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Understanding Lung Cancer Resources and Barriers Among Worksites With Mostly Male Employees in Eight Rural Kentucky Counties: A Focus Group Discussion

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Abstract

Kentucky has the highest cancer incidence and mortality rates in the United States, and lung cancer is Kentucky's leading cause of cancer deaths. Males in Kentucky have higher lung incidence and mortality rates than females. Through support from the SelfMade Health Network, Kentucky developed a Regional Resource Lead Organization that collaboratively developed a multi-component worksite intervention on lung cancer among male populations. The intervention targets eight Kentucky counties. The first component and focus of this manuscript included focus group meetings with organizational representatives in each county that provide health, educational, and social services to men and worksites. The focus groups discussed four distinct areas: (a) lung cancer-related resources and services in each county; (b) perceived ways men in worksites learn about and access health-related services; (c) identification of potential challenges and barriers to reaching men in worksites; and (d) creation of linkages and potential partnerships between community organizations and worksites. Forty-five organizational representatives participated in the eight focus groups. Most resources and services discussed were related to tobacco treatment. Employers were the most commonly perceived way men learn about and access health-related services, while attitudes and behaviors were the most commonly perceived barriers preventing men from accessing services. The most common potential linkages and partnerships across all areas were community organizations and groups, employers, health-care providers, and mass media. Partnering with employers may provide an opportunity to reach males with lung cancer prevention and control resources and services.

Keywords

Lung cancer, health inequality/disparity, occupational health, workforce development programs, cancer prevention

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The SelfMade Health Network (SMHN), part of Centers for Disease Control and Prevention's (CDC) Consortium of National Networks to Impact Populations Experiencing Tobacco-Related and Cancer Health Disparities, is jointly funded by the CDC's Office on Smoking and Health and Division of Cancer Prevention and Control. SMNH was established to advance prevention efforts associated with tobacco-related and cancer health disparities specifically among vulnerable, underserved, and low socioeconomic status populations (SelfMade Health Network, 2017). In March 2016, SMNH funded the University of Kentucky to serve as the Regional Resource Lead Organization

(RRLO) acting as a liaison, communication, coordination, capacity-building, and dissemination hub focused on addressing the needs of rural counties and medically underserved areas, particularly focused on improving men's health.

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Kentucky has the highest cancer incidence and mortality rates in the United States, and lung cancer is the leading cause of cancer deaths in the state (US Cancer Statistics Working Group / US Department of Health and Human Services / Centers for Disease Control and Prevention and National Cancer Institute, 1999–2015). In 2011–2015, the overall age-adjusted lung cancer incidence was 94 per 100,000 population in Kentucky compared to 60.2 per 100,000 population in the United States. During the same time period, the age-adjusted lung cancer incidence rate for males in Kentucky was 113.6 per 100,000 population and 71 per 100,000 population for females in the United States, while that for females in Kentucky was 79.3 per 100,000 population and 52 per 100,000 population in the United States (Kentucky Cancer Registry, 2019; US Cancer Statistics Working Group / US Department of Health and Human Services / Centers for Disease Control and Prevention and National Cancer Institute, 1999–2015). The lung cancer incidence rate is 1.43 times higher among males than females in Kentucky. In the same time period (2011–2015), the average number of overall lung cancer deaths each year in Kentucky (3,460 per year) was almost twice as high as the average number of deaths from breast cancer (females only), colorectal cancer and prostate cancer combined (1,180 per year; Kentucky Cancer Registry, 2019; US Cancer Statistics Working Group/US Department of Health and Human Services / Centers for Disease Control and Prevention and National Cancer Institute, 1999–2015). In 2011–2015, the overall age-adjusted lung cancer mortality rate in Kentucky was 67.3 per 100,000 population and 43 per 100,000 population in the United States (Kentucky Cancer Registry, 2019; US Cancer Statistics Working Group / US Department of Health and Human Services / Centers for Disease Control and Prevention and National Cancer Institute, 1999–2015). During the same time period, the age-adjusted lung cancer mortality rate for males in Kentucky was 86.1 per 100,000 population and 54 per 100,000 population in the United States (Kentucky Cancer Registry, 2019; US Cancer Statistics Working Group / US Department of Health and Human Services / Centers for Disease Control and Prevention and National Cancer Institute, 1999–2015). For females, the age-adjusted lung cancer mortality rate was 53.1 per 100,000 population in Kentucky and 35 per 100,000 population in the United States (Kentucky Cancer Registry, 2019; US Cancer Statistics Working Group / US Department of Health and Human Services / Centers for Disease Control and Prevention and National Cancer Institute, 1999–2015). The lung cancer mortality rate is 1.62 times higher among males than females in Kentucky. There is a significant need to address lung cancer disparities in both males and females in Kentucky. Since the grant requirement focused on male populations

and the age-adjusted incidence and mortality rates of lung cancer are higher among males than females (2011–2015 incidence rate was 113.6 per 100,000 population for males compared to 79.3 per 100,000 population females and 2011–2015 mortality rate was 86 per 100,000 population for males compared to 53.1 per 100,000 population for females; Kentucky Cancer Registry, 2019), the team prioritized addressing lung cancer disparities among men for this effort. Future efforts will focus on addressing lung cancer disparities among females in Kentucky compared to the United States.

Multiple factors contribute to the higher lung cancer incidence and mortality rates within the state of Kentucky. Populations with low socioeconomic status (poverty), less than a high-school education, and who live in rural areas experience high rates of tobacco use and tobacco-related disparities that impact lung cancer rates (Chicago American Lung Association, 2015; Garrett, Dube, Babb, & McAfee, 2015; Truth Initiative, 2019) Compared to the United States, Kentucky has higher rates of poverty and lower rates of education. Based on estimates from the American Community Survey reported to the U.S. Census Bureau, in 2017, 12.3% of the United States and 17.2% of Kentuckians were living in poverty (U.S. Census Bureau, 2018). In the United States, 87% of adults over age 25 have completed high school compared to 84.6% in Kentucky (U.S. Census Bureau, 2018). In 2016, 26% of Kentucky adults were current smokers compared to 17.1% of adults in the United States (Centers for Disease Control and Prevention, 2017). Of Kentucky's 120 counties, 86 are classified as rural (Health Resources & Services Administration, 2018). Rural areas have higher rates of new cases and deaths from lung cancer compared to urban areas (Henley et al., 2017). From 2004 to 2012, the National Health Interview Survey identified the highest levels of smoking prevalence among adults, ages 18–44, males, non-Hispanic Whites, those with a high school education or less, those with less than \$35,000 annual household income, and those with no health insurance coverage (Syamlal, Mazurek, Hendricks, & Jamal, 2015). Because of the contributing factors within the state of Kentucky and the higher prevalence of smoking among males, the need for addressing the risk within the at-risk male population is substantial.

With the goal of reducing lung cancer in Kentucky, the RRLO is focused on prevention, early detection, and survivorship support prioritizing male at-risk populations in rural counties that align with several characteristics identified by the National Health Interview Survey data (males, those with high school education or less, and those with less than \$35,000 annual household income; Syamlal et al., 2015). The entities that make up the Kentucky RRLO include the University of Kentucky College of Public Health (UKCHP), Kentucky Cancer

Program (KCP) at the University of Kentucky and University of Louisville, and the Kentucky Cancer Consortium (KCC).

The UKCPH focuses on providing leadership for population health change in Kentucky and providing service to Kentuckians through interdisciplinary collaborations. Some key performance indicators from the UKCPH 2017–2022 Strategic Plan focus on reducing the burden of health problems in Appalachia Kentucky and supporting solutions to complex rural problems (University of Kentucky College of Public Health, 2018).

