

Examining Disparities in Smoking Among Rural Versus Urban Women of Reproductive Age: 2002-2019

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<http://www.uvm.edu/medicine/behaviorandhealth/>

Acknowledgements/Disclosures

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Introduction

- U.S. rural health disparities have been a concern since the 1980s.
- Rural communities on average have greater prevalence of risky health behaviors and worse outcomes than more urban regions with inadequate healthcare access a notable contributor.
- When the 1964 Surgeon General's report on smoking and cancer was released, smoking prevalence was lower in rural than urban regions for both men and women.
- Smoking has decreased considerably in both areas since 1964 but more so in urban areas so rural areas now have greater prevalence.
- My overarching aim of this presentation is to provide a brief overview of this topic among U.S. women of reproductive age including an examination of disparities in quit ratios.

Programmatic Series of Studies

- We conducted a series of cross-sectional studies examining rural-urban disparities in cigarette smoking using NSDUH.
- Doogan et al. (2017) examined smoking in M & W across years 2007-14 demonstrating an overall increase in disparity across years that was not fully accounted for by sociodemographic differences.
- Cepeda-Benito et al. (2018) examined gender differences in years 2007-14 demonstrating that the greatest disparity was seen among rural women.
- Nighbor et al. (2018) examined smoking in years 2007-16 demonstrating rural-urban disparities among women of reproductive age including those not-pregnant and pregnant.
- Parker et al. (2022) examined quit ratios in years 2010-20 demonstrating lower odds of quitting in rural vs. urban adults although did not report gender differences.

Shared Methods

- National Survey on Drug Use and Health: nationally representative survey of U.S. civilian, non-institutionalized population aged ≥ 12 years measuring prevalence and correlates of drug use;
- Comparing current smoking status (used in past 30 days & ≥ 100 cigs lifetime) among adults (≥ 18 yrs) residing in rural vs. metropolitan/micropolitan areas using Rural/Urban Continuum Codes based 2000 U.S. Census and 2013 classifications from OMB;
- Unadjusted and adjusted (race/ethnicity, education, income) current smoking prevalence (smoked 100 cigs lifetime and ≥ 1 in past 30 days), former smoker status (100 cigs lifetime but not past year) and quit ratios (proportion of lifetime smokers who report not smoking in past year).

A growing geographic disparity: Rural and urban cigarette smoking trends in the United States

