Increasing Access to Colorectal Cancer Screening Educational Materials for Healthcare Providers in Rural Kentucky

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EXECUTIVE SUMMARY

The Fab Four KPHLI group started their journey in the spring of 2005. All members expressed an interest in promoting education regarding cancer screening; as screening and early detection is known to prevent cancer mortalities. It was necessary to narrow the scope of this problem by focusing on a specific type of cancer. The Fab Four decided on colorectal cancer because of its high incidence in Kentucky. As a team, we wanted to impact local health departments by providing a toolkit containing educational materials about screening for colorectal cancer. This project affects the infrastructure of public health by providing educational materials to increase early intervention for colon cancer, thereby easing the burden of care for those who may otherwise require extended care for advanced cancer.

Research for the project was done via literature search and via a survey to various health departments. The team narrowed the focus of the surveys to be sent to three Area Development Districts (ADD). We chose the Big Sandy, Kentucky River and Northern Kentucky districts in order to compare rural areas with a large metropolitan area. Various demographic information for the three Area Development Districts were also obtained for comparative analysis.

INTRODUCTION/BACKGROUND

Colorectal cancer is the third leading cancer in both men and women over the age of 50 in the United States. The American Cancer Society estimates that more than 148,610 new cases of colorectal cancer will be diagnosed in the United States in 2006 and more than 55,170 colorectal cancer deaths will occur in the same year. [1] In the same year, Kentucky is estimated to have more than 2450 colorectal cancer cases diagnosed and approximately 910 deaths.[1] The impact of this is, there will be almost 66 cases of colorectal cancer diagnosed and almost 2.6 deaths by the disease each day in the Commonwealth of Kentucky.

A literature search validate the fact that lack of awareness/education regarding screening for colorectal cancer is an issue due to:

1. "Less than half of the U.S. population age >/= 50 years underwent colorectal cancer tests within the recommended time interval. Educational initiatives for patients and providers regarding the importance of colorectal cancer screening, efforts to reduce disparities in test use, and ensuring that all patients have Access to routine primary care may help increase screening rates."[2]
2. "Lack of awareness was the most common barrier for all screening tests...Although population-wide progress has been made in reducing barriers to screening, lack of awareness, and not recommended by a doctor remain important barriers, especially among traditionally underserved populations." [3]
3. "Successful efforts to improve awareness of the importance and efficacy of screening must further address deeply held skepticism and fears about colorectal cancer screening in the low income population"[4]

The literature reviews support that the best way to prevent colorectal cancer is through regular screening. These screenings include checking the stool for blood through a fecal occult blood test (FOBT) or by viewing the colon through the means of a flexible sigmoidoscopy or colonoscopy, in which both can find precancerous polyps so these can be removed. Screening finds colorectal cancer

early. In 2004 more than 73.5% of the US population and 76% of the Kentucky population over 50 years of age, reported never having a FOBT; of the same age range, more than 47% of the US population and 52.8% of Kentuckians reported never having a flexible sigmoidoscopy or colonoscopy in the last year. [5] Table 1 shows the 2004 Behavioral Risk Factor Surveillance Survey figures by Area Development District screening rates.

TABLE 1

ADD	No FOBT in 2 yrs	No Colonoscopy- 50 yrs >
Big Sandy	80%	70%
Ky River	79%	73%
N Ky	72%	54%