The KCP is a community-based cancer prevention and control network with Regional Cancer Control Specialists (RCCS) who live and work in the communities they serve. Located at both the University of Kentucky and University of Louisville, KCP is designed so staff members can work with community organizations/groups and 15 District Cancer Councils across the state to develop community capacity, mobilize resources, and engage local organizations in planning, implementing, and evaluating cancer prevention and control activities/programs. These RCCS have extensive experience conducting community-based meetings and focus groups (Kentucky Cancer Program, 2018).

The KCC, Kentucky's statewide comprehensive cancer control coalition, is one of the 65 state, tribal, and territorial programs to receive the National Comprehensive Cancer Control Program grant from the CDC (Centers for Disease Control and Prevention, 2018). KCC consists of more than 70 Kentucky member organizations committed to reducing the significant cancer burden in Kentucky—with reducing lung cancer being one of the highest priorities (Kentucky Cancer Consortium, 2018). UKCPH, KCP, and KCC collaborate extensively to address local, regional, and statewide cancer control priorities.

Keeping in mind the goal of the RRLO, this project focused on worksites with mostly male employees (over 50%) in rural and medically underserved areas in southern Kentucky. This initiative targeted eight Kentucky counties (Casey, Christian, Clay, Jackson, McCracken, Ohio, Perry, and Warren counties) recommended by SMHN based on a combination of factors including lung cancer rates, rural status, medically underserved areas, hospitalization rates, poverty, and education.

The first component of this multi-component intervention was to conduct community focus groups in each of the eight participating counties in order to better understand issues facing the target population. Based on previous community-based work with RCCS in these counties, the team decided to conduct the focus groups with organizational representatives who have experience providing health, educational, and social services in these counties. Since these counties are small and rural, the organizations that provide these services within each county are also the

same organizations that provide services to low-income, mostly male, blue-collar workers. Additional components of the project, which will be discussed in future manuscripts, include roundtable meetings with worksite representatives, worksite interventions utilizing a Resource Kit piloted with at least one worksite per county, and statewide educational webinars to provide additional support for participating counties as well as additional cancer prevention and control partners.

This manuscript is focused on the first component of the project's interventions: focus group meetings with organizational representatives in each county that provide health, educational, and social services. This research focused on the perspectives of the organizational representatives in each of the eight counties to understand available community resources and focus group participants' experiences working with men and worksites. These focus groups did not attempt to assess the effectiveness of the local health, educational, and social service organizations in increasing awareness of health or cancer prevention and control issues among men and worksites. The purpose of this manuscript is to provide a descriptive summary of the perspectives of these focus group participants who represent health, educational, and social service organizations in the following areas: (a) an assessment of lung cancer prevention, early detection, and survivorship services in each of the eight counties; (b) focus group participants' experiences with ways men in worksites may learn about and access health-related services; (c) identification of potential challenges and barriers to consider when reaching men in worksites with lung health-related services; and (d) recommendations on how to create linkages and potential partnerships between community organizations and worksites in order to increase utilization of available resources and services.

Methods

Human Subjects

This work was approved as an exempt study by the University of Kentucky Institutional Review Board (IRB) protocol #16-0638-X2B. The IRB did not require informed consent for this project. All participants received an IRB approved cover letter describing the project and study and provided verbal consent to participate.

Purpose and Protocol

A series of eight focus groups (one in each participating county) were held between November 2016 and January 2017, with organizational representatives based in the targeted counties who provide health, educational, and social services to men and worksites. These focus groups

were intended to be exploratory (learning the perspectives of these organizations in how to reach men, barriers, etc.) and serve as an intervention (assessing services across the lung cancer continuum and sharing that information with one another to promote partnerships, linkages, and referrals).

The research team developed a standardized focus group protocol based on Krueger, Morgan, and Kitzinger's work, previous experience conducting focus groups, and consideration of current project goals (Kitzinger, 1994; Krueger & Casey, 2002; Morgan & Krueger, 1998). The standardized protocol included the purpose and objectives related to the project and the focus groups; guidelines for focus group participation and recruitment; scripts; planning resources (travel, food, etc.); IRB cover letter; planning checklist of materials and resources needed to facilitate focus group discussion (pens, flipcharts, handouts, etc.); registration form to use with participants; the focus group agenda template; focus group introductory script and ground rules; focus group script and questions and prompts; data collection instructions; participant evaluation form; debriefing instructions for the moderator and assistant moderator; and a summary report template. Six moderators and five assistant moderators conducted the eight focus groups. All moderators were RCCS who live and work in the regions they serve and have extensive experience conducting both community meetings and focus groups. One moderator conducted three of the focus groups because there were new RCCS in two of the participating counties who were still in training during these focus groups. All moderators were trained using a standardized protocol developed specifically for these focus groups. Training occurred during in-person meetings, follow-up webinars, and conference calls. Once the moderators had completed their training, they then provided training to the assistant moderators.

The following information was collected from the health, educational, and social service organization representative participants in each focus group.

1. Available resources and services in each county related to tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening, and lung cancer survivorship.
2. Perspectives and experiences with ways that men in worksites learn about and access health-related services.
3. Potential challenges and barriers to reaching men in worksites with lung health-related services.
4. Linkages and potential partnerships between community organizations and worksites to increase utilization of available resources and services.

Recruitment

The Kentucky RRLO enlisted the help of KCP's RCCS to recruit representatives from organizations in each of the eight counties. Participants for each focus group were recruited based on the county where their organization was located or where the organizational representatives primarily worked. During the registration process, the participants indicated whether they served only the county where the focus group was held or if they served multiple counties.

The RCCS utilized standardized scripts and identified representatives that provide health as social services to men and/or worksites in these counties. RCCS also worked with their KCP District Cancer Councils to identify potential participants. District Cancer Councils are voluntary advisory groups made up of community organizations and health-care professionals. These individuals were a good fit as focus group participants because they already work together to address cancer prevention and control on regional and local levels.

If the RCCS had an existing relationship with the potential participant, they directly invited the individual to participate. If members of the District Cancer Councils recommended a potential participant that the RCCS was unfamiliar with, the District Cancer Council member reached out directly to that participant. Upon agreement to join, participants were then put in direct contact with the RCCS for further information regarding the nature of the project.

The RCCS provided each potential participant with a letter of request for participation, fact sheet about the project, and contact information to address follow-up questions via email, telephone, or an in-person meeting.

Process and Data Collection

The RCCS worked with local community organizations and potential participants to identify convenient locations for the focus group meetings. Meetings were held mid-day, and lunch was provided in order to maximize participation. Funding for lunch was provided through partnerships with nonprofit organizations.

Participants completed a registration form prior to the focus group, which gathered information such as participant name, organization name, contact information as well as additional information presented in Table 1.

The RCCS moderated the focus groups using a standardized focus group protocol that included a consistent introductory script and set of questions (Figure 1). During the focus group, participants reviewed a county-level *Lung Cancer and Workforce Snapshot* (Figure 2); received information on how to use a county directory of cancer resources and services (Pathfinder <https://netapps.louisville.edu/PathFinder/>); and discussed key questions

Table 1. Focus Group Participant Registration Form.

Category	Options
Type of organization represented (check one)	Agriculture Construction Health Services Finance Professional and Other Services Information and Communications Manufacturing Mining and Other Natural Resources Primary Education Services/Academia Social Services State or Local Government Trade and Transportation Utilities Other
City of organization	
Regions served by organization/worksites	County County and surrounding area/region Statewide Other state
Role/Position in organization/worksites (check one)	Human resources Worksite wellness representative Employee health director (usually nurse) Medical director (designee) Leadership/management Other
Has your organization previously focused on. . . (check all that apply)	Worksite wellness Men's health Lung cancer Tobacco treatment Tobacco-free/smoke-free worksites Radon prevention Lung cancer screening Lung cancer survivorship
Has your organization been involved in a community health assessment?	Yes No
Approximately how many men are served by your organization? Please provide your best estimate	
Does your organization provide services to worksites that employ mostly men?	Yes No
If yes, how many worksites?	
If yes, what are the names and locations of the worksites?	
Would it be ok if we contacted you via email with questions and resources after the focus group?	Yes No

that assessed resources available in the county across the lung cancer continuum (tobacco treatment, reducing exposure to secondhand smoke, radon prevention, lung cancer screening, and lung cancer survivorship), how men learn about and access these services, and what barriers, challenges, and issues exist that may prevent men from learning about or using these services (Figure 1).

