

17. CANCER

Goal

Reduce the burden of cancer on the Kentucky population by decreasing cancer incidence, morbidity, and mortality rates.

Terminology

Cancer: Diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissue and can spread through the bloodstream and lymphatic system to other parts of the body.

Fecal occult blood: A test to check for small amounts of hidden blood in stool.

Malignant: Cancerous.

Mammogram: An x-ray of the breast.

Pap test: Microscopic examination of cells collected from the cervix. The Pap test is used to detect changes that may be cancer and can show noncancerous conditions, such as infection or inflammation.

Risk factor: Something that increases a person's chance of developing a disease.

Screening: Checking for a disease when there are no symptoms.

Sigmoidoscopy: A procedure in which the physician or health provider looks inside the rectum and the lower part of the colon (sigmoid colon) through a flexible lighted tube. The physician or health provider may collect samples of tissues or cells for closer examination.

Stage: The extent of a cancer, especially whether the disease has spread from the original site to other parts of the body.

Overview

Cancer is the second leading cause of death in the United States. According to American Cancer Society (ACS) estimates, 1,221,800 Americans will be diagnosed with cancer in 1999, and approximately 563,100 people will die of cancer during the year. These

numbers do not include carcinoma-in-situ included with basal and squamous cell carcinomas; the incidence of these types of cancer is estimated to exceed 1 million per year. The ACS estimates are based on an increase in the number of older Americans, who are at higher risk for developing cancer. One-half of the cases occur in persons aged 65 and over.

Statistics reflect only a portion of the enormous health problem of cancer, yet there is evidence that the prospect of preventing and surviving cancer continues to improve. Perhaps 50 percent or more of cancer incidence can be prevented through smoking cessation and changed dietary habits. The scientific evidence for smoking as a cause of cancer has been recognized for over 30 years. The evidence for diet and cancer has emerged over the past decade and has progressed to the extent that recommendations for prudent dietary changes can now be made.

The most recent figures from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute (NCI) indicate that the likelihood of a person surviving cancer for at least 5 years from the point of detection, compared with the survival of the general population, is now about 51 percent for patients diagnosed in 1981 through 1987. This survival rate is significantly higher than the 38 percent rate for patients diagnosed in 1960-63 (as estimated by the SEER Program). However, these figures do not take into account the increased incidence of lung cancer. If lung cancer incidence is removed from the most recent figures, the chance of survival for more than 5 years, which for many cancer sites indicates cure, is 56 percent.

In addition to the human toll of cancer, the financial costs of cancer are enormous. NCI estimates that the overall costs for cancer are \$107 billion, with \$37 billion for direct medical costs, \$11 billion for morbidity costs, and \$59 billion for mortality costs. Treatment for lung, breast, and prostate cancers account for more than half of the direct medical costs.

African Americans have a vastly different cancer experience from whites. Statistics show that African Americans have higher age-adjusted incidence and mortality rates for many cancers and lower survival rates than do whites for all but 6 of 25 primary cancer sites. This difference between the races represents both a challenge to understand the reasons, and an opportunity to lower morbidity and mortality and to raise survival rates.

The Hispanic cancer experience also differs from that of the white population, with Hispanics having higher rates of cervical, esophageal, gallbladder, and stomach cancers. The incidence of breast and lung cancers is increasing among Hispanics, who are diagnosed at later stages and have lower survival rates.

The most recently available state, age-adjusted, overall cancer incidence and mortality rates by age and gender demonstrate the impact on the health status of Kentuckians. In 1999, the ACS estimates (excluding basal and squamous cell skin cancers and carcinoma in situ) that more than 20,500 men, women and children in Kentucky will learn they have cancer and more than 9,500 residents will die from cancer. In 1996, cancer was the

second leading cause of death in Kentucky, with 8,847 deaths recorded by Kentucky Vital Statistics. Cancer accounted for 25 percent of all deaths during this statistical reporting period.

