

A Community-Based Strategy to Increase Colorectal Cancer Awareness, Prevention, and Early Diagnosis Among African Americans in Seattle and King County

Background to problem: Colorectal cancer (CRC) is a cancer that occurs in the colon and rectum, emerging from precancerous polyps. CRC screening methods can detect such growths, so they can be removed before they become cancerous.¹ In 9 out of 10 cases, CRC occurs in persons 50 years of age and older.² CRC is also a major U.S. health problem. It is the third most common form of cancer in men and women in the United States and the No. 2 leading cause of all U.S. cancer-related deaths, claiming 53,219 lives in 2007 (27,004 men and 26,215 women).^{2,3} Risk factors associated with CRC include a diet high in red meats and low in fiber, being overweight, smoking, heavy alcohol use, low fruit and vegetable intake, and lack of physical activity.^{2,4}

The U.S. Centers for Disease Control and Prevention (CDC) notes that were everyone 50 years of age or older to receive regular screening tests, up to 6 in 10 deaths from CRC could be prevented.¹ The CDC currently recommends that all persons 50 years of age and older get screened. The tests include fecal occult blood testing (FOBT) (once a year), sigmoidoscopy (every 5 years), and colonoscopy (every 10 years).¹ Those who may need testing earlier include those with relatives with CRC polyps, with inflammatory bowel disease, or with a genetic predisposition for CRC.¹

However, screening remains a problem for all persons over 50 years of age, regardless of race. Two national surveys (the Behavioral Risk Factor Surveillance System [BRFSS] and the National Health Interview Survey) find that among persons 50 years of age or older, the age category for whom screening is recommended, screening prevalence is low. Only 64% of those who should be getting screening tests for CRC are doing so within screening intervals.⁵ In Washington state, those who had health insurance, a personal doctor, and a care provider with whom CRC screening was discussed were more likely to have been screened for CRC.⁴

The burden of CRC falls most heavily on some minority groups. African-Americans have the highest CRC incidence and mortality rates of all ethnic groups nationally.⁶ (See appendix 1, table 4.) In Washington state, CRC incidence rates for African Americans are the second highest of all ethnic groups after American Indians/Alaska Natives (56/ and 58/100,000 respectively, compared to 47/100,000 for whites).⁴ While Washington ranks well nationally in terms of CRC screening (15th from the top)⁷, more can still be done to encourage African Americans to seek CRC screening. Since 1985, CRC rates nationally dropped from 25% to 20% for whites, while they rose for African American men and held steady for African American women (see appendix 1, tables 1 and 4). African Americans are 38% to 43% more likely to die of colon cancer than whites, and they tend to be diagnosed at a later stage and have worse prognoses than whites.⁸ What's more, CRC risk in persons younger than 50 years of age is higher among African Americans than whites.⁸

Lack of CRC knowledge and fear are major barriers to screening.⁸ Much research also has documented the importance of doctors' recommendations for CRC screening, and studies on racial/ethnic differences in CRC screening have found that physicians are less likely to recommend screening to minority patients or those with lower education levels.^{6,7} Socioeconomic factors, educational status, different beliefs, and lack of physician recommendations account for many of the observed disparities.⁸ In Washington state, barriers to screening include fear of the procedures, physician practices, and lack of insurance and cost.⁴ However, African Americans who followed

guidelines had more positive beliefs about the benefits of screening and tended to receive more physician recommendations and have better insurance status.⁸

What is the overall goal: The goal of the program organized by the Carolyn Downs Family Medical Center (CDFMC), a community health center, and Public Health Seattle & King County (PHSKC) is to increase CRC awareness, prevention, and early diagnosis (as recommended by the CDC) among African Americans in King County 50 years of age and older. Though African Americans in Washington have lower CRC incidence and mortality rates than their peers nationally (see appendix 1, tables 2 and 3), with the exception of mortality rates among African American Washington women, the CRC disparities between African Americans and other ethnic groups in King County and in Washington merit intervention.

