The Challenge of Accountability: A Discussion of Local Efforts to Increase Radon Education and Testing in Black Hawk County

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ENVIRONMENTAL HEALTH PROGRAM MANAGER
Presentation Agenda

• Defining the Problem
  ◦ Radon Itself
  ◦ Testing for Radon

• Describing the Program
  • Historical Perspective
  • Radon Program & Collection
  • What does the future hold?

• Comparison & Data Analysis

• The Road Ahead

• Thanks & References
Radon what is it?

• Radon is a colorless, tasteless, radioactive gas produced from the decay of naturally occurring uranium in the soil. Radon enters homes and buildings through foundation cracks, constructions joints, sump pits and other openings. Indoor radon levels can be very high. When radon is breathed in, it can damage the lungs and cause lung cancer.

• Iowans are at particular risk from radon exposure. Seven out of ten Iowan homes have radon levels above the Environmental Protections Agency’s (EPA) radon action level of 4 picocuries/Liter (pCi/L). In fact, the average indoor radon level in Iowa is more than six times the national average.

• Radon is the second-leading cause of lung cancer and the leading cause of lung cancer in non-smokers. More than 400 lives are lost in Iowa each year due to radon-induced lung cancer. That is approximately the same number of lives lost in Iowa traffic accidents each year.
What’s the Problem?

• The Role of the Environmental Health Professional
  • Educational efforts regarding the negative health effects of radon in Black Hawk County
  • Inform and advise the Board of Health regarding radon and related issues
  • Develop better situational awareness and deeper understanding
  • Serve as SME for the public

• Initial Concerns/Hypothesis
  • Radon is still a relatively unknown threat
  • Mitigation is the major barrier to testing due to cost/lack of funding
  • Availability of low cost kits
  • Resistance to participation
Historical Efforts

2016 and into the past – review of what was

2017 – 1st year with the program – Consent form used and data collected

2018 – 2nd year of program - Follow-up conducted with community

2019 – 3rd year of program - Outreach increased and emphasis on education on the kits

2019 and beyond - Where are we taking this and what are the next steps?
2016 and into the past

• Historically
  • Black Hawk County Public Health made radon kits available to the public at cost or decreased cost
  • Iowa Cancer Consortium and Radon Awareness Month
  • Aircheck kits
  • Limited number of events and limited media outputs

• Records
  • No record of who tested
  • No data collection efforts

• No unified or consistent effort
  • Education/Expertise
  • Kit Availability
2017 – Year One

• Hypothesis:
  • Members within the community that higher than recommended levels
  • Major barrier to testing/mitigation was the inability to pay for mitigation

• Program
  • Initial Participation
  • Consent Form

• Events
  • 3 locations

• Media
  • Local Radio PSA and KWWL Interview

• Kits
  • January ‘17 - December ‘18
  • 356 kits were distributed
Initial Consent Form

• Name and Address
• Type of Home (split level, ranch, etc)
• Contact Information
• Had they tested before?
• Test kit serial number
• Results and mitigation plans (if needed)
• Consent language and signature block
• Form v.3 ’19 added a question, “how’d you hear about us?”
2017 Findings

• Testing
  • Just over half (51.4%) of all tests were used
  • Cities
  • ~ 9% of test kits were used improperly

• Radon Levels
  • ~ 56% of all tests
  • 4.1-9.9 pCi/L was the most common concentration ~35 %
  • 20% of all homes tested were 10+ pCi/L

• Mitigation follow-up

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| pCi/L Data                    | Below 4.0 pCi/L   | 38  | 34.55% |
|                               | Above 4.0 pCi/L   | 62  | 56.36% |

| Breakdown                     | 0-1.9 pCi/L       | 15  | 13.64% |
|                               | 2.0-4.0 pCi/L     | 22  | 20.00% |
|                               | 4.1-9.9 pCi/L     | 39  | 35.45% |
|                               | 10+ pCi/L         | 22  | 20.00% |
|                               | Tested Improperly | 10  | 9.09%  |
2017 Findings: Mitigation

• Mitigation concerns

• 4.0 – 7.9 pCi/L
  • 11.4% - planned on mitigating
  • 20% - decided to retest
  • 68.6% - no response

• 8.0 pCi/L
  • 23.1 % - planned on mitigating
  • 3.85% - decided to retest
  • 7.69% - had no plans
  • 65.4% - no response
2018 – Year Two