The RCCS (moderator) recorded responses for each focus group open-ended question on flip charts and an additional KCP, RCCS, other staff member or community volunteer (assistant moderator) recorded notes using

paper or a laptop during the focus group discussion. For instance, the first question focused on available resources and services in each county related to tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening, and lung cancer survivorship. The moderator began by asking for information on known resources and services related to tobacco treatment in the county. As the participants shared their perspectives on resources available (e.g., QuitLine, group classes, etc.), the moderator recorded that information on the flip charts. Simultaneously, the assistant moderator recorded the

Focus Group Guide

Introductory Script

As you reviewed the cancer data, you probably noticed—and maybe already knew—that Kentucky has the highest rates of lung cancer in the nation. There are things we can do to reduce the impact of lung cancer and that is why we are here today!

A variety of resources and services that range from prevention to survivorship exist in counties to help address lung cancer needs. We would like your help in identifying the resources and services in (county) so that we can increase the number of men that access and use these services.

The Kentucky Cancer Program maintains an on-line resource directory for cancer called the “Pathfinder.” How many of you are familiar with the Pathfinder (information would have been provided about the Pathfinder in participant pre-focus group materials)?

Prior to this meeting we prepared a list of existing lung cancer resources for (county). We color coded and listed types of lung cancer related resources and services from the Pathfinder that we were aware of and sent to you to review prior to the focus group. The types of lung cancer related resources and services include:

Tobacco Treatment—Blue

Tobacco-Free/Smoke-Free Worksites—Orange

Radon Prevention—Purple

Lung Cancer Screening—Green

Lung Cancer Survivorship—Red

*The Moderator and Assistant Moderator will need to have prepared existing lung cancer resources identified/flagged for each of the following areas: tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening, and lung cancer survivorship. **The group will not only need to assess resources that are not listed, but verify that the services already listed are accurate.***

To begin the discussion, we have placed information about existing resources on the wall.

Focus Group Questions

Key Question #1

We would like your help in assessing what resources and services are currently available for tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening, and lung cancer survivorship.

What services and resources are you aware of—but are not listed in this county/area for tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening, lung cancer survivorship?

Key Question #2

How do men and/or men in worksites learn about access services: tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening and/or lung cancer survivorship?

Key Question #3

What barriers, challenges, issues exist that may prevent men from learning about or using services for tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening and lung cancer survivorship?

Prompt if needed: Fear of diagnosis of lung cancer, concerns about costs, fear of job loss if diagnosed, services are not offered at convenient time, cannot miss work, etc.

Key Question #4

What linkages and potential partnerships could be created between your organization's services and worksites to increase utilization of services and resources around tobacco treatment, tobacco-free/smoke-free worksites, radon prevention, lung cancer screening and/or lung cancer survivorship?

Final Question

Are there any other questions or comments that have not been discussed today?

Figure 1. Focus group guide used by RCCS in each county.

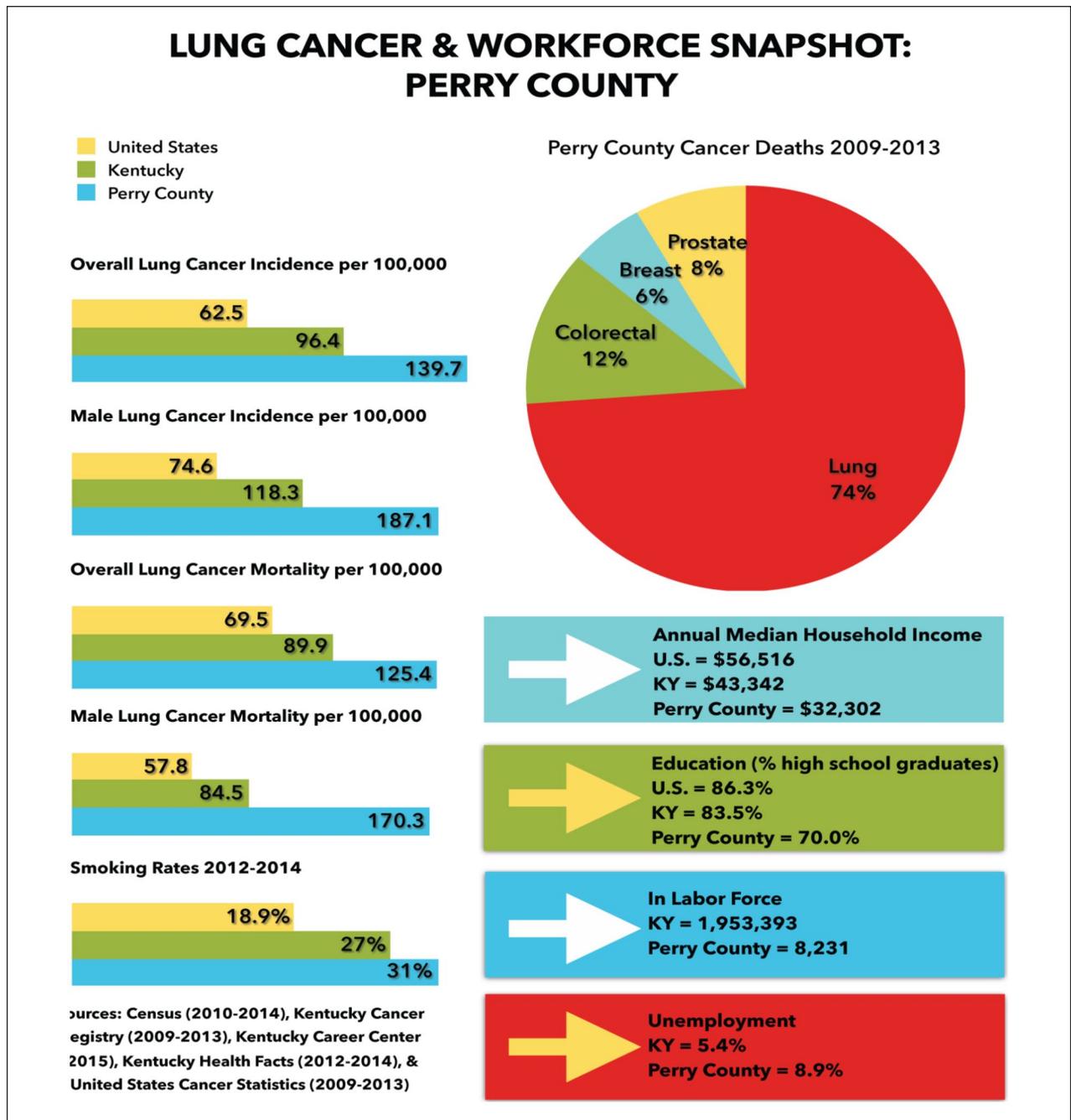


Figure 2. County-level lung cancer and workforce snapshot reviewed by focus group participants.

same information using paper or a laptop. The moderator then moved to a discussion on tobacco-free/smoke free worksites, then radon prevention, lung cancer screening, and lung cancer survivorship. This process for data collection continued for the other three discussion areas as well (ways men learn about and access health-related services, potential challenges, and barriers to reaching men in worksites with lung health-related services, and linkages and potential partnerships between community

organizations and worksites to increase utilization of available resources and services).

