Kentucky Worksite Wellness Tax Credit: A Health Impact Assessment

The purpose of the assessment was to evaluate the potential effects of a worksite wellness tax credit on three main areas of concern for Kentucky: (1) nutrition, physical activity and obesity levels of children whose parents receive Worksite Wellness services, (2) jobs and (3) social cohesion.

January 2012

The Kentucky Department for Public Health produced this report with grant funds from Association of State and Territorial Health Officials and technical assistance from Human Impact Partners and Western Kentucky University.

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CONTRIBUTORS:

Kentucky Department for Public Health HIA Team Leads:
Teresa Lovely MS CHES, Business Coordinator for Worksite Wellness Development
Elaine Russell MS RD LD, Nutrition Coordinator, Obesity Prevention Program

Western Kentucky University (WKU) Department of Public Health
Dr. Cecilia Watkins, Associate Professor
Dr. Gary English, Department Chair
Emily Reeves, MPH Candidate

HIA Project Team Members

Jennifer Redmond, Program Director, Kentucky Cancer Consortium

Anita Courtney, Partnership for a Fit KY and Public Health Consultant

Ashley Elkin, Health Educator, Barren River Health Dept.

Crissy Rowland, Health Information, Barren River Health Department

Carol Donnelly, President- KC WELLNESS, INC.

Shelly Greenwell, Health Educator, Lincoln Trail Health Department

Nancy Spivey, COO & SVP Workforce Talent Development Northern Kentucky Chamber of Commerce

Cris Miller, Partner, Mountjoy Chilton Medley LLP

Randa Deaton, Coordinator Kentuckiana Health Collaborative

Laura Schatz, Worksite Wellness Client Services, St. Elizabeth Hospital

John Sterrett, Insurance Consultant

Daniele Longo, VP Business Growth, Healthcare Solutions, Northern Kentucky Chamber of Commerce

Dr. Richard Wilson, University of Louisville, Health Promotion and Behavioral Sciences, Chair

REPORT REVIEWERS

Dennis Chaney, Barren River District Health Department Director

Charles George, Kentucky Chamber of Commerce, Leader of Kentucky Health & Policy Committee

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CONTACT INFORMATION

Teresa Lovely MS CHES 270-202-1585
Cecilia Watkins PHD CHES 270-745-4796

A Health Impact Assessment
Kentucky Worksite Wellness Tax Credit
EXECUTIVE SUMMARY OF FINDINGS JANUARY 2012

- Current conditions of the selected health determinants -childhood obesity, employment and social cohesion
- A logic model that shows how a Worksite Wellness Tax Credit could impact the three health determinants
- Assessments of the health impacts of the Worksite Wellness Tax Credit on 25 key areas, including Parental Understanding of Healthy Diet and Physical Activity for Children, Job Loss Due to Poor Health Status and Populations in Kentucky with Social Isolation
- Consider This: A Summary of Potential Impacts
- Key Findings
- Recommendations designed to help Kentucky receive the most benefit from worksite wellness policies

WHAT YOU WILL FIND IN THIS REPORT

Extensive research shows that Worksite Wellness Programs benefit both employees and employers. There is strong evidence that comprehensive programs can change employee health behaviors and reduce their risk of disease. Healthy employees boost a company's bottom line by reducing health care costs, Workman's Compensation and disability claims and absenteeism, while increasing morale and productivity. At the current rate of increase, the cost of health care to employers will likely be the single most significant detriment to recruitment of businesses to the state and the viability and profitability of existing businesses. Public agencies are feeling the sting as well as health insurance costs skyrocket. Health care costs contributable to obesity alone are projected to be $2.3 billion in 2013 and $6 billion in 2016 for the state of Kentucky (American Public Health Association/Partners in Prevention, 2011).

A worksite wellness tax credit was proposed, but not enacted in 2008, 2009 and 2010 which would give tax credits to employers who provide qualified wellness programs for their employees. Based on HB 74 in 2010, the annual credits would be up to 50% of the cost of wellness programs, or a maximum of $100 per total number of qualified employees. The total tax credit amount will be capped at $3 million dollars annually. Qualified programs are comprehensive and include health education, behavioral change and supportive environments.

What would the impact of a worksite wellness tax credit be for the state of Kentucky? To answer this question the Kentucky Department for Public Health partnered with the Western Kentucky University College of Public Health to develop a Health Impact Assessment, a state-of-the-art approach used for assessing the broader outcomes of health-related policies. The purpose of the assessment was to evaluate the potential effects of a worksite wellness tax credit on three main areas of concern for Kentucky: (**1)**

nutrition, physical activity and obesity levels of children whose parents receive Worksite Wellness services, (2) jobs and (3) social cohesion. The full report provides complete details of the assessment and findings.

THE PURPOSE OF CONDUCTING AN HIA ON KENTUCKY WORKSITE WELLNESS TAX CREDIT

Consider broader health impact of wellness at the worksite:

- potential benefits of a healthier population
- lower healthcare costs
- stronger economy and workforce

Provide directions to lessen health disparities on special populations including

- small businesses
- rural areas
- underemployed and the lower income.

Inform about the potential health benefits of enacting the Kentucky Worksite Wellness Tax Credit to:

- Kentucky residents, health professionals, legislators, business leaders and other stakeholders

ABOUT HEALTH IMPACT ASSESSMENTS

A Health Impact Assessment is an information gathering tool used to systematically evaluate the potential and sometimes unintended effects of a proposed project, plan or policy on the health of a population and the distribution of those effects within the population. An HIA has 5 steps:

Screening - To determine if a HIA is needed

Scoping - Determines which health impacts, the analysis method and how the impact will be completed

Assessment and Recommendations - Looks at current conditions, possible impacts, and offers strategies to address unwanted health impacts

Reporting - Includes creating and sharing a formal report of process and findings

Monitoring - Tracks impact on the project or policy and the health determinants

----- **Human Impact Partners**

KEY FINDINGS OF ASSESSMENT

The HIA finds a worksite wellness tax credit would likely have positive impacts on the physical and social health of Kentuckians and the economy. Key findings of the HIA of the Kentucky Worksite Wellness Tax Credit are:

- Parents have the most influence of their children's habits and lifestyles.
- Parents can be educated and supported to improve their own health and that of their children at the workplace.
- Progressive companies in the country are offering wellness programs now for employees and their families.
- Employee wellness programs, which include families, have shown greater results than employee only programs.
- Job growth can be increased through healthier employees, which result in healthier companies, including lower employee turnover rates, higher productivity, lower absenteeism, lower presenteeism (coming to work but performing poorly) and a state image that could attract companies.
- Social cohesion influences communities' ability to provide a supportive, healthy environment, including less dependency on government programs with potential opportunities for self-sufficient community members.

Current Conditions

CHILDHOOD OBESITY

- Kentucky ranks third in the nation for childhood obesity
- 16% of children are overweight and 18% are obese
- 80% of children who are overweight will become overweight adults

(CDC, 2009)

JOBS IN KENTUCKY

- Almost 355,000 Kentuckians are underemployed. The underemployed have less education, are younger, non-white, and have physical limitations
- Kentucky is ranked 40th in the nation for percentage of low-income working families

(The Working Poor Project, 2008)

- KY state unemployment - 9.8% Eastern KY areas higher - 12.1%

(Office of Employment & Training, 2010)

SOCIAL COHESION

- Kentucky was ranked 49th in the overall Gallop-Healthways WELL-Being Index Study
- The state was 49th in emotional health, life evaluation, and physical health, and 50th in healthy behavior

(Gallup-Healthways, 2010)

Health Impact Assessment Logic Model

Kentucky
Worksite Wellness Tax Credit

GOAL:
To show the impact of the KY Worksite Wellness Tax Credit

RATIONALE:
Motivate companies to implement effective wellness programs resulting in healthier communities

ASSUMPTIONS

Healthier families including spouses and children

Health care costs could decline, while job opportunities could increase

Healthier worksite could lead to better social cohesion

RESOURCES

Responsible agency

Technical assistance

Develop certification process

Expert at state level

ACTIVITIES

Marketing

Create employee wellness model

Create awards

Conduct training

Tracking

OUTCOMES

Increase in number of companies offering wellness programs

Increase in number of comprehensive wellness programs

Increased number of health promoting policies in work policies

Capacity for job growth

Increased access to wellness programs

Healthier families, including spouses and children

Improved social cohesion internally and externally of worksites in Kentucky

CONSIDER THIS
A Summary of Potential Impacts

More Physical Activity

Kentucky children (under 18) are 8.5% below the national average for meeting the requirements of daily physical activity. This relates to 457, 223 children in the Commonwealth that are considered sedentary. If companies and schools in Kentucky offered worksite wellness programs, parents and teachers, who are both significant roles models to these children would be better equipped to guide their children and students to be more physically active.

Families Eat More Fruit and Vegetables

If employers offered family wellness programs for fruit and vegetable consumption, 11% more of the KY working population and their families may eat healthier. This could lead to an estimated 10,000 children eating more fruits and vegetables.

Educate on Importance of Limiting Sweetened Beverages

If eliminating consumption of just one soda per day, approximately 150 calories (40 grams of sugar) per soda, a child could potentially lose between 10 to 16 pounds in one year. Worksite wellness programs would educate employees (parents) on the nutritional importance of limiting sweetened beverages in their children's daily intake of liquids.

Support for Working Moms to Continue to Breastfeed

A Kentucky worksite wellness tax credit could likely increase the number of companies that implement wellness programs and consequently lactation programs and policies, which would increase Kentucky's rate for breast feeding up to one year which is currently at 13.1% as compared to nationally 22.7% and Health People 2020 objective of 34.1%. Creating basic accommodations for lactating women can cost businesses next to nothing, yet the return on investment can be significant. One company estimated a return on investment for their worksite lactation support program at 2.8 to 1 (Partnership for a Fit Kentucky, 2009). The lactation programs in Kentucky could also prevent the primary reason for mother's stopping breastfeeding, which is returning to work.

Healthier Families

According to the 2008 County Business Patterns (NAICS) from the U.S. Census Bureau, there are 92,587 worksites in Kentucky (U.S. Census Bureau, 2009). Ninety four percent or 87,212 of those businesses are small (49 or less employees) and most do not offer wellness programs, while 5% are medium size (50-249 employees) and less than 1 % are considered large (250 and more). The Worksite Wellness Tax Credit could potentially influence 30,000 employees and their families to live healthier lives, especially those in small and medium businesses.

Support for Parents Employed in Small Businesses

Although the number of employees who are parents and work in small businesses is not known, a majority of worksites in Kentucky are small. According to the U.S. Census Bureau (2008), approximately 99% of all businesses in Kentucky are considered small (2-249). The estimated workers employed by small businesses in Kentucky are 906,794, which could be positively influenced by wellness programs in their worksites, resulting in healthier and more productive workers.

More Jobs in the Wellness Industry

By offering employers incentives to implement wellness programs, more companies will provide comprehensive wellness programs and will require qualified health professionals to lead them. Small and medium sized companies tend not to offer wellness programs as often as larger organizations. With the tax incentive, more companies will likely offer health promotion programs which will generate increased business for wellness vendors in Kentucky. This would lead to more jobs in the wellness service industry in the state.

A Healthier Workforce Creates a Healthier Economy

Wellness programs reduce the chronic diseases in a population and reduce costs for both employees and employers. By implementing wellness programs in the workplace, a significant part of the population is reached. A healthier workforce creates a healthier economy. The savings realized from a healthier workforce includes lower healthcare costs, less absenteeism, lower presenteeism and higher productivity, which will lead to a more efficient working environment and healthier businesses.

Increased Job Opportunities for Vulnerable Populations

Vulnerable populations in Kentucky are more likely to be unemployed. If companies encouraged and supported healthy work environments through worksite wellness programs, producing healthier and more productive employees, these vulnerable populations would have increased job opportunities through a stronger job demand.

Help Kentuckians Meet Their Basic Needs

The need to be self-sustaining and meet the basic need of life is vital to the health of a population. A healthy job market encourages states, communities and individuals to grow and prosper. The Kentucky Worksite Tax Credit will motivate companies of all sizes to add wellness as a part of the benefits to employees. The growth potential of a healthy company will allow more Kentuckians to work and enable them to meet their basic needs.

Increase Job Satisfaction, Increase Productivity

Social support at the workplace has a positive effect on the well-being of the worker, including impact on job satisfaction and productivity for the organization, Kentucky's labor force would benefit from the implementation of wellness programs as a result of passing the KY Worksite Tax Credit.

Key Recommendations

The report found that to truly reap the benefits that worksite wellness has to offer in addressing key problems in the state a more comprehensive approach was needed. Recommendations include to:

- Implement the Worksite Wellness Tax Credit
- Conduct a state-wide in depth assessment of current status of worksite wellness programs
- Create a state-wide worksite wellness council or panel
- Create a center of excellence for worksite wellness
- Support of worksite wellness programs at a regional and local level with a qualified consultant
- Offer wellness programming to provide education for parents in the worksite
- Educate employers on the benefits of providing wellness programs for both employees and their families
- Set standards for quality wellness programs for the worksite wellness tax credits to be successful

What Employers Can Do

- Help employees develop healthy family lifestyles in the home
- Educate employees about what to do if their child is overweight
- Provide tools and information to optimize employee partnerships with health care providers
- Refer parents to child care services and providers that meet nutrition and physical activity recommendations

The Big Picture of Kentucky Worksite Wellness

Worksite	Employee	Families	Community	Kentucky
Increase number & quality of wellness programs	Healthier lifestyles	Healthier lifestyles	Healthier members	Healthier citizens & workforce
Role model for community	Role model for families	Improved family dynamics	Improved social cohesion	Attract new businesses

1. Introduction

Unhealthy lifestyle choices and behaviors are key factors in poorer health, a lower quality of life, and the increased cost of health care (Riedel, Lynch, Baase, Hymel, & Peterson, 2001). As much as fifty percent of health care costs can be attributed to individual behaviors (Anderson, et al., 2000). Poor health and rising healthcare costs consume large portions of our corporate and state resources placing Kentucky at a disadvantage in providing a good quality of life for its people and for creating an environment conducive to business growth and development (Kentucky Chamber, 2010). Lower health status statistics affect the productivity and quality of life, as well as the recruitment and retention of business in the state.

Worksite health promotion programs are offered by employers to raise awareness and knowledge of issues that impact employees' health and well being. The body of evidence that supports the positive results of comprehensive worksite health promotion programs continues to develop. Average reductions in sick leave, health plan costs, and workers' compensation and disability costs of slightly more than 25% were found in a meta-analysis of studies. (Chapman, 2005). Aldana (2001) completed an analysis of studies that showed return on investment savings ranging from $2.30 to $6.00 (Aldana, 2001). A series of literature reviews conducted by the Centers for Disease Control and Prevention Community Guide Task Force found that "there was sufficient or strong evidence that comprehensive, evidence-based programs can reduce rates of tobacco use, dietary fat consumption, seat belt nonuse, high blood pressure, total serum cholesterol levels, high-risk drinking, and the number of days absent from work because of illness or disability. The reviews also found improvements in employees' physical activity, overall health and well-being scores, and health care use, especially in terms of reduced hospital admissions and days of care" (Goetzel & Ozminkowski, 2008).

Improving health through a well designed worksite health promotion program is an important strategy for businesses to address absence and other health related issues. Worksite Health Promotion (WHP) programs can assist in the reduction of health insurance claims and overall health care costs and, most importantly, help achieve a higher level of health for employees (Davis, et al., 2009). Companies continue to promote activities that engage employees in managing their health and costs associated with their health, with 78 percent of companies now investing in health improvement programs such as health risk assessments and biometric testing (Aon Hewitt, 2011).

Kentucky business leaders recognize the need to address poor employee health. Although information about worksite wellness programs in Kentucky businesses is very limited, a 2010 survey conducted by the Kentucky Department for Public Health (KDPH) and the Kentucky Chamber of Commerce found that 63% of Kentucky Chamber member businesses now have a worksite wellness program in place compared with 36% in 2006 (Kentucky Chamber, 2010). These results are representative of chamber members only. Also, many of these programs may not be comprehensive, or include evidence based strategies, and therefore, may not be effective.

Some major changes need to be made to ensure a healthy working population, including employees and their families. There is a need for employers, both public and private, to implement comprehensive worksite wellness programs and provide wellness services to the employees and their families to prevent

overweight and obesity and help employees make healthy choices. Efforts are being made to change the lifestyles risk factors that affect health; however, these efforts can only be successful when they are constant and reinforced. Policy change can strengthen efforts of employers to provide supportive environments and employees to adopt healthier lifestyles (Heinen & Darling, 2009).

In the fall of 2010 the Kentucky Department for Public Health (KDPH) received a grant from the Association of State and Territorial Health Officials (ASTHO) to build capacity to conduct Health Impact Assessments (HIA) and to complete a first HIA for the KDPH. The first HIA project was the assessment of the Kentucky Worksite Wellness Tax Credit (HB 74) which would provide tax credits to employers who implement worksite wellness programs according to specific guidelines. This bill was introduced in 2010 but was not enacted. Speculation is that the economic environment was not conducive to a reduction in tax revenue for the state at that time. However it is believed that revealing the broader positive impact of such a tax credit could result in a gain in support. This HIA was conducted beginning in January of 2011 by the KDPH Obesity Staff and Western Kentucky University's (WKU) Department of Public Health with input from a state-wide HIA Team. Looking at the impact that the tax credit would have on the diet and physical activity levels of children (childhood obesity), jobs, social cohesion and well-being involved extensive literature and document reviews and the expertise and time of public health and other professionals.

This HIA report includes the background, current conditions of the selected health determinants, potential impacts of the tax credit, and recommendations. The background section describes the basic HIA process, worksite wellness at a national level, a summary of HB 74, and the reasoning behind selecting this policy to assess. The current conditions section includes statistics of the three health determinants addressed (diet and physical activity in children, jobs, and social cohesion and well-being). This section includes the scope portion of the report, which goes into more detail of the health determinants and includes the research and impact questions and methodology. The assessment portion provides the available data for each research and impact question. This section emphasizes a "Consider this" section that includes qualitative and quantitative analysis of the impact findings. And finally, in the recommendations portion of this report, suggestions are provided that will result in a strong and effective tax credit bill, but also a stronger worksite wellness initiative for the state.

Reference is made throughout this document, specifically to the 2010 bill (HB74), however, research, conclusions, and recommendations would apply to any similar future legislation.

2. Background

2.1 Health Impact Assessment Overview

A Health Impact Assessment (HIA) is defined as "a combination of procedures, methods and tools that systematically judges the potential and sometimes unintended effects of a proposed project, plan or policy on the health of a population and the distribution of those effects within the population". An HIA identifies appropriate actions to manage those effects (Human Impact Partners). HIA is recommended as a planning tool in Healthy People 2020 (Centers for Disease Control and Prevention, 2011).

Traditionally health impacts have not been considered in projects changing the built environment of a community such as new buildings or road construction. The basic goal of the HIA is to include health and

health disparities in the decision making and planning process of such changes. Without public health input, community "improvements" may actually contribute to a decline in health status particularly for some disparate populations. By following a scientific and objective assessment process in partnership with key stakeholders, public health impacts can be seriously considered by those who do not have an understanding of health factors or risks

The HIA process includes the following l steps:

Screening – Determines if an HIA is needed
Scoping – Determines which health impacts will be assessed, the study methods, and how the research will be completed
Assessment and Recommendations – Looks at current conditions, possible impacts, and offers strategies to address unwanted health impacts
Reporting- Includes creating and sharing a formal report of process and findings
Monitoring- Tracks impact on the project or policy and the health determinants
Source: (Human Impact Partners)

2.2 Worksite Wellness Legislation in the United States

Worksite wellness legislation is a fairly new concept. New Jersey's Health Wellness Promotion Act, enacted in 2000 was the first health promotion legislation to address the adult population. A review of worksite wellness legislation in the U.S. from 2001 to 2006 looked at 87 bills consisting of various wellness incentives including tax credits, wellness policies/programs, alternative transportation and health insurance plans. Those listed as tax credits offered employers income tax credits of varying amounts (up to a maximum amount) toward wellness program costs. Twenty-seven states enacted bills. A passage rate of 19% to 22% revealed that worksite wellness bills were as likely to pass as other health promotion related ones (Lankford, Kruger, & Bauer, 2009).

Worksite wellness legislation is gaining momentum in the United States. Between 2006 and 2010, 28 states passed worksite wellness laws concerning health insurance incentives, state employee programs, tax credits and studies concerning worksite wellness. Nine states and the District of Columbia have considered employer-sponsored health promotion program tax credits, but only Indiana enacted legislation. Indiana's Small Employer Wellness Tax Credit Program allows employers with two to 100 employees to receive a tax credit for 50 percent of the cost incurred in a given year for providing state-certified employee wellness programs. According to the Indiana Department of Revenue, in 2007 (the first year of the program), 50 employers claimed $107,960 in small employer wellness tax credits; in 2008,184 employers claimed $219,782; and in 2009, 186 employers claimed $225,085. (National Conference of State Legislatures, 2010). Several states enacted laws or resolutions to conduct studies of worksite wellness programs. New Mexico passed a resolution to study the effects of worksite wellness programs. Other states have passed legislation concerning state employee wellness programs. Arkansas and Alabama enacted legislation to support their states' employee wellness programs.

One 2010 worksite wellness brief reported that, "The evidence to date suggests gains from wellness programs are too uncertain to justify broad taxpayer supported subsidies" (Tu & Mayrell, 2010). However, worksite wellness studies have found wellness programs, when properly designed and implemented, improve health and contain or reduce health related costs. Several scientific reviews indicate that worksite health promotion programs reduce medical costs and absenteeism and produce a positive return on investment (Chapman, 2005).

According to a briefing document of Health Promotion Advocates (2011), the most definitive review of financial impact reported the following:

- 18 studies indicated that these programs reduce medical costs, and 14 studies indicated that they reduce absenteeism costs.
- 13 studies calculated benefit/cost ratios and all showed the savings from these programs are much greater than their cost, with medical cost savings averaging $3.48 and the absenteeism savings averaging $5.82 per dollar invested in the programs. (Health Promotion Advocates)

A 2004 Research Triangle Institute Obesity Telephone Survey of Americans regarding work policy strategies for treating and preventing adult obesity revealed that almost 85 percent of respondents favored tax credits for employers and reimbursement and discounts for obesity treatment.

