

PREVENTING AND TREATING CANCER IN RURAL AMERICA

THE DATA

Cancer is the second leading cause of death in America.¹ Compared to urban areas, rural areas have lower rates of new cancer cases, but the cancer death rate is higher.² Rural areas are also making slower progress reducing new cases of cancer and cancer deaths. Rural residents have higher rates of lung, colorectal, and cervical cancers. Lung and colorectal cancers are among the deadliest. However, these cancers are also preventable. Cancer costs about \$88 billion in health care each year in the U.S.³

ISSUE OVERVIEW

The primary drivers of rural/urban cancer disparities are related to differences in prevention, screening, treatment for cancer patients, and cancer survivorship.

First, rural residents are more likely than urban residents to have important risk factors for cancer, and less likely to have access to preventive care and programs that reduce them.^{4,5} For example, there are higher percentages of smoking⁶ and obesity/overweight,⁷ which increase the risk for some cancers.^{8,9} But rural residents have greater difficulty accessing resources for quitting smoking, physical activity, and healthy eating.⁸⁻¹¹ They may also have trouble getting cancer-preventing vaccines, such as the HPV vaccine, due to issues of cost. Rural cultural values can also play a role—for example, stoicism and a sense of hardiness can make it less likely someone will seek preventive care.⁴

Policy options and other strategies to prevent and treat cancer in rural America:



Partner with Faith-based Organizations to Provide Evidence-based Smoking Cessation Resources



Offer HPV Vaccinations at Lower Out-of-Pocket Cost



Promote the Option of Colorectal Cancer Stool Tests in Traditional and Nontraditional Settings



Expand Patient Transportation Options



Next, rural residents have less access to cancer screening services. Screening rates are lower in rural areas partially because finding and getting to providers can be challenging.¹² As is the case with prevention, cultural values can also be a barrier to screening.

Third, it is harder for rural residents to get cancer treatment and the follow-up care one needs after surviving cancer (which can include preventive care and screenings). Rural cancer clinics are usually few and far between, and cancer treatment can require many appointments.¹² There is also a serious shortage of specialists. Only 5.6% of the country's oncologists provide care in rural areas—where 15% of the American population lives.^{12,13}

Prevention, screening, treatment, and survivorship are closely interlinked, and they share rural-specific barriers that can prevent policies from working. For example, a lack of transportation can affect whether someone gets preventive care, screenings, treatment, and survivorship care. The following are some policy options that have been demonstrated to overcome these barriers and work within a rural context.

CASE STUDY

West Virginia: The Southern Coalfields Tobacco Prevention Network^{26,27}

The Southern Coalfields Tobacco Prevention Network in West Virginia provides tobacco-use policy guidance—from tobacco-free policies to prevention programs in schools—to the six county coalitions that make up the network. The guidance provided was developed for the unique needs of West Virginia populations that use tobacco the most, such as coal miners. For example, the network's *Spit It Out* program offered tobacco cessation services for hundreds of smokeless tobacco users and resulted in five workplaces going tobacco-free.

Nebraska: Accountable Care Organizations²⁸

Accountable Care Organizations (ACOs) are networks of health care providers that share responsibility for providing care to patients. ACOs create financial incentives to cooperate, share information, and save money, while providing coordinated, high-quality care to their Medicare patients.²⁹ In Nebraska, a rural primary care ACO leveraged these incentives to promote colorectal cancer screenings. The ACO's providers reported that the model's mechanisms, such as electronic health records and team-based care, enabled providers to more efficiently identify patients who were eligible or in need of screening—and then make sure patients completed the process. This helped them more effectively promote colorectal cancer screenings in their communities in a financially-feasible manner.



