The Kentucky Colon Cancer Screening Program Advisory Committee

John M. Bennett, MD, MPH, Chair
Primary Care, Veterans Administration

Deborah Armstrong, MSW, MPA, Co-Chair
Director, UK Kentucky Cancer Program

Connie Sorrell, Co-Chair
Director, UL Kentucky Cancer Program

Stephanie Bates
Kentucky Department of Medicaid Services

Katie Bathje
Director, Kentucky Cancer Consortium

William F. Beam
Colon Cancer Survivor

Virginia Bradford, RN
Kentucky African Americans Against Cancer

Shawn Crabtree
Director, Lake Cumberland District Health Dept.

Kim Dees, RN, MSN, MBA/HCM
Kentucky Hospital Association

Mark Evers, MD
Director, UK Markey Cancer Center

Whitney Jones, MD
Midwest Gastroenterology Associates,
Colon Cancer Prevention Project

Benjamin Lee Kessinger III
Kinkead & Stilz, PLLC

Donald M. Miller, MD, PhD
Director, UL Brown Cancer Center

James Sharp
American Cancer Society Cancer Action Network

Andrea Shepherd
Director, Colon Cancer Prevention Project

Thomas Tucker, PhD, MPH
Director, Kentucky Cancer Registry

Connie Gayle White, MD, MS, FACOG
Deputy Commissioner of Clinical Affairs
Kentucky Department for Public Health

Representative Tom Burch

Representative Rocky Adkins

Senator Alice Forgy Kerr

Kentucky Department for Public Health Staff
Gary L. Kupchinsky, MA, Director, Division of Prevention and Quality Improvement
Sue Thomas-Cox, RN, CMAC, Chronic Disease Prevention Branch Manager
Janet C. Luttrell, Kentucky Colon Cancer Screening Program Manager
Becki Thompson, BSN, Kentucky Colon Cancer Screening Program Clinical Support
Kimberly Gowin, Kentucky Colon Cancer Screening Program Nurse Administrator
Teri Wood, Epidemiologist, PhD, Chronic Disease Prevention Branch Epidemiologist
Vera Pravosud, University of Kentucky Graduate Student Intern
Table of Contents

Message from the Kentucky Colon Cancer Screening Advisory Committee

Executive Summary 5

I. Kentucky Colon Cancer Screening Advisory Committee and Program Support 7

II. The Problem of Colorectal Cancer in Kentucky: An Overview of Data 8

III. Financial Impact of Colorectal Cancer in Kentucky 18

IV. Kentucky Colon Cancer Screening Program FY 2013-2014 22

V. Kentucky Colon Cancer Screening Advisory Committee: Partnership Efforts 26

VI. Education and Outreach related to the Kentucky Cancer Program 31

Appendix A: Statutes and Administrative Regulations 33

References 36

Please direct requests for additional information to:

Janet C. Luttrell
Kentucky Colon Cancer Screening Program Manager
Division of Prevention and Quality Improvement
275 East Main Street, HS2WE
Frankfort, KY 40621
janet.luttrell@ky.gov
Message from the Kentucky Colon Cancer Screening Program Advisory Committee

Colon cancer is a significant health problem in Kentucky - it is the second leading cause of cancer death when rates for men and women are combined. Despite successes over the years in raising screening rates, over 30% of Kentuckians are still not screened for colon cancer according to the American Cancer Society (ACS) guidelines. Most colon cancers can be prevented by removing polyps before they develop into cancer.

In 2008, the Kentucky General Assembly enacted House Bill 415 which was codified into law as KRS 214.540-544. These statutes establish statewide colon cancer screening program. According to the legislation, the Kentucky Colon Cancer Screening Program (KCCSP) was established for three purposes:

1) Increasing colon cancer screening;
2) Reducing morbidity and mortality from colon cancer; and
3) Reducing the cost of treating colon cancer among citizens of the Commonwealth.

As part of KRS 214.544, a Kentucky Colon Cancer Screening Advisory Committee (KCCSAC) provides recommendations for the overall implementation and conduct of the KCCSP. Currently, over 20 representatives from organizations addressing colon cancer and screening activities provide consultation and oversight for the public awareness program as well as offering indirect support to the development of the program.

Efforts to advance the three purposes of the screening program are incremental and can only be accomplished in partnership with others. Members of the advisory committee continue to develop innovative and grassroots projects to address colon cancer screening in our state. In the 2010 Special Session, the General Assembly allocated $200,000 from coal severance funds to support colon cancer prevention and screening efforts in four counties: Floyd, Letcher, Martin, and Pike. In the 2012 Legislative Session, $170,000 was allocated from coal severance funds for Floyd, Knott, and Pike Counties. In addition, during the 2012 Legislative Session the general assembly allocated $1,000,000 for the biennium to address colon cancer screening of the uninsured which was to be matched by $1,000,000 from the Kentucky Cancer Foundation (KCF).

In 2014, the coalition of partners included in the Advisory Committee continue to move forward in their collaborative efforts to reduce the high rates of colon cancer incidence and mortality in Kentucky through screening, early detection, and community outreach initiatives.

This annual report highlights this past year’s effort and also describes the critical need to move forward with increased preventive screening messages and better access for those Kentuckians who have the greatest possibility of colon cancer incidence and mortality.

John M. Bennett, MD, MPH
Chair, Kentucky Colon Cancer Screening Program Advisory Committee
Executive Summary

This annual report from the KCCSAC for July 2013 through June 2014 is mandated by KRS 214.544 to provide an implementation and outcome update as well as recommendations to the Legislative Research Commission (LRC), the Interim Joint Committee on Appropriations and Revenue, the Governor, the Secretary of the Cabinet for Health and Family Services (CHFS), the Commissioner of the Department for Public Health (DPH), and the general public.

Section I: Kentucky Colon Cancer Screening Advisory Committee

Overview of the Kentucky Colon Cancer Screening Advisory Committee

Section II: The Problem of Colorectal Cancer in Kentucky: An Overview of Data

A brief overview of current data related to incidence, mortality, screening, and the burden experienced by disparate populations is found in Section II and illustrates the high burden of colon cancer in Kentucky. Kentucky has been successful in increasing the rate of colon cancer screening using colonoscopy or flexible sigmoidoscopy from 34.7% in 1999 to 65.9% in 2012. The rate of screening in Kentucky is only slightly lower than the national rate of 67.3%. Despite this success, the rate at which new colon cancers are diagnosed and deaths due to colon cancer remain high in the state, and large disparities are seen between blacks and whites and between Appalachia and Non-Appalachian counties.

Section III: Financial Impact of Colorectal Cancer in Kentucky

Colorectal cancer is a costly yet highly preventable disease. Investment in clinical preventive services has been proven cost-effective and can reduce the burden of incidence and mortality from colon cancer. The average charge for a single hospital stay in Kentucky in 2013 with a primary diagnosis of colorectal cancer was over $56,000 and totaled almost $119 million for the year. Although Medicare is the primary payer for the majority of cases, Kentucky Medicaid, employer-sponsored insurance, and uninsured citizens also share a portion of the cost to provide care for citizens with colon cancer.

Section IV: Kentucky Colon Cancer Screening Program Outcomes – FY 2013-2014

The Kentucky Colon Cancer Screening Program (KSSCP) first received funds to provide colon cancer screening services in FY 12-13. A Request for Proposal (RFP) was developed and 10 local health department (LHD) sites and their community partners applied and were funded to provide colon cancer screenings. This report includes data since the inception of the program from March 2012-June 2014. During this time period a total of 628 Fecal Immunochemical Tests (FITS) screenings were completed. Of these 628 FITS, 49 were positive and navigated on to a colonoscopy. During this same time frame, 619 colonoscopies were completed. Adenomatous polyps (pre-cancerous) were removed from 159 persons and eight cases of colon cancer and 1 case of anal cancer were diagnosed.

Section V: Kentucky Colon Cancer Screening Advisory Committee: Partnership Efforts

The KCCSAC is comprised of diverse stakeholders who all share the vision of improving colon cancer screening rates for Kentucky citizens in an effort to aid early detection; decrease mortality; improve health; and effect cost-savings for individuals, insurers, employers, the healthcare system, and government programs. A summary of major efforts of these stakeholders is provided.
Section VI: Education and Outreach related to the Kentucky Cancer Program

The Kentucky Cancer Program (KCP), funded through the General Assembly and administered through the University of Kentucky (UK) and the University of Louisville (UL), continues to implement a statewide education and awareness campaign, “Targeted Colon Cancer Outreach Program” (TCCOP). This program includes many community and individual level interventions in an effort to increase colon cancer screening throughout the state.
I. Kentucky Colon Cancer Screening Advisory Committee and Program Support

The KCCSP and the KCCSAC were developed in 2008 according to KRS 214.540-544 (Appendix A). The advisory committee provides oversight for a colon cancer screening public awareness campaign in Kentucky and in collaboration with Kentucky Department for Public Health (KDPH) staff, produces this annual report on implementation and outcomes. The advisory committee is composed of members representing organizations, agencies, and survivors of colon cancer who are working toward decreasing the incidence, mortality, and burden of colon cancer in Kentucky.

