



minnesota cancer alliance summit

2026 | *the power of collaboration*

February 26, 2026

McNamara Alumni Center

Minneapolis, MN



Breakout Session #2

Memorial Hall

February 25, 2026

McNamara Alumni Center



Reducing Cancer Risk through Community Outreach, Awareness and Prevention

Manal Abbadi

Clarissa Rohm, BA

Gladys Asiedu, PhD

Dan Wilson

Dan Tranter, MPH

Rachel Stoll, CHW



Financial Disclosure Statement

- There are no relevant financial disclosures for this session.



Enhancing Cancer Health Education and Outcomes: Multi-Channel Communication Campaigns

Innovative strategies to improve cancer awareness and screening through cancer advocacy

Manal Abbadi, Sr. Program Coordinator
Mayo Clinic Comprehensive Cancer Center

Financial Disclosure Statement

No financial disclosures or conflict of interests.

MAYO CLINIC CANCER CENT

MICEO Overview

Cancer Advocacy Training

33 Cancer advocates attended a 2-day comprehensive training led by Mayo Clinic Comprehensive Cancer Center (MCCCC) Community Outreach and Engagement (COE) team.

Co-developed Material

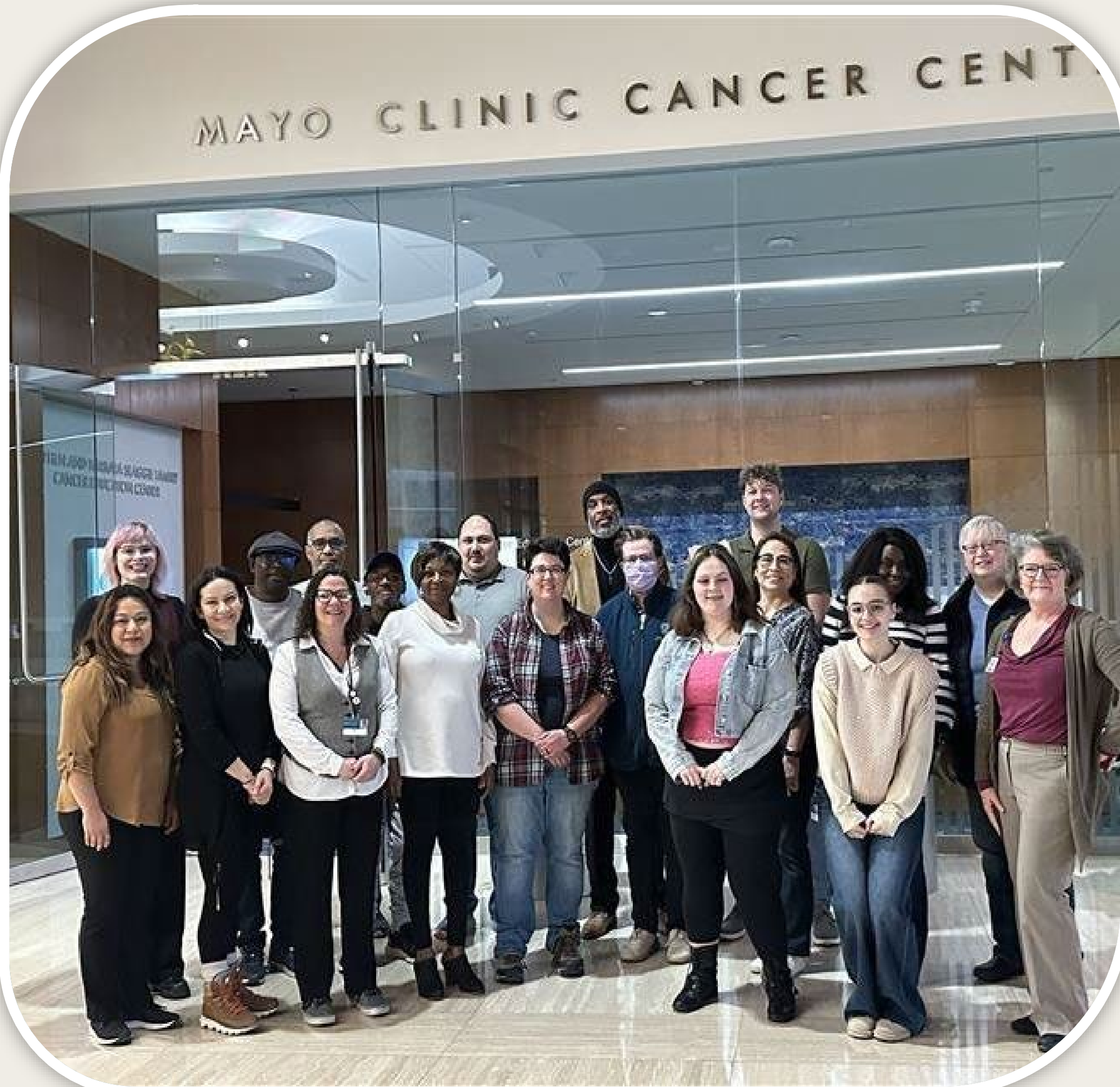
Community advocates and MCCCC COE team worked closely together to develop multi-channel strategies that were tailored to community needs.

Material Evaluation

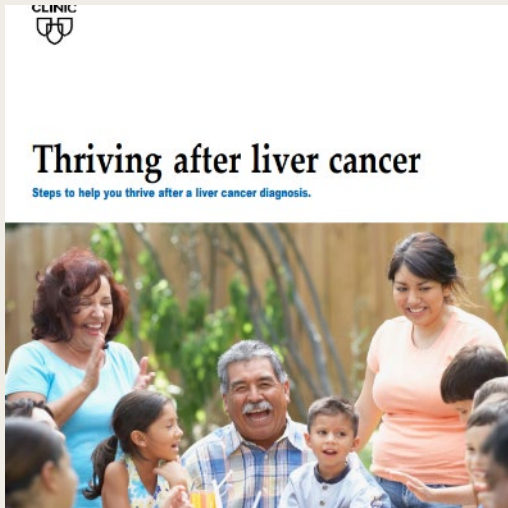
Cancer advocates and the MCCCC COE team attended local events to foster direct interaction and education about cancer prevention. Survey evaluations with an incentive were gathered to ensure that materials were effective.

Material Refinement

MCCCC COE team continues to refine materials developed based on survey data to ensure that materials are responsive to community feedback.



Multi-Channel Communication Strategy



Print Materials

Co-developed brochures focused on cancer prevention, survivorship, lifestyle, and nutrition. Print materials were translated to multiple languages to ensure accessibility and cultural competence.



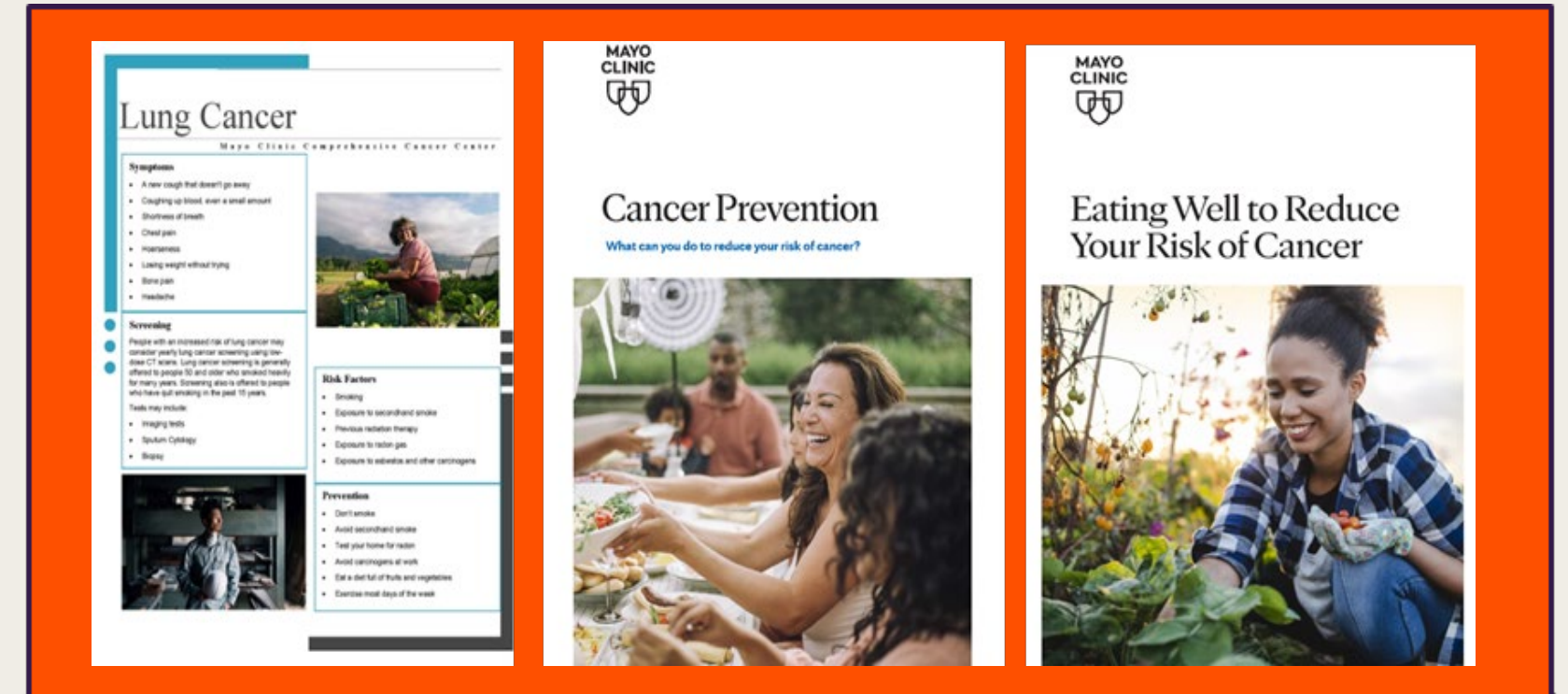
Digital Blogs

Co-developed digital blogs focused on prostate, lung, liver, and colorectal cancer.