Each focus group lasted approximately 90 min. Immediately following each focus group, the moderator and assistant moderator met to discuss, review, reconcile, and organize their notes. The moderator and assistant moderator for each focus group prepared a summary report using a template from the standardized protocol, which included notes from the focus group and

aggregated information from the registration forms. Although these organizational representatives are comfortable meeting and engaging in discussions with one another, they do not usually participate in formal, audiotaped focus groups. Therefore, these focus groups were not audiotaped, as the team was concerned that audio taping the conversation would have reduced our ability to recruit, created intimidation among participants, and reduced the participants' willingness to be open and honest about their perspectives. No names were identified in the summary reports (Figure 3).

Data Analysis

Registration forms. Descriptive information collected from each registration form was analyzed by county and then aggregated across all counties. Frequencies, particularly counts and percentages, were used to describe the focus group participants.

Focus group summary reports. Two researchers from the team independently reviewed, coded, and categorized the data by topic and theme. The coding was inductive. One of the researchers took all of the summary report templates and any additional notes and developed a "tally sheet" for each county focus group. The tally sheets were organized by each of the four discussion questions from the focus groups and by the lung cancer continuum (tobacco treatment, secondhand smoke, radon prevention, lung cancer screening, and lung cancer survivorship). For instance, the first discussion question was related to resources and services available. The tally sheet included the specific resource available and the specific area of the lung cancer continuum that was addressed. When the focus group participants mentioned several different types of classes to support tobacco treatment, those were listed individually in the tally sheet corresponding with tobacco treatment. The information from this tally sheet was reviewed, and based on review of the responses, a codebook was developed to organize, categorize, and aggregate the responses. Another researcher reviewed the tally sheets and codebook then discussed and reconciled any differences in the proposed codes and categories. This was used to inform the tables, counts, and percentages listed in this manuscript. These counts and percentages are included to highlight the most common areas discussed and how they compare to one another rather than a precise quantitative analysis of the results.

The topics included tobacco treatment, secondhand smoke, radon prevention, lung cancer screening, and lung cancer survivorship. Within each question, the responses were then coded into common themes. The researchers discussed the areas where they may have

differed in coding and came to a consensus on categories and themes. The counts in the analysis represent the number of times this resource, barrier, or idea was verbally mentioned during the focus group. It was not analyzed by individual focus group participants. If a focus group participant mentioned a resource, barrier, or idea more than one time, it was only counted "once." Each time a mention was counted, it was done because a different person verbally indicated agreement or another mention that aligned with the same category. The researchers initially analyzed the results by county and then aggregated the information across all focus groups. The analysis included frequencies, particularly counts, to describe the most common categories and themes discussed by focus group participants.

Results

Participant Characteristics

A total of 45 people representing individual organizations participated in the eight focus groups. Forty of the participants had existing relationships with the RCCS in their county ($n = 40$, 89%) and were familiar with one another as well. Twenty-four focus group participants had also participated in local community health assessments ($n = 24$, 53%). Twenty-six focus group participant organizations provided services to multiple counties ($n = 26$, 58%), 13 participants were solely focused on serving the county where the focus group was hosted ($n = 13$, 29%) and four served the entire state ($n = 4$, 9%). Each focus group participant was recruited based on the county where their organization was primarily located.

Most participants were female ($n = 38$, 84%). Twelve different types of organizations were represented, with the majority being health-care organizations ($n = 26$, 58%). These included a wide range of organizations such as county health departments, clinics, family practice offices, hospitals, cancer coalitions, corporate wellness providers, and medical imaging centers. After health care, the next predominant organizational type was education ($n = 5$, 11%), which included Head Start, schools, and college opportunity programs for veterans. Social service organizations comprised 7% of participants such as Job Corps and Community Action Agencies ($n = 3$, 7%). Agricultural organizations also comprised 7% of participants ($n = 3$, 7%). Most participants had leadership and management roles in their organizations ($n = 19$, 42%). The n 's listed in the remainder of the Results section include the number of times an item was verbally discussed during the focus group rather than an individual focus group participant discussing the item.

FOCUS GROUP #1 SUMMARY REPORT

Date: _____ Time: _____ Location: _____

Moderator: _____ Assistant Moderator: _____

Total Number of Participants: _____

1. How many of these participants (the 2 numbers below must equal the total number of participants in the focus group):
 Have you worked with in the past? _____
 Not worked with in the past? _____

2. Total number of organizations represented: _____
 Names of organizations:
 1) _____
 2) _____
 3) _____
 4) _____
 5) _____
 6) _____
 7) _____
 8) _____
 9) _____

3. Types of organizations (aggregate numbers from the registration form):
 #Agriculture _____
 #Construction _____
 #Health Services _____
 #Finance, Professional, and Other Services _____
 #Information and Communications _____
 #Manufacturing _____
 #Mining, and Other Natural Resources _____
 #Professional Services (6-1) _____
 #Secondary Education Services/Academia _____
 #Social Services _____
 #State or Local Government _____
 #Trade and Transportation _____
 #Utilities _____
 #Other (please specify) _____

4. Regions represented by organizations (aggregate numbers from the registration form):
 County _____
 Statewide _____
 Other states _____
 #IL _____
 #IN _____
 #MO _____
 #OH _____
 #TN _____
 #VA _____
 #Other – please list specific states _____

5. Roles/positions in organizations (types of professionals - aggregate numbers from the registration form):
 # Healthcare service providers _____
 # Non-healthcare service provider _____
 # Administrators/managers _____
 # Other (list please describe) _____

6. Number of organizations involved in a community health assessment _____
 7. What is the total number of men served by these organizations combined (aggregated numbers from the registration forms)? _____
 8. How many organizations provide services to worksites (aggregate numbers from the registration form)? _____
 9. How many worksites are served by these organizations (aggregated numbers from the registration form)? _____
 10. What are the names and locations of these worksites (from the registration form)?

Narrative/Summaries

11. Summarize key question 1 - Assessment of services and resources. List all resources and services in this county and health area:
 • Tobacco treatment?
 • Tobacco-free/smoke-free worksite?
 • Radon prevention?
 • Lung cancer screening?
 • Lung cancer survivorship?

12. Summarize key question 2 - How do men and/or men in worksites learn about and access services tobacco treatment, tobacco free/smoke-free worksites, radon prevention, lung cancer screening, and lung cancer survivorship?

13. Summarize key question 3 - What barriers, challenges, issues exist that may prevent men from learning about or using services for:
 • Tobacco treatment?
 • Tobacco-free/smoke-free worksites?
 • Radon prevention?
 • Lung cancer screening?
 • Lung cancer survivorship?

14. Summarize key question 4 - What linkages and potential partnerships could be created between your organizations services and worksites to increase utilization of services and resources around tobacco treatment, tobacco free/smoke-free worksites, radon prevention, lung cancer screening, and lung cancer survivorship?

15. Summarize unanticipated questions posed during the session:

16. Summarize concluding comments/remarks:

Figure 3. Summary report used during focus groups.

Resources and Services Available

Table 2 provides information on the resources and services discussed in the focus groups. A total of 134 types of lung cancer prevention and control resources and services were discussed by focus group participants during all eight focus groups combined. Most of the resources and services known to be available to men and worksites in the participating counties were directed toward *tobacco treatment and smoking cessation* ($n = 39$, 29%). Resources included educational resources (local, state, and national); special events and campaigns (American Cancer Society Kick Butt's Day, or local Relay for Life events); and navigation and linkages to resources (the process of actively linking a person with an identified need or problem to a resource or service that will meet that need or problem). One navigation and linkage resource provided by the KCP is Pathfinder, which provides a directory of cancer prevention and control resources available in each of the 120 Kentucky counties (Kentucky Cancer Program, n.d.). Services included smoking cessation classes and counseling such as the QuitLine (tobacco cessation service available through a toll-free telephone number); medication/nicotine replacement therapy; smoke-free facilities (businesses, cities, and/or counties that have tobacco-free or smoke-free policies); access to free radon kits; professional radon mitigation and testing; lung cancer screening programs (using low-dose CT scans); support groups; and home health services focused on survivorship needs.