Policy	Percent in Favor
Favored tax breaks for employers who provided exercise facilities	**84.9%**
Favored employee health insurance reimbursement for obesity treatment and prevention programs	**72.9%**
Favored employee health insurance discounts for healthy weight or improvement	**72.2%**

(Fuemmeler, Baffi, Mâsse, Atienza, & Evans, 2007)

Tax credits that require a comprehensive wellness program could be a tool to increase the number of effective wellness programs implemented in worksites. The effectiveness of tax credits to increase participation of businesses that implement worksite wellness programs need to be evaluated after more data has been collected from participating organizations.

2.3 The Kentucky Worksite Wellness Tax Credit / HB 74

A Kentucky Worksite Wellness Tax Credit bill (HB111) an act to encourage healthy lifestyles, was introduced by Representative John Tilley for the 2008 session. The 2008 bill was introduced in the House on March 4, 2008 and went to the Appropriations & Revenue Committee on March 5, 2008. This bill included the establishment of a wellness program with the Kentucky Personnel Cabinet and the Frankfort YMCA to create a state employee personal fitness pilot program to demonstrate how a reduction in health care expenditures can be achieved. This bill did not pass (House Bill 111, 2008). A similar bill, filed in 2009, also did not pass.

House Bill (HB) 74, an act relating to encourage health lifestyles was introduced to the Kentucky legislature by Representatives John Tilley and David Watkins in 2010. A description summary of the bill is:

> "An ACT relating to encouraging health lifestyles.
>
> Create new sections in KRS Chapter 141 to establish a wellness project credit; create a new section in KRS Chapter 131 to require the department to report data annually to the Legislative Research Commission; amend KRS 141.0205 to place the new credit within the credit-ordering statute; create a new section in KRS Chapter 194A to require the Cabinet for Health and Family Services to develop an employer wellness project model and require a certification process for all employer-provided programs."
>
> House Bill 74 would allow for employers to certify their worksite wellness program through the Kentucky cabinet for Health and Family Services and then apply for a tax credit for program costs. Employers could receive 50 percent of the costs of their wellness program subject to 1) not to exceed $30 a month per employee for physical activity related costs, 2) Not to exceed $100 per employee per year, 3) No food or health insurance costs can be applied (House Bill 74, 2010).

The program would be required to include:

1) A health-awareness program
2) A behavior-change program
3) A supportive-environment program

If this bill were enacted, The Kentucky Cabinet for Health and Family Services would develop an Employer Wellness Project Model that is based on best practices. The model will include program components that educate employees on health risks and the need for screenings and preventive care; support behavior change; and, promote healthy lifestyles. There is a $3,000,000 annual cap on the tax credit based on a first come, first served basis.

The bill was sent to the Interim Joint Committee on Appropriations and Revenue on November 4, 2010 and introduced in the House Appropriations & Revenue Committee on January 5, 2010. The bill has not since been considered or reintroduced. It is believed that there is support for the advancement of worksite wellness in the state and that there is no major opposition to the bill. However, with state budget problems it is believed that any bill that would reduce tax revenue would not have been enacted in 2010. (See Appendix II for complete bill details.)

2.4 The Decision to Conduct an HIA on the Kentucky Worksite Wellness Tax Credit

Screening, the first step in the HIA process, establishes the benefits and achievability of conducting an HIA. The screening reveals potentially significant health impacts that may be overlooked, and can also

influence the decision-making process. The purpose of conducting the Health Impact Assessment (HIA) on the Kentucky Worksite Wellness Tax Credit is to:

- Consider the broader health impact of wellness at the worksite and the potential benefits of a healthier population, lower healthcare costs, stronger economy and workforce.
- Provide directions to lessen the health disparities on special populations including small businesses, rural areas, underemployed and the lower income.
- Inform Kentucky residents, health professionals, legislators, business leaders and other stakeholders about potential health benefits of enacting the Kentucky Worksite Wellness Tax Credit.

A Kentucky Worksite Wellness Tax Credit has the potential to not only impact the health of the working population, but also the health of spouses, children, and ultimately the community and even the state as a whole. Worksites have become the "perfect" venue to improve health due to the availability of the population and the needs of both employees and employers. Although many worksites now offer wellness programs in the state, a high percentage are not properly designed to produce health improvement. If passed, a Kentucky Worksite Wellness Tax Credit could increase the number of companies that provide effective wellness programs, which could result in healthier and more productive employees. According to HB 74, tax credit would require the wellness program to be "certified" (meet best practice criteria) by the state to quality for the tax credit.

Companies, particularly smaller size ones and those in rural areas, would be more likely to implement effective programs if an incentive was provided. These companies often employ individuals that have less education, less access to health care and have fewer resources for basic needs. Even many current supporters of a worksite wellness tax credit do not see the full impact that worksite wellness programs can have on parents at the workplace and therefore have the capability to affect family health and childhood obesity. Although there may be some understanding of the effect on the economy and jobs in the state, there has not been any formal assessment of this impact.

The relationship between supportive worksite policies and environments to increased physical activity was examined in a study conducted during 2001-2003. The study (Dodson, Lovegreen, Elliott, Haire-Joshu, & Brownson, 2008) revealed the importance of combining worksite programming with policy change to increase employees physical activity levels. The findings suggest that the effectiveness of worksite health promotion programs can be increased through supportive policies and environments.

In 2005, The Task Force on Community Preventive Services reviewed interventions conducted at schools and worksites aimed at achieving or maintaining a healthy weight. People spend a significant amount of time and consume a lot of calories in these settings. Results showed that both schools and worksites provide a controlled environment, including effective communication channels and supportive social networks. A recommendation made by The Task Force suggested worksites combine interventions such as nutrition and physical activity for increased effectiveness. Another recommendation was that worksite interventions that target both adolescents and adults be examined in future studies (Center for Disease Control and Prevention, 2005).

A randomized research study in Kentucky found the potential long-term benefits of multi-component interventions in small companies (150-350 employees). When designing interventions for employees a menu approach may be feasible. A study (Brehm, Gates, Singler, Succop, & D'Alessio, 2011) was conducted in eight smaller manufacturing companies in Kentucky to determine if environmental interventions in the workplace could prevent or manage obesity. Results revealed that interventions of less intensity, such as health risk assessments, were not as effective in long-term health and weight management as more intense efforts such as policy changes. The combination of tailored support for individuals and supportive policies and environments for healthy and at-risk population would seem the most beneficial.

The Worksite Wellness Tax Credit HB74 was introduced in 2010, but not reintroduced in the spring session of 2011. By conducting this HIA in 2011, this provides the entire year to conduct an HIA, disseminate the findings, allow for additional feedback and input, and make revisions. The HIA findings will also be used to identify and document gaps in Kentucky's worksite wellness programs data and to demonstrate the need for a comprehensive assessment of worksite wellness programs in the state.

The screening process led to the decision to conduct an HIA to show the significant impact of worksite wellness on such factors as family health, economic growth, social cohesion and well-being. Worksite wellness encompasses a broad range of health factors, including tobacco, chronic illnesses, ergonomics, financial issues, obesity, and others that can have far ranging effects. Kentucky's childhood obesity rate, which is 4th in the nation, affects Kentucky's future population and its prosperity, influencing the decision to choose obesity over these other issues. Also, the Kentucky Worksite Wellness Initiative, a statewide consortium, conducted surveys which revealed obesity as a major concern in businesses' perceptions of significant health risks for their employees.

Kentucky partners included representatives from the following institutions:

- Western Kentucky University (WKU) conducted literature review, assisted in writing the report, provided a graduate student assistance and consultation on policies and procedures.
- Kentucky Cancer Consortium assisted in literature review.
- Kentuckiana Health Collaborative provided opportunities to share HIA findings.
- Northern Kentucky Chamber of Commerce assisted with literature review sources and provided expert contacts.
- Support to conduct the HIA was provided by ASTHO and Human Impact Partners (HIP).

This HIA was conducted with no known conflict of interest.

Receptiveness to the HIA Findings

Due to state-wide interest and support in worksite wellness from the business community, public health leaders, and others over the past few years, it is believed that demonstrating the broad potential health impact of a worksite wellness tax credit will garner a tremendous amount of additional support for the tax credit. Conducting the HIA research has uncovered many new potential partners and has raised awareness of the important link between their goals, the role of worksite wellness and the tax credit. Public health will have a better understanding of the role worksite wellness plays in reaching the populations they are attempting to affect in their health programming.

2.5 Potential Health Impacts Resulting From the Worksite Wellness Tax Credit Requirements

Since worksite wellness programs cover such a wide range of health and other topics, it was important to narrow the scope of the HIA to a manageable and meaningful project. Scoping is used to determine the health determinants impacts, the method, and how the impact will be analyzed. The health determinants were narrowed to diet and physical activity of children (childhood obesity), jobs and social cohesion. A preliminary review of the research and other available information revealed extensive data on the diets and physical activity levels of children both in Kentucky and nationally. Though there is extensive information on jobs and social cohesion in general, there are gaps in data on the effects of worksite wellness programs on these two areas.

2.6 Current Conditions for Health Determinants chosen for HIA

Health Status

Kentucky's poor health status, 2nd worst in the nation (United Health Foundation, 2010), is greatly influenced by risk factors including personal behaviors, community, environment and public health policies that do not support a healthy lifestyle. Many of these factors can be improved through health education and policies that would encourage and support decisions that would lead to a healthier population. Kentucky's health status is directly related to its workforce's productivity, the resulting economy and the population's general quality of life (Anderson, Asher, Whitler, & Wilson, 2008). Many modifiable behaviors, including obesity and sedentary lifestyles are factors that can be addressed through worksite wellness programs, which if properly implemented can be an effective tool for improving health behaviors. While employees become healthier, companies become healthier as productivity and presenteeism increases and absenteeism decreases. Kentucky's rural demographics can contribute to isolation of communities and often led to an absence of social cohesion. Positive health and economic indicators empower communities to become more self-reliant.

Population Demographics

The state has a population of approximately 4, 300,000 residents. The population age groups compare very closely with those of the rest of the country. (Table 1).

Table 1

Populations	Kentucky	US
Population, 2010	4,339,367	308,745,538
Population, percent change, 2000 to 2010	7.4%	9.7%
Persons under 5 years old, percent, 2009	6.7%	6.9%
Persons under 18 years old, percent, 2009	23.5%	24.3%
Persons 65 years old and over, percent, 2009	13.2%	12.9%

Source: (U.S. Census Bureau, 2009)

The highest percentages of population racial categories are 87.8% white, 7.8% black, and 3.1% Hispanic or Latino, as shown in (Table 2).

Racial Categories in Kentucky and U.S.

Table 2

Race	Kentucky	US
White	87.8%	72.4%
Black	7.8%	12.6%
Hispanic	3.1%	16.3%
Asian	1.1%	4.8%
American Indian/Alaska Native	0.2%	0.9%
Native Hawaiian	0.1%	0.2%

Source: (U.S. Census Bureau, 2009)

2.7 Kentucky Obesity Rates

Kentucky ranks fourth in adult obesity for the nation. Kentucky, along with 8 other states had a prevalence of obesity equal to or greater than 30% (Table 3).

Weight classification by Body Mass Index (BMI) Kentucky Adults

Table 3

	Neither overweight nor obese (bmi le 24.9)	OVERWEIGHT (bmi 25.0 - 29.9)	OBESE (bmi 30.0 - 99.8)
% CI n	32.9 (31.1-34.7) 2869	34.7 (32.9-36.5) 3194	32.4 (30.6-34.1) 3137

Source: (Centers for Disease Control and Prevention, 2009)

Kentucky Obesity Rates for Children

Kentucky ranks third in childhood obesity rates with 17.6% of children obese and 5.6% overweight. (Table 4).

Overweight and Obesity Rates for Kentucky Children

Table 4

Overweight (students who were >= 85th percentile but < 95th percentile for body mass index, by age and sex, based on reference data)	Kentucky 15.6 %	US 15.8 %
Obese (students who were >= 95th percentile for body mass index, by age and sex, based on reference data)	17.6 %	12.0 %

Source: (Centers for Disease Control and Prevention, 2009)

2.8 Unemployment

According to the Office of Employment and Training (OET) for the first time since February 2009 Kentucky's seasonally adjusted preliminary unemployment rate fell below the 10 percent mark to 9.8 percent in May 2011. The state's rate was 10 percent in April 2011.

Rural areas of the state, particularly the eastern part of Kentucky in the Appalachian region, have much fewer employment opportunities and a higher unemployment rate (Table 5).

Table 5

-2010 Change in Kentucky 2009Area Unemployment Rates			
Area	**2009 Unemp. Rate**	**2010 Unemp. Rate**	**Change from 2009-2010**
U.S.	9.3%	9.6%	+0.3%
Kentucky	10.7%	10.5%	-0.2%
Purchase	9.6%	9.7%	+0.1%
Pennyrile	11.5%	10.7%	-0.8%
Green River	10.2%	9.5%	-0.7%
Barren River	11.8%	10.6%	-1.2%
Lincoln Trail	12.2%	11.1%	-1.1%
KIPDA (Louisville)	10.4%	10.5%	+0.1%
Northern Kentucky	10.5%	10.2%	-0.3%
Buffalo Trace/Gateway	12.5%	12.0%	-0.5%
FIVCO	10.4%	10.6%	+0.2%
Big Sandy	11.2%	11.8%	+0.6%
Kentucky River	11.3%	12.1%	+0.8%
Cumberland Valley	12.0%	12.1%	+0.1%
Lake Cumberland	11.6%	11.3%	-0.3%
Bluegrass	9.5%	9.3%	-0.2%
Source: (Office of Employment and Training, 2010)			

The following table compares the average income per person in Kentucky ($33, 348) to the average income per person nationally ($40, 584). Kentucky ranks (44th) in per capita income, well below the national average. (Table 6)

Table 6

Kentucky Per Capita Income	
Dollars (2010p)	$33,348
% of National Average	82%
Dollar Difference from National Average	$40,584
Rank in U.S.	44
% Change 2009-2010p	4.6%
Source: Bureau of Economic Analysis	

Source: (Office of Employment and Training, 2010)

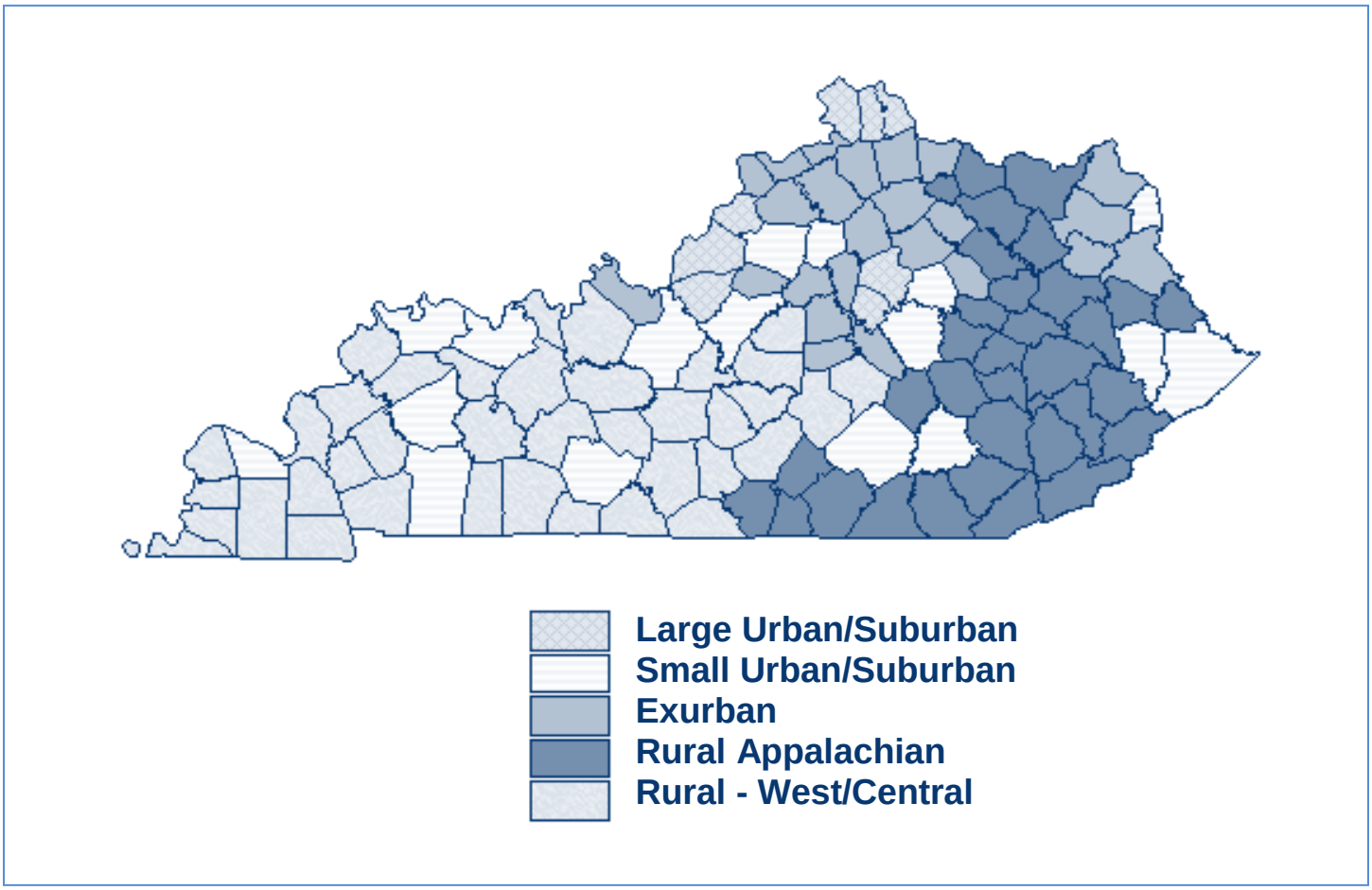
2.9 Job Underemployment

Underemployment was found to be an issue for many in Kentucky. There are almost 355,000 underemployed individuals in the state. The underemployed have less education, are younger, are less likely to be married, non-white, and often have physical limitations. Individuals that are considered underemployed work more in manufacturing than any other industry. They also are more likely to be employed by private for-profit employers than government employers. The unemployed tend not to be self-employed or in management, but are more likely to be in administrative support jobs.

In 2007, the low-income threshold was $41,902 for a family of four. Kentucky is ranked 40th in the nation for percentage of low-income working families and 41st for children in low-income working families. Kentucky has 65.6 percent of low-income families that work and is ranked 41st for adults 18-64 with no high school degree/GED. (The Working Poor Families Project, 2008). The map below shows underemployment rates by Kentucky counties.

Map 1

Underemployment in Kentucky

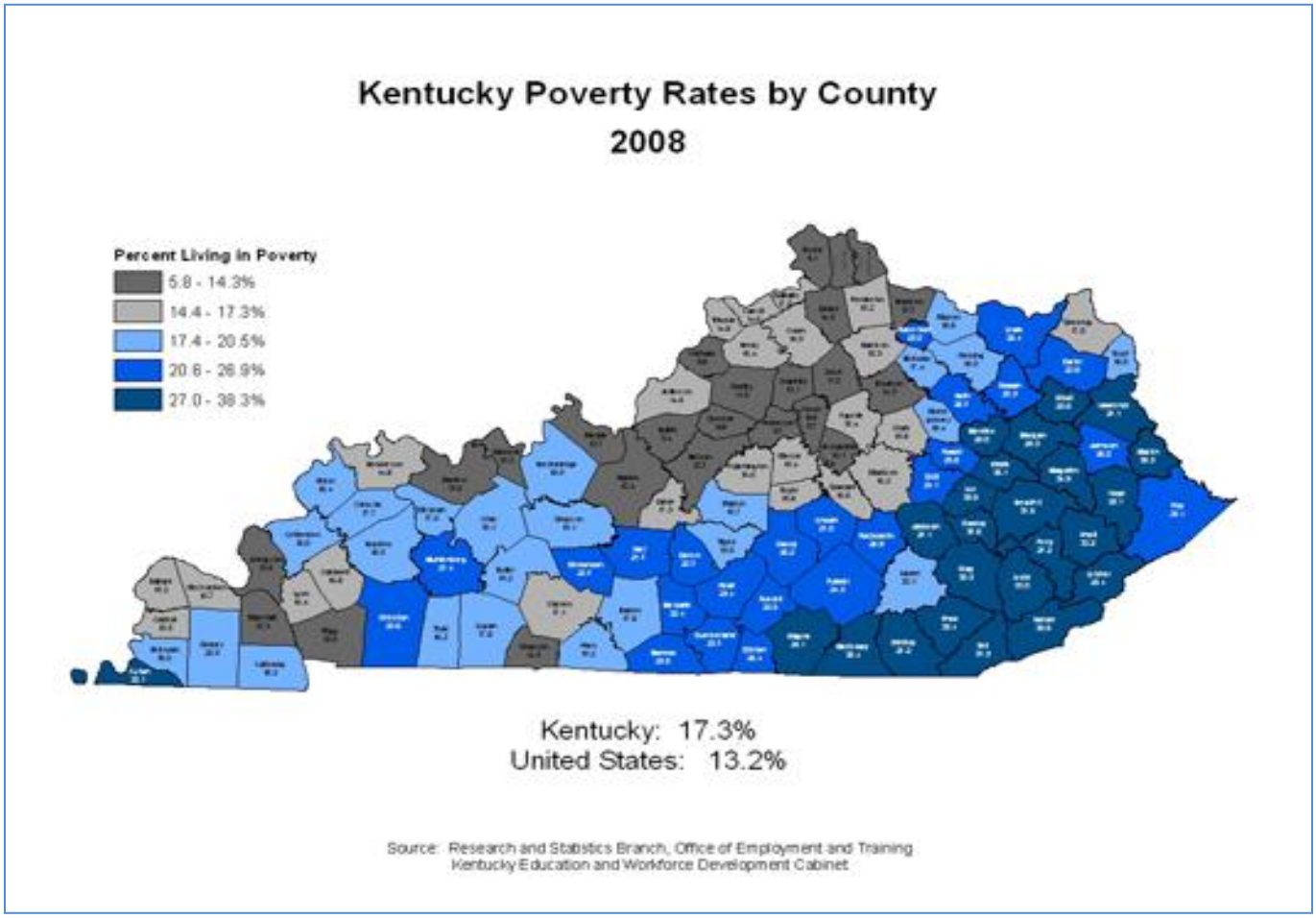


Source: (Berger, Bollinger, Coomes, & Langley, 2003)

2.10 Low Income and Poverty

Kentucky has consistently been ranked in the bottom poverty rate quintile for the past ten years. In 2008, Kentucky's rank deteriorated to 48th, its lowest ranking over the last decade (Kentucky Education and Workforce Development Cabinet, 2010).