In-person Cancer Education

Collaborated with trusted community partners and organizations to deliver cancer education in Spanish.



Community Feedback



Technology Barriers

Hosted in-person cancer conversation event with community partner
Incorporated pencil and paper surveys
Developed print materials



Preventative Behaviors

Co-developed 2 brochures that focus directly on lifestyle factors to reduce cancer risk
Updated brochures to reflect 3 easy lifestyle changes to reduce cancer risk



Representation in Graphics

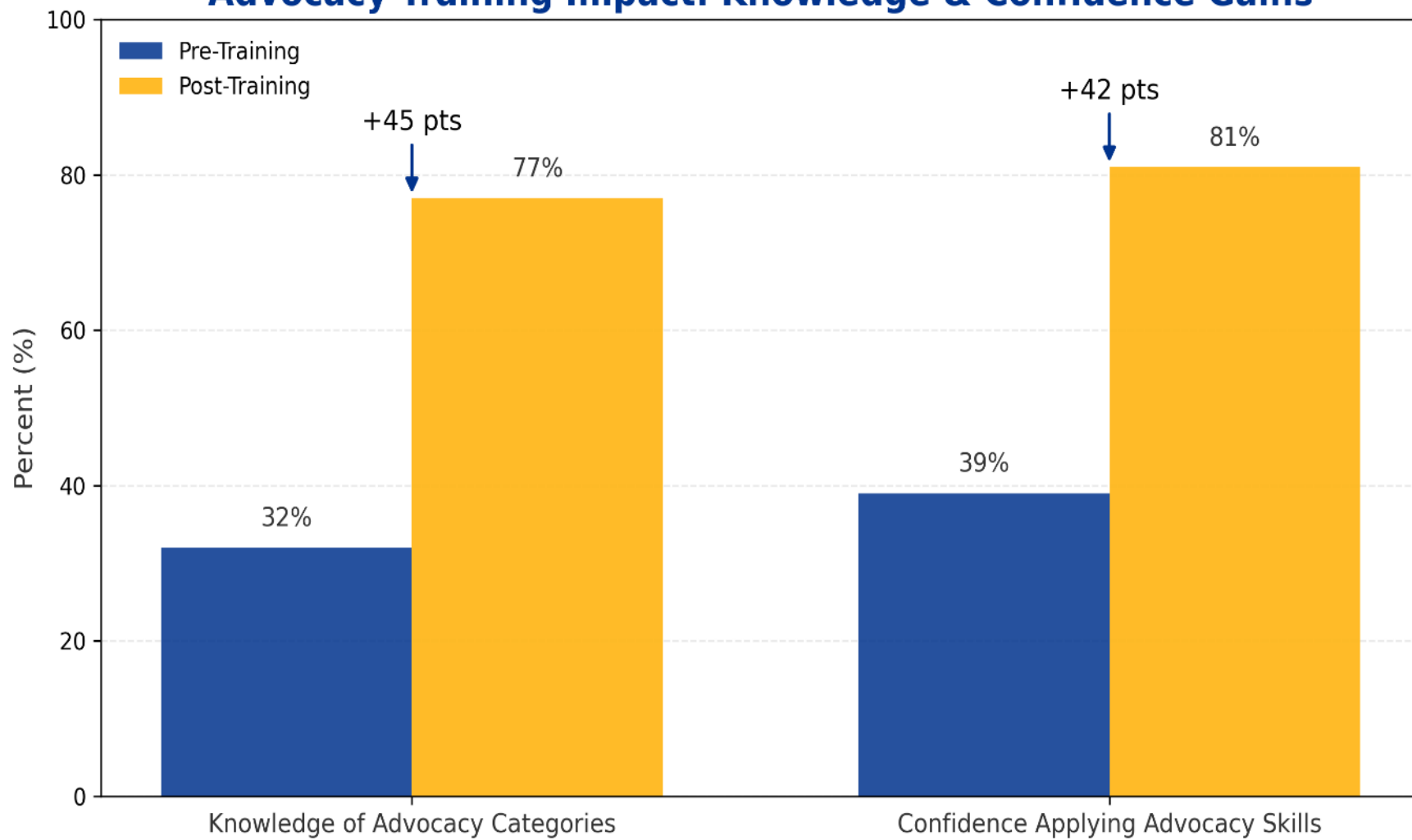
Updated graphics to be reflective of rural communities
Updated nutrition brochure graphics to show a variety of healthy foods

Measuring Impact: Metrics and Outcomes

Cancer Advocacy Training

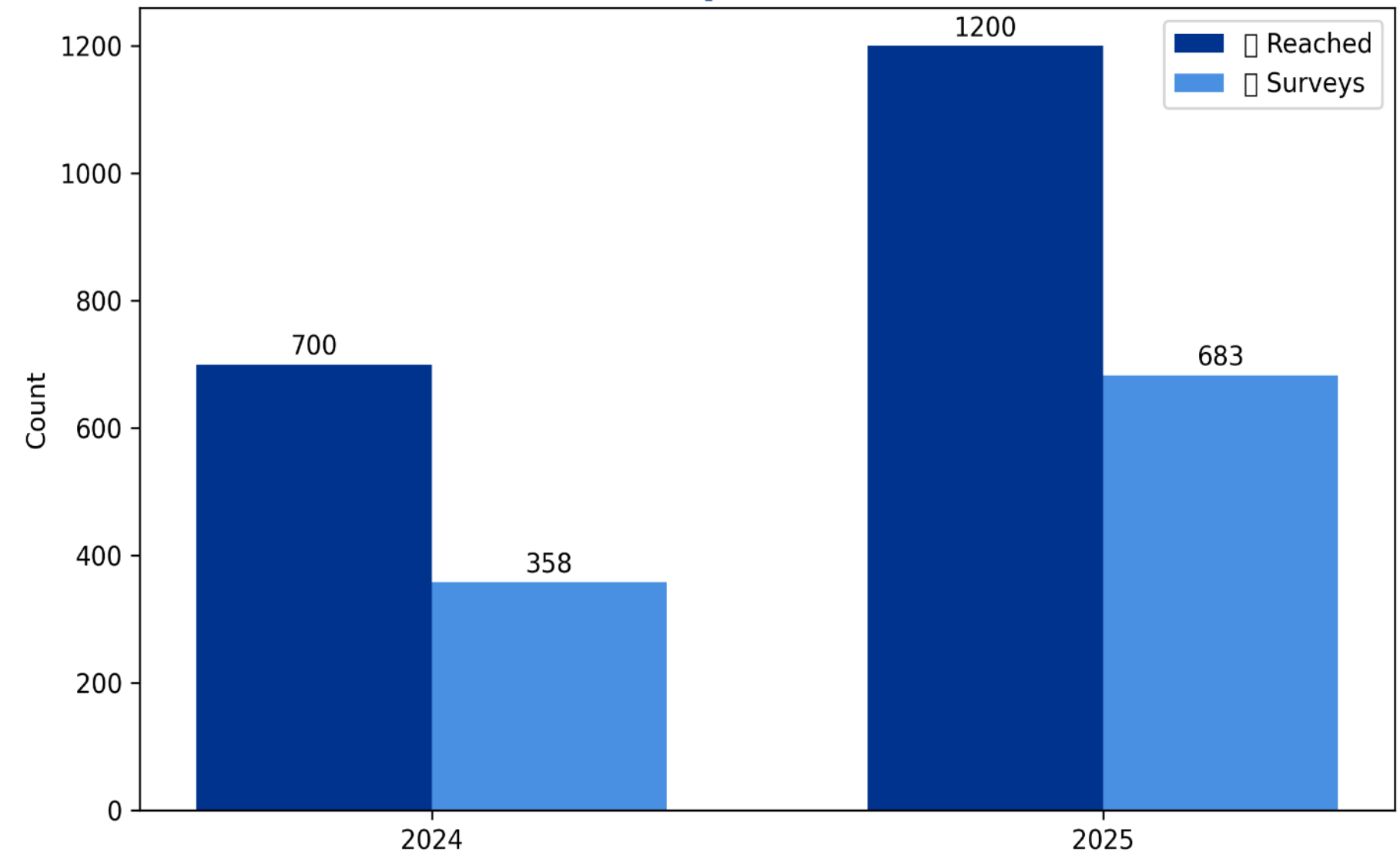
MICEO Communication Materials

Advocacy Training Impact: Knowledge & Confidence Gains



Participants demonstrated significant gains after training (pre vs. post).

MICEO Impact and Reach





Sustainability Plan

Cancer Advocacy Training

Additional trainings will be hosted in 2026 to continue to equip community advocates with resources.

Co-host Evidence Based Interventions

Community advocates and MCCCC COE team will work closely together to implement evidence-based interventions in 2026.

Refining Health Education Materials

MCCCC COE team will continue refine current cancer education materials with community partners.

Developing Health Education Materials

MCCCC COE team will continue to co-create and cancer education materials with community partners.

Conclusion

Multi-Channel Communication

MICEO shows how using various communication channels improves cancer health education and patient outcomes.

Innovation and Collaboration

Innovation and collaboration are central to MICEO's success in delivering effective health messages.

Addressing Disparities

The campaign tailors' outreach to reduce health disparities and empower patients.