The leading cause of death in Kentucky is heart disease; however, mortality rates for heart disease have decreased since 1970. From 1970 to 1990, the mortality rates for cancer increased, but have leveled during the 90's. It is probable that cancer mortality rates will equal or exceed heart disease mortality during the next decade. In fact, 1995 age specific rates show that cancer mortality increases with age, peaking at 1,181 per 100,000 for those 65 and over. For those between 45 and 64, the cancer mortality rate actually exceeds that of heart disease.

1994 SEER data show that while the U.S. mortality rate was 172.3 per 100,000, Kentucky's mortality rate was 192.4 per 100,000. For males the cancer mortality rate was the third highest in the nation at 252.4 per 100,000 compared to the national figure of 217.9 per 100,000. Kentucky has the highest rate of lung cancer deaths in the nation both overall (67.7 per 100,000) and for men (104.1 per 100,000), while Kentucky women rank second nationally in deaths due to lung cancer (41.2 per 100,000). The mortality rate for cervical cancer is second in the nation (3.8 per 100,000). Kentucky mortality rates for female total cancers and for colorectal cancer for all groups are well above the national rate. The mortality rates for breast cancer, prostate cancer and melanoma are at the national rates. As in the rest of the nation, racial and ethnic minorities have higher cancer mortality rates than do whites. Looking at mortality due to all types of cancers combined, the 1995 non-white mortality rate is 249 per 100,000 compared to the 1995 white mortality rate of 228 per 100,000.

Data from the Kentucky Cancer Registry show that 19,314 cases of cancer were diagnosed in 1996. The sites with the highest incidences were lung (2,799), breast (2,774), colorectal (2,333), prostate (1,986), and cervical (1,223) cancer. The incidence rate in Kentucky for all cancer sites in 1996 was 418.8 per 100,000. The incidence rate for the US population in 1995-96 was 424.7 per 100,000 population, which is higher than the 1994 rate from SEER for the U.S. (395.8 per 100,000). The incidence rate for all cancers for women in Kentucky for 1995-96 was 402.6 per 100,000, well above the rate for SEER in 1994 (342.5 per 100,000). For 1995-96, the incidence rate for males in Kentucky from all cancers is similar to the rate from SEER (470.2 per 100,000 vs. 472.3 per 100,000). While the male incidence rate for all cancers is similar to national data available for SEER (470.2 vs. 472.3), the total population and female rates are substantially higher in Kentucky than in the rest of the country (Total = 424.7 vs. 395.8; women = 402.6 vs. 342.5). Kentucky incidence rates for overall, male and female lung cancer, colorectal cancer and melanoma are higher than the SEER national calculations. Cervical cancer incidence is also high, while breast cancer incidence is at the same level as the national calculation. Only prostate cancer is at a lower rate in Kentucky than the rest of the nation. According to estimates by the Surveillance Research Program of the ACS's Department of Epidemiology and Surveillance, Kentucky will see 20,500 new cases of cancer in 1999.

Progress Toward Year 2000 Objectives

Cancer remains the second leading cause of death among Kentuckians. However, trends for three of the five *Healthy People 2000* goals related to cancer mortality rates have been met or exceeded.

- 16.1 To reverse the rise in total cancer deaths to achieve a rate of no more than 196 per 100,000 people in Kentucky.

For all cancers, the mortality rate in 1997 had reached 188.7. In fact, Kentucky data show a sharp decrease in overall cancer deaths by 1991, ending a 20-year rise in cancer mortality.

- 16.2 To slow the rise in lung cancer deaths to achieve a rate of no more than 73.8 per 100,000 people in Kentucky.

Rates of lung cancer deaths were 80.7 per 100,000 in 1997.

- 16.3 To reduce breast cancer deaths to no more than 26.5 per 100,000 women in Kentucky.

Rates of breast cancer deaths declined to 28.1 deaths per 100,000 in 1997.