The KCCSAC meets on the third Thursday of each month at 1:30 pm in the Capitol Annex. These meetings began officially in July of 2008 and minutes are accessible by contacting the Division of Prevention and Quality Improvement (PQI) at KDPH. Each monthly meeting is dedicated to the ongoing development and adjustments to the KCCSP, public awareness campaign, and recommendations that will move the program forward. Agenda items for these meetings may include: reports on the number and type of services provided with program funds and outcomes of screening services; updates on testing procedures; presentations of current data on incidence and mortality from the Kentucky Cancer Registry (KCR); reports from organizations on the advisory committee; best practice models for outreach; discussion of potential funding sources; and reports from sites providing screening. The advisory committee continues to focus on developing a sustainable infrastructure for the KCCSP.

KDPH staff provides technical and administrative support to the advisory committee and collaborates with member organizations of the KCCSAC to develop a public awareness campaign, a data collection system, and an outreach and screening program. American Cancer Society (ACS), KCP, and the Kentucky Cancer Consortium (KCC) provide expertise and connection to coalitions and networks of professional and lay persons working to decrease colon cancer in Kentucky. The Colon Cancer Prevention Project (CCPP) provides significant support through advocacy and provider education efforts, and the KCF works to secure private funds to match state dollars for the screening program.

KDPH also continues to work on integrated cancer screening and prevention efforts with the Kentucky Women’s Cancer Screening Program, other programs within the Health Care Access Branch and the Chronic Disease Prevention Branch (CDPB) in the PQI, and with external partners that address the needs of the uninsured, such as the local health departments and the Federally Qualified Health Centers (FQHCs). These collaborative efforts maximize outreach, avoid duplication of services, and reinforce consistent messaging across the state.
II. The Problem of Colorectal Cancer in Kentucky: An Overview of Data

Introduction

Common, costly, and highly preventable, colorectal cancer (CRC) generally affects individuals 50 years old and older. CRC is second behind lung cancer as the most common major type of cancer diagnosed in Kentucky and is a major contributor to the state’s high overall age-adjusted mortality rates. For the time period of this report, data on incidence and mortality was available for 2007 to 2011. For this time period Kentucky had the highest rate of new CRC cases in the nation as well having the fifth highest rate of CRC mortality.

Most colon cancers develop from a type of non-cancerous growth in the colon and rectum called an adenomatous polyp. Through detection and removal of these polyps by screening, asymptomatic age appropriate people can actually prevent the disease from occurring. Depending on the type and stage of CRC when detected, as well as other individual patient characteristics, the treatment protocol may include surgery, chemotherapy, and/or radiation. In addition to active treatment, maintenance follow-up and/or palliative care contribute to the overall medical costs of late stage diagnosis. Regardless of the treatment methodology, treatment costs can range from $30,000 to $120,000, depending upon the stage of the cancer when diagnosed.

In terms of the economic impact, the medical and societal costs of treating CRC are substantial. From a cost perspective, $100,000 in Kentucky can either pay for 246 colonoscopy screenings or cover the costs of just one late stage case of CRC treatment. In addition to decreasing mortality rates by finding colon cancer in its pre-cancerous stage, screenings can also significantly reduce the societal financial burden associated with treatment. According to the KCC, the average estimated cost of treatment for people with colon cancer is $55,200 per year. Additionally, the U.S. Preventive Services Task Force (USPSTF) has established that colon cancer screening strategies have been found to be “cost effective compared to no screenings” as well as having a “high-impact on colon cancer burden.”

This section of the report will review the key data on CRC in Kentucky, including incidence and mortality, utilization of age appropriate screening tests, and barriers to screening. Data comparing Kentucky with the nation will also be reviewed as well as highlighting disparities within Kentucky.
Colon Cancer Incidence

For the years 2007 to 2011 combined, the national age-adjusted CRC incidence rate was **43.3 per 100,000** compared to the Kentucky age-adjusted rate of **56.3 per 100,000 population**, which is the highest in the nation\(^1\).

Figure 1: U.S. Incidence Rates of Colorectal Cancer for 2007-2011
CRC incidence by Area Development Districts (ADDs) ranges from 51.2 to 71.1 with all of the ADDs above the national of 43.3 per 100,000. Figure 2 and Table 1 demonstrate differences in CRC incidence by ADDs with significantly higher rates in Kentucky’s Appalachian region. Gateway, Buffalo Trace, and Big Sandy ADDs have the highest rates (in red).

Figure 2: Kentucky Incidence Rates of Colorectal Cancer for 2007-2011

Table 1: Age-Adjusted Colorectal Cancer Incidence Rates – Kentucky ADDs 2007-2011

<table>
<thead>
<tr>
<th>Area Development District</th>
<th>Cases</th>
<th>Age-adjusted Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gateway</td>
<td>309</td>
<td>71.1</td>
</tr>
<tr>
<td>Buffalo Trace</td>
<td>228</td>
<td>69.3</td>
</tr>
<tr>
<td>Big Sandy</td>
<td>568</td>
<td>64.2</td>
</tr>
<tr>
<td>Kentucky River</td>
<td>410</td>
<td>62.1</td>
</tr>
<tr>
<td>Cumberland Valley</td>
<td>795</td>
<td>60.3</td>
</tr>
<tr>
<td>FIVCO</td>
<td>503</td>
<td>58.6</td>
</tr>
<tr>
<td>Lincoln Trail</td>
<td>804</td>
<td>57.8</td>
</tr>
<tr>
<td>KIPDA</td>
<td>2939</td>
<td>57.2</td>
</tr>
<tr>
<td>Lake Cumberland</td>
<td>727</td>
<td>57</td>
</tr>
<tr>
<td>Barren River</td>
<td>874</td>
<td>56.6</td>
</tr>
<tr>
<td>Pennyrile</td>
<td>694</td>
<td>55.3</td>
</tr>
<tr>
<td>Green River</td>
<td>678</td>
<td>54.3</td>
</tr>
<tr>
<td>Purchase</td>
<td>669</td>
<td>52.5</td>
</tr>
<tr>
<td>Bluegrass</td>
<td>2021</td>
<td>51.8</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>1089</td>
<td>51.2</td>
</tr>
<tr>
<td><strong>STATE</strong></td>
<td><strong>13308</strong></td>
<td><strong>56.3</strong></td>
</tr>
</tbody>
</table>

Note: All rates are per 100,000. Rates are age-adjusted to the 2000 U.S. Standard Million Population. Data accessed from the Kentucky Cancer Registry www.kcr.uky.edu January 20, 2015. Based on data released November 1, 2013.
Colon Cancer Mortality

The national mortality rate for CRC for 2007-2011 combined was **15.9 per 100,000**, while the rate for Kentucky is the fifth highest in the nation at **18.7 per 100,000**.¹,⁷

**Figure 3: The U.S. Mortality Rates of Colorectal Cancer for 2007-2011**⁷
CRC mortality by ADDs range from 14.80 to 26.15 with 14 of the 15 ADDs above the national average of 16.4 per 100,000. Figure 4 and Table 2 shows differences in CRC mortality by ADDs with significantly higher rates in Kentucky’s Appalachian region. Gateway, Buffalo Trace, and Big Sandy ADDs have the highest rates (in dark blue).