Acknowledgments

Cancer Advocates

Community Partners

Mayo Clinic COE Team

- Dr. Gladys Asiedu, Associate Director
- Adeline Abbenyi, Program Manager
- Dr. Manisha Salinas, Lead Program Evaluation Specialist
- Anavelia Segura, Community Engagement Coordinator
- Miguel Valdez Soto, Community Engagement Coordinator
- Ilaya Hopkins, Community Engagement Coordinator
- Clarissa Rohm, Community Relations Coordinator
- Jillian Bettencourt, University of Minnesota, Inten

Nitrate Poisoning in Southeastern Minnesota



MN 2026 Cancer Summit

A little bit about myself



Meet the Trailblazers: Announcing 2024-25 Project REACH Cohort

Author: Gao Vang

MAY 23, 2024



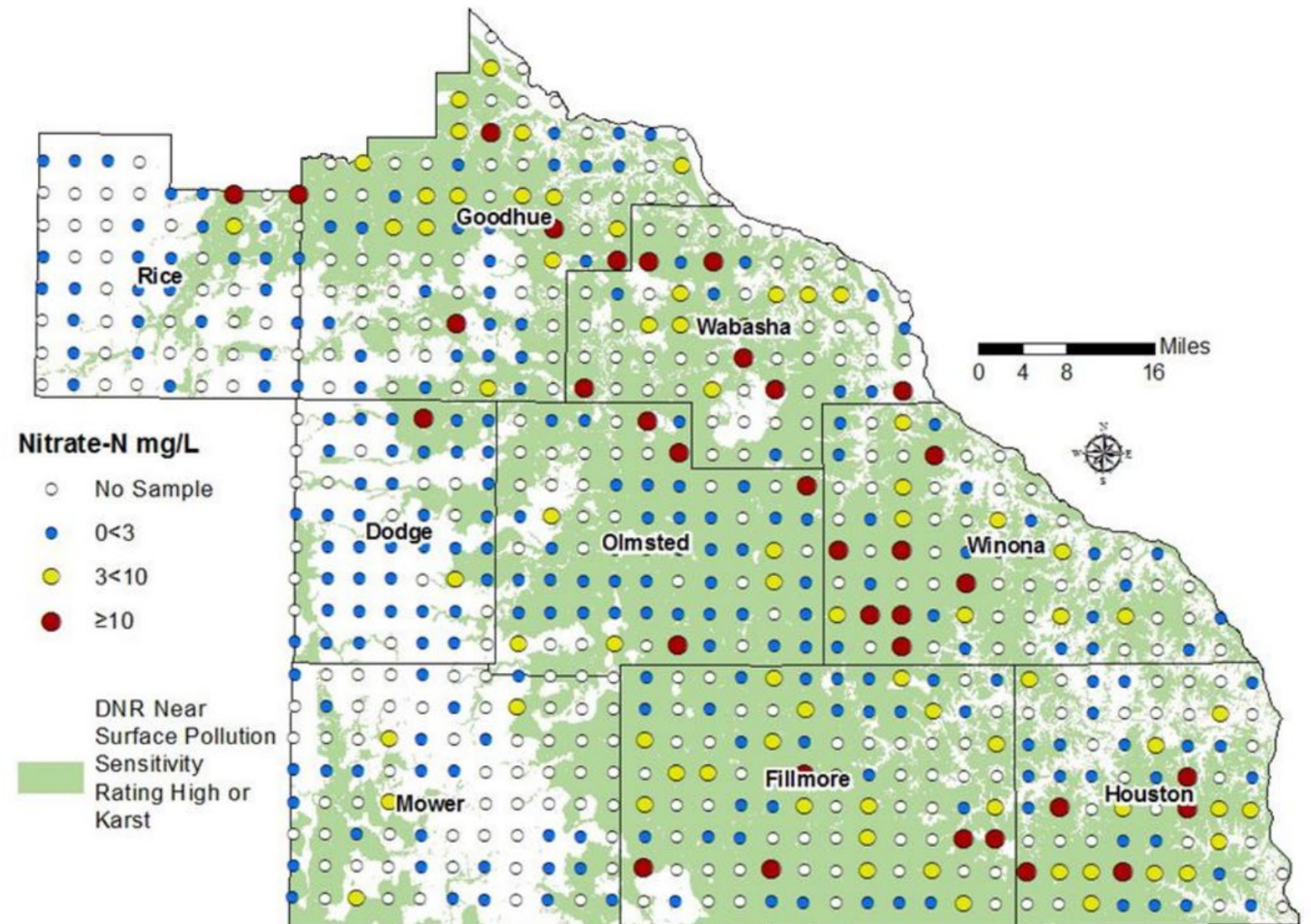
Project REACH (Rural Experts Advancing Community Health) is a University of Minnesota program that provides community leaders in rural Minnesota with health policy and leadership training. Participants learn to frame health policy challenges and how to communicate effectively with state legislators and other policymakers.

Scope of Well Water Contamination in SE MN

%>3mg/l	% 3- 10mg/l	%>10mg/l
84.7%	10.60%	4.7%
x80,000	x80,000	x80,000
67,760	8,480	3,760

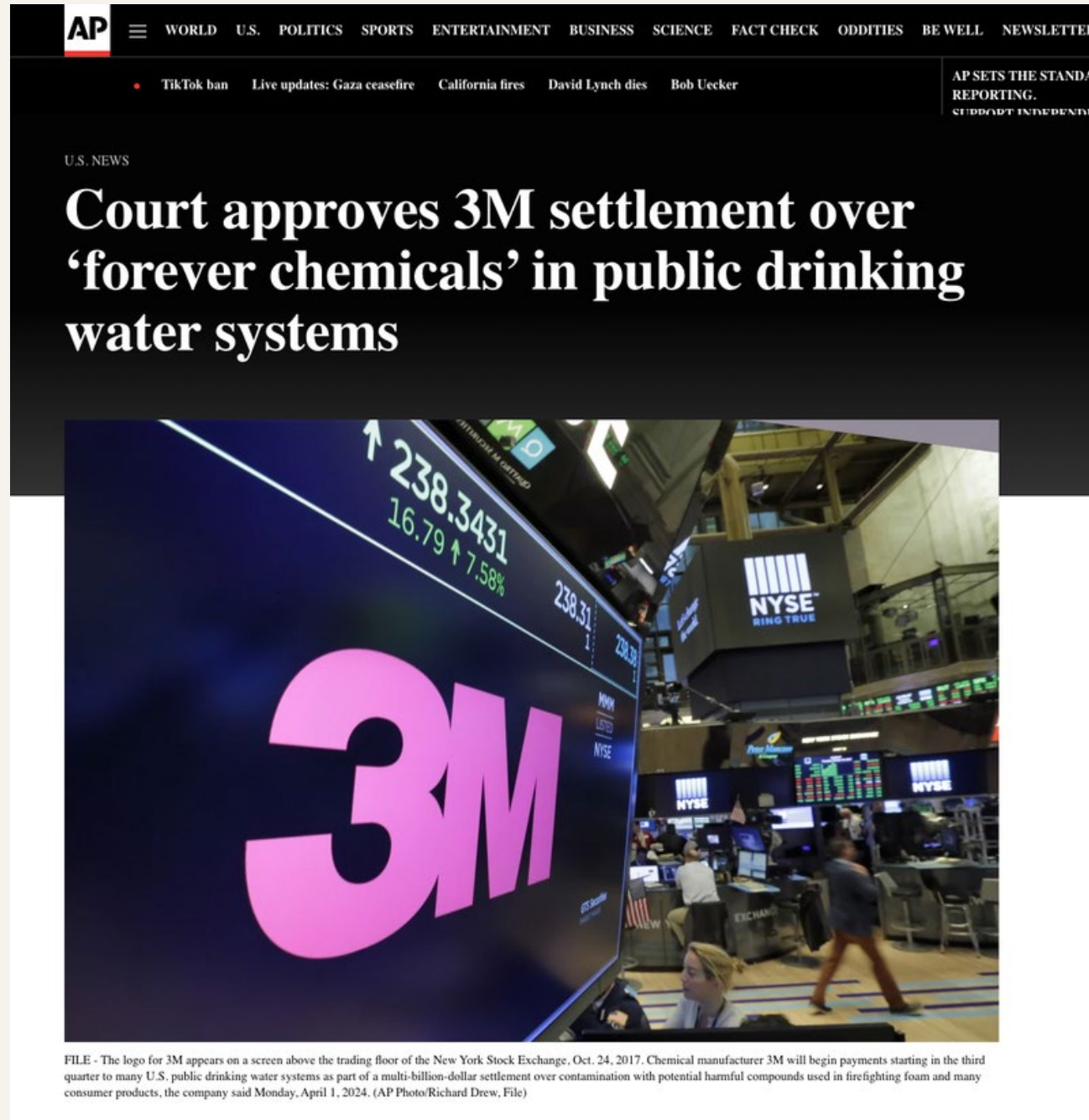
12,240 People at risk for nitrate poisoning in SE MN

Figure 4. Nitrate concentrations in wells tested as part of the MDA's Southeast Volunteer Nitrate Monitoring Network in 2017 [Figure courtesy of the Minnesota Department of Agriculture].



