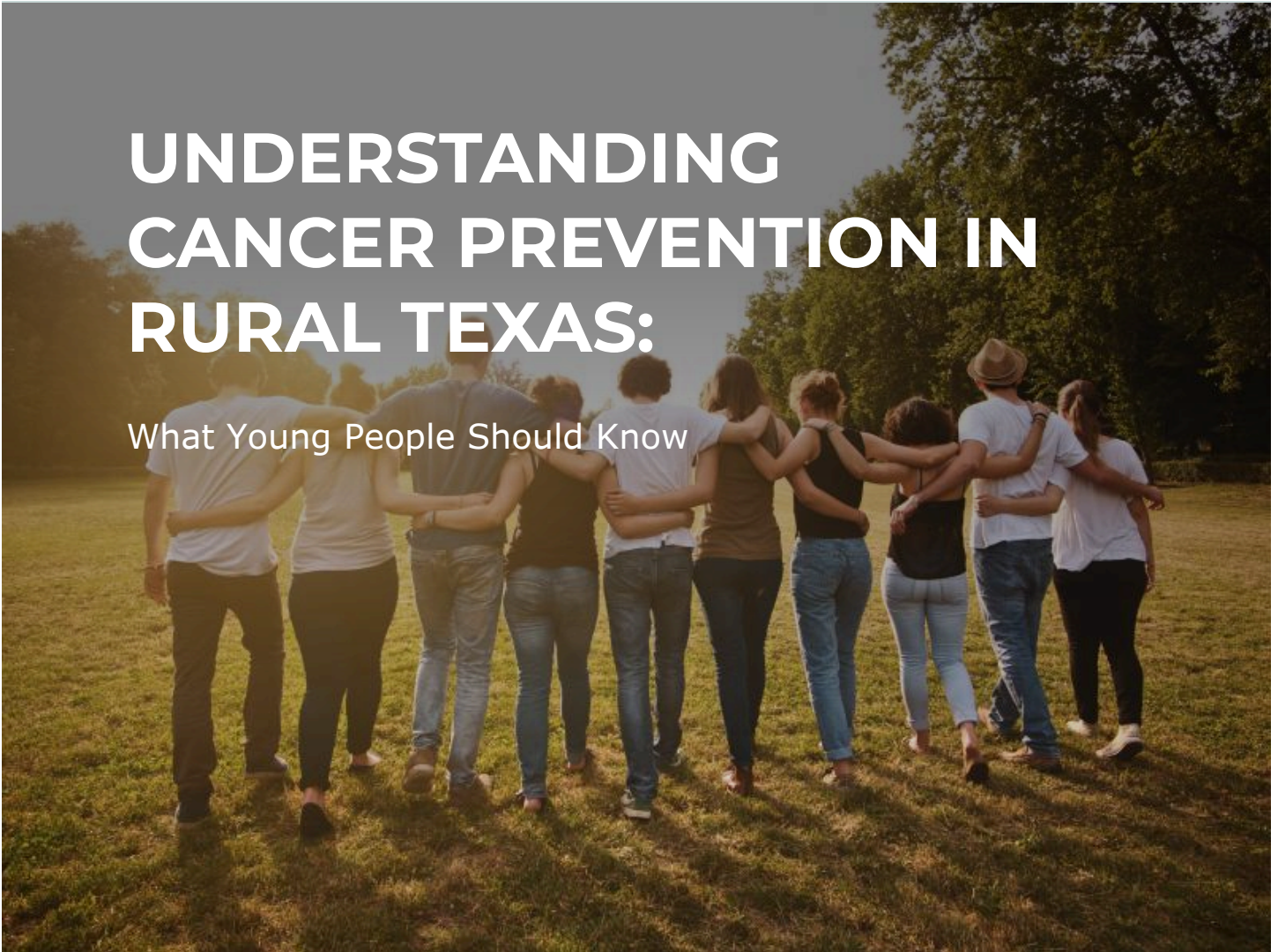


UNDERSTANDING CANCER PREVENTION IN RURAL TEXAS:

