Early Detection and Screening for Prostate and Colorectal Cancer: Results from the Knowledge, Attitudes and Practice (KAP) Survey

MDCH

MCC
Michigan Cancer Consortium

Michigan Public
Health Institute

Table of Contents

EXECUTIVE SUMMARY **4**

Overview **4**

Methods **6**

Results **7**
- Response Rate 7
- Provider Characteristics (Tables 3-5) 8
- Providers' Patient Characteristics (Tables 6-7) 10
- Influences on practices (Tables 8-10) 11
- Reminder and Tracking Systems (Table 11) 12
- Colorectal Cancer Knowledge, Attitudes, and Practices (Tables 12-22) 13
- Prostate Cancer Knowledge, Attitudes, and Practices (Tables 23-37) 17

Comparisons of Survey Years: 1997 vs. 2006 .... **23**
- Provider Characteristics, 1997 vs. 2006 (Tables 38-42) 23
- Knowledge, Attitudes, and Practices, 1997 vs. 2006 (Tables 43-51) 25

Discussion **29**
- Colorectal Cancer 29
- Prostate Cancer 30
- Comparison of Survey Years 31

Recommendations **32**

Study Limitations **33**

REFERENCES **34**

APPENDIX A: 2006 KAP SURVEY TOOL **35**

APPENDIX B: MAPPING OF SURVEY RESPONDENT ZIP CODES **52**

Executive Summary

Overview

Primary care providers play a major role in the decision of their patients to be screened for colorectal and prostate cancer. According to the 2006 Special Cancer Behavioral Risk Factor Survey (SCBRFS)[1], among those who received various screening tests for the first time, doctor recommendation was the most commonly cited reason for getting tested. For colorectal cancer, a lack of physician recommendation and being unaware that they needed to get tested were the most common responses for why the patient did not have a test in the appropriate time interval.

Despite the ability of primary care providers to impact screening, there are still a large number of individuals who are not receiving appropriately timed screening tests. Recommendations regarding the age to begin screening for prostate and colorectal cancer, as well as appropriate screening intervals vary widely among providers. Various factors, including attitudes regarding the efficacy of screening, conflicting guidelines and a lack of consensus, patient or provider barriers, and knowledge regarding appropriate screening practices, may all contribute to the differences in provider recommendations. Information gathered on knowledge, attitudes, and practices regarding screening are needed to guide future public health policy, as well as professional education efforts.

Primary care providers may also vary in terms of experience and comfort level treating men for side effects after diagnosis and treatment of prostate cancer. The growing rate of survivors and increased survival time has increased the number of primary care providers who will interact with cancer survivors[2]. This information has important implications for the potential necessity for educating primary care providers about the needs of their patients who are dealing with survivorship issues.

The KAP Survey is intended to investigate the beliefs and practice patterns of primary care providers in Michigan with regard to screening for colorectal and prostate cancer. The 2006 KAP survey can also be used in part to help evaluate the efforts of the Michigan Cancer Consortium (MCC). Since the 1997 KAP Survey there have been a number of educational interventions for the public, as well as professionals. Some areas of comparison between the two surveys can be evaluated to determine if there have been any changes in beliefs and practice patterns over the years. Results from the survey will also be used to help guide decisions regarding the role of public health policy in the area of cancer prevention and control. The survey focused on the following areas:

- ☐ How often and at what ages primary care providers believe asymptomatic patients should be screened for prostate and colorectal cancer using various screening tests.

- ☐ Provider beliefs on the effectiveness of available tests for prostate and colorectal cancer screening.

- ☐ The importance of factors related to the public and the medical community in explaining why people are not up to date in being screened for prostate and colorectal cancer

- ☐ Best methods of encouraging patients to get screened.

- ☐ Beliefs regarding which factors place patients at high risk for developing prostate or colorectal cancer.

- ☐ Practices regarding primary care for men who have been treated for prostate cancer.

- ☐ Organizational influence on screening practices.

- ☐ Preferred methods of receiving information regarding screening and early detection for prostate and colorectal cancer.

Key Findings for Colorectal Cancer Screening

- The majority of respondents appeared to indicate a preference for colonoscopy as a screening choice.
    - Colonoscopy was considered very effective in reducing incidence and preventing death by the majority of respondents.
    - Colonoscopy was the most common choice for a follow up to abnormal FOBT result.
- For the majority of the respondents, time intervals for recommended frequency of FOBT, flexible sigmoidoscopy, and colonoscopy are consistent with the Michigan Cancer Consortium's (MCC) recommendations[1].
    - FOBT was recommended annually by over 86% of providers.
    - Flexible sigmoidoscopy was recommended every 5 years by approximately 69% of providers.
    - And over 60% of respondents recommended colonoscopy every 10 years.
- Patient level factors were considered to be more important than provider level factors in explaining low levels of screening for colorectal cancer.

Key Findings for Prostate Cancer Screening

- Just over half of providers found PSA to be an effective screening method for men age 50 and older, whereas approximately 37% found DRE to be very effective.
- Age, family history, and a mutual decision after discussion of pros and cons of screening were the 3 greatest influences on recommending prostate screening

---

[1] The MCC's recommendation for colorectal cancer screening is to have either an annual fecal occult blood test (FOBT) or a sigmoidoscopy every five years or a yearly FOBT with a sigmoidoscopy every five years or to have a colonoscopy every ten years or a double contrast barium enema (DCBE) every five years.

- For men ages 50-65 and 65+ years, annual screening with DRE was recommended by nearly 90% of providers and PSA was recommended for these age groups by 83.1% and 85.4% of providers respectively
- Only 32.7% of providers recommended stopping DRE at any age, and 45% recommended stopping PSA at any age.
- Of those who recommended stopping screening, the average age recommended was nearly 80 years old
- Patient level factors were more frequently considered important in explaining low rates of screening than provider level factors
- Over 73% of providers continue to treat male patients after prostate cancer diagnosis and treatment, and the majority only feel somewhat comfortable treating symptoms related to side effects of treatment

Methods

The 2006 version of the KAP survey was adapted from the baseline survey conducted in 1997. The survey was adapted to be more consistent with current screening recommendations, some response choices were updated, and several additional questions were added regarding areas of interest such as treatment of prostate cancer survivors after diagnosis and preferred methods of receiving information. The survey went through several revisions and was reviewed by project staff, as well as nurse consultants. The current version is not necessarily intended for the sole purpose of comparison to the previous survey; however, there are some areas where comparisons can be made.

The survey is divided into three sections: prostate cancer screening, colorectal cancer screening, and a general section. Providers were instructed to complete all sections relevant to their practice. The final version of the survey can be found in Appendix A.
It was determined that the survey would be sent to all primary care physicians currently practicing in Michigan. In some instances patients may see a nurse practitioner or physician assistant instead of a physician for healthcare visits, these providers are also important influences on the decision for cancer screening. For this reason, it was decided that a sample of nurse practitioners and physician assistants should be included in the survey. Physician addresses were obtained by purchasing a database with contact information for current primary care providers in Michigan. An updated version of the database was also purchased once it was made available. A listing of nurse practitioners and physician assistants was obtained from the state Licensing Division. In order to obtain a random sample from the nurse practitioner and physician assistant databases, a random number list was generated and the sample was selected.

A cover letter with a description of the project was included in the mailing and participants were informed that their organizations name would be entered into a drawing for a cash prize incentive. Surveys were sent out in a staggered mailing and survey recipients were given a return date of two weeks after the survey was sent. All non-respondents were sent reminder postcards and a second reminder postcard was sent for those who still did not respond. Reminder postcards also included contact information for those who wanted to request an electronic copy of the survey or a replacement survey. For those with available email addresses, an electronic reminder was also sent along with an electronic copy of the survey. Surveys that were returned due to an incorrect address were re-sent if an updated address could be obtained.

Results

Response Rate

A breakdown of responses to the mailed surveys can be seen below in Table 1. Surveys were considered complete if respondents had at least filled out one section of the survey. Several respondents were determined to be ineligible due to retirement, illness, death, no longer residing in Michigan, not treating adult patients, not being a primary care provider, and not currently practicing medicine. Upon receiving an updated version of the physician database, those non-respondents who were no longer in the most current database were assumed to be ineligible. If a survey was returned by the post office and an updated address could not be obtained, then it was excluded from all analysis.

Because eligibility of the non-respondents could not be determined, it was estimated using the same methods that the 1997 KAP survey utilized. The number of recipients with known status was calculated and then it was determined which proportions of these were not eligible. We then assumed that the same proportion of the non-responders was ineligible for the study. Physicians who were not in the updated version of the contact database were not included in this calculation because the large number would lead to a misleading increase in the response and because it was not reasonable to assume that a recently updated database would have similar errors.

The overall estimated response rate is 15.86%. The estimated response rate for each of the provider groups is 15.69% for physicians, 14.32% for physician assistants, and 18.28% for nurse practitioners. The calculations used to estimate the responses can be seen in Table 2. A mapping of location of respondents, using zip codes can be seen in Appendix B.

Table 1: Survey status

Status	Physicians	Physician Assistants	Nurse Practitioners	Total Providers
Complete	670	111	121	902
Refusals	17	2	0	19
Not eligible	120	29	61	210
Did not receive survey (no current address)	567	26	12	605
Non-respondents	4208	832	813	5853
Total	**5589**	**1000**	**1007**	**7589**

Table 2: Provider response rate calculations, 2006

	Physicians	**Physician Assistants**	**Nurse practitioners**	**Total**
Known status = Completed + Refusals + Not eligible	807	142	182	1131
Not eligible	120	29	61	210
Estimated % of ineligible non-responders= Not eligible/Known Status	120/807=14.87%	29/142=20.42%	61/182=33.52%	210/1131=18.57%
Estimated # of eligible non-respondents = Non respondents – (estimated % of ineligible non-respondents*Non respondents)	4208-(.1487*4208) =3582	832- (.2042*832) =662	813-(.3352*813) =541	5853-(.1857*5853 =4766
Estimated Response rate = Complete/(Completed + Refusals + Estimated # of eligible non-respondents)	670/(670+17+3582) =**15.69%**	111/(111+2+662) =**14.32%**	121/(121+0+541) =**18.28%**	902/(902+19+4766) =**15.86%**

Provider Characteristics (Tables 3-5)

Approximately 46.3% of respondents were female and 53.7% were male. Of these respondents, the majority (83.8%) were white. The average age of the providers was approximately 49 years old and the average time since graduating their medical program was 20 years. On average providers claimed that 10.3% of continuing medical education credits was related to cancer screening and prevention. When asked to describe their medical practice, single specialty group practice was the most common (36.8%) followed by solo private practice (23.3%).

A little more than half of respondents reported being salaried employees of an organization that runs their practice. The majority (73.8%) were not affiliated with a cancer center, although about half were within 5 miles of a cancer center that patients could be referred to. On average the providers treated nearly 300 patients per month.