Map 2

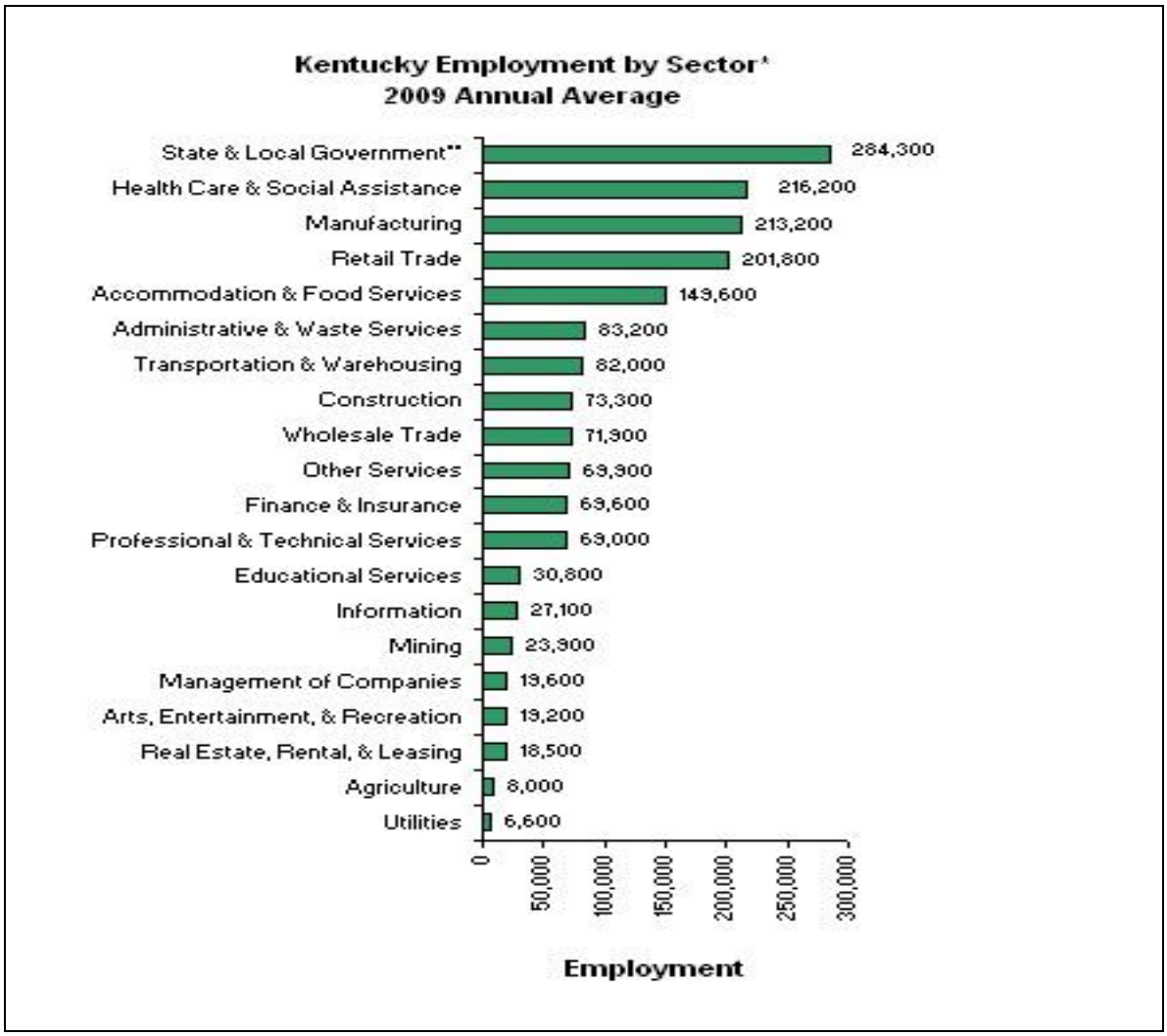


Source: (Office of Employment and Training, 2010)

2.11 Businesses in Kentucky

In looking at the business demographics of Kentucky in the 2009 chart below, the largest segment of employment is state and local government followed by health care and social assistance, while third is manufacturing.

Figure 1

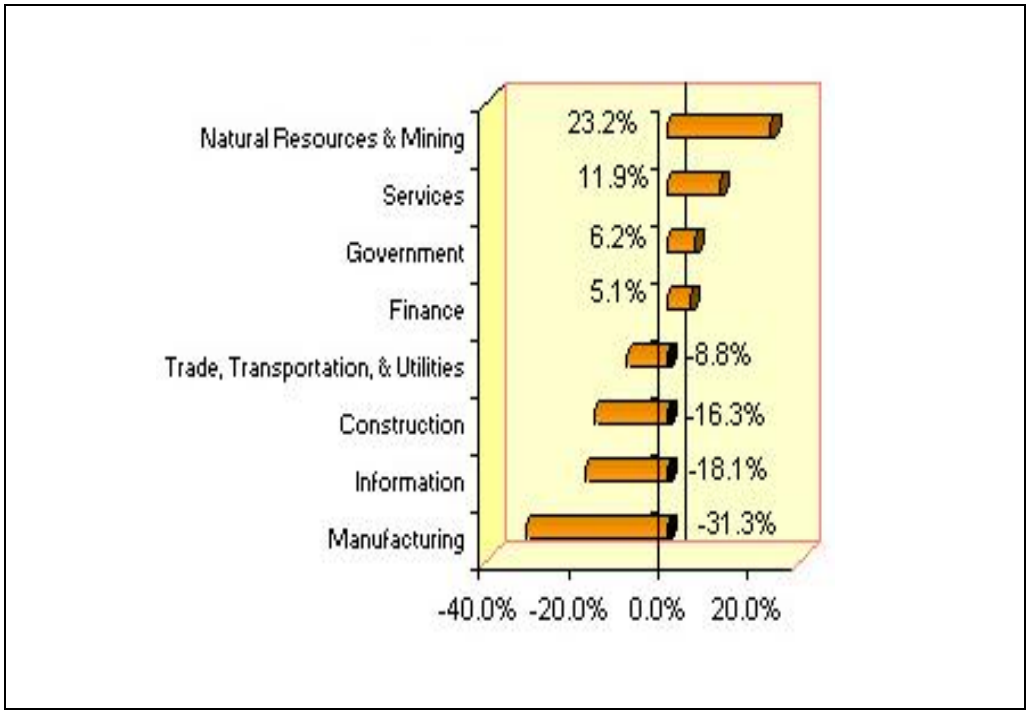


Source: (Office of Employment and Training, 2010)

The chart below displays the Kentucky Statewide Percentage Change by Industry and reveals that manufacturing had the largest percentage of lost jobs. This phenomenon could possibly result in several consequences including higher unemployment, underemployment and a need for the retraining of a significant portion of the workforce. The large rural population in Kentucky may find it more of a challenge than the urban population to retrain or return to school. Two significant barriers include geographic location involving longer commutes and lack of awareness of access to tuition reimbursements.

Figure 2

Kentucky State-wide Job Loss Percentage Change by Industry 2000-2009



Source: (Office of Employment and Training, 2010)

2.12 Social Cohesion and Well-being

Kentucky was ranked 49th in the overall Gallop-Healthways Well-Being Index Study. The Well-Being Index study examines key factors in individuals such as emotional and physical health, healthy behaviors, and work environment. The state was 49th in emotional health, life evaluation, and physical health, and 50th in healthy behaviors. There was a significant decline in the nation's Work Environment Index (WEI) in 2010. The WEI score was 50.9 in 2008 and fell to 48.2 in 2010. According to a Healthways report, "This indicates increasing discontent with the U.S. work environment, declining job satisfaction, and a lack of trust in employee / supervisor relations." Kentucky's Work Environment Index score fell from 48.3 in 2009 to 46.8 in 2010 leading to a drop in state ranking from 32 to 36 in this index. The city of Ashland (grouped with Huntington for this study) was named the unhealthiest city in the country. This assessment also considered morale and social support (Gallup- Healthways, 2010).

The table below shows the Overall Well-Being ranking for Kentucky and each of the six areas evaluated (Table 7).

Table 7

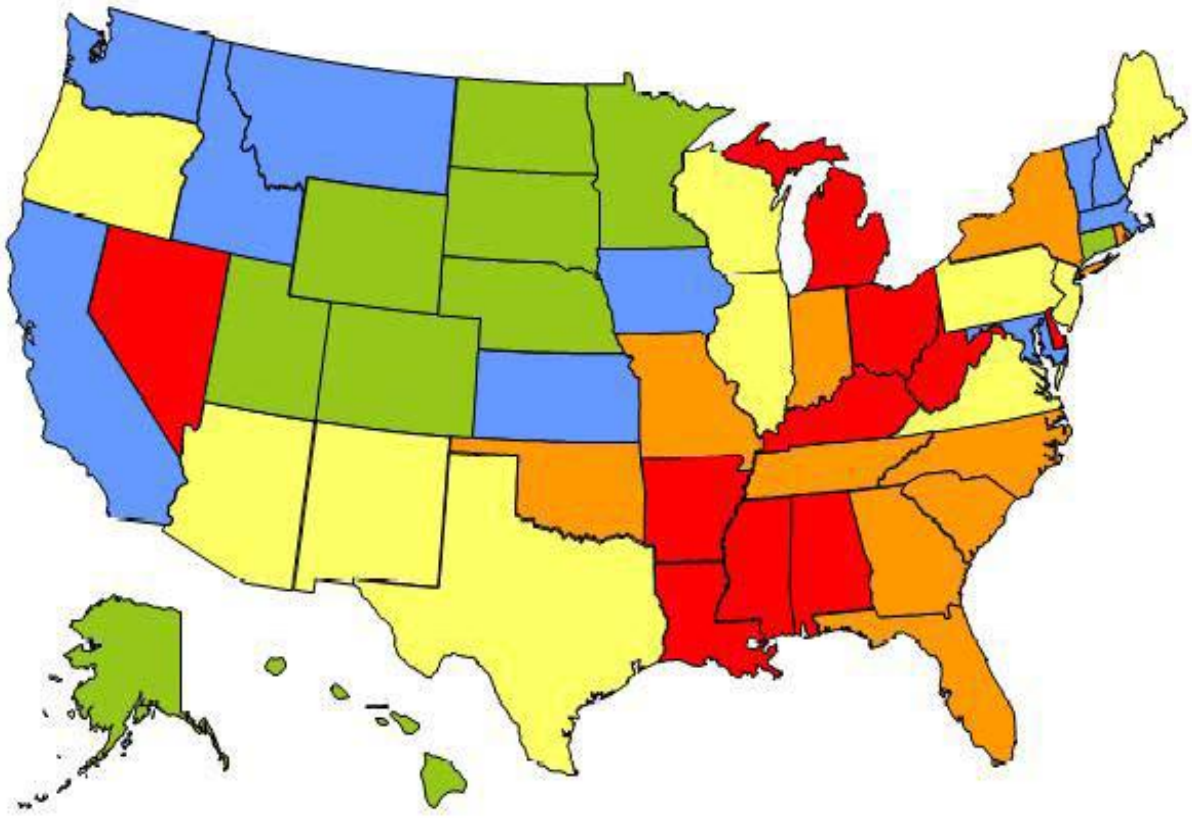
	2009	2010	
Well-Being Overall	49	49	
Life Evaluation	48	49	
Emotional Health	49	49	
Physical Health	49	49	
Healthy Behavior	50	50	
Work Environment	32	36	Noted Decline
Basic Access	39	45	

Source: (Gallup- Healthways, 2010)

Map 3

State of Kentucky Well-Being

The map below identifies state ranking for Wellbeing. Kentucky ranks in the 5th (Rankings Highest 1 – Lowest 5) Quintile for Well-being.



TOP QUINTILE = GREEN **2ND QUINTILE =BLUE**

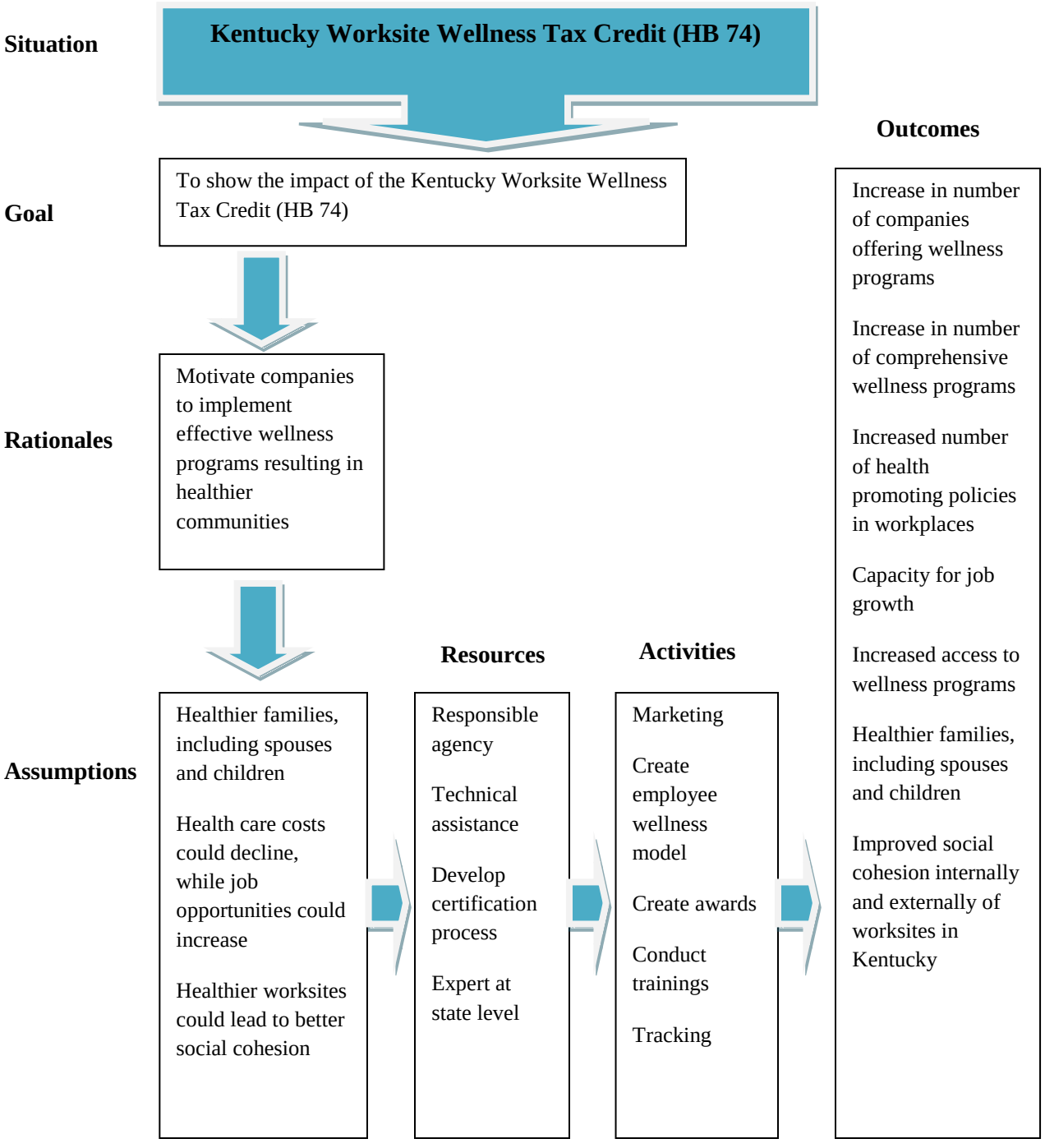
3 rd QUINTILE= YELLOW **4TH QUINTILE = ORANGE**

5TH QUINTILE= RED

Source: (Gallup- Healthways, 2010)

Figure 3

HIA Logic Model



3. Scope of the HIA Project Concerning the Commonwealth Of Kentucky

The scoping process allows for a concentrated focus on specific health determinants and the potential impact of projects or policies. The goal of the HIA on the Kentucky Worksite Wellness Tax Credit was to locate the evidence of its potential impact on the health determinants of diet and physical activity in children (obesity), jobs, and social cohesion. The more vulnerable populations considered in this HIA include children, low income individuals and families, less educated individuals, employees of small businesses, minorities, and those in isolated regions of the state. The geographic area of focus for this HIA is the state of Kentucky. Of particular interest was the evidence of the tax credit's potential impact on childhood obesity. It is believed that by improving the health behaviors of employees, their families will also improve their health.

Although the tax credit policy was the focus on this HIA, worksite wellness programs are the key driver to achieving results. Worksite wellness covers a broad health spectrum. Most worksite wellness interventions include programming for nutrition, physical activity, specific health conditions (such as cancer, diabetes), and stress. It was necessary to narrow the HIA scope to diet and physical activity. The economic aspect of worksite wellness policy was considered by researching its potential impact on jobs in the state. Worksite social cohesion was researched in order to provide insights into the impacts of social perceptions and their effect on employees, businesses, and the community. There is no specific data available on worksite wellness and its effects on social cohesion in Kentucky. Only limited surveys have been conducted and this data has not been collected. Therefore, this HIA reviewed social cohesion in a broader perspective looking at national data and limited Kentucky data.

The Kentucky Department for Public Health (KDPH) HIA Team proposed the worksite wellness tax credit policy as a potential HIA project for a grant that KDPH had received in 2010 from ASTHO. The HIA Team for this project consisted of professionals from public health, business, and the university setting. Team members attended a two day training in November, 2010 conducted by Human Impact Partners to learn the key process steps of conducting an HIA. The training also included reviewing a proposed HIA project for Kentucky. The worksite wellness tax credit was presented to the HIA Team during the training. Although there was much discussion in the screening process to determine the feasibility of conducting an HIA on a policy that included a health aspect, it was determined that since the HIA would address children's health, jobs, and social cohesion this provided an opportunity to look at aspects of worksite wellness not typically considered. The scoping process required narrowing the health determinants to manageable yet meaningful areas of interest. The scope areas of diet and physical activity of children (childhood obesity), jobs, and social cohesion were finalized by the HIA Team.

The HIA Team members provided journal articles, reports and other data to conduct the research over the next several months. Team members provided names of contacts that could be a resource for locating data. Western Kentucky University (WKU) conducted an extensive literature review, provided technical assistance, consultation and assisted in writing the final report. Some members of the HIA team attended a worksite wellness conference on May 18 in Louisville, Kentucky in which the HIA Project was introduced to an audience consisting of business and health professionals.

A Kentucky Worksite Wellness Tax Credit policy will affect working residents of Kentucky and their families, businesses, and the state's health status statistics as a whole. By increasing the number and quality of worksite wellness programs in the state, more of the over 1,500,000 working population could be supported through interventions provided by these programs to improve employees' health habits. Many employers are also insurance providers for the employees' beneficiaries. Increased access to wellness programs can benefit not only employees, but also their families, especially when programs are designed with a family emphasis. Business will benefit by improving employee health that translates into improved productivity and reduced health care costs. Kentucky as a state can improve its health status statistics overall through worksites wellness programs that reach employees, families, and the community.

A worksite wellness tax credit policy also has the potential to increase the effectiveness of wellness programs in the state. Worksite wellness programs address most health habits, particularly those associated with nutrition, physical activity, and stress, which are directly linked to many chronic diseases. A key health determinant impact of this HIA is diet and physical activity of children and its impact on childhood obesity. This could be either through the improved knowledge, belief system, and habits of employees (parents) or directly through specific family programming.

The largest data gap discovered in our research was the lack of information on worksite wellness programs in the state. We used the most current national and state reports, peer-reviewed journals, and websites in our assessment.

For each of the research impact questions listed in Section 3, a literature review was conducted. The following section reveals the assessment and potential impact for each of the selected areas of childhood obesity, jobs, social cohesion and well-being.

3.1 Research/Impact Questions

Worksite wellness includes a broad spectrum of factors in health and other areas. Health, economic and social aspects should be considered. For this reason, the HIA of the worksite wellness tax credit policy was narrowed to the health determinants of diet and physical activity in children (childhood obesity), jobs, and social cohesion. Research and impact questions for each of these health determinants were selected. The previous logic model demonstrates the broad potential impact the worksite wellness tax credit can have on the health of employees, spouses, children, communities and the state. Each research question, immediately followed by the impact question, is the format used to show the relationship between the existing conditions and the potential impact of the worksite wellness tax credit.