What Young People Should Know



Understanding Cancer

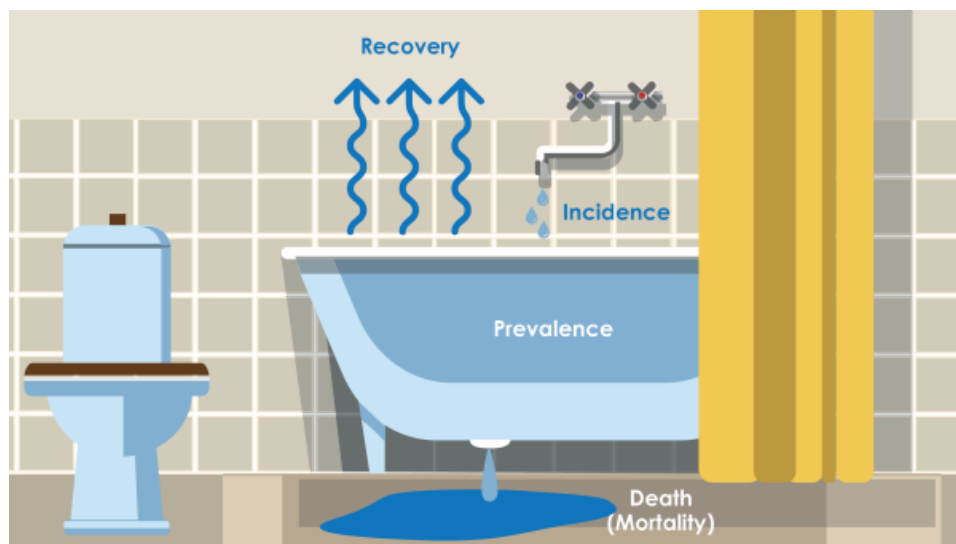
Knowledge is Power

Cancer might sound scary but understanding what it is can help us address it. Simply put, cancer happens when our body's cells grow out of control. Normally, our cells grow, divide, and die in an organized way. But sometimes, something goes wrong. These abnormal cells can form lumps called tumors. Some tumors are benign, which means they are not cancerous, while others are malignant, meaning they can spread to other parts of the body and

cause serious harm. There are many different types of cancer, affecting various organs like the lungs, breasts, and skin. Knowing what cancer is helps us understand why preventing it is so important.

The Epidemiologist's Bathtub: Understanding Incidence, Prevalence, and Mortality

Imagine an old-fashioned bathtub. This bathtub represents a community's overall health when it comes to cancer.



Source:

<https://www.technologynetworks.com/immunology/articles/incidence-vs-prevalence-329073>

Prevalence is the total amount of water currently in the bathtub. This means *it includes all the existing cases of cancer—both new and previously diagnosed individuals*. If the prevalence of breast cancer in a community is 200 cases per 100,000 people, it is like saying the bathtub is filled with 200 gallons of water, representing all those living with breast cancer at that moment.

Incidence is like the water that is being poured into the bathtub. *It represents the number of new cancer cases diagnosed in a specific population during a certain time.*

For example, if rural Texas has an incidence rate of 429 cases per 100,000 people, that means 429 new people have been diagnosed with cancer within a certain timeframe. When the water flows into the tub, it fills up, just like new cases add to the total cancer burden in the community.

Mortality is like the water draining out of the bathtub. *It reflects the number of deaths caused by cancer over a specific period, expressed as a mortality rate (like deaths per 100,000 people).* When people pass away from cancer, it is as if the water is being drained from the tub. The more that drains out, the more we see the impact of cancer on our community.

Recovery or Remission can be likened to water evaporating from the bathtub. When someone is in remission, it means their cancer is either undetectable or significantly reduced and removed from the prevalence. This evaporation does not mean the cancer is completely gone, but it is a hopeful sign that things are improving. Just as some water can evaporate over time while some remains, people in remission may still face challenges, but often enjoy a better quality of life.

We measure health statistics in rates, like cases per 100,000 people, because it allows us to compare different communities fairly, regardless of their population size. This way, we can see where the health challenges are greatest and focus efforts where they are needed most.

By using this bathtub metaphor, we can better understand how incidence, prevalence, and mortality all shape the overall picture of cancer in rural Texas. Preventing new cases (keeping the tap turned down) and reducing the

number of deaths (slowly draining the tub) are critical for improving the health of our communities.

Addressing Cancer

CPRIT Prevention Programs in Rural Texas



Cancer significantly affects people living in rural Texas, creating barriers to essential screenings and health resources. Thankfully, organizations like the Cancer Prevention and Research Institute of Texas (CPRIT) are stepping up to address these challenges.

