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Review Paper

Exposing some important barriers to health care access in the rural USA



N. Douthit^{a,c}, S. Kiv^{a,c}, T. Dwolatzky^a, S. Biswas^{b,*}

^a Medical School for International Health, Ben Gurion University, Beer Sheva, Israel

^b Ben Gurion University, Beer Sheva, Israel

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ABSTRACT

Objectives: To review research published before and after the passage of the Patient Protection and Affordable Care Act (2010) examining barriers in seeking or accessing health care in rural populations in the USA.

Study design: This literature review was based on a comprehensive search for all literature researching rural health care provision and access in the USA.

Methods: Pubmed, Proquest Allied Nursing and Health Literature, National Rural Health Association (NRHA) Resource Center and Google Scholar databases were searched using the Medical Subject Headings (MeSH) 'Rural Health Services' and 'Rural Health.' MeSH subtitle headings used were 'USA,' 'utilization,' 'trends' and 'supply and distribution.' Keywords added to the search parameters were 'access,' 'rural' and 'health care.' Searches in Google Scholar employed the phrases 'health care disparities in the USA,' 'inequalities in 'health care in the USA,' 'health care in rural USA' and 'access to health care in rural USA.' After eliminating non-relevant articles, 34 articles were included.

Results: Significant differences in health care access between rural and urban areas exist. Reluctance to seek health care in rural areas was based on cultural and financial constraints, often compounded by a scarcity of services, a lack of trained physicians, insufficient public transport, and poor availability of broadband internet services. Rural residents were found to have poorer health, with rural areas having difficulty in attracting and retaining physicians, and maintaining health services on a par with their urban counterparts.

Conclusions: Rural and urban health care disparities require an ongoing program of reform with the aim to improve the provision of services, promote recruitment, training and career development of rural health care professionals, increase comprehensive health insurance coverage and engage rural residents and healthcare providers in health promotion.

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* Corresponding author. Tel.: +972 50 432 7252.

E-mail address: seemabiswas@msn.com (S. Biswas).

^c N. Douthit and S. Kiv are equal first authors.

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Introduction

Over 51 million Americans (one-sixth of the population of the US) live in rural areas.¹

The topic of health care access for these citizens continues to fuel debate and requires more attention, especially in the light of recent health care reform.² There is clear evidence for the existence of disparities in access to quality health care services in rural as compared to urban areas, with comparatively higher levels of chronic disease, poor health outcomes and poorer access to digital health care (ironically hailed, initially, as a possible bridge to the gaps in rural health care provision) as a result of poor rural broadband internet connectivity.^{3–7} As the Committee on Health Care for Underserved Women reports, rural women have poorer health than their urban counterparts, suffer higher rates of unintentional injury and greater mortality as a result of road traffic accidents, cardiovascular disease and suicide.⁸ These women are more likely to smoke cigarettes, suffer greater substance abuse, are more obese and have a higher rate of teenage pregnancy and cervical cancer (and a lower rate of cervical cancer screening).^{9–11}

While the definition of a rural population is not precise, there is consensus that this should include the sparseness of population. Most recently, the US Census Bureau 'adopted the urban cluster concept, for the first time defining relatively small, densely settled clusters of population using the same approach as was used to define larger urbanized areas of 50,000 or more residents, and no longer identified urban places located outside urbanized areas.'¹² The Rural Development Act of 1972 defines 'rural' or 'rural area' as an area of no more than 10,000 residents. In either case, rural communities have clearly been demonstrated to have 'poorly developed and fragile economic infrastructures, [and] substantial physical barriers to health care.'¹³ In 2010, despite 17% of the United States' population living in rural areas, only 12% of total hospitalizations, 11% of days of care, and 6% of inpatient procedures were provided in rural hospitals.¹⁴ The Patient Protection and Affordable Care Act, was implemented in 2010 with the aim of 'quality, affordable health care for all Americans.'

All the authors of this paper are Global Health practitioners with a particular interest in health disparities and universal health coverage. In this paper we explore the disparities between urban and rural health care provision, citing examples of cultural differences among patients and inequalities in the level of provision of services. The goals of the Patient Protection and Affordable Care Act will never be accomplished as long as these inequalities in provision and utilization of universal health services exist.^{2,15}

According to the most recent data from the Health and Human Resources Administration of the US Department of Health and Human Services, rural areas of the United States demonstrate a visible and disproportionate lack of services in medically underserved areas, including a paucity of primary care physicians, i.e. family doctors, pediatricians, and internists, as shown in Fig. 1. Rural residents have different health-seeking behaviors compared to their urban counterparts; and this, coupled with different approaches to patient

care among physicians, exacerbates the disparity in expectations and delivery of care.¹⁶ Although there was great hope that information technology solutions would help to bridge communication gaps and extend the availability of telemedicine, resulting improvements in utilization, in service delivery and in patient outcome have not been consistent; instead, evidence of a digital divide across the USA has emerged.¹⁷ Disparities in health care are exacerbated by a commensurate gap in both access to and availability of technology, especially, the Internet. As Tom Wheeler, FCC chairman, observes, 'Americans living in urban areas are three times more likely to have access to Next Generation broadband than Americans in rural areas.'^{18,19}

The demand for better access to health care in rural America is, therefore, increasingly clear. The National Rural Health care Association (NRHA) states the health needs in the following terms:

The obstacles faced by healthcare providers and patients in rural areas are vastly different than those in urban areas. Rural Americans face a unique combination of factors that create disparities in health care not found in urban areas. Economic factors, cultural and social differences, educational shortcomings, lack of recognition by legislators and the sheer isolation of living in remote rural areas all conspire to impede rural Americans in their struggle to lead a normal, healthy life.²⁰

Rural residents have the same right to quality health care as their urban counterparts. According to the World Health Organization, '[U]niversal access to skilled, motivated and supported health workers, especially in remote and rural communities, is a necessary condition for realizing the human right to health, a matter of social justice.'²¹ This problem is pervasive, affecting both specialist and primary care, and services delivered directly by physicians, nurses and pharmacists alike. As we show in this paper, the literature demonstrates that disparities affect all rural patient groups, irrespective of age, race, gender or sexual orientation; vulnerable populations, however, remain the worst affected. Thus, a reexamination of the evidence for barriers in seeking health care and in access to health care for rural populations across the United States of America is both timely and important. We describe these barriers, emphasizing the differences in health-seeking behaviors between rural and urban populations; identifying critical areas for improvement and adding our voice to the call for urgent action to address inequalities in rural health.