A note of how we talk about farming and pollution

Source point vs Non source point pollution



V
S



When we center who is to blame, we fail to center those are experiencing the very real harms

The Cost of Nitrate Poisoning

MINNPOST Nonprofit, independent journalism

News ▾ Arts & Culture ▾ Health ▾ Opinion ▾ News

Topics State Government Metro Public Safety Greater Minnesota National Environment Mental Health & Addiction Sports The Glean Mini

From Other Nonprofit Media

On 'Cancer Road,' a group of southeastern Minnesota families ask if nitrate exposure is to blame

by **Keith Schneider**
09/15/2023



Cancer survivor Brian Bennerotte Credit: Photo by Keith Schneider

Medical expenditures: \$1.5B
Lost productivity: \$6.5B
Nationally

 Environmental Research
Volume 176, September 2019, 108442



Exposure-based assessment and economic valuation of adverse birth outcomes and cancer risk due to nitrate in United States drinking water.

Alexis Temkin ^a, Sydney Evans ^a, Tatiana Manidis ^b, Chris Campbell ^a, Olga V. Naidenko ^a

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<https://doi.org/10.1016/j.envres.2019.04.009> [Get rights and content](#)

Under a Creative Commons [license](#) ● open access

Highlights

- First of its kind national analysis assessing nitrate exposure from drinking water for the entire U.S. population.
- 2,300 to 12,594 nitrate-attributable cancer cases annually in the U.S., of which 54-82% are colorectal cancer (CRC) cases.
- Up to \$1.5 and \$6.5 billion in medical and indirect costs may be associated with annual nitrate-attributable cancer cases.
- Meta-analysis of eight studies assessing nitrate in drinking water and CRC supports a health benchmark of 0.14 mg/L.

The Cost of Nitrate Poisoning

Potential cost to SE MN

\$626,579,976

Healthcare costs are born by:
individuals, public health departments,
medicare, medicaid, insurance,
hospitals, and tax payers

This number does not include:

- [Nitrate is considered an indicator chemical a wide variety of water contaminants . Some are easily tested, others are very difficult . These chemicals have known connections to other cancers](#)
- [Not including developing nitrate -induced methemoglobinemia](#) {hypoxia} (adults and children)
- Lost of productivity cost
- **Exposure less than 3mg/L of nitrates (0-1 & 1-2 mg/l most common concentration)**
- The human cost of losing loved ones to cancer, or going through cancer treatments . Being a parent to a child with neural tube defects

Conclusion

Health and economic analyses presented here suggest that lowering exposure to nitrate in drinking water could bring economic benefits by alleviating the impacts of nitrate-associated diseases.

A note on “Citizen Science”



Journal of Environmental Management

Volume 393, October 2025, 126895



Research article

Health damages of nitrate exposure in drinking water: Inclusion of non-fatal conditions increases the social costs of nitrogen

Bonnie L. Keeler ^a , Terin V. Mayer ^a, Ryan Noe ^b

^a Center for Science, Technology, and Environmental Policy, Humphrey School of Public Affairs, University of Minnesota, Twin Cities, USA

^b U-Spatial, Research and Innovation Office, University of Minnesota, Twin Cities, USA

Received 9 February 2025, Revised 27 July 2025, Accepted 5 August 2025, Available online 20 August 2025, Version of Record 20 August 2025.

Highlights

- Multiple methods are used to monetize health damages in public water supplies.
- Inclusion of additional health conditions increases damages relative to previous estimates.
- Non-fatal conditions comprise the greatest share of total damages.
- Nitrate-related damages disproportionately affect low income and rural communities.
- Results suggest a need for greater investment in nitrogen mitigation.

Abstract

Nitrogen pollution of surface and groundwater remains largely unregulated resulting in negative impacts to human health and the environment. Policy interventions designed to internalize the negative externality of nutrient pollution have relied on low and highly uncertain damage estimates. Here we address an important gap in monetizing the health costs attributable to drinking water nitrate contamination in public water supplies. We consider fifteen adverse health conditions linked to elevated levels of drinking water nitrate including cancers, birth anomalies, and other non-fatal conditions. We apply our approach to public water suppliers in the U.S. state of Minnesota, estimating the avoidable nitrate-attributable direct medical and quality of life costs at \$745 million (± 82) annually statewide, a burden disproportionately shouldered by poor and rural

\$745 Million statewide

Those that may be the most affected are the least likely to test



Test/retest homes for cancer-causing radon gas during Radon Action Month

Analysis shows home testing rates are often lowest in areas with higher poverty



- **Continued Low Rates for PWU Water Quality Testing:** Despite offers of free water testing, over 80% of good owners still do not test their drinking water due to a misinformed fear of government regulations, a lack of trust in government agencies, complex instructions, and the fear that testing would require a new well.

We know how to solve for this!



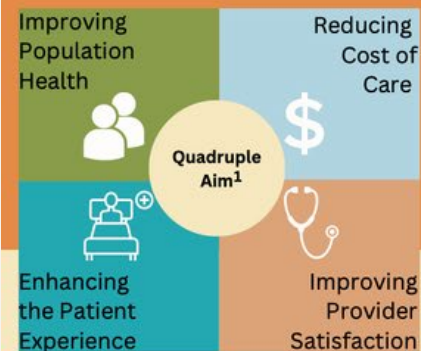
What is a Community Health Worker (CHW)?

Community health workers (CHWs) are a health equity workforce. CHWs come from the communities they serve, sharing identities, geography, and experiences. This commonality uniquely qualifies CHWs to relate with and provide support to people in their community. By addressing barriers to care that occur within different language, cultural, and socioeconomic identities, CHWs improve health outcomes and advancing health equity.

CREDENTIALS:

- Competency-based certificate with field experience
- Knowledge of community, culture, and systems

HEALTH EQUITY WORKFORCE



CHWs are trusted, knowledgeable frontline health personnel who come from the communities they serve who:

- Bridge cultural and linguistic barriers
- Address social drivers of health (SDOH)
- Expand access and quality of coverage and care
- Increase cultural competence and affordability
- Improve health outcomes and health equity

PROVEN COST SAVINGS:


- CHW strategies save money while improving care which helps individuals return to health, their family, community, and jobs. CHWs:
- help clients access care and increase use of primary and preventive care ^{2,3}
 - generate net cost savings through decreased use of urgent care, emergency care, hospitalizations, hospital readmissions, inpatient, and outpatient behavioral health care ⁴
 - have a return on investment of \$3 for every \$1 invested ⁵

IMPROVED HEALTH:

- CHWs provide culturally competent care increasing trust in the healthcare system. Improved health outcomes saves the healthcare system money. Improved outcomes include but not limited to:
- asthma ^{6,7}
 - diabetes ⁸
 - cardiovascular disease ⁸
 - COVID-19 prevention and mitigation ⁹
 - increased cancer screenings ¹⁰

Mission Statement: Build community and systems capacity for better health through the integration of CHW

Vision Statement: Equitable and optimal health outcomes for all communities.

 <https://mnchwalliance.org>



A note on numbers

My background is science and political science. Not public health or statistics.

100 to 1

Potential cost to SE MN
\$626,579,976

VS

Total of \$8,067,600

Assume of employing 1 CHW at \$100,000 per
year for 4 years for the 9 counties in SE MN

\$3,600,000/yr

We deserve to know our cancer risks

The End!



wilson.a.daniel@gmail.com



Radon in Minnesota: Basics, Laws, Partnerships

Indoor Air Unit

Dan Tranter, Supervisor

Cancer Summit – Feb 26, 2026

New MN Cancer Plan

2.5: *Decrease exposure to radon.*

Strategies:

- Identify communities disproportionately impacted by radon exposure.
- Partner with community-based organizations to promote testing and mitigation.
- Conduct tailored outreach and education to inform communities about radon exposure as a risk factor for cancer and options for testing and mitigation.
- Advocate for policies that protect communities from radon exposure and reduce barriers to testing and mitigation.



What is Radon?

- Colorless, odorless, tasteless gas
- Radioactive
- Breakdown of uranium
- Leading cause of lung cancer in never smokers



Radon Average Levels and Action

MN Average
and also the
Action Level

4.0 (pCi/L)

