CREATING A CULTURE OF HEALTH IN APPALACHIA
Disparities and Bright Spots

ARC   FOUNDATION FOR A HEALTHY KENTUCKY   Robert Wood Johnson Foundation

Exploring Bright Spots in Appalachian Health: Case Studies
Executive Summary

OVERVIEW

Longstanding perceptions of Appalachia paint a picture of a monolithic region, one characterized by low-income communities, lack of education and racial diversity, and limited economic opportunity. The reality is that Appalachia is by nature a diverse and complex region of the country, stretching across 205,000 square miles in 13 states, and home to more than 25 million people. While as a region it has faced, and continues to face, greater economic challenges than the rest of the country, statistics show that Appalachia has achieved progress or evolved in a number of significant ways over the last decades:

- Many Appalachian counties are economically distressed, but since 1960, the Region's poverty rate has dropped by almost half—from 31 percent in 1960 to 17 percent in the period 2011–2015 (compared with a national rate of 15.5 percent in 2011–2015).

- The Region's population is racially diverse. Many counties are home to large minority populations, and, in some counties, black and Latino residents constitute the majority.

- High school graduation rates have steadily improved since 1960. The Region's graduation rate is now on par with the rest of the country.

Statistics also show that within Appalachia, there is considerable diversity in the socioeconomic characteristics of different subregions:

- Northern Appalachia's poverty rate is 14.5 percent, compared with Central Appalachia's rate of 24.4 percent.

- Minorities make up 31.3 percent of Southern Appalachia's population. They are 11 percent of Northern Appalachia's.

- In South Central Appalachia, 19.6 percent of the population age 25 and up holds at least a bachelor's degree; in North Central Appalachia, the figure is 14 percent.[1]

But these differences within the Region are reflective of diversity at the most fundamental level, the communities. Appalachian communities vary widely in their characteristics, their resources, and their levels of physical, social, and economic health: In the ten Appalachian counties examined for this report, the 2014 unemployment rate ranged from a low of 6.2 percent to a high of 12.4 percent, compared with the national unemployment rate of 6.2 percent.[2] Employment options differ widely from county to county, ranging from retail to health services to manufacturing. Some of those counties have a thriving arts community, while others draw thousands of outdoor enthusiasts to their hiking trails and other outdoor-recreation attractions.

Although Appalachian communities face different sets of challenges related to their individual characteristics, one common challenge many of them are working to address today is poor health

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[1] Poverty, demographic, and education data come from the American Community Survey, 2011–2015.
[2] U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, 2014

outcomes among their residents. Appalachia has higher mortality rates in 7 of the leading causes of death in the United States: heart disease, cancer, COPD, unintentional injury, including drug overdose, stroke, diabetes, and suicide.[3] The Appalachian Region's number of physically unhealthy days, mentally unhealthy days, and prevalence of depression are all higher than the national averages for these measures. Obesity, smoking, and physical inactivity—risk factors for a number of health outcomes—are all higher in Appalachia than in the nation overall. The Region also has lower supplies of healthcare professionals when compared to the United States as a whole, including primary care physicians, mental health providers, specialty physicians, and dentists. Lower household incomes and higher poverty rates—both social determinants of health—reflect worse living conditions in the Region than in the nation as a whole.

Over the past two decades, the Appalachian Region as a whole has made some progress in a number of health measures. However, the progress often comes up short when compared with the progress made by the United States overall, and indicates a widening gap in overall health between Appalachia and the nation as a whole.

EXPLORING BRIGHT SPOTS IN APPALACHIAN HEALTH

This report, *Exploring Bright Spots in Appalachian Health: Case Studies*, looks at how ten Appalachian counties with health outcomes that are better than expected—given the counties' characteristics and resources—are using their resources and strengths in different ways to address their health challenges. It identifies concrete actions these communities are taking to improve health and well-being, that others in the Region can work to replicate.

This is the qualitative companion report to the second report in the series, *Identifying Bright Spots in Appalachian Health: Statistical Analysis*, which described the analysis used to assess how each of the 420 Appalachian counties scored on 19 health indicators, and identified counties with better-than-expected outcomes given their characteristics and resource levels.[4]

Using the average degree to which a county's observed health outcomes exceeded predicted values, the model identified the counties that either did very well on a few measures or exceeded expectations across

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[3] See *Health Disparities in Appalachia* for more details about health outcomes in the Appalachian Region.