Research/Impact Questions: Diet and Physical Activity (for children)

1. **How many sweetened beverages are consumed on average (per day) by children in Kentucky (for young children and teens)?**

    - **How could this policy impact consumption of sweetened beverage among children (younger children and teens) in Kentucky?**

2. **How many minutes on average do teens in Kentucky engage in physical activity? How does this compare to recommended standards for physical activity levels for teens?**
    - **How will this policy impact conditions that influence the amount of physical activity among children in Kentucky?**
3. **How many servings of fruits and vegetables do children (teens and younger children) in Kentucky consume on average per day or week?**
    - **How will this policy impact the factors that influence fruits and vegetables among children in Kentucky?**
4. **Where do children of employed parents eat most meals (at home, away from home) in Kentucky?**
    - **How will this policy impact the amount of meals children eat at home versus eating out (restaurants and fast foods)?**
5. **What is the average "screen time" per day for children of employed parents in Kentucky?**
    - **How will this policy impact factors that influence screen time for children of employed parents in Kentucky?**
6. **What percentage of mothers in Kentucky breastfeed their children? Are the rates of breastfeeding among employed mothers similar to the average for women across the state?**
    - **How would this policy impact the number of percentage of Kentucky mothers that breastfeed their children?**
7. **What is known about parent understanding/knowledge of healthy diet and level of physical activity for children in Kentucky?**
    - **How would this policy impact parent's knowledge/understanding about healthy diets and levels of physical activity for their children?**
8. **What are the current levels of [diabetes, high blood pressure, etc. - list chronic conditions related to physical activity and diet here] among children in Kentucky?**
    - **How would this policy impact risk factors for chronic conditions among children in Kentucky?**
9. **How many employees currently enrolled in worksite wellness programs have no more than a high school education in the state?**
    - **How would this policy impact the number of lower educated employees participating in worksite wellness programs?**

10. **How many employees currently enrolled in worksite wellness programs have been (or are currently) enrolled in WIC programs in Kentucky?**
    - **How many additional employees enrolled in (current or past) WIC will be enrolled in worksite wellness programs if this policy is implemented in Kentucky?**
11. **How many employees currently enrolled in worksite wellness programs are considered to be low-income in Kentucky?**
    - **How many additional employees considered to be low-income will be enrolled in worksite wellness programs if this policy is implemented in Kentucky?**
12. **How many Kentucky employees who work in small companies (2 -200) are also parents?**
    - **How will this policy impact parents who work in small businesses and their children?**
13. **How many employees currently enrolled in worksite wellness programs have children enrolled in Head Start in Kentucky?**
    - **How many additional employees with children in Head Start would be enrolled in wellness programs if this policy was enacted?**

Research/ Impact Questions: Jobs

1. **How many worksite wellness service jobs currently exist in Kentucky?**
    - **How would this policy impact the number of wellness service jobs that could be supported in Kentucky?**
2. **What is the rate of job turnover in companies with worksite wellness programs vs. those without Worksite Wellness Programs?**
    - **How would this policy impact the rate of future job turn over for companies that are eligible for the worksite wellness tax credit in Kentucky?**
3. **What is the prevalence of health outcomes associated with lack of employment in Kentucky? (or with being employed) - [for example, depression, having money available for basic needs (food, health care services, etc.)]**
    - **How will this policy impact the prevalence of these conditions in Kentucky?**
4. **What are the characteristics of the unemployed populations in Kentucky with regard to race, age, gender, education level and skill/training?**
    - **How will this policy increase the number of jobs available to these vulnerable populations?**

5. **What is the relationship between job loss and health status statistics in Kentucky?**
    - **How will this policy affect job loss in Kentucky?**
6. **What is the effect of lack of resources for basic needs in the state?**
    - **How will this policy affect the results of the lack of basic resources?**

Research/Impact Questions: Workplace Social Cohesion and Well-being

1. **How many workplaces in Kentucky currently have worksite wellness programs? What is the average size of these workplaces?**
    - **How many additional worksites will implement worksite wellness programs as a result of this policy?**
2. **How many Kentucky worksites have reported increased productivity as a result of their worksite wellness programs?**
    - **How many additional worksites could report increased productivity as a result of implementing wellness programs resulting from this policy?**
3. **Do workplaces that currently have worksite wellness programs report strong social networks among employees?**
    - **How will this policy impact the number of workplaces that report having strong social networks among employees?**
4. **How does support in the workplace impact health outcomes in Kentucky?**
    - **How will this policy impact factors associated with these health outcomes?**
5. **What populations in Kentucky have the least cohesive communities?**
    - **Will this policy help worksite wellness programs reach this population?**
6. **Are there populations in Kentucky in which social isolation is a concern?**
    - **Will this policy help worksite wellness programs in KY reach socially isolated populations?**

3.2 Methodology

The research methods used to conduct the HIA included the review of existing secondary data, peer-reviewed and empirical literature. Thirteen research questions were identified for diet and physical activity for children (childhood obesity), six questions for jobs, and six questions for workplace social cohesion followed by impact questions. A literature review was conducted for each question and national and state data was used to confirm deficits of health determinants in Kentucky as related to worksites. Information was obtained through publicly available sources including the National Business Group on

Health, CDC's Youth Risk Behavior Surveillance System (2009), the Kentucky Tweens Nutrition Report (2005), and Investing in Kentucky's Working Families (2010). Eleven worksite wellness related questions could not be addressed due to the lack of information about worksite wellness programs in Kentucky. One question regarding unemployed populations in Kentucky could not be released due to privacy policies. It is evident that a worksite wellness program assessment is needed to capture important information in order to comprehend the current status and effects of wellness programs in Kentucky and their potential to improve health and economics in the state.

4. Assessment of the Health Impact of a Kentucky Worksite Wellness Tax Credit on Childhood Obesity

As previously stated, Kentucky ranks third in childhood obesity with 17.6% obese and 15.6% overweight (Centers for Disease Control and Prevention, 2009). Almost one in four Kentucky one year olds (23%) is classified as obese. Obese children are developing diseases that were formerly seen only in adults. Type 2 diabetes, hypertension, heart disease and arthritis are now common in Kentucky's youth (Partnership for a Fit Kentucky, 2009). A third of the babies born in Kentucky in 2000 will develop diabetes during their lifetimes (Kentucky Public Health Association, 2010). Up to 80% of overweight children will become overweight adults, leading to a lifetime of poor health. This is the first generation predicted to have shorter life spans than their parents (Olshansky, et al., 2005).

4.1 How many sweetened beverages are consumed on average (per day) by children in Kentucky (for young children and teens)?

The dietary habits of children are one of the factors contributing to childhood obesity. Kentucky data shows that 35.7% of children drank a can, bottle or glass of soda one or more times per day during the past seven days compared to the national rate of 29.2 % (Centers for Disease Control and Prevention, 2009).

Research has established a clear link between sweetened beverage consumption and childhood obesity. One study revealed that for each additional serving of a sweetened beverage consumed daily over a 1 ½ year period among school aged children, the risk of becoming overweight increased by 60% after controlling for other confounding variables. The size of the sweetened beverage problem has grown substantially. Soft drink consumption among youth has increased 500% in the last 30 years (Ludwig, Peterson, & Gortmaker, 2001).

According to the CDC, the highest consumers of sweetened beverages are in the 12- 19 age group (13% of total calories). Parenting practices, and parental consumption are named as factors in the level of sweetened beverages that children consume. Addressing the importance of drinking water and limiting sweetened drinks can be included in the nutritional component in workplace wellness programs for both the parents (employees) and for their children. In May, 2008 the Healthy South Dakota Program conducted the "Sodabriety Healthy Challenge" targeting workplaces in an effort to increase water intake in the state. They saw an 88% increase in water intake and a decrease of 74% in sweet drink consumption" (Centers for Disease Control and Prevention, 2010).

The Lexington Fayette County Health Department in Kentucky (2005) conducted marketing research of the eating habits of Tweens (9 to 11 years old) and their parents in 2004. The focus of the research was

the perceptions, habits, and barriers to a healthy diet in the Tweens population in Lexington, Kentucky. They conducted 27 focus groups with Tweens and 24 focus groups with parents. Results concluded that when Tweens drink more sweetened beverages, they drink fewer nutritious beverages such as milk, water, and 100% juice. A recent study of children aged 6-13 years found that children will choose sweetened drinks over milk when given a choice, but will drink milk if not given a choice (Mrdjenovic & Levitsky, 2003).

Potential Impact of a Worksite Wellness Tax Credit on Sweetened Beverage Consumption in Kentucky

The Center for Weight and Health considers the reduction of sweetened beverages one of the most promising interventions to prevent childhood obesity (Ritchie, Crawford, Woodward-Lopez, Ivey, Masch, & Ikeda, 2001). Creating a Kentucky Worksite Wellness tax credit for employers could likely increase the number of companies that implement worksite wellness programs. This would allow more opportunities to provide education and support for employees (parents) to become healthier, better role models, and to learn about ways to improve their children's health. Research confirms that parents and caregivers are the primary influence on the Tweens age group. Parents allowed soda both at home and outside the home with cost and availability of healthier choices named as the reasons. The majority of soda is consumed at home leading to the assumption that attempts at reducing consumption of sweetened drinks may be most effective if the home is the targeted location. Understanding what a healthy drink is was an issue for both parents and Tweens (Morris, Bryant, & Courtney, 2005).

Consider this: If eliminating consumption of just one soda per day, approximately 150 calories (40 grams of sugar) per soda, a child could potentially lose between 10 to 16 pounds in one year. Worksite wellness programs could educate employees (parents) on the nutritional importance of limiting sweetened beverages in their children's daily intake of liquids.

4.2 How many minutes on average do teens in Kentucky engage in physical activity? How does this compare to recommended standards for physical activity levels for teens?

According to the CDC, children and adolescents should get 60 minutes of moderate to vigorous physical activity a day. Fifty-four percent (54.5%) of children in Kentucky were physically active for a total of at least 60 minutes per day on five or more of the past seven days, while the national rate is 63% (Centers for Disease Control and Prevention, 2009). According to a CDC report, The Obesity Epidemic and Kentucky Students (2009):

- 17% did not participate in at least 60 minutes of physical activity on any day during the 7 days before the survey.
- 79% were physically active at least 60 minutes per day on less than 7 days during the 7 days before the survey.
- 67% did not attend physical education (PE) classes in an average week when they were in school.
- 77% did not attend PE classes daily when they were in school.
- 29% watched television 3 or more hours per day on an average school day.
- 23% used computers 3 or more hours per day on an average school day

The CDC Youth Physical Activity: Role of Families (2009) states that the benefits of physical activity for children include:

- Builds strong bones and muscles
- Decreases the likelihood of developing obesity and risk factors for diseases like type 2 diabetes and heart disease
- May reduce anxiety and depression and promote positive mental health (Centers for Disease Control and Prevention, 2009)

Physical activity in adolescents has been associated with lower weight. Physical activity has been linked to lower tobacco and marijuana use, less television watching, higher fruit and vegetable consumption, less depression, and closer relationships with parents (Menschik, Ahmed, Alexander, & Blum, 2008).

Vigorous activity should be included at least three days of the week. Most of the physical activity should be aerobic like walking, bike riding, running, dancing and physically active games. Children need muscle strengthening exercise three days a week (included in the 60 minutes) such as climbing, gymnastics, push-ups, and weight lifting. Bone strengthening activities should also be a part of an active lifestyle for three days a week (included in the 60 minutes) such as hopping, skipping, and sports like basketball and soccer (Centers for Disease Control and Prevention, 2009).

Potential Impact of a Worksite Wellness Tax Credit on Children's Physical Activity in Kentucky

Parents' physical activity levels have been shown to predict their children's physical activity levels (Kalakanis, Goldfield, Paluch, & Epstein, 2001). Parent's role modeling and beliefs of physical activity influences their children's level of activity both directly and indirectly. Some researchers believe that support and encouragement of physical activity may have an even greater impact on children's behavior than role modeling. This may be in part due to the amount of time children spend with their peers. However, parents do have significant influence over their children. Active parents are more likely to support an active lifestyle for their children. Active parents may provide more sports and other tools to be active (Welk, Wood, & Morss, 2003). Most studies find some differences in how each parent may influence their children's physical activity. Parents can serve as good role models by being active themselves and including physical activity in family time. A study found that parental role modeling and parental social support are important to increase physical activity among underserved adolescents (Wright, Wilson, Griffin, & Evans, 2010).Parents can also encourage children to engage in active play with their friends (Centers for Disease Control and Prevention, 2009).

Worksite wellness programs can assist employees and their families to become more physically active. Physical activity is typically a key component in worksite wellness programs. The CDC's Guide to Community Preventive Services (2010) addresses the prevention and control of obesity by advocating the establishment of worksite programs at workplaces that includes physical activity components. Providing opportunities for physical activity at the workplace such as exercise facilities, walking paths plus policies to support them may lead to more recreational physical activity both inside and outside of the workplace (Crespo, Sallis, Conway, Saelens, & Frank, 2011). Improving the physical activity level of the employee (parent) through workplace health promotion efforts would better equip parents to follow the

recommendations to assist their children in being more physically active. Companies can also implement programs specifically targeting parents and their children, which could lead to more physical activity for the families of employees.

Consider this: Kentucky children (under 18) are 8.5% below the national average for meeting the requirements of daily physical activity. This means that 457, 223 children in the Commonwealth are considered sedentary. If companies and schools in Kentucky offered worksite wellness programs, parents and teachers, who are both significant roles models to these children would be better equipped to guide children and students to be more physically active.

4.3 How many servings of fruits and vegetables do children (teens and younger children) in Kentucky consume on average per day or week?

A CDC article, Fruit and Vegetable Consumption among Adults (2007), states that a lack of fruit and vegetable consumption is linked to obesity. In Kentucky, 85.8% of children ate **fruits and vegetables less than five times per day** compared to 77.7% nationally. Also 75.8% ate fruit or drank 100% fruit juice less than two times a day compared to 66.1% nationally (Centers for Disease Control and Prevention, 2009). The availability of fresh fruit and vegetables is a proven factor in the ability to increase consumption, yet many Kentuckians reported it is difficult for them to get affordable fresh fruits and vegetables (Health Foundation of Greater Cincinnati; Foundation for a Healthy Kentucky, 2011).

The 2010 Kentucky Health Issues Poll surveyed Kentuckians about their ability to obtain healthy foods for their families. Access to fresh fruits and vegetables is a significant concern for too many Kentucky families. The Poll found that:

- 1 in 5 Kentucky adults (21%) said it was not easy to get affordable fruits and vegetables where they live.
- 4 in 10 Kentucky adults (41%) were worried about having enough money to buy nutritious meals to feed their families.
- 1 in 3 low-income Kentucky family reported it difficult to get affordable fresh fruits and vegetables (Those earning less than the federal poverty guidelines, or less than $22,050 for a family of 4)

Potential Impact of a Worksite Wellness Tax Credit on Fruit and Vegetable Consumption

Studies have found that the role of family dietary behaviors and the importance of parental modeling in determining the consumption of fruits and vegetables in their children were important. One study looked at differences in consumption and predictors of fruit, berries and vegetables between normal-weight and overweight treatment-seeking children and their parents. Children and parents in the normal weight range ate fruits and vegetables more often than overweight children. The parents' consumption of fruit and vegetables influenced the child's interest in eating fruits and vegetables signifying the importance of parent's behaviors ability to impact those of the children (Vanhala, Keinänen-Kiukaanniemi, Kaikkonen, Laitinen, & Korpelainen, 2010).

Most worksite wellness programs include nutrition awareness and educational programs for employees (parents) providing an opportunity to improve their nutritional habits. By assisting employees (parents) to adopt a healthier diet they can become more knowledgeable about food choices and become better role models for their children. A study looking at parenting styles suggests that parents should be guided to improve their own diet to increase their children's fruit and vegetable consumption (Vereecken, Maes, & Rovner, 2010). In looking at interventions to improve fruit and vegetable consumption, employee and family programs have shown greater results (19%) than employee alone interventions (7%). Additional results based on this study's outcomes revealed that family interventions resulted in less fat and saturated fat intake of children. These results showed that worksite interventions, which include families, focus on barriers to fruit and vegetable consumption while providing needed resources. Dietary habits addressed in the work and home improves the intervention (Sorenson, et al., 1999). If fruits and vegetables are readily available in the home, children are more likely to eat healthy. Social environmental influences also play a major role in combating obesity at an early age. Frequent family meals promote healthy food consumption among children and adults (Gable & Lutz, 2000). Parental lifestyles, including healthy eating can influence a child's eating habits. Educating parents at their workplace about convenient healthy eating strategies will help them implement those at home. Some researchers have described the worksite as the ideal place for individual behavior change (Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008).

Consider this: If employers offered family wellness programs for fruit and vegetable consumption, 11% more of the Kentucky working population and their families might eat healthier. This could lead to an estimated 10,000 children eating more fruits and vegetables.

4.4 Where do children of employed parents eat most meals (at home, away from home) in Kentucky?

Approximately 200,000 children receive some kind of out-of-home day care on a daily basis in Kentucky. Approximately 50% of America's food expenditure goes for foods consumed outside the home. Americans are predicted to spend $1.7 billion on fast food a day in 2011. The average family spent $2,619 dollars on food away from home in 2009 (National Restaurant Association, 2011).

Potential Impact of a Worksite Wellness Tax Credit on the Type of Meals that Children in Kentucky Eat

Working parents find it difficult to find time to prepare and serve meals at home and often rely on fast food. A study of working parents and food choices for the family looked at several work related factors such as hours, shift, job schedule, security, satisfaction, and food access. Other food and meal management factors such as food preparation, food away from home, missing meals, planning meals were also considered. The father's working conditions, when including long hours and nonstandard schedules, revealed associations with the amount of take-out meals and missed family meals. The mother's work affected missed breakfast and the prepared entrees types and frequencies. Stressful work conditions among parents often influenced food choices for their family meals. This study points out in its findings that the workplace could provide education for employees (parents) enabling better food choices for their families (Devine, Farrell, Blake, Jastran, Wethington, & Bisogni, 2009).

Eating meals prepared at home may improve dietary quality for families according to a study on dietary behaviors associated with fruit and vegetable consumption. (Staser, Saywell, Zollinger, Kunapareddy, Gibson, & Caine, 2010). By educating employees (parents) on the importance of eating healthier foods at home and providing incentives for them at the workplace, both parents and children can become more knowledgeable in their nutritional choices.

4.5 What is the average "screen time" per day for children of employed parents in Kentucky?

- Screen time for children of employed parents is not known.

Information on screen time rates for Kentucky children overall is available. Although screen time rates for children in Kentucky are below national averages they are still a contributing factor to the high childhood obesity rates in the state. The chart below includes national and Kentucky rates.

	Kentucky	National
Watched television 3 or more hours per day (on an average school day)	28.8 (25.6–32.2)	32.8 (30.4–35.3)
Used computers 3 or more hours per day (played video or computer games or used a computer for something that was not school work on an average school day)	23.0 (20.1–26.1)	24.9 (22.9–27.0)

Source: (Centers for Disease Control and Prevention, 2009)

National data shows that:

- Twenty-six percent of U.S. children watch four or more hours of television per day.
- Sixty-seven percent of U.S. children watch two or more hours of television per day.
- Almost half (48 percent) of all families with Tweens have all four of the latest media staples: TV, VCR, video game equipment and computer.
- More homes in the U.S. have an Internet subscription (52 percent) than a newspaper subscription (42 percent).

Many children now have televisions, computers, and computer games in their bedrooms. Of children 9 to 13 years old, more than half (57 percent) have a TV in the bedroom, 39 percent have video game equipment, 30 percent have a VCR, 20 percent a computer and 11 percent Internet access (Woodard & Gridina, 2000). More electronics in the homes means children spend more time sitting in front of the screen. Forty-eight percent of families with children ages 2 – 17 have a TV, VCR, video game console, and computer (Woodard & Gridina, 2000).

Potential Impact of a Worksite Wellness Tax Credit on Children's Screen Time in Kentucky

Morrissey et al (2011) conducted a study with 990 children, which observed an association between maternal employment and increased children's body mass index (BMI). The influence was found to be the highest in the fifth and sixth grade children. According to this research, two factors related to employment can influence the BMI of children. The first factor is time constraints of working mothers as more time is spent at work and doing household chores than with children, this often leads to frequent outside eating, eating junk food and not having enough time for cooking. The second factor relates to children being less physically active as working mothers have less time for outdoor activities. It has also been observed that children watch television or play video games more when their parents are absent. (Morrissey, Kalil, & Dunifon, 2011)

Parental habits and rules in association with screen time influence the amount of time children watch TV, play video or computer games. The more screen time children have the less active they are and the more likely to be overweight. Children limited to one hour or less of TV were far less likely to be overweight than those with no limits (Crespo, Sallis, Conway, Saelens, & Frank, 2011). Eating lunch and dinner in front of the screen and working mothers were associated with an increase in children's weekday screen time. Establishing family rules on the amount of screen time been shown to reduce it (Birken, et al., 2011). Parents need to learn the importance of limiting their own and their children's screen time, how it connects to poor health, and how to decrease it. This can be achieved at the workplace through a worksite wellness program that targets parent's and their children's sedentary habits such as too much screen time. Working parents need support at the worksite to become healthier and to create a healthier home environment for their families. It is difficult to manage work demands and maintain healthy habits in families in today's culture in the United States.

Consider this: More wellness programs at work could increase physical activity opportunities for communities. There could be an increase in shared use agreements between companies and schools. Recreation centers in businesses could benefit working parents allowing children to utilize these options to increase physical activity verses being a "latchkey" child and watching TV or playing video games for entertainment.

4.6 What percentage of mothers in Kentucky breastfeed their children? Are the rates of breastfeeding among employed mothers similar to the average for women across the state?

The breastfeeding rates in Kentucky are 58.7% for initiation compared to the national rate of 73.9%. The chart below contains more information on both Kentucky and national breastfeeding rates.

Healthy People 2020 Goals for Breastfeeding

Figure 4

Healthy People 2020 Breastfeeding Objectives Topic #	Description- Increase the proportion of infants who:	National Baseline	Kentucky Baseline[26]	Objective
MICH-21.1	Were ever breastfed (any breastfeeding)	73.9%	58.7%	81.9%
MICH-21.2	Were breastfed at 6 months	43.4%	29.6%	60.5%
MICH-21.3	Were breastfed at 1 year	22.7%	13.1%	34.1%
MICH-21.4	Were breastfed exclusively through 3 months	33.1%	26.4%	44.3%
MICH-21.5	Were breastfed exclusively through 6 months	13.6%	12%	23.7%
MICH-22	Increase the proportion of employers that have worksite lactation support programs	25%	NA	38%
MICH-23	Reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life	15.6%	18.6%	10%
MICH-24	Increase the proportion of live births that occur in facilities that provide recommended care for lactating mothers and their babies	2.9%	5.58%	8.1%

(Centers for Disease Control and Prevention)

- The breastfeeding rates among employed mothers are not known for Kentucky.

Potential Impact of a Worksite Wellness Tax Credit on Breastfeeding in Kentucky

Mothers are the fastest-growing segment of the U.S. work force. Approximately 70% of employed mothers with children younger than 3 years work full time. One-third of these mothers return to work within 3 months after birth and two-thirds return within 6 months (Partnership for a Fit Kentucky, 2009). In Kentucky there are over 80,000 women in the workforce with children under the age of six (NACCRRA, 2011).