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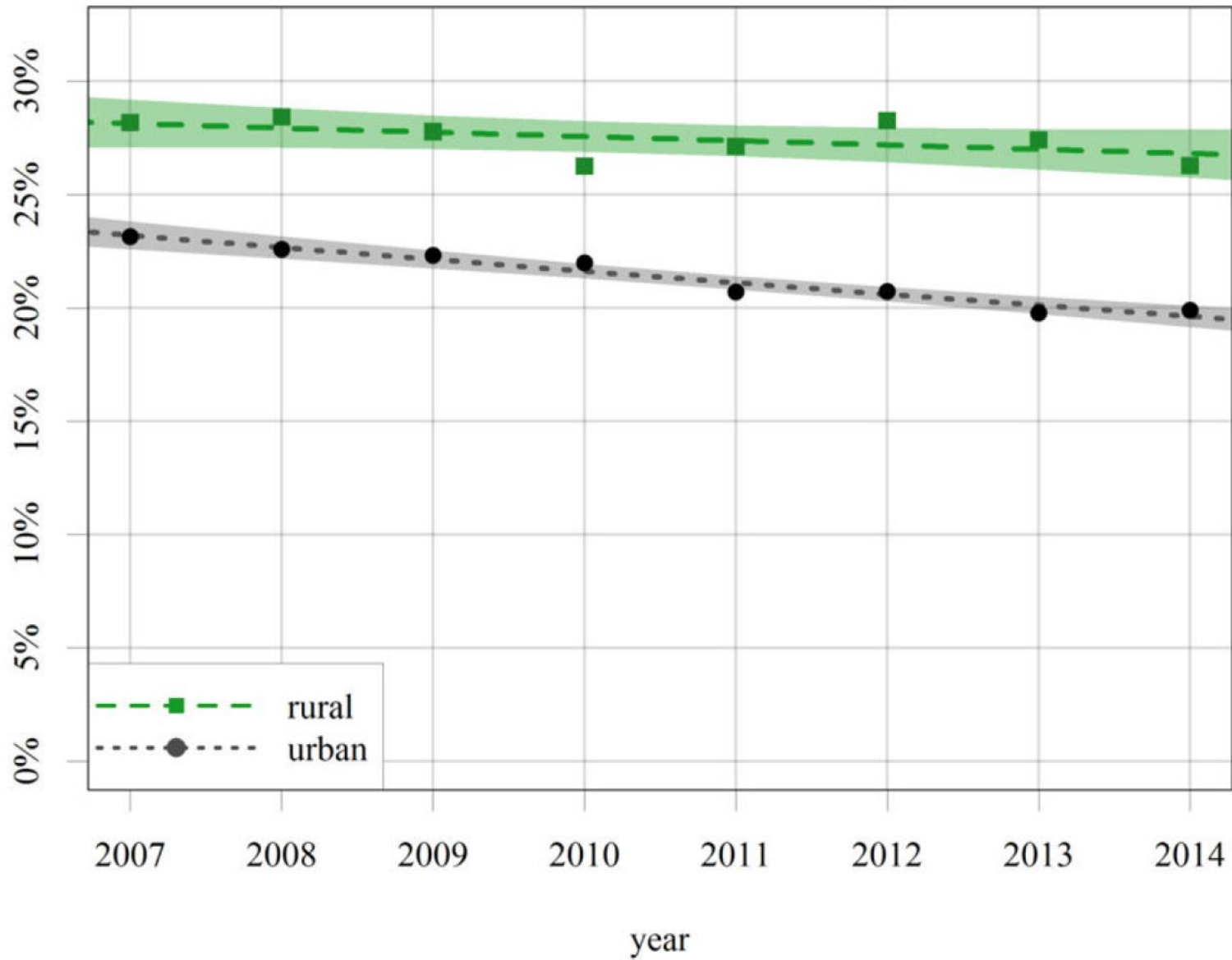
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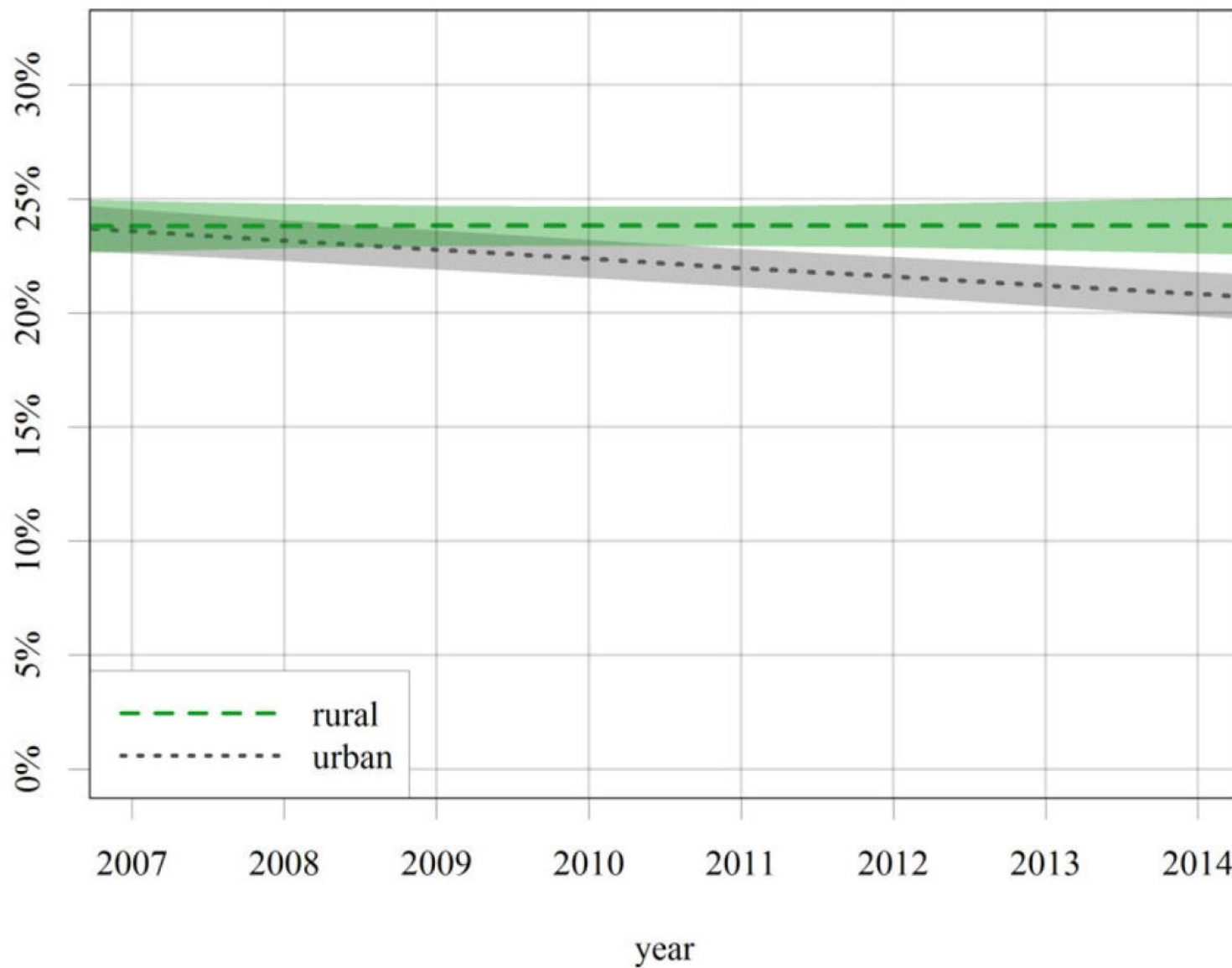
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unadjusted cigarette smoking prevalence



