancer.[37] A growing acceptance of observation is also being suggested for men aged 66 to 69 years with low-risk disease and no comorbidities.

A recent study led by Duke Cancer Institute suggest that African-American men with advanced prostate cancer might be more responsive than white men to an anti-androgen drug and steroids.[38] George et al, observed that African-American men with metastatic castration-resistant prostate cancer (mCRPC) experience a greater PSA response to treatment with abiraterone and prednisone in comparison to white men.[39]

Which Treatment Is Right for Me?

Choosing the right treatment for anyone may be hard. It is advisable for men to discuss with their cancer doctor about the treatment options available for their type and stage of cancer. The health care provider can explain the risks and benefits of each treatment and their side effects. Sometimes people get an opinion from more than one cancer doctor. Getting a second opinion may help a person choose the treatment that is right for them.

Survivorship

The increasing number of prostate cancer survivors in the U.S. is raising concerns that some patients may not be receiving the best care once they are no longer seeing their prostate cancer specialist. The American Cancer Society (ACS) Prostate Cancer Survivorship Care Guidelines address health promotion, surveillance for prostate cancer recurrence, screening for second primary cancers, physical and psychosocial long-term and late effects assessment and management, care coordination, and implications for clinical practice.[40] The guidelines are intended to support primary care clinicians caring for men faced with prostate cancer and its sequelae. The dissemination and implementation of these guidelines into clinical practice will be a step forward to improve the delivery of prostate cancer survivorship care.

The American Society of Clinical Oncology (ASCO) has endorsed these guidelines.[41] ASCO endorsed the guidelines for the following reasons: they addressed psychological issues and coordination of care between the survivor's primary care physician and prostate cancer specialist; recommendations in the guidelines really serve as a platform and offer primary care doctors a framework to provide good care for survivors; will help improve the transition back to primary care and help improve overall care; calls for counselling survivors to achieve and maintain a healthy weight through a healthful diet and increased physical activity; and states that prostate cancer survivors should be counseled to avoid or limit alcohol consumption to no more than two drinks per day. The guidelines call for discussing bowel and rectal bleeding with survivors and recommend prescribing stool softeners, topical steroids or an anti-inflammatory to men experiencing rectal bleeding with a negative colorectal cancer screening result.

However, ASCO added two qualifying statements to the ACS prostate cancer survivorship guidelines: colorectal cancer should be ruled out in survivors experiencing rectal bleeding after radiation therapy and suggested measuring PSA levels every six to 12 months for the first five years and re-checking annually thereafter. ASCO suggested that specialists might recommend more frequent PSA monitoring during early survivorship, particularly in men with higher risk of prostate cancer recurrence and men who may be candidates for salvage therapy (i.e., treatment that is given after the cancer has not responded to preferred therapies).

According to the findings of phase 3 PROSPECT trial presented at the 2018 American Society of Clinical Oncology Annual Meeting in Chicago Illinois, Prostvac-V/F, an investigational prostate cancer vaccine regimen, does not improve overall survival among men with asymptomatic or minimally symptomatic metastatic castration-resistant prostate cancer (mCRPC).[42] However, other data presented at this same meeting indicated that imaging with ^{68}Ga-PSMA11 PET/CT is highly accurate in localizing recurrent prostate cancer.[43] Salvage therapy guided by PET/CT resulted in high biochemical response rates (PSA undetectable). This could be a good tool to use with prostate cancer survivors.

Conclusion

Prostate cancer is the leading invasive cancer among men in Missouri. The incidence and mortality rates are significantly higher among African-American men. Debate continues regarding the risks and benefits of prostate cancer screening. Although risk factors such as age, race, and family history can not be controlled, there are some things that can be done to lower the risk of prostate cancer such as maintaining a healthy body weight, being physical active, and consuming a high plant-based and fish diet. There is no absolute prostate cancer prevention strategy, but evidence suggests that diet plays a key role. As such, doctors recommend that men with an average risk of prostate cancer make choices that benefit their overall health if they are interested in prostate cancer prevention. Some common treatments for prostate cancer are active surveillance, watchful waiting, surgery, radiation and hormone therapy. Other therapies include cryotherapy, chemotherapy, biological therapy and high-intensity focused ultrasound therapy.

African-American men have high incidence and mortality rates from prostate cancer and represent a special population for this disease. Studies suggest that African-American men might be more responsive than white men to an anti-androgen drug and steroids and experience a greater PSA response to treatment with abiraterone and prednisone. In addition, a literature review was conducted to assess interventions for delivering health Information to African-American men regarding prostate cancer (see Attachment). Prostate cancer survivorship care guidelines developed by ACS, address health promotion, surveillance for prostate cancer recurrence, screening for second primary cancers, physical and psychosocial long-term and late effects assessment and management, care coordination, and implications for clinical practice. ASCO endorsed the guidelines with qualifying statements.