With CPRIT Prevention Programs, more individuals in rural communities are gaining access to vital screenings, which are crucial for detecting cancer early when treatment is more effective. This funding boosts detection rates and empowers local communities to take proactive steps in confronting cancer.

Key Facts^{1,2}

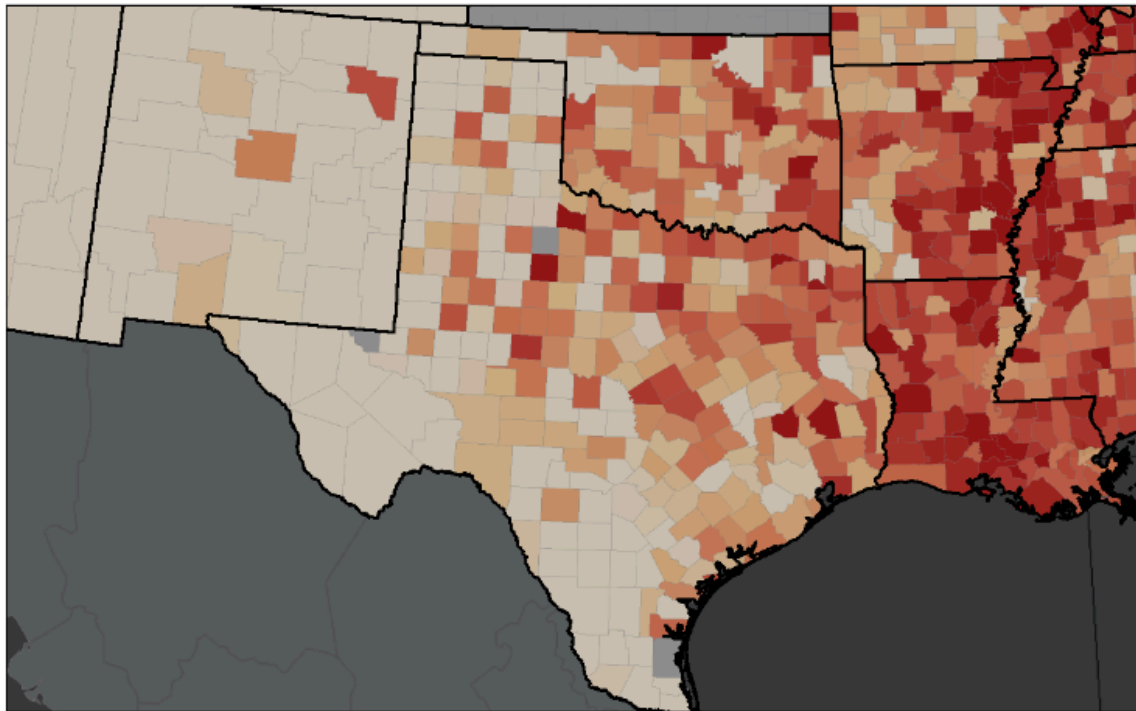
- **More Cases in Rural Texas:** From 2015 to 2019, the cancer incidence rate in rural Texas was 429.2 cases per 100,000 people, higher than the urban rate of 412.9 cases per 100,000.
- **Growing Rates:** While urban areas have seen a decline in cancer rates, rural areas are experiencing a slow increase.



Between 2010 and 2019, the overall cancer incidence rate declined in Texas. However, the incidence increased by 0.4% each year in rural counties while decreasing in urban counties by 0.5% each year.

- **Common Cancers:** For men, the most common types of cancer are prostate, lung, and colorectal. For women, they are breast, lung, and colorectal cancers.
- **Alcohol and Cancer:** Alcohol-related cancers are more prevalent in rural areas, with an annual increase of 1.6%. The incidence rate of all alcohol-related cancers combined was higher in rural areas from 2015 to 2019. The incidence rate of all alcohol-associated cancers combined (excluding colorectal cancer) increased by 1.6% each year in rural counties between 2010 to 2019.)
- **HPV and Cancer:** The incidence rate of all HPV-associated cancers increased by 3.1% each year in rural counties between 2010 to 2019.
- **Risk Factors:** Rural counties in Texas generally have higher rates of smoking³, obesity⁴, and physical inactivity⁵ compared to predominately urban counties; these factors make people in rural Texas more at risk for cancer.

