NATIONAL ASSOCIATION OF CHRONIC DISEASE DIRECTORS
Promoting Health. Preventing Disease.

Impact of the Changing Healthcare Policy Environment on State Cancer Programs

Rural Health and Cancer Screening

What Should You Know?

People in rural areas are more likely to die of cancer than those living in urban areas. While incidence is lower for rural populations, mortality rates are higher, indicating the critical importance of early detection through screening. According to the CDC, "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…The primary drivers of rural/urban cancer disparities are related to differences in prevention, screening, treatment for cancer patients, and cancer survivorship." [1]

What Do We Know About Cancer Disparities in Rural America?

CDC has published a series of Morbidity and Mortality Weekly Reports (MMWRs) on rural health and rural cancer issues looking at differences between death rates in rural and non-rural populations.

Data highlights of these reports include:

- "Across the United States, individuals in rural areas experienced higher age-adjusted death rates those in metropolitan areas." [2]
- "The percentages of potentially excess deaths among persons aged <80 years from the five leading causes (heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke) were higher in nonmetropolitan areas than in metropolitan areas."[2]
- "The gap between the most rural and urban counties for potentially excess deaths increased during 2010-2017 for cancer, heart disease and CLRD, Chronic Lower Respiratory Disease)."[3]
- "By cancer site, nonmetropolitan rural counties experienced higher death rates than metropolitan counties for cancers of the lung, colon and rectum, prostate, and cervix; for female breast cancer, death rates were higher than in metropolitan counties with <1 million population but similar to rates of other counties." [1]

In 2017, CDC reported: “In the approximately five-year period 2009-2013, nonmetropolitan rural counties had lower average annual age-adjusted **incidence** rates for all cancer sites combined, **but higher average annual age-adjusted death rates for all cancer sites combined, than nonmetropolitan urban and metropolitan counties.** During the most recent 10-year period with available data, the annual age-adjusted overall cancer death rates decreased more slowly in rural counties (-1.0% per year) than in metropolitan counties (-1.6% per year). [4]

Rural counties had higher incidence and death rates for cancers related to smoking (e.g., lung and laryngeal cancers) and cancers that can be prevented by screening (i.e., colorectal and cervical cancers). Rates for these cancers also decreased more slowly in nonmetropolitan counties than in metropolitan counties, increasing disparities. Rural counties also had higher incidence rates of cancers related to human papillomavirus (HPV) (cancers of the cervix, oral cavity, and pharynx).“ [4]

Life and Health Issues in Rural America

A study of issues in rural America conducted by Harvard’s TH Chan School of Public Health, National Public Radio, and the Robert Wood Johnson Foundation, “Life in Rural America” (2018), indicated: “When asked about the biggest problem facing themselves and their families, more than one-quarter of rural Americans say financial problems (27%), while **16% cite concerns related to health or healthcare.** No other issues were mentioned by more than 10% of rural Americans.” In addition, the report stated, “Almost one-quarter of rural Americans (23%) say that drug addiction or abuse is the most urgent health problem currently facing their community, **followed by cancer (12%) and access to health care (11%).”** [5]

The follow-up report, “Life in Rural America, Part 2” (2019), found that, “About one-quarter of rural Americans (26%) say there has been a time in the past few years when they needed healthcare but did not get it, while 72% say they received healthcare every time they needed it in the past few years. More than four in 10 rural adults without health insurance (42%) did not get care when they needed it, but also even about one in four rural Americans who have health insurance (24%) did not get care when they needed it.” [6]

Rural Americans often reported that issues with access to healthcare were due to financial and physical barriers. About 45% of rural adults said that not being able to afford healthcare was a reason they did not get the care they needed; 23% said they felt the healthcare location was too far or too difficult to get to; 22% said they could not get an appointment during the hours they needed; and 19% said they could not find a doctor who would take their health insurance. Closure of rural hospitals in the past few years has accelerated and exacerbated the issues regarding access to preventive services such as mammography and access to specialists for such services as colonoscopy and follow-up to abnormal screening results. While telehealth expansion due to the COVID-19 pandemic has been of benefit to rural health, the report indicated that, “About one in five rural Americans (21%) say access to high-speed internet is a problem for them or their family, including one in 10 (10%) who say it is a major problem.” [6]

The National Advisory Committee on Rural Health and Human Services (2019) noted: "Longer travel distances to health services also affects cancer screening and participation in clinical trials. Compared to urban populations, low screening rates have been observed among rural residents in different settings and populations, for example, breast and colorectal screenings among Medicare beneficiaries, breast and cervical screenings among Hispanic and American Indian women residing in the American Southwest, and cervical screenings among women living in persistent poverty rural counties." [7]

Rural conditions provide challenges for both cancer screening and the needs of cancer patients receiving treatment as well as survivors needs. For example, CDC's Division of Cancer Prevention and Control has published a Rural Health Policy Brief, "Preventing and Treating Cancer in Rural America", in which it is noted: "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. 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…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." [8]

What are the Implications for Cancer Prevention and Control Screening Programs?