- 16.4 To reduce deaths from cancer of the uterine cervix to no more than 1.5 per 100,000 women in Kentucky.

Only cervical cancer rates have failed to decline and have in fact increased to 3.6 since the baseline rate of 3.1 was observed in 1989.

- 16.5 To increase to at least 90% the proportion of women ages 40 and older who have ever received a clinical breast examination and mammogram, and to at least 80% those ages 50 and older who have received them within the preceding one to two years.

Improvements have been made in risk factors as measured by the BRFSS, but we have not met the goals set for the year 2000. The percentage of women age 40 and over who have ever had a mammogram and clinical breast examination (CBE) has increased from 66 percent in 1993 to 78 percent in 1997, still 12 percent short of the goal of 90 percent.

- 16.6 To increase to at least 98 percent the proportion of women ages 18 and older with a uterine cervix who have ever received a Pap test and to at least 90 percent those who received a Pap test within the preceding one to three years.

Kentucky had set goals of 98 percent of all women 18 and older to have EVER had a Pap test, and for 90 percent of women age 18 and older to have had a Pap test in the past 3 years. By 1997, the number of women age 18 and older having *ever* had a Pap test was 93 percent (5 percent below our goal) while 82 percent had received a Pap test within the past 3 years (8 percent below the goal).

- 16.7 To reduce colorectal cancer deaths to no more than 15.2 per 100,000 people in Kentucky.

Colorectal cancer rates have not declined to the target level of 15.2 per 100,000, but this rate has declined from 21.2 in 1990 to 18.2 in 1997.

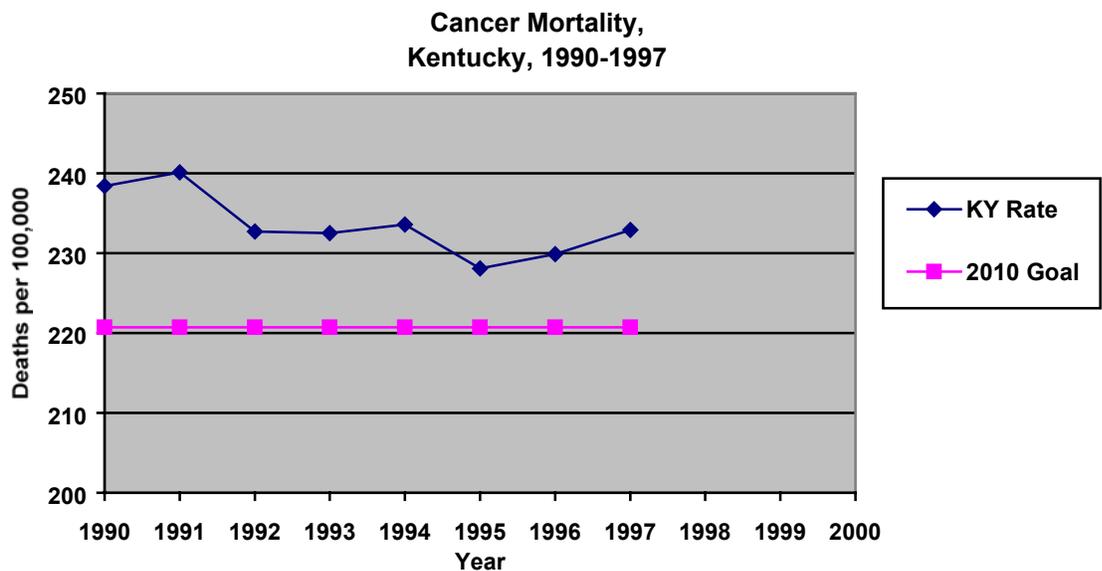
- 16.8 To increase to at least 50 percent the proportion of people ages 50 and older who have received fecal occult blood testing within the preceding one to two years and to at least 40 percent those who have ever received proctosigmoidoscopy.