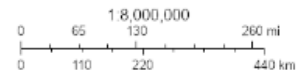
Incidence | All Races | All Cancer Sites | Both Sexes | County | 2016 to 2020



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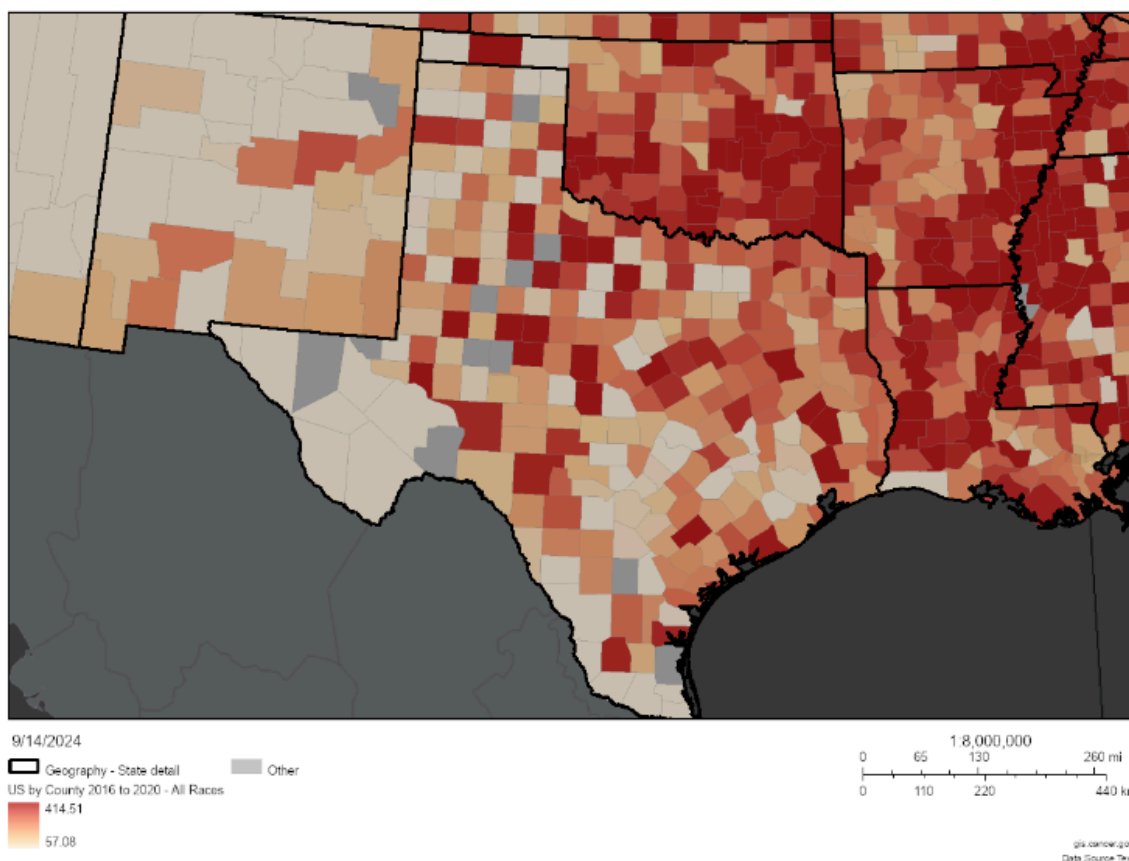
Geography - State detail Other

US by County 2016 to 2020 - All Races



gis.cancer.gov
Data Source Text

Cancer Incidence



Mortality

Why Does This Matter?

These facts show why cancer is such a big concern in rural communities. Many people find it hard to get the healthcare services and screenings they need, which can lead to late diagnoses and worse health outcomes. When cancer is discovered later, treatments can be more complicated and less effective, making it harder for patients to survive. Early detection is super important for improving health outcomes, but without access to screenings, folks in rural areas may miss the chance for timely care.

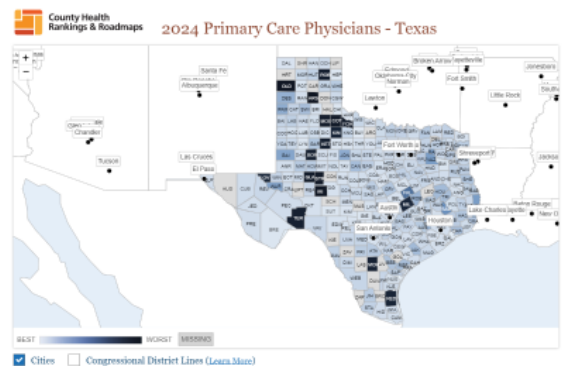
By highlighting these issues, we can understand why it is crucial to focus on cancer prevention efforts and boost resources for these communities. Tackling these

challenges is key to helping everyone in Texas live healthier lives and ensuring they have the support they need to stay well.