Table 3: Provider Characteristics

Gender	**N**	**(%)**
Female	400	(46.3)
Male	464	(53.7)
Age		
Mean	49.4	
Median	50	
Max	88	
Min	24	
45 Years and Under	302	(35.2)
Over 45 Years	556	(64.8)
Ethnic or cultural group		
American Indian, Eskimo, Aleut	6	(0.7)
Asian or Pacific Islander	63	(7.3)
Middle Easterner	16	(1.9)
Black/African American	25	(2.9)
White/Caucasian	720	(83.8)
Hispanic	13	(1.5)
Other	16	(1.9)
Years Since Graduating Medical Program		
Mean	20.3	
Median	20	
Max	62	
Min	0	
10 or less	213	(25.5)
11 to 20	220	(26.4)
21 to 30	247	(29.6)
More than 30	154	(18.5)

Table 4: Of Providers' Continuing Medical Education Credits, Percentage of Credits Related to Cancer Screening and Prevention

	N	**(%)**
Mean		(10.3)
Median		(10.0)
Max		(100)
Min		(0)
10% or less	589	(65.7)
11-25%	135	(15.1)
26% or more	35	(3.9)

Table 5: Characteristics of Medical Practice

	N	(%)
Type of Medical Practice		
Solo private practice	201	(23.3)
Multi-specialty group practice	116	(13.5)
Urgent care	22	(2.6)
Single specialty group practice	316	(36.7)
Teaching facility	105	(12.2)
Other	102	(11.8)
Salaried Employee of an Organization that Runs the Practice		
Yes	453	(52.6)
No	409	(47.4)
Affiliated With A Cancer Center		
Yes	226	(26.2)
No	636	(73.8)
Distance from Nearest Cancer Center		
Within 5 miles	438	(50.9)
Within 5-10 miles	147	(17.1)
Within 10-20 miles	122	(14.2)
Over 20 miles	154	(17.9)
Number of Patients Treated Monthly		
200 or less	294	(36.0)
201 to 399	233	(28.5)
400 to 499	184	(22.5)
500 to 599	63	(7.7)
600 to 999	37	(4.5)
1000 plus	6	(0.7)

Providers' Patient Characteristics (Tables 6-7)

Providers reported that nearly 59% of their patients were 40 years and older and a little more than 45% were 50 years and older. Providers were also asked abut what percentage of their patients were survivors of any cancer. After removing those respondents who were cancer specialists, as well as outliers[2], the average percent of the providers' patient population that are survivors of cancer was 9.69%. The majority of respondents (76.7%) reported that 10% or less of their patients were cancer survivors.

Table 6: Percentage of Providers' Patient Population by Age Group

	40 years and older	50 years and older
Mean	58.9%	45.3%
Median	60.0%	5.0%
Min	1.0%	0.0%
Max	100.0%	100.0%

---

[2] A total of 22 outliers were removed (outliers were more than 3 standard deviations from the mean)

Table 7: Percentage of Providers' Patient Population who are Survivors of Any Cancer[3]

	N	(%)
Mean		(9.7)
Median		(10.0)
Min		(0.0)
Max		(40.0)
10% or less	570	(76.7)
Over 10%	173	(23.3)

Influences on practices (Tables 8-10)

Providers were asked about various organizations and their influence on delivery of preventive services. The greatest three influences were the American Cancer Society (84.1%), the National Cancer Institute (68.9%), and National Professional Associations (68.2%). The majority felt that print materials from the various organizations had the greatest influence on them, as opposed to conferences or web materials. Providers were also asked about various sources that may be useful in keeping them up to date on prostate and colorectal cancer screening. A majority found CME event/conferences, national and statewide consensus development conferences, Medical Association newsletters, "state of the science sheets", journals, and the Internet to be useful. Sources that were considered not useful by the majority included palm pilots and blackberries, audio visual materials, and listserv messages/updates.

Table 8: Influential Organizations on Provider Delivery of Day to Day Services

	N	(%)
National Cancer Institute (NCI)	575	(64.1)
American Cancer Society (ACS)	702	(78.3)
State Professional Associations (MSMS, MAOPS, other)	404	(45.0)
National Professional Associations (AMA, AOA, other)	567	(63.2)
Michigan Cancer Consortium (MCC)	247	(88.9)
HEDIS measures	320	(35.7)
Michigan Quality Improvement Consortium (MQIC)	271	(30.2)
Other	63	(7.0)

---

[3] A total of 22 outliers were removed (outliers were more than 3 standard deviations from the mean)

Table 9: Routes of Information From Organizations that Influence Provider Delivery of Day to Day Services

	Conference		Web		Print	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**
National Cancer Institute (NCI)	84	(9.4)	148	(16.5)	461	(51.4)
American Cancer Society (ACS)	96	(10.7)	172	(19.2)	590	(65.8)
State Professional Associations (MSMS, MAOPS, other)	129	(14.4)	71	(7.9)	294	(32.8)
National Professional Associations (AMA, AOA, other)	197	(22.0)	140	(15.6)	425	(47.4)
Michigan Cancer Consortium (MCC)	37	(4.1)	41	(4.6)	211	(23.5)
HEDIS measures	39	(4.3)	52	(5.8)	281	(31.3)
Michigan Quality Improvement Consortium (MQIC)	30	(3.3)	50	(5.6)	239	(26.6)
Other	17	(1.9)	28	(3.1)	53	(5.9)

Table 10: Usefulness of Sources in Keeping Providers Current on Colorectal and Prostate Cancer Screening

	Found Sources 'Useful'	
	N	**(%)**
CME events/conferences	750	(83.6)
Findings from statewide consensus development conferences	513	(57.2)
Findings from national consensus development conferences	679	(75.7)
Medical Association newsletters	479	(53.4)
1-2 pg "state of the science" sheets	665	(74.1)
Palm pilots, blackberries, etc.	282	(31.4)
Journals	638	(71.1)
Audio visual materials	321	(35.8)
Internet	516	(57.5)
Listserv messages and updates	186	(20.7)
Other	12	(1.3)

Reminder and Tracking Systems (Table 11)

Providers were asked about various reminder and tracking systems to notify patients when cancer screening is due. The majority of providers (59.0%) use flow charts as a reminder and tracking system. The second most common method was reminder cards by mail (40.9%). Reminder wallet cards were the least used reminder method (13%).

Table 11: Provider Use of Reminder Systems for Notifying Patients of Cancer Screening

	Providers who use system	
	N	**(%)**
Flow charts or "tickler files"	501	(55.9)
Computerized records of patient's status	243	(27.1)
Reminder wallet cards to give to patients	110	(12.3)
Reminder phone calls	257	(28.7)
Reminder cards by mail	347	(38.7)
Other	21	(2.3)

Colorectal Cancer Knowledge, Attitudes, and Practices (Tables 12-22)

When asked about emphasis on early detection of cancer, most providers (64.0%) felt that they put greater emphasis on early detection of cancer in asymptomatic patients than they did 5 years ago and only 1.4% of providers claimed to put less emphasis on early detection. When asked about various colorectal cancer screening methods and their effectiveness on preventing death among patients aged 50-65 and 65+ years, colonoscopy was the only test that the majority of providers found very effective in preventing death. Tests that were considered somewhat effective included digital rectal exams (DRE), fecal occult blood tests (FOBT), flexible sigmoidoscopy (Flex Sig), and double contrast barium enema (DCBE). Colonoscopy was also reported to be very effective in reducing incidence of colorectal cancer by a majority of providers. Flexible sigmoidoscopy was found to be only somewhat effective in reducing the incidence of colorectal caner. Colonoscopy was also found to be the test that the majority of providers would recommend as a follow up to an abnormal FOBT test.

When asked about the recommended time intervals for various screening tests a large proportion of respondents (72.5%) did not recommend DCBE for patients age 50-65 and 65+ years and nearly half did not recommend flexible sigmoidoscopy. Of those who did recommend these tests, FOBT was recommended annually, flexible sigmoidoscopy was recommended every five years, colonoscopy every ten, and DCBE was not recommended on a fixed interval. Most providers did not recommend stopping these tests at any age, but of those who did, the average age recommended was around 80 years.

Although African Americans have a higher incidence of and mortality from colorectal cancer, only 34.2% of providers believed that African Americans should be screened at an earlier age than the general population. Of these providers, the average age of earlier recommended screening was 42 years. The majority of providers did not believe that African Americans needed to be screened more frequently than the general population. Only 32.4% of providers felt that Africans Americans should have a colonoscopy at a more frequent interval than the general population.

Providers were asked about various factors related to the public and the medical community that may be important in explaining low levels of screening for colorectal cancer. Patient level factors that were considered important by the majority of providers included fear of pain or discomfort, concerns about preparation for the test, embarrassment, lack of perceived need, cost, fear of learning they have cancer, and fear of risks or side effects. Provider level factors that were considered important by a majority of providers were insufficient reimbursement, lack of a reminder and tracking system, lack of time, and lack of agreement with standard screening guidelines.

Family history of colorectal cancer and polyps/growths were considered important risk factors for qualifying a patient as high risk for developing colorectal cancer. A majority of providers also felt a patient was considered high risk due to factors such as older age, high fat/low fiber diet, race, smoking, not getting exams/ignoring symptoms, constipation/irregular bowel movements, and inflammatory bowel disease.

Table 12: Provider Emphasis on Early Detection of Cancer in Asymptomatic Patients Compared to Five Years Ago

	N	(%)
Greater emphasis	531	(64.0)
Less emphasis	12	(1.4)
About the same	287	(34.6)

Table 13: Provider Beliefs of the Effectiveness of Various Colorectal Cancer Screening Procedures in Preventing Death by Test and Patient Age Group

	Not Effective		Somewhat Effective		Very Effective		Don't know/No opinion	
	N	(%)	N	(%)	N	(%)	N	(%)
DRE: 50-65	279	(31.4)	496	(55.9)	109	(12.3)	4	(0.5)
DRE: 65+	275	(31.0)	479	(54.1)	127	(14.3)	5	(0.6)
FOBT: 50-65	72	(8.1)	637	(71.7)	176	(19.8)	3	(0.3)
FOBT: 65+	65	(7.3)	638	(72.0)	180	(20.3)	3	(0.3)
Flex Sig: 50-65	54	(6.1)	594	(66.9)	230	(25.9)	10	(1.1)
Flex Sig: 65+	53	(6.0)	594	(67.0)	229	(25.8)	10	(1.1)
Colonoscopy: 50-65	5	(0.6)	39	(4.4)	822	(92.6)	22	(2.5)
Colonoscopy: 65+	4	(0.5)	37	(4.2)	823	(92.9)	22	(2.5)
DCBE: 50-65	83	(9.3)	519	(58.4)	231	(26.0)	55	(6.2)
DCBE: 65+	82	(9.3)	517	(58.4)	232	(26.2)	55	(6.2)

Table 14: Provider Beliefs of the Effectiveness of Flexible Sigmoidoscopy and Colonoscopy in Reducing Incidence of Colorectal Cancer by Test and Patient Age Group

	Not Effective		Somewhat Effective		Very Effective		Don't know/No opinion	
	N	(%)	N	(%)	N	(%)	N	(%)
Flex Sig: 50-65	149	(16.9)	577	(65.3)	143	(16.2)	15	(1.7)
Flex Sig: 65+	152	(17.3)	578	(65.6)	136	(15.4)	15	(1.7)
Colonoscopy: 50-65	63	(7.1)	102	(11.5)	699	(78.9)	22	(2.5)
Colonoscopy: 65+	63	(7.1)	103	(11.7)	696	(78.7)	22	(2.5)

Table 15: Provider Recommended Test as Follow Up to Abnormal Fecal Occult Blood Test