Framing the goal with community input: The preliminary stage, before the proposal can be written between the CDFMC and PHSKC, will be a focus group with African American community leaders, organized through the CDFMC and attended by the CDFMC health planner and Joe Jackson of PHSKC, to determine the community's understanding of CRC and to determine if the screening barriers identified in research correspond to experiences locally. This approach, similar to James Prochaska's transtheoretical model for individual behavior change, uses a community readiness for change model, which begins first by gauging community knowledge. To succeed in achieving community change, there must be greater knowledge of the problem, leadership, and funding for prevention, as well as community input in piloting the model.⁹ For the focus group, 5 African American leaders identified by the CDFMC will be confirmed along with members of 3 participant groups, which are described in the *partner roles* section of this paper (the Greater Seattle Chapter of the Links, the Mary Mahoney Professional Nurses Organization, and members of at least one African American Greek fraternity group). (It is assumed the partners will join this effort.)

Proposed target audience segments: The wider target audience for this intervention is the larger African American community in King County and Seattle, 50 years of age and older, as this proposal is for a community-based intervention. Data from the 2010 Census show African Americans make up 6.2% of King County's population, many who live in Seattle and south King County.¹⁰ A secondary audience to target are all community health centers in King County and the Valley Medical Center, a public hospital district that runs 8 primary care facilities in much of south King County. The facilities will play a critical role in providing screening education and follow-up messaging to all African American patients via CRC screening reminders to be mailed to all African American patients 50 years of age and older.

Intervention strategy/rationale: The campaign will be a 2-year, county-wide community education campaign that builds upon CDC's national campaign called "Screen for Life." It will work with King County community health centers and the Valley Medical Center clinics, African American churches, African American-owned beauty businesses, public events attended by African Americans in King County, and multiple media. The campaign messages will:

- Educate African American men and women 50 years of age and older that they are at a higher risk of developing CRC and dying from CRC than any other ethnic group in the United States.⁸
- Educate African Americans that CRC screening saves lives and can help to prevent CRC, a major health risk to the community.⁵
- Provide information on the importance of routine and recommended CRC screening as a means of detecting precancerous CRC polyps before they become cancerous and deadly.⁵
- Provide information that CRC screening is important because some polyps or cancer in the colon do not always show symptoms.⁵

- Provide information on the recommended forms of screening available.
- Provide information that, for persons who are Medicare eligible, coverage begins at age 50 for the most common CRC screening tests.⁵

The local campaign will use multiple media platforms: radio and TV PSAs, print ads, the Internet, and printed materials. It also will leverage existing online resources of PHSKC, which already features CRC call hotlines, education materials, and a CRC PSA by noted actor Terrence Howard.¹¹ The messaging, to be created by PHSKC, will be designed for the target audience in consultation with the CDFMC, as there is general agreement among researchers that culturally appropriate CRC messaging should be used.^{12,13} Communications campaigns using PSAs to deliver colorectal health advocacy messages, though expensive, have proven to be an effective means of encouraging behavior change, when broadcast media messages are backed by secondary messaging like printed matter.¹⁴ Evidence shows that peripheral approaches for materials packaged for the target audience (distinct photographs and titles, such as “a guide for African Americans”) will appeal more to an identified audience. Evidence statements in materials that indicate higher rates of CRC in the target audience also are recommended, as well as socio-cultural messages that appeal to the audience.¹² These will be design elements incorporated into materials developed for community education. At the policy level, the campaign will, if funded, provide free screening to low-income uninsured, and underinsured residents in King County. Ideally for a true socio-ecological approach, upstream policy interventions, including advocacy for funding in Olympia to support local community health initiatives like this campaign, would be pursued. This campaign intentionally will not include that upstream focus due to an analysis of the state’s serious budget crisis.