Recommendations

Continue research to:

- improve the evidence on prostate cancer prevention
- determine the most effective strategies, tests and screening intervals to detect cancer for asymptomatic individuals
- document findings, adverse events, and health outcomes from current and new therapies

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Health Information Interventions for African-American Men

Introduction

The purpose of this summary is to cite the most effective methods African-American men 40 years and older learn about health related information from the scientific literature. One of several factors implicated in the poor health status of African-American men is lack of health information.[1] Information seeking involves the act of gathering information to clarify or confirm knowledge about a particular topic. When patients are well informed, they are more apt to maintain a sense of control regarding their illness than are individuals with limited information and they are better able to cope with the ambiguity of illness outcomes and treatment consequences.[1] In addition, well-informed patients may engage in treatment planning and may comply with therapeutic regimens more readily than those who are ill informed and this can ultimately influence recovery from an illness.[1] Correspondingly, there is documented evidence that having inadequate health information can have detrimental health consequences.[1] In the case of African-American men, they have the highest cancer incidence and mortality rates for all sites combined and for prostate, lung, colorectal and other specific cancers.[2] In addition to having inadequate health information they also need culturally appropriate health information.

In order to accommodate the information-seeking needs and preferences of individuals in any population, it is important to understand the issues involved. Situational circumstances and sense-making needs, or the process through which people work to understand issues and events, which sometimes can be quite complex, can be based on rational or emotional processing.[1] However, given the health status of African-American men and their health-information needs, concerns and behaviors are of particular concern.[1]

Health Education and Decision-Making

It is very important to provide information to people in the way they most desire to receive it. It is critical to identify factors that influence what information men choose to believe and follow or decided to ignore.[3] The need for culturally appropriate health promotion interventions and strategies for providing health information cannot be overemphasized.[4] According to Randolph et al, (2017) providing culturally, linguistically, and socially appropriate health education is a necessary part of delivering high quality, patient-centered care and outcomes.[5] “Due to [the]

controversy regarding prostate cancer screening, it is imperative that African-American men make informed decisions".[6] Understanding African-American men's preferences for receiving health-related information and for prostate cancer screening helps to clarify the issues that health professionals need to consider when attempting to assist African-American men in making a prostate cancer screening decision.[7]

Informed decision-making is defined as the process that patients go through to make a decision about engaging in a medical or health-related procedure or activity, considering the benefits, harms, risks, health improvements, the match between these properties and personal values and preferences, and understanding the uncertainty and limitations of the procedures.[4]

Cancer communication interventions using community-based research that address cultural beliefs, seem to provide an effective approach to increasing informed decision making for prostate cancer screening.[4] These types of interventions are particularly important for African-American men and to whom informed decision making regarding screening plays a significant role, along with factors such as access to adequate medical care and engaging in preventive behaviors in their lifestyle.[4] Among studies involved with decision-making for prostate cancer screening among African-American men, several cultural factors were identified. These factors included their knowledge of prostate cancer and clinical services, prostate cancer and screening as a threat to manhood, self-awareness of health and well-being, value of screening, convenience of prostate specific antigen screening, misunderstanding of the screening controversy, distrust of the medical community and shared decision-making.[6] Timothy et al. 2018, observed that African-American men's belief surrounding prostate cancer screening differ from non-African-American men and advised that these beliefs should be considered when developing culturally appropriate education, screening and treatment strategies for this group.[8]

Shared decision-making, recommended as one method to assist men in making an informed decision about prostate cancer screening was evaluated among African-American men. It was observed that a higher level of education and older age were associated with preferring shared decision-making,[6] while men with greater prostate cancer screening knowledge were more likely to prefer making the decision independently.[7]

Reaching African-American Men

Faith-based institutions such as churches continue to be the best places for reaching African Americans, as members look for leadership in areas beyond spirituality and religion. Several church-based prostate cancer screening informed decision-making programs showed some modest short-term gains in knowledge. However, knowledge among African-American men was still low, as was screening.[4] "None of these church-based interventions used a spiritually based approach. Rather, they have used the church solely as a venue. This approach may underutilize the potential of the church for effective health education."[4]

Cancer communication interventions that integrate spiritually based content, in which relevant spiritual themes and scriptures are identified by community members and used to frame the health message, may have increased cultural appropriateness."[4] Such interventions work within an existing cultural framework to increase cultural relevance, and; therefore, effectiveness of the health communications intervention. Spiritually based approaches may be more effective to them than their nonspiritual counterparts, based on the notion that they are more personally relevant to the receiver.[4] One study developed and pilot tested the acceptability of spiritually based prostate cancer screening informed decision-making interventions for African-American men who attended church.[4] The result indicated that religious involvement, including beliefs and church support were important for screening as well as faith and church leadership and the belief about God's will for health outcomes.[4]

