

Prostate Cancer Control Recommendations for Primary and Secondary Prevention

Goals, Progress Markers, Rationale, Objectives, Strategy Options

Primary and Secondary Prevention Goal

Increase, by 2010, awareness of prostate cancer risk factors as well as the benefits and risks of prostate cancer screening among primary care physicians, high-risk men, and the general public.

Progress Markers

The Michigan Cancer Consortium (MCC) will know if progress is made toward increasing awareness of prostate cancer risk factors and the benefits and risks of screening among primary care physicians, high risk men, and the general public by:

- Repeating the 1995 randomized Prostate Cancer Knowledge, Attitudes and Practices survey of physicians
- Conducting chart reviews among Michigan Health Plans to assess documentation of counseling about prostate cancer
- Repeating the 2001-02 Special Cancer Behavioral Risk Factor Survey to determine changes in reported counseling from primary care providers about prostate cancer testing risks and benefits, and reported receipt of a PSA test among men in both high risk and average risk populations
- Conducting audits of health plan data, in conjunction with HEDIS analysis, to obtain baseline information about utilization of PSA testing by primary care physicians.

Why This Priority Is Important

The high incidence of prostate cancer, and its excessive burden among African American men, makes it an important target for cancer control. Baseline data gathered in 1995 along with the advice of consumer and professional groups led the MCC to develop *Recommendations for Prostate Cancer Screening, 1997*. Subsequently two objectives were proposed to increase knowledge among primary care physicians, and among the public and high-risk populations. This objective was not the chosen Consortium priority in 1998, but even so, several initiatives were undertaken to increase knowledge among primary care physicians, the public, and high-risk men. It was expected that the increase in knowledge would result in careful, informed decision-making about whether or not to participate in screening. It was also presumed that physicians would be aware of the excessive burden on African American men and more likely to counsel them about their risk and the issues about screening and its sequelae.

Summary of Science and Issues Related to Prevention

Risk assessment: Individualized risk assessment based on risk factors and risk reduction factors should inform the decision whether or not to get screened for prostate cancer.

Major risk factors are increasing age, African ancestry, and positive family history.⁴ For more complete information see Appendix A. Chemoprevention with finasteride has been shown to decrease the overall risk of prostate cancer, but it increases the risk of aggressive disease slightly.⁵ Epidemiological studies have suggested antioxidants (such as lycopene and Vitamin E) may be effective in reducing the risk of prostate cancer; clinical trials are underway.

Knowledge among primary care providers: Professional and scientific groups still differ on PSA screening recommendations. The American Urological Association and the American Cancer Society advocate offering screening annually beginning at age 50. The National Cancer Institute and the U.S. Preventive Services Task Force do not recommend PSA screening. The American College of Physicians and the American Academy of Family Physicians, both representing primary care providers, advocate a shared decision-making model, in which the patient/significant other decide along with the health care provider whether or not to be screened. Most groups that recommend screening suggest that screening begin at age 50 with both PSA and DRE, with age of screening onset lowered to age 40-45 for high-risk populations, particularly African Americans. The MCC Advisory Committee on Prostate Cancer recommends considering screening in high-risk populations at age 45. A key difference among those supporting screening is that some groups unequivocally advise screening, while others are more cautious; indicating that conclusive data demonstrating efficacy (e.g., a decrease in mortality rate attributable to screening) is still pending.

Testing for Prostate Cancer:

Evidence is weak for the use of DRE in screening for prostate cancer; therefore, the following issues pertain to the use of PSA as a screening test.

- PSA is a good screening test.⁶ Sensitivity and specificity are high, and positive predictive values are 30% for Caucasians and 45% for African Americans.
- Reliability of PSA suggests a need for caution. For PSAs greater than 4, between 15% and 30% will test normal (under 4) on repeat sampling.
- Significant percentages of men with PSAs below the normal cutoff of 4 have prostate cancer. For example, 5% of men with PSAs under 2 have prostate cancer.⁷
- PSA velocity may predict the aggressiveness of the disease. A recent study⁸ showed that men with a rapidly rising PSAs prior to prostatectomy were found to have more aggressive disease relative to those men showing a gradual rise of pre-surgical PSA levels.

