

# Looking Beyond the Urban Core: Tobacco-related Disparities in Rural Missouri



*Prepared for:*  
**Missouri Foundation for Health**

*Prepared by:*  
**Center for Tobacco Policy Research at  
Washington University in St. Louis**

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## **Tobacco-related Disparities in Rural Missouri**

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## Introduction

Eliminating tobacco-related health disparities is a major public health challenge.<sup>1</sup> Despite progress in reducing overall smoking prevalence and secondhand smoke exposure, certain high risk population groups continue to suffer disproportionately from the effects of tobacco use. Identifying and addressing these disparate groups in tobacco control policies and programs is essential.

This report focuses on identifying tobacco-related disparities in terms of geographic location. Prior research has shown that numerous challenges to tobacco control efforts exist in rural settings.<sup>2</sup> National surveys have found smoking and the use of smokeless tobacco to be more common in rural areas compared with urban settings.<sup>2,3</sup> In addition, rural residents have been described as having less access to prevention programs and cessation services compared with people living in more urban areas.<sup>2</sup>

Using data from the 2007 Missouri County-level Study (see Appendix), the Center for Tobacco Policy Research (CTPR) at Washington University in St. Louis conducted analyses of how geographical region relates to tobacco use, secondhand smoke exposure and smoking cessation in Missouri. This topic was initially explored in a previous CTPR report, “Who is Most Affected? Tobacco-related Disparities in Missouri.”<sup>4</sup> However, there are many different ways to classify geographical areas and implications may vary depending on the classification scheme applied.<sup>2,5</sup> The previous report categorized counties into two groups (rural or urban) based on one of the CLS survey questions. While this definition was helpful in identifying tobacco-related disparities between the urban core and the rest of Missouri, it did not account for counties that were in close proximity to a metropolitan area (e.g., St. Louis, Kansas City). This report applies an alternate definition of rural that allows us to look beyond the urban core and distinguish between different levels of rurality.

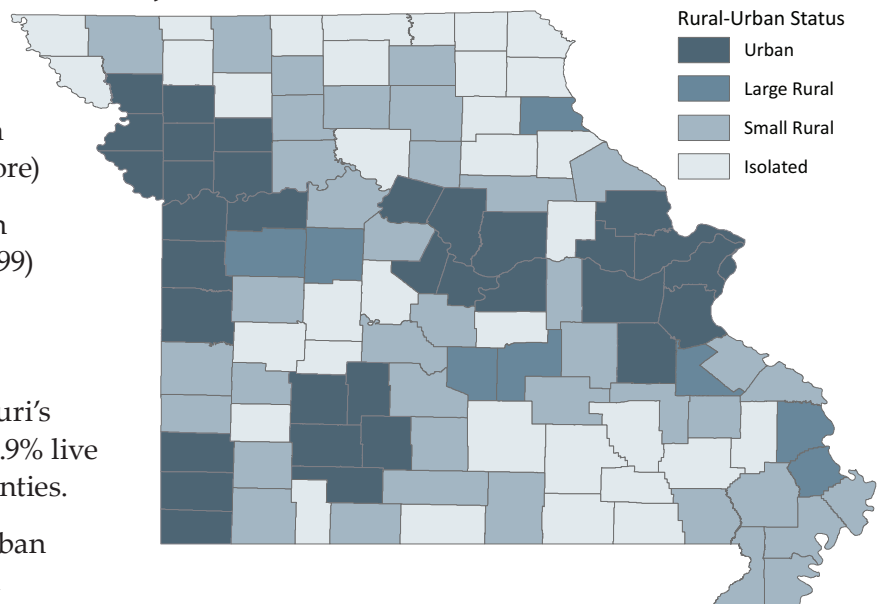
Using rural-urban continuum codes<sup>6</sup>, we classified counties as:

- **Urban** (metropolitan county)
- **Large Rural** (nonmetro county with an urban population of 20,000 or more)
- **Small Rural** (nonmetro county with an urban population of 2,500 to 19,999)
- **Isolated** (nonmetro county with an urban population of less than 2,500)

Based on this classification, 72.7% of Missouri’s population reside in Urban counties and 26.9% live in Large Rural, Small Rural, or Isolated counties.