Partner with Faith-based Organizations to Provide Evidence-based Smoking Cessation Resources

CDC's *Tips From Former Smokers* educational campaign features compelling stories of former smokers living with smoking-related health conditions. Since 2012, CDC estimates that at least a half million cigarette smokers have quit for good because of the *Tips* campaign.¹⁴

Given their central role in many rural communities, spiritual leaders and places of worship have played an important role in addressing social challenges and protecting people who are at risk.^{4,15} *Tips* provides a range of resources for faith-based communities and faith leaders.¹⁶



Offer HPV Vaccinations at Lower Out-of-Pocket Cost

Human papillomavirus (HPV) vaccination is important because it protects against cancers caused by HPV infection,¹⁷ but vaccination rates for boys and girls are lower in rural than in urban areas.² One significant barrier to HPV vaccination in rural areas is financial constraint.¹⁸ Policies including the Federal Vaccines for Children Program have expanded access to many vaccines at reduced out-of-pocket cost.¹⁹ Reducing out-of-pocket costs by paying for vaccinations, providing insurance coverage, or reducing copayments has been shown to increase vaccination rates in rural areas—especially because more rural residents are more likely to be uninsured.^{2,19}



Promote the Option of Colorectal Cancer Stool Tests in Traditional and Nontraditional Settings

Colorectal cancer is the second leading cancer killer among cancers that affect both men and women in the United States,²⁰ but some forms of colorectal cancer screenings may be less feasible for some rural patients. For example, colonoscopies require a day of preparation, access to a colonoscopist, and if the patient is sedated, someone to take them home.^{21,22}

While the specific screening method used should be determined between patients and their providers, the best test is the one that gets done. One of those options is the stool test, which can provide an alternative option for patients who may have difficulty getting a colonoscopy.

Stool tests do not require bulky, onsite equipment or medical facilities²³—patients can collect the stool sample in the privacy of their home and drop it off or send it in to a testing site. This can be done via mail-in kits, which have been shown to raise screening rates.²⁴ If the stool test indicates potential cancer, then patients can work with their providers to decide how to get a follow-up colonoscopy. Promoting discussion between rural health care providers and their patients about the option of stool tests may help raise screening rates.

CASE STUDY

Idaho: Multifaceted Strategy to Increase Colorectal Cancer Screening Rates³⁰

In rural Idaho, a clinic attempted to increase its low colorectal cancer screening rates with a three-pronged strategy that involved getting baseline data, sending reminders to patients through the mail and electronically, and bringing up screening during appointments and public health-related events. The clinic also found that encouraging competition between the individual providers at the clinic increased screening rates. In addition, because the clinic found that many patients' insurance policies did not fully cover colonoscopies, it often utilized stool tests instead. The clinic raised its screening rates from 52% to 69% with this strategy.

POLICY OPTIONS (CONTINUED)



Expand Patient Transportation Options

Even after receiving a cancer diagnosis, rural residents are less likely to seek treatment during the early stages of the disease, resulting in higher likelihood of death.⁴ If they survive cancer, they are less likely to receive the necessary follow-up care. This often happens because they cannot get to cancer specialists or other providers due to provider shortages and lack of transportation.

One way that has been shown to help patients can get to their appointments is with the use of state Rural Transit Assistance Programs (RTAPs).²⁵ RTAPs provide community stakeholders and decision makers with workshops, on-site training, educational materials, and peer assistance to help them develop public non-emergency medical transit programs and systems.

RESOURCES

[CDC's National Comprehensive Cancer Control Program](#) provides funding and technical advice to create, carry out, and evaluate comprehensive cancer control plans, which focus on issues like prevention, detection, treatment, survivorship, and health disparities.

[The National Rural Transit Assistance Program \(RTAP\)'s Resource Catalog](#) includes training modules, web apps, and technical briefs.

CDC's Division of Cancer Prevention and Control (DCPC) developed [The Road to Better Health: A Guide to Promoting Cancer Prevention in Your Community](#) to help community groups guide their communities toward better health.