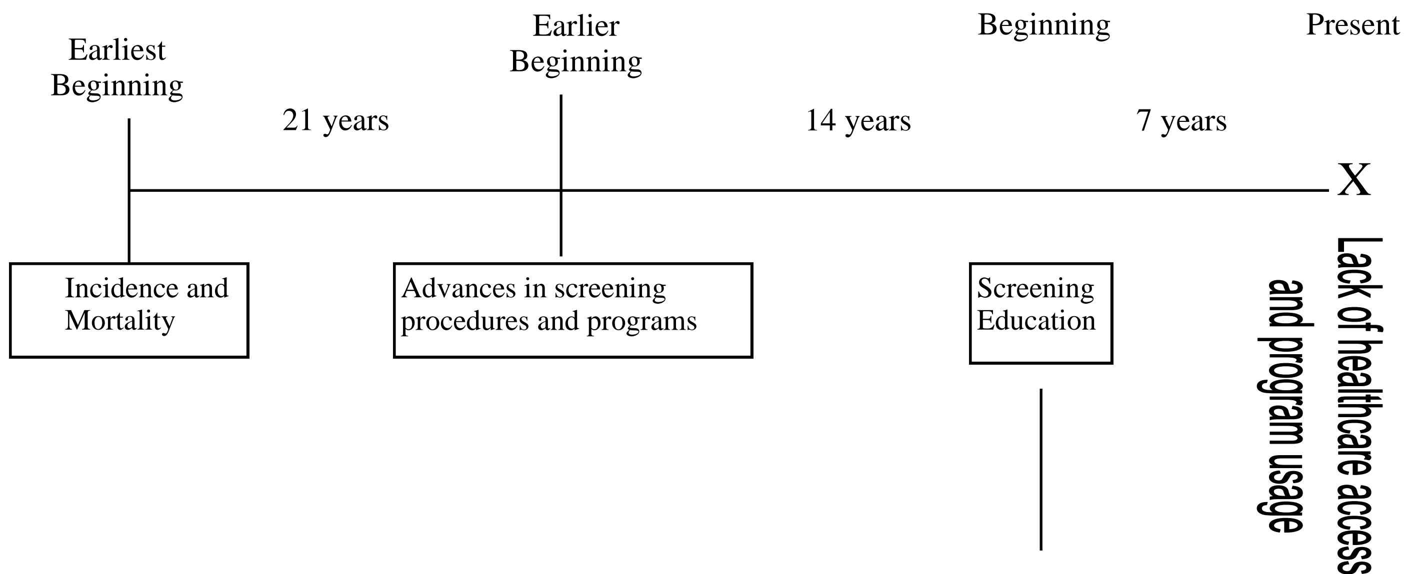
Early detection of colorectal cancer increases the 5 year survival rate to 90%. Statistics show however that less than 40% of colorectal cancers are found in its earliest most treatable stage[6].

With the burden of disease and death rate of colorectal cancer in Kentucky being so high, there is an enormous need to increase screening rates for those 50 years and older or those who have a family history through their local health departments and other primary care physicians.