Involvement of the targeted community of African Americans 50 years of age and older—those at high risk of CRC—as partners in the intervention and in the delivery of the services will be essential for this CRC awareness, prevention, and early diagnosis program to work, given that member involvement of the target communities creates empowerment and ownership of the intervention.¹⁵ The CDFMC will be instrumental in helping PHSKC develop the partnerships for a community campaign. Faith- and community-based culturally targeted CRC education also have been shown to increase CRC knowledge in the African American community and decrease cancer fatalistic attitudes, which are pervasive in that cohort.¹⁶ These elements will be included in the campaign.

Research on racial-ethnic differences in CRC screenings also has found that interventions to eliminate disparities found nationally in CRC screening need to focus on health care settings and patient education about CRC screening.⁶ The intervention strategy in King County and messaging materials also will be designed to address concerns by African Americans, who perceive fewer benefits to screening and who have lower knowledge of CRC.⁶ The American Cancer Society’s evidence-based recommendations to boost CRC screening rates call for: patient-provider consultation about the importance of CRC screening, providing FOBT cards and instructions for patients to use at home, mailed reminders to patients who are due for CRC screening interventions, use of clinic-based systems to help providers counsel eligible patients about screening, and the use of patient navigators to help manage referrals.⁷ The CDC also recommends client reminders, using small media, and reducing structural barriers.¹⁷ Most of these are the approaches that will be laid out in the campaign objectives.

Role of Carolyn Downs and Public Health: CDFMC will assist PHSKC in developing culturally appropriate CRC education materials and PSAs. The CDFMC health planner will be the liaison with the recruited African American service organizations and will participate as a health expert with PHSKC staff at event booths. The CDFMC will organize faith-based outreach events. It will also

organize mailings and distributions of materials to African American beauty-hair salons. PHSKC will organize and handle the development of all media on all platforms, including paid advertising. PHSCK will be involved in booths at all events. PHSKC will spearhead all communications with all community health centers and the Valley Medical Center to develop a consistent health strategy for promoting CRC screening information, follow-up communications to patients, and distribution of information for patients in those settings. PHSKC will be responsible for the two surveys and analysis of the data and will collaborate with CDFMC on published findings.

Partner roles: Prominent African American churches, such as First AME and Mt. Zion, will be approached by the CDFMC health planner to provide speaking opportunities on CRC during the 2 years of the campaign. If successful, outreach to these congregations would include African Americans who had CRC screening and who avoided the cancer, such as Rev. Vaughn Profit-Breaux (featured in PHSK's CRC education materials already). They would speak about their experiences with CRC screening and its importance. "Witnessing," such as these activities, are proven community health education tools.¹⁸ Witness role models will also be invited to attend educational events by health professionals, who provide accessible medical information on prevention and screening methods.

The Greater Seattle Chapter of the Links, an African American professional women's service organization, will be enlisted as a partner to adopt CRC screening message sharing as a 2-year-long community service pledge through its "National Trends and Services Program."¹⁹ This would involve sharing information with the network of black fraternities and sororities in the metro Seattle area in order to commit one or two bodies (preferable a fraternity) to make a similar pledge of service for a year, by educating them that African Americans are more likely to die of colon cancer than whites, and are diagnosed later and have worse prognoses than whites. These organizations include the Alpha Phi Alpha Fraternity, Delta Sigma Theta Sorority, the Phi Beta Sigma Fraternity, and others. Because CRC is a health issue impacting older African Americans, these Greek organizations, which have lifelong members, likely would be receptive to a partnership, as their members frequently hold leadership and business positions in the Seattle and King County and have strong community service pledges.²⁰ Links and the Greek organization members would also man information booths at events well attended by middle-age and older African Americans, such as annual SeaFair activities, Bite of Seattle, and Festival Sundiata (all summer events).

The Puget Sound Affiliate of Susan G. Komen for the Cure will be asked to share CRC materials for African Americans at their fund-raisers and booths they host during their race for the cure events. The Mary Mahoney Professional Nurses Organization, serving African American nurses in the Seattle area, will be contacted to share information with its membership via its email lists and web site about the importance of CRC screening for African Americans 50 years of age and older.