CASE STUDY

Georgia: Salud es Vida^{31,32}

Hispanic women have higher rates of cervical cancer than any other ethnic population in America. New immigrant communities, especially rural ones, often lack Spanish-speaking health care providers. In rural southern Georgia, the *Salud es Vida* (or *Health is Life* in English) curriculum and intervention program targeted female Hispanic farmworkers. The program educated lay health workers (known as *promotoras*) about cervical cancer and how the HPV vaccine can prevent it. The *promotoras* helped fill a critical gap in cervical cancer and HPV education services. An evaluation of the program found that it successfully educated the *promotoras* on cervical cancer, resulting in them being more willing to promote screening and HPV prevention. It also found that all *promotoras* reported being more confident that they would receive Pap tests (one way of screening for cervical cancer) in the future.

*CDC policy briefs provide a summary of evidence-based best practices or policy options for a public health issue. They also include information on the background and significance of the issue as well as current status and potential next steps. This policy brief is part of a series accompanying **CDC's Morbidity and Mortality Weekly Reports on rural health.***

REFERENCES

- 1 Moy E, Garcia MC, Bastian B, et al. Leading Causes of Death in Nonmetropolitan and Metropolitan Areas — United States, 1999–2014. *MMWR Surveill Summ* 2017;66(No. SS-1):1–8. DOI: <http://dx.doi.org/10.15585/mmwr.ss6601a1>
- 2 Henley SJ, Anderson RN, Thomas CC, Massetti GM, Peaker B, Richardson LC. Invasive Cancer Incidence, 2004–2013, and Deaths, 2006–2015, in Nonmetropolitan and Metropolitan Counties — United States. *MMWR Surveill Summ* 2017;66(No. SS-14):1–13. DOI: <http://dx.doi.org/10.15585/mmwr.ss6614a1>
- 3 American Cancer Society. (2017). Economic Impact of Cancer. Retrieved from <https://www.cancer.org/cancer/cancer-basics/economic-impact-of-cancer.html>
- 4 Crosby, R. A., et al. (2012). Rural Populations and Health: Determinants, Disparities, and Solutions, John Wiley & Sons.
- 5 Matthews KA, Croft JB, Liu Y, et al. Health-Related Behaviors by Urban-Rural County Classification — United States, 2013. *MMWR Surveill Summ* 2017;66(No. SS-5):1–8. DOI: <http://dx.doi.org/10.15585/mmwr.ss6605a1>
- 6 National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta (GA): Centers for Disease Control and Prevention (US); 2014. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK179276/>
- 7 Lauby-Secretan, B., Scoccianti, C., Loomis, D., Grosse, Y., Bianchini, F., & Straif, K. (2016). Body fatness and cancer—viewpoint of the IARC Working Group. *New England Journal of Medicine*, 375(8), 794-798.
- 8 Steele CB, Thomas CC, Henley SJ, et al. Vital Signs: Trends in Incidence of Cancers Associated with Overweight and Obesity — United States, 2005–2014. *MMWR Morb Mortal Wkly Rep* 2017;66:1052–1058. DOI: <http://dx.doi.org/10.15585/mmwr.mm6639e1>
- 9 Henley SJ, Thomas CC, Sharapova SR, et al. Vital Signs: Disparities in Tobacco-Related Cancer Incidence and Mortality — United States, 2004–2013. *MMWR Morb Mortal Wkly Rep* 2016;65:1212–1218. DOI: <http://dx.doi.org/10.15585/mmwr.mm6544a3>
- 10 Rural Health Information Hub. Reducing Out-Of-Pocket Costs for Evidence-Based Cessation Treatments. (2014). Retrieved from <https://www.ruralhealthinfo.org/community-health/tobacco/2/state-local-governments/reduce-treatment-costs>.
- 11 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4760835/>
- 12 American Society of Clinical Oncology. (2016). The State of Cancer Care in America, 2016: A Report by the American Society of Clinical Oncology. *J Oncol Pract* 12(4): 339-383.