⁴ Klein, E. (2005). Can Prostate Cancer Be Prevented? *Nat Clin Pract Urol*, 5. Retrieved from www.medscape.com/viewarticle/498004.

⁵ Thompson, I.M., Goodman, P.J., Tangen, C.M., et al. (2003). The influence of finasteride on the development of prostate cancer. *NEJM*, 349(3), 215-224.

⁶ Barry, M. (2001). Prostate-Specific-Antigen testing for early diagnosis of prostate cancer. *NEJM* 344 (18). Retrieved December 22, 2004 from www.nejm.org.

⁷ U.S. Preventive Services Task Force. (2002). Screening for prostate cancer: recommendation and rationale. *Annals of Internal Medicine*, 137(11). Retrieved from www.annals.org.

⁸ D'Amico, A.V., Chen, M-H., Roehl, K.A., & Catalona, W.J. (2004) Preoperative PSA velocity and the risk of death from prostate cancer after radical prostatectomy. *N Engl J Med*, (351), 125-135.

- A number of biomarkers that would distinguish indolent from aggressive prostate cancer are being investigated.⁹
- Lead time bias due to PSA screening is estimated to be from 4 to more than 15 years. This range makes it difficult to develop predictive models on the efficacy of screening.
- Use of descriptive, epidemiologic data to prove or disprove screening efficacy using PSA is difficult. This is underscored by a study of two geographic areas showing that although the areas had widely different rates of PSA screening, both showed equal trends of decreased mortality after the onset of PSA screening.¹⁰
- The gold standard for screening efficacy is whether or not mortality rates are positively impacted. These data cannot be derived without prospective randomized trials. The results of these trials, such as the PLCO trial in the U.S., are not due for another six to ten years. Some investigators fear that contamination of the control group may invalidate the results of the PLCO trial and possibly other trials.

The 2005 MCC Advisory Committee on Prostate Cancer (ACPC) concluded that screening issues need to be addressed and that there should be clear guidance for physicians and men in Michigan. The group felt the committee must advocate for patients using the preponderance of evidence and their collective judgment about who should be screened for prostate cancer. Biologic differences exist and need to be addressed. Informed and shared decision making with patients contemplating prostate cancer screening is crucial, but the ACPC acknowledged that time and knowledge continue to be barriers to shared decision making about screening and treatment decisions for primary care providers. They recommended that primary care physicians should continue to be targeted with education and tools related to prostate cancer screening. To that end, the 1997 Prostate Cancer Screening Recommendations were revised. See Appendix A for the MCC Prostate Cancer Early Detection Recommendations, 2005.

It is still unclear if primary care physicians understand prostate cancer risk factors or regularly counsel men about screening. Results of the 2001-2002 Special Cancer Behavioral Risk Factor Survey indicate that over half of Michigan men ages 50 and older in all population groups who had prostate cancer screening tests reported that their doctor discussed the advantages and disadvantages of PSA testing. African Americans (58.4%) were least likely to report that discussion had taken place and Arab Americans most likely (85.8%)¹¹. Men aged 50-64 were more likely to have had that discussion than were men 65 and older. However, while in general, more than half of men surveyed reported having had a PSA test, there were differences by population group and by age. Only slightly more than 40% of African American men ages 50-64 said they had been screened with PSA. The Advisory Committee recommends measuring the degree to which physicians understand prostate cancer risk factors and screening, how frequently they document discussion about screening among male patients, and the degree to which screening is provided by primary care physicians.

⁹ Eisenberger, M., Partin, A. (2004). Progress toward identifying aggressive prostate cancer. *NEJM*, 351(2). Retrieved July 8, 2004, from www.nejm.org.