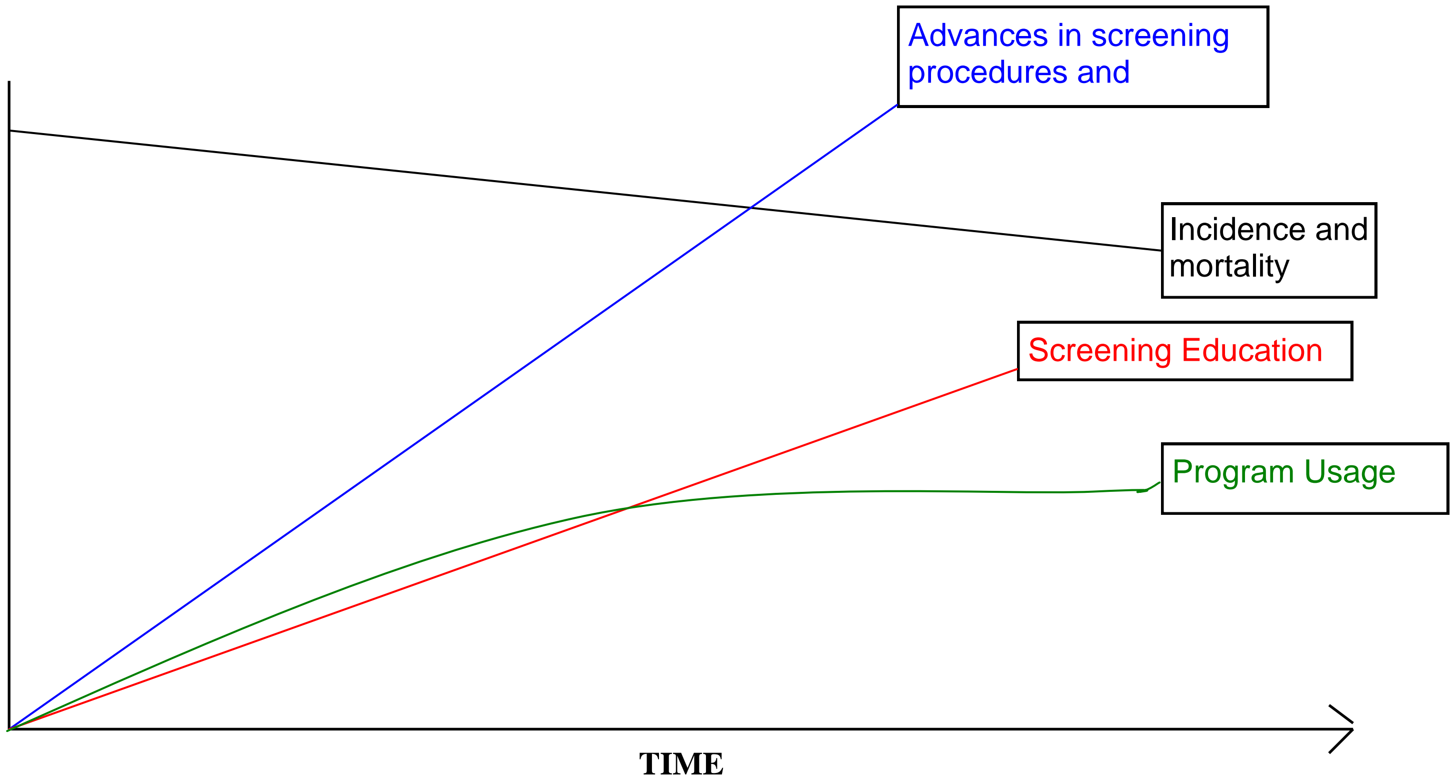
PROBLEM STATEMENT

Educational materials that inform the general public about screening for colorectal cancer is not utilized in rural communities in Kentucky.

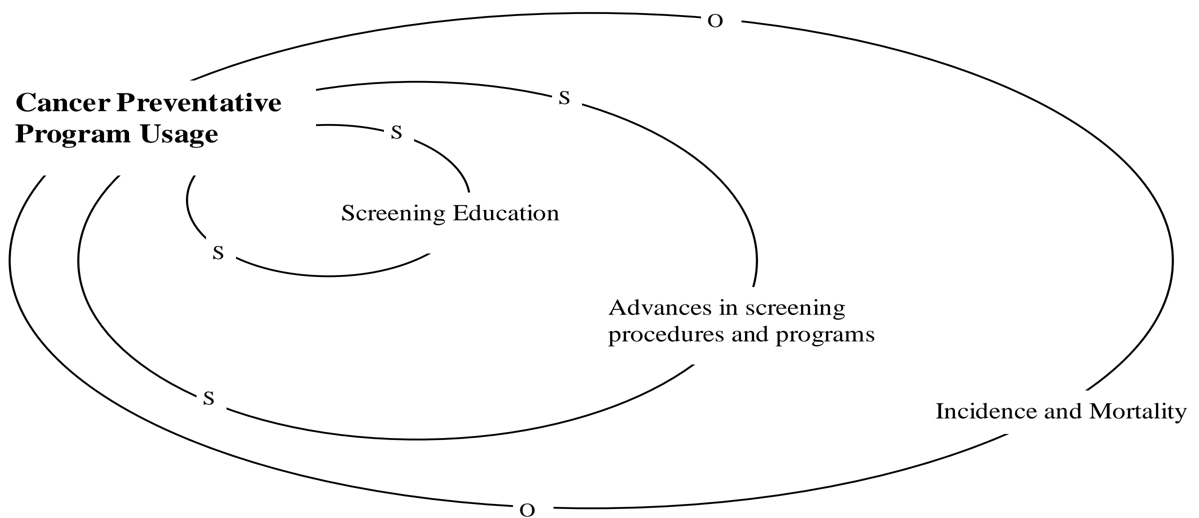
BEHAVIOR OVER TIME GRAPHS:



Time Graph of Problem

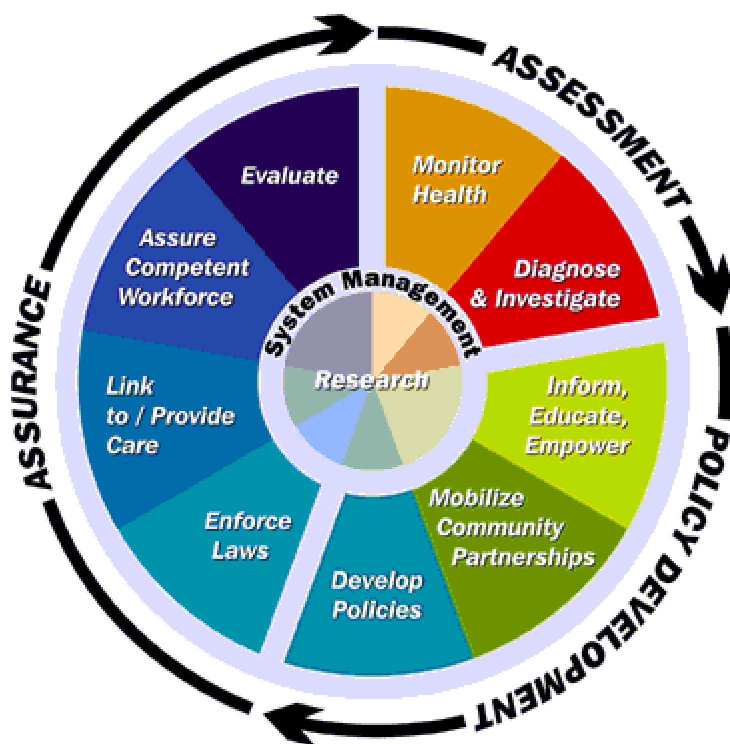


Causal Loop Diagram (multiloop diagram)



The Fab Four
Mentor: Dr. Carolyn Lewis

10 Essential Public Health Services/National Goals Supported:



Our project aimed to address the ten Essential Public Health Services. In addition, the project also wanted to incorporate goals from Healthy People 2010 as well as Healthy Kentucky 2010. [7] The goals our change master project will meet are listed below:

Essential Public Health Services (EPHS)

- EPHS #2 Diagnose and investigate health problems and health hazards in the community
- EPHS #3 Inform, educate, and empower people about health issues
- EPHS #7 Link people to needed personal Health Services and assure the provision of healthcare when otherwise unavailable
- EPHS #9 Evaluate effectiveness, accessibility, and quality of personal population-based health services

Healthy People 2010

The goal in Healthy People 2010 stating endeavors to eliminate health disparities among different segments of the population. Also, the focus area goal to reduce the number of new cancer cases as well as the illness, disability, and death caused by cancer.

Healthy Kentucky 2010

We feel that our project meets the following objectives:

- 17.1. To reduce cancer deaths to a rate of no more than 220.7 per 100,000 people in Kentucky.
- 17.7. To reduce colorectal cancer deaths to no more than 23.5 per 100,000 people in Kentucky.

PROJECT OBJECTIVE, DESCRIPTION, AND DELIVERABLE:

Much has been written about why individuals do not get screened for certain health issues as well as how physicians and medical staff can have an impact. Lack of knowledge about the need for screening and the fear of the procedures involved in screening are two of the biggest factors. These must be addressed to move people toward a healthier life. Providing information during an office visit is usually not enough. There must be compelling benefits to behavior change. (Appendix C)

The Tran Theoretical Model [8], as well as other behavior modification models can be very effective in moving patients toward action. The Tran theoretical models or stages of change, see behavior change as a process where every person is at a different readiness stages. By using this framework, a targeted health campaign can be designed for patients at each stage. Within this model there are 5 stages:

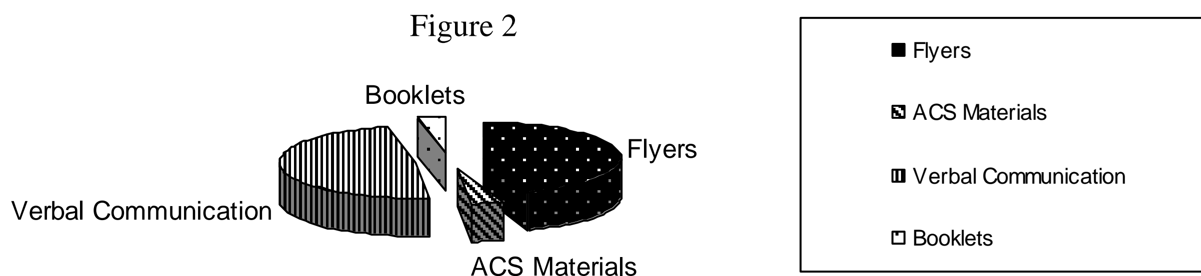
1. Precontemplation--not thinking about changing behavior
2. Contemplation—thinking about the changing in the near future
3. Decision—making a plan to change the behavior
4. Action—implementing the plan to change behavior
5. Maintenance—continuation of the behavior changes.

Though the model is not linear, it is unlikely that an individual will move from precontemplation to action, especially when the action is colorectal cancer screening. In developing our toolkit, we addressed the different stages and messages that would assist in moving individuals through the stages to action and maintenance.

It is said that we learn through three modes: hearing, seeing and saying. Our materials address two of these modes: hearing and seeing. We have developed talking points and materials for the health care worker to use in counseling patients at different stage of readiness as well as providing researched based information concerning screening options, cost and benefits.

To address the visual aspect we have put together a collection of comprehensive educational materials created by national organizations that have been proven to be effective across many audiences. We felt this was very important after the completed surveys showed a disproportionate use of self created materials. The survey asked, “What form of educational materials do you use with your patient base?” Only 1 health department used ACS material. All of the health departments reported using only self made flyers or verbal communication as their main tool for educating their patients. The total distribution is shown in figure 2.

Figure 2



In the Fab Four's tool kit, we will provide the health departments sample materials such as "Screen For Life" [9]created by the Center For Disease Control, American Cancer Society materials and Colorectal Cancer education by National Colorectal Cancer Research Alliance. These materials will increase the number of proven effective tools the health departments can use to reach their patients at any stage of behavior change they may be in. These materials also are available in Spanish and with an emphasis on specific race issues.

Our team will initially distribute the toolkit to the health departments in the three districts that participated in our research; we feel that it would be a valuable resource for all primary care centers as well as other state health departments.

PROJECT METHODOLOGY:

The Fab Four's desire for this project to make an impact on the burden of disease by creating a toolkit for the local health departments. This toolkit will include educational material for the caregivers, health maintenance forms for the clients to complete to identify their screening status, educational materials for the clients, and reimbursement information. Providing this toolkit will enable the staff to have more information to assist their clients and make the best decision for their health.

To move forward, we selected 3 Area Development Districts: Big Sandy, Kentucky River and Northern Kentucky, to obtain baseline data. We realized demographic profiles of these areas were needed, as well as determining what the health departments were providing for colorectal cancer screenings. We compared the household income, poverty rate and the percent of uninsured of the three districts.[10]

Table 2

ADD	Household Income	% Poverty	% Uninsured
Big Sandy	$20,000-26,000	21-29%	15-19%
KY River	$16,000-24,000	22-37%	16-21%
N. KY	$32,000-55,000	6-16%	8-15%

No correlation between poverty and mortality rate could be found. According to Kentucky Cancer Registry (KCR), the three district had approximately the same colon and rectal cancer mortality rates from 1998-2002[11].(table 3)

TABLE 3
Cancer Mortality (CDC1998-2002)

ADD	Deaths	At Risk Population	Percent
Big Sandy	201	803,153	25%
KY River	128	603,077	21%