In 1997, 26 percent of those ages 50 and older had received fecal occult blood testing within the preceding one to two years and 40% of people ages 50 and older had ever received a proctosigmoidoscopy.

2010 Objectives

- 17.1. To reduce cancer deaths to a rate of no more than 220.7 per 100,000 people in Kentucky.

Baseline: 229.9 per 100,000 people in 1996.



Target Setting Method: Four percent decrease from the baseline.

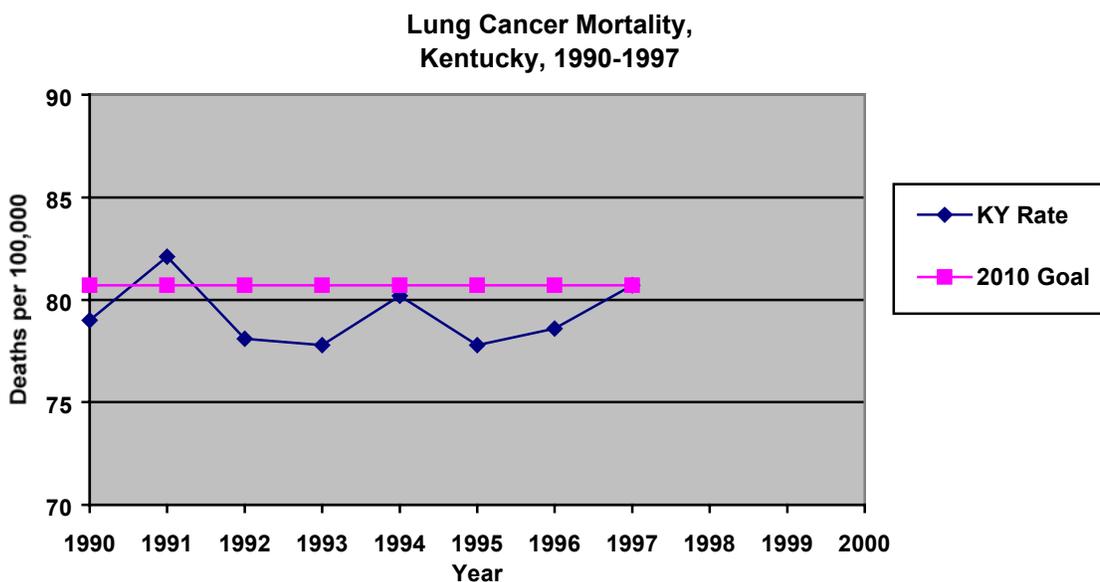
Data Sources: Kentucky State Center for Health Statistics
Health Data Branch, Kentucky Department for Public Health

Implementation Strategy:

- Initiate an aggressive statewide cancer control plan.
- Encourage reduction in tobacco use and diet modification through public and professional education.
- Promote use of early detection and screening practices by primary care providers, local health departments and other health care agencies.
- Increase community outreach efforts in prevention and early detection education.
- Maintain strong partnerships between the Kentucky Department for Public Health, the American Cancer Society, and Kentucky's university cancer centers to improve surveillance, access to state of the art care and provision of professional education opportunities to ensure high standards of care.
- Prompt investigation of all possible cancer clusters reported by health care professionals or members of the general public.
- Support continued research on prevention, early detection and treatment.

17.2. Maintain lung cancer deaths to a rate of no more than 80.7 per 100,000 people in Kentucky.

Baseline: 80.7 per 100,000 in 1997.



Target Setting Method: Maintain level rate following decade of increasing rates.