**Figure 4: Kentucky Mortality Rates of Colorectal Cancer for 2007-2011**

Age-Adjusted Cancer Mortality Rates in Kentucky
Colon and Rectum, 2007-2011
By Area Development District
Age-Adjusted to the 2000 U.S. Standard Million Population
Kentucky Rate: 16.7
Rate per 100,000
14.6 - 17.1
17.2 - 17.9
18.0 - 19.9
20.0 - 23.9
23.1 - 26.1

**Table 2: Age-Adjusted Colorectal Cancer Mortality Rates – Kentucky ADDs 2007-2011**

<table>
<thead>
<tr>
<th>Area Development District</th>
<th>Deaths</th>
<th>Age-adjusted Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffalo Trace</td>
<td>87</td>
<td>26.15</td>
</tr>
<tr>
<td>Gateway</td>
<td>97</td>
<td>23.18</td>
</tr>
<tr>
<td>Big Sandy</td>
<td>196</td>
<td>22.99</td>
</tr>
<tr>
<td>Cumberland Valley</td>
<td>294</td>
<td>22.56</td>
</tr>
<tr>
<td>Lincoln Trail</td>
<td>286</td>
<td>21.27</td>
</tr>
<tr>
<td>Kentucky River</td>
<td>134</td>
<td>20.83</td>
</tr>
<tr>
<td>FIVCO</td>
<td>167</td>
<td>19.25</td>
</tr>
<tr>
<td>Barren River</td>
<td>288</td>
<td>19.05</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>388</td>
<td>18.91</td>
</tr>
<tr>
<td>Lake Cumberland</td>
<td>230</td>
<td>18.45</td>
</tr>
<tr>
<td>KIPDA</td>
<td>917</td>
<td>18.36</td>
</tr>
<tr>
<td>Bluegrass</td>
<td>652</td>
<td>17.47</td>
</tr>
<tr>
<td>Green River</td>
<td>213</td>
<td>17.23</td>
</tr>
<tr>
<td>Pennyrile</td>
<td>204</td>
<td>16.54</td>
</tr>
<tr>
<td>Purchase</td>
<td>190</td>
<td>14.80</td>
</tr>
<tr>
<td><strong>STATE</strong></td>
<td><strong>4343</strong></td>
<td><strong>18.70</strong></td>
</tr>
</tbody>
</table>

Colorectal Cancer Screening in Kentucky

For Kentucky to be successful in reducing the number of deaths due to colorectal cancer, it is necessary to ensure that Kentuckians receive appropriate screening based on their age and risk factors. According to the American Cancer Society, when colorectal cancer is found early and treated, the 5-year relative survival rate is 90%; however, because screening rates are low, less than 40% of colorectal cancers are found early.9

The United States Preventive Services Task Force (USPSTF) recommends that individuals over the age of 50 should be screened to detect CRC. The USPSTF recommends three different types of screening tests for CRC: high-sensitivity fecal occult blood testing (FOBT), flexible sigmoidoscopy, and colonoscopy.6 There are two types of FOBTs, a chemical guaiac test and a Fecal Immunochemical Test (FIT), each of which is performed annually. Both tests make use of a stool sample, which is most often collected at home by the patient and mailed back to either a laboratory or the provider’s office for analysis, depending on the brand and type of test used. FITs have shown a higher sensitivity and specificity than guaiac FOBTs in the detection of CRC.10 Because of this, the KCCSP uses FIT screening. Instead of a stool test, a flexible sigmoidoscopy may be performed every five years to look for cancerous growth in the rectum and lower third of the colon.11 The gold standard is to perform a colonoscopy every 10 years to check the entire colon for cancerous growth.11

Data from the Behavioral Risk Factor Surveillance System (BRFSS) for Kentucky and the nation shows that Kentucky has made significant progress since 1999 with increasing colorectal cancer screening rates; however, there is still much work to be done. Chart 1 shows the trend for Kentucky in the percentage of those aged 50 and older who have been screened for colorectal cancer using a flexible sigmoidoscopy or colonoscopy. The 2012 screening rate for Kentucky is 65.9%, which is slightly below the national rate of 67.3%. It should be noted that changes in the survey methodology made in 2011 mean that comparison of survey findings before and after that change may not be fully comparable, although we have graphed all the data on one chart.

Chart 1: Kentucky Colorectal Cancer Screening Rate (Colonoscopy or Flexible Sigmoidoscopy) for 50 and Older 13

Note: Dashed line shows marks change in KyBRFSS survey methodology during 2011 and beyond.

There is some indication that Kentuckians, employers, providers, and insurers are sharing the message that colon cancer screening saves lives. Over the past few years, Kentucky has shown substantial improvement in screening rates based on BRFSS data as noted previously in Chart 1. However, rates for
uninsured and low income persons remain lower than for those with college degrees and incomes over $50,000. The USPSTF has reviewed research on the main screening strategies for colorectal cancer and found that all were “cost effective compared with no screenings; a finding that has been supported in other prevention studies.”13-15

**Disparities in Colorectal Cancer Screening**

Chart 2 shows 2012 KyBRFSS colonoscopy/sigmoidoscopy screening rates for Kentuckians aged 50 and older by race, education level, and income level. The data clearly shows that screening rates vary greatly depending on income and education levels. Screening rates vary only slightly for race, despite substantial racial differences in both incidence and mortality to be seen later in this report. Only 54% of those in the lowest income level have been screened compared to 70% in the highest income bracket. Similarly, only 55% of those with less than a high school degree have been screened compared to 74% of those with a college education.

**Chart 2: Kentucky CRC Screening Rates Based on Race, Income, and Education for 2012**

Data Source: KyBRFSS 2012
**Barriers to Colonoscopy in Kentucky**

In order to improve colon cancer screening rates, it is important to understand the reasons why people do not have flexible sigmoidoscopies or colonoscopies which are considered the “gold standard” for colon cancer screening. In 2008 and 2012 an optional question was added to the Kentucky BRFSS for persons 50 years and older to gain insight into these reasons. The data was analyzed by KDPH epidemiologists and a work group from the KCC and then distributed to partners for dissemination across the state and incorporation into their work plans to reduce barriers and increase screening. When persons who had not been screened were asked why they had not been screened there were two common reasons: 2008 data showed that 27.4% said that their reason for not having had a colonoscopy or flexible sigmoidoscopy was a belief that they were not at risk for colon cancer or that the test was not needed; 26.8% of respondents said that their health care provider did not recommend or refer patients for these tests.

In response to this data, members of the KCCSAC focused on increasing provider recommendations for colon cancer screening and public awareness of recommendations. Members of the advisory committee and KCCSP staff submitted the collaboratively written article, “Understanding Barriers to Colon Cancer Screening in Kentucky,” to the Journal of the Kentucky Medical Association which was published in March 2011. This article reviewed the data on colorectal cancer in Kentucky and encouraged providers to work with their patients to increase screening referrals and patient compliance.

Chart 3 shows the results of the same question asked in the 2012 BRFSS, which shows a substantial decrease (2008=26.8% / 2012=15.2%) in the proportion of respondents who said they have not had a colonoscopy or flexible sigmoidoscopy due to lack of health care provider recommendation. In other words, the data shows that providers are now making more referrals for colon cancer screening via colonoscopy or sigmoidoscopy.

**Chart 3: Kentucky BRFSS 2012 Barriers to Colon Cancer Screening (Adults 50 and older): What is the most important reason you have never had a Sigmoidoscopy or Colonoscopy?**

- Not needed/Not at risk (26.1%)
- Not recommended by doctor (15.2%)
- Doesn’t want to have one (12.4%)
- Don’t know or Hasn’t thought about it (16.9%)
- Cost/Not covered by insurance (10.1%)
- Fear/Discomfort/Embarrassing (6.1%)
- Put off/No time (6.9%)
- Other (4.8%)
- No regular doctor/Don’t go to the doctor (1.4%)
Disparities in the Incidence of Colorectal Cancer in Kentucky

Data from the Kentucky Cancer Registry show that Kentuckians experience large disparities in the incidence of colorectal cancer based on gender, race, and geographic location. Chart 4 below shows the rate of invasive CRC by gender, race, and geographic location and includes lines showing the comparable rate for Kentuckians overall and for the nation. Males overall have a higher burden of colorectal cancer incidence than females. The largest disparity is observed by race and is especially prominent for black males who have a much higher rate than their white counterparts. Black females also experience higher incidence rates than white females. In addition, residents of Kentucky’s Appalachian counties have a higher incidence rate than both the rest of the state and the nation overall.

Table 3 shows these same disparities between gender, race, and geographic location in Kentucky but also compares them to the national average in more detail.