• Events
  • 4 locations during the month of January

• Media
  • Local Radio PSA, KWWL Interviews (Industry & Department), Press Release

• Kits
  • 211 kits were distributed

• Observations
  • People weren’t USING the kits that they purchased

• Change of Focus
  • How do we get people to use the kits that they purchased?
  • Education on kits at point of sale began during 2018 and consent form updated
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2019 – Year Three

- Hypothesis:
  - Education on the kit, in addition to radon, is necessary to achieve participation

- Events
  - 11 Locations, 9 general public & 2 underserved population (Inclement weather forced 2 cancellations)

- Media plan
  - Local radio stations, interviews with KWWL, massive social media push, local newspapers

- Kits
  - 135 kits distributed January – February ’19

- Partnership with Waterloo Community development HH/HUD contract

- Extending beyond radon awareness month for educational opportunities
  - “Package” Model

- Demonstration test kits
  - Social Media post
  - Demo kits on-hand at point of purchase
  - More robust follow-up oriented on the using the test kit

- More robust planning efforts, updates to consent form, Admin FAQ and training
FAQ and Admins

• ~45% of kits distributed at Pinecrest during Radon Awareness Month
• Admin Aids began to have more interaction with the public

• FAQ sheet produced and training for admins
  • What part of the house should I place my kit?
  • How any should I purchase?
  • How long does this take?
  • What happens if my results are high? What is considered a high result?
  • Can the kits expire?

• Easily able to answer cursory questions

• Pass it along to EH Staff as needed
  • Triage
Social Media Campaign

• Changed Cover photo to radon image – 608 Followers

• 35 Radon posts – ranged from January 7th – February 3rd

• Radon Follower Demographics
  • 66% Women and 34% Men
  • 72% were ages 25-54; Largest group (27%) were ages 35-44

• Page likes increased 50%

• Page Views increased 65%

• Post Engagement increased 244%

• Post Reach went up 86% - all organic- no paid ads

• Examples of posts with biggest reach
  • 1,990 on 1/4/19- radon graphic of locations
  • 939 on 1/6/19- radon graphic of locations
  • 615 on 1/14/19- specific location - CF Public Library
  • 511 on 1/30/2019 - notification about PCHC being closed, and radon kits available at BHCHD
2019 Findings

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• Radon Levels
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• Mitigation follow-up

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### 3 - Year Comparison Kits Used

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- 16.5% increase in number of test kits used 2017-2019
- Dip in Waterloo & CF percentages 2017-2018
- 26% increase in number of test kits used in outlying cities 2017-2018
The Future

• Physician Champion
  • Board Member

• Providers and Interaction
  • Health Care Professionals Guide

• Advising ordinances
  • Review and recommendations

• How to pay for mitigation
  • Low/No interest loans, HSP

• Partners
  • Cedar Falls - champion on the city council
  • Waterloo Community Development & Event locations

• Media Campaign – maintain robustness, $ into Social Media, ICC Grant
ICC Grant Application

• Iowa Cancer Plan Goal 7:
  • Decrease exposure to radon and other environmental substances linked to cancer

• What does this outline look like?
  • High profile event registration, Social Media Promos, materials

• What does this look like in terms of Health Equity?
  • Key populations

• Physician Champion
  • Interactions with providers
  • Ultimate Goal of making this a portion of the Well Care check
  • Materials needed

• Addressing the under-served demographics within the population of Black Hawk County
  • Education and outreach into local schools, places of worship, community events
  • Strengthening our partnership with other agencies that service minority population; Waterloo Community Development
Recognition

• People
  • Penny Andorf, Gabbi Dewitt, Megan Hoskins, Eric Heinen, Andrea Magee and Eileen Daley

• Admins
  • Micah Knebel, Marianna Robinson and Rebecca Rossin

• Interns
  • Lindsey Kite, Ellie Myer, Ameera Tahir, Jillian Hill

• Partners
  • Cedar Falls Library, Waterloo Library, Hy-Vee, YWCA, YMCA, Waterloo SportsPlex, Cedar Falls Rec Center, KWWL, WCF Courier, 93.5 the Mix, NEST, Waterloo Community Development, People’s Clinic, Tyson Foods “Life Happens”, Grin and Grow, Iowa Cancer Consortium, Linn County