¹⁰ Lu-Yao, G., et al. (2002) Natural experiment examining impact of aggressive screening and treatment on prostate cancer mortality in two fixed cohorts from Seattle area and Connecticut. *BMJ*, (325). Retrieved January 20, 2005 from www.bmj.com.

¹¹ Michigan Department of Community Health and Michigan Public Health Institute. *The 2001-2002 Special Cancer Behavioral Risk Factor Survey*. Retrieved from www.michigancancer.org/PDFs/MCCReports/MCCReports-SCBFRS-043004.pdf.

The Michigan Association of Health Plans represents 25 health plans throughout the state. Every health plan has guidelines that it uses to ensure members receive appropriate evidence-based care, and each may be different. Health plans usually send a one-page list of guidelines to the providers in their networks, and most providers are affiliated with more than one health plan. Guidelines sent out by the state to providers may not be the same as those recommended by a particular health plan and may be ignored. Not all Health Plans have a guideline for prostate cancer screening. Distribution of the 2005 MCC recommendations might increase the use of risk assessments among primary care physicians in the absence of uniform early detection recommendations and help them assist men to weigh the pros and cons of testing with PSA and DRE on an individual basis.

Knowledge among the public and high-risk populations

A 1998 objective was to increase knowledge 20% among these populations by 2002. The 1995 survey would be used as the baseline. Several initiatives have been undertaken but there are still disparities by age and population group in early detection rates and in mortality. It is not known if the initiatives have worked or to what extent the public's and high-risk populations' knowledge have increased about prostate cancer signs and symptoms, risk factors, early detection recommendations and procedures, and the impact of a positive diagnosis. African American men are less aware of risk factors for prostate cancer than other men who are at lower risk.¹² If knowledge gaps still exist, the Advisory Committee believes more could be done to make the public and high-risk populations aware of risk factors for prostate cancer, the issues related to early detection procedures, and the impact of a positive diagnosis.

Prostate Cancer Screening: A Decision Guide and *Prostate Cancer Screening: A Decision Guide for African Americans* from the CDC and *Making the Choice: Deciding What to Do About Early Stage Prostate Cancer* from the Michigan Cancer Consortium are excellent products. A booklet on survivorship issues may need to be developed.

These booklets need to be widely distributed to help men make rational decisions around prostate cancer issues. Existing networks and opportunities such as AARP, unions, women's groups, existing screening sites, and driver's license renewal processes could be used to reach men and their families/friends. Most companies that offer cafeteria health care plans could distribute the booklets during the sign up process. Short, pointed informational messages such as:

- Do you know that prostate cancer strikes 1 man in 6?
- Do you know your PSA?

could be designed to make the public aware enough to ask their primary care physician a question in order to start the discussion. The information would be adaptable to short messages (posters in the workplace) just to plant a thought, and attempt to get a man to visit his healthcare provider to discuss prostate cancer screening.

¹² Woods, V.D., Montgomery, S.B., Belliard, J.C., et al. (2004) Culture, black men, and prostate cancer: what is reality? *Cancer Control*, 11(6z), 388-396.

PSA Utilization

The MCC Prostate Cancer Early Detection Recommendations indicate a combination of DRE and PSA should be used to test for the presence of prostate cancer. Measurement of DRE utilization would require chart review for documentation on a physical examination. Since the PSA requires laboratory analysis using a specific procedure code, analysis of PSA utilization could be more efficient. The PSA might serve as a surrogate measure of prostate cancer testing. Assessment of current PSA utilization in Michigan would provide baseline data for use if and when population screening, or screening of high-risk populations, is widely supported. Analysis of administrative data sets from health plans could provide some indication of current use. While utilization data may not include race, data could be analyzed by zip code and by age cohorts (ten year increments).