adjusted cigarette smoking prevalence



Trend differences in men and women in rural and urban U.S. settings

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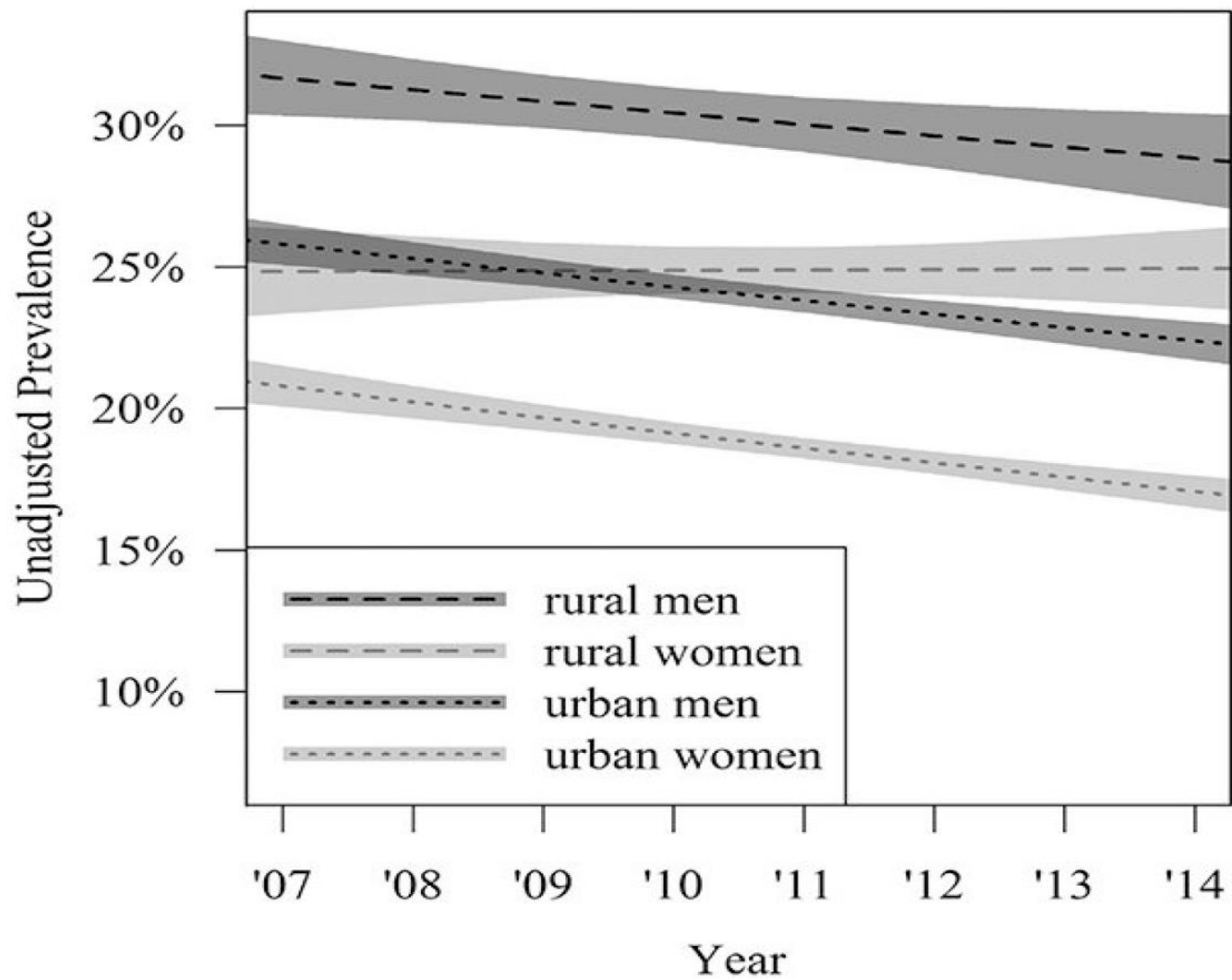
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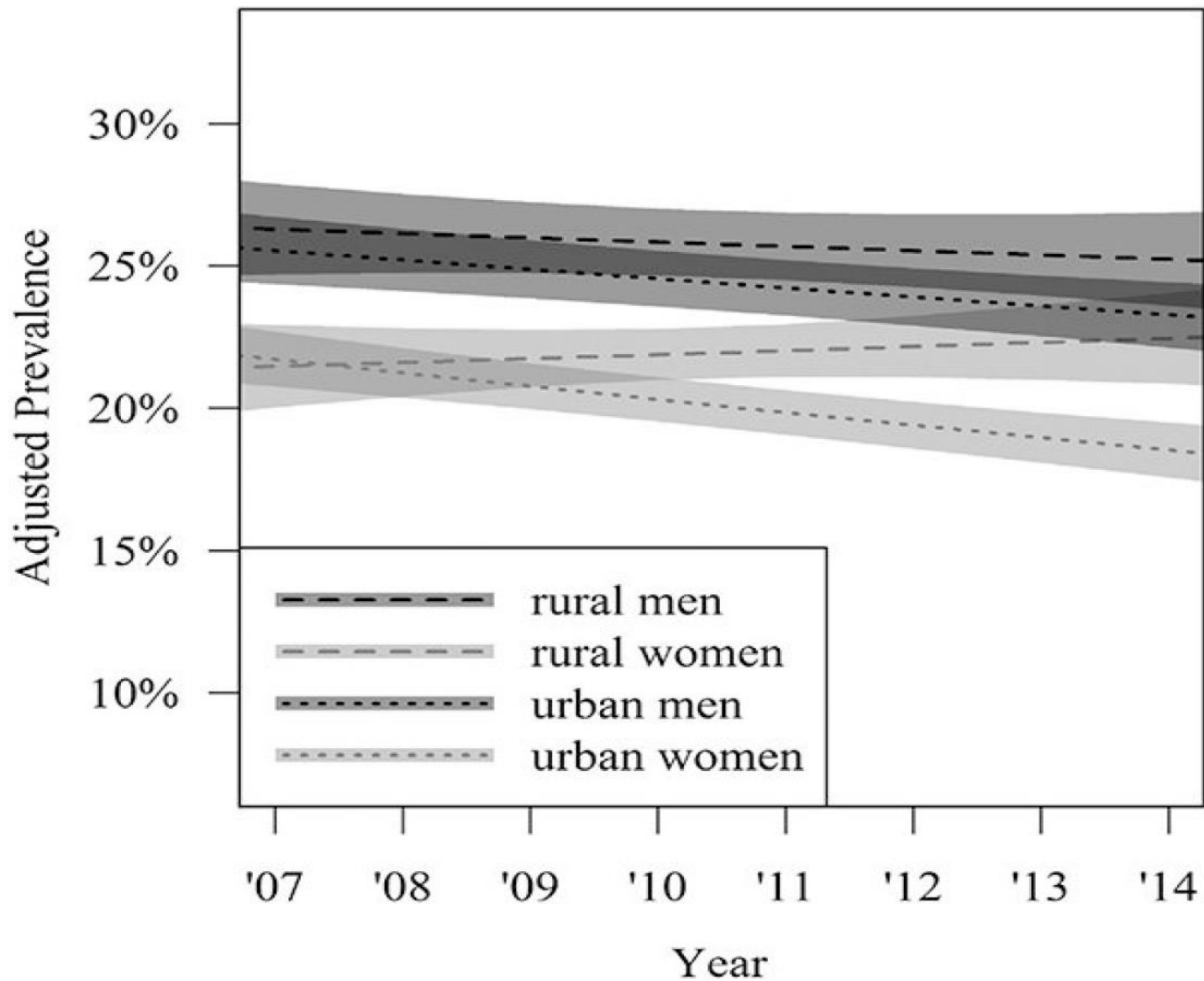
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Research Letter | Public Health