[4] See *Identifying Bright Spots in Appalachian Health: Statistical Analysis* for more details on the analysis.

many health outcomes. Ultimately, 42 Appalachian counties—the top ten percent of counties in the Region—were classified as "Bright Spots."

Exploring Bright Spots in Appalachian Health: Case Studies presents in-depth qualitative analyses of ten Bright Spot counties identified by the statistical analysis; digs deeper to explore local perceptions of practices that may be associated with better-than-expected health outcomes; and summarizes promising strategies that may be replicable in other communities.

 Together, these companion reports:

- Identify Bright Spot counties that exhibit better-than-expected health outcomes given their resources; and

- Explore ten Bright Spot counties through in-depth, field-based case studies.

The reports offer a basis for understanding and addressing health in the Appalachian Region and identify factors that support a culture of health in Appalachian communities. They also explore activities, programs, and policies that appear to encourage better-than-expected health outcomes.

It is important to note that because the research team only studied counties that were classified as Bright Spots, we cannot attest that these conditions and practices distinguish Bright Spot counties from Appalachian counties whose outcome measures are not better than expected. To make such a determination would require a comparative research design and longer immersion in the field. We can say, however, based on previous public health research, that the practices we uncovered tend to be associated with better population-level health outcomes.

The fourth and final report in the series, expected to be published in late 2018, will provide recommendations for practical strategies and activities that build on the findings of the first three reports.

FOSTERING A CULTURE OF HEALTH

For decades, the country's approach to health has been grounded in providing the best possible medical treatment and striving to make that care accessible and affordable. Research, however, shows that there is more to health than health *care*—although that is critically important. Where one lives, learns, works, and plays can have a greater impact on health than having access to a doctor. Given this knowledge, health systems, civic leaders, employers, community coalitions, and residents are collaborating to create communities that help people stay healthy in the first place.

RWJF is championing efforts like these to foster a Culture of Health. According to RWJF, building a Culture of Health means creating a society that gives every person an equal opportunity to live the healthiest life they can—whatever their ethnic, geographic, racial, socioeconomic, or physical circumstances happen to be. A Culture of Health recognizes that health and well-being are greatly influenced by where we live, how we work, the safety of our surroundings, and the strength and connectivity of our families and communities.

Research from the federal Centers for Disease Control and Prevention (CDC) shows that living in communities with inadequate housing, lower income levels, unsafe neighborhoods, limited access to food, or substandard education can have a detrimental effect on a person's health. Efforts to address these conditions can improve individual and population health and lead to greater health equity.

THE BRIGHT SPOT COUNTIES

Progress in the socioeconomic and health spheres are often interrelated if not interdependent, and this is no different in Appalachia. The Region's economy, once highly dependent on mining, forestry, and agriculture, has diversified in recent decades, and now includes larger shares of manufacturing and professional services, among other industries. The number of high-poverty counties in the Region (those with poverty rates more than 1.5 times the U.S. average) declined from 295 in 1960 to 87 when measured from 2011 to 2015. However, incomes, poverty rates, unemployment rates, and post-secondary education levels continue to lag behind performance at the national level.

Although the Region as a whole performs poorly on many health outcomes and drivers of health compared to the rest of the nation, many Appalachian communities are exceeding expectations on a number of health indicators. This report dives deep into ten of those communities to explore the practices, programs, and policies that may be leading to their better-than-expected health outcomes.

These ten counties represent each of Appalachia's five subregions, include eight states, both metropolitan and nonmetropolitan areas, and three of ARC's five economic status classifications (see Table 1 and Figure 1).

Table 1: Selected Characteristics of Case Study Counties

State	County	Subregion	Census Designation	2014 Population	Economic Status[5]
AL	Hale	Southern	Metropolitan	15,393	Distressed
KY	McCreary	Central	Nonmetropolitan	18,073	Distressed
KY	Wayne	Central	Nonmetropolitan	20,728	Distressed
MS	Noxubee	Southern	Nonmetropolitan	11,240	Distressed
NY	Tioga	Northern	Metropolitan	50,464	Transitional
NC	Madison	South Central	Metropolitan	20,951	At-Risk
PA	Potter	Northern	Nonmetropolitan	17,451	Transitional
TN	Sequatchie	South Central	Metropolitan	14,431	Transitional
WV	Grant	North Central	Nonmetropolitan	11,829	Transitional
WV	Wirt	North Central	Metropolitan	5,810	At-Risk

It is important to note that the Bright Spot counties are not distributed evenly among the Appalachian states. The statistical analysis in the accompanying quantitative report determined that Kentucky and Mississippi have proportionately more Bright Spot counties than other states. The model did not identify any Bright Spot counties in Ohio despite the fact that the state contains 32 Appalachian counties. South Carolina and Maryland also had no identified Bright Spot counties.