Process, impact, and outcome objectives: (*Note, this intervention will use the CDC's definitions of process, impact, and outcome objectives.*²¹). The campaign will include a pre- and post-test survey to determine if individuals had a FOBT in the past year or a sigmoidoscopy or colonoscopy in the last 5 years (time frames for those tests used nationally in surveys to determine CRC awareness).²² The survey will be conducted at community health centers and Valley Medical Center clinics among African American patients 50 and older. The survey, no more than 2 pages, also will measure fears, beliefs, and attitudes about CRC. It will ask how individuals learned about CRC (from doctors, health providers, friends, media). It will test knowledge of CRC and African Americans' risks associated with CRC. It will ask about barriers to screening and determine if care

providers are educating them about CRC and CRC screening. Lastly it will gather income and insurance data, given these have been identified as barriers in CRC research.⁴ The objectives are:

- At the end of month 1, complete the design of the pre- and post-intervention, 2-page survey instrument to be administered to 400 African Americans receiving care at community health centers and Valley Medical Center clinics. (Process)
- At the end of month 2, complete planning for roles and responsibilities of those clinics and centers in the county-wide CRC awareness campaign, including preliminary consultation messaging to all incoming African American clients 50 and older and the adoption of reminder cards in center and clinic medical records systems. (Process)
- At the end of month 2, administer survey at 6 clinics and centers in Seattle and King county to gather baseline information on CRC awareness and screening in the African American community. (Process)
- At the end of month 3, have developed print materials to be used for health booths, beauty-hair salons, clinics and centers, and all outreach activities. (Process)
- At the end of month 3, roll out PSAs on broadcast media formats (10 radio ads and 5 TV ads all told, staggered over 2 years) and print ads (different each month) in the African American Facts and Seattle Medium newspapers, to continue as budgets allow for 2 years. (Process)
- By the end of month 3, identify list of all African American owned hair-beauty salons (using these 2 newspapers' ads as database references or African American business lists. (Process)
- Between months 6 and 12, mail or deliver CRC education materials to all African American owned hair-beauty salons identified. (Process)
- Between months 6 and 24, 6 African American churches will feature guest speakers (health witnesses) from the African American community on CRC. (Process)
- Between months 3 and 24, host CRC education booths and provide FOBT cards and instructions for patients to use at home at 10 large community events (SeaFair, Festival Sundiata, Bite of Seattle, Bumbershoot etc.), staffed by CDFMC, PHSKC, and one of the community partners recruited to promote CRC awareness. (Process)
- At the end of the first year, all community health centers and Valley Medical Center clinics will have adopted CRC screening reminder systems for African American patients. (Process/Impact)
- At the end of the first year, clinics will have seen 25% increase in African American patients referred for CRC screening, theoretically due to care provider messaging or individual awareness from media or personal sources. (Impact)
- At the end of years 1 and 2, see 25% increase in web hits each year on PHSKC web sites dedicated to CRC for African Americans. (Process/Impact)
- At end of the 2nd year, centers and clinics will have recorded success sending reminders for CRC screening to 80% of their African American clients 50 years and older. (Process/Impact)
- At the end of the 2nd year, centers and clinics will have seen a 40% increase in number of African American clients (from year 1) seeking CRC screening services. (Process/Impact)
- At the end of the 2nd year, conduct post-intervention survey at the same centers and clinics to determine changes in attitudes, CRC awareness, and adoption of screening behaviors. See 30% reduction in negative attitudes fears about CRC screening. See 30% increase in knowledge of CRC and use of screening, like home use of FBOTs. (Impact)
- At the end of year 3 (after intervention has ended), PHSKC surveys all centers and clinics to determine if 95% are successfully using reminder notices for CRC screening and initial consultations with African American clients about CRC risks for that community. (Outcome)
- At the end of year 5, incidence of CRC in King County African American residents drops by 10% from 5 years earlier as measured by Washington State Cancer Registry. (Outcome)