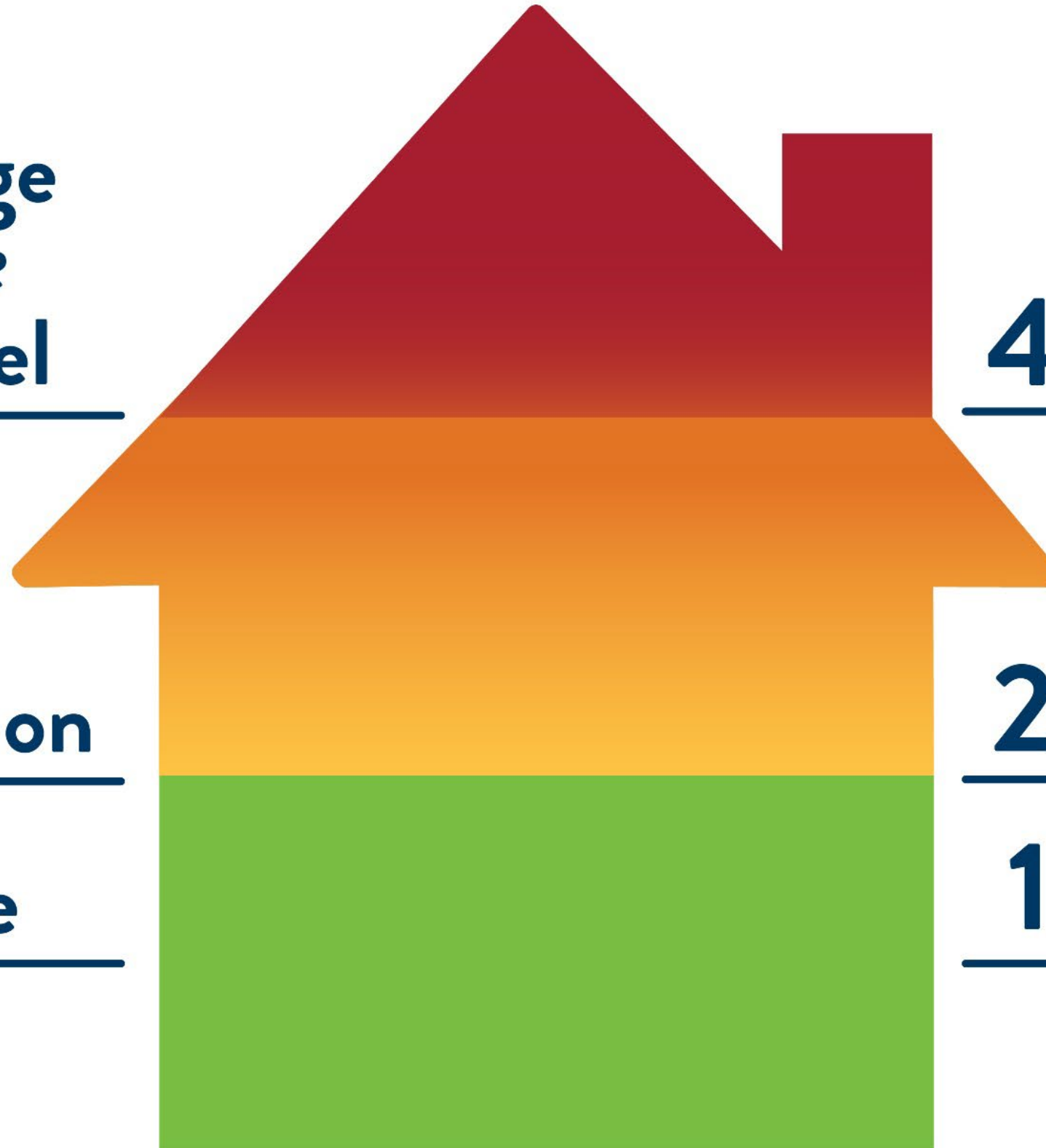
Consider
Taking Action

2.0 (pCi/L)

US Average

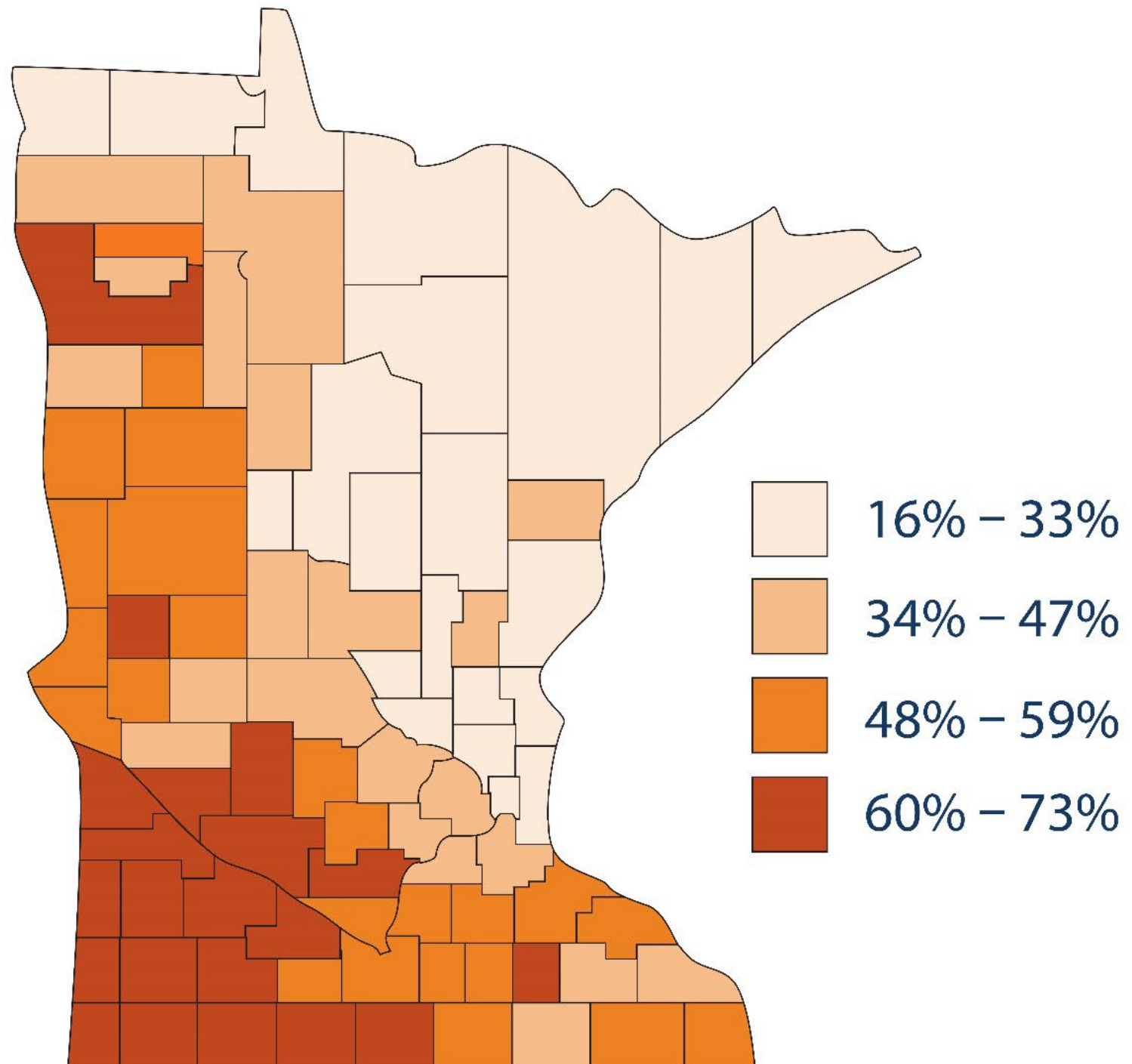
1.3 (pCi/L)

Outdoor ~0.4 pCi/L



MN has high radon statewide

Percent of MN Properties Tested for Radon that are ≥ 4 pCi/L (2014-2023)



2 out of 5 Minnesota homes have high radon levels.

How do I test for radon?

- **Short-term Test:**

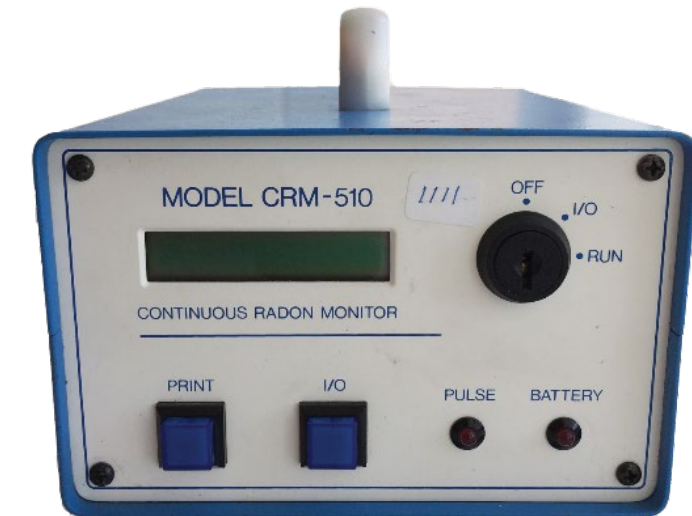
- 2-7 days.

