

COMBINING TOBACCO CESSATION AND RADON TESTING: A MULTIAGENCY COLLABORATION TO PROMOTE THE HEALTH OF MONTANANS

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Abstract

Exposure to indoor radon and tobacco smoke have a synergistic effect, meaning that the combined risk for lung cancer is more than additive. In a rural, high-radon geographic state, this concern led to a coalition approach to encourage radon testing for Montana residents. A one-page radon background and risk document was included in the orientation packets for “Quit Line” enrollees attempting to quit smoking cigarettes. Free radon kits were sent to interested individuals. Data collection began January 1, 2014 and ended May 15, 2014. Six hundred individuals were invited and fourteen (2.3%) accepted the invitation. Two of the fourteen (14.3%) completed the test kit they requested. This rate is well below the approximately 65% test kit return rate reported from state radon programs. Indoor radon concentrations were less than the recommended action level for both participants. Members of the six agencies involved in the coalition agreed to try an alternative outreach approach for Quit Line participants in January 2015. The results of this pilot-test provide important information for other high-radon states wishing to launch a similar collaboration.

Introduction

Persons who smoke and are exposed to radon decay products are at a “substantially greater” risk for lung cancer than smokers who have not been exposed to indoor radon (National Research Council, 1999; U.S. Department of Health and Human Services, 1999). The Environmental Protection Agency estimated a nearly ten-fold increase in lung-cancer risk for smokers (2012). Unfortunately, this synergistic health effect has not led to increased rates of radon testing among smokers. In the Montana Radon Study (Larsson, 2014), most county radon program participants were neither current (n = 291; 91.2%) nor former smokers (n = 235; 72.3%). Low radon testing rates by smokers coupled with limited public health funding led Lantz, Mendez, and Philbert (2013) to their published opinion that “residential radon control policy would be most effective and efficient if it combined forces with tobacco prevention and control efforts.” Lantz and colleagues also noted that no state radon programs had any explicit screening activities directed to smokers. Finding this a compelling conclusion, the author organized a coalition of representatives from the Montana Tobacco Use Prevention Program (MTUPP), the Montana Department of Environmental Quality (MDEQ), the Montana Cancer Coalition, Gallatin and Ravalli County Tobacco Prevention Specialists and Gallatin and Ravalli County Health Officers to discuss the Lantz, Mendez, and Philbert article and identify actions that could be taken in Montana to integrate tobacco cessation with the radon awareness and testing. The purpose of this research brief is to 1) report on the formation and activities of this coalition, and 2) report the results of a pilot-research project to invite Montanans initiating a tobacco cessation attempt to receive a free radon test kit.

Background

This group of eight stakeholders met via teleconference in August, September, and October of 2013. The group agreed with Lantz, Mendez, and Philbert (2013); the work of each agency would be improved through a complementary approach that emphasized the importance of both tobacco cessation and radon awareness. Group members recognized current and former smokers as the highest priority audience and pursued the following three action items to demonstrate their commitment to inter-agency efforts to promote health. First, Mr. John Podolinsky of MDEQ and Mr. Jeremy Brokaw of MTUPP collaborated to include literature from the Montana Tobacco Quit Line in the DEQ radon booth. This educational booth is displayed at health fairs and home shows around Montana. Second, Ms. Bonnie Rouse of MDEQ and Ms. Jennifer Ullman of MTUPP cross-linked information on each of their agency's websites to underscore the health effects of radon and tobacco smoke exposure (Montana Department of Environmental Quality, 2014; Montana Department of Public Health and Human Services, 2014). Third, coalition members designed and incorporated a pilot research study into the Montana Tobacco Quit Line program to learn if offering a radon screening opportunity to individuals initiating a tobacco cessation attempt would be an effective approach to increase home-radon testing among smokers.

Methods

Coalition members agreed that the ideal way to recruit persons initiating a tobacco cessation attempt to test their home for radon would be to include an invitation to participate in the script used by the telephone operators who coach "Quit Line" participants. MTUPP leaders decided this approach was not possible as the script in use by the Quit Line coaches already included content from other health promotion projects (e.g., childhood asthma, chronic obstructive pulmonary disease, etc.) and the addition of radon information would make the calls too long. Instead they suggested we send a one-page radon information sheet in the packet of materials sent to each person attempting a smoking cessation attempt. One advantage of this approach was the ability to target only smokers rather than those attempting to quit chewing tobacco.