Preferred Methods of Delivery for Health Education

Although much research on African American health-information seeking has addressed the population as a whole, little is revealed about the health-information seeking activity and needs of African-American men.[1] Health information typically requested by African-American men, included the signs and symptoms of illness, the appropriated tests and screenings and the timing of these, as well as whom to see, the location of facilities and resources.[1] Whereas an increasing proportion of the population looks to the internet for health information, African Americans continue to prefer print media (magazines, pamphlets, and books), television, and family and friends as sources of health information.[1] African-American men may also seek information from members of their social network[1] and their wives.[10]

Oliver et al. 2018, observed a need for prostate cancer and screening educational interventions and dialogue to include males and their health care advocates usually women, spouses or significant others.[9] Given that African-American women want and are seeking health information on prostate cancer screening for their African-American partners, program planners should include women in educational interventions on prostate cancer screening.[10] African-American women may be more likely to promote screening to their male partners as opposed to promoting informed decision-making in the absence of appropriate information about the benefits and risks of screening.[10] It appears that although there is good access to technology among African-American men, they may prefer interventions with face-to-face contact.[5] When working with African-American men, health care providers and others addressing health issues should consider adding personal interactions to interventions and communications that are primarily delivered through technology.[5] Randolph et al, 2017 observed that using cell phones to communicate health information and implement health promotion interventions could be useful for African Americans.[5] Although African-American men received health information from a variety of sources, including medical professionals, media, and members of their social networks, which raised their awareness of health issues, trust in the source of the information influenced how it was perceived.[6] Family members were the most trusted source of health information.[3] Health problems and social support increased men's motivation to use health information in order to improve their health and healthy behaviors.[3]

Some authors attributed not having trouble recruiting African-American men into their research study on prostate cancer screening to culturally attractive Afrocentric materials and a personalized ethnic approach.[11] Providing free screening has been shown to boost prostate cancer screening among African-American men.[11] No matter what method was used to try to increase the number of African-American men being screened for prostate cancer (video tape, printed materials or both), collaborative efforts with members of the community in developing the educational tools was the most valuable aspect of the process.[11] They need health information that discussed access issues. Would like information to cover health-behavior barriers such as costs, lack of medical insurance and poverty. Health materials that recommend seeking a doctor's care or screening procedures should indicate resources for those who lack insurance or the ability to pay for the services.[1]

Barriers To Seeking Health Information

Community norms related to male roles and behaviors influenced male behavior on health behavior and information seeking.[1] Community norms suggest that men do not worry about their health. They are strong and can endure pain and do not "whine and/or cry". Illness is not an option for a man, particularly in youth and early adulthood, not going to the doctor makes you a stronger man. African-American men perceived some screening tests and examinations such as digital rectal examinations, sigmoidoscopy and colonoscopy as violating their manhood. The desire to meet these social standards reportedly led them to delay reports of pain and symptoms.[1]

Lack of education, limited employment and low income restricted African-American men to communities with few resources – it was noted that health care facilities and providers likely to promote health education and provide health information were not present in their communities. They need health information that discussed access issues. The most frequent concern raised was that information was not provided that explained how to improve African-American men's health. They wanted explanations and suggestions for actions.[1] "They are unsure of whether physicians would provide them with the most important and relevant information." It has been cited that African-American men feel "Sometimes there is information that is kept from you as a Black man."[1]

Mistrust of health information available, care providers who demonstrate dismissive attitudes and a lack of respect toward them, and when the health care provider is not the same race – African-American men get the feeling that "they are not receiving the same services as a white counterpart."[1] Although African Americans may also seek information from members of their social network, a belief that discussing serious issues related to health and disease would be burdensome to family members and friends can contribute to an inhibition of health-information seeking and may be particularly relevant to African-American men conditioned to present as physically and emotionally strong.[1] African-American men may not always feel welcome in certain venues: hospitals, community clinics, health fairs where health information is available[1] In addition, barriers to screening included mistrust of the medical community [6, 11] and negative attitudes toward particular screening modalities.[4]

Conclusion

African-American men 40 years and older would prefer to learn about health-related information when information is spiritually based by putting health in a spiritual context. When developing tools to provide health information to African-American men, there is a need to collaborate with members of the community and take into consideration cultural factors, beliefs, and a personalized ethnic approach. They prefer print media and television, Afrocentric materials, family and friends as sources of health information. They would appreciate information that explain how to improve African-American men's health and would prefer educational interventions and dialogue to include their health care advocates usually their spouses or significant others. Integrating a face-to-face contact in any health-related information is preferred. Trusting the source of information influences how it is perceived, received, and acted upon.

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