Appendix 1

Table 1. Colorectal cancer (CRC) data, 1975-2004, from the National Cancer Institute’s Surveillance, Epidemiology, and End Results (SEER) program.²³

Race	CRC Mortality Rates	5-year CRC Survival Rates
African Americans	24.8/100,000	55.7%
White Americans	17.4/100,000	65.9%

Table 2. Colorectal cancer data, incidence and mortality per 100,000, Washington State, 2003-2007, age adjusted to the 2000 U.S. standard population.⁷

Men

Race	Incidence	Mortality
African Americans	56.6	27.2
White Americans	50.6	18.4

Women

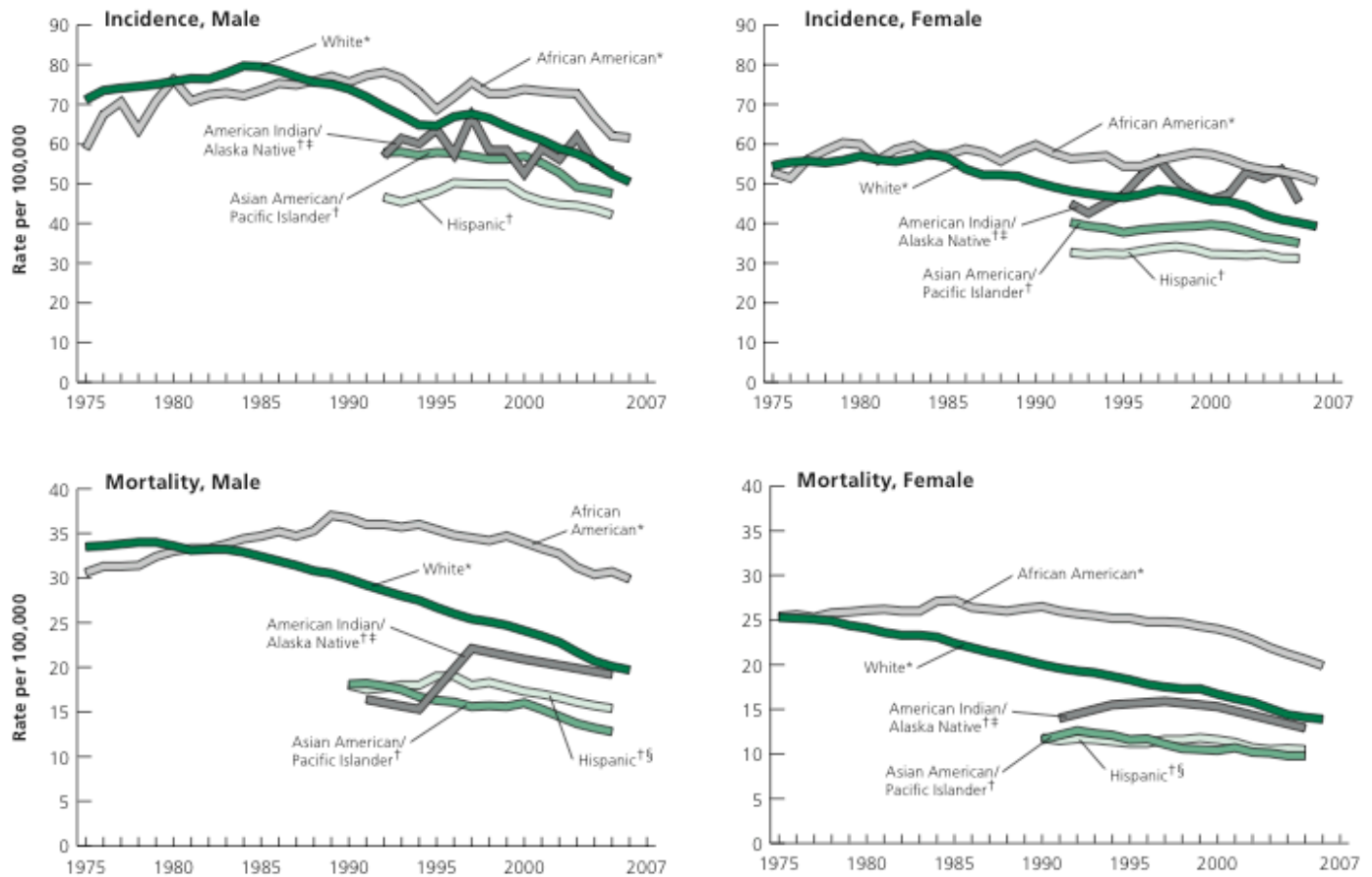
Race	Incidence	Mortality
African Americans	44.2	21.7
White Americans	38.2	13.5