Tobacco treatment. For tobacco treatment (smoking cessation), the most commonly discussed resources across all counties were *smoking cessation classes and tobacco treatment counseling*. Participants had suggestions for how to encourage the use of these resources and make them even easier to access.

[Participants] reported that men are competitive and suggested worksite competitions for cessation. They also noted that participation in worksite classes was higher if offered while on the clock. (Moderator notes)

Reducing exposure to secondhand smoke. There were at least 15 tobacco-free or smoke-free policies identified. These included worksites, school campuses, restaurants, public buildings, and two cities.

The cities of Paducah and Bowling Green have a smoke free ordinance, the counties do not. (Moderator notes)

Radon prevention. The most common resources available for radon prevention were the availability of free radon kits. Some focus group participants also reported having educational resources and classes/counseling geared toward radon. In three focus groups, comments made by focus group participants reflected a general lack of awareness and knowledge about radon.

Most participants [were] unfamiliar with radon but were interested in learning more.

Table 2. Services and Resources Available for Tobacco Treatment/Smoking Cessation, Reducing Exposure to Secondhand Smoke, Radon Prevention, Lung Cancer Screening, and Lung Cancer Survivorship.

Types of resources and services	Tobacco treatment	Reducing exposure to secondhand Smoke	Radon	Lung cancer screening	Survivorship	Total
Resources						
Educational resources	8	7	8	2	7	32
Special events/campaigns	1				1	2
Navigation and linkages	1			5	2	8
Services						
Smoking cessation Classes/counseling (includes QuitLine)	26		5			31
Medication/nicotine replacement therapy (NRT)	3					3
Smoke-free policy support		15				15
Free radon kits			10			10
Radon testing/mitigation			1			1
Lung cancer screening Programs (low-dose CT)				22		22
Home health					5	5
Support groups					5	5
Total	39	22	24	29	20	134

Radon education/awareness is a missing gap in McCracken County. (Moderator notes)

Lung cancer screening programs. A total of 22 lung cancer screening programs were highlighted across all eight counties. Despite the number of screening programs, some participants reported perceived underutilization of the services due to lack of awareness regarding lung cancer screening and poor follow-up and adherence.

Men are unaware that [they] can detect lung cancer at an early stage. More promotion of this program would be beneficial to men. (Moderator notes)

They all expressed concern in lack of ability to get them screened for anything that couldn't be done on-site. (Moderator notes)

One clinic noted that they made all kinds of referrals for cancer screening, but patients didn't seem to ever follow up. (Moderator notes)

Lung cancer survivorship. The common types of resources related to lung cancer survivorship discussed were educational. Participants also mentioned the availability of home medical resources and support groups. Navigation and linkages to two health-care service providers were highlighted (hospice and a local hospital) and one special event (survivor dinner) was discussed.

Perceived Ways Men Learn About and Access Services

Table 3 provides a summary of the focus group participant perspectives on how men learn about and access services. Most of the focus group participants perceived that men learned about and accessed services primarily related to the tobacco treatment ($n = 50$, 32%) and lung cancer screening ($n = 34$, 22%) areas of the lung cancer continuum. A total of 156 methods were discussed during all eight focus groups combined (Table 3). The focus group

participants suggested that the most common ways men learn about and access health-related services overall are through their employers ($n = 46$, 29%). Participants identified the following types of employer or worksite services and activities: health and wellness programs within the worksites, on-site employee health-care services, wellness nurses, offering health insurance coverage to employees, employee assistance programs, worksite health fairs, health-related emails and newsletters, staff meetings that include health-related messages, tobacco treatment, and smoking cessation classes hosted at the worksite and educational information provided to employees.

“Media,” including mass media, small media, and social media, was the second most commonly perceived way of learning about services ($n = 29$, 19%). Specific examples included television public service announcements or advertisements, radio, newspaper, internet, and posters/pamphlets in doctors' offices. The messages focused on awareness and motivating experiences from peers and others who have been diagnosed with lung cancer.

Community organizations/groups were another way focus group participants perceived that men learn about services ($n = 24$, 15%). These included church-related groups, community wellness groups, and the Cooperative Extensive Service. Health-care providers ($n = 17$, 11%) were discussed as potential resources for learning about services and included local health department newsletters and educational resources, health assessments and medical histories, patient navigation, physician liaisons, case management, and primary care providers. Health insurance companies were also highlighted ($n = 16$, 10%). Specific examples included insurance-related health reward and incentive systems (e.g., Humana Vitality), paying for treatment, reimbursement of costs, lower premiums for non-tobacco users, and insurance-based health risk appraisal forms.

Additional methods discussed during the focus groups included educational activities and special events such as worksite and hospital health or cancer screening fairs and promotion of radon testing. Encouragement from family

Table 3. Perceived Ways Men Learn About and Access Services and Resources.

Perceived ways men learn about and access services and resources	Tobacco treatment	Reducing exposure to secondhand smoke	Radon	Lung cancer screening	Survivorship	Total
Employers	16	8	6	11	5	46
Media (mass, social, and small)	7	4	5	8	5	29
Community organizations/groups	6	4	4	6	5	25
Health-care providers	4	4	2	3	4	17
Health insurance companies	8	2	2	2	2	16
Educational activities and special events	3	2	3	2	2	12
Family and friends	6	1	1	2	1	11
Total	50	25	23	34	24	156

and friends was another method discussed during some of the focus groups. This included the recommendation and encouragement from spouses or children as well as personal invitations from friends to participate in health-related activities.

Tobacco treatment. Participants perceived that the majority ($n = 16, 32\%$) of tobacco treatment services are accessed through employers. These services include on-site smoking cessation classes and educational programs, wellness programs, and information about the Kentucky QuitLine, known as “Quit Now Kentucky” (Kentucky Department for Public Health Tobacco Prevention and Cessation Program, 2018). Health insurance companies are the second most common method discussed during the focus groups offering promotional incentives, reimbursement of costs, and lower premiums for non-smokers.

Reducing exposure to secondhand smoke. Employers were also the most frequently suggested way that men may access information on reducing exposure to secondhand smoke. For example, employees at Eastern Kentucky University receive newsletters and emails, participate in staff meetings, and discuss policy enforcement. Resources related to reducing exposure to secondhand smoke may also be found through the media, community organizations and groups (cooperative extension newsletters), and health-care providers such as clinics, patient navigators, and health departments.

Radon prevention. Five of the eight focus groups had participants who were familiar with radon prevention resources. In these five groups, it was suggested that radon prevention resources are most commonly accessed through employers, media, and community organizations and groups. Specific examples include staff meetings, national awareness campaigns, worksite safety talks, community wellness groups, and cooperative extension newsletters. Participants in the three other focus groups were unaware of ways men could learn about radon prevention.

Lung cancer screening. Similar to radon prevention, the most common ways focus group participants perceive that men access information related to lung cancer screening are through employers, media, and community organizations/groups. Specific examples include lunch and learns, health risk assessments, staff meetings, and employee health resources. One worksite provided free screening in collaboration with a college's research study. Media examples included radio and TV advertisements social media and posters/pamphlets in doctors' offices. Community organizations and groups once again included

cooperative extension newsletters as well as church groups.