Overcoming Hurdles in Rural Texas

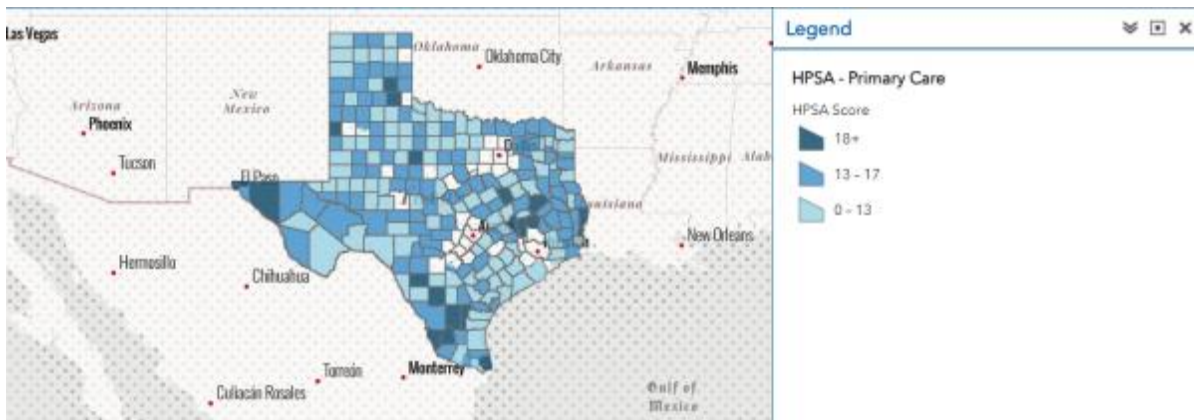
When facing cancer in rural Texas, the journey is not without its hurdles. While organizations like CPRIT work tirelessly to make a difference, they face several significant challenges that impact their efforts.

Imagine living in a small town where the nearest doctor is miles away. This is the reality for many of the *2.9 million people in Texas who live in non-metro areas—almost 10% of the state’s population*⁶. In these rural communities, there are not enough primary care providers.



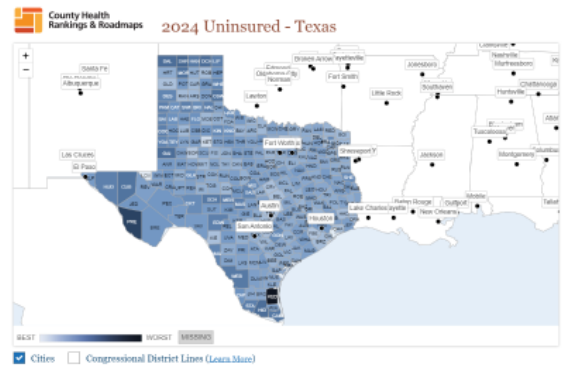
Number of Primary Care Physicians in 2024

In fact, ***out of 254 counties in Texas, a staggering 214 are designated as health professional shortage areas.***⁷



Healthcare Professional Shortage Areas (HPSAs)

Now, picture trying to get medical help but not having the insurance to cover it. Many people in rural areas struggle with this issue. *The poverty rate in rural Texas was **17% in 2021**, higher than the **14% in urban areas**. Additionally, rural residents often have lower high school graduation rates, higher unemployment rates, and lower*

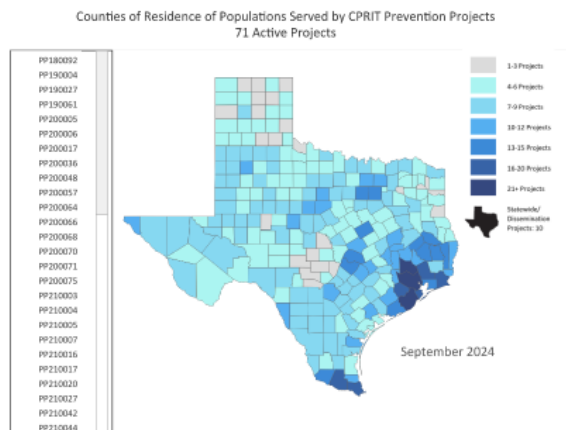


The Uninsured Population

*average incomes compared to those living in cities.*⁸ All of these factors make getting health insurance more difficult.