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[5] Fiscal year 2017

**Figure 1: Map – OMB Designation of Appalachian Bright Spot Counties
(Metropolitan/Nonmetropolitan)**
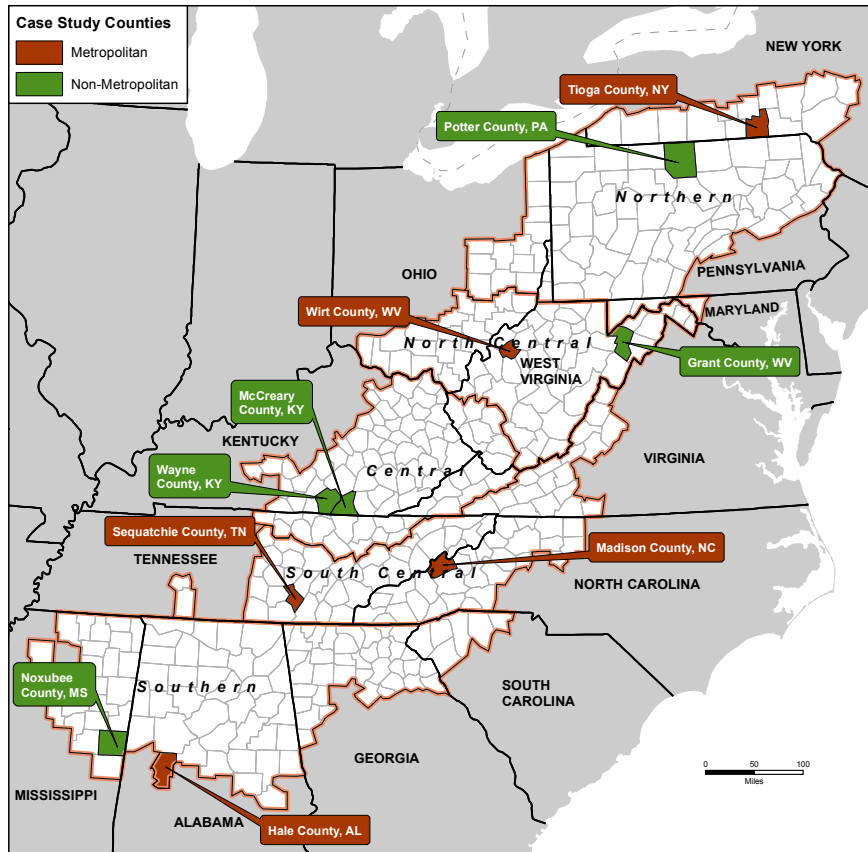
While each of the ten counties has a unique health outcomes profile, all performed better than expected on premature mortality, injury mortality, and the prevalence of depression in Medicare patients (see Table 2). Wayne, Noxubee, and Hale Counties stand out for both the range of outcomes that were better than expected and the extent to which the outcomes exceeded expectations.

Table 2: Health Outcomes in the Case Study Counties

Category	Indicator	Wayne	Noxubee	Hale	Wirt	Sequatchie	Tioga	McCreary	Potter	Madison	Grant	Total Counties Better Than Expected per Measure (Max = 10)
Mortality and Morbidity	YPLL	●	●	●	●	●	●	●	●	●	●	10
	Stroke	●	●	●	●	●	●	●	●		●	9
	Cancer	●	●	●		●		●		●	●	7
	Injury	●	●	●	●	●	●	●	●	●	●	10
	COPD	●	●	●	●	●	●	●	●		●	9
	Heart disease	●	●	●	●	●	●	●	●	●		9
Mental Health	Mentally bad day	●	●	●		●	●			●	●	5
	Suicide mortality	●	●	●	●	●		●		●	●	8
	Depression	●	●	●	●	●	●	●	●	●	●	10
Child Health	% low birthweight	●	●			●	●	●	●	●	●	7
	Infant mortality	●	●	●	●	●	●	●	●	●		8
Chronic Disease	Diabetes	●			●	●					●	4
	Heart disease hospitalization	●	●	●	●	●		●	●	●	●	9
	Medicare HCC	●	●	●	●		●	●	●	●	●	9
	Obesity			●		●		●		●		4
	Physically bad day		●			●		●		●		4
Substance Abuse	Excessive drinking	●		●	●	●	●		●		●	7
	Poison mortal	●	●	●	●	●		●		●	●	8
	Opioid Rx		●		●		●		●		●	5
Total Better-than-Expected Outcomes per County (Max = 19)		16	16	15	14	14	14	14	14	13	12	