Trends in Rural and Urban Cigarette Smoking Quit Ratios in the US From 2010 to 2020

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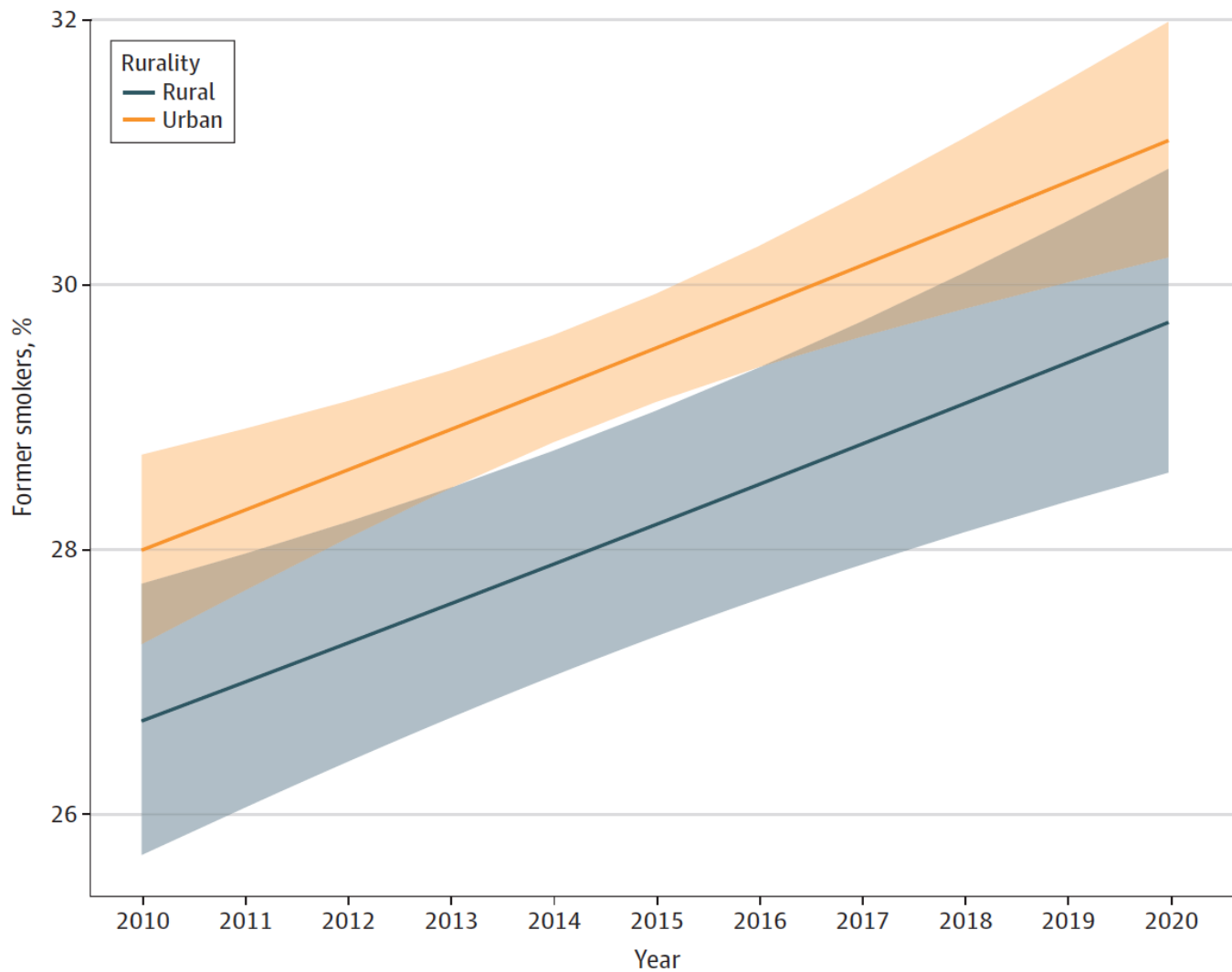

















Figure 1. Smoking Quit Ratios for Individuals in Rural vs Urban Areas From 2010 to 2020