Table 3: Colorectal cancer incidence and mortality rates, per 100,000, by race/ethnicity, in the United States, 2003-2007, age adjusted to the 2000 U.S. standard population.⁷

Race/Ethnicity	Incidence		Mortality	
	Men	Women	Men	Women
Non-Hispanic White	56.8	41.9	20.9	14.6
Non-Hispanic Black	68.3	51.6	30.5	21.0
Asian American/Pacific Islander	42.8	32.5	13.2	9.9
American Indian/Alaska Native†	43.2	34.4	19.2	12.9
Hispanic/Latino	49.2	34.8	15.6	10.5
All persons	57.2	42.5	21.2	14.9

*Per 100,000, age adjusted to the 2000 US standard population.
† Statistics based on data from Contract Health Service Delivery Area (CHSDA) counties.
Source: Incidence: North American Association of Central Cancer Registries. Mortality: National Center for Health Statistics, Centers for Disease Control and Prevention, as provided by the Surveillance, Epidemiology, and End Results Program, National Cancer Institute.

Table 4: Colorectal cancer incidence and mortality rates, per 100,000, by race /ethnicity, in the United States, 1975-2007, age adjusted to the 2000 U.S. standard population.⁷



Rates are per 100,000 and age adjusted to the 2000 US standard population. *Rates are two-year moving averages. †Rates are three-year moving averages. ‡Rates are based on Contract Health Service Delivery Areas; mortality rates are for fixed time intervals: 1990-1992, 1993-1995, 1996-1998, 1999-2002, and 2003-2007. §Due to incomplete data, rates exclude deaths from Connecticut, District of Columbia, Louisiana, Maine, Maryland, Minnesota, Mississippi, New Hampshire, New York, North Dakota, Oklahoma, Vermont, and Virginia.
Sources: Incidence - Surveillance, Epidemiology, and End Results (SEER) Program; Mortality - National Center for Health Statistics, Centers for Disease Control and Prevention, as provided by the SEER Program, National Cancer Institute.

REFERENCES:

1. U.S. Centers for Disease Control and Prevention. *Colorectal cancer screening*. 2011; http://www.cdc.gov/cancer/colorectal/basic_info/screening/. Accessed May 31, 2011.
2. American Cancer Society. *Colorectal cancer overview*. 2011; <http://www.cancer.org/Cancer/ColonandRectumCancer/OverviewGuide/colorectal-cancer-overview-what-causes>. Accessed May 31, 2011.
3. U.S. Centers for Disease Control and Prevention. *Colorectal Cancer Control Program (CRCCP)*. 2011; <http://www.cdc.gov/cancer/crccp/index.htm>. Accessed May 31, 2011.
4. Washington State Department of Health. *Colorectal cancer*. 2008; http://www.doh.wa.gov/hws/doc/CD/CD_CCN2007.pdf. Accessed June 1, 2011.
5. U.S. Centers for Disease Control and Prevention. *Colorectal cancer campaign overview – 2011*. 2011; http://www.cdc.gov/cancer/colorectal/pdf/sfl_backgrounder.pdf. Accessed May 31, 2011.
6. Shokar NK, Carlson CA, Weller SC. Factors associated with racial/ethnic differences in colorectal cancer screening. *J Am Board Fam Med*. Vol 21. United States 2008;414-426.
7. American Cancer Society. *Colorectal cancer facts & figures, 2011-13*. 2011; <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-028323.pdf>. Accessed May 31, 2011.
8. Dimou A, Syrigos KN, Saif MW. Disparities in colorectal cancer in African-Americans vs Whites: before and after diagnosis. *World J Gastroenterol*. Aug 14 2009;15(30):3734-3743.
9. Oetting ER, Jumper-Thurman P, Plested B, Edwards RW. Community readiness and health services. *Subst Use Misuse*. May-Jun 2001;36(6-7):825-843.
10. The Spokesman-Review. *Census 2010: Washington*. 2011; <http://data.spokesman.com/census/2010/washington/counties/king-county-wa/>. Accessed June 1, 2011.
11. Public Health-Seattle & King County. *Colon cancer: preventable. treatable. beatable!* 2011; <http://www.kingcounty.gov/healthservices/health/chronic/colon.aspx>. Accessed May 31, 2011.
12. Thompson VL, Kalesan B, Wells A, Williams SL, Caito NM. Comparing the use of evidence and culture in targeted colorectal cancer communication for African Americans. *Patient Educ Couns*. Vol 81 Suppl. Ireland: 2010 Elsevier Ireland Ltd; 2010:S22-33.
13. Sanchez MA, Bowen DJ, Hart A, Jr., Spigner C. Factors influencing prostate cancer screening decisions among African American men. *Ethn Dis*. Spring 2007;17(2):374-380.
14. Randolph W, Viswanath K. Lessons learned from public health mass media campaigns: marketing health in a crowded media world. *Annu Rev Public Health*. 2004;25:419-437.
15. Coughlin SS, Costanza ME, Fernandez ME, et al. CDC-funded intervention research aimed at promoting colorectal cancer screening in communities. *Cancer*. Sep 1 2006;107(5 Suppl):1196-1204.
16. Morgan PD, Fogel J, Tyler ID, Jones JR. Culturally targeted educational intervention to increase colorectal health awareness among African Americans. *J Health Care Poor Underserved*. Vol 21. United States 2010:132-147.
17. U.S. Centers for Disease Control and Prevention. *Cancer prevention & control: client-oriented screening services*. 2011; <http://www.thecommunityguide.org/cancer/screening/client-oriented/index.html>. Accessed June 1, 2011.

18. Hurd TC, Muti P, Erwin DO, Womack S. An evaluation of the integration of non-traditional learning tools into a community based breast and cervical cancer education program: the Witness Project of Buffalo. *BMC Cancer*. May 29 2003;3:18.
19. The Links, Inc., Greater Seattle Chapter. *Programs*. 2011; <http://www.greaterseattlelinksinc.org/Programs.aspx>. Accessed June 1, 2011.
20. Chess-Prentice F. Attorney, Seattle School District. Interview. June 1, 2011.
21. U.S. Department of Health and Human Services, U.S. Centers for Disease Control and Prevention. *National Public Health Performance Standards Program: acronyms, glossary, and reference terms*. 2007; <http://www.cdc.gov/nphpsp/PDF/Glossary.pdf>. Accessed May 31, 2011.
22. Nguyen BH, McPhee SJ, Stewart SL, Doan HT. Effectiveness of a controlled trial to promote colorectal cancer screening in Vietnamese Americans. *Am J Public Health*. Vol 100. United States 2010:870-876.
23. Yan B, Noone AM, Yee C, Banerjee M, Schwartz K, Simon MS. Racial differences in colorectal cancer survival in the Detroit Metropolitan Area. *Cancer*. Aug 15 2009;115(16):3791-3800.