Lung cancer survivorship. Similar to radon prevention, five focus groups identified employers, media, and community organizations/groups as the most commonly perceived ways men access lung cancer survivorship resources. Specific examples included employee wellness and assistance programs, media that portrayed motivating experiences from peers who have been diagnosed with lung cancer as well as cooperative extension and church group support. Three focus groups were unfamiliar with ways men could access lung cancer survivorship services, with one focus group participant saying: “Lung cancer is a taboo subject and survivorship is low in our county.”

Perceived Barriers, Challenges, and Issues That May Prevent Men From Learning About or Using Services

Table 4 focused on the perceived barriers, challenges, and issues that may prevent men from learning about or accessing services. Most barriers and challenges discussed during the eight focus group sessions were related to the tobacco treatment and lung cancer screening ($n = 45, 35\%$) areas of the lung cancer continuum. Participants identified 128 potential barriers and challenges in all eight focus groups combined (Table 4). Results were divided into categories related to the type of barrier or challenge identified and then divided into subcategories according to the lung cancer care continuum.

Overall, attitudes and behaviors were the most commonly perceived category of barriers that may prevent men from accessing services. These included fear, addiction, denial, stress, peer pressure, fatalism, lack of interest in going to the doctor, stigma, religious beliefs, and culture (Kentucky is a tobacco-growing state). Of these types of attitudes and beliefs, fear was most commonly discussed and was the emphasis in four of eight focus groups. Specific fears included the fear of failure related to tobacco treatment and fear of potential results/procedures related to lung cancer screening.

The second most commonly perceived category of barriers to services included work-related conflicts. Examples of these type of conflicts included not having sick leave, difficulty in getting time off work, and working in facilities that are not smoke-free. Cost was also discussed as a potential barrier related to work-related conflicts. These included lost income from taking time off of work (if they have no sick leave), cost of smoking cessation/tobacco treatment products, lack of insurance coverage, and the potential cost of mitigating radon in the home. Another frequently mentioned perceived barrier

Table 4. Perceived Barriers, Challenges, and Issues That Exist and May Prevent Men From Learning About or Using Services.

Barriers	Tobacco treatment	Reducing exposure to secondhand smoke	Radon	Lung cancer screening	Survivorship	Total
Attitudes/behaviors	19	11	1	20	6	57
Work-related conflicts	8	7		2		17
Cost	6		3	6		15
Lack of awareness	2		6	2	4	14
Health-care system	1			9	1	11
Transportation	4	1		1		6
Family	3			1		4
Lack of access	1		1			2
Legislation/policies	1	1				2
Total	45	20	11	41	11	128

was related to lack of awareness. This category included the relationship between radon and lung cancer as well as risks from other chemical exposures. Several focus groups highlighted the perceived lack of awareness of men's health as it related to tobacco treatment, lung cancer screening, and survivorship.

Additional perceived barriers mentioned were health-care systems barriers, transportation, family, lack of access, and policy-related barriers. The health-care systems barriers discussed were primarily related to lung cancer screening. Examples included confusion over guidelines, doctors not ordering the screening, clinic hours that are not compatible with work schedules, not having it as a Health Care Effectiveness and Data and Information Set measure (National Committee for Quality Assurance, 2018) and lack of local lung cancer screening programs. Lack of transportation was most discussed in terms of tobacco treatment related services. Perceived family-related barriers may have multiple impacts, such as tobacco treatment being less effective and more difficult if other members of the family smoke. Another aspect of family discussed was the potential impact family members, particularly spouses, in encouraging men to take care of their health and go to the doctor. The perceived access-related concerns were associated with a lack of local smoking cessation classes and access to free radon kits. The perceived policy barriers related to a lack of policies that regulate tobacco use and poor enforcement of existing smoke-free policies.

Tobacco treatment. Attitudes and behaviors and work-related conflicts were perceived as the most common barriers for men to access tobacco treatment services. Multiple focus groups mentioned “fear of failure” based on previously unsuccessful quit attempts. Other attitudes and behaviors discussed during the focus groups that may prevent men from accessing services include the strength of addiction to tobacco products, reluctance or resistance

to change habits, being “macho” by not asking for help, stress, and their perception of their smoking status as not being a problem. Other participants mentioned potential attitudes such as stubbornness contributing to their behavior in not accessing services. Additionally, participants suggested that some men might be in denial of their addiction.

Perceived work-related conflicts included work schedules and long commutes that may prevent them from participating in local smoking cessation classes and lack of resources and other funding for the local business to provide on-site preventive services such as smoking cessation classes. Some focus groups also highlighted potential cost barriers such as Nicotine Replacement Therapy or other medications and loss of income due to missed work to participate in tobacco treatment efforts.

Reducing exposure to secondhand smoke. Although four groups did not perceive any barriers related to reducing exposure to secondhand smoke, the other four groups devoted attention to perceived attitudes and behavior barriers to learning about secondhand smoke or smoke-free environments. Specific attitudes and behaviors discussed during the focus groups included fear of offending others, peer pressure, inconvenience, resentment, and denial as challenges to utilizing smoke-free facilities or accepting services.

[Smoke free environments] interfere with freedom-individual rights (Focus group participant)

There were several perceived *work-related barriers* including leadership and existing worksite, local, or countywide policies. Lack of support from leadership may impact enforcement of smoke-free environments. One group discussed the potential impact of not having a tobacco-free or smoke-free policy as well as having the availability of smoking cessation classes and insurance

coverage for tobacco treatment medications. Focus group participants perceived that some worksites may have more difficulty with tobacco-free/smoke-free environments than others depending upon existing local or countywide policies.

The city has a smoke free ordinance, the county does not. (Focus group participant)

Radon prevention. The majority of the barriers perceived for radon prevention were related to lack of awareness or information about the risks of radon and other chemicals, as well radon programs and services.

[There is a] lack of education and knowledge of what chemicals/products cause exposure. (Focus group participant)

[They are] unaware of health department free radon kits and cooperative extension demonstrations on how to use kits. (Focus group participant)

Participants also suggested that men may avoid testing their homes for radon because of the potential expense associated with mitigation.

Lung cancer screening. Almost half of all barriers perceived in men's access to lung cancer screening services were related to attitudes and behaviors. Participants echoed attitudes that were discussed as barriers in other areas such as reluctance to seek medical care, fear, and stubbornness. Additionally, men may perceive that they do not fit screening criteria, believe that lung cancer will never happen to them, or have a sense of fatalism that impacts their desire (or lack of desire) to find out screening results.

Men are macho, don't want to go to [their] doctor and fear results. [They] don't want to know. (Focus group participant)

According to the focus group discussions, *health-care providers and systems* may also serve as a barrier to men accessing lung cancer screening services. If they do not understand or support current screening guidelines, do not have systems in place to remind them to ask about screening, or have clinic hours that make it difficult for men to be screened, it may be difficult for men who are eligible to participate in lung cancer screening programs. The *cost* related to unpaid time off work was identified as a potential barrier in several focus group discussions. One focus group mentioned wives as a potentially important component in encouraging men to talk with their doctor about screening.

Survivorship. Four of the eight focus groups did not perceive any barriers to lung cancer survivorship services, which aligns with the results from the previous question

focused on the perceived ways men learn about and access services and resources (three of the focus groups did not identify any ways men could learn about and access survivorship services). Three focus groups specifically mentioned the barrier related to the lack of lung cancer survivors in their area, which contributes to a fatalistic attitude.

Many of our lung cancer patients in our area don't "survive" cancer.

Only one or two of the many lung cancer patients are a stage 3 at the lowest, all others are already stage 4. (Focus group participant)

Participants also perceived that men in their areas may not be interested in group support and may not be people who like to express their feelings. One focus group suggested that an important potential barrier to overcome is the severe gap and lack of access to health-care services for survivors and caregivers.