<table>
<thead>
<tr>
<th>Population</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US</td>
<td>KY</td>
<td>US</td>
<td>KY</td>
</tr>
<tr>
<td>All</td>
<td>50.04</td>
<td>62.50</td>
<td>37.83</td>
<td>45.1</td>
</tr>
<tr>
<td>Black</td>
<td>60.63</td>
<td>71.50</td>
<td>44.79</td>
<td>53.6</td>
</tr>
<tr>
<td>White</td>
<td>48.83</td>
<td>62.00</td>
<td>36.85</td>
<td>44.5</td>
</tr>
<tr>
<td>Appalachia</td>
<td>--</td>
<td>67.20</td>
<td>--</td>
<td>47.5</td>
</tr>
<tr>
<td>Non-Appalachia</td>
<td>--</td>
<td>60.60</td>
<td>--</td>
<td>44.2</td>
</tr>
</tbody>
</table>

Data Sources: US data – SEER; KY data – Ky Cancer Registry
Disparities in Mortality due to Colorectal Cancer in Kentucky

Similar to the differences seen in incidence rates, Kentucky also has significant disparities in terms of colorectal cancer mortality in all categories compared to the rest of the nation. The racial disparity is illustrated again for black males and females who have a much higher death rate from colorectal cancer than their white counterparts. The geographic disparity is again seen with residents of Kentucky’s Appalachian counties having a higher mortality rate than the rest of the state and the nation overall.

Table 4 highlights these same disparities between gender, race, and geographic location in Kentucky and compares them to the national average in more detail.

<table>
<thead>
<tr>
<th>Population</th>
<th>Table 4: Kentucky and US Age-Adjusted Colorectal Cancer Mortality Rates per 100,000, 2007-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td>US</td>
</tr>
<tr>
<td>All</td>
<td>19.1</td>
</tr>
<tr>
<td>Black</td>
<td>27.7</td>
</tr>
<tr>
<td>White</td>
<td>18.5</td>
</tr>
<tr>
<td>Appalachia</td>
<td>--</td>
</tr>
<tr>
<td>Non-Appalachia</td>
<td>--</td>
</tr>
</tbody>
</table>

Data Sources: US data – SEER; Ky data – Ky Cancer Registry
III. Financial Impact of Colorectal Cancer in Kentucky

Costs of Colorectal Cancer by Coverage

A diagnosis of cancer leads to a variety of costs to the patient, their family, and the community. Most direct costs are related to diagnosis and staging, treatment in hospital, and outpatient and follow-up care. In addition to direct medical costs to patients and families, there are out-of-pocket expenses such as travel to appointments, loss of income during treatment, and temporary or permanent loss of work. Additional indirect costs include those incurred by the employer related to missed work, lower productivity, and higher insurance premiums.

Colon cancer treatment varies based on the stage at diagnosis and this also greatly impacts treatment cost. Colorectal cancer treatment can range from surgical removal of a polyp to removal of part or the entire colon, to surgery combined with chemotherapy and/or radiation. The most recent estimates from the National Cancer Institute (NCI) report that treatment of CRC in the first year after diagnosis costs over $61,000 for those under 65 and over $51,000 for those 65 or older, with continuing care costs of over $3,000 per year.

For the cancer patient, co-pays and out-of-pocket expenses can directly contribute to the significant financial burdens. Furthermore, the time patients spend on care directly or indirectly, such as hospitalization stays and travel to treatment facilities respectively, can potentially affect employers as well such as costs from absenteeism.

Employers interested in saving money through prevention should review the numbers of persons and costs covered by the organization’s health plan and determine if there have been inpatient hospital admissions and ongoing treatment for colorectal cancer. It is possible that high quality health messaging and eliminating barriers to colon cancer screening would reduce these costs.

Chart 6 reflects inpatient hospitalization discharges from Kentucky hospitals for which colon cancer is indicated as the primary diagnosis. Inpatient hospitalization data reflects only a portion of the total charges to the individuals, employers, and payers, namely those charges incurred during a hospital stay. Significant costs are also incurred on an outpatient basis, including costs for chemotherapy and/or radiation, laboratory, and follow-up imaging studies to gauge effectiveness of treatment.

Despite the fact that the number of inpatient discharges remain fairly stable between 2,297 and 2,109 visits, inpatient charges have steadily increased from $100.6 million dollars in 2009 to almost $119 million in 2013.
Chart 6: Inpatient Discharges from Kentucky Hospitals: Primary Diagnosis of Colorectal Cancer, 2009 to 2013 (Source – Kentucky Hospital Discharge Data; ICD9 45378-45385)

Table 5 summarizes the inpatient hospitalization discharge information for CRC as the primary diagnosis compared to the inpatient hospitalization discharge information with any CRC diagnosis for men and women. In addition, any diagnosis of CRC shows there is a great economic impact for those who have a history of colon cancer.

Table 5: 2013 Kentucky Inpatient hospitalization discharges with CRC as Primary or Any Diagnosis, Average Length of Stay, Average Charges and Total Charges

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Discharges</th>
<th>Average Length of Stay</th>
<th>Average Charges</th>
<th>Total Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Diagnosis</td>
<td>2,109</td>
<td>7.88</td>
<td>$56,327.04</td>
<td>$118,793,735</td>
</tr>
<tr>
<td>Any Diagnosis</td>
<td>4,197</td>
<td>6.98</td>
<td>$46,908.18</td>
<td>$196,873,642</td>
</tr>
</tbody>
</table>

*Actual costs may vary as they are based on contractual agreements between providers and payers.
Source: Office of Health Policy, Cabinet for Health and Family Services, Hospitalization Data

Costs of Colorectal Cancer by Payer Source

Table 6 on the next page summarizes the payer characteristics of inpatient hospital admission procedures in 2013 for Kentucky. Medicare patients were hospitalized 1,216 times and account for 57.7% of the primary diagnosis charges or $68,730,206. Overall there were 2,448 total hospitalizations for Medicare recipients with any diagnosis and colorectal cancer with total costs of $114,960,757; again, indicating the need for screening and prevention strategies.

There were 132 hospital admissions for people covered by Kentucky Medicaid with a primary diagnosis of colorectal cancer in 2013 with charges of $10,558,544. There were 384 hospital admissions with any diagnosis and colorectal cancer for patients covered by Medicaid with total charges of $20,320,567 in 2013. These costs have gone up incrementally over the years and have an impact on the state budget.

For people with no insurance and categorized as self-pay, there were 88 hospitalizations in 2013 for a primary diagnosis of colorectal cancer with charges of $4,731,784. Comparing this number with 2012 when there were 73 inpatient hospitalizations with primary diagnosis of colon cancer and charges of
$3,326,884, there is a concern for persons with no insurance. Commercial insurance accounts for the second highest amount of hospitalizations and charges. This is of particular importance to employer groups and will account for most of the working age adults in Kentucky who are diagnosed with colon cancer.

### Table 6: 2013 Kentucky Inpatient Discharges by Payer Source

<table>
<thead>
<tr>
<th>Payer</th>
<th>Primary Diagnosis of CRC</th>
<th>Any Diagnosis with CRC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discharges</td>
<td>Total Charges</td>
</tr>
<tr>
<td>Medicare</td>
<td>1,216</td>
<td>$68,730,206</td>
</tr>
<tr>
<td>Medicaid</td>
<td>132</td>
<td>$10,558,544</td>
</tr>
<tr>
<td>Self-pay</td>
<td>88</td>
<td>$4,731,784</td>
</tr>
<tr>
<td>Commercial</td>
<td>611</td>
<td>$31,065,428</td>
</tr>
<tr>
<td>Charity</td>
<td>31</td>
<td>$2,132,956</td>
</tr>
<tr>
<td>Other</td>
<td>31</td>
<td>$1,574,814</td>
</tr>
<tr>
<td>Total</td>
<td>2,109</td>
<td>$118,793,735</td>
</tr>
</tbody>
</table>

Source: Office of Health Policy, Cabinet for Health and Family Services, Hospitalization Data

### Table 7: 2013 Kentucky Outpatient Colonoscopy Procedures by Payer

<table>
<thead>
<tr>
<th>Payer</th>
<th>Discharges</th>
<th>Total Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare</td>
<td>36,286</td>
<td>$155,757,877</td>
</tr>
<tr>
<td>Medicaid</td>
<td>2,905</td>
<td>$16,077,003</td>
</tr>
<tr>
<td>Self-pay</td>
<td>831</td>
<td>$3,986,433</td>
</tr>
<tr>
<td>Commercial</td>
<td>47,268</td>
<td>$164,085,048</td>
</tr>
<tr>
<td>Charity</td>
<td>332</td>
<td>$2,222,038</td>
</tr>
<tr>
<td>Other</td>
<td>828</td>
<td>$3,135,418</td>
</tr>
<tr>
<td>Total</td>
<td>88,450</td>
<td>$345,263,817</td>
</tr>
</tbody>
</table>

Source: Office of Health Policy, Cabinet for Health and Family Services, Hospitalization Data