Recommended Test	N	(%)
Flexible Sigmoidoscopy	102	(11.4)
Colonoscopy	851	(95.0)
DCBE	51	(5.7)
Repeat FOBT	160	(17.9)

Table 16: Provider Recommended Screening Intervals for Early Detection of Colorectal Cancer by Test and Patient Age Group

	Annually		**Every 2 Years**		**Every 5 Years**		**Every 10 Years**		**No Fixed Interval**		**Never Recommend**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
FOBT: 50-65	713	(80.7)	60	(6.8)	14	(1.6)	3	(0.3)	39	(4.4)	54	(6.1)
FOBT: 65+	731	(83.1)	46	(5.2)	5	(0.6)	3	(0.3)	39	(4.4)	56	(6.4)
Flex Sig: 50-65	9	(1.0)	27	(3.1)	314	(35.6)	23	(2.6)	82	(9.3)	426	(48.4)
Flex Sig: 65+	13	(1.5)	23	(2.6)	313	(35.6)	18	(2.0)	83	(9.4)	430	(48.9)
Colonoscopy: 50-65	21	(2.4)	21	(2.4)	210	(23.8)	568	(64.3)	56	(6.3)	7	(0.8)
Colonoscopy: 65+	28	(3.2)	27	(3.1)	215	(24.4)	546	(61.9)	60	(6.8)	6	(0.7)
DCBE: 50-65	2	(0.2)	11	(1.3)	89	(10.1)	33	(3.8)	107	(12.2)	638	(72.5)
DCBE: 65+	2	(0.2)	10	(1.1)	89	(10.1)	32	(3.6)	109	(12.4)	637	(72.5)

Table 17: Provider Belief that Colorectal Cancer Screening Should Stop at a Certain Age

	No Age to Stop Recommending		**Stop Recommending at Some Age**	
	N	**(%)**	**N**	**(%)**
FOBT	607	(67.7)	189	(21.1)
Sigmoidoscopy	310	(34.6)	187	(20.9)
Colonoscopy	490	(54.7)	344	(38.4)
DCBE	231	(25.8)	103	(11.5)

Table 18: Age Recommended by Providers Who Suggest Stopping Colorectal Cancer Screening at Some Point

	Mean Age	**Median Age**	**Min**	**Max**
FOBT	79.9	80	40	100
Sigmoidoscopy	79.3	80	50	100
Colonoscopy	81.4	80	50	100
DCBE	79.8	80	50	98

Table 19: Provider Recommendations for Colorectal Cancer Screening Among African Americans compared to the General Population

	N	**(%)**
'Agree' that African Americans should be screened for colorectal cancer at an earlier age than the general population	296	(33.0)
Of providers who agree, at what age should African Americans be screened for colorectal cancer		
Mean	42.0	
Median	40	
Max	50	
Min	25	
Agree that African Americans should be screened more frequently than the general population		
FOBT	228	(25.4)
Sigmoidoscopy	85	(9.5)
Colonoscopy	278	(31.0)
DCBE	47	(5.2)

Table 20: Factors Considered 'Important' by Providers in Explaining Low Levels of Screening for Colorectal Cancer Among the Public

	N	**(%)**
Fear of learning they have cancer	568	(63.4)
Fear of pain or discomfort during the procedure	819	(91.4)
Fear of risks or side effects from the procedure	553	(61.7)
Embarrassment/offensiveness of the procedure	699	(78.0)
Costs associated with being screened	677	(75.6)
Lack of perceived need to be screened	677	(75.6)
Low confidence in or distrust of the medical community	166	(18.5)
Concerns about preparation for the test	721	(80.5)
Lack of transportation	313	(34.9)
Not having someone to go with them	338	(37.7)
Language barriers	173	(19.3)
Other	27	(3.0)

Table 21: Factors Considered 'Important' by Providers in Explaining Low Levels of Screening for Colorectal Cancer Among the Medical Community

	N	**(%)**
Low interest in prevention	230	(25.7)
Low confidence in effective treatment for colorectal cancers found	124	(13.8)
Assuring patient follow up is too time consuming	216	(24.1)
Lack of time	462	(51.6)
Not all providers agree with standard screening guidelines	401	(44.8)
Lack of training in delivering preventive services	317	(35.4)
Insufficient reimbursement for screening	479	(53.5)
Lack of reminder and tracking system	605	(67.5)
Lack of case management	362	(40.4)
Other	27	(3.0)

Table 22: Factors Identified by the Provider That Are Considered Important in Qualifying a Patient as Being at High Risk for Developing Colorectal Cancer

	N	**(%)**
Older age	696	(77.7)
High fat, low fiber diet	621	(69.3)
Other diet related factors	292	(32.6)
Alcohol	352	(39.3)
Not enough exercise	232	(25.9)
Race	588	(65.6)
Family history of colorectal cancer	883	(98.5)
Polyps/growths	875	(97.7)
Smoking	589	(65.7)
Stress	151	(16.9)
Not getting exams/ ignoring symptoms	684	(76.3)
Constipation/irregular bowel movements	554	(61.8)
Environmental pollutants	227	(25.3)
Related sexual activities	299	(33.4)
Inflammatory bowel disease	819	(91.4)

Prostate Cancer Knowledge, Attitudes, and Practices (Tables 23-37)

The digital rectal exam (DRE) and prostate specific antigen (PSA) test were considered not effective for men ages 30-39 in the prevention of death. A large proportion of providers felt that DRE was somewhat effective for men age 40 and older. The majority of providers also felt that PSA was somewhat effective for men age 40-49 and over half felt it was very effective for men ages 50-65 and 65 and older in preventing death. Various factors influenced who the majority of providers recommended screening to. Age and family history were reported by almost all providers as influencing their decision to recommend prostate cancer screening.

When asked about recommended time intervals for screening, most respondents do not recommend DRE or PSA for men ages 30-39. Of those who do recommend screening for mean ages 30-39, most do not recommend it at any fixed interval. For all other age groups, most respondents would recommend DRE annually. The majority of providers do not recommend PSA at any fixed interval for men below age 50. For men ages 50-65 and 65+, PSA is recommended annually by most. Most providers do not recommend stopping screening at any age; however for those that do the average age is nearly 80 years old.

African Americans have a higher incidence of and mortality from prostate cancer than other population groups. A majority of providers felt that African Americans should be screened at an earlier age than the rest of the population. Of those who would recommend earlier screening, the average recommended age was approximately 40 years old. Although a majority of providers felt that African Americans should be screened earlier, the majority did not feel that they needed to be screened more frequently using DRE or PSA.

Providers identified several factors related to the patient and to the medical community that they felt were important in explaining low rates of screening. Patient level factors identified by a majority of providers include fear of learning they have cancer, fear of pain or discomfort, fear of risks or side effects from treatment, embarrassment, lack of perceived need, lack of knowledge of appropriate screening practices, confusion about appropriate screening due to conflicting sources, and providers not recommending screening. Factors related to the medical community included insufficient evidence that screening reduces mortality, lack of time during office visits, providers not agreeing with standard guidelines, and lack of reminder and tracking systems. Factors that providers felt were important in developing prostate cancer included older age, race, family history of the disease, smoking, and not getting exams/ignoring symptoms.

Providers were also asked a series of questions regarding seeing patients after they have been diagnosed and treated for prostate cancer. Approximately 73.4% of respondents continue to treat patients after they have been diagnosed and treated for prostate cancer. Treatment provided includes counseling with family/partner (86.2%), symptom management after treatment (83.4%), periodic monitoring (80%), helping to decide best treatment (65.1%), symptom management during treatment (63.8%), and symptom management during and after treatment (63.5%). A majority of providers would refer patients back to specialty care after a rise in PSA levels or after a request by the patient. Approximately 98.8% of providers claimed that their typical patient followed up regularly with the treating physician during the first year after treatment. Providers who continued to treat prostate cancer survivors felt that for the most part the treating physicians adequately communicated with them, that a clear plan was provided, and that details regarding treatment complications and management were clearly expressed.

Of the providers who continue to treat prostate cancer survivors after diagnosis, most are only somewhat comfortable treating symptoms such as incontinence, impotence, bowel problems, and psychosocial concerns. Most providers reported treating urinary incontinence with anticholingerics or urologist referral. They also reported treating impotence most frequently with oral agents or urologist referral.

Over half of providers, however, felt that it was equally appropriate for them to provide care to patients who are prostate cancer survivors. Approximately 14.6% of respondents felt there should be a comprehensive care facility to address patient needs. Providers caring for survivors frequently kept the disease listed as an active issue after treatment on the problem summary list and 83.7% routinely inquire about physical side effects that occur due to treatment. Only 14.3% of providers used surveys to measure patient symptoms, although 56.5% claimed they would be somewhat likely to use these tools if they were available.

Table 23: Effectiveness of DRE and PSA in Preventing Death by Age Group

	Not Effective		**Somewhat Effective**		**Very Effective**		**Don't know/No opinion**	
	N	**%**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
DRE: 30-39	460	(55.8)	249	(30.2)	63	(7.6)	52	(6.3)
DRE: 40-49	239	(28.9)	422	(51.1)	139	(16.8)	26	(3.1)
DRE: 50-65	112	(13.6)	390	(47.3)	307	(37.2)	16	(1.9)
DRE: 65+	122	(14.8)	380	(46.1)	306	(37.1)	16	(1.9)
PSA: 30-39	420	(51.2)	197	(24.0)	147	(17.9)	57	(6.9)
PSA: 40-49	214	(26.0)	341	(41.4)	239	(29.0)	29	(3.5)
PSA: 50-65	54	(6.5)	309	(37.4)	443	(53.6)	20	(2.4)
PSA: 65+	82	(10.0)	289	(35.1)	431	(52.3)	22	(2.7)

Table 24: Patient Characteristics that Influences Provider Recommendation for Prostate Cancer Screening to Patient

	N	(%)
Age	802	(89.5)
Co-morbid conditions	490	(54.7)
Race	616	(68.8)
Patient	597	(66.6)
Family history	801	(89.4)
Mutual decision after discussion of pros and cons	673	(75.1)
Life expectancy	570	(63.6)
Geographic location	79	(8.8)
Testosterone use	525	(58.6)
Other	15	(1.7)

Table 25: Provider Recommended Screening Intervals for Detection of Prostate Cancer by Test and Patient Age Group

	Annually		**Every 2 Years**		**Every 3-5 Years**		**No Fixed Interval**		**Never Recommend**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
DRE: 30-39	69	(8.4)	66	(8.0)	124	(15.1)	216	(26.3)	346	(42.1)
DRE: 40-49	320	(38.9)	147	(17.9)	93	(11.3)	150	(18.2)	113	(13.7)
DRE: 50-65	708	(86.0)	46	(5.6)	16	(1.9)	24	(2.9)	29	(3.5)
DRE: 65+	715	(87.0)	27	(3.3)	14	(1.7)	34	(4.1)	32	(3.9)
PSA: 30-39	40	(4.9)	49	(6.0)	79	(9.7)	232	(28.4)	418	(51.1)
PSA: 40-49	223	(27.2)	121	(14.7)	91	(11.1)	232	(28.3)	154	(18.8)
PSA: 50-65	664	(80.6)	65	(7.9)	31	(3.8)	39	(4.7)	25	(3.0)
PSA: 65+	675	(82.0)	45	(5.5)	19	(2.3)	51	(6.2)	33	(4.0)