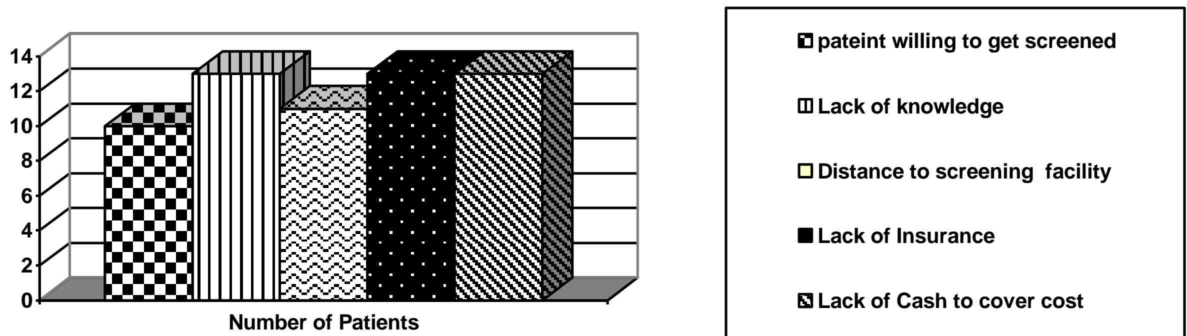
N. KY	450	1,959,552	23%

To determine the information and materials the health departments were currently using, we mailed a self-report survey to each individual county and district department within the three Area Development Districts. A total of 21 surveys were mailed and 15 were returned, which was an excellent response, 71% return rate and will have excellent generalizability.

PROJECT RESULTS:

The surveys provided us with great insight into the identified health departments' colorectal screening practices. There were very consistent message across the board for many of the questions. Figure 1 shows the health care workers' perceived barriers to patients getting screened for colorectal cancer

Figure 1



As with many medical issues, lack of cash or insurance coverage is seen as common barriers to screening. We had hypothesized that knowledge also played a big role in the decision as well. As shown above lack of knowledge measured as high as the ability to pay or be covered for procedures. This reinforces the need for a broad education campaign to the health care workers and the public about the importance of screening for colorectal cancer and the benefits of catching it early.

The surveys that were completed by the health departments in the identified ADDs showed a need for a tool that would provide easy access to materials that can be used for professional education as well as public education. Though our survey of the health departments indicate only 25% of the clinic patients are age 50 and over, it is still vital for health departments to have information regarding screening for colorectal cancer available. The information can be utilized for younger patients who have a family history of colon cancer. Our toolkit can also be utilized by the health education team in the health departments to inform the general public about colorectal cancer screening. It is important to help the public understand and acknowledge that the fear of having a colonoscopy performed can be lessened with the realization that the screening could prevent cancer or eliminate it in the early stages. The complete survey summary is attached in Appendix B .

CONCLUSION

Our original problem statement suggested that educational materials that inform the general population about colorectal cancer screening are not utilized in rural Kentucky. Through an extensive literature research, we found that many areas around the country had looked at this problem and asked many of the same questions we asked. Questions such as: "Why aren't people getting screened?", "Are people in rural populations less likely to get screened than people in urban populations?", and "Does screening really effect the outcome?"

We believe that if health departments and any primary care physician have the correct tools they can assist their patients in making the most knowledgeable and correct decision for themselves. That doesn't mean that if they hand John Doe a pamphlet they had created in the office on the benefits of colorectal cancer screening, he will be making his appointment before he leaves. If however, the health care worker can provide John Doe with information that resonates with him at the stage of decision-making he is at currently, they can move him along the process so that before his next appointment he is considering the benefits of screening. It is also important for people to receive consistent, informed messages. This can be accomplished by distributing information that is science based and tested, not something that was created in office.

The Fab Four's toolkit will provide these facilities with: professional education, health maintenance forms for the charts, billing codes, printable education materials for patient in pdf format and ordering information for FREE publications.

Somewhere down the line we have asked ourselves," Can our project make a difference?" To answer that, we each have to look inside ourselves and determine if almost 66 cases of colorectal cancer being diagnosed and almost 2.6 people dying from this disease each day in the Commonwealth of Kentucky are too many for us to sit by and do nothing.