Although the majority of citizens live in Urban areas, it is imperative to consider Rural and Isolated communities in public health planning. These areas constitute a large portion of Missouri’s physical landscape (72.4% of Missouri’s total land area) and their citizens may face additional health-related challenges due to the economic, cultural and geographic characteristics that define these areas.

**Counties by Rural-Urban Status**

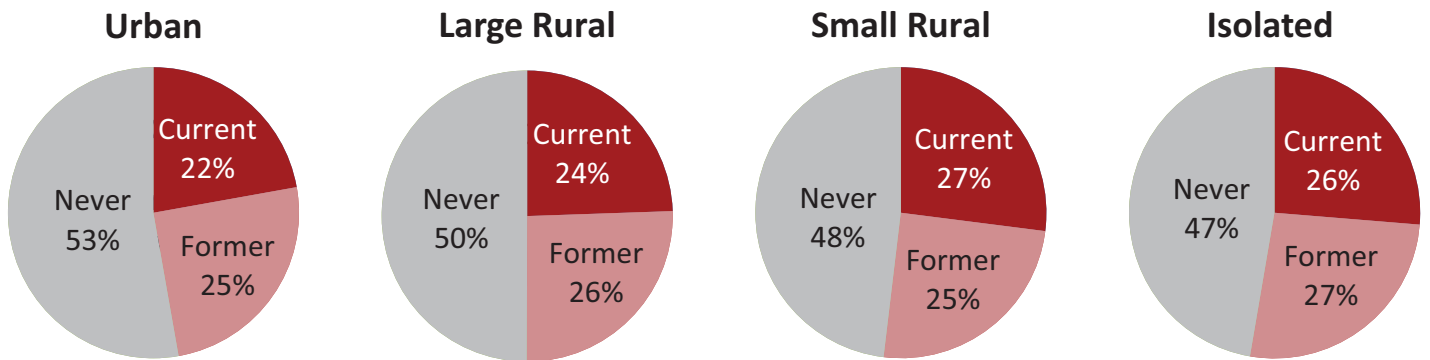


County Classification	% of Missouri Population	Area: Square miles
Urban	72.7%	19,234
Large Rural	6.5%	4,653
Small Rural	15.0%	25,496
Isolated	5.8%	20,320

# Results

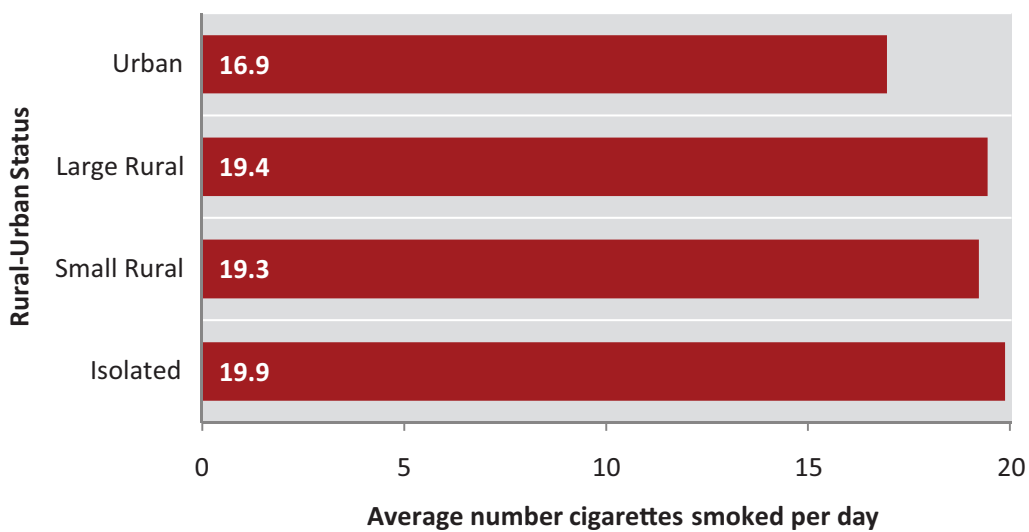
## Smoking Status

The percentage of current smokers in 2007 varied by geographical location. Smoking prevalence was highest among residents in Small Rural counties (27%) and lowest among residents in Urban counties (22%).\*



