Rural Realities and Challenges

‘We don’t know why it came to this’
As white women between 25 and 55 die at spiking rates, a close look at one tragedy

The Rich Live Longer Everywhere. For the Poor, Geography Matters.
Life expectancy of 40-year-olds with household incomes below $25,000, adjusted for race

Alone on the Range, Seniors Often Lack Access to Health Care

The Overlooked Rural Disparity

Widening Rural-Urban Disparities in All-Cause Mortality and Mortality from Major Causes of Death in the USA, 1969–2009

Gopal K. Singh and Mohammad Salipurksh

ABSTRACT

This study examined trends in rural-urban disparities in all-cause and cause-specific mortality in the USA between 1969 and 2009. A rural-urban continuum measure was linked to county-level mortality data. Age-adjusted death rates were calculated by sex, race, cause of death, area poverty, and education level. For 15 time periods between 1969 and 2009, cause-of-death decomposition and logistic and Poisson regression were used to analyze rural-urban differences. Mortality rates increased with increasing levels of poverty overall and for non-Hispanic whites, blacks, and American Indian/Alaska Natives. Despite the declining mortality trends, mortality risks for both males and females and for blacks and whites have been increasing higher in non-metropolitan than metropolitan areas, particularly since 1990. In 2005–2009, mortality rates were about 19.1% per 100,000 population for Asian/Pacific Islanders in rural areas to 10.5.4 for blacks in small-town regions. Poverty gradients were steeper in rural areas, which maintained higher mortality than urban areas after adjustment for poverty level. Poor blacks in non-metropolitan areas experienced twice to three times higher all-cause and premature mortality risks than affluent blacks and whites in metropolitan areas. Disparities widened over time; excess mortality from all causes combined from cause-specific major causes of death in non-metropolitan areas were greater in 2005–2009 than in 1969–1989. Causes of death contributing most to the increasing rural-urban disparity and higher rural mortality include heart disease, unintentional injuries, COPD, lung cancer, stroke, suicide, diabetes, nephritis, pneumonia, influenza, cirrhosis, and Alzheimer’s disease. Residents in metropolitan areas experienced larger mortality reductions during the past four decades than non-metropolitan residents, contributing to the widening gap.

KEYWORDS: Mortality, Cause of death, Rural-urban, Metropolitan, Decomposition, Race, Poverty, Inequality, Trend, USA

INTRODUCTION

Geographical inequalities in health have long represented an important area of public health research in the USA.1–3 Mortality data for urban and rural areas have been available for several decades in the USA although mortality rates have been published infrequently due to the lack of appropriate denominator or population statistics.4 Reduction of health inequalities, including those between rural and urban areas, has remained a priority for public health professionals worldwide.5

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Background: There is limited research on rural–urban disparities in U.S. life expectancy.

Purpose: This study examined trends in rural–urban disparity in life expectancy, a birth in the U.S., between 1969 and 2009.

Methods: The 1969–2009 U.S. county-level mortality data linked to a rural–urban continuum were analyzed. Life expectancy was calculated by age, gender, and race for 5-year time periods between 1969 and 2006 and for 2007–2009 using standard life-table methodology. Differences in life expectancy were decomposed by age and cause of death.

Results: Life expectancy was inversely related to both of these measures. In 2007–2009, there was a larger decrease in life expectancy in metropolitan areas than in non-metropolitan areas. For the period 1969 to 2009, life expectancy was 7.6 years lower in metropolitan areas than in non-metropolitan areas. Life expectancy in metropolitan areas ranged from 78.5 years among non-Hispanic white women in nonmetropolitan areas to 81.9 years among non-Hispanic black men in metropolitan areas. Rural–urban disparities widened over time. In 1969–1989, life expectancy was 6.3 years lower in metropolitan than in nonmetropolitan areas (78.5 to 79.8 years). By 2007–2009, the life expectancy difference had increased to 7.6 years (78.5 to 74.9 years). The rural poor and rural blacks currently experience survival probabilities that urban rich and urban whites enjoyed 6 decades earlier. Causes of death contributing most to the increasing rural–urban disparity and lower life expectancy in rural areas include heart disease, unintentional injuries, COPD, lung cancer, stroke, suicide, and diabetes.

Conclusions: Between 1969 and 2009, residents in metropolitan areas experienced larger gains in life expectancy than those in nonmetropolitan areas, contributing to the widening gap.

Introduction

Life expectancy is an important health indicator and a key measure of human development globally.6 Since 1996, reducing health inequalities and increasing life expectancy have been the two most important overarching goals for the U.S., as specified in its national health initiative, Healthy People.7–10

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Conclusions: Between 1969 and 2009, residents in metropolitan areas experienced larger gains in life expectancy than those in nonmetropolitan areas, contributing to the widening gap.

Life expectancy estimates are routinely available for gender and broad nativity groups in the U.S.11–13 Many U.S. states have analyzed spatial-temporal patterns in mortality11 and a few states have reported differences in life expectancy according to SES or area-based deprivation leveling.11–13 Estimates of U.S. life expectancy according to subnational level are limited, particularly analysis of trends in life expectancy among rural and urban populations over time.14 Although substantial disparities in life expectancy exist among racial, ethnic, and socioeconomic groups in the U.S., it is important to know the magnitude and sources of life expectancy disparities between rural and urban areas for the purposes of social planning and public health decision making. Life expectancy is a summary index of mortality that can be used to document both absolute and relative inequalities in survival between rural and urban areas.

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Rural Realities and Challenges

The Overlooked Rural Disparity

Findings from the 2016 RWJ County Health Rankings
Though opioid abuse and opioid-related death has been on the rise nationally, rural communities are disproportionately affected.

- Drug-related deaths 45% higher in rural areas.
- Rural communities have a history of substance abuse.
- Rural residents are most likely to be prescribed opioid painkillers.

- Rural has greater prevalence of risk factors and fewer options for treatment.
Rural Realities and Challenges

Other Factors

• Higher Rates of Chronic Disease
• Higher Rates of Suicide
• Higher Rates of Smoking
• Higher Rates of Poverty
• Lower Rates of Educational Attainment