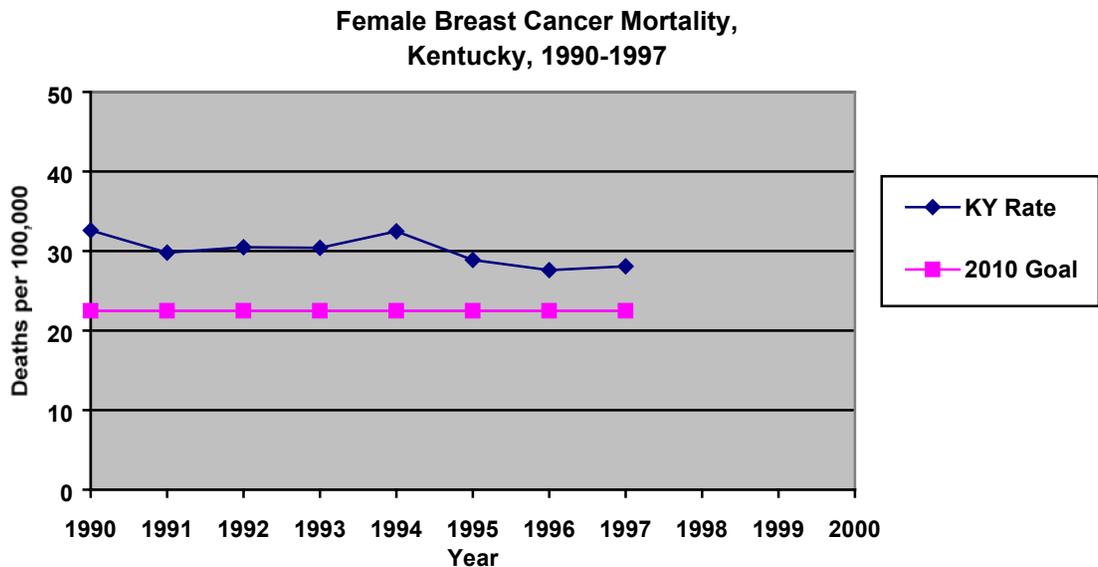
Data Sources: Kentucky State Center for Health Statistics
Health Data Branch, Department for Public Health

Implementation Strategy:

- Encourage school, family and community based programs to discourage tobacco use among children and teenagers.
- Support and encourage local initiatives to strengthen enforcement of youth access laws.
- Target pregnant women and mothers of young children with cessation counseling.
- Increase number of workplaces and restaurants that are smokefree or have stronger policies against smoking.
- Increase the proportion of school districts who have trained school health coordinators in order to ensure the best all-encompassing health programs for our children.
- Support and encourage participation in smoking cessation programs.
- Establish radon home testing programs in all Kentucky local health departments.
- Provide professional education opportunities to promote smoking cessation counseling and referral to cessation programs by primary care providers.
- Take actions to reduce exposure to secondhand smoke in all settings.

17.3. To reduce breast cancer deaths to no more than 22.5 per 100,000 women in Kentucky.

Baseline: 28.1 per 100,000 in 1997.



Target Setting Method: 20 percent decrease due to intense public and private efforts planned for the next decade.

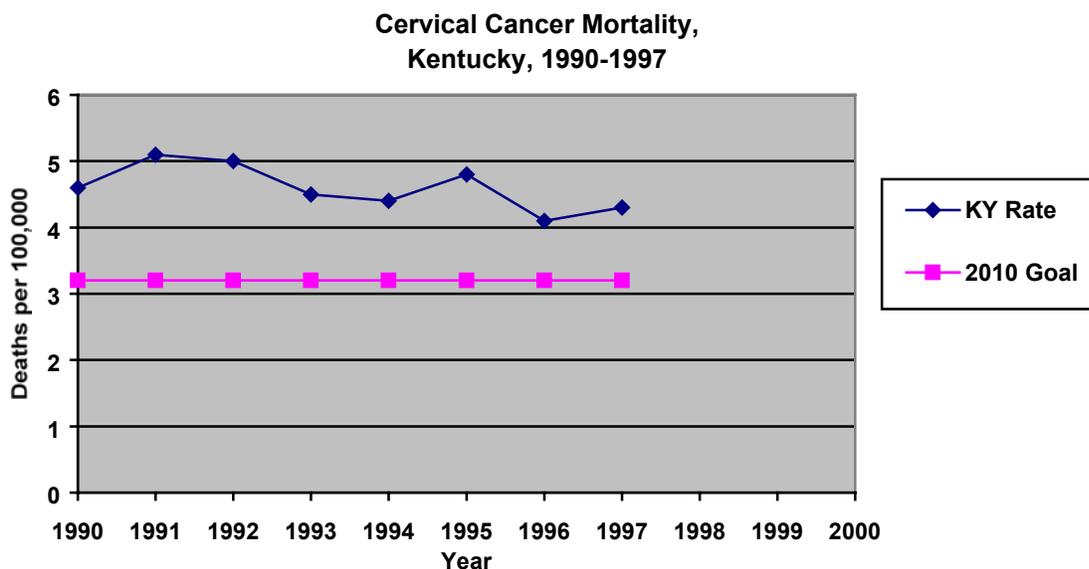
Data Sources: Kentucky State Center for Health Statistics
Health Data Branch, Kentucky Department for Public Health