Commercial insurance continues to account for the largest coverage source for colonoscopies, which would be expected as most colonoscopies completed in the state are for those in the 50-64 year age group. In 2013, there were 47,268 colonoscopy procedures covered by commercial payers. In 2013 there were 2,905 colonoscopies reported as covered by Kentucky Medicaid as compared to 3,188 in 2012 and 3,149 in 2011. In 2013 there were 831 colonoscopies reported as self-pay and an additional 332 colonoscopies reported as charity, and 828 colonoscopies covered by other sources for a total of 1,991 procedures not covered by commercial insurance, Medicare, or Medicaid. In the March 2011 issue of the Journal of the Kentucky Medical Association, Dr. Tucker et al. published findings that patients, who lacked insurance, had more than twice the odds of being diagnosed with advanced colorectal cancer at which time the cost of treatment is much higher and the odds of survival much lower.23
Chart 7 below shows the number of colonoscopy services reported in claims data from Kentucky Hospitals which are required to report discharges and procedures plus those free standing ambulatory facilities that choose to file data with the Office of Health Policy. While it is not known if these services were provided strictly for colon cancer screening or due to lower gastrointestinal symptoms requiring a colonoscopy for diagnosis, it is true that any colonoscopy would include identification and removal of any polyps and histology to determine if any growths removed included cancer cells. As such, the colonoscopies shown below serve as colon cancer screening services. The chart shows a recent decline in colonoscopies reported via this data source. Review of the number of services reported by specific providers shows large increases in numbers among some and strong declines among others. There is some change in providers reporting this data from year to year. At this time, we cannot identify a clear reason for the decrease in services reported from this source. It is possible that the number of colonoscopies is declining due to an increase in use of Fecal Immunological Testing (FIT) of stool samples for occult blood due to adenomas.

Conclusion

Despite an improvement in CRC screening rates over the past few years, Kentucky continues to rank among the highest states in terms of CRC mortality and incidence rates as well as ranking below the national average for screening. Problems such as screening disparities among different groups of people signify roadblocks to the ultimate goal of a healthy Kentucky. Therefore, while the combined efforts of all involved parties have helped Kentucky make improvements, there is still much work to be done. Given the rising costs of treating CRC after diagnosis, prevention through colonoscopies and/or annual FITs represents a cost-effective way of saving lives in Kentucky. Moving forward, the KCCSP will continue to provide education, outreach, leadership, and public awareness for prevention through screening. State funding appropriated in Fiscal Year 2014 will help remove barriers to CRC screening for those who are low income and uninsured.
III. Kentucky Colon Cancer Screening Program FY 2013-2014

FY 2013-2014 was the first full year for the KCCSP to provide CRC screening services to low income, uninsured citizens. In its 2012 Regular Session, the Kentucky General Assembly approved the biennial budget, which for the first time, included $500,000 per year in general funds to KDPH for colon cancer screening of uninsured Kentuckians. The KCF, a new private non-profit organization, committed to providing equal matching funds for the program. Funds are used by KCCSP to support state clinical and management staff; outreach and education support by the KCP; health care provider costs associated with both colonoscopy services and FIT kits; local patient navigation services; and leasing fees for the FIT analyzer, which is housed at the KDPH State Public Health Laboratory.

Development of Program Guidelines

Working with an advisory committee, KDPH developed guidelines and protocols for program operations to ensure effectiveness and consistency across all funded sites. At the center of these guidelines are evidence-based criteria for determining who is eligible for CRC screening and the best test to use for that individual. To be eligible for this program, clients must be between the ages of 50-64 (or age 45-64 for African Americans) or qualify with certain high risk conditions/factors; be a United States citizen or qualified alien; be a legal resident of Kentucky and uninsured; and their income must be at or below 250% of the federal poverty level.

Eligible clients determined to be at average risk for colon cancer are screened using a take home test called a FIT, which uses antibodies directed against human hemoglobin to detect blood in the stool. The person uses the FIT kit to collect a small stool sample, which is mailed to the KDPH state lab for analysis. The use of FITs is very cost effective in comparison to the much higher expense associated with colonoscopy. When done on an annual basis, FIT testing is highly accurate in detecting adenomas in the lower colon.

Colonoscopy is the screening test of choice for clients who are found to be at moderate or high risk for colon cancer and those who have a positive FIT result. These clients are connected to a health care provider contracted by the program to receive a colonoscopy to identify and remove any benign, precancerous, or cancerous polyps. Removal of polyps before they become cancer saves lives and reduces health care costs by avoiding expensive surgeries or treatment of advanced cancer with chemotherapy or radiation.

One key component of the program is the use of patient navigators to assist the patient in successfully completing the colon cancer screening process. Each funded site is required to identify patient navigators who then complete a training program conducted by state KCCSP staff. The patient navigator guides the client through each step of the colon cancer screening process and documents the test results in the state laboratory data system.

Funded sites are required to establish contracts with local health care providers who are contractually responsible for any needed pre-colonoscopy medical clearance and for all services connected to the colonoscopy, including preparation for the procedure, facilities charges, anesthesia, and removal of any polyps with pathology.
Selection of Colon Cancer Screening Sites

Working with the KCCSAC, staff at KDPH developed a Request For Proposal (RFP) process to solicit applications from LHDs and their partners. The RFP was released in June of 2012 with a due date of September 24, 2012. LHDs brought together community partners to apply for this funding, while serving as the fiscal agent in administering these grants. As fiscal agent, the LHD receives the grant funds from the state and establishes contracts with local hospitals, endoscopists, FQHCs, Community Health Clinics, or other providers as necessary to carry out services funded under this grant. Service providers must document services related to the CRC screening, as well as screening results, and supply this written information to the LHD for reimbursement at the specified rates.

Ten grant applications were reviewed by a six person panel from the KCCSAC and state KCCSP staff, which scored the proposals on a number of criteria. All 10 grant applications were awarded funding based on their applications with only minor adjustments to align with the program requirements. Funded sites were notified in November 2013. The average grant award was $50,000 - $75,000 per applicant per year.

Program Start-Up

Between September 2012 and December 2012, KDPH staff developed data collection forms, training materials, and a data entry process. The database system for the KCCSP which is called OutReach, is operated by the KDPH Division of Laboratory Services (DLS). Since this database is already used by LHD personnel for lab tests, it was chosen to minimize overall costs and eliminate duplicate data entry. Although there was no cost for initial data entry, quality improvement and content-specific query development, outcome reporting and evaluation does require reimbursement for programming costs. However, compared to the cost of developing a database from the ground up, using OutReach was an efficient use of budgeted funds.
Sixty-six patient navigators and partners including KCP staff were trained from December 19, 2012, through end of January 2013. Training consisted of attending all-day face-to-face interactive and hands-on trainings in Frankfort, which included the following topics:

- Brief Program History and Description
- Screening Methods Reimbursed by KCCSP
- Program Eligibility
- Screening and Surveillance Guidelines
- Program Forms and Use
- Patient Navigation Responsibilities
- Data Collection and Data Entry into OutReach System
- Rules Pertaining to Reimbursement for Services
- Resources

Additional training sessions and technical assistance continue to be delivered by KCCSP staff as the need arises.

**KCCSP Launch**

Provision of CRC screening services began in March 2013. Soon after this initial rollout, state KCCSP staff traveled to each grant site to meet with field staff and partners. The goal of the site visits was to assess the working partnerships, reinforce the information shared in the training sessions, and to confirm that each grant site was collaborating with local partners. While the KCCSP has overarching structure and programmatic requirements, such as use of specific forms, each KCCSP site worked with state staff on how to best incorporate the KCCSP into their health department and community. Additional site visits were made to the individual patient navigation locations to evaluate their role in the program, including a sample audit for completeness of records, and to address any specific questions, needs, or concerns. Support for all the KCCSP sites included technical assistance conference calls every month to address concerns from screening sites and inform them of program changes, reinforce information, and offer opportunities for networking and sharing of best-practices.

**Program Outcomes March 2012 – June 2014**

From March 2012-June 2014 a total of 628 FIT screenings were completed. Of these 628 FITs, 49 were positive and navigated to a colonoscopy. During this same time frame, 619 colonoscopies were completed. The following tables show the colonoscopy results.

First, **Table 8** shows how the endoscopist rated the quality of the patient’s preparation or “prep” for the procedure. Excellent or Good preparation for the procedure is essential to ensure that the colon is clear of fecal matter so the physician can view the entire surface of the colon and identify any pre-cancerous or cancerous polyps.