LEADERSHIP DEVELOPMENT OPPORTUNITIES:

Meredith Brown

Participating in the Kentucky Public Health Leadership Institute has been a rewarding experience. I have been able to broaden my scope in how Public Health can improve the lives of Kentuckians. I have strengthened my knowledge on system thinking as well as how to see the whole perspective surrounding a problem. I have also learned about myself and how to work with others from various backgrounds.

Through this experience, I have strengthened my leadership skills which will assist me in my current Public Health position. I am truly thankful that I had the opportunity to participate in the institute. This is an experience that I will never forget.

Bethany Potter

My overall experience in the Kentucky Public Health Leadership Institute can be summed up in one word: WOW! From the summits, to the online facilitations, to our personal development plans-it is amazing the valuable resources provided to participants which will make us better leaders. What an awesome privilege it has been to be a participant of KPHLI (thanks for letting me stay) and to have the honor to meet such wonderful people who have a common goal to achieve: becoming effective change agents in our professional and personal communities. Thank you for enabling me with the tools to turn my knowledge and/or lack of knowledge into valuable skills that can be applied to every aspect of my life.

Amy Steinkuhl

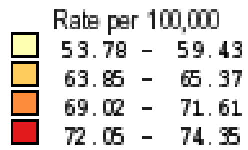
As our year in the Kentucky Public Health Leadership Institute comes to a close I have to say this has been one of the most rewarding professional experiences that I have had the opportunity to participate in. I came into the experience hoping to gain a little knowledge in areas such as conflict management and how to deal with difficult people. What I got was so much more! Through the guidance of incredible mentors and facilitators my public health knowledge and skills have been broadened and strengthened, to which point I feel like I can be an effective change agent. I also appreciated the opportunity to foster growth personally through the personal development plan and mentoring, the personality and social skill exercises and by developing a greater understanding for Emotional Intelligence. KPHLI has created avenues for collaboration with public health partners that I may never have had the opportunity to develop otherwise. Having the opportunity to work with some of the most talented and hard working people in public health is an education in itself. The friendships that have resulted are icing on the cake. Thank you for such a rewarding experience!