The major federal health agencies – Centers for Disease Control and Prevention, (CDC), National Cancer Institute (NCI), and the Health Resources and Services Administration (HRSA) are all engaged in strategy implementation for rural cancer control. The following are strategies to enhance opportunities for cancer screening in rural areas.

Community Health Workers – The Community Guide to Preventive Services recommends engaging Community Health Workers to enhance cancer screening: "The Community Preventive Services Task Force (CPSTF) recommends interventions that engage community health workers to increase screening for breast, cervical, or colorectal cancer. Evidence from systematic reviews reported interventions were effective when community health workers were engaged independently or as part of a team. Systematic reviews of economic evidence showed these interventions were cost-effective for cervical and colorectal cancer. There was not enough evidence to determine cost-effectiveness for breast cancer interventions. These interventions typically are implemented in underserved communities to improve health and can enhance health equity." [9]

The CDC summarized the evidence on community health workers (CHWs) in a policy brief (2015), "Addressing Chronic Disease through Community Health Workers: A Policy and Systems-Level Approach," and stated: "The unique role of CHWs as culturally competent mediators (health brokers) between providers of health services and the members of diverse communities, as well as CHWs' effectiveness in promoting the use of primary and follow-up

care for preventing and managing disease, have been extensively documented and recognized for a variety of healthcare concerns, including asthma, hypertension, diabetes, **cancer**, immunizations, maternal and child health, nutrition, tuberculosis, and HIV and AIDS."[10]

Patient Navigation - CDC describes patient navigators as "Staff members who work with patients to overcome barriers and understand the medical system. Their support can help patients get the cancer screenings and follow-up care they need."[11] The CDC funded, New Hampshire Colorectal Cancer Screening (NHCRCSP) program "patient navigation model has been highly effective in increasing the completion and quality of colonoscopy screening among low income, uninsured, and underinsured groups. The results of a comparison group study showed that navigated patients were 11 times more likely to complete their colonoscopy than non-navigated patients." Patient navigation conducted on-site or remotely can be effective in enhancing cancer screening in the rural health setting. Given the success found in the study, CDC and NHCRCSP developed a manual to help others replicate the model.[12] This may be a viable adjunct to rural cancer screening programs.

Mailed FIT (fecal immunochemical test) - The CDC Policy Brief on "Preventing and Treating Cancer In Rural America"[1] recommends that programs "Promote the option of colorectal cancer stool tests in traditional and nontraditional settings, and utilize options such as mailed FIT Recent studies have supported the use of mailed FIT tests." [7] It indicates, "Promoting discussion between rural healthcare providers and their patients about the option of stool tests may help raise screening rates." Additionally, an expert stakeholder panel convened by CDC's Division of Cancer Prevention and Control concluded, that mailed FIT "is an effective and efficient strategy with great potential for increasing colorectal cancer screening in diverse healthcare settings if more widely implemented." [13] The CDC-funded Colorectal Cancer Control Program (CRCCP) in Washington State partnered with a large federally qualified health center, to implement a direct-mail FIT program. The health center provided FIT kits to patients who were overdue for colorectal cancer screening. A resource reporting of this is available at www.cdc.gov/cancer/crccp/manuscripts/effectiveness-cost-mailed-FIT-program.htm[14]

Telehealth - Telehealth has been important for rural areas for a long time, and is even more important as we deal with the COVID-19 pandemic. According to HRSA, "The range and use of telehealth services have expanded over the past decades, along with the role of technology in improving and coordinating care. Telehealth is defined as the use of electronic information and telecommunication technologies to support long-distance clinical healthcare, patient and professional health-related education, public health, and health administration. Technologies include video conferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications."[15] The well-known Project ECHO includes a cancer collaborative for telehealth in cancer prevention, control, and survivorship.[16,17] The COVID-19 pandemic has provided new opportunities for insurance coverage of telehealth; however, this is a changing situation that may be monitored for latest updates.

Transportation - CDC's DCPC and others, including the Life in Rural America report, indicated that transportation is a significant barrier in rural America for both screening and

treatment access. CDC recommends linking with state Rural Transit Assistance Programs (RTAPs). 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. Other innovative strategies to remove transportation barriers are important to explore.[18]

What Should State Cancer Programs Do?

Link with NCI Cancer Centers as feasible - The National Cancer Institute's network of Designated Cancer Centers includes Cancer Centers and Comprehensive Cancer Centers that focus on outreach and engagement strategies with their communities. The NCI's Division of Cancer Control and Population Sciences (DCCPS) is funding 21 of the NCI-designated Cancer Centers to develop research capacity and feasibility on rural cancer control, including, but not limited to conducting studies in collaboration with clinics serving low-income and underserved rural populations and/or American Indian populations.[19] Partnering with these sites and their outreach and education staff may provide synergy to enhance cancer screening.

Link with Comprehensive Cancer Programs and Coalitions - 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. Cancer coalitions may bring a variety of partnerships to bear on the rural cancer screening issue. [20] Cancer screening programs should work with these programs and coalitions to assure that rural cancer control is addressed in state cancer plans.