The expected values for the 19 health outcome measures are based on the regression analysis described in the *Statistical Analysis* companion report. The regression predicted health outcomes for every county in Appalachia using 29 health drivers associated with the environment, health behaviors, health care delivery system, quality of health care, and social determinants. It then compared actual outcomes with expected outcomes and standardized the differences to identify the counties in the top decile in both the metropolitan and nonmetropolitan categories. Data in the study cover the years 2008 to 2014.

A DEEPER LOOK AT THE BRIGHT SPOT COUNTIES

Each of the ten Bright Spot counties has its own particular health-related challenges, available resources for dealing with them, and different responses. But there are similarities in the solutions and strategies they employed. These fall into six broad categories:

- Community leaders engaged in health initiatives

- Cross-sector collaboration

- Resource sharing
  - Transportation
  - Food
  - Shelter

- Local healthcare providers committed to public health

- Active faith community

- Initiatives to combat substance abuse

Communities, policymakers, and funders who are interested in improving health outcomes could examine opportunities focusing on initiatives aligned in these broad categories.

Community Leaders Engaged in Health Initiatives

Sustained, committed leadership is critical to helping communities improve health outcomes. In the ten Bright Spots studied, we found dedicated leaders who demonstrated resilience honed by decades of commitment to making the county a healthy place to live and visit. Each of the counties has a local leader or leaders with credibility, know-how, and a drive to make programs successful. These individuals include political officials, business leaders, volunteers, and health care workers. Coalitions of citizens work together toward a common goal, and even large employers are dedicated to the health and well-being of their employees.

Most receive training through formal leadership development programs or informally through local organizations or relationships. All appear to get support in a number of areas, including skill development, mentoring, encouragement, income assistance, and networking strategies and tools. Groups providing support include the U.S. Department of Agriculture Cooperative Extension, university extension agencies, regional health care providers, regional health departments, area health education programs, national faith-based organizations, governments, and nonprofits.

Many leaders have years of experience working together. Groups of leaders and citizens meet face to face regularly to discuss health issues in the county and formulate responses. These groups—health coalitions, health councils, health consortiums, and community health advisory boards—function in a democratic way and are not dominated by any single member. They also form strong networks of communication and cooperation.

Cross-Sector Collaboration

Cross-sector collaboration within a county—or between neighboring counties—is a given in Bright Spot communities. In the words of Peggy Bobo Alt, deputy director of emergency services in Grant County, West Virginia: "Nobody has the resources to take care of everything all the time, so we're sharing and helping, and that has been good here."

Collaboration among formal and informal organizations, long-time residents, and relative newcomers helps counties stretch and focus local resources while also avoiding wasteful duplication. These collaborations are facilitated by a seeming absence of turf wars, minimal competition, and sharing credit for accomplishments.

Almost every county studied has formal coalitions that meet regularly. They bring together government leaders, health care providers, local churches, and senior centers as well as less formal groups of volunteers from food banks, food delivery programs, and after-school programs. A core group of dedicated, long-term leaders combine forces to meet community needs.

In many communities, employers recognize the value of a healthy community and healthy employees, support comprehensive health insurance plans, wellness programs, and participate in community health fairs. In Hale County, Alabama, an industrial board that serves like a Chamber of Commerce to attract business also collaborates with the health department and the University of Alabama's extension office to provide health education.

Area Agencies on Aging are frequently central to collaborative efforts, often providing needed resources. And social service agencies often collaborate with health providers to ensure access, either by providing transportation to health care services or by taking the needed services to clients. Tioga County, New York and Potter County, Pennsylvania house a range of service providers in one building, which fosters access for social service program beneficiaries as well as communication and cooperation among providers.

Resource Sharing

Patterns of cooperation and resource sharing differ, but one thread consistently identified in each Bright Spot community was a strong network of local volunteers. These volunteers engaged in outreach to isolated community members, delivered food, and provided a broad range of services. Each Bright Spot community also set aside any differences to achieve core, shared goals. This enables leaders to accomplish more with the resources available to them, sometimes pooling resources to more effectively meet needs.