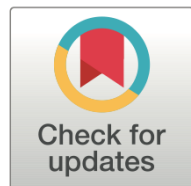


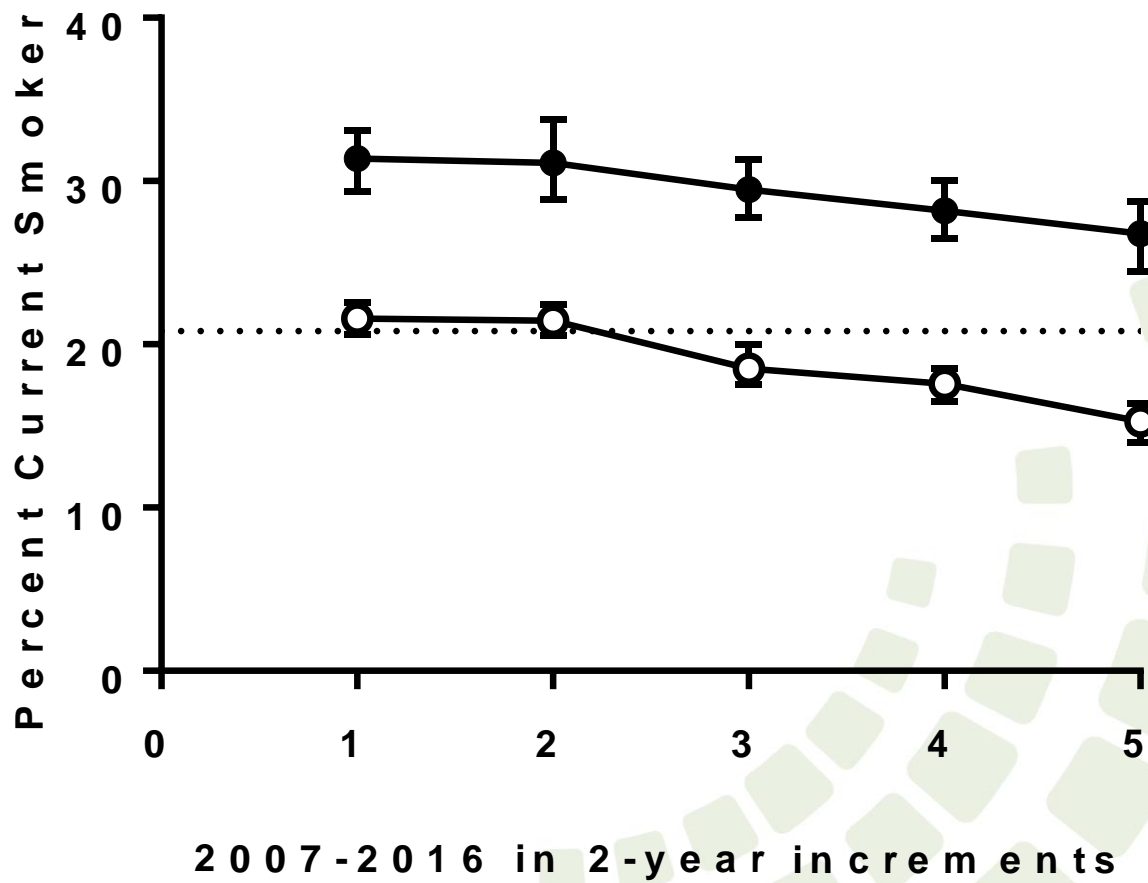
RESEARCH ARTICLE

Smoking prevalence and trends among a U.S. national sample of women of reproductive age in rural versus urban settings

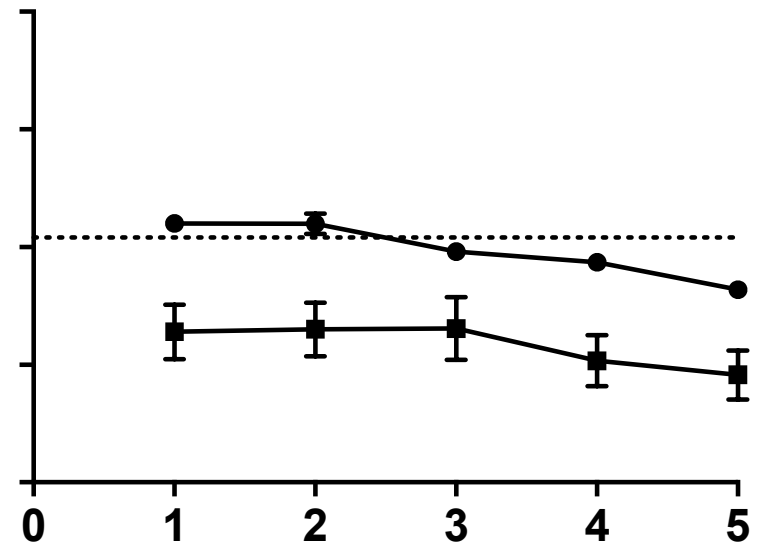
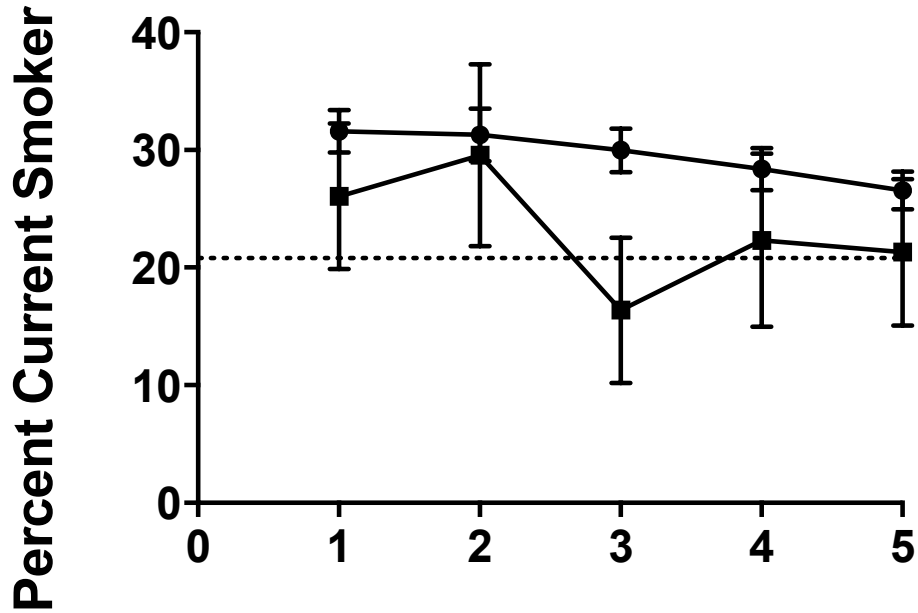
Tyler D. Nighbor^{1,2}, **Nathan J. Doogan**³, **Megan E. Roberts**³, **Antonio Cepeda-Benito**^{1,4}, **Allison N. Kurti**^{1,2,4}, **Jeff S. Priest**⁵, **Harley K. Johnson**^{1,2}, **Alexa A. Lopez**¹, **Cassandra A. Stanton**^{6,7}, **Diann E. Gaalema**^{1,2,4}, **Ryan Redner**^{1,8}, **Maria A. Parker**^{1,2}, **Diana R. Keith**^{1,2}, **Amanda J. Quisenberry**⁹, **Stephen T. Higgins**^{1,2,4}*