Implementation Strategy:

- Increase availability and accessibility of breast screening and diagnostic services for uninsured and underinsured women through local health departments.
- Support population based education efforts to increase screening in all women 40 and older, including education and peer counseling, to be carried out by community breast cancer coalitions and other entities.
- Provide professional education opportunities to improve expertise in provision of clinical breast exams, mammography and treatment.
- Promote participation in clinical trials for prevention and treatment.
- Provide education to the public on other risk factors such as diet and exercise which may have a relationship to breast cancer.

17.4. To reduce deaths from cancer of the uterine cervix to no more than 3.2 per 100,000 women in Kentucky.

Baseline: 4.3 per 100,000 in 1997.



Target Setting Method: 25 percent decrease due to intense public and private efforts planned for the next decade

Data Sources: Kentucky State Center for Health Statistics
Health Data Branch, Kentucky Department for Public Health

Implementation Strategy:

- Increase availability and accessibility of cervical screening and diagnostic services for uninsured and underinsured women through local health departments.
- Support population based education efforts carried out by community cancer coalitions and other entities to increase screening in all women 18 and older.
- Provide professional education opportunities to improve technique, referral and standards of care.
- Provide education on risk factors including intercourse at an early age, multiple sex partners, and sexually transmitted disease.

- 17.5. To increase to at least 85 percent the proportion of women ages 40 and older who have ever received a Clinical Breast Exam (CBE) and mammogram, and to at least 85 percent those ages 50 and older who have received a CBE and mammogram within the preceding one to two years.**

Baseline: In 1997, 78 percent of women 40 and older had at some time received a mammogram and clinical breast exam and 73 percent of women 50 and older had a mammogram and clinical breast exam within the past 2 years.

Target Setting Method: Eleven percent increase in those who have ever received CBE's and mammograms and 16 percent increase in those receiving them in the previous one to two years

Data Source: Kentucky Behavioral Risk Factor Surveillance System (BRFSS).

Implementation Strategy:

- Increase availability and accessibility of breast screening and diagnostic services for uninsured and underinsured women through local health departments.
- Support population based education efforts carried out by community breast cancer coalitions and other entities to increase screening in all women 40 and older.
- Provide professional education opportunities to improve expertise in provision of clinical breast exams, mammography and treatment.
- Promote participation in clinical trials for prevention and treatment.
- Provide professional education opportunities to increase both health care provider adherence to accepted screening guidelines and appropriate referral of patients.

17.6. To increase to at least 95 percent the proportion of women ages 18 and older who have ever received a Pap test, and to at least 85 percent those who received a Pap test within the preceding one to three years.

Baseline: In 1997, 93 percent had a Pap test at some time and 82 percent had a Pap test within the past 3 years.

Target Setting Method: Two percent increase in those 18 and older who have ever received a Pap test and four percent increase in those who received a Pap within the preceding one to three years.