Numerous factors contribute to a woman's decision to breastfeed, including social and cultural norms, social support, guidance and support from health-care providers, work environment, and the media. Women who are employed full time are less likely to start breast feeding and to continue it to the recommended six months (Center for Prevention and Health Services, 2009). Studies have shown that one of the primary reasons that women stop breast feeding is their return to the workplace (Taveras, Capri, Braverman, Jensvold, & Lieu, 2003).

There is a need for lactation support in the workplace. Encouraging breastfeeding has many benefits for employers including less absence due to the child's illness, lower health care costs, and less turnover. The percentage of illness requiring a one-day absence from work was 25 percent for mothers who breastfed compared to 75 percent for those who used formula. Children who are breastfed require less medical care. A two-year study by CIGNA of lactation program participants showed $240,000 less in health care expenses and 62 % fewer prescriptions. Retention rates have been reported as high as 94 percent for the maternity employees compared to an average national rate of 59 percent (Department of Health and Human Services, 2008).

Barriers to breastfeeding identified in the workplace include a lack of flexibility in the work schedule for milk expression, lack of clean and private accommodations to pump or store breast milk, and concerns about support from employers and coworkers. Well-designed work place lactation support programs increase breastfeeding rates and reduce health care costs for businesses (Centers For Disease Control and Prevention, 2004). A policy supporting worksite lactation will help to insure equal access to accommodations regardless of employee position (Partnership for a Fit Kentucky, 2009).
Companies that have implemented lactation programs such as Cigna have reported increased breast feeding rates at six months of 72.2% compared to national averages of 21%. (Center for Prevention and Health Services, 2009).

Consider this: A Kentucky worksite wellness tax credit could likely increase the number of companies that implement wellness programs and consequently lactation programs and policies, which would increase Kentucky's rate for breast feeding up to one year which is currently at 13.1% as compared to nationally 22.7% and Health People 2020 objective of 34.1%. Creating basic accommodations for lactating women can cost businesses next to nothing, yet the return on investment can be significant. One company estimated a return on investment for their worksite lactation support program at 2.8 to 1 (Partnership for a Fit Kentucky, 2009)**. The lactation programs in Kentucky could also prevent the primary reason for mother's stopping breastfeeding, which is returning to work.**

4.7 What is known about parent understanding/knowledge of healthy diet and level of physical activity for children in Kentucky?

In a focus groups conducted by the Lexington Tweens Nutrition and Fitness Coalition parents reported a concern with their ability to be good role models for their children and the ability to afford healthy food. Kentucky parents say that they want help getting the knowledge they need to make healthier food choices for their children. Parents listed lack of time and knowledge as top barriers to their ability to provide healthier foods for their families and requested information on healthier food choices, which was fast and convenient along with information on how to prepare them.

Lexington parents know the importance of being good role models for their children, but acknowledge a need for improvement causing feelings of guilt about what their families eat and drink. Some parents admitted to a sense of hopelessness about changing family eating habits.
A key barrier to Lexington Kentucky parents' offering healthier foods for themselves and their children is a lack of knowledge. Another barrier to family mealtime includes the emotional stress that comes from a parent's attempts at pleasing all family members with a single meal (Morris, Bryant, & Courtney, 2005).

Studies have shown that the more often families share meals together, the healthier their diet. A study by Neumark-Sztainer, et al, showed a greater meal frequency was associated with increased consumption of fruits, vegetables and other nutritious foods and less frequent soft drink consumption (Neumark-Sztainer, Hannan, Story, Croll, & Perry, 2003). However, parents struggle in dealing with the eating habits of their children. (Morris, Bryant, & Courtney, 2005) list the following as the most significant parental barriers to good child nutrition:

- Reluctance to take on another battle with their children
- Lack of knowledge on how to get children to eat well
- Limited time
- Difficulty in practicing good eating behaviors themselves

Potential Impact of a Worksite Wellness Tax Credit on Kentucky Parent's Understanding of Children's Healthy Diet and Physical Activity Levels

Parents' perceptions and awareness of their children's dietary habits is an important step in improving them. Many parents think that their toddler or preschooler consumed enough fruits and vegetables. In a study looking at parents perceptions, over 90% of the adults knew that at least two servings of fruits and vegetables are needed for good health. Ninety-seven percent of the parents knew of health problems associated with children being overweight; however, the parents of the overweight children tended to deny the impact of diets higher in fat. Most parents of overweight children knew the correct number of servings required for good health. This study showed that the level of knowledge did not improve the diet of the children. This could show that although parents know the elements of a good diet, other factors such as cost, time, work demands prevent them from providing them (Hudson, Stotts, Pruett, & Cowan, 2005).

Parents have been shown to influence their children's dietary behaviors through direct communication, role modeling, and by fostering self efficacy and overall self-esteem (Morris, Bryant, & Courtney, 2005). Parent's self efficacy has been shown to influence children's self efficacy, which has a stronger impact on their eating behavior than nutritional knowledge. Parents' own dietary behaviors have been shown to influence children's dietary behaviors (Lee & Birch, 2002). Parent-child communication has been shown to impact children's nutrition knowledge, and indirectly impact their eating behaviors (Rimal, 2003). Parental knowledge of overweight and general nutrition knowledge has been related to a decreased risk of overweight among their children (Birch, Orlet Fisher, & Grimm-thomas, 1996). A lack of self confidence affects the parent's ability to help their children or themselves eat right. (Borra, Kelly, Shirreffs, Neville, & Geiger, 2003). Worksite wellness programs can assist parents improve their nutrition knowledge and those of their children.

"A child's health and well-being is fostered by a home environment with engaged and skillful parenting that models, values, and encourages sensible eating habits and a physically active lifestyle." (U.S. Department of Health and Human Services, 2005)

Parent's knowledge and understanding of the importance of being good role models, effective communication techniques and instilling self efficacy in children could be strengthened by including these topics in programs in a comprehensive wellness program. Parents who receive education, and support at their workplaces through programs and policies would then have a solid foundation to model positive lifestyle behaviors; however, all employers do not provide wellness programs at their workplaces. Though weight management is an integral part of today's wellness programs, a constant effort should be made to increase employee's knowledge of healthy eating and maintaining physical

activity which can lead to permanent behavior change in the individual. This behavior change should also be incorporated into family life at home.

4.8 What are the current levels of chronic conditions related to physical activity and diet among children in Kentucky?

Kentucky ranks 3rd in the U.S. in childhood obesity with 17.6% of children obese 15.6% considered overweight (Centers for Disease Control and Prevention, 2009). Almost one in four Kentucky one-year olds (23%) is classified as obese. The 2008 Pediatric Surveillance System (PedNESS) reports that 32.3% of low income children in Kentucky aged two to five are overweight or obese (National Iniative for Children's Healthcare Quality, 2008). Obesity costs for Kentucky are $1.2 billion a year. A third of the babies born in Kentucky in 2000 will develop diabetes during their lifetimes (Kentucky Public Health Association, 2010). Studies indicate Type 2 diabetes is becoming more common among youth under 20 affecting about 0.25 percent of this age group. Based on this calculation Kentucky would have about 2800 residents less than 20 years of age with Type 2 diabetes (Kentucky Diabetes Network, 2010). Type 2 diabetes, hypertension, heart disease and arthritis are now common in Kentucky' youth (Partnership for a Fit Kentucky, 2009).

Potential Impact of a Worksite Wellness Tax Credit on Children's Chronic Disease Associated with Physical Activity and Diet in Kentucky

Many employees may be struggling with a child who is already overweight or obese. Overweight or obesity may be accompanied by one or more serious weight-related medical conditions. Obesity is multi-factorial (Gable & Lutz, 2000) and in turn causes many health problems such as hypertension, Type 2 diabetes, cardiovascular diseases, cancer and strokes (Henderson & Armah, 2010). Seventy percent of obese youth have at least one risk factor for cardiovascular disease (Centers for Disease Control and Prevention, 2011). Obese children are developing diseases that were formerly seen only in adults. Obese children and adolescents have more bone and joint problems, sleep apnea and poor self esteem which can be associated with obesity and may lead to social and psychological problems.

Up to 80% of overweight children will become overweight adults. This will mean a high percentage of the working population will be plagued with serious health conditions that will affect productivity and health related costs for employers. This will place a tremendous financial burden on businesses in Kentucky. If employers do not address the obesity issue of their employees and their families, the economy of Kentucky will suffer significantly with increased health costs and loss of productivity. With Kentucky's high obesity rates for adults and children, the cost to the economy is already much more than many other states. The businesses in the state bear much of the burden associated with obesity. Worksite wellness programs provide an opportunity for companies to improve nutrition and physical activity habits and reduce obesity in their employees and other beneficiaries at reasonable costs.

Consider this: According to the 2008 County Business Patterns (NAICS) from the U.S. Census Bureau, there are 92, 587 worksites in Kentucky (U.S. Census Bureau, 2009)**. Ninety four percent or 87,212 of those businesses are small (49 or less employees) and most do not offer wellness programs, while 5% are medium size (50-249 employees) and less than 1 % are considered large (250 and more). The Worksite Wellness Tax Credit could potentially influence 30,000 employees and their families to live healthier lives, especially those in small and medium businesses.**

4.9 How many employees currently enrolled in worksite wellness programs have no more than a high school education in the state?

- It is not known how many additional employees without a high school education would be enrolled in worksite wellness programs.

Lower education levels are an issue in Kentucky. Sixteen percent of adults age 18-64 lack a high school diploma or GED and 54 percent of adults age 16 and over read at basic or below basic levels. Twenty-six percent of parents in Kentucky do not have a high school diploma or GED and 54 percent do not have any post secondary education. Nationally, Kentucky ranks 41st in the number of adults that have at least a high school education.

Potential Impact of a Worksite Wellness Tax Credit on high school educated employees' access to wellness programs in Kentucky

Lack of education plays a major role in preventing low-income workers from improving their economic situation. Government resources for adult education or skills training programs meet only about one-tenth of the need. Low income families face several barriers to achieving higher education levels including the higher cost of tuition and cuts in state funding for education (The Working Poor Families Project, 2010).

Most people with less education have lower paid jobs. Lower income workers often do not have access to worksite wellness programs. This policy would likely increase the number of wellness programs in smaller companies and those with less resources that would not typically provide them. This would give lower income employees the opportunity to participate in wellness programs and improve their health and influence their families.

4.10 How many employees currently enrolled in worksite wellness programs have been (or are currently) enrolled in WIC programs in Kentucky?

- The number of employees enrolled in worksite wellness programs have been (or are currently) enrolled in WIC programs in Kentucky is not known.

It is known that an average of 104,794 of Kentucky Children receive WIC monthly (The Annie E. Casey Foundation, 2009). The lack of data regarding companies with wellness programs in Kentucky leaves many unanswered questions when pertaining to employees and their ability to obtain nutritional knowledge, which could improve their status as healthy and productive citizens.

Potential Impact of a Worksite Wellness Program on Employees Enrolled in WIC

Findings from a UK Millennium study observed 1311 children, 3 years old to have a higher probability of being overweight if their mothers were employed since birth (Hawkins, Cole, & Law, 2008). The researchers studied single children born between 2000 and 2002 to examine the relationship between maternal employment and overweight. They found that the children were at greater risk of gaining weight for every 10 hours a mother worked per week. Preventing obesity at an early stage helps to reduce a large amount of expenditures in health care. Cost effective programs are needed which reduce the economic burden of the employers and can also address the need of health care organizations, hospitals, and public

employers to serve as role models to other worksites (Heinen & Darling, 2009). The potential for employees enrolled in WIC to gain nutritional knowledge through education provided from wellness programs at the worksite for both themselves and families could possibly lead to a lack of requirement of subsidized programs.

4.11 How many employees currently enrolled in worksite wellness programs are considered to be low-income in the state?

- The number of low income employees enrolled in worksite wellness in Kentucky is not known.

According to Workforce Kentucky the number of Kentuckians living in poverty in 2008 rose to 716,951 persons (17.3% of the total population). This is a slight increase in the poverty rate from 2007, and 4.1% higher than the national estimate of 13.2%. There are 77,516 children in Kentucky living in poverty (Office of Employment and Training, 2010).

Thirty percent of Kentucky's working families are low-income and 24 percent of the jobs in the state are in occupations that pay below the federal poverty level for a family of four. "Still Working Hard, Still Falling Short," a national report found that more than one in four working families, a total of 42 million adults and children were low-income in 2006, earning too little to meet their basic needs. This report stated that in Kentucky:

- 30 percent of children in Kentucky live in low-income working families.
- 34 percent of children live in low income working homes
- 34 percent of children had one parent/parents with no health insurance

(The Working Poor Families Project, 2008).

Potential Impact of Worksite Wellness Programs on Low Income Employees

There is almost no data on the effectiveness of worksite wellness programs in diverse populations. Nationally lower socioeconomic status such as blue collar workers, who predominantly fall into those lower socioeconomic classes, are often overlooked. Blue collar and service workers generally have less access to worksite wellness programs and are at greater risk of practicing lifestyle behaviors that place them at higher risk for coronary heart disease and stroke. Women in the workplace are often overlooked as a vulnerable population despite unique challenges posed by pregnancy, family responsibilities, and menopause, a transition associated with heightened cardiovascular risk (Carnethon, et al., 2009). Time pressures are a major issue for women balancing professional, family, and personal life and should be considered when worksite wellness programs are implemented. In 2009, 60 percent of women were in the workforce. The rate of working mothers with children under 18 years of age rose from 47.4 percent to 72.9 percent in 2000. In 2009, the percentage of working mothers was 71.6 percent. Seventy-six percent of unmarried women are in the workforce (U.S. Census Bureau, 2009).

Wellness program participants tend to be white collar, salaried, and healthier. Blue collar workers are less likely to participate in wellness programs (Quintilani, Sattelmair, & Sorensen, 2007). Wellness programs can be successfully implemented in all types of organizations. To be effective wellness programs must be

designed and marketed for specific types of workers such as those at lower income levels. No segment of the working population can be ignored if Kentucky is to improve both the health and economic status of the state.

4.12 How many Kentucky employees who work in small companies (2 -200) are also parents?

- The number of employees who work in small companies in Kentucky is not known.

According to the National Association of Child Care Resource & Referral Agencies (NACCRRA), there are about 198,000 children under the age of six in Kentucky that have parents employed. There are 120,000 children with both parents working and about 78,000 in single –parent homes with a working parent (NACCRRA, 2011). Approximately 94% of the 1,500,000 employed people in Kentucky, work in small companies.

Potential Impact of a Worksite Wellness Tax Credit on Working Parents Employed in Small Business

Research shows that worksite wellness programs are less common in smaller size companies. Smaller businesses tend to employ more females and those with less education (Sorenson, et al., 1999). At least half of the working people in the United States do not have access to health promotion programs because they work in small companies or for employers who have employees distributed in small numbers across multiple sites. Smaller employers face unique barriers in relation to offering wellness programs. Many of these smaller companies do not have a human resource professional to implement the programs. The expense of hiring a full-time health promotion staff is not financially feasible for a smaller company. Health insurance premiums are not under the influence of smaller companies and are set by the medical utilization experience of their group. In the past, reducing their medical costs by improving the health of employees did not decrease their insurance premiums (O'Donnell M. , 2006). In more recent years insurance companies are beginning to give discounts for wellness programs and are even providing some of the wellness services.

There are disparities in the availability of worksite wellness programs by industry type. Manufacturing and, business/professional services reported having wellness programming whereas wholesale/retail, transportation, finance, and agriculture/mining were much less likely to have comprehensive programming. However, the population that has been most lacking in worksite wellness programs is those employed by smaller worksites. Only 4.6 percent of companies with 50 to 100 employees offered wellness services compared with 11 percent for companies with 250 to 749 employees and 24 percent for employers with 750 (Linnan, et al., 2008).

Linnan et al (2006) also states:

> "More work must be done with small businesses to make a "business case" for health promotion, to develop new methods for reaching employees, and to determine the employer and employee incentives (e.g., tax credits, benefit discounts) that are most effective in supporting worker health" (pg.1508). (Linnan, et al., 2008).

However, it is thought that implementing worksite wellness programs in small business settings and rural areas will likely result in less educated and lower income employees and their families having access to wellness services. An increase in companies that offer wellness programs will mean more parents will gain assistance and guidance to become healthier at their workplace, which could mean better role models for their children**.** The vital role of parents in a child's health cannot be overlooked. Parents are role models for their children, and can have extreme influence over their children's behavior. Observing the parents following a healthy lifestyle can help children adapts a similar healthy routine (Gable & Lutz, 2000). Since many times both parents work, they have less time for cooking at home resulting in dining out or selecting fast food (Patricia & France, 2006). This is of particular concern for parents who may work in small companies or receive lower earnings. More low income individuals and women work in small businesses. Without access to worksite wellness programs it will be difficult for parents to gain the information and support necessary to improve their health and the health of their children.

Consider this: Although the number of employees who are parents and work in small businesses is not known, a majority of worksites in Kentucky are small. According to the U.S. Census Bureau (2008), approximately 99% of all businesses in Kentucky are considered small (2-249). The estimated workers employed by small businesses in Kentucky are 906,794, which could be positively influenced by wellness programs in their worksites, resulting in healthier and more productive workers.

4.13 How many employees currently enrolled in worksite wellness programs have children enrolled in Head Start in Kentucky?

- The number of employees who have access to wellness programs and who have children enrolled in Head Start in Kentucky is not known.

There were about 19, 257 children and 17,983 families served in Head Start programs in Kentucky in 2009. Over one hundred and six million dollars is invested in the Head Start program in Kentucky (CLASP, 2010). As previously mentioned in other sections, the lack of data regarding companies with wellness programs in Kentucky prevents progress in research of the effects of wellness programs on employees and their SES status.

Potential Impact of a Worksite Wellness Tax Credit on the Additional Employees with Children in Head Start Enrolled in Wellness Programs

Although the number of employees who have access to worksite wellness programs and receive WIC in Kentucky is not known, we do know that those served by Head Start are a population with needs due to lower incomes. Head Start and Early Head Start provide comprehensive, high-quality early care, education and support services to vulnerable young children from birth to kindergarten, pregnant women, and their families. Support services include access to health screenings, referrals, follow-up support, parenting resources, and social services (CLASP).

5. Assessment of a Kentucky Worksite Wellness Tax Credit on Jobs

Kentucky jobs are important for the health, quality of life, and well-being of the people and the economy. According to the 2009 Economic Report for Kentucky, the state's economy struggles with poor health status, high unemployment rates, low per capita income, high poverty rates, and low educational status. The report reveals that Kentucky has high unemployment with a current rate of 10.5 % placing it at 8th in the nation for unemployment rates. The state's ranking for per capita income fell from 41st to 48th from 2000 to 2009. Poverty levels have also gotten worse. Kentucky was ranked 42nd in poverty in 1999, but rising rates put the state at 48th in 2008. Manufacturing, which makes up 17.4 percent of total jobs, was hurt in 2008 by the recession due to the automobile industry presence. Nationally manufacturing makes up 12.7 percent of total employment. There has been a shift in service sectors as opposed to goods production over the last ten years. There were 81,300 service jobs added and 107,200 goods jobs lost (Kentucky Education and Workforce Development Cabinet, 2010). Organizations employing the most people are state and local government, health care and social assistance, and manufacturing (Office of Employment and Training, 2010).

5.1 How many worksite wellness service jobs currently exist in Kentucky?

- The Number of Worksite Wellness Service Jobs Currently in Kentucky is not known.

However, according to the 2010 Kentucky Chamber/Kentucky Department for Public Health survey 25% of chamber member respondents reported wellness/medical staff on site. Typically, only medium to large size companies have wellness staff on site. Smaller size companies rely on wellness vendors and local low cost or free resources.

Nationally, the majority of worksites (64.6%) that provided a wellness program employed at least one full or part time staff person who was directly responsible for health promotion and worksite wellness, according to a 2004 national survey (Linnan, et al., 2008). Worksite wellness programs are expected to be the next commonly offered benefit provided by employers. As worksite programs increase, worksite wellness jobs are also expected to increase. Worksite wellness has been described as; "An emerging, multibillion wellness industry" in the United States" (Stoltzfus, 2009).

Potential Impact of a Worksite Wellness Tax Credit on the Number of Wellness Service Jobs That Could Be Supported in Kentucky

Heinen and Darling (2009) discussed how employers have come to realize obesity related illnesses and disabilities experienced by not only employees, but also their dependents could prohibit potential health care costs containment (Heinen & Darling, 2009). Health care costs can be considerably reduced by tailoring the worksite wellness programs according to the employees' concerns for health and extending the support services to their dependents. These include implementation of wellness programs that promote individuals to choose a healthy lifestyle, together with educating them about making healthy eating choices. Many employers are practicing a population health management approach that involves looking at the total population, using a comprehensive model, and assessing population health risks with the help of a health risk appraisal (HRA). The Kentucky worksite wellness tax credit will likely mean an increase

in the number of companies that offer wellness programs. With more worksite wellness programs offered in Kentucky there would be more opportunities to provide health improvement programs for employees (parents), assistance for parents to help their children, and for employers to provide programs that target wellness for employees' children.

Consider this: By offering employers incentives to implement wellness programs, more companies will provide comprehensive wellness programs and will require qualified health professionals to lead them. Small and medium sized companies tend to not offer wellness programs as often as larger organizations. With the tax incentive, more companies will likely offer health promotion programs which will generate increased business for wellness vendors in Kentucky. This would lead to more jobs in the wellness service industry in the state.

5.2 What is the rate of job turnover in companies with worksite wellness programs vs. those without worksite wellness programs?

- The turnover rates for companies with worksite wellness programs versus those without are not available in Kentucky.