Montana State University Institutional Review Board assigned an exempt status (LL1004-13EX) to the protocol titled, "MTUPP MTDEQ Collaboration: Radon Testing during Smoking Cessation Attempt" on October 4, 2013. The National Jewish Hospital in Denver, Colorado administers the Quit Line programs for several states including Montana. Through a cooperative agreement with their fulfillment center, a graphically rich (see Figure 1) information sheet was included in the initiation packets for 600 individuals attempting to quit smoking from January 1 – May 15, 2014. Quit Line participants were invited to contact the author if they wanted to receive a free radon test kit.

Need another reason to quit?



RADON

Radon is a naturally occurring chemical in the ground that can be harmful to your body.

While smoking is the leading cause of lung cancer, radon is the second, killing 21,000 people per year.

MONTANA

Montana has naturally occurring high levels of Radon.

Being a smoker in a high-radon state like Montana, increases your risk of lung cancer.

Radon is a health hazard that you can decrease. The first step is to test your home.



Send My Radon Test Kit To...

Name: _____

Address: _____

For a **FREE Radon Test Kit** from Montana State University please send your name and address to Laura Larsson, PhD, RN in one of the following ways...

1) Email: llarsson@montana.edu

2) Call: 406-994-7504

3) Mail the bottom of this sheet to:
Laura Larsson, PhD, RN
c/o Montana Radon Study
173560 Sherrick Hall
MSU College of Nursing
Bozeman, MT 59715

Participation will not affect your work with the MT Quit Line. This is a disease prevention project at MSU. Test results will be sent to you and to Laura only. No personal info will be shared.



Figure 1. Map showing that 49 of 56 counties in Montana have the highest possible risk for household radon exposure.

Figure 1 One page information sheet included in the orientation packets of 600 Montanans who initiated a smoking cessation attempt through the Montana Quit Line from January 1, 2014 - May 15, 2014.

Results

Fourteen individuals (2.3%) responded to the invitation; six by ground mail, four by electronic mail, and four by telephone. Only two of the fourteen (14.3%) returned their radon test kit to the laboratory for analysis. Both results (1.6 pCi/L and 2.7 pCi/L) were below the EPA recommended 4 pCi/L action level (Environmental Protection Agency, 2012).

Discussion

Coalition members were impressed at the volume of cessation attempts initiated through the Quit Line as 600 mailed invitations is a somewhat large sample size for a pilot research project. This is a promising avenue through which to reach the priority population and provide information to people at highest risk for lung cancer about the role of residential radon exposure in increasing their lung cancer risk. On the other hand, including the written invitation in a packet of information was not an effective way to increase radon testing as only 14 out of 600 (2.3%) accepted the invitation for a free radon test kit. Further, a 14.3% test-kit return rate is very low compared to the 65.6% return rates documented for county radon programs in Ravalli, Gallatin, and Flathead counties (Larsson, 2014).

Coalition members will next have the opportunity to work with MTUPP agency leaders to consider if radon testing should have equal standing with other high priority health topics and be rotated into the Quit Line script on some reasonable basis. For example, due to the severity of winters in Montana indoor radon concentrations are likely to be highest from January through March. Radon could be the highlighted health topic Quit Line callers receive during those months. A simple question inserted into the script could be, "Perhaps one of the reasons you have decided to quit smoking is concern about lung cancer. Since Montana is a high-radon state and radon also causes lung cancer, we have radon test-kits available for our participants. Would you like us to send you a kit so you can test your home?" If the participant answers in the affirmative then the Quit Line operator at National Jewish Hospital would forward the participant's mailing address to the research team. A packet including the radon test kit and the EPA pamphlet "A Citizen's Guide to Radon: The Guide to Protecting Yourself and Your Family from Radon" would be sent to the participant. Follow up contact with the participant to answer questions about how to complete their test kit could be elements of that research method. A one-season pilot-study would provide data to help coalition members understand if the low response rate in this study was related to only having a one-page information sheet included in a packet of paperwork or if alternatively, individuals attempting a smoking cessation attempt are too overwhelmed or preoccupied to adopt residential radon testing.

Conclusion

A multi-agency coalition was formed in Montana to address the problem of low radon knowledge and testing among individuals at highest risk for lung cancer. In addition to integrating information across agencies and committing to address the problem of radon exposure among individuals who smoke cigarettes, we completed a pilot study to measure participation and the rate of completed residential radon testing in a sample of Montanans who had voluntarily initiated a smoking cessation attempt. While this pilot study yielded poor results, the coalition is committed to finding another way to work with the Quit Line participants to better assess their dual exposure to radon and tobacco smoke.

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