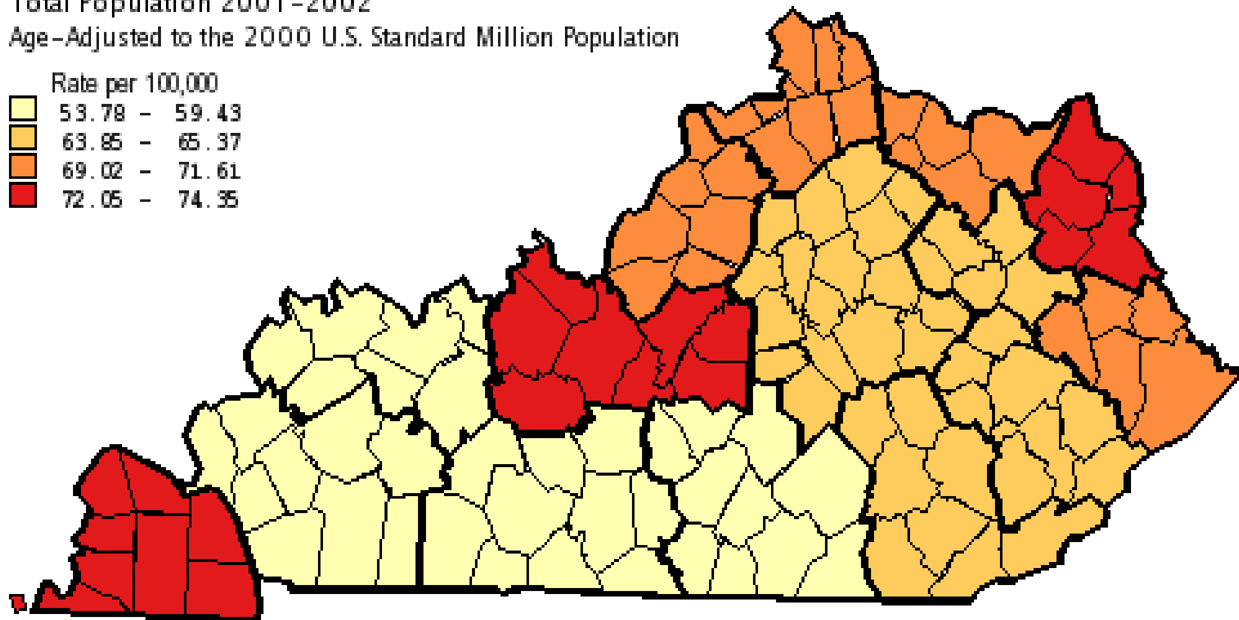
Karen Weller

I have considered it an honor and a privilege to have the opportunity to be involved in the Kentucky Public Health Leadership Institute. As a home health administrator, I found it valuable to learn about the many facets of public health through networking with scholars from across the state. I especially found learning about Emotional Intelligence and my personal social style valuable in understanding how I can be a more effective leader. I will use this information throughout my career and in my personal relationships.

APPENDIX A

Age-Adjusted Cancer Incidence Rates by ADD in Kentucky
Colon and Rectum, 2001-2002
Total Population 2001-2002
Age-Adjusted to the 2000 U.S. Standard Million Population





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APPENDIX C

	Pre-contemplation	*Contemplation*	*Decision*	*Action*	*Relapse*	*Maintenance*
Description of the stage:	No conflict, no interest in change	Increasing conflict between status quo and desire to change	Conflict culminates in intention to change	An attempt to change is made	Most times the first attempt doesn't last	Sometimes the change is integrated into ongoing life
Activities of the person in this stage:	"Denial" of a problem that other people see	Information gathering, creating an identity, "trying it on"	Telling people you are ready to change, preparing for action	Trying to change	Falling back into previous behavior	Mostly steady steps to keep resolving barriers as they come up, becomes easier over time
What increases motivation at this stage:	Presentation with factual data about what is problematic to others, their concerns; this raises doubt COURAGE	Support and time for noticing discrepancy, exploring risks and benefits of change or not, strengthening self-efficacy EMPATHY/ PATIENCE	Helping yourself decide on a course of action; obtaining concrete information for use in this specific situation PRACTICAL ADVICE	Support and time for taking action, anticipating the need to problem-solve CREATIVITY	Letting yourself progress through the stages again, avoiding becoming demoralized, treating the relapse as opportunity to learn COMPASSION	Focusing on consistency, which involves skills to come out of relapse and problem-solve how changing impacts life CONSISTENCY/ PATIENCE
What does not increase motivation or may increase resistance:	Being offered solutions before you've decided there's a problem (creates defensiveness: "I don't have a problem")	Identifying with one side of the conflict rather than holding the tension: e.g., Nagging/criticism, OR meeting concerns with arguing/ rationalizations	Identifying as a "good girl" - invoking too much approval from the outside for your own choice about change; or undermining self-efficacy, e.g., self-disparagement	Ditto (from left)	Saying "I told you so," regarding relapse as failure, underscoring your identity as someone who can't change	Giving only intermittent effort or attention (not being consistent), capitulating to the hopelessness, feeling you're not entitled to anything better
Where are you now in the model with the issue you identified?						
Examples of goals for each stage	Plan a time to get feedback from a friend who is concerned about you	Set aside 5 minutes a day when you can think about the issue; or "Poll" the different parts of yourself about the issue	Search the web for resources devoted to the issue; or Call a hotline to talk to a real person about what to do next	OK, give it a whirl: Take care of yourself a different way, and then write about how it felt	When you start to mentally beat yourself up, stop that thought with the thought that relapse is a valuable opportunity to build "damage control" skills	Come up with a list of what has gotten in the way of being consistent with your change. Set aside 3 minutes every day to picture yourself practicing this change for the rest of your life.

Table based on the Transtheoretical Model by Prochaska and DiClemente, 1982.

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