Potential Impact of the Worksite Wellness Tax Credit on job turnover rate for companies that are eligible for the worksite wellness tax credit in Kentucky

Wellness programs assist employees to reduce health risks and to improve health and well-being. (Pelletier, Boles, & Lynch, 2004). Wellness programs are beneficial for the organizations in that they lower health care costs, reduce absenteeism, reduce disability and worker's compensation costs (Chapman, 2005). Wellness programs are now viewed as a benefit and send a message that the company cares about its employees. This means employees are more satisfied and less likely to look for work elsewhere. This can help reduce turnover. For example, the annual turnover rate for wellness program participants of the Canada Life program was only 1.8 percent per year among program participants, as compared with an initial company average of 18 percent. Seven years after the program started, turnover rates were still 8 per cent lower among frequent program participants than among dropouts (Shephard, 1992). If the tax credit policy is implemented in Kentucky, this could result in companies implementing more comprehensive worksite wellness programs, which could contribute to lowered turnover rates, due to higher morale and more dedicated employees. Lower turnover rates lead to better productivity and profitability for Kentucky businesses.

5.3 What is the prevalence of health outcomes associated with lack of employment or underemployment in Kentucky? [for example, depression, having money available for basic needs (food, health care services, etc.)]

Lower incomes are associated with more health problems. Workers with household annual incomes less than $35,000, or a high school education or less, report more chronic diseases and lower health status. They tend to be younger, nonwhite, and have much higher levels of smoking and missed cholesterol screening (Harris, Huang, Hannon, & Williams, 2011). Kentucky's per capita income is below $35,000 at $33,348.

The number of Kentuckians living in poverty in 2008 rose to 716,951 persons, or 17.3% of the total population. This is a .1% increase in the poverty rate from 2007, and 4.1% higher than the national estimate of 13.2% (Office of Employment and Training, 2010).

More than one third of low-income working families include at least one parent that does not have health insurance. Access to health care is a major problem for many low income working families. Without access to preventive and primary care, low-income parents are susceptible to job loss and long-term unemployment due to serious illness (The Working Poor Families Project, 2006-2008).

As the charts below indicate, the unemployment rates in Kentucky have increased from 6.1% in 2006 to 10.5 % in 2010, while underemployment rates have increased from 10.1% in 2006 to 17.5% in 2010.

Figure 5

Kentucky's Unemployment Rates

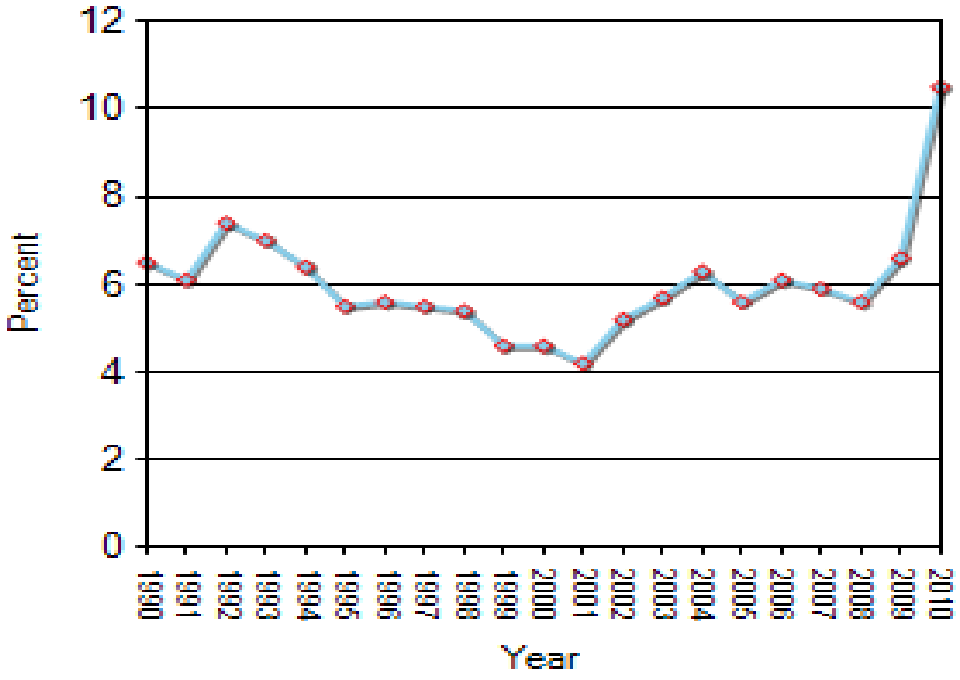
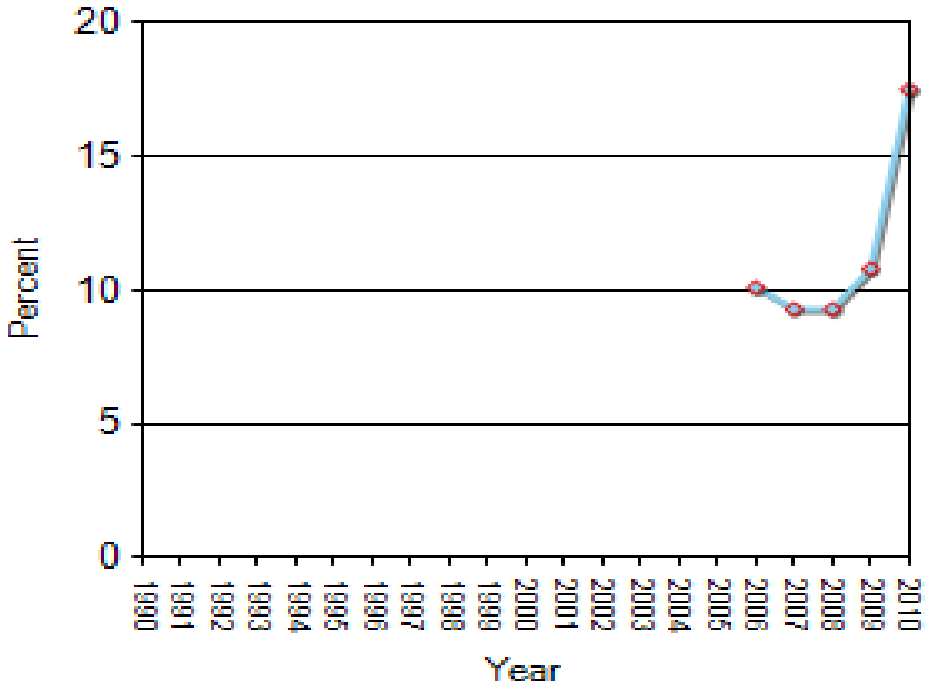


Figure 6

Kentucky's Underemployment Rates



Source: (United Health Foundation, 2010)

Potential Impact of the Worksite Wellness Tax Credit on Health Outcomes related to unemployment and underemployment in Kentucky

Research has shown that job loss and unemployment are harmful to health, affecting many aspects of life. Incomes typically drops 25 to 45 percent for most with a job loss impacting lifestyle, relationships, activities, basic needs, social standing, and security. Sometimes a job loss may make it necessary for a family to relocate, giving up support of family and friends.

Studies have shown a connection between job loss and health issues. Stroke, hypertension, heart disease, heart attack, arthritis, diabetes, and emotional/psychiatric problems may result due to the stress of a job loss. Results showed that losing a job due to a business closure resulted in a 54% decline in health status from "fair" to "poor". A job loss also increased the odds of developing a new health condition by 83%. If a person locates a job fairly quickly the affect is lessoned, but they tend to have more new health conditions likely due to stress. The most common problems reported after a no fault job loss were cardiovascular conditions primarily, hypertension and heart disease and arthritis (Strully, 2009). Blue collar workers who lose their jobs may suffer more negative consequences due to lack of adequate resources.

"To decrease chronic diseases among low-socioeconomic status workers, we need to focus workplace health promotion programs on workers in low-wage industries and small workplaces" (Harris, Huang, Hannon, & Williams, 2011).

Underemployment is a problem in the state. According to the most current statistics found in a Kentucky Labor Supply and Demand Survey Report (2002), there are almost 355,000 underemployed persons in Kentucky. This report provides some information on unemployed and underemployed (Berger, et al., 2002). This study found that the underemployed tend to:

- Be younger
- Less educated and low skilled
- Single
- More likely work in manufacturing than other industries
- Work in private for profits
- Not self employed
- In a Non- management position
- Work in administrative support positions
- More likely to be in school

The Kentucky worksite wellness tax incentive policy would encourage companies to implement worksite wellness programs, which would improve the health and productivity of employees and in turn the ability of Kentucky businesses to prosper and thrive. More prosperous business would lead to more jobs creation and hopefully increased incomes for many workers.

5.4 What are the characteristics of the unemployed populations in Kentucky with regard to race, age, gender, education level and skill/training?

- There is no demographic data available on the unemployed in the state due to confidentiality laws.

According to Workforce Kentucky (2010), there are 217,997 unemployed residences in Kentucky.

On a national level, as of June 2011, the unemployment rates for adult men was 9.1 %, adult women 8.0 %, whites 8.1 %, blacks 16.2 %, and Hispanics 11.6 %. The jobless rate for Asians was 6.8 %, not seasonally adjusted (United States Department of Labor, 2011). These statistics reveal the high unemployment rates of minorities across the U.S.

Potential Impact of the Worksite Wellness Tax Credit on the vulnerable populations in Kentucky with regard to race, age, gender, education level and skill/training

Consider this: Vulnerable populations in Kentucky are more likely to be unemployed. If companies encouraged and supported healthy work environments through worksite wellness programs, producing healthier and more productive employees, these vulnerable populations would have increased job opportunities through a stronger job demand.

5.5 What is the relationship between job loss and health status statistics in Kentucky?

Although there are no studies on the relationship between job loss and health status statistics in Kentucky, it has been concluded from longitudinal studies that unemployment is detrimental to health and has an impact on health outcomes including higher mortality rates, increasing physical and mental ill-health and greater utilization of health services (Mathers & Schofield, 1998). Counties with very high disability rates were clustered in the coal mining areas of Kentucky, West Virginia, and Virginia (U.S. Census Bureau, 2005). Nationally, almost two out of every five people with a disability live in the south. The percentage of adults aged 18 to 64 in Kentucky who reported a disability is 17 percent compared to the national rate of 12 percent (The Henry J. Kaiser Family Foundation, 2011). This rate places Kentucky as the third highest disability ranked state in the country. Kentucky ranks 10th in the nation for the number of heart disease deaths with 220 per 100,000 compared to the national rate of 190. Other serious conditions such as diabetes (10 percent compared to national of 8.7 percent), cancer. 2nd in the nation with 517 incidence per 100,000 compared to national of ate of 465 (The Henry J. Kaiser Family Foundation, 2011).

Potential Impact of the Worksite Wellness Tax Credit on Job Loss due Health Status in Kentucky

Consider this: Wellness programs reduce the chronic diseases in a population and reduce costs for both employees and employers. By implementing wellness programs in the workplace, a significant number of individuals can be reached. A healthier workforce creates a healthier economy. The savings realized from a healthier workforce includes lower healthcare costs, less absenteeism, less presenteeism and higher productivity, which will lead to a more efficient working environment and healthier businesses.

5.6 What is the effect of lack of resources for basic needs in the state?

Living without enough income presents many problems. Lack of income affects quality of life. Without enough income basic needs such as housing, food, energy, and health care are difficult to obtain. One-third of Kentucky's working families are low-income. More than 37 percent of kids in Kentucky are in low-income households. Minority working families in Kentucky are more likely than white families to fall into the low-income category. Among Kentucky working families with at least one minority parent, 47 percent are low-income (The Working Poor Families Project, 2010).

A new national report finds that 30 percent of working families in Kentucky are low-income and 24 percent of the jobs in the state are in occupations that pay below the federal poverty level for a family of four. "These findings show that economic development in Kentucky must be about more than just creating jobs," said Justin Maxson, President of the Mountain Association for Community Economic Development (MACED). "We must pay more attention to improving job quality so workers are able to support their families" (The Working Poor Families Project, 2008).

In Kentucky, nearly 1 in 7 households (13%) lack food security (Health Foundation of Greater Cincinnati; Foundation for a Healthy Kentucky, 2011). Nearly 6 in 10 Kentucky adults (58%) reported being

sometimes, usually, or always stressed about having enough money to pay their rent or mortgage in a survey conducted by the Foundation for a Healthy Kentucky. The 2010 Kentucky Health Issues Poll surveyed Kentuckians about their ability to get healthy foods for their families. Results:

- 1 in 5 Kentucky adults (21%) said it was not easy to get affordable fruits and vegetables where they live.
- 4 in 10 Kentucky adults (41%) were worried about having enough money to buy nutritious meals to feed their families.
- One in three low-income (Those earning less than the federal poverty guidelines, or less than $22,050 for a family of 4) (Health Foundation of Greater Cincinnati; Foundation for a Healthy Kentucky, 2011).

Potential Impact of the Ability to Obtain Basic Needs Due to Lack of Resources

A NIOSH publication states, "Work is one of the most important determinants of peoples' health. According to NIOSH, "Up to 70% of health determinants can be addressed in workplace programs" (Centers for Disease Control and Prevention, 2009). Health determinants are defined as "conditions in the social, physical, and economic environment in which people are born, live, work, and age. They consist of policies, programs, and institutions and other aspects of the social structure, including the government and private sectors, as well as community factors.

Consider this: The need to be self-sustaining and meet the basic need of life is vital to the health of a population. A healthy job market encourages states, communities and individuals to grow and prosper. The Kentucky worksite wellness tax credit policy will motivate companies of all sizes to add wellness as a part of the benefits to employees. As mentioned previously, the growth potential of a healthy company will allow more Kentuckians to work and enable them to meet their basic needs.

6. Impact of a Kentucky Worksite Wellness Tax Credit on Social Cohesion and Well-being in Kentucky Worksites

6.1 How many workplaces in Kentucky currently have worksite wellness programs? What is the average size of these worksites?

- The number of workplaces in Kentucky that have worksite wellness programs is not known.
- An average size of Kentucky worksites with wellness programs is not known.

According to Wellness Councils of America more than 81 percent of companies with 50 or more employees offer some type of wellness program. Most common in these programs are exercise, smoking cessation, back care and stress management programs (WELCOA, 2011).

Potential Impact of the Worksite Wellness Tax Credit on the number of worksites which will implement worksite wellness programs

Creating a tax credit would serve as an incentive to those companies that have not implemented a program at all and to those that have not created an effective comprehensive program. In order to qualify for the tax credit a company would require meeting criteria that ensures a more comprehensive and effective approach.

6.2 How may Kentucky worksites have reported increased productivity as a result of their worksites wellness programs?

- The data for productivity due to worksite wellness programs is not available for Kentucky.

There is a great deal of evidence that worksite wellness programs improve productivity of employees. Productivity involves measures including absenteeism as well as reduced job performance while at work known as "presenteeism".

Potential Impact of a Worksite Wellness Tax Credit on worksites' productivity as a result of implementing wellness programs

Wellness programs that are effective consist of a multi-component model. In one study, a wellness program showed decreases in absenteeism and health risks plus improved work performance. A key factor in this program impact was that it offered health risk appraisals, individualized website information, wellness educational materials and workshops (Mills, Kessler, Cooper, & Sullivan, 2007). Other studies have looked at individual risk factors and productivity. For example, a study examining obesity and overweight studied the effects on worker productivity. Overweight and obese employees were absent 14.7% more than normal weight employees. Also, in this study overweight and obese workers were estimated to cost employers $644 and $201 more per employee per year (Goetzel & Ozminkowski, The Health and Cost Benefits of Work Site Health-Promotion Programs, 2008).

6.3 Do worksites that currently have worksite wellness programs report strong social networks among employees in Kentucky?

- The data for strong social networks among employees with worksite wellness programs is not available for Kentucky

Social cohesion or collective well-being is often given little or no thought when considering employee wellness. The ability to have a positive state of well-being is often hampered through the efforts of single approach wellness programs. According to Stokols (2000), a multifaceted approach to health promotion has several advantages including the ability to:

- Target multiple health risks and diseases
- Combine multiple strategies of disease prevention and health promotion programs
- More effectively target vulnerable populations
- Assess assets and barriers at several community levels and multiple settings within those communities
- Evaluate the effectiveness, efficiency and sustainability of alternative programs

Stokols (2000) addresses the social ecological perspective of health promotion. According to this perspective, the dynamics of human health and the ability to effectively design wellness programs are

influenced by the physical and social environments. The social ecological perspective also incorporates the many levels of participants in the environment, (individual, groups, organizations, communities and populations). Public polices at the state and local level often influence behaviors and must be considered in developing strategies for health promotion. The link between public health, medicine and the behavioral and social science are also in the social ecological efforts of health promotion. (Stokols, 2000) Social capital as defined by Oksanen et al (2011) is the features of social structure such as levels of interpersonal trust and norms of reciprocity and mutual aid that act as resources for individuals and facilitate collective action (Oksanen, et al., 2011). Social capital can have a significant impact on the ability of individuals to experience the type of social cohesion that allows them to develop a strong sense of well-being. Recent studies have examined the working population and the variation of social capital found at the workplace and found that high-levels of workplace social capital seems to be associated with lowered risk of overall mortality in the working-age population. The perception of the workplace social capital seems to depend on not only the individual's perception, but also external working conditions and shared perceptions of the workplace. High workplace social capital seems to reinforce social norms and the ability to have influential control over defiant health behaviors of the group as well as support for positive behaviors. This study reinforces the notion of the importance of the social environment of the workplace and its influence on employees' health.

A recent Gallup-Healthways Well-Being Index (WBI) study looked at individual key factors, such as emotional and physical health, healthy behaviors, and work environment. The survey reveals a significant decline in the Work Environment Index (WEI) in 2010. The WEI score was 50.9 in 2008 and fell to 48.2 in 2010. According to a Healthways report, "This indicates increasing discontent with the U.S. work environment, declining job satisfaction, and a lack of trust in employee / supervisor relations." Kentucky was ranked 49 in the overall Gallop- Healthways Well-Being Index. The state's Work Environment Index score fell from 48.3 in 2009 to 46.8 in 2010 leading to a drop in state ranking from 32 to 36 in this index (Gallup- Healthways, 2010). This decline indicates issues in morale and satisfaction of employees in Kentucky. This could be a potential downfall for the growth of the economy and workforce in the Commonwealth.

Potential Impact of a Worksite Wellness Tax Credit on the Number of Worksites with Wellness Programs That Report Strong Social Networks among Employees

One solution to this decline of morale and satisfaction in Kentucky's worksites could be the implementation of worksite wellness programs. Comprehensive worksite wellness programs improve productivity, morale, employee satisfaction, staff retention, staff co-operation, creativity, loyalty to company and recruitment (Canadian Mental Health Association, 2010). As noted by Golaszewski, Allen & Edington (2008), an organization that establishes itself as a "wellness company" possibly increases the ability to attract and retain employees that value health (Golaszewski, Allen, & Edington, 2008). Most employers are not capable of implementing a comprehensive health promotion program due to lack of resources and skills. A worksite wellness tax credit could possibly encourage more employers to utilize health promotion as a business strategy (Goetzel, Roemer, Liss-Levinson, & Samoly, 2008). According to (Hawe & Ghali, 2008), social relationships and the social environment affect coherence, quality of life, self esteem, and health. The social environment affects how people feel, their behaviors, and their ability to change habits. Some health promotion programs target social relationships to build social support to assist employees to improve their health. This helps the organization to build a "culture

of wellness". The culture of the organization affects everything. It is important to understand and recognize the current culture in an organization when implementing wellness strategies. In a social network, people's feelings and behaviors are interconnected. This study evaluated social links in an organization and found that everyone was linked to someone else. Even more isolated individuals were a significant part of the social environment and can contribute to the social cohesion of an organization.

Support of peers is important in improving health. Teams in workplaces can lead to more productive and healthier workers and a more cohesive environment (Jones & Way, 2008). Most effective wellness programs include peer and team type activities in an effort to create a social environment that creates a healthy culture. These are included to provide support, encouragement, and healthy competition among employees to improve health. This is a part of creating a culture in the organization that supports wellness. As employees participate in wellness programs individually or on a team they are focusing on similar goals which help them to interact and share progress and barriers. Social support, particularly in regard to wellness programs, improves employee engagement, performance, reduces stress, increases confidence and motivation, self-efficacy, happiness, exercise levels, healthy shopping and reduces anxiety (Health Enhancement Systems, 2011).

"The WBI data can be viewed as an indicator of the actual state of the nation over the past three years, mirroring unemployment rates and the added pressure the employed are feeling," said John Harris, Chief Well-Being Officer at Healthways. "Seeing the declining satisfaction in work environment is a reminder that business leaders and government must empower themselves with the tools, programs and resources necessary to increase well-being in the workplace. Making strides in this area is critical to our ability to increase productivity, lower healthcare costs and achieve sustained economic growth, while raising the well-being standard in our nation." (Gallup- Healthways, 2010).

6.4 How does support in the workplace impact health outcomes in Kentucky?

- The current data of health outcomes associated with feelings of support in the workplace is not available for Kentucky.

The worksite can be an excellent avenue to support health improvement for a large portion of the state's population. Worksite wellness programs can impact the health of employees, spouses, and families. Of particular concern are reaching the 92,000 small size companies and those in rural areas in Kentucky (U.S. Census Bureau, 2009). Small, rural worksites often have many barriers to healthy choices. Overweight and obesity in the U.S. is highest in rural areas. Kentucky is the 4th highest state in obesity rankings and is considered a rural state. Ninety nine percent of worksites in Kentucky are considered small. According to a study conducted in 2005 by The Emory Prevention Research Center, small worksites have both advantages and disadvantages of larger worksites. While many of the physical assets of access to healthy foods and exercise facilities are limited at small worksites, the sense of community and the consequent of social support enhancing the possibility of positive behavior change could be significantly enhanced through access to worksite health promotion programs in smaller worksites (Escoffery, Kegler, Alcantara, Wilson, & Glanz, 2011).

Social factors can greatly influence wellness. It is important for companies to address the human needs of its employees (Hillier, Fewell, Cann, & Shephard, 2005). Social support at the workplace has an effect on

the well-being of the worker and productivity for the organization. Social support has been shown to be connected to job control, depression, and job performance (Park, Wilson, & Lee, 2004). Depression affects at least 18.8 million workers and employers lose productivity as a result. Depression is one of the costliest risk factors for employers (Goetzel, et al., 1998). Social support also helps symptoms of depression by the providing feelings of support, feelings of more job control, and more assistance of work-related problem solving (Park, Wilson, & Lee, 2004).