Lastly, think about the vast landscapes of rural Texas. With wide-open spaces and long distances between towns, CPRIT-funded projects often cover huge areas. This means that reaching everyone in need takes a lot of time and resources. Many rural communities do not have reliable public transportation, which poses a significant barrier for those needing screenings. For someone needing a mammogram, for instance, traveling to see a provider could involve a long journey, sometimes hundreds of miles round-trip, just to get the care they need. Throughout rural Texas, there are lower rates of mammography screening compared to urban counties.⁹

Adding to these challenges, people in rural Texas face higher rates of health risks. *Many areas have **higher rates of smoking, obesity, and physical inactivity**, all of which can increase the risk for cancer.* Furthermore, lower educational attainment and higher unemployment rates in these communities make it even harder for



individuals to focus on their health.

Many people in these situations are often juggling multiple responsibilities, such as finding enough food, securing clothing, and ensuring stable housing for themselves and their families. When daily survival and meeting these essential needs become the top priorities, health care may take a backseat, even if they understand its importance.

Additionally, limited access to health education and resources can make it difficult for individuals to learn about the available options for taking care of their health. This complex situation highlights the importance of understanding the broader factors that influence health decisions.

Despite these challenges, the story does not end here. Organizations like CPRIT are committed to finding solutions. They are working to increase the number of healthcare providers, improve access to insurance, and create better transportation options. By tackling these obstacles head-on, they are paving the way for a healthier future for everyone in rural Texas.

CPRIT's Work in Rural Texas

Since 2009, CPRIT has been working hard to make things better. They have invested over \$36 million into dozens of projects aimed at combating cancer in rural areas. CPRIT-funded prevention projects in rural Texas have been implemented through a variety of organizations, including academic medical centers and grassroot community organizations.

Making a difference

CPRIT-funded prevention programs have adopted several effective strategies in addressing cancer. These approaches focus on fostering partnerships, increasing access to screenings, and improving education about cancer risks.



Teamwork in Cancer Prevention

One of the most important strategies in confronting cancer in rural Texas is teamwork. CPRIT funds many projects that rely on partnerships between different organizations. These partnerships often bring together hospitals, clinics, and social service groups.

“You couldn't do anything in the community if you didn't have partners and collaborators of some kind. If you really want to have collaboration, you've got to share resources. And I don't mean just the funding. You have to be able to share your systems and your people and all of those things. I can't say enough about collaboration. That lets you do things that you can never do by yourself.”

– CPRIT Prevention Program Director

By working together, these organizations can help more people access important cancer prevention services, like screenings. Screenings are tests that help find cancer early when it is easier to treat.

These collaborations also make it easier for individuals who have had a screening to get the follow-up care they need. For example, if someone receives an abnormal screening result, the partnerships ensure that person is connected to local organizations that can provide further tests or treatment.



To make these connections even smoother, organizations use technology to share information and communicate effectively. They might even sign agreements that outline how they will work together, making sure everyone is on the same page. This teamwork is vital for ensuring that people in rural areas have the support they need to prevent and address cancer.

Bringing Screening Technology to Rural Texans

Another key focus of CPRIT-funded projects in rural Texas is making cancer screening technology more available. In many rural areas, people often struggle to find the tools they need for important cancer screenings, like mammography machines for breast cancer or CT scanners for other types of cancer. Sometimes, just one CT machine serves multiple counties, making it hard for people to get tested.

“Mobile mammography. It's the great equalizer. It doesn't matter if you were insured, uninsured, White, Black, or Green. You have the chance to be diagnosed at an

early stage. I only had two people in the last two years that were diagnosed past stage II. Do you know the percentage of chance they got to live? 98%.”

– CPRIT Prevention Program Director

To tackle this problem, CPRIT is working to increase the number of screening tools available to communities in rural Texas. One innovative solution has been the use of mobile mammography units. These are special trucks equipped with mammography machines that travel to different towns, bringing screenings right to people’s doorsteps. This way, more people can get tested without having to travel long distances, helping catch cancer early when it is most treatable.