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● Rural ○ Urban



● Rural Non-Pregnant

■ Rural Pregnant

● Urban Non-Pregnant

■ Urban Pregnant

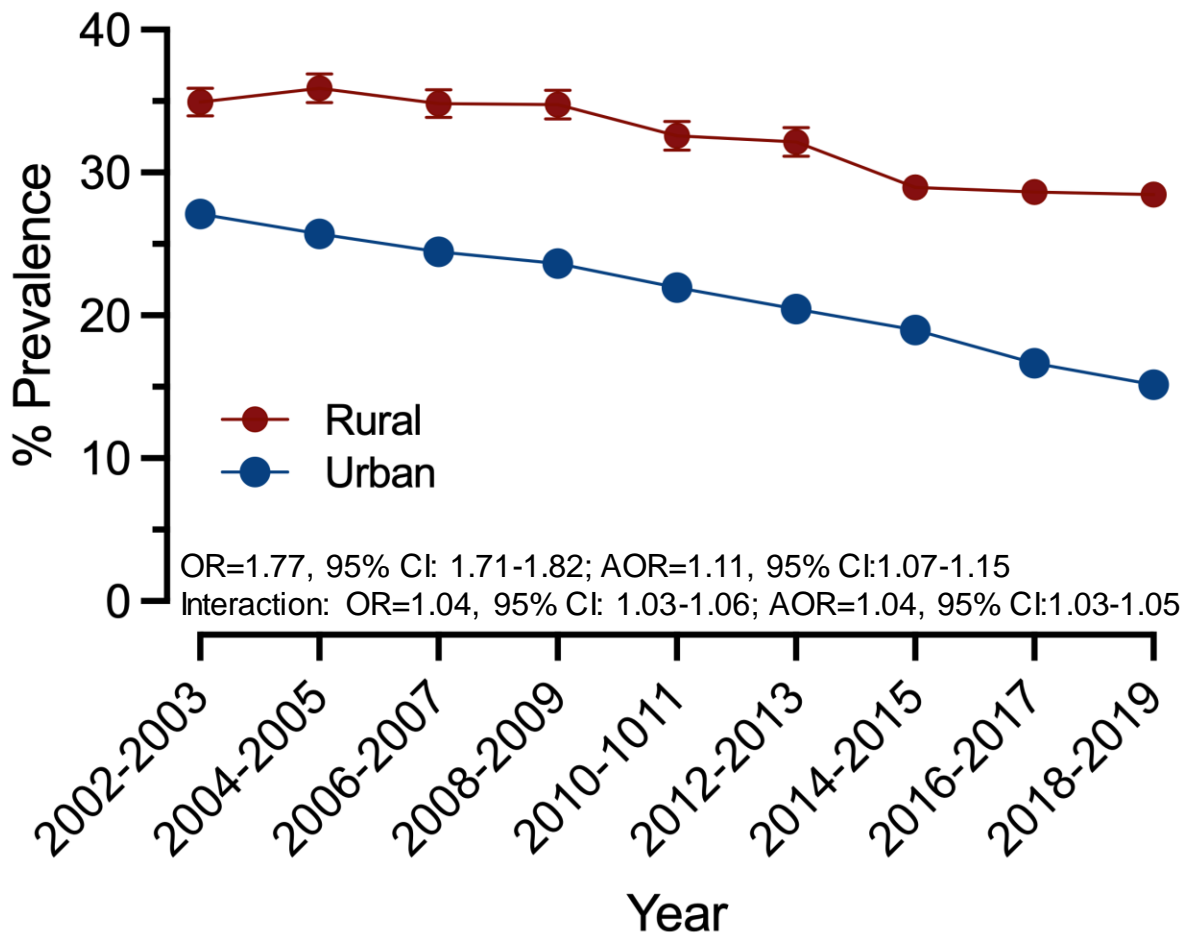
2007-2016 in 2-year increments

Gaining Further Insights into Rural-Urban Disparities in Women of Reproductive Age