Table 26: Provider Belief that Prostate Cancer Screening Should Stop at a Certain Age

	No Age to Stop Recommending		**Stop Recommending at Some Age**	
	N	**(%)**	**N**	**(%)**
DRE	520	(58.0)	253	(28.2)
PSA	427	(47.7)	349	(39.0)

Table 27: Age Recommended by Providers Who Suggest Stopping Prostate Cancer Screening at Some Point

	Mean Age	**Median Age**	**Min**	**Max**
DRE	79.8	80	30	100
PSA	79.2	80	40	100

Table 28: Provider Recommendations for Prostate Cancer Screening Among African Americans compared to the General Population

	N	(%)
‘Agree’ that African Americans should be screened for prostate cancer at an earlier age than the general population	503	(56.1)
Of providers who agree, at what age should African Americans be screened for prostate cancer		
Mean	39.8	
Median	40	
Max	20	
Min	55	
Agree that African Americans should be screened more frequently than the general population		
DRE	283	(31.6)
PSA	311	(34.7)

Table 29: Factors Considered ‘Important’ by Providers in Explaining Low Levels of Screening for Prostate Cancer Among the Public

	N	(%)
Fear of learning they have cancer	546	(60.9)
Fear of pain or discomfort during the procedure	622	(69.4)
Fear of risks or side-effects from prostate cancer treatment	542	(60.5)
Embarrassment/offensiveness of the procedure	658	(73.4)
Costs associated with being screened	364	(40.6)
Lack of perceived need to be screened	641	(71.5)
Lack of knowledge of appropriate screening practices	618	(69.0)
Confusion about appropriate screening due to conflicting sources of information	518	(57.8)
Low confidence or distrust in medical community	181	(20.2)
Lack of transportation	173	(19.3)
Language barriers	151	(16.9)
Perceived lack of time to discuss with provider in a single visit	351	(39.2)
Physicians not recommending screening	440	(49.1)
Other	11	(1.2)

Table 30: Factors Considered ‘Important’ by Providers in Explaining Low Levels of Screening for Prostate Cancer Among the Medical Community

	N	(%)
Insufficient evidence that screening reduces mortality	448	(50.0)
Low confidence in effective treatment for prostate cancer found	237	(26.5)
Assuring patient follow up is too time consuming	171	(19.1)
Lack of time during the office visit	410	(45.8)
Not all providers agree with standard screening guidelines	531	(59.3)
Insufficient reimbursement for screening	369	(41.2)
Lack of reminder and tracking system	529	(59.0)
Other	11	(1.2)

Table 31: Factors Identified by the Provider That Are Considered Important in Developing Prostate Cancer

	N	**(%)**
Older age	808	(90.2)
High fat diet	289	(32.3)
Other diet related factors	169	(18.9)
Alcohol	222	(24.8)
Not enough exercise	131	(14.6)
Race	730	(81.5)
Family history of prostate cancer	804	(89.7)
Smoking	490	(54.7)
Stress	101	(11.3)
Not getting exams/ignoring symptoms	607	(67.7)
Environmental pollutants	173	(19.3)

Table 32: Care Given by Primary Care Providers after Patient Diagnosis and Treatment of Prostate Cancer

	N	**(%)**
Providers Who Care for Men During and After Prostate Cancer Diagnosis	606	(67.6)
Type of Treatment Given by Primary Care Providers		
Help decide best treatment	391	(43.6)
Symptom management during treatment	384	(42.9)
Symptom management after treatment	503	(56.1)
Symptom management during AND after treatment	382	(42.6)
Counseling with family/partner	519	(57.9)
Periodic monitoring	475	(53.0)
Provider Would Refer Patient Back to Specialty Care		
Rising PSA level	602	(67.2)
Patient request	589	(65.7)
Patient Follows Up with Treating Physician Regularly During First Year after Treatment	596	(66.5)

Table 33: Provider Felt that Communication from Treating Physician was Adequate

	N	**(%)**
Treating physician adequately communicated with provider during patient treatment	492	(54.9)
Clear plan was provided	461	(51.5)
Details regarding treatment complications and management were clearly expressed	395	(44.1)

Table 34: Comfort Level of Provider to Treat Side Effects from Prostate Cancer Treatment

	Very uncomfortable		**Somewhat comfortable**		**Very comfortable**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**
Incontinence	82	(9.2)	448	(50.0)	71	(7.9)
Impotence	74	(8.3)	405	(45.2)	122	(13.6)
Bowel problems	71	(7.9)	413	(46.1)	117	(13.1)
Psychosocial concerns	60	(6.7)	341	(38.1)	200	(22.3)
Other	3	(0.3)	0	(0.0)	0	(0.0)

Table 35: Methods of Treatment Typically Used by Providers for Side Effects of Prostate Cancer Treatment

	N	**(%)**
Treating Urinary Incontinence[4]		
Anticholingerics	453	(50.6)
Refer to urologist	543	(60.6)
Other	39	(4.4)
Typically do not treat	19	(2.1)
Treating Sexual Impotence		
Oral agents such as Viagra	541	(60.4)
Refer to urologist	509	(56.8)
Other	36	(4.0)

Table 36: Provider Opinion of Who is Most Appropriate to Give Care to Patient after Prostate Cancer Treatment

Primary care provider		**Treating physician**		**Equally appropriate for both**		**A comprehensive survivorship clinic**	
N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
23	(2.6)	252	(28.1)	298	(33.3)	88	(9.8)

Table 37: Providers Care for Prostate Cancer Survivors

	N	**(%)**
Keep 'Prostate Cancer' listed as an active issue on patient's problem summary list	589	(65.7)
Routinely inquire about incontinence, sexual impotence, and bowel problems	505	(56.3)
Routinely use surveys to measure patient urinary and sexual symptoms	86	(14.3)
Among providers currently not using surveys to measure patient urinary and sexual symptoms, the likelihood of provider to use such survey tools		
Very Likely	53	(10.3)
Somewhat Likely	291	(56.5)
Not Likely	171	(33.2)

---

[4] Note: 'Refer to urologist' and 'typically do not treat' are treated as different responses-respondents who selected both (N=48) were coded as refer to urologist

Comparisons of Survey Years: 1997 vs. 2006

The 2006 version of the KAP survey is an adapted version of the baseline survey conducted in 1997. Even though questions within the 2006 survey were changed, added, or deleted, there are still some areas of comparison between the current and previous survey.

Provider Characteristics, 1997 vs. 2006 (Tables 38-42)

The 2006 survey had a much greater female representation than in the previous survey. The 2006 survey also had an older population with 64.8% of providers being over 45 years compared to only 46.1% in the 1997 survey. There were not any large changes in the percentages of various racial and ethnic groups as well as years since graduating from a medical program in the two survey years.

Since the original survey there has been a decrease in the percentage of physicians who work in solo private practice and an increase in the percentage that work in single specialty group practice and teaching facilities. There has also been an increase in salaried employees of an organization that runs the practice. Providers who reported having 200 or fewer patients in a typical month have also increased while the percentage of providers reporting 500 or greater patients have decreased from 1997 to 2006. Providers also reported fewer CME credits related to cancer screening and prevention than in previous years. Those with 10% or fewer credits have increased by nearly 12% since the 1997 survey.

Organizations that influence providers delivery of day to day services has remained the same between survey years. The American Cancer Society, the National Cancer Institute, and the National Professional Associations (AMA, AOA, etc) remain influential organizations in providers' decision making. Sources of information that were found useful by providers have changed somewhat from survey years. CME events and conferences were found useful by a greater percentage of providers in 2006, however statewide and national consensus development conferences and "state of the science" sheets were found to be useful by a smaller percentage of providers.

In 2006, a greater percentage of providers who use reminder and tracking systems reported using computerized records while a smaller percentage used the flow charts or "tickler files" than in 1997. About the same percentage of providers used reminder wallet cards, phone calls, or cards by mail.

Table 38: Provider Characteristics, 1997 vs. 2006

	1997		2006	
Gender	**N**	**(%)**	**N**	**(%)**
Female	199	(17.4)	400	(46.3)
Male	947	(82.6)	464	(53.7)
Age				
45 Years and Under	611	(53.9)	302	(35.2)
Over 45 Years	523	(46.1)	556	(64.8)
Ethnic or cultural group				
American Indian, Eskimo, Aleut	5	(0.4)	6	(0.7)
Asian or Pacific Islander	121	(10.8)	63	(7.3)
Middle Easterner	25	(2.2)	16	(1.9)
Black/African American	37	(3.3)	25	(2.9)
White/Caucasian	895	(80.0)	720	(83.8)
Hispanic	11	(1.0)	13	(1.5)
Other	25	(2.2)	16	(1.9)
Years Since Graduating Medical Program				
10 or less	284	(25.3)	213	(25.5)
11 to 20	412	(36.8)	220	(26.4)
21 to 30	148	(13.2)	247	(29.6)
More than 30	277	(24.7)	154	(18.5)

Table 39: Characteristics of Medical Practice, 1997 vs. 2006

	1997		2006	
	N	**(%)**	**N**	**(%)**
Type of Medical Practice				
Solo private practice	408	(37.5)	201	(23.3)
Multi-specialty group practice	140	(12.9)	116	(13.5)
Urgent care	25	(2.3)	22	(2.6)
Single specialty group practice	335	(30.8)	316	(36.7)
Teaching facility	92	(8.4)	105	(12.2)
Other	89	(8.2)	102	(11.8)
Salaried Employee of an Organization that Runs the Practice				
Yes	495	(44.6)	453	(52.6)
No	614	(55.4)	409	(47.4)
Number of Patients Treated Monthly				
200 or less	181	(16.7)	294	(36.0)
201 to 399	346	(31.9)	233	(28.5)
400 to 499	240	(22.1)	184	(22.5)
500 to 599	154	(14.2)	63	(7.7)
600 to 999	132	(12.2)	37	(4.5)
1000 plus	33	(3.0)	6	(0.7)
Percentage of Patients 40 Years and Older				
25% or less	60	(5.4)	40	(5.8)
26-50%	427	(38.5)	270	(39.2)
51-75%	406	(36.6)	232	(33.7)
76-100%	216	(19.5)	146	(21.2)

Table 40: CME Credits Related to Cancer Screening and Prevention, 1997 vs. 2006

	1997		2006	
	N	**(%)**	**N**	**(%)**
10% or less	669	(53.9)	589	(65.7)
11-25%	254	(20.4)	135	(15.1)
26% or more	94	(7.6)	35	(3.9)

Table 41: Influences on Provider Delivery of Day to Day Services, 1997 vs. 2006[5]

	1997		2006	
Influential Organizations	**N**	**(%)**	**N**	**(%)**
National Cancer Institute (NCI)	871	(70.1)	575	(64.1)
American Cancer Society (ACS)	983	(79.1)	702	(78.3)
State Professional Associations (MSMS, MAOPS, other)	622	(50.1)	404	(45.0)
National Professional Associations (AMA, AOA, other)	705	(56.8)	567	(63.2)
Influential Sources that are found 'Useful'				
CME events/conferences	1000	(80.5)	750	(83.6)
Findings from statewide consensus development conferences	904	(72.8)	513	(57.2)
Findings from national consensus development conferences	1028	(82.8)	679	(75.7)
1-2 pg "state of the science" sheets	1059	(85.3)	665	(74.1)

Table 42: Provider Use of Reminder Systems for Notifying Patients of Cancer Screening, 1997 vs. 2006[6]

	1997		2006	
	N	**(%)**	**N**	**(%)**
Flow charts or "tickler files"	677	(54.5)	501	(55.9)
Computerized records of patient's status	161	(13.0)	243	(27.1)
Reminder wallet cards to give to patients	110	(8.9)	110	(12.3)
Reminder phone calls	393	(31.6)	257	(28.7)
Reminder cards by mail	541	(43.6)	347	(38.7)

Knowledge, Attitudes, and Practices, 1997 vs. 2006 (Tables 43-51)

The emphasis that providers put on early detection of cancer among asymptomatic patients has not changed from survey years. Since 1997, providers believe DRE to be a less effective means to prevent death from colorectal cancer. The majority of providers still view FOBT as somewhat effective at preventing death from colorectal cancer, however, in 2006, less providers found it be very effective. In 1997, the majority of providers believed the flexible sigmoidoscopy to be very effective in preventing deaths from colorectal cancer, where as in 2006, the majority of providers found the flexible sigmoidoscopy to be only somewhat effective.