Training Heroes

A crucial part of addressing cancer in rural Texas is making sure healthcare providers are well-trained. CPRIT-funded programs focus on teaching medical professionals about the latest standards for cancer screening. This training ensures that doctors, nurses, and medical students know how to perform screenings correctly and follow the best practices.

“That's always kind of been ingrained in our program that these grants–have always been geared towards training for rural practice. And so we've always had rural in mind, and with that comes underserved.”

– CPRIT Prevention Program Director

These programs often involve hands-on training, where providers learn not just about the requirements for screenings but also how to use the tools needed for tests. By equipping healthcare workers with the right knowledge and skills, we can ensure that they are prepared to help patients effectively and confidently.

Well-trained providers are essential for improving cancer detection and treatment in rural areas, ultimately helping to save lives.

CPRIT's Impact in Rural Texas

The hard work of CPRIT-funded projects in rural Texas is making a real difference in the confronting cancer. Here are some of the positive changes we are seeing:



First, tens of thousands of people have been screened for cancer, including many who belong to underserved populations, like people who live in poverty, are immigrants, or don't have health insurance. These screenings are crucial for catching cancer early.

Thanks to these efforts, more people are being diagnosed at earlier stages of cancer, when it is much easier to treat. This means that individuals have a better chance of recovery and a healthier future.

“In every single case, [the cancer] wouldn't have been diagnosed when it did if this [program] didn't exist. These patients would

have ended up in the ER... suffering complications before they would have gotten a diagnosis. We've been able to find it early and navigate them into treatment. Without our program, that wouldn't have been possible.”

– CPRIT Prevention Program Director

Additionally, there has been a rise in the number of people who follow up after receiving abnormal screening results. Improved teamwork among different organizations has made it easier for patients to get the care they need after a screening.

Access to cancer prevention technology, like imaging machines, has also increased. Thousands of healthcare providers have been trained in the best practices for cancer prevention, ensuring they are ready to help their patients effectively.

The programs have created strategies and resources that can benefit even more people in the community, not just those directly involved in CPRIT projects. Many organizations have also been able to secure extra funding because of their successful work with CPRIT, leading to even more resources for cancer prevention across rural Texas. Together, these efforts are helping to create a healthier future for everyone in rural communities.

Eliminating Cancer

The Path Forward in Cancer Prevention in Rural Texas

Cancer has a big impact on people living in rural Texas, making it harder for them to get the screenings and resources they need to stay healthy. Fortunately, organizations like CPRIT are stepping up to change this situation.

With the support of CPRIT, more people in rural communities can now access important screenings, which helps catch cancer earlier when it is easier to treat. If you are interested in learning more about how CPRIT is making a difference or want to help bring these important resources to your own community, check out <https://cprit.texas.gov/funding-opportunities> to learn about eligibility for CPRIT grants. Together, we can make sure that all Texans, no matter where they live, have access to the healthcare resources they need to stay healthy and eliminate cancer.



1 Texas Department of State Health Services. (2022). *Texas Cancer Registry Annual Report 2022*. <https://www.dshs.texas.gov/sites/default/files/legislative/2022-Reports/Texas-Cancer-Registry-Annual-Report-2022.pdf>

2 Cancer-Rates. (2024). *Texas Cancer Registry*. <https://www.cancer-rates.com/tx/>

3 County Health Rankings. (2024). *Texas. Adult Smoking*. County Health Rankings & Roadmaps. <https://www.countyhealthrankings.org/health-data/texas?year=2024&measure=Adult%2BSmoking&tab=0>

4 County Health Rankings. (2024). *Obesity Data*. Texas DSHS. <https://www.dshs.texas.gov/obesity-texas/obesity-data>

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e%20ERS%20reports%2C%20based%20on,ACS%20data
%20reported%20by%20ERS](https://www.ruralhealthinfo.org/states/texas#:~:text=The%20ERS%20reports%2C%20based%20on,ACS%20data%20reported%20by%20ERS). NOTE: some data here is
originally from ACS and USDA.

7 Texas Department of State Health Services. (2024).
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8 Rural Health Information Hub. (2022). *Texas*.

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e%20ERS%20reports%2C%20based%20on,ACS%20data
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9 County Health Rankings. (2024). *Mammography
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year=2024&measure=Mammography%2BScreening&tab=
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