<table>
<thead>
<tr>
<th>Table 8: Reported Colonoscopy Preparation Quality (Includes all scopes March 1, 2012 through June 30, 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
</tr>
<tr>
<td>Fair</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
<td>Excellent</td>
</tr>
<tr>
<td>Not Reported</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Over 81% of clients were considered to have had good or excellent “prep” for their procedure. Almost nine percent of the colonoscopy reports did not include prep quality. Preparation quality is an important quality control measure for our program. Because of this, contract language with providers has been modified to require accurate reporting.

In order to enhance cost effectiveness for the program, colonoscopy is the initial screening test only for those considered to be at moderate or high risk for CRC. During the initial months of the KCCSP, the two most common reasons for categorizing a person as being at increased risk for CRC were having a first degree relative with CRC prior to age 60 (207 cases, 33.4%) and noticing bright red blood in their bowel movements (144 cases, 23.3%). The third most common reason for being at increased risk came from those who had previously had polyps removed from their colon (118 cases, 19.1%).

Table 9 shows the final diagnosis from the 619 colonoscopies performed with KCCSP funds. The table shows that over 56% of the cases resulted in a normal/negative finding. An additional 16% of cases (100) had hyperplastic polyps removed. These polyps very rarely develop into a cancer.

Another 25% of cases (153) had low grade adenomatous polyps removed and an additional 1% (6 cases) had high grade adenomatous polyps removed. Adenomatous polyps can eventually develop into cancers and removal can prevent CRC. During the first sixteen months of program operation, 159 cases of cancer were potentially prevented. There were eight cases of CRC diagnosed during this time period. One case of anal cancer was diagnosed.

One client who came in to arrange for a colonoscopy was also referred for a mammogram and was diagnosed with Breast Cancer.

<table>
<thead>
<tr>
<th>Table 9: Colonoscopies - Final Diagnosis</th>
<th>(Includes all procedures March 1 2012 through June 30, 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal/Negative</td>
<td>349</td>
</tr>
<tr>
<td>Adenomatous-Not High Grade</td>
<td>153</td>
</tr>
<tr>
<td>Adenomatous-High Grade</td>
<td>6</td>
</tr>
<tr>
<td>Hyperplastic Polyp</td>
<td>100</td>
</tr>
<tr>
<td>Colorectal Cancer</td>
<td>8</td>
</tr>
<tr>
<td>Incomplete Procedure</td>
<td>1</td>
</tr>
<tr>
<td>Pending other Procedure</td>
<td>1</td>
</tr>
<tr>
<td>Other type of cancer (i.e. anal)</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>619</td>
</tr>
</tbody>
</table>
IV. Kentucky Colon Cancer Screening Advisory Committee-Partnership Efforts:
Awareness, Education, and Outreach Efforts of Partner Organizations

American Cancer Society (ACS)

Provider Support Services
- Provided webinar for practice managers in Eastern Kentucky in the summer of 2013 to promote/increase CRC screening in their physician practices. Resources and tools (both Kentucky specific and national resources) were provided to 25 practice managers who participated to help them establish policies and procedures to increase their CRC screening rates. Most of the resources were from the CRC toolkit produced by ACS, as well as some from the CDC and the KCCSP.

Patient Support Services
- ACS Hope Lodge in Lexington continues to provide patient support services to CRC patients with over 200 nights of free lodging provided.

Navigation Services
- An on-site Patient Navigator Program continues at the University of Kentucky Markey Cancer Center, connecting cancer patients with ACS programs, services, and community resources.

Increasing use of FIT testing at FQHCs
- Park DuValle - Received a grant from ACS & WellPoint to purchase FITs and has screened over 400 individuals for colon cancer since January 1, 2014. ACS met with the clinic monthly to review their progress with the grant and their CRC screening progress.
- Health First - Fayette County is currently working with their Medical Director to increase CRC screening rates by training their providers and staff on the use of FITs and assisting them in setting up a patient reminder system for annual screenings. ACS participated in the First Health Quality Initiative meeting and discussed the current ACS CRC screening guidelines and the CRC screening toolkit.
- Bluegrass Community Center - Fayette County has trained providers and staff on the FluFIT program and implemented the program in the Fall of 2014. This program assists BCC with utilizing their reminder system in their electronic health record system.
- Mountain Comprehensive Center - Whitesburg has met with the CEO and Medical Director in September of 2014 to introduce the CRC screening toolbox and train appropriate staff on the four steps in increasing CRC screenings.
- Grace Community Health Care Center - Knox County received a Walgreens grant for $50,000 for a two year CRC screening project for eligible patients. This grant is utilized in the health care sites in Knox, Clay, and Leslie County.
- Kentucky Care - McCracken County is working with the Paducah-McCracken County Health Department to navigate patients to the health department to utilize the KCCSP grant funds.
- Fairview Community Health - Warren County is working with the Barren River District Health Department to navigate patients to the health department to utilize the KCCSP grant funds.
- Cumberland Family Medical Center - Cumberland is working with the Lake Cumberland District Health Department to navigate patients to the health department to utilize the KCCSP grant funds.
- Health Help Inc. - Madison County has submitted a grant application to the University of Kentucky for funding in the area of CRC screening.
- Community Health Centers of Western Kentucky - Muhlenberg/Logan Counties. The clinic in Logan County hosted the KDPH inflatable colon at the Relay for Life of Logan
American Cancer Society Cancer Action Network (ACS CAN):

Policy Efforts

- Strongly supported the Kentucky-based Health Care Exchange (Kynect) implementation to ensure thousands of Kentuckians have access to care and screenings for colon cancer.
- Supported implementation of the national ACA which eliminates co-payments for preventive services like colonoscopies and exempts preventive services from deductibles under the Medicare program.
- Advocated for the expansion of the Medicaid program in Kentucky to ensure more at risk citizens have access to vital medical and preventive services.

Cabinet for Health and Family Services - Kentucky Department for Public Health:

Data System and Website

- KDPH maintains and updates the KCCSP website with information including the annual report and education for the public, health educators, and providers as well as links to additional partner organizations. [http://chfs.ky.gov/coloncancer](http://chfs.ky.gov/coloncancer)
- CHFS and KDPH provide data on CRC screening via the BRFSS, hospital discharge data through the Kentucky Office of Health Policy, and mortality surveillance from Vital Statistics.

Fall Forum

- The 4th Annual Colon Cancer Fall Forum was held on October 3, 2013, at the Knicely Conference Center in Bowling Green. This event, which had over 100 attendees, explored the development and implementation of the KCCSP regional and state partnerships, developed relationships for possible future collaborations, discussed what is working to increase CRC screening rates, and identified successes and challenges.

Site Visits

- KDPH conducted site visits to all 10 grant sites to review and discuss technical assistance available to staff, work with KCP for outreach, the number of hours spent each week on the KCCSP, the current system for tracking patient information, tracking the number of FIT kits and colonoscopies used and available, and what type of voucher system was used to assist patients with KCCSP services.
- KDPH also traveled to the 10 grant sites to videotape interviews of program participants and physicians involved in the program. The interviews were edited into five minute vignettes and placed on a CD as well as various websites to be used to promote the KCCSP.

Kentucky State Fair

- KCCSP staff set up a display booth at the Kentucky State Fair for two days in August 2013 and talked to 871 people about the KCCSP. Staff gave away items adorned with the KCCSP logo along with other information about the CRC screening program.

Navigator Trainings

- All KCCSP training is performed by KDPH staff in order to maintain continuity of the program.
- Between July 2013 and June 2014, three additional KCCSP trainings were conducted as new patient navigators were hired or identified at sites. In September 2013, training was provided for the staff at the Letcher County Health Department. While not one of our funded sites, the KCCSP screening process was adopted by this LHD to help
maximize coal severance funds that were earmarked for CRC screening in Letcher County.

Contracts
- Each KCCSP grantee site was tasked with establishing contracts with partners for services outside of the LHD setting. These services included: medical clearance for the colonoscopy, facilities where the colonoscopy is to be performed, provider who is preforming the colonoscopy, anesthesia services, and pathology services. This resulted in a total of 45 contracts with partners. Each contract was reviewed by KCCSP staff for specific language such as: patient cannot be balance billed and provider payments would not be made until the patient navigator had the procedural/pathology reports in hand. Each contract is valid for one fiscal year only.

Health Care Access Branch – 1-800-633-8100
- Working in conjunction with the Health Care Access Branch, the KCCSP launched a new effort to provide CRC screening information to the public by utilizing their current access telephone number. Kentuckians who call the number to request information or screening services are interviewed by the Health Care Access staff. If determined to be eligible for screening services, they are referred to the KCCSP and state staff makes contact for referral to a local KCCSP site. If determined to be ineligible for the program, Health Care Access branch staff sends screening literature to the caller.