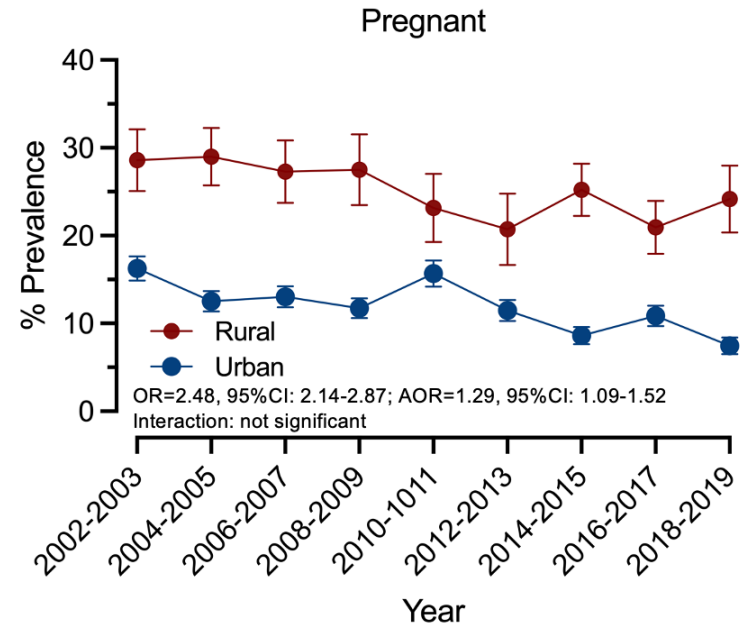
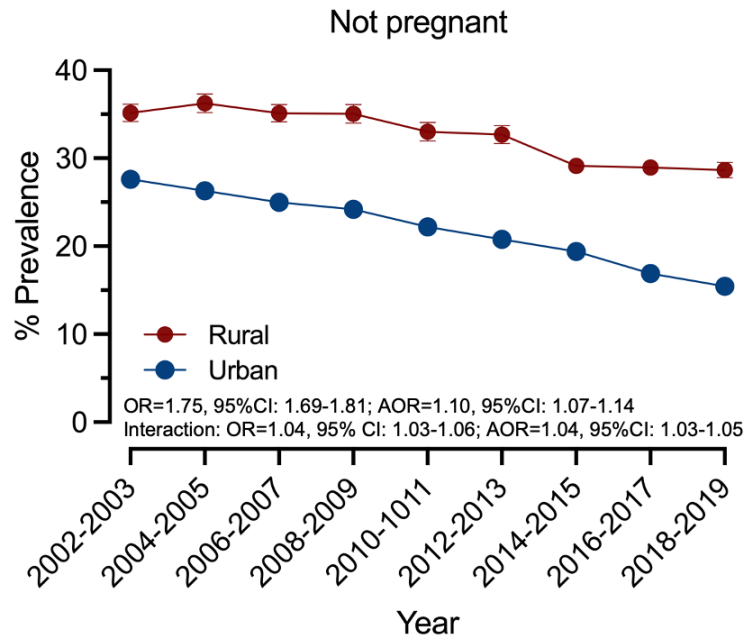
- National Survey on Drug Use and Health;
- Comparing current smoking status (used in past 30 days & \geq 100 cigs lifetime) among women (18-44 yrs) residing in rural vs. urban areas;
- Unadjusted and adjusted (race/ethnicity, education, income) current smoking prevalence (smoked 100 cigs lifetime and \geq 1 in past 30 days), and quit ratios (proportion of lifetime smokers who report not smoking in past year) between 2002-2019 in 2-year bins.