## Smoking Level

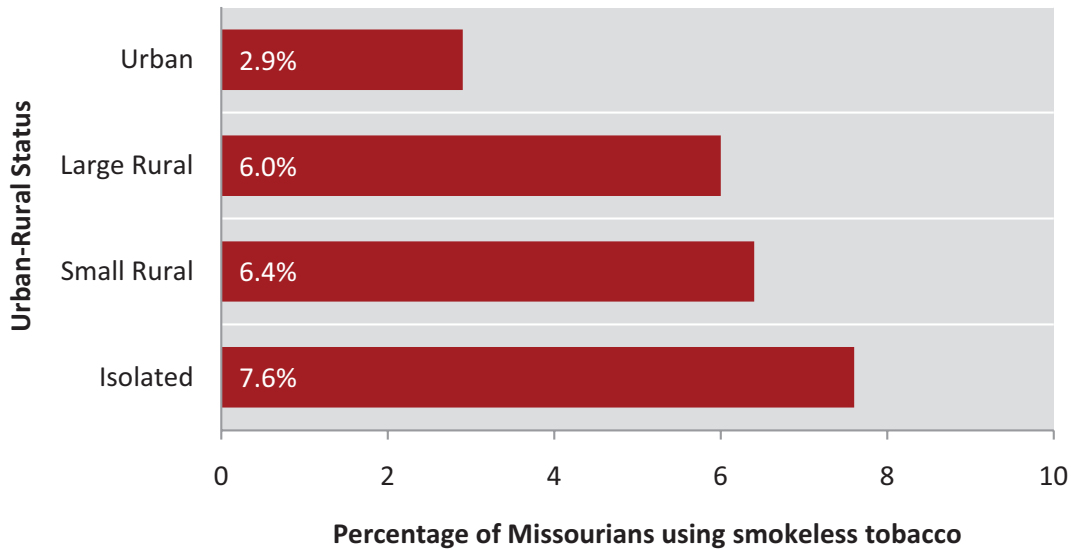
Of those who smoked, residents in Urban counties smoked fewer cigarettes per day on average compared with residents in Small Rural, Large Rural, and Isolated counties.\*



\*Results were statistically significant (p<0.01).