---

[5] Note: recoded influence 'somewhat' and 'a great deal' from 1997 data into 1 category for comparison. Those who claimed the organization did not have much influence were compared to the current survey response of having no influence

[6] Note: respondents had the option of selecting more than one choice

The percentage of providers who would never recommend flexible sigmoidoscopy at a fixed interval increased substantially since 1997. Compared to 1997, a greater percentage of providers believe that colorectal cancer screening should be stopped at a certain age and the recommended age at which colorectal cancer screening would cease, has remained at approximately 80 years from 1997 to 2006.

Of the colorectal cancer screening tests that providers would recommend African Americans to have more frequently than the general population, the FOBT was recommended by more physicians in 2006 than in 1997 and the flexible sigmoidoscopy was recommended by less physicians in 2006 than in 1997. Of the prostate cancer screening tests that providers would recommend African American men to have more frequently than men within the general population, both the DRE and PSA tests were recommended by more physicians in 2006 than in 1997.

Between survey years, there has been a slight change in the public level factors providers find important for explaining low levels of screening. In 1997 the top three factors identified as important to low screening levels were "lack of perceived need to be screened", "fear of pain and discomfort during the procedure", and "fear of learning they have cancer". In 2006 the top three identified patient factors were "fear of pain or discomfort during the procedure", "embarrassment/offensiveness of the procedure", and "lack of perceived need to be screened". Provider level factors have remained similar between survey years in that the top three factors mentioned by providers were "not all providers agree with screening guidelines", "lack of time", and "insufficient reimbursement for screening". Among these factors there has been an increase in the response to lack of time and lack of agreement with standard screening guidelines since 1997. There has also been a decline in the percentage of providers that feel that "low confidence in treatment for colorectal cancer" and "assuring patient follow up as too time consuming" identified as important factors in explaining low screening rates.

Table 43: Provider Attitude Towards Early Detection of Cancer in Asymptomatic Patients Compared to Five Years Ago, 1997 vs. 2006

	1997		**2006**	
	N	**(%)**	**N**	**(%)**
Greater emphasis	732	(66.2)	531	(64.0)
Less emphasis	26	(2.4)	12	(1.4)
About the same	348	(31.5)	287	(34.6)

Table 44: Provider Beliefs of the Effectiveness of Colorectal Cancer Screening Procedures in Preventing Death by Test and Patient Age Group, 1997 vs. 2006[7]

	Not Effective				**Somewhat Effective**				**Very Effective**			
	1997		**2006**		**1997**		**2006**		**1997**		**2006**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
DRE: 50-65	263	(21.5)	279	(31.6)	646	(52.7)	496	(56.1)	11	(25.8)	109	(12.3)
DRE: 65+	233	(19.0)	275	(31.2)	622	(50.8)	479	(54.4)	370	(30.2)	127	(14.4)
FOBT: 50-65	150	(12.2)	72	(8.1)	728	(59.0)	637	(72.0)	356	(28.8)	176	(19.9)
FOBT: 65+	136	(11.0)	65	(7.4)	697	(56.5)	638	(72.3)	401	(32.5)	180	(20.4)
Flex Sig: 50-65	32	(2.6)	54	(6.2)	464	(38.1)	594	(67.7)	722	(59.3)	230	(26.2)
Flex Sig: 65+	28	(2.3)	53	(6.1)	439	(36.0)	594	(67.8)	753	(61.7)	229	(26.1)

Table 45: Recommended Screening Intervals by Provider for the Early Detection of Colorectal Cancer by Test and Age Group, 1997 vs. 2006[8]

	Annually				**Every 2 Years**				**No Fixed Interval**				**Never Recommend**			
	1997		**2006**		**1997**		**2006**		**1997**		**2006**		**1997**		**2006**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
FOBT																
50-65 Yrs	935	(81.9)	713	(80.7)	106	(9.3)	60	(6.8)	45	(3.9)	39	(4.4)	29	(2.5)	54	(6.1)
65+ Yrs	1008	(88.3)	731	(83.1)	51	(4.5)	46	(5.2)	40	(3.5)	39	(4.4)	27	(2.4)	56	(6.4)
Flex Sig																
50-65 Yrs	125	(11.1)	9	(1.0)	204	(18.1)	27	(3.1)	129	(11.4)	82	(9.3)	30	(2.7)	426	(48.4)
65+ Yrs	201	(17.8)	13	(1.5)	170	(15.1)	23	(2.6)	132	(11.7)	83	(9.4)	2.5	(2.7)	430	(48.9)

Table 46: Provider Belief that Colorectal Cancer Screening Should Stop at Any Age, 1997 vs. 2006

	No Age to Stop Recommending Screening				**Stop Recommending at Some Age**			
	1997		**2006**		**1997**		**2006**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
FOBT	998	(80.4)	607	(67.7)	117	(9.4)	189	(21.1)
Sigmoidoscopy	806	(64.9)	310	(34.6)	289	(23.3)	187	(20.9)

Table 47: Age Recommended by Providers Who Suggest Stopping Colorectal Cancer Screening at Some Point, 1997 vs. 2006

	Mean Age		**Median Age**		**Min**		**Max**	
	1997	**2006**	**1997**	**2006**	**1997**	**2006**	**1997**	**2006**
FOBT	80.1	79.9	80	80	35	40	99	100
Sigmoidoscopy	79.0	79.3	80	80	40	50	99	100

---

[7] Respondents who selected 'don't know' in the current survey were excluded for the purposes of comparison to the 1997 survey, which did not include 'don't know' as an answer choice

[8] Note: Only responses that could be compared between years were included

Table 48: Provider Beliefs Regarding the Effectiveness of Prostate Cancer Screening Procedures in Preventing Death by Test and Age Group, 1997 vs. 2006[9]

	Not Effective				Somewhat Effective				Very Effective			
	1997		2006		1997		2006		1997		2006	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
DRE												
40-49 Yrs	321	(26.6)	239	(29.9)	582	(48.2)	422	(52.8)	304	(25.2)	139	(17.4)
50-65 Yrs	93	(7.6)	112	(13.8)	567	(46.4)	390	(48.2)	461	(45.9)	307	(37.9)
65+ Yrs	128	(10.5)	122	(15.1)	474	(38.9)	380	(47.0)	617	(50.6)	306	(37.9)
PSA												
40-49 Yrs	301	(25.4)	214	(27.0)	473	(39.9)	341	(42.9)	412	(34.7)	239	(30.1)
50-65 Yrs	104	(8.6)	54	(6.7)	458	(38.1)	309	(38.3)	641	(53.3)	443	(55.0)
65+ Yrs	148	(12.3)	82	(10.2)	401	(33.4)	289	(36.0)	651	(54.3)	431	(53.7)

Table 49: Providers Who Agree That African Americans Should to be Screened for Colorectal and Prostate Cancer More Frequently Than the General Population, 1997 vs. 2006

	1997		2006	
	N	(%)	N	(%)
Colorectal Cancer				
FOBT	200	(16.1)	228	(25.4)
Sigmoidoscopy	189	(15.2)	85	(9.5)
Prostate Cancer				
DRE	213	(17.1)	283	(31.6)
PSA	224	(18.0)	311	(34.7)

Table 50: Factors Considered 'Important' by Providers in Explaining Low Levels of Screening for Colorectal and Prostate Cancer Among the Public, 1997 vs. 2006[10]

	1997		2006	
	N	(%)	N	(%)
Fear of learning they have cancer	982	(79.1)	667	(82.8)
Fear of pain or discomfort during the procedure	1032	(83.1)	851	(97.1)
Fear of risks or side effects from the procedure	783	(63.0)	719	(87.3)
Embarrassment/offensiveness of the procedure	970	(78.1)	799	(94.2)
Costs associated with being screened	951	(76.6)	716	(84.7)
Lack of perceived need to be screened	1036	(83.4)	785	(92.7)
Low confidence in or distrust of the medical community	263	(21.2)	239	(34.6)

---

[9] Respondents who selected 'don't know' in the current survey were excluded for the purposes of comparison to the 1997 survey, which did not include 'don't know' as an answer choice

[10] Note: Responses to separate prostate and colorectal questions in the 2006 survey were combined for the purposes of comparison to the 1997 version

Table 51: Factors Considered 'Important' by Providers in Explaining Low Levels of Screening for Colorectal and Prostate Cancer Among the Medical Community, 1997 vs. 2006[5]

	1997		2006	
	N	**(%)**	**N**	**(%)**
Low confidence in effective treatment for colorectal cancers found	594	(47.8)	293	(40.4)
Assuring patient follow up is too time consuming	576	(46.4)	282	(38.8)
Lack of time	795	(64.0)	566	(71.2)
Not all providers agree with standard screening guidelines	857	(69.0)	629	(82.2)
Insufficient reimbursement for screening	801	(64.5)	555	(71.3)

Discussion

Colorectal Cancer

Primary care providers reported that roughly 45% of their patient population is age 50 or older and therefore of the recommended age to be screened for colorectal cancer. Provider responses regarding screening intervals were compared to the Michigan Cancer Consortium's (MCC) recommendations for appropriate colorectal cancer screening[11]. For those who did recommend the various screening tests, FOBT, sigmoidoscopy, and colonoscopy were recommended at the appropriate intervals by the majority. Providers who did recommend DCBE, however, did not recommend it every 5 years as the MCC suggests. It was recommended at no fixed interval by most. Although those who did recommend tests often recommended them at appropriate intervals there were a couple of tests that providers claimed they never recommend to patients. Nearly half of the providers never recommend flexible sigmoidoscopy and nearly 73% never recommend double contrast barium enemas for colorectal cancer screening. These findings suggest that providers are not making recommendations to patients in accordance with screening guidelines. Flexible sigmoidoscopy, FOBT, DCBE, and colonoscopy at the suggested time intervals are all appropriate screening methods.

The majority of providers emphasized fear of pain, embarrassment, and concerns about preparation for colorectal cancer as important reasons for explaining low levels of colorectal cancer screening. Other studies have also found that providers frequently identify these barriers[3]. These factors have all been shown to contribute to lower screening rates; however, patient surveys suggest that a lack of physician recommendation is a greater barrier to colorectal cancer screening[3, 4]. A large proportion of patients will choose to get screened if a provider recommends it to them, despite other potential barriers[4]. These findings demonstrate the need for educating providers regarding the importance of screening recommendation.