- **Long-term Test:**

- 90-365 days

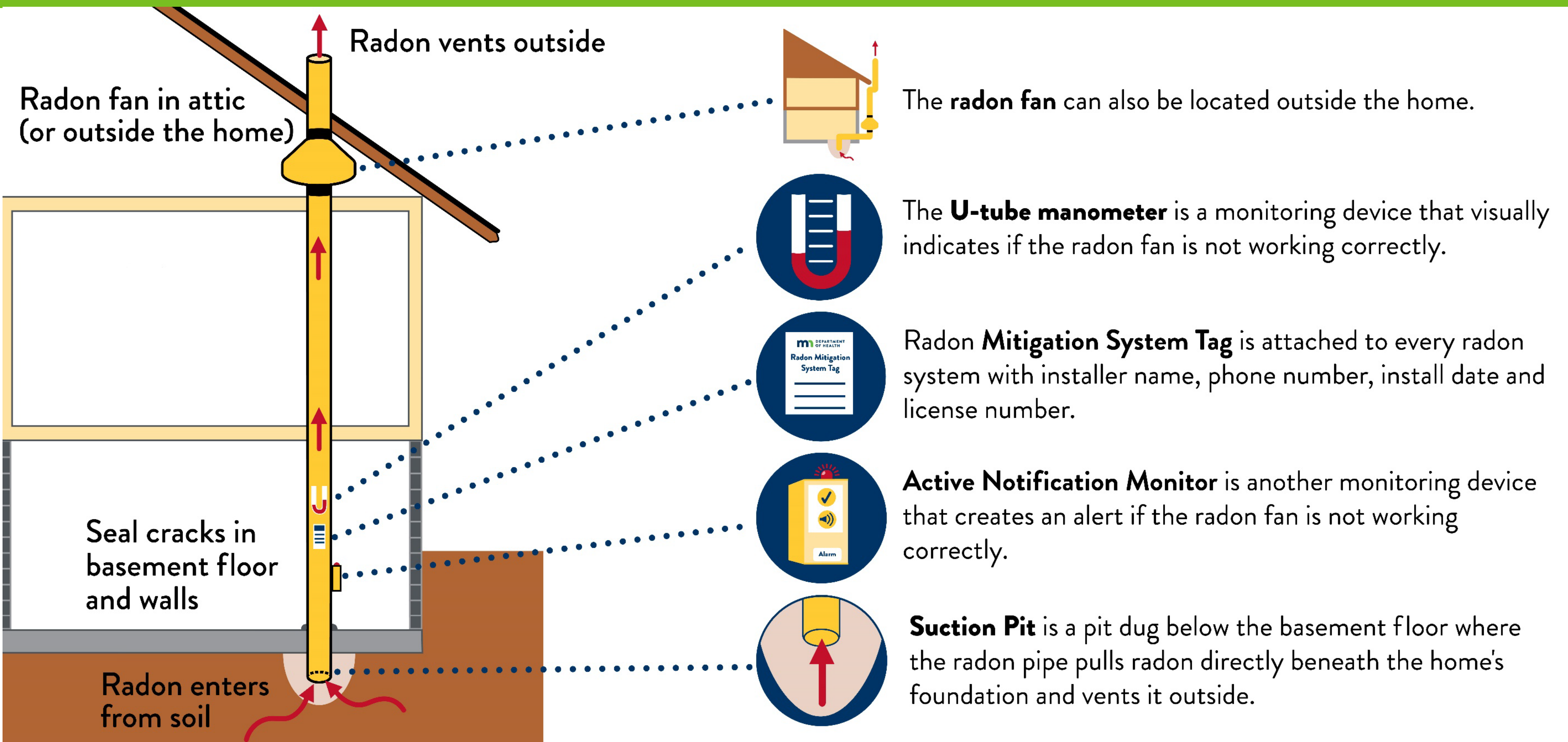
- **Options**

- mn.radon.com
- Local health dept
- Hardware store
- Licensed pro (buying home, large building)



Typical Radon Mitigation System

In commercial buildings, other mechanical equipment may be used



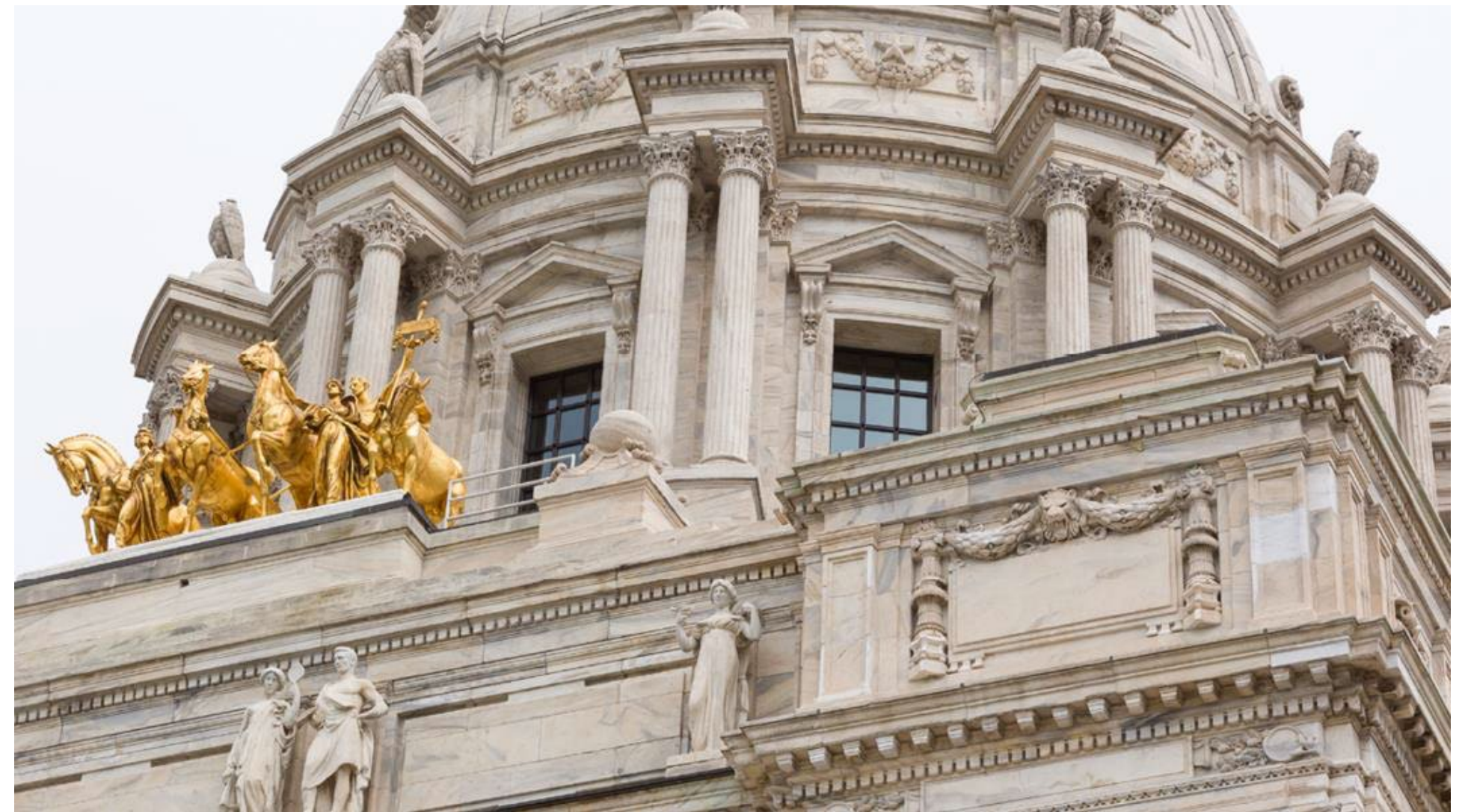
Existing Laws

- New homes built radon resistant
- Home sales disclosure a notification
- Radon pros licensed



Bills in Recent Years Not Enacted

- Child care
 - disclosure and notification
- Schools
 - testing and mitigation
- Rental homes
 - testing and mitigation
 - tenant can break lease if landlord won't mitigate high radon



Laws/Bills Around the Country

- Tax credits for radon mitigation
- Grants for low income mitigation
- Funding for schools and child care
- Real estate testing
- Commercial building radon resistant new construction



Partnerships and Projects

- Presentations to public
- Continuing education to pros
- Test kit distribution
- Community events (health fairs)



Partnerships and Projects



YOUR HOME

Has radon made itself at home?

Don't let your home and your health be exposed to this dangerous visitor.

Radon is a radioactive gas that usually exists outdoors. Released from the normal decay of uranium found in the rocks and soil surrounding a home, radon can build up within homes to concentrations that significantly increase the risk of lung cancer.

Radon can get into any type of building — homes, offices, and schools — and result in high indoor radon concentrations. But you and your family are most likely to get your greatest exposure at home, where you spend most of your time. ↪

YOU CAN'T SEE, SMELL, OR TASTE IT. RADON IS THE SECOND LEADING CAUSE OF LUNG CANCER AND IT MIGHT BE AN UNWELCOME VISITOR IN YOUR HOME.

The EPA Recommends

- Test your home for radon — It's easy and inexpensive.
- Fix your home if your radon level is 4 pCi/L or higher.
- Radon levels less than 4 pCi/L still pose a risk, and in many cases may be reduced.

10 | **Ohio** | SPRING 2011

11 | **Ohio** | SPRING 2011

- Press release
- Letters to editor
- Media/podcast interview
- Articles

Partnerships and Projects

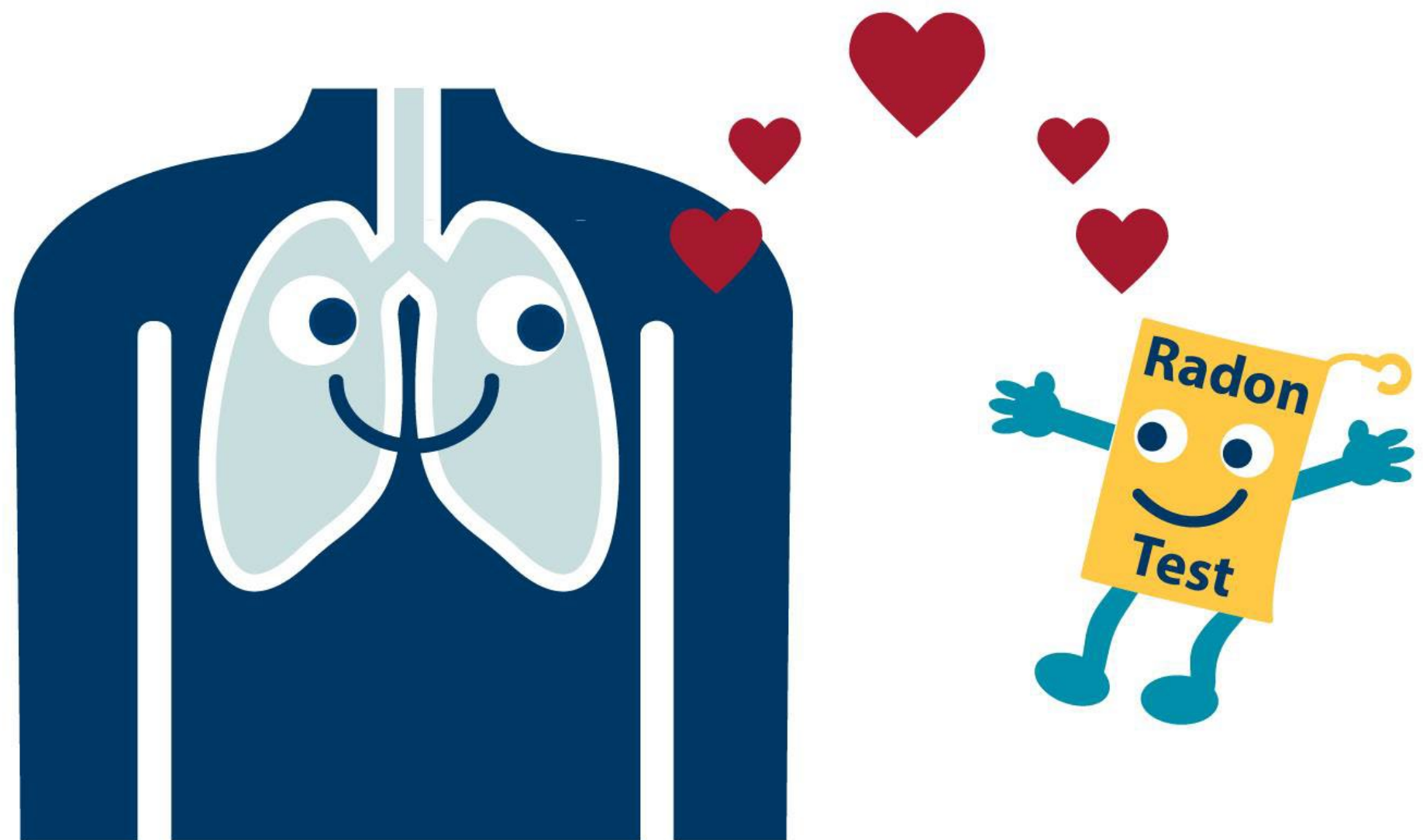
- Videos
- Social media
- Testing campaigns
- Mitigation projects