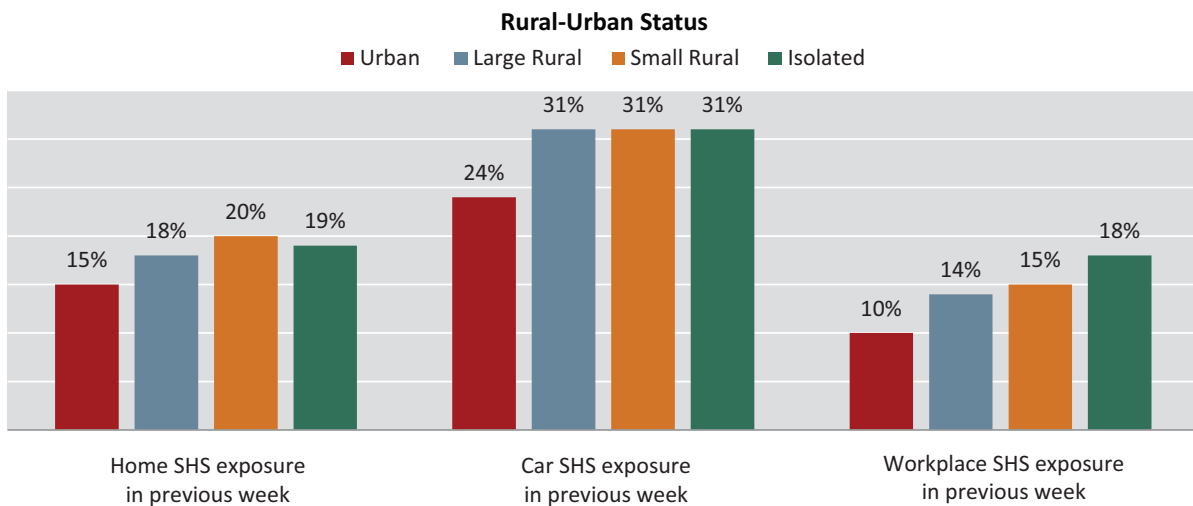
## Smokeless Tobacco Use

Urban-Rural status was significantly related to smokeless tobacco use.\* The percentage of Large Rural, Small Rural, or Isolated residents who used smokeless tobacco products (e.g., chewing tobacco or snuff) was over two times higher than the percentage of Urban residents.



## Secondhand Smoke Exposure

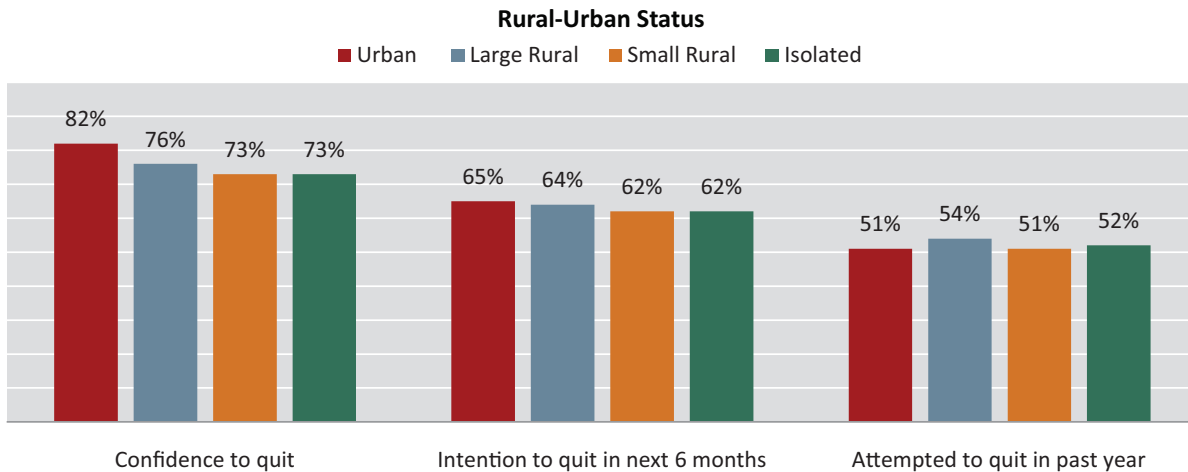
Urban residents were less likely to be exposed to secondhand smoke in the home, car, and workplace than residents living in Large Rural, Small Rural, or Isolated counties.\* Differences were especially noted in the workplace, with 10% of Urban residents exposed vs. 18% of residents in Isolated counties.



\*Results were statistically significant (p<0.01).