---

[11] The MCC's recommendation for colorectal cancer screening is to have either an annual fecal occult blood test (FOBT) or a sigmoidoscopy every five years or a yearly FOBT with a sigmoidoscopy every five years or to have a colonoscopy every ten years or a double contrast barium enema (DCBE) every five years.

Our results also suggest a need for educating providers about the importance of various risk factors for colorectal cancer. Although there are various factors that can place a patient at increased risk of colorectal cancer, not everyone exhibiting these factors would be considered high risk. According to the MCC, those who would fall into the high risk category have family history of familial adenomatous polyposis, family history of hereditary non-polyposis colon cancer, or inflammatory bowel disease. Although the majority of providers selected those risk factors that place patients at high risk, they also selected several other risk factors that increase patient risk, but do not place the patient in the high risk category. This confusion could lead to improper screening practices since screening for those at high risk should be conducted earlier than for those at average or moderate risk.

Prostate Cancer

The American Cancer Society (ACS) recommends that all men begin prostate cancer screening at age 50 and receive a prostate specific antigen (PSA) blood test along with a digital rectal exam. The ACS also recommends that men at high risk begin screening at age 45. High risk men include African Americans and men with a first degree relative who developed prostate cancer before age 65. Men with more than one first degree relative who has developed prostate cancer should begin screening at age 40[5]. Not all providers, however, agree with screening guidelines due to conflicting expert recommendations[5]. There is still not conclusive evidence to support the fact that screening for prostate cancer using the prostate specific antigen test (PSA) reduces mortality[6]. Some providers also do not feel that DRE is an accurate screening test[7].

Although nearly 60% of providers thought that insufficient evidence that screening reduces mortality was an important factor in explaining low rates of cancer screening, several studies suggest that a majority of providers recommend screening to their patients[6, 8-11]. Despite a lack of agreement on appropriate screening, the majority of providers surveyed recommended PSA annually, as well as annual DRE for men 50 older. For men 40-49 those who do recommend PSA generally recommend it annually and for men 30-39 a large proportion do not recommend PSA or DRE, but for those who do they do not recommend it at any fixed interval. For the most part, providers are recommending screening for men age 50 and older in accordance with ACS guidelines; however, our results indicate that providers may be over screening asymptomatic men in younger age groups. Age and family history were the two factors that affected almost all of the respondent’s recommendation for prostate cancer screening. A large proportion (82.3%) also reported making screening decisions after discussing the pros and cons with their patient. The majority of providers did not feel there was an age at which it was necessary to stop screening for prostate cancer. Of those providers who did feel prostate screening should be stopped; the average age was over 79 years old. According to ACS guidelines screening is not recommended for men with less than 10 years of life expectancy[5].

When asked about various factors that contribute to low rates of prostate cancer screening. Patient level factors were selected in greater proportions than factors related to the medical community. Some factors identified by the majority of providers, however, could be addressed by a primary care giver. Providers have the unique opportunity to address barriers such as, lack of perceived need to be screened and lack of patient knowledge. According to providers, however, there may first be system level barriers that need to be addressed. In order for providers to successfully communicate with their patients about prostate cancer screening, it is important to address system level barriers, such as better tracking and reminder systems, as well as conflicting guidelines for prostate cancer screening.

A large number of providers continue to see patients after diagnosis and treatment for prostate cancer and over half of primary care providers feel that it is equally appropriate for either themselves or the specialist to treat survivors. Although a large proportion of these providers report treating symptoms during and after treatment, only a small proportion report feeling very comfortable treating these symptoms. Almost all of these providers reported that their patients continued to see their specialist regularly in the first year following treatment and the majority felt that good communication was provided. There is, however, still room for improvement. Approximately 20% of primary care providers did not feel that treating specialists gave them details regarding treatment complications and did not clearly express management.

Not only is it important for the treating specialist to properly communicate with primary care providers, but it is also important for primary care providers to be educated on the various side effects of treatment and best methods of managing them. Although almost all providers keep ‘prostate cancer’ listed as an active issue on their patient problem summary list, some providers report that they do not even routinely inquire about symptoms related to treatment that the patient may be experiencing. This further emphasizes the need for providers to continue to be informed about survivorship issues.

Comparison of Survey Years

Provider beliefs in the effectiveness of certain colorectal cancer screening procedures in preventing death have shifted from the previous survey year. A substantially smaller percentage of providers viewed FOBT and flexible sigmoidoscopy as very effective, although both tests were still viewed as somewhat effective in preventing death from colorectal cancer by providers in 2006. The shift in the perceived effectiveness of both tests may be a result in the increased percentage of providers who perceived colonoscopy to be very effective. In 2006, colonoscopy was the only test the majority of providers believed to be very effective at preventing death from colorectal cancer, with over 90% of providers believing this to be true for both age groups. Because colonoscopy allows for detection and removal of premalignant lesions throughout the colon and rectum, it is considered the gold standard among colorectal cancer screening procedures.

Although there are gaps in the data for comparison of survey years for screening intervals recommended by providers, what we can note is that FOBT was recommended on an annual basis by the majority of providers in 1997 and 2006. The recommended screening interval for flexible sigmoidscopy did differ between 1997 and 2006 survey years. Nearly fifty percent of providers reported they would never recommend flexible sigmoidoscopy at a regular interval in 2006, which suggest a lack of knowledge among providers of the intervals recommended within the ACS colorectal cancer screening guidelines for flexible sigmoidoscopy that was not seen in 1997 or, that in 2006, providers are less likely to recommend flexible sigmoidoscopy over an alternative screening procedure.

The majority of providers in both surveys felt that there wasn't a need to recommend that African Americans be screened for colorectal or prostate cancers more frequently than the general population, which is in accordance with cancer screening guidelines. Colorectal cancer screening guidelines from the ACS and the MCC do not indicate a need for colorectal cancer screening at an increased frequency for African Americans. The ACS guidelines for prostate cancer screening do indicate that African American men are considered at high risk and should have an annual PSA or DRE at an earlier age but not at a greater frequency than average risk men.

Patient level factors considered important by providers in explaining low levels of screening for colorectal and prostate cancer remained similar between survey years. In 2006, a greater percentage of providers found the fear of risks or side effects from the procedure and embarrassment/offensiveness of the procedure than in 1997. Factors considered important by providers in explaining low levels of screening for colorectal cancer and prostate cancer among the medical community remained similar between surveys years. Not all providers agreeing with screening guidelines, lack of time, and insufficient reimbursement for screening with the top three identified factors in both survey years.

Recommendations

Although many providers are aware of appropriate colorectal cancer screening guidelines, there is still a large portion of their patient population who is not getting appropriately timed screening tests. The importance of having patients get any appropriately timed screening test should be emphasized to providers, especially those who may not recommend all of the available screening options. In order to facilitate discussion between providers and patients regarding colorectal cancer screening, other system level barriers must also be addressed. These system level barriers include lack of reminder and tracking systems, insufficient reimbursement for screening, and lack of time during regular office visits.

A lack of perceived need to be screened for colorectal cancer was one barrier that nearly 81% if providers identified as a patient level barrier. Asymptomatic patients may be unaware that they need colorectal cancer screening even if they are not exhibiting symptoms or if they feel healthy. Providers have the opportunity to play a key role in educating their patients about the importance of screening and informing their patients that everyone is at risk for colorectal cancer. Providers should be made aware of the impact their recommendation has on colorectal cancer screening for their patients.

For prostate cancer, continued education for providers regarding treatment side effects and their management could improve care for patients. Most providers report being at least somewhat likely to use a survey tool to measure patient symptoms if it were available. Creating effective tools to measure patient symptoms, as well as making them more accessible to providers may help to improve provider methods of treating side effects. Providers should also be educated on the emotional, as well as physical side effects that patients may experience and effective treatment.

Expert recommendations regarding appropriate screening for prostate cancer are still conflicting and it is important to work on developing a consensus regarding guidelines. It is important to clarify screening guidelines and appropriate timing for primary care providers because provider recommendation can have appositive impact on patient choice to get screened.

Study Limitations

The main limitation to our study was the limited response. Physician participation in surveys is generally lower than that of the general population[12, 13]. Reaching physicians can be difficult because they have several demands on their time, as well as administrative staff to ensure interruptions are minimized. Unlike the 1997 survey, our follow up was not as extensive due to the large survey population. It was not possible to mail another copy of the survey due to cost unless a provider requested another copy. Although an attempt was made at random follow up calls, this was largely unsuccessful due to limited staff to make calls, several address changes, disconnected numbers, and physicians being busy with patients during the day. Phone numbers were also not available for nurse practitioners, physician assistants, and a portion of the physicians. An attempt was made to send follow up emails as well, but many of the addresses were incorrect and the updated version of the database excluded email addresses.

Survey length was another factor that may have contributed to the lower response rate. The survey tool was quite lengthy and many providers who did complete the survey commented on the length. Because of the size of the mailing it was not possible to offer all participants an incentive and therefore they may have been less willing to complete the survey. Other studies have demonstrated the positive effect of an incentive on survey response[13].

References

1. *Special Cancer Behavioral Risk Factor Survey, 2006. Michigan Department of Community Health and Michigan Public Health Institute. {Online} Available at http://www.michigancancer.org/PDFs/MCCReports/MCCReports-SCBRFS-2004-012606.pdf.*
2. Haylock, P.J., *The shifting paradigm of cancer care. The many needs of cancer survivors are starting to attract attention.* Am J Nurs, 2006. **106**(3 Suppl): p. 16-9.
3. Klabunde, C.N., et al., *Barriers to colorectal cancer screening: a comparison of reports from primary care physicians and average-risk adults.* Med Care, 2005. **43**(9): p. 939-44.
4. Etzioni, D.A., et al., *A population-based study of colorectal cancer test use: results from the 2001 California Health Interview Survey.* Cancer, 2004. **101**(11): p. 2523-32.
5. Kim, H.L., et al., *Practice trends in the management of prostate disease by family practice physicians and general internists: an internet-based survey.* Urology, 2002. **59**(2): p. 266-71.
6. Evelyn, C.Y., et al., *Brief Report: Physicians and Their Personal Prostate Cancer-screening Practices with Prostate-specific Antigen. A National Survey.* J Gen Intern Med, 2005. **21**: p. 257-259.
7. Curran, V., et al., *Prostate cancer screening attitudes and continuing education needs of primary care physicians.* J Cancer Educ, 2005. **20**(3): p. 162-6.
8. Austin, O.J., et al., *Determinants of prostate-specific antigen test use in prostate cancer screening by primary care physicians.* Arch Fam Med, 1997. **6**(5): p. 453-8.
9. Hicks, R.J., R.M. Hamm, and D.A. Bemben, *Prostate cancer screening. What family physicians believe is best.* Arch Fam Med, 1995. **4**(4): p. 317-22.
10. Fowler, F.J., Jr., et al., *Prostate cancer screening and beliefs about treatment efficacy: a national survey of primary care physicians and urologists.* Am J Med, 1998. **104**(6): p. 526-32.
11. Lawson, D.A., et al., *Prostate cancer screening--a physician survey in Missouri.* J Community Health, 1998. **23**(5): p. 347-58.
12. Olmsted, M.G., et al., *Evaluating Methods for Increasing Physician Survey Cooperation.* 2005. Paper presented at the 60th Annual Conference of the American Association for Public Opinion Research.
13. Kasprzyk, D., et al., *The effects of variations in mode of delivery and monetary incentive on physicians' responses to a mailed survey assessing STD practice patterns.* Eval Health Prof, 2001. **24**(1): p. 3-17.