Resource sharing includes combining different programs with multiple sources of funding to address local challenges. Examples include efforts to keep seniors and youth nourished, sheltered, engaged, and healthy. Resource sharing extends to co-sponsorship of expos and fairs where county residents can obtain free or subsidized health screenings.

Remote counties that do not have their own health care systems, or local specialty care services, rely on multicounty or regional organizations to obtain the health care services they need. This cross-county pooling of resources is crucial to residents in otherwise underserved counties.

People interviewed in each of the ten Bright Spot counties stressed the importance of transportation, food, and shelter safety nets. Intense poverty and a lack of reliable transportation make it difficult for many in these counties to access available food or obtain other services. Children and seniors, in particular, are often at risk of going hungry.

Programs to improve local health generally involve low-cost solutions to address social determinants of health, such as providing affordable housing or help with utility bills; access to balanced and healthy food; health screenings with follow-ups; and wrap-around substance abuse programs that remove stigma, engage the entire community, provide clear information about risks, eliminate easy access to drugs through prescription take-back programs, and assist with recovery.

Transportation

Transporting people to services and food sites is a continuing struggle in many counties. Kentucky's Wayne and McCreary counties have formal Rural Transit Enterprises Coordinated programs that run scheduled vans covered through Medicaid. In other counties, churches, volunteer organizations, and senior centers provide transportation. In Tioga County, New York, cuts in Medicaid eligibility prompted the formation of a largely volunteer transportation service called Neighbors Helping Neighbors.

Food

In Noxubee County, Mississippi, at least a half-dozen programs provide food to low-income children at churches and community centers year-round. Churches also provide afterschool food programs for low-income children. In Wayne County, Kentucky, students grow and harvest fresh fruits and vegetables from a four-acre garden originally planted by the school food service director. The Hope Center, also located in Wayne County, provides weekend bag lunches to keep children from going hungry on the days when they are not in school.

Shelter

A recent American Hospital Association study shows that housing takes priority over health care when resources are tight. Noxubee County, Mississippi; Hale County, Alabama; and Tioga County, New York all offer programs to address affordable shelter. While some assist residents with utility payments, others focus on affordable home ownership.

Local Providers Committed to Public Health

In all ten counties studied, health care providers are essential to the health of the surrounding communities. They have long recognized that the health of their patients depends on more than the medical care they provide. "We recognized several years ago that we had to go beyond the four walls of the hospital," says Grant Memorial Hospital CEO Mary Beth Barr. "We needed to serve the entire community."

Residents trust their local providers, whether they are an individual provider, hospital, or service network, and whether they are in-community or based in the next county over. While a few counties have an established hospital and easy access to emergency services, others rely on the county health department, small community hospitals, or a regional clinic network. All provide outreach into the community, and most have active regional mental health providers who work with physical health institutions and social service agencies.

In McCreary County, Kentucky, strong local volunteer organizations, emergency medical services, and the library connect residents to health and social services. More than half of the counties studied hold regular health fairs providing basic medical tests and health-related information. Others recognize that the location of health services matters a lot. In Madison County, North Carolina, the nonprofit Hot Springs Health Program operates four medical centers strategically placed around the county to give residents easy access—no one in Madison County has to travel more than half an hour for services. This kind of local outreach and commitment may lower cultural and psychological barriers to seeking care.

Local providers also tend to champion public health-oriented measures such as safe places for walking and efforts to combat substance abuse.

Active Faith Community

Faith-based communities are actively working to promote healthier lifestyles in a variety of ways, including sharing information, hosting health fairs, providing food to nutritionally insecure families, or driving people to medical appointments. They are also involved in providing information and shaping attitudes about substance abuse.

In Sequatchie County, Tennessee, 19 local churches have created the Sequatchie Ministerial Association. This association helps pay utility bills for struggling families, provides a jail ministry, and operates a food bank. Various churches in the community provide yoga and meditation classes, potluck dinners, and health fairs. In Hale County, Alabama, the health department collaborates with local congregations to provide regular screenings in churches or at one of the two area food stores. It distributes flyers about health-related events in area churches. According to many people we interviewed, this is especially effective given a long tradition of sharing news by word-of-mouth.