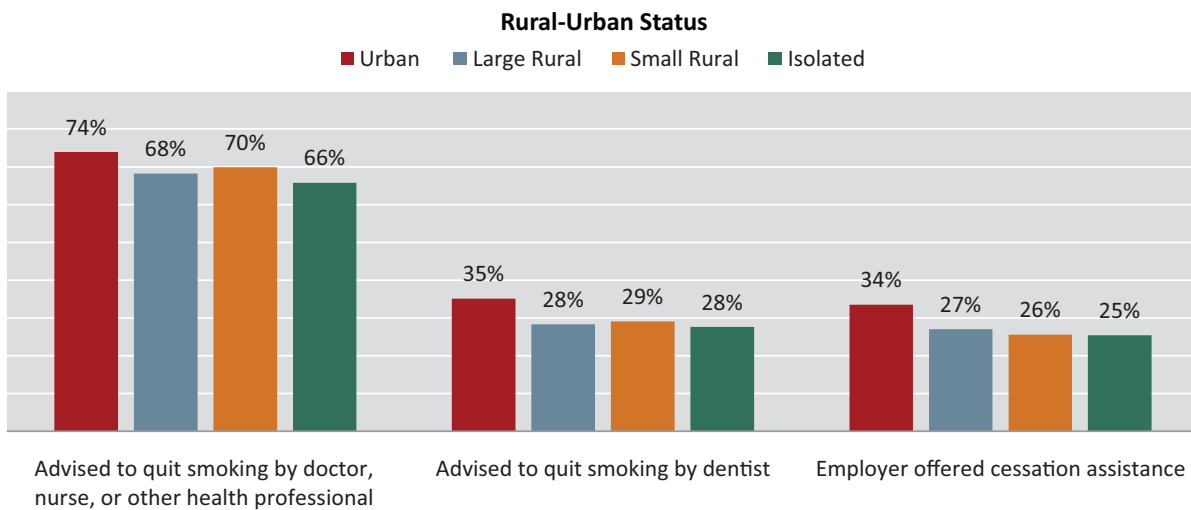
## Smoking Cessation

There was no statistically significant difference in the percentage of smokers who had attempted to quit in the last year or were intending to quit in the next six months among survey participants. However, Urban smokers were more likely to believe they could successfully quit compared to smokers in Large Rural, Small Rural or Isolated areas.\*



## Cessation Advice and Access

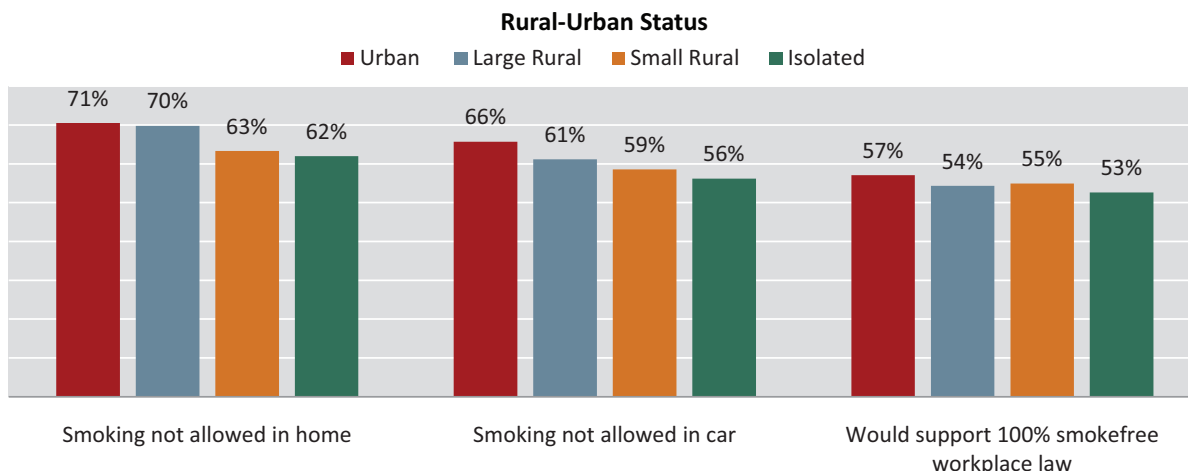
Urban residents were more likely to be advised to quit smoking by a doctor or dentist compared with Large Rural, Small Rural or Isolated residents.\* Among those working indoors, Urban residents were also more likely to be offered cessation assistance by their employer (i.e., stop smoking programs or other help to employees who want to quit smoking) than Large Rural, Small Rural, or Isolated residents.\*



\*Results were statistically significant ( $p < 0.01$ ).

## Smoking Policies

Residents living in Large Rural, Small Rural, or Isolated counties were less likely to have personal rules against smoking inside the home or in their car compared with Urban residents.\* Large Rural, Small Rural, and Isolated residents were also less likely to support 100% smokefree workplace laws than residents living in Urban areas.\*



\*Results were statistically significant ( $p < 0.01$ ).