**Raccoons
are
colorless &
odorless**



Create a Healthier Building Test...Fix...Prevent Lung Cancer

- Minnesota has high radon levels (2 in 5 homes elevated)
- Testing & mitigation recommended
- Some laws enacted, some not
- Many opportunities for awareness, partnership, and projects



More Information

MDH Indoor Air Unit

Dan Tranter (supervisor)

651-201-4618

daniel.tranter@state.mn.us

651-201-4601 (general)

health.indoorair@state.mn.us

mn.gov/radon

Other Resources

US Environmental Protection Agency

World Health Organization

Centers for Disease Control

American Lung Association

Association Radon Scientists

Pool Cool: A Multiyear Evaluation of a Community-Based Sun Protection Intervention to Enhance Skin Cancer Prevention Practices in Rochester, Minnesota

Clarissa Rohm, Community Relations Coordinator
Mayo Clinic Comprehensive Cancer Center (MCCCC)



Financial Disclosure Statement

- No conflicts of interest



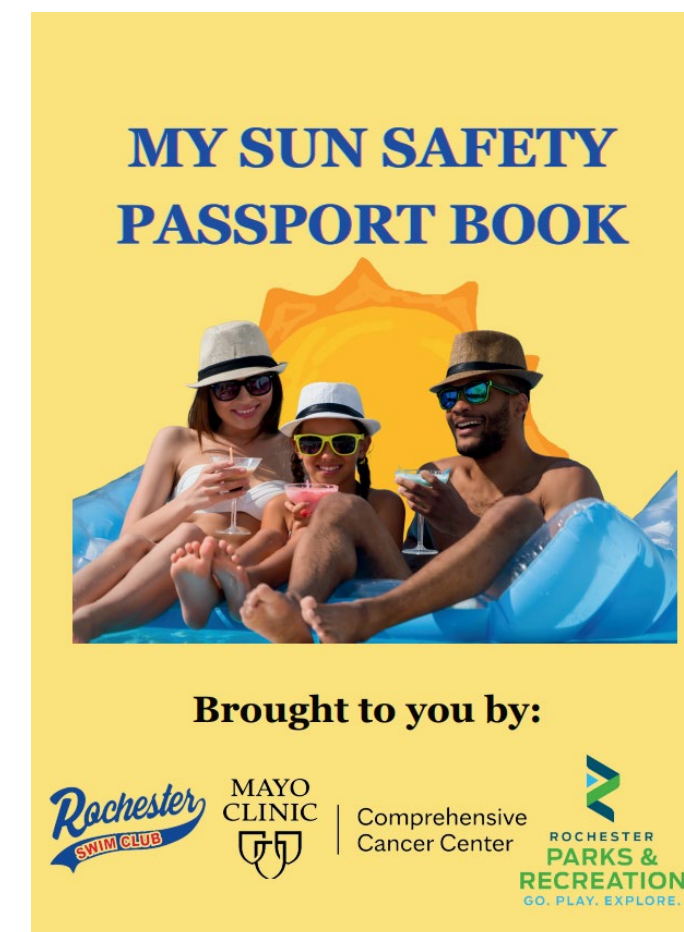
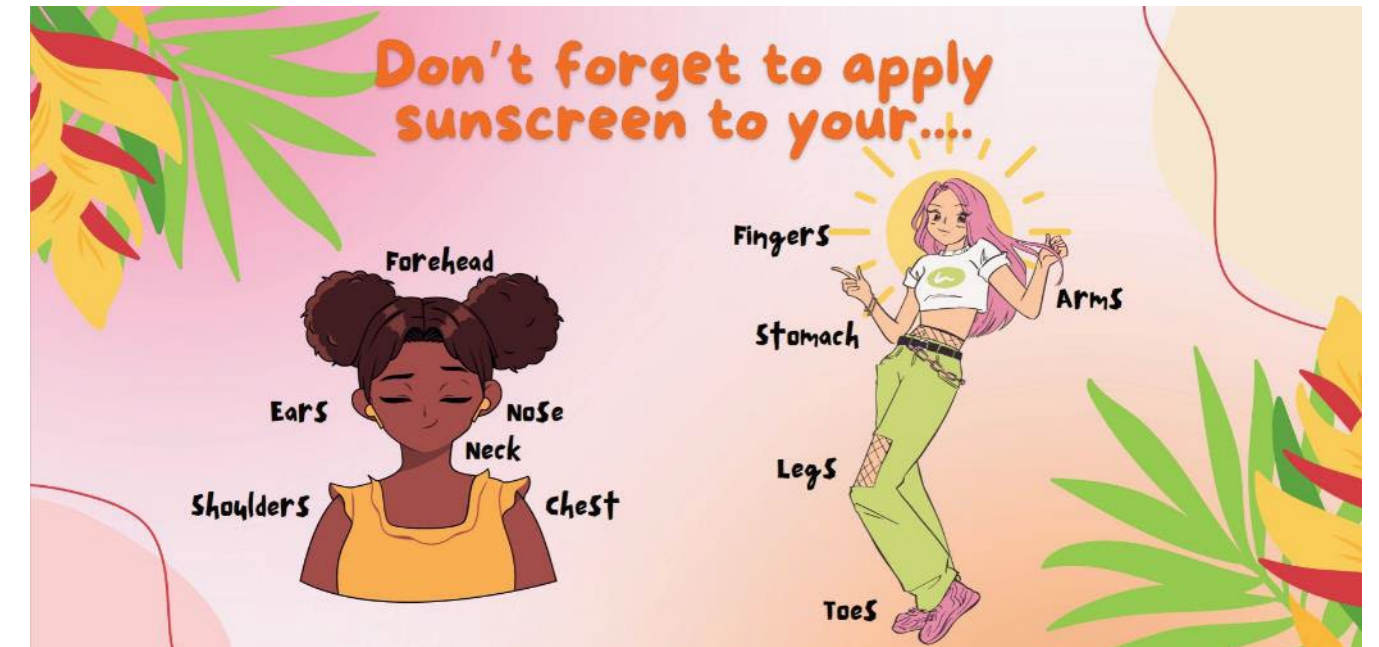
Pool Cool Background

- Sun protection is essential in melanoma prevention, particularly among children, families, and outdoor workers such as lifeguards
- Pool Cool was designed by the Perelman School of Medicine
- Aims to increase sun safety habits at public pools to help decrease melanoma cancer risk
- Provides education for children, families, and staff
- Implements pool-wide environmental changes



Rochester, MN 2023-2025

- Collaboration with Rochester Parks and Recreation and Rochester Swim Club
- Educate pool staff on sun-safe practices using the University of Pennsylvania curriculum and information from medical professionals at Mayo Clinic
- Installed sunscreen dispensers at our two public pools
- Displayed educational banners around the pool
- Engaged both children and adults in fun sun-safety activities
- Provided free tickets to underrepresented community members to join us at the pool during our educational events (*591 tickets redeemed 2023-2025*)



Results: Improved Sun-Safety Knowledge and Behavioral Intentions

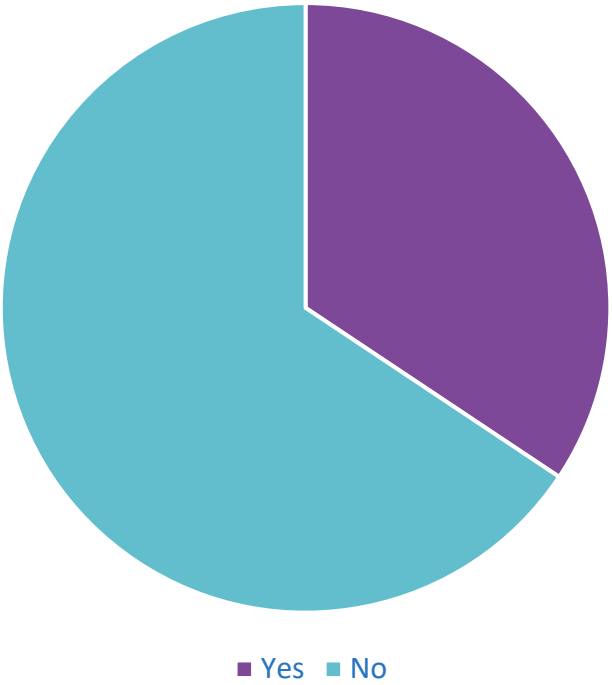
Intent to Use Sunscreen Daily

Grew from 34.7% (2024 pre-intervention) to 85.5% (2024 post-intervention)