Technical Assistance
- KDPH provides ongoing technical assistance to LHDs and management for the development of CRC screening programs within the state, including the KCCSP sites as well as those receiving coal severance funds.

Worksite Wellness
- The KCCSP Program Manager worked collaboratively with the KCP to host a special Dress in Blue Day focused on CRC screening awareness for state employees in March of 2014. Ms. Madeline Abramson met with state employee representatives to emphasize the importance of CRC screening and to summarize the planned events of the day that each employee could implement in their workplace. Approximately 30,000 employees received the CRC screening awareness message via their state payroll stub.

Education and Outreach
- Funds from the CDC Preventive Health and Health Services Block Grant (PHHSBG) were used to support staff and for the Educational Colon East and West.

Coal Severance Funds
- During the 2012 Legislative Session, $170,000 was allocated in the biennial budget of 2012-2014 for the counties of Floyd, Knott, and Pike. Floyd and Knott county governments each received $50,000 for screening, and Pike received $70,000. Coal severance funds were used to implement CRC education and screening programs dependent on county priorities.
- As of June 2014, 12 persons were screened using coal severance funds. No cases of CRC were detected during this time period while polyps were removed from three individuals who had the potential to develop into cancer.
Colon Cancer Prevention Project

Education and Outreach

- The Colon Cancer Prevention Project has a patient navigator and health educator who participates as a partner in the Louisville Metro Colon Cancer Screening Program, linking patients who need colonoscopies to gastroenterologists in the area.
- Distributed newly edited “Are You at Risk for Colon Cancer?” brochures, stool-based testing pamphlets, and other CRC educational materials across Kentucky.
- A Community Outreach and Survivor Support Manager was hired to grow a statewide volunteer network to raise awareness of CRC.
- Worked with national partners to raise awareness of the rise of people under 50 being diagnosed with CRC.
- Held its 8th Annual Walk Away from Colon Cancer & 5K Run in Louisville in August 2013. The event was the largest yet with more than 1,200 survivors, patients, physicians, and concerned members of the community participating.
- Held its 4th Annual Bottoms Up Bash presented by Kentucky One Health in March 2014, drawing a crowd of 400 who raised funds for the fight to end CRC. The Bash was held on Dress in Blue Day and brought publicity to CRC screening. Approximately $45,000 was raised for the Colon Cancer Prevention Project and $5,000 for the Fighter’s Fund.
- Received nearly 400 pledges from its Pledge Campaign aimed at getting people to take action in the fight to end CRC. Participants make a pledge to talk with their doctor, talk with their family, get screened, and/or volunteer for the fight to end CRC.
- Thanks to the Gheens Foundation, in the fall of 2013 success billboards, bus stop banners, and mailers about screening in the areas of Louisville with the largest CRC rates.
- Helped get the Educational Inflatable Colon across Kentucky for the third year. The Colon Cancer Prevention Project manages a colon, which is owned by KDPH, and stores it, manages its schedule, and oversees how many people it educates across the state.

Policy Efforts

- Held a rally in Frankfort to support continued funding of the KCCSP; worked with legislators and KCF to identify a public-private funding stream for screening of the uninsured.

Health Systems Improvement

- Partnered with KDPH in May 2014 to present Dr. Jim Allison, nationally-renowned FIT screening expert, at a KCCSP physician education forum in Lexington. The Project and KDPH also provided a large lunch-and-learn educational presentation in Bowling Green.
- Began a program that provides education to FQHCs and community health centers on stool-based screening and other screening options. This program will help increase screening rates among low-income residents across Kentucky.

Survivor Support

- Continued the Fighters’ Fund, a program that provides one-time grant assistance to people in Kentucky and Southern Indiana who are in treatment for CRC. To date, nearly four dozen grants have been awarded.
Kentucky Cancer Consortium

The KCC includes over 55 statewide and multi-regional organizations working to reduce the burden of cancer in Kentucky. KCC meets quarterly to work collaboratively on addressing goals, objectives, and strategies in the Kentucky Cancer Action Plan (KCAP). Goal 7 in the KCAP is to “reduce incidence and mortality from CRC through prevention and early detection.” Progress towards this goal is measured through reviewing CRC screening rates through the Kentucky BRFSS with a special focus on those who have not completed a high school education. Another measure includes the percentage of Kentuckians diagnosed at an early stage of CRC when the disease is more effectively treated.

- Conducted literature review and coordinated team of experts to review, revise and update changes to the CRC prevention and early detection section of the KCAP.
- KCC has focused its collective efforts on supporting outreach and organizational/systems-level changes to assist Kentuckians in obtaining a CRC screening. These systems level efforts included:
  - Provided technical assistance to KCP to identify local/regional system-level barriers to CRC screening.
  - Provided funding for the KCP to educate worksites and their employees on CRC, the need for screening, and organizational/policy changes which support employees obtaining a screening.
  - Developed draft press release to be tailored by KCCSP sites highlighting success stories and funding.
  - Presented current colon cancer data at KCCSP provider forum on May 21, 2014.
- Active monthly participation on the KCCSAC.
- Facilitated donation of 300 FIT kits to KCCSP from Fight Colorectal Cancer, a national non-profit organization.
- Participated on KCCSP grant review committee in April 2014.
- Continued funding of the online domain name www.kycolon.org for use with all materials.
- Promoted March’s CRC screening awareness “Dress in Blue” day among member organizations and their networks.
- Educated and informed KCC member organizations as to KCCSP funding status and opportunities to educate legislators.
- Provided KCC’s Resource Plan to KCCSP and KCCSAC to be used in identifying funding needs for CRC screening.
- Presented KCC and CRC data to the kyhealthnow oversight team on Thursday, June 19, 2014.
- Served as member of the KCF board that is responsible for securing matching funding for KCCSP.
- Worked on improving FIT referrals from physicians and improving health literacy options for communicating FIT testing.
- Developed fact sheets for health professionals and the public on the prevention details regarding ACA and CRC.
**Kentucky Cancer Registry**

**Surveillance Data**

- KCR continues to present data related to colorectal cancer incidence, mortality, and screening rates to partner organizations, KCCSAC members, legislative members, and the general public. In addition, special attention is focused on disparate populations. This emphasis on statistical evidence helps diverse partners determine their work plan activities.
- KCR has continued to strengthen its working relationship with academic institutions, particularly with the University of Kentucky Markey Cancer Program and the University of Louisville Brown Cancer Center.

**VI. Education and Outreach Related to the Kentucky Colon Cancer Program**

*KRS 214.544, Section 3.8. The KCP, jointly administered by the UK and UL, shall establish a colon cancer screening education and outreach program in each of the state ADDs. The program shall focus on individuals who lack access to colon cancer screening.*

The KCP continued to coordinate the Targeted Colon Cancer Outreach Project (TCCOP) established in the fall of 2009. This evidence-based model focuses on raising awareness of CRC screening among all Kentuckians and set the stage for participation in the state program after it was funded. KCP is working with District Cancer Councils (DCCs) and community partners across the state to implement a comprehensive TCCOP in each of Kentucky’s 15 ADDs.

This initiative encourages community organizations and groups to coordinate their efforts and form partnerships. It provides a broad framework of possible strategies from which organizations can work, including media campaigns, distribution of educational materials and key messages, educational programs for the public and health care providers, and special initiatives such as “Dress in Blue Day.” Reaching people who do not have access is a program priority.

During the past year, funding for TCCOP activities was provided by the KCP. In-kind contributions/support were secured from hundreds of partners, including hospitals, clinics, pharmacies, universities and colleges, ACS, health departments, Cooperative Extension Service offices, Area Health Education Centers, businesses, chambers of commerce, government agencies, public schools, churches, libraries, and individuals. These partners integrated CRC education and outreach into their existing services.

Highlights of these activities for the past year are summarized below.

**Public Awareness and Educational Materials**

- Organizations/groups/businesses distributed over 40,670 posters, bookmarks, and church bulletins containing key messages about CRC screening in all 120 counties.
- Over 43,274 promotional pieces and 25,000 educational materials were disseminated across the state.
- Local resource guides were developed or updated by many DCCs to assist individuals and organizations in locating CRC screening facilities in their community.
Dress In Blue Campaign

- Over 348 partners participated as part of a national campaign to raise awareness about screening.
- In addition to wearing blue on March 2, 2014, hundreds of special events and activities took place throughout Colon Cancer Awareness Month at worksites, hospitals, and businesses.