## Recommendations

There are considerable tobacco-related disparities facing rural areas in Missouri. The findings of this report are consistent with previous literature documenting higher tobacco use and secondhand smoke exposure among residents living in rural or isolated areas.<sup>2</sup> Also in line with previous research, these results suggest that rural residents in Missouri have less access to cessation services.<sup>2</sup>

Based on the findings presented in this report, the following are recommendations for the Missouri tobacco control community:

### **Ensure access to affordable and relevant cessation services.**

Rural smokers face many challenges to cessation. In agreement with previous research, Missouri residents living in Rural or Isolated counties had less access to cessation services. Rural/Isolated smokers were also less likely than Urban smokers to be advised to quit by physicians, dentists or other clinicians. Perhaps as a result of these and other barriers, smokers living in Rural or Isolated counties were less likely to express confidence to quit smoking compared with smokers in Urban counties.

Evidence-based guidelines recommend removing cost and other barriers to tobacco-dependence treatment for groups disproportionately affected by tobacco use.<sup>7-9</sup> A recent recommendation by the American Legacy Foundation also speaks to the need for relevant services, stating:

*“Specific outreach, enrollment, retention, follow-up, and relapse prevention techniques grounded in rural settings are key to effective tobacco cessation programming.”<sup>2</sup>*

In addition, previous research has found that rural residents would prefer clinical encounters that provide specific advice and a non-judgemental approach to smoking cessation.<sup>10</sup>



### **Address smokeless tobacco use in rural settings through public awareness campaigns.**

National surveys have shown relatively high smokeless tobacco use in rural areas.<sup>2</sup> In Missouri, a similar trend is noted with the percentage of Rural or Isolated residents using smokeless tobacco products over twice that of Urban residents. Smokeless tobacco use may be influenced by the social and cultural norms of rural communities.<sup>2</sup> Tobacco manufacturers have tried to reinforce these norms by promoting smokeless products through persistent marketing campaigns in rural areas.<sup>2</sup> Health communication strategies to counter these messages are needed, especially in rural areas.

### **Implement comprehensive population-level tobacco control policies.**

Missouri has the lowest cigarette excise tax rate, \$.17 per pack,<sup>11</sup> of all 50 states and only 13.5% of Missourians are protected by comprehensive smokefree policies that cover workplaces, restaurants, and bars.<sup>12</sup> There are currently 17 municipalities with strong smokefree laws in Missouri.<sup>13</sup> Only four of these laws protect Large or Small Rural county residents and no smokefree ordinances are currently in place that cover Isolated counties.<sup>13</sup>

In order to effectively address geographic disparities in tobacco use and secondhand smoke exposure, statewide policies that reach rural and isolated areas in Missouri are needed. Comprehensive policies such as increasing the tobacco excise tax and 100% smokefree policies have the potential to benefit residents regardless of their geographical location.

**Overall, this report shows that we should pay greater attention to the issues facing rural areas in Missouri. These communities experience tobacco-related disparities in terms of smoking and smokeless tobacco use, secondhand smoke exposure, and support for tobacco-related policy change. In order to affect statewide change and improve the health of all Missourians, the disparities and challenges faced by rural areas will need to be considered in future tobacco control policies and programs.**

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## Appendix

In 2003, the Missouri Department of Health and Senior Services (MDHSS) conducted a study to collect county-specific data on tobacco use and chronic disease prevalence. It proved a valuable resource for public health professionals by providing more regionally focused data; however, the sample size of 15,000 Missouri adults limited effective analysis at the county level for many counties.

To address the need for updated and more comprehensive county-level data, and to establish baseline measures for the Tobacco Prevention and Cessation Initiative, the Missouri Foundation for Health (MFH) partnered with MDHSS in 2007 to expand on the previous data collection activities. Specifically, MFH and MDHSS aimed to determine county-level prevalence of behavioral risk factors, chronic diseases and conditions, and preventive practices among adults age 18 and older in Missouri.

The resulting 2007 County-Level Study (CLS) was implemented by the University of Missouri's Health and Behavioral Risk Research Center, which conducted telephone interviews with Missouri adults between February 2007 and April 2008. The 2007 CLS resulted in 49,513 completed interviews.

Summary results of the 2007 CLS, as well as comparisons to the 2003 data, are available at <http://www.dhss.mo.gov/CommunityDataProfiles>. Information regarding the design and methodology of the 2007 CLS is available at [http://www.dhss.mo.gov/CLS/Design\\_Methodology](http://www.dhss.mo.gov/CLS/Design_Methodology).