Smoking Prevalence

Overall

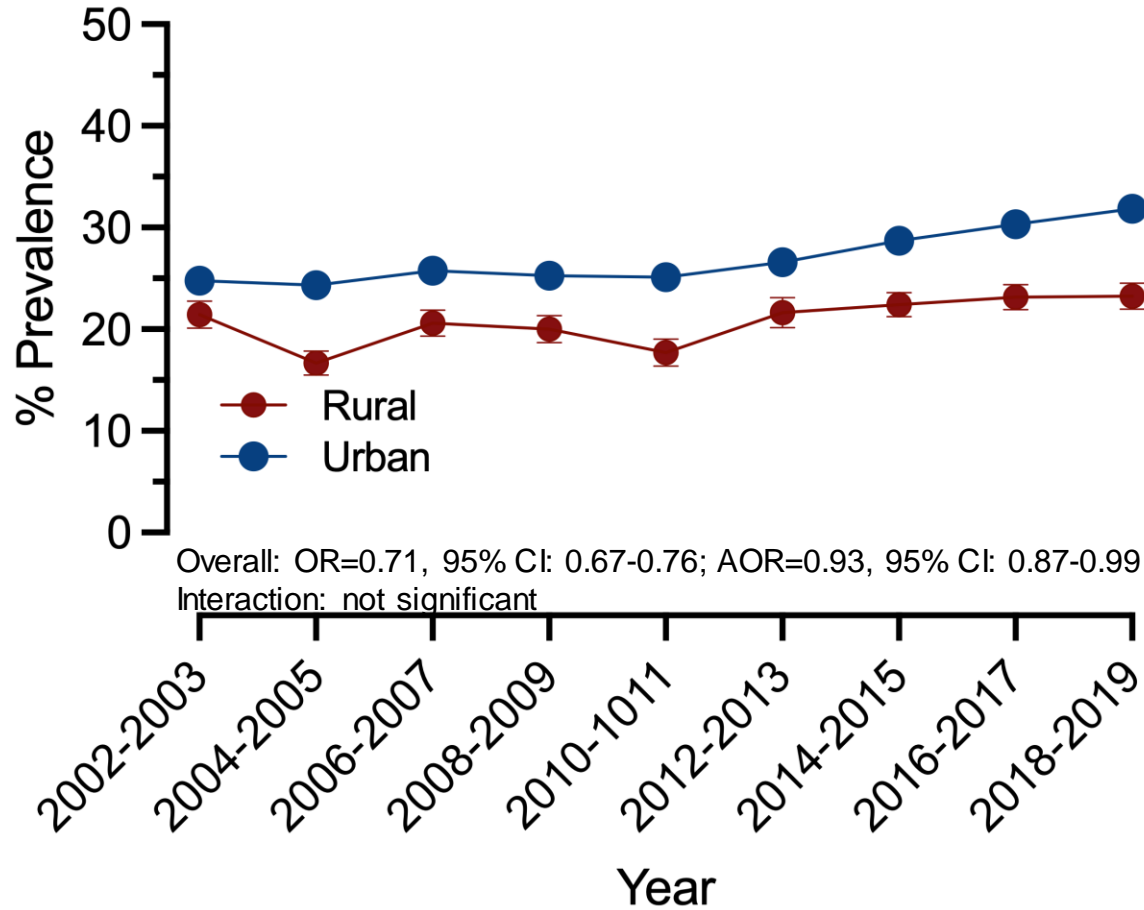


Smoking Prevalence

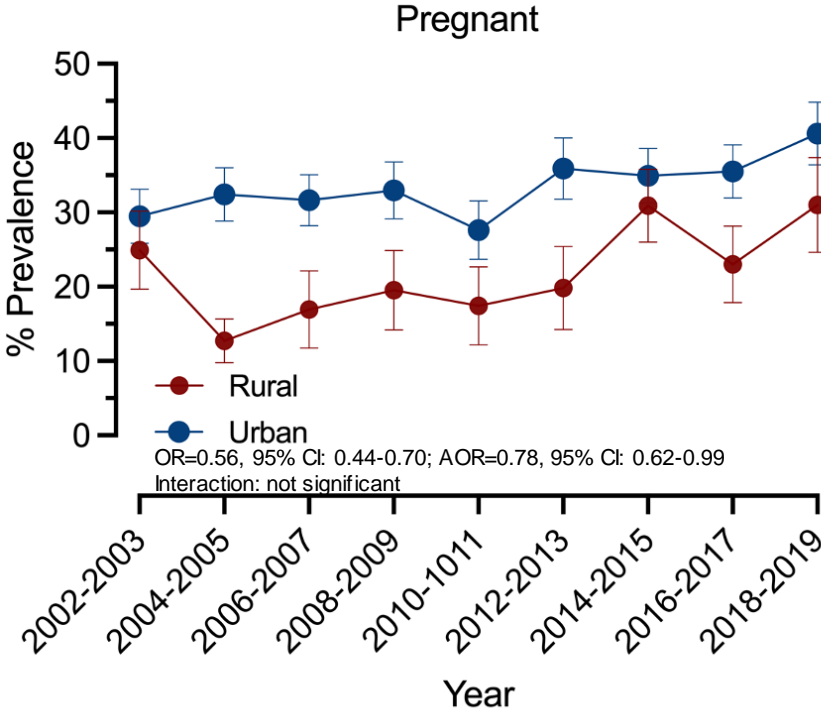
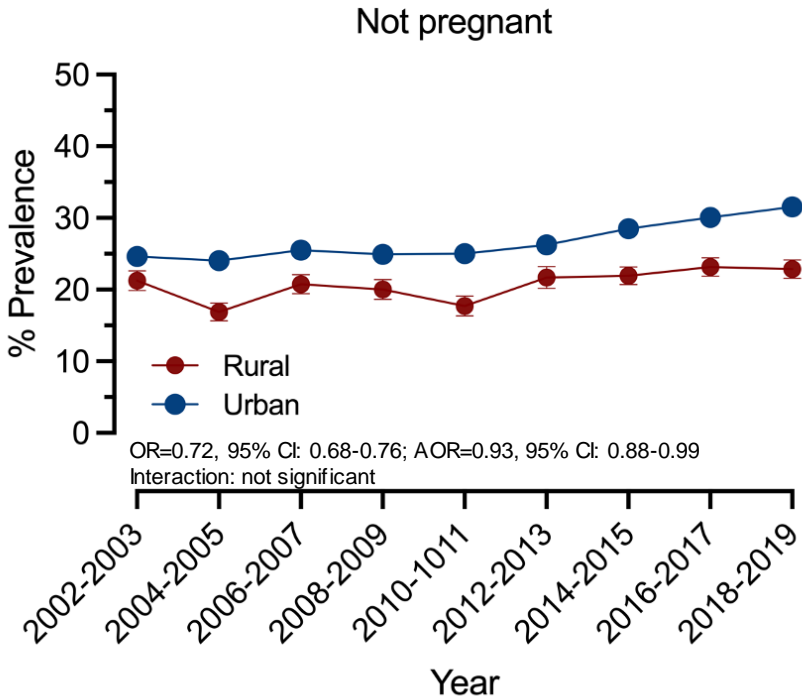


Quit Ratios

Overall



Quit Ratios



Summary/Conclusions

- A rural-urban disparity in cigarette smoking is robust and impactful contributing to disparities in morbidity (cancer, cardiovascular disease) and mortality.
- This disparity is disproportionately impacting women including those of reproductive age. The disparity includes pregnant women likely contributing to disparities in infant health outcomes including SIDS and SGA.
- Where previously these differences could be accounted for completely by differences in sociodemographic/socioeconomic disparities that does not appear to be the case more recently and certainly does not obviate the need for action.
- Disparities in availability and enforcement of tobacco control and tobacco regulations are likely contributors and where change can be promoted (i.e., actionable). Differences shown here in quit ratios underscore the need for additional and more effective smoking-cessation services, especially for pregnant women who are currently undertreated.