- 13 Centers for Disease Control and Prevention. (2017). About Rural Health. <https://www.cdc.gov/ruralhealth/about.html>
- 14 Centers for Disease Control and Prevention. (2017). Tips From Former Smokers - About the Campaign. Retrieved from <https://www.cdc.gov/tobacco/campaign/tips/about/index.html>.
- 15 Centers for Disease Control and Prevention. (2017). Faith-Based FAQs. <https://www.cdc.gov/tobacco/campaign/tips/partners/faith/faith-faq.html>
- 16 Centers for Disease Control and Prevention. (2017). Tips From Former Smokers – Faith-Based Organizations (FBOs). Retrieved from <https://www.cdc.gov/tobacco/campaign/tips/partners/faith/>.
- 17 Centers for Disease Control and Prevention. (2017). HPV Vaccines: Vaccinating Your Preteen or Teen. Retrieved from <https://www.cdc.gov/hpv/parents/vaccine.html>.
- 18 Ferrer, H. B., et al. (2014). Barriers and facilitators to HPV vaccination of young women in high-income countries: a qualitative systematic review and evidence synthesis. *BMC Public Health* 14(1): 700.
- 19 Jacob, V., et al. (2016). Increasing Coverage of Appropriate Vaccinations: A Community Guide Systematic Economic Review. *Am J Prev Med* 50(6): 797-808.
- 20 Kochanek, K. D., Murphy, S. L., Xu, J., & Tejada-Vera, B. (2016). Deaths: final data for 2014. *National vital statistics reports: from the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System*, 65(4), 1-122.
- 21 Knudsen AB, Zauber AG, Rutter CM, Naber SK, Doria-Rose VP, Pabiniak C, Johanson C, Fischer SE, Lansdorp-Vogelaar I, Kuntz KM. Estimation of Benefits, Burden, and Harms of Colorectal Cancer Screening Strategies Modeling Study for the US Preventive Services Task Force. *JAMA*. 2016;315(23):2595–2609. <http://dx.doi.org/10.1001/jama.2016.6828>.
- 22 Anderson, A. E., et al. (2013). Rural vs urban residence affects risk-appropriate colorectal cancer screening. *Clin Gastroenterol Hepatol* 11(5): 526-533.
- 23 Centers for Disease Control and Prevention. (2017). Colorectal Cancer Screening Tests. Retrieved from https://www.cdc.gov/cancer/colorectal/basic_info/screening/tests.htm.
- 24 Charlton, M. E., et al. (2014). Evaluation of a home-based colorectal cancer screening intervention in a rural state. *J Rural Health* 30(3): 322-332.
- 25 Rural Health Information Hub. (2017). Transportation to Support Rural Healthcare. Retrieved from <https://www.ruralhealthinfo.org/topics/transportation#strategies>.
- 26 Rural Health Information Hub. Southern Coalfields Tobacco Prevention Network. Retrieved from <https://www.ruralhealthinfo.org/community-health/tobacco/3/southern-coalfields>.
- 27 Rural Health Information Hub. (2017). Spit It Out-West Virginia. Retrieved from <https://www.ruralhealthinfo.org/community-health/project-examples/634>.

REFERENCES (CONTINUED)

²⁸ Kim, J., et al. (2017). Promoting colorectal cancer screening through a new model of delivering rural primary care in the USA: a qualitative study. *Rural and Remote Health* 17(4187).

²⁹ Centers for Disease Control and Prevention. Partnering With Accountable Care Organizations for Population Health Improvement. Retrieved from <https://www.cdc.gov/nccdphp/dch/pdfs/partnering-with-acos.pdf>

³⁰ Miller Temple, K. (2017). "Doing Something Exceptional": Rural Communities and Colorectal Cancer Screening, Rural Health Information Hub.

³¹ Rural Health Information Hub. (2017). Salud es Vida Cervical Cancer Education. Retrieved from <https://www.ruralhealthinfo.org/community-health/project-examples/879>.

³² Luque, J. S., et al. (2011). Salud es vida: development of a cervical cancer education curriculum for promotora outreach with Latina farmworkers in rural Southern Georgia. *Am J Public Health* 101(12): 2233-2235.