Educational Presentations

- The DCCs sponsored 76 educational programs targeting over 4,800 health care providers, social service organizations, businesses, and other community organizations and groups.

Regional and Small Media

- KCP distributed a Colon Cancer Screening Toolkit that was initially developed several years ago and is updated each year. It contains tips for reaching the media, sample press releases, articles for newspapers and newsletters, print advertisements, and public service announcements.
- DCC and community partners secured free publicity, including 103 television and radio shows, public service announcements, and newsletter and newspaper articles. In addition, hundreds of organizations were provided e-mail messages and encouraged to share them with their networks and employees. Although challenging to track, it is estimated that at least 150,000 messages were sent.

Special accomplishments

- KCP continued to receive funding from the KCC through the CDC to develop and pilot a new worksite wellness program designed to encourage employees to get screened for CRC. During the campaign, activities and messages focused on the importance of getting screened for CRC were shared with 445 employees.
- KCP coordinated 11 events in Louisville and western Kentucky where over 4,000 people toured the KDPH educational colon display and 2,167 completed a brief survey. The giant inflatable colon is an excellent way to work with local partners to increase awareness and provide education about the importance of CRC screening.
Appendix A: Statutes and Administrative Regulations

214.540 Definitions for KRS 214.540 to 214.544 -- Establishment and limitation of Colon Cancer Screening Program.
(1) As used in KRS 214.540 to 214.544:
   (a) "Department" means the Department for Public Health in the CHFS; and
   (b) "Program" means the Colon Cancer Screening Program.
(2) The Colon Cancer Screening Program is hereby established for the purposes of:
   (a) Increasing colon cancer screening;
   (b) Reducing morbidity and mortality from colon cancer; and
   (c) Reducing the cost of treating colon cancer among citizens of the Commonwealth.
(3) The provisions of KRS 214.540 to 214.544 shall be limited to the amount of appropriations to the department for the Colon Cancer Screening Program.
Effective: July 15, 2008

214.542 Eligibility for Colon Cancer Screening Program -- Services provided -- Funding -- Data collection -- Administrative regulations.
(1) The program shall provide colon cancer screening for uninsured individuals who are age fifty (50) to sixty-four (64) and other uninsured individuals determined to be at high risk for developing colon cancer.
(2) Services provided under the program may be undertaken by private contract for services or operated by the department. The program may also provide referral services for the benefit of individuals for whom further examination or treatment is indicated by the colon cancer screening.
(3) The department may accept any grant or award of funds from federal or private sources for carrying out the provisions of this section.
(4) The department shall establish a data collection system to document the number of individuals screened, the demographic characteristics of the individuals screened, and the types of colon cancer screening tests performed under the program.
(5) The department shall promulgate administrative regulations to implement the provisions of this section.
Effective: July 15, 2008

214.544 Colon Cancer Screening Advisory Committee -- Membership -- Duties -- Annual report -- Colon cancer screening, education, and outreach programs.
(1) A CCSAC shall be established within the KCC. The advisory committee shall include:
   (a) One (1) appointee appointed by the Speaker of the House;
   (b) One (1) appointee appointed by the President of the Senate;
   (c) The deputy commissioner of the Department for Public Health;
   (d) Two (2) at-large members appointed by the Governor;
   (e) The director of health initiatives for the mid-south division of the ACS;
   (f) The director of the KCP at the UK;
   (g) The director of the KCP at the University of Louisville;
   (h) The director of the KCR;
   (i) The director of the Colon Cancer Prevention Project;
   (j) The chair of Kentucky African Americans Against Cancer; and
   (k) The director of the KCC.
Members of the advisory committee shall be appointed for a term of four (4) years.

(2) (a) Members appointed under subsection (1)(a) to (d) of this section shall be appointed as follows:
1. Members shall be appointed for a term of four (4) years, except as provided in subparagraph 2 of this paragraph;
2. The initial appointments shall be for a period of two (2) years; thereafter, the appointments shall be for a term of four (4) years; and
3. Members shall not serve more than two (2) terms of four (4) years.
(b) Members serving under subsection (1)(e) to (k) of this section shall serve by virtue of their positions and shall not be subject to term limits.

(3) The chair of the advisory committee shall be elected from the membership of the advisory committee to serve for a two (2) year term. A member of the advisory committee may designate an alternate to attend meetings in his or her place.

(4) The advisory committee may add members from other organizations as deemed appropriate.

(5) The advisory committee shall provide recommendations for the overall implementation and conduct of the Colon Cancer Screening Program (CCSP).

(6) The advisory committee shall establish and provide oversight for a colon cancer screening public awareness campaign. The CHFS shall contract with the KCC at the UK to provide the required support. The amount of the contract shall not be included in the base budget of the university as used by the Council on Postsecondary Education in determining the funding formula for the university.

(7) The CCSAC shall provide an annual report on implementation and outcomes from the CCSP and recommendations to the LRC, the Interim Joint Committee on Health and Welfare, the Interim Joint Committee on Appropriations and Revenue, the Governor, the secretary of the CHFS, and the commissioner of the Department for Public Health.

(8) The KCP, jointly administered by the UK and the University of Louisville, shall establish a colon cancer screening, education, and outreach program in each of the state ADDs. The colon cancer screening, education, and outreach program shall focus on individuals who lack access to colon cancer screening. The CHFS shall contract with the University of Louisville and the UK to provide the required support. The amount of the contract shall not be included in the base budgets of the universities as used by the Council on Postsecondary Education in determining the funding formula for the universities.

Effective: July 15, 2008


Legislative Research Commission Note (7/15/2008). There are two incorrect internal references in subsection (2) of this statute that have not been corrected in codification because they are drafting errors, not manifest clerical or typographical errors correctable by the Reviser of Statutes under KRS 7.136(1)(h). However, the reference in subsection (2)(a) to "subsection (1) of this section" should have been drafted as "subsection (1)(a), (c), and (d) of this section" since the deputy commissioner of the Department for Public Health referenced in subsection (1)(c) of this statute serves as an ex officio, not appointed, member of the advisory committee. Likewise, the reference in subsection (2)(b) of this statute to "subsection (1)(e) to (k) of this section" should have been drafted as "subsection (1)(c) and (e) to (k) of this section."
304.17A-257 Coverage under health benefit plan for colorectal cancer examinations and laboratory tests.

(1) A health benefit plan issued or renewed on or after January 1, 2009, shall provide coverage for all colorectal cancer examinations and laboratory tests specified in current ACS guidelines for colorectal cancer screening of asymptomatic individuals as follows:

(a) Coverage or benefits shall be provided for all colorectal screening examinations and tests that are administered at a frequency identified in the most recent version of the ACS guidelines for colorectal cancer screening; and

(b) The covered individual shall be:

1. Fifty (50) years of age or older; or

2. Less than fifty (50) years of age and at high risk for colorectal cancer according to current colorectal cancer screening guidelines of the ACS.

(2) Coverage under this section shall not be subject to a separate deductible or separate coinsurance but may be subject to the same deductible or coinsurance established for other laboratory testing under the health benefit plan.

Effective: July 15, 2008

History: Created 2008 Ky. Acts ch. 107, sec. 1, effective July 15, 2008
References:

   d. Incidence and Mortality Rates by Type, Race, and Gender: http://nced.cdc.gov/uscs/cancersbyraceandethnicity.aspx


   a. U.S. Colorectal Incidence Rates:
   b. KY Colorectal Incidence Rates:
   c. U.S. Colorectal Death Rates:
   d. Kentucky Colorectal Death Rates:
   e. Historical Trends (1975-2010) Mortality Rates- U.S. compared with Kentucky:
   f. Age-Adjusted Death Rates for Kentucky:


http://www.cdc.gov/cancer/colorectal/basic_info/screening/questions.htm

Nationally Colorectal Cancer Screening Rates:
Kentucky Colorectal Cancer Screening Rates


15. Kentucky Department for Public Health (KDPH) and the Centers for Disease Control and Prevention (CDC). Kentucky Behavioral Risk Factor Survey Data. Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky Department for Public Health, [2012]. 
http://chfs.ky.gov/nr/rdonlyres/b83944d8-a64f-4c6e-b9ae-303c89313fe5/0/2012kybrfsannualreport.pdf


**Supporting Partners**

American Cancer Society  
Colon Cancer Prevention Project  
Kentucky Cancer Consortium  
Kentucky Cancer Program  
Kentucky Cancer Registry  
University of Louisville James Graham Brown Cancer Center  
University of Kentucky Lucille Parker Markey Cancer Center