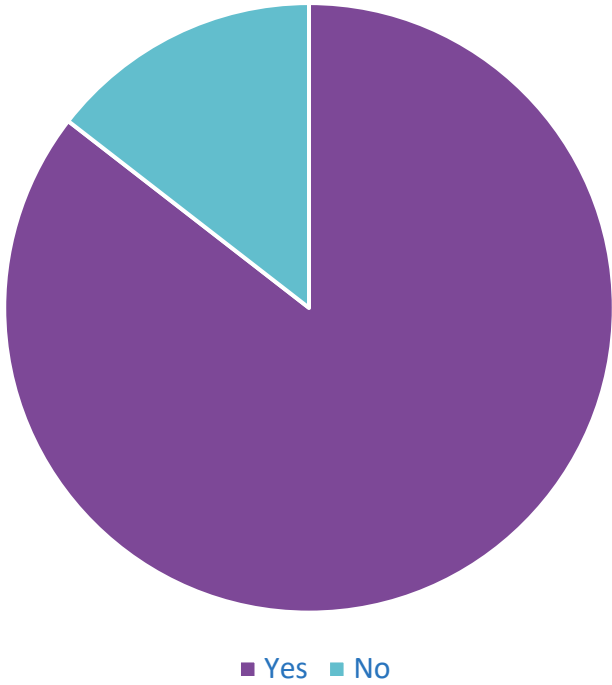
Awareness of Peak Hours of UV Radiation (10am-4pm)

Rose from 61.2% (2024 pre-intervention) to 76.7% (2024 post-intervention)

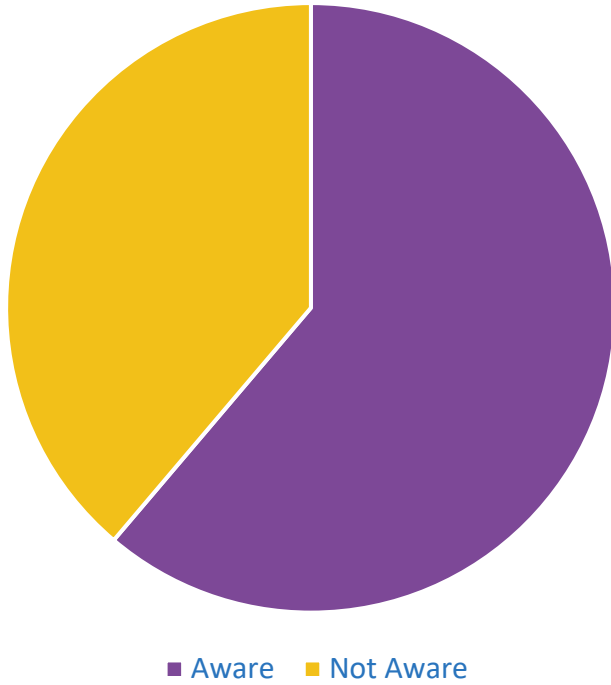
Intends to Use Sunscreen Daily Pre-Intervention



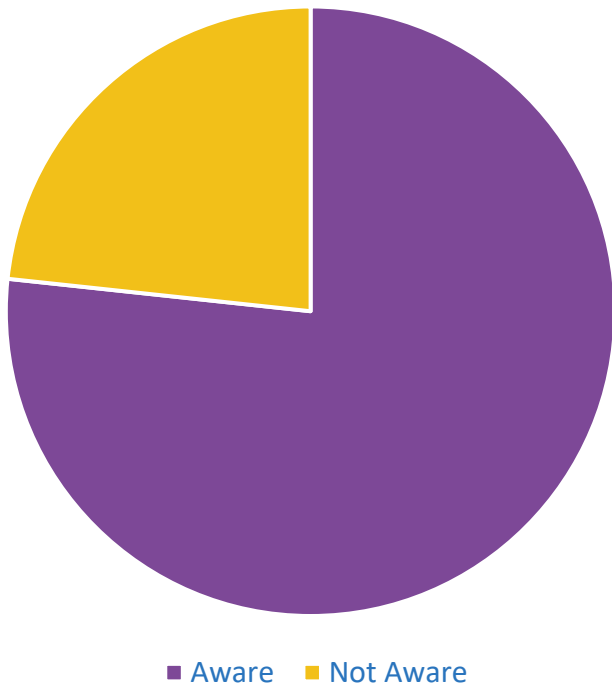
Intends to Use Sunscreen Daily Post-Intervention



Awareness of Peak UV Hours Pre-Intervention



Awareness of Peak UV Hours Post-Intervention



Social Media

- Collaborated with our community partners to post messages on their social media page
- Shared articles, informational flyers, and event flyers
- 2024-2025 reach: **20,430**

.....CÓMO ESCOGER UN.....
PROTECTOR SOLAR

Escoger el protector solar correcto puede reducir el riesgo de contraer cáncer de piel y el envejecimiento prematuro de la piel causado por el sol.

EL PROTECTOR SOLAR ES UNA HERRAMIENTA IMPORTANTE en la batalla contra el cáncer de piel, incluido el melanoma, la forma más extrema de cáncer de piel.

1 de cada **5** estadounidenses tendrá cáncer de piel a lo largo de su vida.

La Academia Estadounidense de Dermatología recomienda elegir un protector que indique lo siguiente en la etiqueta:

AMPLIO ESPECTRO
 Esto significa que la loción protege la piel contra los rayos ultravioleta A (UVA) y los rayos ultravioleta B (UVB), que pueden causar cáncer de piel.

SPF 30 O MAYOR
 Esto indica en qué grado lo protege la loción de una quemadura de sol.

RESISTENTE AL AGUA
 Si bien los protectores solares pueden ser "resistentes al agua" (durante 40 minutos) o "muy resistentes al agua" (durante 80 minutos), no repelen el agua ni la transpiración por completo, y deben volver a aplicarse.

La mayoría de los adultos necesita cerca de una onza de protector. **SUFICIENTE PARA LLENAR UN VASO DE TEQUILA**, para cubrir todo el cuerpo.

AMERICAN ACADEMY OF DERMATOLOGY
 SPOT SKIN CANCER
 SPOTSKINCANCER.ORG

MAYO CLINIC

Pool Cool Sun Safety Party
 Discover sun-safe fun for everyone



Join us for an afternoon filled with fun activities highlighting sun-safe habits. Learn about how you can protect your skin and win cool prizes!

Friday, July 18, 2025
 Friday, August 1, 2025






12 PM - 3 PM CST


LOCATION
 Soldiers Field Swimming Pool
 244 Soldiers Field Dr SW
 Rochester, MN 55902

For questions, contact us at COERS@mayo.edu.

UV INDEX EXPLAINED

The UV Index provides a forecast of the expected risk of overexposure to UV radiation from the sun. It predicts the level of UV radiation at a given time and location on a specific day. This is indicated on a scale of 1 or higher - the higher the number, the greater chance of overexposure.

1-2: LOW	<ul style="list-style-type: none"> • Low danger from UV rays • Wear sunscreen and cover up. • On bright days, wear sunglasses. 	
3-5: MODERATE	<ul style="list-style-type: none"> • Moderate danger from UV rays • Wear sunscreen and reapply every 2 hours. • Cover up, wear sunglasses, and seek shade around midday. 	
6-7: HIGH	<ul style="list-style-type: none"> • High danger from UV rays • Wear sunscreen and reapply every 2 hours. • Cover up, wear sunglasses, and seek shade, especially around midday. 	
8-10: VERY HIGH	<ul style="list-style-type: none"> • Very high danger from UV rays • Wear sunscreen and reapply every 2 hours. • Cover up, wear sunglasses, and stay in shade, especially around midday. 	
11 or more: EXTREME	<ul style="list-style-type: none"> • Extreme danger from UV rays • Cover up, wear sunscreen and sunglasses. • Keep sun exposure to a minimum, as sun damage can occur in less than 10 minutes of exposure. 	

 Snow, white sand and other bright surfaces reflect UV Rays and can double UV exposure.

To find the UV Index for your area, visit the EPA's UV Index Search at enviro.epa.gov/envirofacts/uv/search or use the QR code.

Sources: UV Index Description, Environmental Protection Agency



Scaling to Communities Beyond Rochester

Things to consider:

- Materials needed
- Target populations
- Curriculum
- Expanding to *Here Comes the Sun*

Lesson #3

The Ins and Outs of Sunscreen – Part 1

Goal: To help students understand:
1) the importance of wearing sunscreen.
2) what type of sunscreen to use.

Sun Safety Message # 3
Protect your skin with
sunscreen that has an SPF 30 or
higher.



Thank You

Acknowledgements

Community Partners

Ben Boldt, Director, Rochester Parks and Recreation

Autumn Kappes, Director, Rochester Swim Club

Mayo Clinic Comprehensive Cancer Center Community Outreach Team

Dr. Gladys Asiedu, Associate Director

Dr. Manisha Salinas, Lead Program Evaluation Scientist

Adeline Abbenyi, Program Manager

Manal Abbadi, Senior Program Coordinator

Corinna Sabaque, Senior Program Coordinator

Anavelia Segura, Community Engagement Coordinator

Miguel Valdez Soto, Community Engagement Coordinator

Ilaya Hopkins, Community Engagement Coordinator

Jillian Bettencourt, Intern

Minnesota Cancer Alliance