APPENDIX A: 2006 KAP Survey Tool

SURVEY OF PRIMARY CARE PRACTITIONERS IN MICHIGAN

Practice Patterns and Beliefs Regarding Screening for Colorectal Cancer

Throughout this survey, the term "*screening*" refers to any procedure used to detect cancer in patients who are (a) asymptomatic and (b) at **average** risk for getting cancer.

1. How effective do you believe the following screening procedures are in the **prevention of deaths** from colorectal cancer? (*Please circle the number that relates to your response*)

Procedure	Not Effective	Somewhat Effective	Very Effective	Don't Know/ No Opinion
Digital Rectal Exam *(The DRE includes single in-office stool sample taken for FOBT)* *For Colorectal Cancer – Women and Men Aged:*				
a. 50-65	☐	☐	☐	☐
b. 65+	☐	☐	☐	☐
Fecal Occult Blood Test *(FOBT is defined as the at-home procedure of collecting two samples from three consecutive bowel movements)* *For Colorectal Cancer – Women and Men Aged:*				
c. 50-65	☐	☐	☐	☐
d. 65+	☐	☐	☐	☐
Flexible Sigmoidoscopy *For Colorectal Cancer – Women and Men Aged:*				
e. 50-65	☐	☐	☐	☐
f. 65+	☐	☐	☐	☐
Colonoscopy *For Colorectal Cancer – Women and Men Aged:*				
g. 50-65	☐	☐	☐	☐
h. 65+	☐	☐	☐	☐
Double Contrast Barium Enema *For Colorectal Cancer – Women and Men Aged:*				
i. 50-65	☐	☐	☐	☐
j. 65+	☐	☐	☐	☐

2. How effective do you believe the following screening procedures are in **reducing incidence (development)** of colorectal cancer? (*Please circle the number that relates to your response*)

Procedure	Not Effective	Somewhat Effective	Very Effective	Don't Know/ No Opinion
Flexible Sigmoidoscopy				
For Colorectal Cancer – Women and Men Aged:				
e. 50-65	☐	☐	☐	☐
f. 65+	☐	☐	☐	☐
Colonoscopy				
For Colorectal Cancer – Women and Men Aged:				
g. 50-65	☐	☐	☐	☐
h. 65+	☐	☐	☐	☐

3. If a fecal occult blood test shows an abnormal result, what do you usually recommend as a follow up test?

Follow up test	Yes	No
a. flexible sigmoidoscopy	☐	☐
b. colonoscopy	☐	☐
c. double contrast barium enema	☐	☐
d. repeat FOBT	☐	☐

4. Which interval of time corresponds best to your policy for recommending *(this includes referring patients for screening somewhere other than your own office)* each of the following procedures as a means for screening asymptomatic patients? (*Please circle the number that relates to your response*)

Procedure	Annually	Every 2 Years	Every 5 Years	Every 10 Years	No Fixed Interval	Never Recommend
Fecal Occult Blood Test						
(FOBT is defined as the at-home procedure of collecting two samples from three consecutive bowel movements)						
For Colorectal Cancer – Women and Men Age:						
a. 50-65	☐	☐	☐	☐	☐	☐
b. 65+	☐	☐	☐	☐	☐	☐
Sigmoidoscopy						
For Colorectal Cancer – Women and Men Age:						
c. 50-65	☐	☐	☐	☐	☐	☐
d. 65+	☐	☐	☐	☐	☐	☐
Colonoscopy						
For Colorectal Cancer – Women and Men Age:						
e. 50-65	☐	☐	☐	☐	☐	☐
f. 65+	☐	☐	☐	☐	☐	☐
Double Contrast Barium Enema						
g. 50-65	☐	☐	☐	☐	☐	☐
h. 65+	☐	☐	☐	☐	☐	☐

5. Is there an age at which you stop recommending *(this includes referring patients for screening somewhere other than your own office)* these procedures for your patients? (*Please circle the appropriate number*)

Procedure	No	Yes	If *Yes*, At What Age?	Not Applicable
a. Fecal Occult Blood Test	☐	☐	⇨	☐
b. Sigmoidoscopy	☐	☐	⇨	☐
c. Colonoscopy	☐	☐	⇨	☐
d. Double Contrast Barium Enema	☐	☐	⇨	☐

6. African-Americans have a higher incidence of and rate of mortality from colorectal cancer than persons of other races. Thus, some experts believe that African-Americans should be screened more aggressively than other segments of the population. Other experts believe that screening guidelines should be based on the broad experiences of the "average" patient, regardless of race or other factors related to risk.

a. In general, do you believe African-Americans ought to be screened at *an earlier age* than the rest of the population? (*Please check*)

Yes	No	If Yes, at What Age
☐	☐	_____

b. In general, do you believe African-Americans ought to be *screened more frequently* than the rest of the population using the following tests? (*Please check*)

	Yes	No
a. Fecal Occult Blood Test	☐	☐
b. Sigmoidoscopy	☐	☐
c. Colonoscopy	☐	☐
d. Double Contrast Barium Enema	☐	☐

c. What other adjustments to standard screening guidelines do you think ought to apply for African- Americans? (*Please describe below*)

7. National surveys show that the general public is not screened on a regular basis for colorectal cancer. In the geographic area in which you practice, how important would you say the following factors are in explaining why people are not up-to-date in being screened for colorectal cancer?

Importance of <u>Factors Related to the Public</u> in Explaining Low Levels of Screening for Colorectal Cancer	<u>Important</u>	<u>Not Important</u>	<u>Don't Know</u>
a. Fear of learning they have cancer	☐	☐	☐
b. Fear of pain or discomfort during the procedure	☐	☐	☐
c. Fear of risks or side-effects from the procedure	☐	☐	☐
d. Embarrassment/offensiveness of procedure	☐	☐	☐
e. Costs associated with being screened	☐	☐	☐
f. Lack of perceived need to be screened	☐	☐	☐
g. Low confidence in or distrust of medical community	☐	☐	☐
h. Concerns about preparation for the test	☐	☐	☐
i. Lack of transportation	☐	☐	☐
j. Not having someone to go with them (esp. for colonoscopy)	☐	☐	☐
k. Language barriers	☐	☐	☐
l. Other (*Please specify*) __	☐	☐	☐

Importance of <u>Factors Related to the Medical Community</u> in Explaining Low Levels of Screening for Colorectal Cancer	<u>Important</u>	<u>Not Important</u>	<u>Don't Know</u>
a. Low interest in prevention	☐	☐	☐
b. Low confidence in effective treatment for colorectal cancers found	☐	☐	☐
c. Assuring patient follow-up is too time-consuming	☐	☐	☐
d. Lack of time (competing interest between prevention and treatment of acute illness)	☐	☐	☐
e. Not all providers agree with standard screening guidelines	☐	☐	☐
f. Lack of training in delivering preventive services	☐	☐	☐
g. Insufficient reimbursement for screening	☐	☐	☐
h. Lack of reminder and tracking system	☐	☐	☐
i. Lack of case management	☐	☐	☐
j. Other (*Please specify*) __	☐	☐	☐

8. What do you think would encourage greater numbers of average risk men and women in your area to be screened more regularly for colorectal cancer?

9. What do you think would encourage more physicians to discuss regular colorectal cancer screening with their patients?

10. Although there are various risk factors that increase the risk for colorectal cancer, not everyone exhibiting risk factors is considered **high risk**. Which of the risk factors below do you think should qualify a patient as being at **high risk** for developing colorectal cancer?

Risk Factor	Yes	No
a. older age	☐	☐
b. high fat, low fiber diet	☐	☐
c. other diet related factors	☐	☐
d. alcohol	☐	☐
e. not enough exercise	☐	☐
f. race	☐	☐
g. family history of colorectal cancer	☐	☐
h. polyps/growths	☐	☐
i. smoking	☐	☐
j. stress	☐	☐
k. not getting exams/ignoring symptoms	☐	☐
l. constipation/irregular bowel movements	☐	☐
m. environmental pollutants	☐	☐
n. related sexual activities	☐	☐
o. inflammatory bowel disease	☐	☐

SURVEY OF PRIMARY CARE PRACTITIONERS IN MICHIGAN

Practice Patterns and Beliefs Regarding Screening and Follow Up For Prostate Cancer

Throughout this survey, the term "*screening*" refers to any procedure used to detect cancer in patients who are (a) asymptomatic and (b) at **average** risk for getting cancer.

1. How effective do you believe the following screening procedures are in the **prevention of deaths** from prostate cancer? (*Please circle the number that relates to your response*)

Procedure	Not Effective	Somewhat Effective	Very Effective	Don't Know/ No Opinion
Digital Rectal Exam				
For Prostate Cancer – Men Aged:				
a. 30-39	☐	☐	☐	☐
b.40-49	☐	☐	☐	☐
c. 50-65	☐	☐	☐	☐
d. 65+	☐	☐	☐	☐
Prostate-Specific Antigen Test				
For Prostate Cancer-Men Aged:				
e. 30-39	☐	☐	☐	☐
f. 40-49	☐	☐	☐	☐
g. 50-65	☐	☐	☐	☐
h. 65+	☐	☐	☐	☐

2. How effective do you believe the following screening procedures are in **reducing incidence** of prostate cancer? (*Please circle the number that relates to your response*)

Procedure	Not Effective	Somewhat Effective	Very Effective	Don't Know/ No Opinion
Digital Rectal Exam				
For Prostate Cancer – Men Aged:				
a. 30-39	☐	☐	☐	☐
b. 40-49	☐	☐	☐	☐
c. 50-65	☐	☐	☐	☐
d. 65+	☐	☐	☐	☐
Prostate-Specific Antigen Test				
For Prostate Cancer – Men Aged:				
e. 30-39	☐	☐	☐	☐
f. 40-49	☐	☐	☐	☐

g. 50-65	☐	☐	☐	☐
h. 65+	☐	☐	☐	☐

3. Which factors influence your decision on who you recommend prostate cancer screening for?

Influential Factors	Yes	No
a. Age	☐	☐
b. Co-morbid conditions	☐	☐
c. Race (i.e. African American)	☐	☐
d. Patient	☐	☐
e. Family History	☐	☐
f. Mutual decision after discussion of pros and cons	☐	☐
g. Life expectancy	☐	☐
h. Geographic location	☐	☐
i. Testosterone use	☐	☐
j. Other *(Please Specify)*__	☐	☐

4. Which interval of time corresponds best to your policy for recommending *(this includes referring patients for screening somewhere other than your own office)* each of the following procedures as a means for screening asymptomatic patients? (*Please circle the number that relates to your response*)