Link with Federally Qualified Health Centers -The foundation of healthcare in rural areas can be seen through the network of HRSA-funded federally qualified health centers. This is covered in the complementary policy brief issued by NACDD, "Cancer Screening and Community Health Centers."[21]

HRSA offers a valuable resource on rural health collaboration: "A Guide for Rural Health Care Collaboration and Coordination" (2019).[22]

This publication was supported by the Cooperative Agreement Number 6NU38OT000286-01, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Center for Disease Control and Prevention or the Department of Health and Human Services.

Prepared by: Randy Schwartz, MSPH, and Paula F. Clayton, MS, RDN, LD

The National Association of Chronic Disease Directors
Promoting Health. Preventing Disease.
The National Association of Chronic Disease Directors (NACDD) and its more than 7,000 Members seek to strengthen state-based leadership and expertise for chronic disease prevention and control in states and nationally. Established in 1988, in partnership with the U.S. Centers for Disease Control and Prevention, NACDD is the only membership association of its kind to serve and represent every chronic disease division in all states and U.S. territories. For more information, visit chronicdisease.org.

References

1. CDC Rural Health Policy Brief, Preventing and Treating Cancer in Rural America, available at: - www.cdc.gov/ruralhealth/cancer/policybrief.html

2. 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.

3. Garcia MC, Rossen LM, Bastian B, et al. Potentially Excess Deaths from the Five Leading Causes of Death in Metropolitan and Nonmetropolitan Counties – United States, 2010-2017, MMWR Surveill Summ 2019;68(no.SS-10):1-11. DOI: http://dx.doi.org/10.15585/mmwr.ss6810a1

4. Henley, SJ, Anderson RN, Thomas CC, Masetti, 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

5. Harvard T.H. Chan School of Public Health, NPR, Robert Wood Johnson Foundation, "Life in Rural America," October 2018

6. Harvard T.H. Chan School of Public Health, NPR, Robert Wood Johnson Foundation, "Life in Rural America, Part 2," May 2019.

7. National Advisory Committee on Health and Human Services, Examining Rural Cancer Prevention and Control Efforts, Policy Brief and Recommendations to the Secretary, August 2019

8. CDC, Office of the Associate Director for Policy, "Preventing and Treating Cancer in Rural America": www.cdc.gov/ruralhealth/cancer/policybrief.html#:~:text=Preventing%20and%20Treating%20Cancer%20in,status%20and%20potential%20next%20steps.

9. CDC, The Community Guide to Preventive Services, "Engaging Community Health Workers to Increase Cancer Screening is Effective and Cost-Effective," www.thecommunityguide.org/content/engaging-community-health-workers-increase-cancer-screening-effective-and-cost-effective

10. Centers for Disease Control and Prevention, Addressing Chronic Disease Through Community Health Workers: A POLICY AND SYSTEMS-LEVEL APPROACH, Second Edition, April 2015

11. CDC, Patient Navigation**,** You Can Help Patients Overcome Barriers to Cancer Screening**,** www.cdc.gov/screenoutcancer/patient-navigation.htm

12. Centers for Disease Control and Prevention, New Hampshire Colorectal Cancer Screening Program Patient Navigation Model for Increasing Colonoscopy Quality and Completion A Replication Manual, October 2016

13. Kemper K, Glaze B., Eastman C, et al. Effectiveness and Cost of Multilayered Colorectal Cancer Screening Promotion Interventions at Federally Qualified Health Centers in Washington State. Cancer. 2018;124 (21), 4121-4129. https://doi.org/10.1002/cncr.31693

14. Gupta S, Coronado GD, Argenbright K, et al. Mailed Fecal Immunochemical Test Outreach for Colorectal Cancer Screening: Summary of a Centers for Disease Control and Prevention-Sponsored Summit [published online ahead of print, 2020 Jun 25]. *CA Cancer J Clin*. 2020;10.3322/caac.21615. doi:10.3322/caac.21615

15. www.hrsa.gov/rural-health/telehealth

16. https://echo.unm.edu/collaboratives/cancer-echo

17. Arora, S, Hawk, E. Ensuring Equitable Cancer Care for All Patients, ASCO Post 2017, www.ascopost.com/issues/may-10-2017/ensuring-equitable-cancer-care-for-all-patients

18. Rural Health Information Hub. (2017). Transportation to Support Rural Healthcare. Retrieved from www.ruralhealthinfo.org/topics/transportation#strategies

19. www.cancer.gov/about-nci/organization/crchd/inp/non#:~:text=The%20National%20Outreach%20Network%20(NON,CHEs)%20located%20at%20NCI%2Ddesignated

20. www.cdc.gov/cancer/ncccp/index.htm#:~:text=Since%201998%2C%20CDC's%20National%20Comprehensive,to%20prevent%20and%20control%20cancer.

21. www.chronicdisease.org/page/cancer_briefs_19/Impact of the Changing Health Policy Environment on State Cancer Program: Cancer Screening and Community Health Centers

22. U.S. Department of Health and Human Services, Health Resources and Services Administration, A Guide for Rural Health Care Collaboration. Rockville, Maryland: U.S. Department of Health and Human Services, 2019.