Potential Linkages/Partnerships Between Organizations and Worksites

Table 5 provides information on the final discussion group area discussed highlighting potential linkages and partnerships between organizations and worksites. Overall, a total of 136 potential linkages were discussed across all eight focus groups, with many specific suggestions for partnerships in particular services (Table 5). The most common potential linkages and partnerships recommended between organization services and worksites across all areas were *community organizations and groups* ($n = 53$, 39%), followed by *employers* ($n = 33$, 24%), health-care providers ($n = 30$, 22%) and mass media ($n = 12$, 9%). Examples of potential community organizations and groups discussed included churches and faith-based collaboratives, chambers of commerce, housing authority, Health Access Nurturing Development (HANDS) program, county cancer/health coalitions and task forces, wellness centers, service organizations (Lion's Club), and nonprofits (American Cancer Society [ACS], American Lung Association [ALA]). Examples of potential employers discussed included banks, Farm Bureau, business owners, electric companies, coal companies, farmers, and manufacturing. One group focused on the potential importance of working with farmers in relation to radon and exposure to other chemicals, safety, and stigma. Health-care providers discussed included health departments, hospitals, pharmacies, physicians' offices, and nursing homes. Mass media was mentioned several times with a particular focus on the potential for public service announcements (PSA) radio, television, newspaper, and social media.

Table 5. Potential Linkages and Partnerships Between Organizations and Worksites.

Potential linkages/partnerships	Tobacco treatment	Reducing exposure to secondhand smoke	Radon	Lung cancer screening	Survivorship	Total
Community organizations/groups	27	8	5	8	5	53
Employers	13	5	6	6	5	33
Health-care providers	11	2	4	8	5	30
Media			9	2	1	12
Government	2	1				3
Family and friends	2			1		3
Total	55	16	21	25	16	136

Some groups mentioned the impact of government, family, and friends as potential linkages. A few focus group participants suggested that city governments may be particularly impactful in relation to tobacco treatment and smoke-free efforts. Family and friends can potentially provide success stories and serve as motivators toward improving health.

Tobacco treatment. Most of the partnership and linkage recommendations focused on tobacco treatment ($n = 55$, 40%). Focus group participants suggested partnering with community organizations that included health, faith-based collaboratives, local health departments, nonprofit organizations like the ACS and ALA, Lion's Club, school systems, HANDS/Head Start, Grandparents Parenting programs, Medicaid Managed Care organization, Chamber of Commerce, wellness centers, and rehabilitation facilities. Participants suggested linking employers with community organizations that can provide tobacco treatment services. Additional suggestions included working with elected officials and linking success stories and local champions.

Smoke free/secondhand smoke. Similar to tobacco treatment, most recommendations on linkages for smoke-free/tobacco-free environments were with community-based organizations. These included community task forces, Chambers of Commerce, and faith-based organizations that could provide information on the benefits of going smoke-free, sharing best practices, and recognizing those enacting and enforcing comprehensive smoke-free policies. Other potential linkages included working with city and county governments to improve existing ordinances and to support healthy lifestyles through health policy initiatives.

Radon prevention. Most discussion related to partnerships and linkages for radon prevention focused on the category of media. Perceived lack of awareness was one of the major barriers identified (Table 3) and focus group participants considered media to be a primary method for

increasing awareness. Specific ideas included PSAs, promoting a radon prevention campaign, and creating a Radon Awareness Month. In addition, focus group participants recommended partnerships with health departments who could provide free radon kits. One focus group recommended working closely with farmers to promote radon prevention.

Lung cancer screening. Health-care providers were the most common potential partners related to lung cancer screening services. These linkages may include stronger relationships with clinicians who recommend screening, screening facilities offering free screening, and education provided by health insurance companies and health departments. Other potential linkages included media through the use of an education campaigns and hospital TVs. One focus group discussion highlighted the importance of family, particularly spouses, as a linkage to make and keep health-care appointments.

Survivorship. Three of the eight focus groups identified potential partnerships and linkages for increasing lung cancer survivorship services. Employers were seen as potential linkages in offering survivorship sessions at worksites. Community organizations and health-care providers were suggested as a method for linking men to existing community resources.

___County has a well-respected cancer coalition that is very effective at fund-raising and assisting cancer patients with transportation costs and could be a possible partner for survivorship program. (Focus group participant)

Discussion

The focus group discussions on (a) lung cancer-related resources and services available; (b) perceived ways men learn about and access services; (c) perceived barriers, challenges, and issues that may prevent men from learning about or using services; and (d) potential linkages, provided an opportunity to understand the perspective of

community organization representatives that provide health, social, or educational services in the eight participating counties.

The perceived ways men access and learn about services, as well as many of the perceived barriers to accessing services, focused on employers and work-related conflicts, respectively. This demonstrates the potential importance as well as the possible barriers and challenges that may exist in working with employers and worksites to promote lung cancer prevention and control resources and services. One potential way to address these challenges and opportunities may be by linking community-based organizations with employers.

The most common types of barriers and challenges discussed across all topic areas were categorized as "attitudes and beliefs." These included: fear, addiction, denial, stress, peer pressure, fatalism, lack of interest in going to the doctor, stigma, religious beliefs, and culture (Kentucky is a tobacco-growing state). Within this list, fear was emphasized the most. The research team was particularly surprised that "attitudes and beliefs" would have been the most commonly discussed barrier. The team expected it to relate more directly to access issues, such as health insurance coverage, having a health-care provider, cost, or time off from work. While those were mentioned, they were much less common. Based on our study focus, these implications are very important. As the team works with employers, the media, and community-based organizations (the most common perceived ways men learn about resources and services), the team must consider how to frame messages and interventions recognizing attitudes and beliefs that may serve as barriers to accessing resources and services.

Tobacco Treatment

Overall, the focus group participants demonstrated most familiarity with tobacco treatment-related resources and services, perceived ways to reach men, perceived barriers in men accessing services, and potential linkages with other organizations. Since most of the resources and services discussed related to tobacco treatment, it makes sense that the other areas would also have a particular emphasis on tobacco treatment. Although tobacco treatment resources were the most discussed topic among all eight focus groups, Kentucky's rate of adult smoking within these eight counties ranges from 23% to 35% (Foundation for a Healthy Kentucky, 2017). More work must be done to increase access and utilization of these resources, and to develop new ways of reaching Kentuckians with tobacco treatment resources and services.

Lung Cancer Screening

Lung cancer screening was the second most commonly discussed topic area. Although the focus groups mentioned the availability of 22 lung cancer screening programs within eight counties as resources, the focus group participants also identified several potential barriers to lung cancer screening before the barriers-related question was asked. These perceived barriers were echoed during the formal discussion on barriers and ranged from reluctance to seek medical care, lack of awareness that lung cancer can be detected at an early stage, challenges with follow-up for referrals made (to any type of cancer screening), and concern that employees eligible for lung cancer screening would not be screened if there were not screening services located onsite at a worksite.

Reducing Exposure to Secondhand Smoke

Reducing exposure to secondhand smoke, radon prevention, and survivorship had the fewest number of resources and services discussed and were the least familiar topics for the focus groups overall. The types of services potentially available for reducing exposure to secondhand smoke focused on policy change, including worksite, city or county policies. Although reducing exposure to secondhand smoke has been a priority for Kentucky health-related organizations for more than a decade, only 35.2% of Kentuckians are covered by comprehensive smoke-free workplace laws as of October 1, 2018 (University of Kentucky BREATHE, 2018). By increasing the number of smoke-free workplaces and smoke-free ordinances across these areas, workplaces will be able to protect their employees from the dangers of secondhand smoke and provide opportunities to encourage utilization of tobacco treatment resources and services.