Initiatives to Combat Substance Abuse

Like much of the rest of the nation, counties in Appalachia are struggling with a substance abuse epidemic. In fact, the poisoning mortality rate in Appalachia (which includes overdose) was 37 percent higher than the national rate during the 2008–2014 period. Most of the ten counties are taking creative, proactive steps to face the issue head-on. These efforts range from organized substance abuse support groups for both addicted persons and their families to initiatives to curb addictive behaviors to low-cost disposal sites. Often, these initiatives involve agencies working across sectors. For example, in Grant County, West Virginia, the coalition called PITAR—Prevention, Intervention, Treatment, Anti-Stigma, and Recovery—comprises representatives from the prosecutor's office, the sheriff's department, the drug court, and treatment centers, and gathers monthly to discuss solutions.

Prevention education for adolescents is common. Schools run programs which educate students on the dangers of drugs and long-term consequences of substance abuse. In Wirt County, West Virginia, schools partner with more than a dozen other agencies to create an annual sober event in which students play games and drive golf carts while wearing vision-altering goggles, often called "beer goggles." Since the program began, there have been no alcohol-related auto deaths after prom and graduation. We could not measure how it translated to sustained health behaviors at other times.

Wirt County, West Virginia, also has a "Drug Take Back Day," during which any resident can dispose of old or unneeded medications at a chosen site. The county also has a permanent receptacle in front of the courthouse where residents can drop off medications, or any other substance, anonymously.

Remaining Gaps

The research done for this report also found common challenges, which may suggest key roles that remain to be filled by outside entities. For example, many health coalitions are inspired to work among youth, but dwindling resources for public education make it increasingly difficult to engage with schools. Private investors, health systems, and insurance payers could fill that gap by investing resources in the schools. At a broader level, sustaining collaborative work depends on thorough planning, resourceful grant-writing, and effective communications—core elements of community capacity that are missing in many rural areas. Regional foundations, community development financial institutions, and advocacy groups could target investment to capacity building services, not just program delivery.

For example, a comprehensive report from the Walsh Center for Rural Health Analysis released in February 2018 recommended that funders—including philanthropies and government agencies—adapt

their funding strategies to address barriers to participation in rural places; provide funding opportunities for rural communities that are ready for change but lack capacity to apply for grants; identify and grow rural leaders by ensuring opportunities for youth engagement and employment; support economic development efforts through investments in rural economies beyond the health care sector; and consider rural communities as program pilot sites to test interventions on a smaller scale, among other interventions that could be adopted in Appalachia.

IMPROVING HEALTH THROUGHOUT APPALACHIA

The patterns evident in the Bright Spot counties encourage further exploration of strategies that could improve health throughout other parts of the Region. Many practices in these ten counties could be replicated elsewhere, and some could be replicated at low cost.

Health councils can be organized wherever local leaders and citizens are willing to join forces to discuss community health problems and possible solutions. These councils or coalitions may also foster cross-sector collaboration that, in turn, promotes efficient use of resources, diminished competition, and pulling together to get things done.

Many of the programs supporting youth and seniors are also relatively inexpensive given that they are often supported by a large volunteer network or existing organizational infrastructure, such as university extension agencies. Some efforts to combat substance abuse are also relatively low-cost, such as providing safe places to discard unused and outdated drugs, and having courts divert low-level offenders into treatment programs.

Other conditions and initiatives are more difficult to replicate, mainly because they are rooted in local culture or historical community services. Half of the ten counties studied had a leading health care provider with roots in the community and strong ties to the local culture. These included "homegrown" publicly owned hospitals or health systems with a record of striving to serve local residents and improve population health. They reduce actual and perceived access barriers through outreach and cultural identification with the community, commit resources to screening and prevention, create extended networks of specialty providers, and help to organize and integrate health promotion efforts at the county level.

Practices that may be more difficult to replicate include strong communication networks among local leaders, a spirit of cooperation, community solidarity, a willingness to share resources and credit, and generous mutual support. These things develop organically over time. However, what may be more easily replicable are the organizational elements associated with these community characteristics: democratically functioning health councils with broad membership; co-located government, health, and social service hubs that aid communication and collaboration; and cooperative ties to regional organizations that can generate new ideas without being imposed from outside the community.

It is clear that making health a shared value is necessary to transform a county into a vibrant, healthy place to live. But concrete action, fostered through sustained leadership and a willingness to work together for the benefit of the community, is just as crucial. This report identifies practices that other counties may want to consider implementing in order to improve overall health.

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