Data Source: Kentucky BRFSS

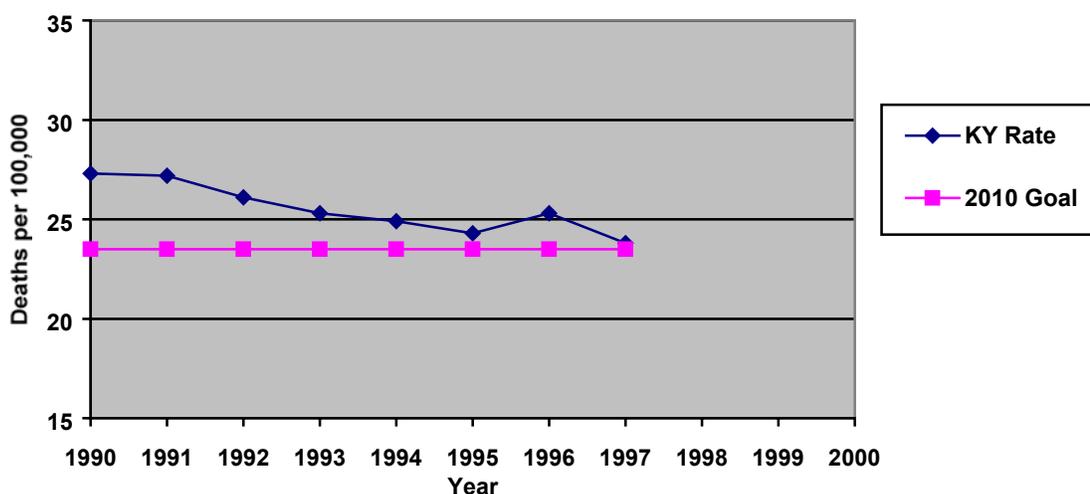
Implementation Strategy:

- Increase availability and accessibility of cervical screening and diagnostic services for uninsured and underinsured women through local health departments.
- Support population based education efforts carried out by community cancer coalitions to increase screening in all women 18 and older.
- Provide professional education opportunities to improve technique, referral and standards of care.
- Provide professional education opportunities to increase health care provider adherence to accepted screening guidelines.

17.7. To reduce colorectal cancer deaths to no more than 23.5 per 100,000 people in Kentucky.

Baseline: In 1996, the death rate for colorectal cancer was 25.3/100,000 (Male 29.9, Female 21.9)

**Colorectal Cancer Mortality,
Kentucky, 1990-1997**



Target Setting Method: 7 percent decrease

Data Sources: Kentucky State Center for Health Statistics
Health Data Branch, Kentucky Department for Public Health

Implementation Strategy:

- Increase community education programs for early detection in people over age 50 with sigmoidoscopy/colonoscopy.
- Promote referrals by health care providers for screening exams.
- Promote clinical trial participation for prevention and/or treatment.
- Education/outreach regarding dietary modifications to reduce risk.

17.8. To increase to at least 35 percent the proportion of people ages 50 and older who have received fecal occult blood testing within the preceding one to two years, and to at least 40 percent those who have ever received proctosigmoidoscopy.

Baseline: 1997 data show 26 percent of people ages 50 and older have had a fecal blood test within the past 2 years and 34 percent have had a sigmoidoscopy at some time.

Target Setting Method: 35 percent increase in fecal occult blood testing and 18 percent increase in sigmoidoscopy

Data Source: Kentucky BRFSS

Implementation Strategy:

- Promote referrals by health care providers for screening exams.
- Promote clinical trial participation for prevention and/or treatment.
- Provide public education/outreach regarding the importance of screening exams.

17.9. (Developmental) Increase the number of men 50 years and older, particularly African American and other high risk individuals, who receive counseling from health care providers about prostate cancer screening.