Potential Impact of a Worksite Wellness Tax Credit on factors associated with these feelings of support in health outcomes

To create a culture of health the employees must have positive perceptions of the social environment of their organization. The culture must support health and health improvement, and give self confidence to both employees and particularly the wellness advocates (employee peer wellness leaders) (OWLS, 2011).

In a study at the Worksite of Dell Computer Corporation in Austin, group cohesion was related to lower levels of job stress and greater job satisfaction. The authors include recommendations on health promotion at the workplace and the importance of addressing job stress (Steinhardt, Gottlieb, & McCalister, 2003).

Consider this: Since there is documented research that social support at the workplace has a positive effect on the well-being of the worker and productivity for the organization, Kentucky's labor force would benefit from the implementation of wellness programs as a result of passing the Kentucky Worksite Tax Credit.

6.5 What populations in Kentucky have the least cohesive communities?

According to a national Well-being assessment, Kentucky ranked 49th out of 50 in its overall ranking. The Well-being assessment looked at five areas: life evaluation, emotional health, physical health, healthy behavior, work environment, and basic access. The emotional health ranking for the eastern Kentucky region is the lowest in the nation of the 436 national congressional districts. This region also had the lowest state rankings in life evaluation, physical health, healthy behaviors and basic access. Interestingly, the work environment rating for this region is second (197) in the state. The city of Ashland, KY (grouped with Huntington, West Virginia for this study) was named the unhealthiest city in the country. This assessment considered morale and social support (Gallup- Healthways, 2010). A population's health along with the potential for economic growth can be positively influenced by the establishment of infrastructures that support healthy lifestyles (Goetzel, Roemer, Liss-Levinson, & Samoly, 2008).

Potential Impact of a Worksite Wellness Tax Credit on the Least Cohesive Communities in Kentucky

Rates of obesity and overweight are often higher in rural than urban areas. Rural worksites tend to be smaller, usually with 50 or less employees (Escoffery, Kegler, Alcantara, Wilson, & Glanz, 2011). By enacting the Kentucky Worksite Wellness Tax Credit more companies will implement wellness programs and serve as models in rural areas. Wellness programs will improve the health of employees who are also citizens in communities that are in need of good role models. Wellness programs also impact spouses, particularly if the program has a family orientation.

6.6 Are there populations in Kentucky in which social isolation is a concern?

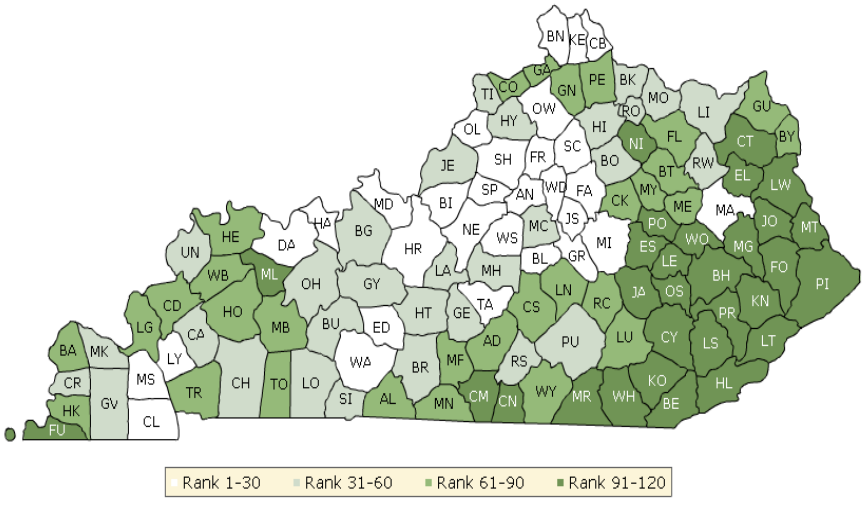
Around 40 percent of Kentucky is considered rural. Eastern Kentucky is considered more of an isolated region of Kentucky. According to organizations such as the Mountain Association for Community and Economic Development, which focuses on issues specific to the eastern region of Kentucky, this region has more issues with poverty and isolation than other regions of the state. The mountainous area contributes to higher poverty, unemployment rates, and lower high school graduation rates.
A public use micro data area (PUMA) is an area with a decennial census population of 100,000 or more people for which the U.S. Census Bureau provides specially selected extracts of raw data from a small sample of long-form census records screened to protect confidentiality. The report, Investing in Kentucky's Working Families A Path to Shared Prosperity (2010) reveals the following facts:

- Eight Appalachian Public Use Micro-data Areas (PUMAs) regions are all rural
- Six of the ten regions have the state's lowest median family incomes.
- Eight of the ten regions have the highest proportion living below the poverty level.
- Seven of the ten regions have the highest unemployment rate (The Working Poor Families Project, 2010)

The maps below show Kentucky's counties divided into groups by health rank. The lighter colors mean a higher ranking in a summary of health outcomes distribution. Eastern Kentucky (in dark green) is ranked the lowest in health outcomes overall.

Map 4

Health Outcomes

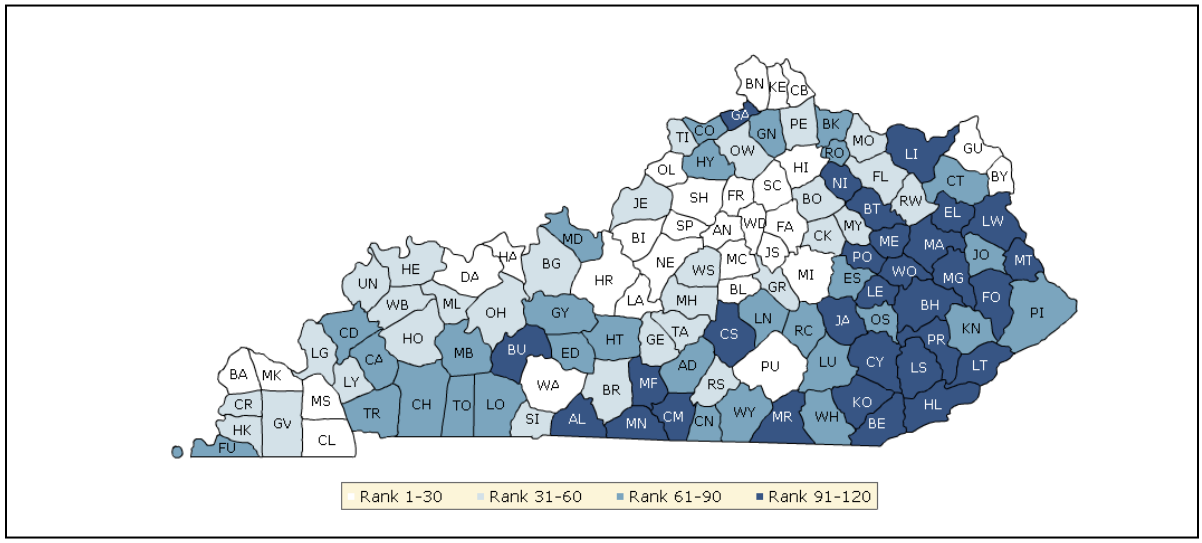


Source: (County Health Rankings, 2011)

This map shows the distribution of the summary rank for health factors. Again, note the abundance of health factors in the eastern region of Kentucky.

Map 5

Health Factors



Source: (County Health Rankings, 2011)

Potential Impact of Worksite Wellness Programs in Socially Isolated Populations

Workers in rural areas have less access to employment opportunities and to wellness programs. Enacting the Kentucky Worksite Wellness Tax Credit could increase the number of smaller and rural worksites that would be prone to implement wellness programs and possibly improve the societal isolation and access to health care, fewer health factors and improved health outcomes.

There Was No Data Available For Following Research Questions

1) Are the rates of breastfeeding among employed mothers similar to the average for women across the state? Data on employed mothers and their breastfeeding practices in the state is limited.

2) How many employees currently enrolled in worksite wellness programs have no more than a high school education? There is no detailed data on wellness program participants in the state due to a lack of an assessment.

3) How many employees currently enrolled in worksite wellness programs have been (or are currently) enrolled in WIC programs in Kentucky? There s no data available on wellness program participants who are also WIC enrollees in the state.

4) How many employees in low income employment have access to worksite wellness programs? There is no detailed data of worksite wellness program participants in the state.

5) How many employees who work in small companies (2 -200) are also parents in Kentucky? This data was not located. However may be available from small business association or similar agency.

6) How many employees currently enrolled in worksite wellness programs have children enrolled in Head Start? There s no detailed data available on wellness program participants and Head Start enrollment.

7) How many worksite wellness service jobs currently exist in Kentucky? This is unknown due to a lack of worksite wellness program data in general.

8) What is the rate of job turnover in companies with worksite wellness programs vs. those without worksite wellness programs? This is not available for Kentucky worksite wellness programs due to a lack of program data. There is also limited data on worksite wellness programs at a national level in regard to turnover rates.

9) What are the characteristics of the unemployed populations in Kentucky with regard to race, age, gender, education level and skill/training? This data is not available due to confidentiality laws in the state.

10) How many workplaces in Kentucky currently have worksite wellness programs? What is the average size of worksites that have wellness programs? This is unknown due to a lack of data on worksite wellness programs in the state.

11) How may Kentucky worksites have reported increased productivity as a result of their worksites wellness programs? This data is not available due to lack of detailed information on worksite wellness programs in the state.

12) Do worksites that currently have worksite wellness programs report strong social networks among employees in Kentucky? This data is unknown due to a lack of detailed assessment of worksite wellness programs in the state.

Monitoring

The influence and use of the findings of this HIA will be monitored over the next several years. Media reports and articles recognizing the importance and benefits of conducting HIAs on proposed projects and policies will be noted. The legislation of the worksite wellness tax credit and its potential impact on the health of Kentucky will be monitored. Others, particularly local health department staff who received HIA training in the state, will receive follow up to determine any new HIA projects.

The Kentucky Department for Public Health obesity prevention and worksite wellness experts, along with key members of the HIA team, plan to monitor the outcome of the proposed worksite wellness tax credit in the 2012 legislative session. The state level worksite wellness coordinator plans to continue to serve on the Kentucky Chamber Health and Wellness Policy Council and to provide input and guidance on both childhood obesity prevention and the worksite wellness tax credit. Other recommendations resulting from this HIA project concerning the further

development of worksite wellness programs in the state in an effort to improve the health will be monitored by tracking the establishment of a state wellness council, a center of excellence, and the development of local or regional wellness coordinator support. The HIA on the Kentucky worksite wellness tax credit has the potential to gain support for the proposed legislation as well as further the development of worksite wellness resulting in overall health improvement for the state

Evaluation of the HIA impact will be achieved by the results of key specific recommendations including passage of the tax credit legislation, conducting a state-wide worksite wellness program assessment, progress in the creation of a worksite wellness council, progress in the development of regional and local worksite wellness support, and progress towards the creation of a worksite wellness center of excellence.

7. Conclusions and Key Recommendations

This section describes legislative and procedural recommendations to improve the potential health impacts resulting from a Kentucky Worksite Wellness Tax Credit.

Recommendations Summary

- Implement the tax credit
- Conduct a state-wide in depth assessment of current status of worksite wellness programs.
- Create a state-wide worksite wellness council or panel
- Create a Kentucky center of excellence for worksite wellness
- Support of worksite wellness programs at a regional and local level with a trained worksite wellness coordinator
- Offer wellness programming to provide education for parents in the worksite.
- Educate employers on the benefit of providing wellness programs for the entire family of employees.

Recommendation #1: Implement the tax credit

Enacting a tax credit for employers who implement comprehensive wellness programs will likely increase the number of wellness programs offered in the state and therefore improve the health of the working population, spouses, and families. The Cabinet for Health and Family services would be responsible for establishing a monitoring system to administer and track results of the tax credit. Staff currently within the Department for Public Health can serve as experts on program implementation and certification. Impacts of the tax credit can be monitored by tracking the number of companies that become certified and receive the tax credit, by establishing baseline aggregate health status of participating companies, and by noting changes in employee health status after each year. The 2004 National Worksite Health Promotion Survey results reinforce the need for employer incentives, such as tax credits to encourage the implementation of health promotion programs at the workplace (Linnan, et al., 2008).

Recommendation # 2: Conduct a state-wide in depth assessment of current status of worksite wellness programs.

Establishing the current health status of the working population in the state will provide a tool for monitoring the impacts of the tax credit and related worksite wellness efforts. The assessment could be conducted by the Kentucky Department for Public Health in partnership with a state university qualified in worksite wellness. A state-wide assessment could be conducted with federal grant funds through either the Kentucky Department for Public Health or the state university partner. Grant funding in the $150,000 range has been available in the recent past for such assessments. Health risk and health related costs changes overtime could serve as the monitoring system for this assessment.

Recommendation # 3: Create a state-wide worksite wellness council, panel, or leadership group

Although most states now have a formal worksite wellness business group, council, or panel consisting of business professionals, health, and public health experts, Kentucky does not. Benefits of such a council or group include a formal central source for employers to seek unbiased expert wellness program guidance and support at a low cost. High quality and low cost conferences, networking, and peer support for employers could be provided. A council would provide an avenue to impact the health status of the working population and their families and to provide employers with the assistance they need to control health care costs. A council could be created and supported by major health agencies such as the Kentucky Department for Public Health, Kentucky health foundations, and business associations such as the Kentucky Chamber, and Kentucky Society for Human Resources Management. Funding can be provided through federal grants, business contributions, foundations and health agency funding.

Recommendation # 4: Create a Kentucky center of excellence for worksite wellness

Creating a center that provides support for evidence-based worksite wellness strategies, and program implementation and development would assure consistency in the quality and effectiveness of wellness programs in the state. Currently there is a suspected high percentage of wellness programs in the state that are activity-based and do not offer the evidence-based strategies that produce health behavior changes and health cost control that are needed for wellness programs to be effective and sustainable. Data collected on company outcomes can be evaluated annually to determine effectiveness of such a center. Funding for a centralized high quality center of excellence could be obtained through federal grants, state grants, and contributions from business organizations.

Recommendation # 5: Support of worksite wellness programs at a regional and local level with a trained worksite wellness coordinator

A tax credit would provide state level support for worksite wellness program implementation and development, as well as send a positive message to businesses of the importance of offering wellness programs. Local level support provided by qualified worksite wellness coordinators could assist employers with the day-to-day guidance necessary particularly in the early changes of program

implementation. By offering local expert support employers will provide higher quality wellness programs that achieve more results in both health improvement such as increased physical activity and improved nutrition. Effective wellness programs in a community can result in better health outcomes overall and in improved economic conditions by providing a healthier employee pool for employers. Coordinators in many regions in the state could be funded by federal and state grants, contributions of businesses, and by revenues of an organized state wellness council. Impacts of the local level support could be monitored by reports to the state wellness center of excellence and the wellness council.

Recommendation #6: Offer wellness programming to provide education for parents in the worksite

As climbing childhood obesity rates becomes recognized as a major health, economic, and moral issue for the US, school and community strategies to reverse this trend have been implemented. However, although most would agree that teaching parents the negative effects of childhood obesity and solutions to reduce it is important, formalizing a concerted effort directed at parents in the workplace is not widespread. Families with two working parents have become the norm, making community-based interventions less accessible and effective. Just as employees must have support during the work day to improve their health, working parents must receive the education and support to address childhood obesity. Support for parental education in diet and physical activity for their children can be incorporated in most wellness programs without a huge increase in funding. Most parents could be motivated to improve their own diet and physical activity levels and that of their children if it is offered in wellness program educational materials and sessions.

Recommendation #7: Educate employers on the benefit of providing wellness programs for the entire family of employees

Employee wellness programs could be designed to enhance not only the health of employees, but their children as well, particularly in the area of obesity. The investment of business in employee and family health can offer a return in both health-related cost controls for employees and beneficiaries. Companies must also consider the future workforce it will need to sustain its competitive edge and the future health status of the employee pool health status. Some progressive larger companies do offer incentivized wellness programming targeting childhood obesity and family-oriented solutions to improve physical activity and diets in both children and parents. Funding for providing education to combat childhood obesity could be provided by including family diet and physical activity programming in wellness programs. Studies have shown that employee plus spouse programming is more effective that employee alone and so justifies the benefits of including family-based programming in wellness program offerings.

What Employers Can Do

Employers can offer comprehensive worksite wellness programs that benefit individual employees and the company.

Employers can play a critical role in fighting the childhood obesity epidemic by equipping parents with the information they need, when they need it. Employers can provide health educational materials and workshops as appropriate to do the following:

1. **Help employees** develop healthy family lifestyles in the home
2. **Educate employees** about what to do if their child is overweight
3. **Provide tools** and information to optimize employee partnerships with health care providers
4. **Refer parents** to child care services and providers that meet nutrition and physical activity recommendations

Employers can use external resources such as state health departments at low to no cost, for childhood obesity and physical activity materials. Employers can educate employees by hosting seminars or education classes to help families develop healthy lifestyles in the home (National Business Group on Health). Employers can assist employees by allowing fitness centers to be used by children of employees and insure that employer-based childcare facilities meet the physical activity and nutrition standards as well as educate employees on selecting child care facilities that meet these standards (National Business Group on Health).

Trends: Health Programs for Employee Children and Families

Employers can benefit by improving the health of children and families. Addressing the entire population can result in lower healthcare costs, increased productivity, improved retention, reduced turnover, and a healthier future workforce (The Henry J. Kaiser Family Foundation, 2009). Maternal and child health care costs equal $1 out of $5 that large employers spend on total health care. Employee absenteeism can often be attributed to children's health problems (National Business Group on Health).

Heinen and Darling (2009) discussed research that provides the successful example of the wellness program, "WellAware" of Northeast Utilities, Hartford, CT where the wellness program to prevent obesity extends not only to the employees, but to their spouses as well. A positive response was obtained due to the services offered by the program with a self reported loss of around seven pounds per participant. Another example is the "Live Healthy" Wellness Program, by the Texas Instruments in Dallas, Texas. This wellness program covers all the employees and their families, including spouses and children through E-health portals and home mailings. They also provide services for the employee's children of all age groups, such as onsite child care at the fitness centers, summer programs for children, and youth camps. The reported results in 2006 and 2007 indicated the high-risk group (more than four risk factors) of the participants and their families dropped from 40 to 35%.

Increasing the number of comprehensive wellness programs in businesses in Kentucky cannot be achieved by one organization or group. Stakeholders will need to join forces and seek to provide businesses with education, support, and incentives to implement and develop effective wellness programs. Organizations such as the Kentucky state government, Kentucky Chamber of Commerce, local chambers of commerce, other business associations, and the business community will need to work together in a structured manner to improve the health of Kentucky employees and their families.

A tax worksite wellness tax credit policy would not only serve as a motivation for organizations to implement wellness programs but would also send a message of the importance of improving health of the working population in Kentucky. Conducting a formal assessment of the current status of worksite wellness programs in the state would provide valuable data to assist in determining the needs of business to develop successful programs. Forming a state-wide worksite wellness council and a structured means to provide support to businesses would also assure more comprehensive worksite wellness programs in the state. As worksite wellness programs are increased and developed in the state the more residents would be reached with health information, education, and support to improve their health and that of their families. Using the worksite as an avenue to reach the working population, their spouses, families, and their community to improve the health status of the state would be an effective strategy due to the interest of business leaders to support and invest in employee health. With rising health related costs and loss of productivity most businesses now see worksite wellness as a wise investment. A healthy workforce, employee family, company, community, and economy for Kentucky could be achieved with visible support of worksite wellness such as the worksite wellness tax credit policy.

Summary of Potential Impacts

Consider This:

More Physical Activity

Kentucky children (under 18) are 8.5% below the national average for meeting the requirements of daily physical activity. This relates to 457, 223 children in the Commonwealth that are considered sedentary. If companies and schools in Kentucky offered worksite wellness programs, parents and teachers, who are both significant roles models to these children would be better equipped to guide their children and students to be more physically active.

Families Eat More Fruit and Vegetables

If employers offered family wellness programs for fruit and vegetable consumption, 11% more of the KY working population and their families may eat healthier. This could lead to an estimated 10,000 children eating more fruits and vegetables.

Educate on Importance of Limiting Sweetened Beverages

If eliminating consumption of just one soda per day, approximately 150 calories (40 grams of sugar) per soda, a child could potentially lose between 10 to 16 pounds in one year. Worksite wellness programs would educate employees (parents) on the nutritional importance of limiting sweetened beverages in their children's daily intake of liquids.

Support for Working Moms to Continue to Breastfeed

A Kentucky worksite wellness tax credit could likely increase the number of companies that implement wellness programs and consequently lactation programs and policies, which would increase Kentucky's rate for breast feeding up to one year which is currently at 13.1% as compared to nationally 22.7% and Health People 2020 objective of 34.1%. Creating basic accommodations for lactating women can cost businesses next to nothing, yet the return on investment can be significant. One company estimated a return on investment for their worksite lactation support program at 2.8 to 1 (Partnership for a Fit Kentucky, 2009). The lactation programs in Kentucky could also prevent the primary reason for mother's stopping breastfeeding, which is returning to work.

Healthier Families

According to the 2008 County Business Patterns (NAICS) from the U.S. Census Bureau, there are 92,587 worksites in Kentucky (U.S. Census Bureau, 2009). Ninety four percent or 87,212 of those businesses are

small (49 or less employees) and most do not offer wellness programs, while 5% are medium size (50-249 employees) and less than 1 % are considered large (250 and more). The Worksite Wellness Tax Credit could potentially influence 30,000 employees and their families to live healthier lives, especially those in small and medium businesses.

Support for Parents Employed in Small Businesses

Although the number of employees who are parents and work in small businesses is not known, a majority of worksites in Kentucky are small. According to the U.S. Census Bureau (2008), approximately 99% of all businesses in Kentucky are considered small (2-249). The estimated workers employed by small businesses in Kentucky are 906,794, which could be positively influenced by wellness programs in their worksites, resulting in healthier and more productive workers.

More Jobs in the Wellness Industry

By offering employers incentives to implement wellness programs, more companies will provide comprehensive wellness programs and will require qualified health professionals to lead them. Small and medium sized companies tend not to offer wellness programs as often as larger organizations. With the tax incentive, more companies will likely offer health promotion programs which will generate increased business for wellness vendors in Kentucky. This would lead to more jobs in the wellness service industry in the state.