Radon Prevention

Free radon kits were the most common resource discussed among the five focus groups that were familiar with radon prevention. Three of the focus groups did not know how to access radon prevention services. One focus group participant suggested creating an "awareness month" for radon, which indicates their lack of knowledge that January is actually already slated as Radon Awareness Month (U.S. Environmental Protection Agency, 2018). These results emphasize the potential importance of connecting employers and community-based organizations with free radon kits and radon information that they may provide to their employees to increase access to radon prevention resources and services.

Survivorship

Five focus groups identified potential survivorship-related resources focused on education, while participants in the other three focus groups were unable to identify any potential ways that men could access survivorship-related resources in their counties. The lack of discussion regarding lung cancer survivorship is striking and concerning considering the significant burden of lung cancer in these counties. This suggests a need for additional resources and services to support lung cancer survivorship. Based on discussions related to perceived attitudes and beliefs, these resources and services may also need to focus on decreasing stigma that may prevent men from utilizing the resources when they are available. The perception that there are no lung cancer survivors also reinforces the need to encourage conversations about lung cancer screening and the potential for early detection among high-risk populations. This also provides an opportunity to reflect on the potentially effective ways to promote tobacco treatment efforts without reinforcing stigma.

Strengths

Financial reimbursement was deemed an unnecessary incentive for participation because the KCP RCCS and community organizations had established relationships that facilitated focus group recruitment. In addition, as residents of the regions they serve, these KCP RCCS have a thorough knowledge of the people and culture of their communities and are able to facilitate open discussions related to resources, facilitators, and barriers.

Many of the participating organizational representatives in each county focus group knew each other and were familiar with the represented organizations. The focus group participants also had extensive experience providing worksite wellness-related services to employees. These strengths provided an informed and open discussion related to the resources, facilitators, and barriers. The small group setting encouraged interaction and discussion since the focus groups were hosted in a central location in each county and lunch was provided for the participants.

A moderator and an assistant moderator took detailed notes in each of the focus groups. The moderator and assistant moderator discussed the notes immediately after each focus group and submitted them to the research team. Two of the research team members independently coded the qualitative data and developed counts for each of the responses. The research team members worked together to address and decide upon discrepancies to clarify categories.

Limitations

The majority of participants in the focus groups were women. Although the focus group participants have

experience working with worksites and men, the perceptions about facilitators and access barriers may not be representative of front-line male workers. Additional research is needed to assess perceptions of facilitators and barriers directly from front-line workers and compare those with perception of facilitators and barriers identified by women who work with these worksites.

There were only 45 participants in all eight counties combined, so the information collected may not be generalizable to other populations beyond the participating counties. Although assistant moderators took detailed notes, discussed and compared them with the moderator's flip chart notes and perceptions, the focus groups were not audio-recorded and transcribed. Also, the assistant moderators only took notes on verbal agreement rather than nonverbal agreements (head nods, etc.). Some details may have been unavailable for the analysis. There were different moderators and assistant moderators in each of the focus groups. The moderators were trained in the standardized protocol, which included templates for taking notes. While this is a strength because of the individual relationships with the local community and ability to create open discussions, it may also be a limitation because the different moderators and assistant moderators may have influenced the discussion differently in each county focus group.

Dissemination and Next Steps

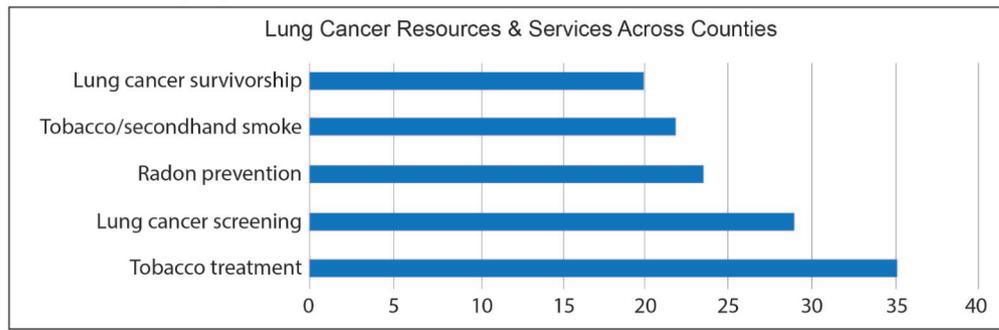
As part of the study, the team shared the analyzed results with focus group participants using tailored, county-specific snapshots (Figure 4). The focus group results have been used in combination with results from county-level "Roundtable" meetings representing predominately-male worksites to inform the development of a "Lung Cancer Prevention and Survivorship is Good Business Resource Kit" (Resource Kit). This Resource Kit includes lung cancer prevention and control resources and ideas for how worksites can implement interventions focused on increasing tobacco treatment among workers, reducing exposure to secondhand smoke, radon prevention, increasing shared decision-making for lung cancer screening, and increasing access to lung cancer survivorship. The KCP RCCS have reconvened the focus group members to review and provide feedback on the Resource Kit, piloted the Resource Kit in selected worksites, and provided an opportunity for focus group and roundtable participants in each county to meet together to discuss overall successes and lessons learned and to facilitate potential linkages between worksites and community-based organizations.

Focus Group Questions and Answer Summaries for Your County:

1. What resources and services are currently available in the county?

- Your county offers resources and services for
 - Tobacco treatment through
Classes/Counseling (3)
 - Secondhand smoke through
Some free facilities (4)
 - Radon Prevention through
Free radon kits (1)
 - Lung Cancer Screening through
Information/Referral (4)
 - Lung Cancer Survivorship through
Special Events/Campaigns (1)

•Across all focus groups:



2. How do men and/or men in worksites learn about and access services?

- In your county, men learn and access services for:
 - Tobacco treatment through:
Employers and community organizations/groups
 - Secondhand smoke through:
Health care providers

•Across all focus groups:

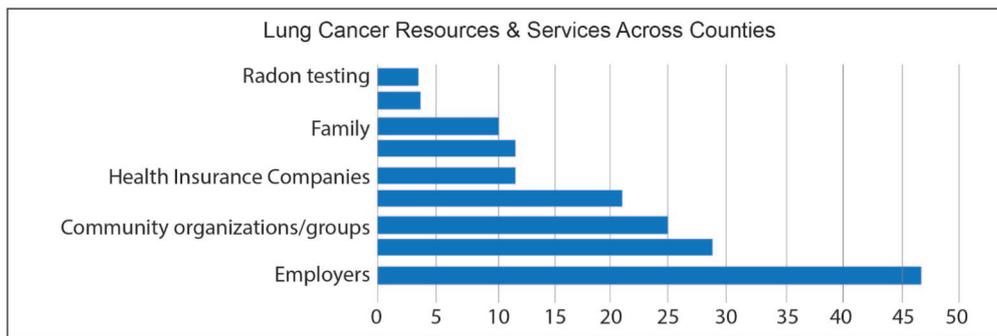


Figure 4. Focus group results were combined and shared with participants using tailored, county-specific snapshots.

Conclusion

Conducting county-level focus groups with community-based organizations can provide potentially important information on resources as well as perceived facilitators and barriers to reaching worksites, particularly those in rural counties and with predominately male employees. Based on the results of the focus group discussions, there are potential opportunities to connect worksites with existing tobacco treatment resources, address the complex challenges associated with lung cancer screening (individual, health system, community, etc.), support comprehensive smoke-free policies at all levels (worksite, city, county, and state), and enhance lung cancer-related resources and services related to radon prevention and survivorship.

Since Kentucky has the highest rates of lung cancer and the rates are particularly high among males, increased efforts need to focus on these populations of greatest need. The focus groups highlighted the potential importance of working with employers to reach men with lung cancer prevention and control services. Additional research needs to be done directly with employers about the methods and approaches that will work best for them to engage in lung cancer prevention and control efforts. More research is also needed with men directly to better understand the barriers that may prevent men, particularly those in predominately male worksites, from learning about and utilizing lung cancer prevention and control resources and services.

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