Health plans know the ethnic and racial composition of persons residing in the various Michigan zip codes. To do this analysis, the methodology (numerator and denominator) would have to be identified after which the health plan could be asked if they would be willing to do this assessment. Results could provide information about utilization of PSA testing and which age, race, socioeconomic status and co-morbid disease status are associated with lower utilization of PSA testing. In addition to analysis of administrative data, chart reviews are conducted by health plans to determine adherence to HEDIS measures that are not included in the data set from clinical procedures (B/P for example). It has been suggested that during this process of chart review, chart reviewers could also look for evidence that prostate cancer screening/counseling was discussed. Reviewers could also look to see if there was documentation of family history of prostate cancer. The MCC could take appropriate actions in the future to address identified deficiencies.

What Needs to Be Done

Even though it is still unclear that prostate cancer screening benefits the general population of men of average risk, all men and their providers should be aware of the issues. High-risk populations should be well informed of their increased risk and the potential benefits and risks of early detection. It is important that providers understand prostate cancer risk factors, and that they identify and counsel men at high risk about early detection procedures. Managed care plans offer an opportunity to monitor the extent to which risk assessments guide counseling about prostate cancer testing and provide baseline information about PSA utilization.

Objective

Increase by 2010 awareness of prostate cancer risk factors as well as the benefits and risks of prostate cancer screening 30% among primary care physicians (Baseline: 2006 KAP survey of physicians), and 30% among high risk men and the general public (Baseline: 2006 SCBRFS).

Objective

By 2010, increase from 70% to 80%, the awareness of prostate cancer risk factors among African American men. (Baseline to be measured by the 2006 SCBRFSS)

Strategy Options

- Disseminate the 2005 revised early detection recommendations among health providers, particularly primary care physicians, through existing networks such as to MAHP, MQIC, and at medical meetings.
- Encourage the MAHP and MQIC to adopt a recommendation for doing risk assessments while counseling men about the efficacy of prostate cancer testing.
- Widely disseminate existing prostate cancer screening booklets (CDC), the decision tree (MDCH), booklets on treatment options, and information on ongoing care/survivorship issues to the public.
- Produce a series of informational articles as part of a public campaign, similar to public education breast cancer and heart disease campaigns, to increase awareness of prostate cancer incidence, risk factors, and issues.
- Develop educational efforts that target African American men.

Objective

By 2010, there will be a 30% increase in adherence to the 2005 Michigan Cancer Consortium prostate cancer early detection recommendations among primary care physicians, with particular emphasis on populations of higher than average prostate cancer risk.

Strategy Options

- Determine and monitor utilization of PSA testing among high-risk men by analysis of health plan data.
- Repeat SCBRFS to assess change in reported receipt of counseling and testing.

Additional References

1. Barry, M. (2001) Prostate-Specific-Antigen testing for early diagnosis of prostate cancer. *N Engl J Med*, 344 (18). Retrieved December 22, 2004, from www.nejm.org.
2. D'Amico, A.V., Chen, M-H., Roehl, K.A., & Catalona, W.J. (2004) Preoperative PSA velocity and the risk of death from prostate cancer after radical prostatectomy. *N Engl J Med*, (351), 125-135.
3. Eisenberger, M. & Partin, A. (2004) Progress toward identifying aggressive prostate cancer. *N Engl J Med*, 351(2). Retrieved July 8, 2004 from www.nejm.org.
4. Klein, E. (2005). Can prostate cancer be prevented? *Nat Clin Pract Urol*, 2(1). Retrieved from www.medscape.com/viewarticle/498004.
5. Lu-Yao, G., et al. (2002) Natural experiment examining impact of aggressive screening and treatment on prostate cancer mortality in two fixed cohorts from Seattle area and Connecticut. *BMJ* (325). Retrieved January 20, 2005 from www.bmj.com.
6. Michigan Department of Community Health and Michigan Public Health Institute. *The 2001-2002 Special Cancer Behavioral Risk Factor Survey*. Retrieved from www.michigancancer.org/PDFs/MCCReports/MCCReports-SCBRFS-043004.pdf.
7. U.S. Preventive Services Task Force. (2002). Screening for prostate cancer: recommendation and rationale. *Annals of Internal Medicine*, 137(11). Retrieved from www.annals.org.