Procedure	Annually	Every 2 Years	Every 3-5 Years	No Fixed Interval	Never Recommend
Digital Rectal Exam					
For Prostate Cancer – Men Aged:					
a. 30-39	☐	☐	☐	☐	☐
b. 40-49	☐	☐	☐	☐	☐
c. 50-65	☐	☐	☐	☐	☐
d. 65+	☐	☐	☐	☐	☐
Prostate-Specific Antigen Test					
For Prostate Cancer – Men Aged:					
e. 30-39	☐	☐	☐	☐	☐
f. 40-49	☐	☐	☐	☐	☐
g. 50-65	☐	☐	☐	☐	☐
h. 65+	☐	☐	☐	☐	☐

5. Is there an age at which you stop recommending *(this includes referring patients for screening somewhere other than your own office)* these procedures for your patients? (*Please circle the appropriate number*)

Procedure	No	Yes		If *Yes*, At What Age?	Not Applicable
a. Digital Rectal Exam	☐	☐	⇨	_	☐
b. Prostate-Specific Antigen Test	☐	☐	⇨	_	☐

6. African-Americans have a higher incidence of and rate of mortality from prostate cancer than persons of other races. Thus, some experts believe that African-Americans should be screened more aggressively than other segments of the population. Other experts believe that screening guidelines should be based on the broad experiences of the "average" patient, regardless of race or other factors related to risk.

a. In general, do you believe African-Americans ought to be screened at *an earlier age* than the rest of the population? (*Please check*)

	Yes	No	If Yes, at What Age
	☐	☐	_____ _

b. In general, do you believe African-Americans ought to be *screened more frequently* than the rest of the population using the following tests? (*Please check*)

	Yes	No
1. Digital Rectal Exam	☐	☐
2. Prostate-Specific Antigen Test	☐	☐

c. What other adjustments to standard screening guidelines do you think ought to apply for African- Americans? (*Please describe below*)

7. National surveys show that the general public is not screened on a regular basis for cancer. In the geographic area in which you practice, how important would you say the following factors are in explaining why people are not up-to-date in being screened for prostate cancer?

Importance of <u>Factors Related to the Public</u> in Explaining Low Levels of Screening for Prostate Cancer	<u>Important</u>	<u>Not Important</u>	<u>Don't Know</u>
a. Fear of learning they have cancer	☐	☐	☐
b. Fear of pain or discomfort during the procedure	☐	☐	☐
c. Fear of risks or side-effects from the prostate cancer treatment	☐	☐	☐
d. Embarrassment/offensiveness of procedure	☐	☐	☐
e. Costs associated with being screened	☐	☐	☐
f. Lack of perceived need to be screened	☐	☐	☐
g. Lack of knowledge of appropriate screening practices	☐	☐	☐
h. Confusion about appropriate screening due to conflicting sources of information	☐	☐	☐
i. Low confidence in or distrust of medical community	☐	☐	☐
j. Lack of transportation	☐	☐	☐
k. Language barriers	☐	☐	☐
l. Perceived lack of time to discuss with provider in a typical visit	☐	☐	☐
m. Physicians not recommending screening	☐	☐	☐
n. Other (*Please specify*) _	☐	☐	☐

Importance of <u>Factors Related to the Medical Community</u> in Explaining Low Levels of Screening for Prostate Cancer	<u>Important</u>	<u>Not Important</u>	<u>Don't Know</u>
a. Insufficient evidence that screening reduces mortality	☐	☐	☐
b. Low confidence in effective treatment for prostate cancer found	☐	☐	☐
c. Assuring patient follow-up is too time-consuming	☐	☐	☐
d. Lack of time during the office visit	☐	☐	☐
e. Not all providers agree with standard screening guidelines	☐	☐	☐
f. Insufficient reimbursement for screening	☐	☐	☐
g. Lack of reminder and tracking system	☐	☐	☐
h. Other (*Please specify*) _	☐	☐	☐

8. What do you think providers should tell average risk men in your area about prostate cancer screening?

9. What do you think would encourage more physicians to discuss prostate cancer screening with their patients?

10. Please identify the factors that you believe are most important in determining an individual's chances of getting Prostate Cancer.

Risk Factor	Important	Not Important	Don't Know
a. Older age	☐	☐	☐
b. High fat diet	☐	☐	☐
c. other diet related factors	☐	☐	☐
d. alcohol	☐	☐	☐
e. not enough exercise	☐	☐	☐
f. race (i.e. African American, Hispanic etc.)	☐	☐	☐
g. family history of prostate cancer	☐	☐	☐
h. smoking	☐	☐	☐
i. stress	☐	☐	☐
j. not getting exams/ignoring symptoms	☐	☐	☐
k. environmental pollutants	☐	☐	☐

11.

a. Do you continue to provide primary care to men during and after prostate cancer diagnosis and treatment?

	If yes, answer sections b-l Yes	*If no, then the skip to general section* No
	☐	☐

b. What kind of care or treatment do you provide? ***(Check all that apply)***

	Yes	No
1. Help decide best treatment	☐	☐
2. Symptom management during treatment	☐	☐
3. Symptom management after treatment	☐	☐
4. Counseling with family/ partner	☐	☐
5. Periodic monitoring *(If yes, Please describe how)* _ ___________________________________	☐	☐

c. Do you feel that the treating physician (urologist or oncologist) adequately communicated with you during you patient's prostate cancer treatment?

	Yes	No
	☐	☐
If Yes to part c)		
1. Was a clear plan provided?	☐	☐
2. Were details regarding treatment complications and their management clearly expressed?	☐	☐

d. Do you feel comfortable in taking care of the following symptoms/complications that arise from prostate cancer treatment?

	Very uncomfortable	Somewhat uncomfortable	Somewhat comfortable	Very Comfortable
1. Incontinence	☐	☐	☐	☐
2. Impotence	☐	☐	☐	☐
3. Bowel Problems	☐	☐	☐	☐
4. Psychosocial Concerns	☐	☐	☐	☐
5. Other (Please Specify)__	☐	☐	☐	☐

e. What would trigger referral of a patient back to specialty care? ***(Check all that apply)***

	Yes	No
1. Rising PSA level	☐	☐
2. Patient Request	☐	☐

f. How do you typically treat urinary incontinence after treatment?

	Yes	No
1. Anticholingerics	☐	☐
2. Refer to urologist	☐	☐
3. Other (Please Specify)___	☐	☐
4. Typically do not treat	☐	☐

g. How do you typically treat sexual impotence after treatment?

	Yes	No
1. Oral agents such as Viagra	☐	☐
2. Refer to urologist	☐	☐
3. Other (Please Specify)__	☐	☐

h. Does your typical prostate cancer patient follow up with the treating physician (urologist or oncologist) regularly during the first year after treatment?

	Yes	No
	☐	☐

i. Do you feel it is appropriate for you to provide care related to the prostate cancer and/ or treatment complications or do you feel it is more appropriate for the treating physician to take care of such issues? *(Check most appropriate answer-select only 1 answer)*

1. More appropriate for me to provide care	☐
2. More appropriate for treating physician to provide care	☐
3. Equally appropriate for either to provide care	☐
4. There should be a comprehensive survivorship clinic that addresses the consequences of treatment	☐

j. Do you keep ‘prostate cancer’ on your patients’ problem summary lists as an active issue after treatment?

	Yes	No
	☐	☐

k. Do you routinely inquire about urinary incontinence, sexual impotence and bowel problems related to cancer treatment?

	Yes	No
	☐	☐

l. Do you routinely use surveys/questionnaires to measure patient urinary and sexual symptoms?

	Yes	No
	☐	☐

	Not likely	Somewhat likely	Very likely

1. If no, how likely would you be to use such a resource if it were available? 2. If yes, please list the survey that you use	☐	☐	☐

KAP Survey General Section

1. How do the following organizations influence your day-to-day delivery of preventive services for cancer? (*Check all that apply*)

Organization ***(Check all that apply)***	Conference	Website	Print Material	Not Relevant
a. National Cancer Institute (NCI)	☐	☐	☐	☐
b. American Cancer Society (ACS)	☐	☐	☐	☐
c. State Professional Associations (MSMS, MAOPS, other)	☐	☐	☐	☐
d. National Professional Associations (AMA, AOA, other)	☐	☐	☐	☐
e. Michigan Cancer Consortium (MCC)	☐	☐	☐	☐
f. HEDIS measures	☐	☐	☐	☐
g. Michigan Quality Improvement Consortium (MQIC)	☐	☐	☐	☐
h. Other (*Please specify*)	☐	☐	☐	☐

2. We'd like to find out how you prefer to get information. If the following were made more readily available to you, would you expect they would be useful in helping to keep you up-to-date on topics related to colorectal and prostate cancer screening and prevention? (*Please circle the appropriate response*)

Source of Information	Not Useful	Useful
a. CME events/ conferences	☐	☐
b. Findings from statewide consensus development conferences	☐	☐
c. Findings from national consensus development conferences	☐	☐
d. Medical Association newsletters	☐	☐
e. One-to-two page "state-of-the-science" sheets	☐	☐
f. Palm Pilots, Blackberries, etc.	☐	☐
g. Journals	☐	☐
h. Audio-visual materials	☐	☐
i. Internet	☐	☐
j. Listserv messages and updates	☐	☐
k. Other (*Please specify*)	☐	☐

3. Do you use any of the following systems to remind you or your patients when they are due to be screened? (*Please circle the number that relates to your response*)

System Used to Remind Patients of Need to be Screened	Yes	No	Not Relevant
a. Flow charts or "tickler" files to let myself or staff know whether patients are due for screening and/or education about cancer	☐	☐	☐
b. Computerized records of my patients' status	☐	☐	☐
c. Reminder wallet cards to give to patients	☐	☐	☐
d. Reminder phone calls	☐	☐	☐
e. Reminder cards by mail	☐	☐	☐
f. Other (*Please specify*)	☐	☐	☐

We would like to close by finding out a bit about you and your practice.

4.

a. With what ethnic or cultural group do you identify yourself? (*Please check*)

____ a. American Indian, Eskimo, Aleut
____ b. Asian or Pacific Islander
____ c. Middle Easterner
____ d. Black/African American
____ e. White/Caucasian
____ f. Hispanic
____ g. Other (*Please Specify*) ___________

b. What is your gender? ____ a. Female ____ b. Male

c. And your age? ____ Years

d. How long has it been since you graduated from medical school? ____ Years

e. Which of the following settings best describes your practice? (*Please check*)

____ a. Solo private practice
____ b. Multi-specialty group practice
____ c. Urgent care
____ d. Single specialty group practice
____ e. Teaching facility
____ f. Other (*Please Specify*) ____________

f. Are you a salaried employee of an organization that runs your practice?

____ a. Yes ____ b. No

g. Do you have an affiliation with a cancer center?

___a. Yes ___b. No

h. Is there a cancer center that you can refer patients to a) within 5 miles__
b) within 5-10 miles___
c) within 10-20 miles___
d) over 20 miles___

5.

5.

a. On average, how many patients do you personally see in a typical month? _____

b. About what percent of your patients are: 40 and above?____% : 50 and above? _____ %

c. About what percent of your patients are cancer survivors (any cancer)?_____%

d. Roughly what percent of your credits for continuing medical education are related to cancer screening and prevention? _____ %

e. In general, would you say you practice early cancer detection in asymptomatic patients with greater or less emphasis than five years ago?
____ a. Greater ____ b. Less ____ c. About the same

We welcome your comments or questions. Please share them with us in the space provided.

Appendix B: Mapping of Survey Respondent Zip Codes

2006 KAP Survey Respondents by Zip Code