A Healthier Workforce Creates a Healthier Economy

Wellness programs reduce the chronic diseases in a population and reduce costs for both employees and employers. By implementing wellness programs in the workplace, a significant part of the population is reached. A healthier workforce creates a healthier economy. The savings realized from a healthier workforce includes lower healthcare costs, less absenteeism, lower presenteeism and higher productivity, which will lead to a more efficient working environment and healthier businesses.

Increased Job Opportunities for Vulnerable Populations

Vulnerable populations in Kentucky are more likely to be unemployed. If companies encouraged and supported healthy work environments through worksite wellness programs, producing healthier and more productive employees, these vulnerable populations would have increased job opportunities through a stronger job demand.

Help Kentuckians Meet Their Basic Needs

The need to be self-sustaining and meet the basic need of life is vital to the health of a population. A healthy job market encourages states, communities and individuals to grow and prosper. The Kentucky Worksite Tax Credit will motivate companies of all sizes to add wellness as a part of the benefits to employees. The growth potential of a healthy company will allow more Kentuckians to work and enable them to meet their basic needs.

Increase Job Satisfaction, Increase Productivity

Social support at the workplace has a positive effect on the well-being of the worker, including impact on job satisfaction and productivity for the organization, Kentucky's labor force would benefit from the implementation of wellness programs as a result of passing the KY Worksite Tax Credit.

Conclusions

Overall the HIA of the Kentucky Worksite Wellness Tax Credit has proven valuable in revealing a more far reaching impact on health and economy of Kentucky than is obvious. A tax credit has the potential to

increase the number and quality of wellness programs in the state. This increase can lead the way in advancing worksite wellness in companies beyond those who receive the tax credit. Many of these companies that would not otherwise implement wellness programs can serve as models in their region or community. Wellness programs have the capacity to reach not only the working population but also their families and communities. Worksites can serve as a venue to improve health in individuals, families, communities, and the state. In addition, the tax credit could increase the number of jobs available in the state as more employee wellness services are utilized and as company productivity is increased by healthy employees. The enhanced social connectivity brought by a quality worksite wellness program would strengthen the fabric of Kentucky communities.

The next step includes sharing the results of the HIA with stakeholders both in health and business sectors. Providing legislators with the results of the HIA particularly those involved in childhood obesity and worksite wellness legislation will be an early process step. Other impact recommendations centered on the general development of worksite wellness such as creating a wellness council, establishing a center of excellence for worksite for regional and local support will be shared with state leadership as a means to improve the health of the state as a whole. As a result of the findings of this HIA, the ability of employees (parents) to be positive role models for their children through participation in wellness programs at the workplace will be enhanced. Also, Kentucky's workforce, by way of healthier and more productive employees, will grow and prosper as will the social cohesion that healthy citizens contribute to communities as they experience the availability of knowledge, skills and motivation obtained through worksite wellness programs.

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8. Appendices

Appendix I: Additional Employer Case Studies of Children and Family Wellness Programs

Case 1: Kentucky SHPS Health Happens Here

SHPS *Health Happens Here*

SHPS is a national, single-source provider of benefits administration services and health improvement programs, with expertise in servicing large organizations with complex requirements. SHPS serves large and mid-sized employers, government agencies, and third-party administrators through its Carewise® Health, Landacorp, and SHPS brands. The organization is located in Louisville, Kentucky and employs a total of 1950+ with 1100+ in the Louisville area.

For several years SHPS provided its associates with online wellness programs - smoking cessation, weight management and stress management but since a significant portion of SHPS business is helping client organizations engage their employees to take greater responsibility for managing their own health, management knew that it was vital to continually show commitment to live that vision as an organization. So in 2010 the program was expanded to provide a full-scale, year-round wellness initiative. Health Happens Here includes onsite wellness activities and education to help strengthen the mind, body, and spirit of SHPS entire organization.

"A healthy workforce drives competitive strength and saves on healthcare premiums. But improving the health of our associates is more than a good business practice. It's simply the right thing to do. A person's level of health affects every aspect of their life - family, friends, hobbies, finances, career and even happiness. Good health is good for business. It's good for individuals and families. It's good for our schools and local communities. It's good for Louisville and it's good for the state."

(Rishabh Mehrotra, President & CEO of SHPS, Inc.)

Health Happens here was designed to help SHPS associates become more aware of their current health status and actively take steps to maintain and/or improve it so that they can lead healthier and more productive lives, the company can be more competitive and profitable, and the world around us can become a better place to live. Our objective is to pursue every opportunity to engage our associates and integrate health into the culture of our workplace thereby creating a work environment that fosters healthy lifestyles and decision making, allowing us to contain health care costs, reduce absenteeism and employee turnover as well as improve morale and productivity.

"We want to support our associates and their families on their journey of health and make it easier for associates to make healthy choices at work." (JC Gibson, Executive VP, Human Resources, SHPS, Inc.)

Health Happens Here has already provided the organization with a significant return of investment of 28 percent reduction in health care cost, while 94 percent of survey respondents are working on healthy lifestyle changes. Before implementing the wellness program costs had been rising at about 15 percent a year. Employee monthly medical claims have dropped from $552 in 2008 to $412 in 2010.

In 2012 the program will expand its focus to target prevalent health issues that are driving up the cost of healthcare, including smoking cessation, weight management, diabetes, and more programs targeting families and dependents.

Case 2: IBM's Children's Health Rebate Program

Some progressive companies are realizing the benefit of including families in their worksite wellness programs. A study of IBM's Children's Health Rebate Program showed positive results for improving nutrition and physical activity in employee families (Sepúlveda, Lu, Sill, Young, & Edington, 2010) . This initiative involved a cash incentive for families participating in a 12-week nutrition and physical activity online program. Details of this program are below.

IBM's Children Health Rebate Program targets both the parents (employees) and the children. About 45 percent of IBM's employees have children covered on the health plan. In 2008 IBM launched this annual program to help parents assist their children in maintaining a healthy weight. The 12-week web-based program includes a $150 cash rebate that rewards participation. IBM created this program to promote activities and provide tools for the entire family to address overweight and obesity. The program focuses on the following four areas: physical activity, healthy eating, screen time limits and positive parental role modeling.

The program has three requirements 1) family inventory of eating and physical activity habits, 2) set goals, 3) complete 12-week inventory.

In its first year, more than 22,000 IBM employees participated in the Children's Health Rebate program. Of those, 14,000 employees completed the first two requirements for the rebate and more than 11,000 employees completed the follow-up inventory at 12 weeks and earned their $150 rebate.
Program evaluation showed that

- Two thirds of employees who participated in the program reported that their children were exercising more or maintaining appropriate physical activity levels.
- Fifty-nine percent of children and 64% of adults improved body weight or maintained a healthy weight.
- Both parents and children showed improvement in healthy eating and physical activity behaviors, as well as a reduction in screen time.
- Children getting physical activity five + days a week rose from 49% at the beginning of the program to 65% by the end of the 12-week program.
- Reducing screen time to less than one hour resulted in an improvement of 22% to 31% now getting less than one hour.

Over 22,000 employees participated in the program. Two thirds of them reported that their children were exercising more. Children getting physical activity five or more days a week rose from 49% at the beginning of the program to 65% by the end of the 12-week program. Participants reported an improvement in the family being physically active together from 23% to 40% (National Business Group on Health).
This case study shows the influence that employee health programs can have on both employees and their family members.

Case 3: Baptist Health South Florida: "Families Step Up"

Baptist Health South Florida introduced "Families Step Up" in September 2006. It is a six week program, offered twice a year. The program teaches healthy eating and physical activity skills in sessions to the entire family. The families learn together and provide each other with support in making healthy behavior changes, while working to reach their nutritional and physical activity goals. The program has been

offered five times, and twenty eight families have taken part. Twenty one of the twenty eight families (75%) attended all sessions. Of these twenty one families, twelve provided measurable data. There was a 57% completion rate. Health behavior changes were noted in all twelve families. Among the twelve families, the following results were found:

- Eight (24%) participants were found to have one improvement in the health measures tested.
- Seven (21%) participants were found to have an improvement in two health measures.
- Nine (27%) participants had three measurable health improvements.
- Seven (21%) participants had four noted changes.
- Two (6%) of the thirty three participants had improvements in all five health metrics.

Of the twelve families who completed the entire program, ten had the involvement and support of both parents. Families with two parents involved typically had a higher number of health improvements than the families with a single parent enrolled in the program. Baptist Health South Florida has determined that a six week nutrition and physical activity program, which targets all family members, can result in healthy behavior changes (National Business Group on Health).

Case 4: Johnson & Johnson's "Family Activity Challenge"

In 2009, the Johnson & Johnson Global Health Services Group created an innovative program to promote family health and combat childhood obesity. The program, named the Family Activity Challenge, is modeled after SPARK (**S**ports, **P**lay and **A**ctive **R**ecreation for **K**ids), a school-based program shown to improve academics, fitness and the enjoyment of physical activity. While SPARK is designed for schools, the Johnson & Johnson Family Activity Challenge is a home-based program designed for U.S. employees and their children. The program helps parents create valuable family time centered on physical activities.

How It Works:

The Family Activity Challenge is a 12-month program that allows families to progress through various stages at their own pace without a predetermined start or end date. It is aimed at families with children 6-12 years of age, and is available to all employees based in the U.S. The program consists of electronic marketing materials, activity brochures mailed to the home, guide books, reminder e-mails and raffle prizes (National Business Group on Health).

Case 5: Insurance Companies

Insurance companies are becoming more involved in health improvement for children. Some insurance companies are offering obesity-related services on their health plans. Humana and Accenture joined together to form an "Alliance Healthcare Initiative" to provide comprehensive health benefits to combat childhood obesity. The pilot program provides prevention, assessment, and treatment of childhood obesity. The coverage provides eligible children and families multiple visits with physicians and registered dietitians for obesity prevention-related services. Eligible children have access to at least four follow up visits with their primary care provider and at least four visits with a registered dietitian per year.

These healthcare professionals work with children and their families on how to establish and maintain a healthy lifestyle.

Highmark of Pennsylvania (insurance company) began offering obesity services for childhood obesity in 2006. Highmark offers overweight beneficiaries the following services for those who qualify:

- Two additional preventive service visits specifically for obesity and blood pressure management
- Two annual nutrition counseling visits.

For more obese beneficiaries (BMI greater than 95th percentile), Highmark also offers laboratory tests. According to Highmark, service utilization increased 23% within one year of implementing the change.

Case 6: Costco Wholesales

In January 2008, Costco Wholesale removed the obesity exclusion from its self-insured health plan and began reimbursing for claims with a diagnosis of obesity. The new plan design provides reimbursement to physicians, dietitians or nutritionists and hospitals for the treatment of obesity, including the initial exam, diagnostic tests and ongoing visits for the purpose of monitoring and evaluating progress. Costco Wholesale believes this change will allow beneficiaries of all ages to seek and start treatment before they begin to experience chronic conditions. In its first year, nearly 250 child claimants received care for obesity (National Business Group on Health).

Appendix II: Kentucky Worksite Wellness Tax Credit Proposed House Bill

HB74 (BR 210)

AN ACT relating to encourage health lifestyles.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

➔SECTION 1. A NEW SECTION OF KRS CHAPTER 131 IS CREATED TO READ AS FOLLOWS:

(1) Notwithstanding KRS 131.190, by October 1 of each year, the department shall report to the Legislative Research Commission taxpayer-specific information related to the wellness project credits permitted in Section 3 of this Act and claimed on tax returns filed during the fiscal year ending June 30 of that year.

(2) The report may be submitted electronically and shall include the following data for each taxpayer claiming the wellness project credit:

(a) The taxable year for the return claiming the wellness project credit;

(b) The name, address, and tax identification number of the taxpayer;

(c) The total amount of credit claimed;

(d) The number of employees for which the credit applies; and

(e) The total costs expended toward the wellness project.

➔SECTION 2. A NEW SECTION OF KRS CHAPTER 141 IS CREATED TO READ AS FOLLOWS:

As used in this section and Sections 3 and 5 of this Act:

(1) "Behavioral-change program" means an employer-provided program that assists in altering employee lifestyles to encourage healthy living through physical fitness programs, counseling, seminars, on-line programs, or self-help materials. The behavioral-change program shall include initiatives related to:

(a) Smoking;

(b) Obesity;

(c) Stress management;

(d) Physical fitness;

(e) Nutrition;

(f) Substance abuse; and

(g) Depression;

(2) "Health-awareness program" means an employer-provided program that contains the following:

(a) A health education initiative that disseminates health information addressing the specific needs and health risks of the employees; and

(b) A health screening initiative that provides opportunities for periodic screenings for health problems and referrals for appropriate follow-up measures;

(3) "Qualified employee" means an employee who works an average of not less than twenty-five (25) hours per week during the taxable year;

(4) "Supportive-environment program" means an employer-provided program that includes the following:

(a) On-site policies that promote a healthy lifestyle, including policies related to:

1. Smoking at the worksite;

2. The nutrition of food available at the worksite through cafeterias and vending options;

3. Minimizing stress in the workplace; and

4. The encouragement of physical activity during work hours;

(b) Incentive benefits for each employee who participates in the health screening initiative or the behavioral change program including an adjustment in health insurance premiums or co-pays by the employee; and

(c) The opportunity for employees to participate in the management of the wellness program by providing employee input;

(5) "Wellness project" means an employer-provided program that is certified by the Cabinet for Health and Family Services as provided in Section 5 of this Act and consists of the following components:

(a) A health-awareness program;

(b) A behavioral-change program; and

(c) A supportive-environment program; and

(6) "Wellness project annual credit cap" means three million dollars ($3,000,000).

➔SECTION 3. A NEW SECTION OF KRS CHAPTER 141 IS CREATED TO READ AS FOLLOWS:

(1) An employer may be eligible for a nonrefundable wellness project credit against the tax due computed as provided by KRS 141.020 or 141.040 and 141.0401, with the ordering of credits as provided in KRS 141.0205.

(2) The credit provided in subsection (1) of this section shall be an amount equal to fifth percent (50%) of the costs paid or incurred by the employer in connection with a wellness project, subject to the following:

(a) The costs included in the wellness project credit computation related to fees paid by the employer for physical fitness programs shall not exceed thirty dollars ($30) per month per qualified employee;

(b) The total credit allowed for an employer in any taxable year shall not exceed the product of one hundred dollars ($100) and the monthly average of the number of qualified employees of the employer;

(c) Costs paid or incurred by an employer for food or health insurance shall not be taken into account when calculating the costs included in the wellness project credit computation; and

(d) The total amount of credit claimed on returns filed by all employers in the Commonwealth's fiscal year shall not exceed the wellness project annual credit cap. If the total amount of credit claimed on returns filed by all employers in the Commonwealth's fiscal year exceeds the wellness project annual credit cap, the credit shall be allowed to employers based on the date of certification by the Cabinet of Health and Family Services on a first-come, first-served basis. Any employer who is certified by the Cabinet of Health and Family Services in a fiscal year and who does not receive the wellness project credit because the annual credit cap has been exceeded for that fiscal year shall receive priority for the credit in the following fiscal year before employers receiving certification in that fiscal year.

(3) With each return claiming the wellness project credit, the employer shall submit documentation from the Cabinet for Health and Family Services substantiating the certification of the wellness project as provided by Section 5 of this Act.

(4) (a) This section shall not apply to any amount paid or incurred before January 1, 2011, or after December 31, 2017.

(b) No deduction, which would otherwise be allowable as a deduction for the taxable year, shall be allowed for any costs paid or incurred for a wellness project and included in the wellness project credit computation.

(c) No portion of the unused wellness project credit in a taxable year may be carried back or forward to a taxable year prior to or following the taxable year in which the costs were paid or incurred by the employer.

➔Section 4. KRS 141.0205 is amended to read as follows:

If a taxpayer is entitled to more than one (1) of the tax credits allowed against the tax imposed by KRS 141.020, 141.040, and 141.0401, the priority of application and use of the credits shall be determined as follows:

(1) The nonrefundable business incentive credits against the tax imposed by KRS 141.020 shall be taken in the following order:

(a) 1. For taxable years beginning after December 31, 2004, and before January 1, 2007, the corporation income tax credit permitted by KRS 141.420(3)(a);

2. For taxable years beginning after December 31, 2006, the limited liability entity tax credit permitted by KRS 141.0401;

(b) The economic development credits computed under KRS 141.347, 141.381, 141.384, 141.400, 141.401, 141.402, 141.403, 141.407, 141.415, 154.12-2088, and 154.27-080;

(c) The certified rehabilitation credit permitted by KRS 171.397(1) (a);

(d) The health insurance credit permitted by KRS 141.062;

(e) The tax paid to other states credit permitted by KRS 141.070;

(f) The credit for hiring the unemployed permitted by KRS 141.065;

(g) The recycling or composting equipment credit permitted by KRS 141.390;

(h) The tax credit for cash contributions in investment funds permitted by KRS 154.20-263 in effect prior to July 15, 2002, and the credit permitted by KRS 154.20-258;

(i) The coal incentive credit permitted under KRS 141.0405;

(j) The research facilities credit permitted under KRS 141.395;

(k) The employer GED incentive credit permitted under KRS 151B.127;

(l) The voluntary environmental remediation credit permitted by KRS 141.418;

(m) The biodiesel and renewable diesel credit permitted by KRS 141.423;

(n) The environmental stewardship credit permitted by KRS 154.48-025;

(o) The clean coal incentive credit permitted by KRS 141.428;

(p) The ethanol credit permitted by KRS 141.4242;

(q) The cellulosic ethanol credit permitted by KRS 141.4244;

(r) The energy efficiency credits permitted by KRS 141.436;~~[and]~~

(s) The railroad maintenance and improvement credit permitted by KRS 141.385*; and*

***(t) The wellness project credit permitted by Section 3 of this Act*.**

(2) After the application of the nonrefundable credits in subsection (1) of this section, the nonrefundable personal tax credits against the tax imposed by KRS 141.020 shall be taken in the following order:

(a) The individual credits permitted by KRS 141.020(3);

(b) The credit permitted by KRS 141.066;

(c) The tuition credit permitted by KRS 141.069;

(d) The household and dependent care credit permitted by KRS 141.067; and

(e) The new home credit permitted by KRS 141.388.

(3) After the application of the nonrefundable credits provided for in subsection (2) of this section, the refundable credits against the tax imposed by KRS 141.020 shall be taken in the following order:

(a) The individual withholding tax credit permitted by KRS 141.350;

(b) The individual estimated tax payment credit permitted by KRS 141.305;

(c) For taxable years beginning after December 31, 2004, and before January 1, 2007, the corporation income tax credit permitted by KRS 141.420(3)(c);

(d) The certified rehabilitation credit permitted by KRS 141.382(1)(b); and

(e) The film industry tax credit allowed by KRS 141.383.

(4) The nonrefundable credit permitted by KRS 141.0401 shall be applied against the tax imposed by KRS 141.040.

(5) The following nonrefundable credits shall be applied against the sum of the tax imposed by KRS 141.040 after subtracting the credit provided for in subsection (4) of this section, and the tax imposed by KRS 141.0401 in the following order:

(a) The economic development credits computed under KRS 141.347, 141.381, 141.384, 141.400, 141.401, 141.402, 141.403, 141.407, 141.415, 154.12-2088, and 154.27-080;

(b) The certified rehabilitation credit permitted by KRS 171.397(1)(a);

(c) The health insurance credit permitted by KRS 141.062;

(d) The unemployment credit permitted by KRS 141.065;

(e) The recycling or composting equipment credit permitted by KRS 141.390;

(f) The coal conversion credit permitted by KRS 141.041;

(g) The enterprise zone credit permitted by KRS 154.45-090, for taxable periods ending prior to January 1, 2008;

(h) The tax credit for cash contributions to investment funds permitted by KRS 154.20-263 in effect prior to July 15, 2002, and the credit permitted by KRS 154.20-258;

(i) The coal incentive credit permitted under KRS 141.0405;

(j) The research facilities credit permitted under KRS 141.395;

(k) The employer GED incentive credit permitted under KRS 151B.127;

(l) The voluntary environmental remediation credit permitted by KRS 141.418;

(m) The biodiesel and renewable diesel credit permitted by KRS 141.423;

(n) The environmental stewardship credit permitted by KRS 154.48-025;

(o) The clean coal incentive credit permitted by KRS 141.428;

(p) The ethanol credit permitted by KRS 141.4242;

(q) The cellulosic ethanol credit permitted by KRS 141.4244;

(r) The energy efficiency credits permitted by KRS 141.436;

(s) The ENERGY STAR home or ENERGY STAR manufactured home credit permitted by KRS 141.437;

(t) The railroad maintenance and improvement credit permitted by KRS 141.385;~~[and]~~

(u) The railroad expansion credit permitted by KRS 141.386*; and*

***(v) The wellness project credit permitted by Section 3 of this Act*.**

(6) After the application of the nonrefundable credits in subsection (5) of this section, the refundable credits shall be taken in the following order:

(a) The corporation estimated tax payment credit permitted by KRS 141.044;

(b) The certified rehabilitation credit permitted by KRS 141.382(1)(b); and

(c) The film industry tax credit allowed in KRS 141.383.

➔SECTION 5. A NEW SECTION OF KRS CHAPTER 194A IS CREATED TO READ AS FOLLOWS:

(1) The cabinet shall develop an Employer Wellness Project Model that may be used as a guide by employers when applying to the cabinet for certification of a wellness project as defined in Section 2 of this Act.

(2) The model shall include best practices for an employer-provided program that:

(a) Informs and educates employees about health risks and the need for screenings and preventive measures;

(b) Impacts and sustains behavioral change in employees; and

(c) Promotes a healthy lifestyle for employees.

(3) The cabinet shall:

(a) Promulgate administrative regulations related to the Employer Wellness Project Model and the certification requirements for employers;

(b) Consult with employers wishing to develop a wellness project; and

(c) Annually certify that the employer's wellness project meets a majority of the best practices established in the Employer Wellness Project Model prior to the employer claiming the wellness project credit permitted in Section 3 of this Act.