The absence of modifiable risk factors for prostate cancer precludes any effective primary prevention approach at this time. Secondary prevention to reduce mortality through screening and early detection remains controversial. The ACS recommends offering annual digital rectal exams and Prostate Specific Antigen (PSA) testing in men aged 50 and older with 10 years of life expectancy and to younger men who are at high risk. Widespread prostate cancer screening should be approached with caution until results of clinical trials provide evidence that screening does more good than harm. Some advocates favor screening programs targeting high-risk groups among the elderly, African Americans, and members of families with a history of prostate cancer.

17.10. (Developmental) Increase the percentage of persons aged 50 and older who have received oral, skin and digital rectal exams in the preceding year.

All three exams are nationally recognized preventive measures for this population. Unfortunately, there is no Kentucky data to establish a baseline for these exams. In the first half of the decade the means to measure the use of these exams in the population should be developed and by mid-decade an objective for improvement should be established. Potential mechanisms for establishing the baseline include private insurance data, BRFSS data, and Medicaid and Medicare data.

17.11. (Developmental) Increase the percentage of Kentucky physicians who have current knowledge about genetics and disease and who appropriately counsel or refer their high risk patients.

A revolution in knowledge about genetics and disease is underway. As recent advances in genetics continue and the Human Genome Project approaches a projected completion date of 2003, concerns about genetic counseling will continue to move to the forefront of public discussion. For years these concerns have been limited largely to prenatal care and outcomes at birth, but they have now expanded to include chronic diseases and the entire life span. Genetic counseling will play an increasingly important role in the interactions between patients and their health care providers. There are fewer than 1,200 genetic counselors in this country, and there is a general lack of training in this area among primary health care providers. Discussions about this issue invariably

raise questions about cost and availability of tests, quality of tests, appropriate action to take based on results, confidentiality and discrimination. The rapidly evolving science and plethora of questions surrounding this issue suggests a need for a statewide plan for addressing these concerns including provisions for ongoing continuing medical education of health care providers.

17.12. (Developmental) Increase the number of cancer survivors who are living 5 years or longer after diagnosis.

The prevalence of cancer survivorship and the survival rate for cancer patients in the Commonwealth of Kentucky has not been estimated. The survival rate could be a potentially useful indicator of how cancer patients are faring in the state with implications for access to state of the art treatment and quality of treatment in the state. In the first half of the next decade the cancer survival rates for selected cancers in Kentuckians should be analyzed. Equally important to the survival rates is some indication of the quality of life of cancer survivors. Methods of documenting the cancer survivor's perception of quality of life should be reviewed and a strategy should also be developed for documenting cancer survivors' health-related and psychosocial issues.

In the second half of the decade, needs identified by the analysis of rates and the quality of life survey should be addressed. Particular areas of concern are increasing the number of cancer patients who are referred to cancer support services, training healthcare providers to disseminate information regarding long-term health maintenance and increased attention to the late effects of cancer treatment, and the availability of educational resources for cancer patients and their families, palliative care, and their rights as a cancer survivor.

Contributors

- Greg Lawther, Department for Public Health, Division of Adult and Child Health, Chapter Coordinator
- Paula Alexander, Department for Public Health, Division of Adult and Child Health
- Freddie Birdwell, American Cancer Society
- Jeff Brock, Department for Public Health, Division of Adult and Child Health
- Colleen Kaelin, Department for Public Health, Division of Public Health Protection & Safety
- Maxine Kreis, Whitley County Health Department
- Linda Linville, Kentucky Cancer Program
- David O’Nan, American Cancer Society
- Linda Piker, Department for Public Health, Division of Adult and Child Health
- Patty Sewell, Department for Public Health, Division of Adult and Child Health
- Connie Sorrell, Kentucky Cancer Program

- Sue Ellen Stuebing, American Cancer Society
- Emma Walters, Department for Public Health, Division of Adult and Child Health
- Todd Warnick, Department for Public Health, Division of Adult and Child Health
- Teri Wood, Department for Public Health, Division of Adult and Child Health