Methods

A search of the English literature was conducted on Pubmed, Proquest Allied Nursing and Health Literature, and the NRHA Resource Center databases from 2005 to 2015. These dates were chosen in order to cover the period of time before and after the passage of the Patient Protection and Affordable Care Act in 2010, which is a landmark in United States health care reform.²

The search utilized Medical Subject Headings (MeSH) 'Rural Health Services' and 'Rural Health.' Additional MeSH subtitle

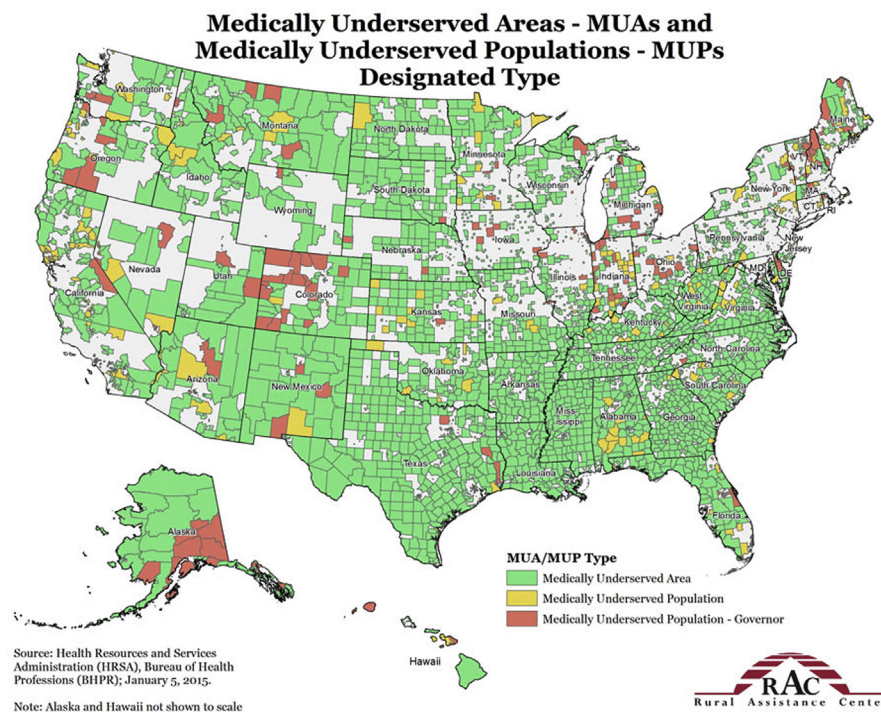
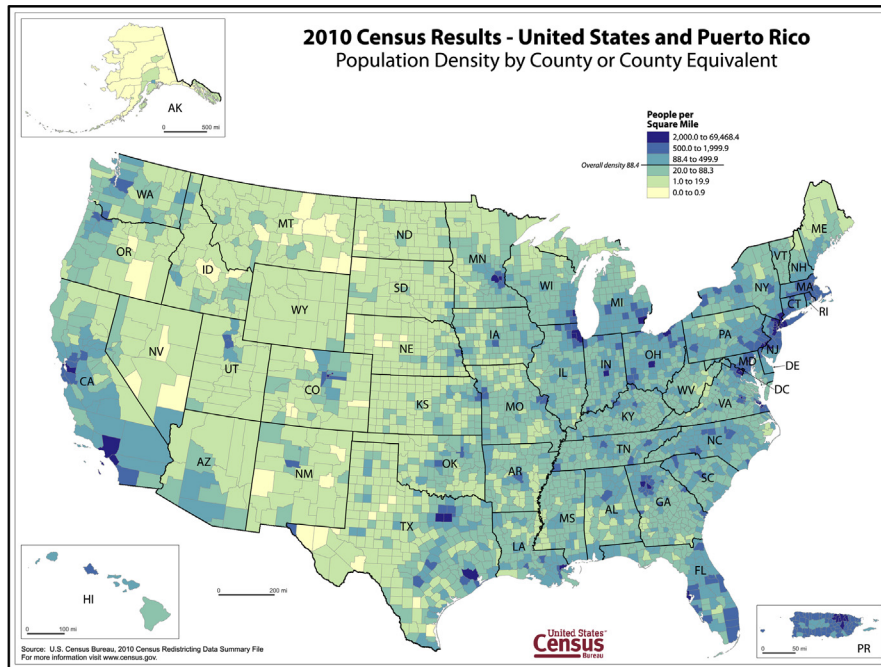


Fig. 1 – Population density compared to medically underserved areas.

headings used were ‘utilization,’ ‘trends’ and ‘supply and distribution.’ The following keywords were added to the search parameters: ‘USA,’ ‘access,’ ‘rural’ and ‘health care.’ The NRHA Resource Center does not permit searches using MeSH terms, therefore, ‘access’ was the only keyword used in searching the database. Google Scholar was searched using the phrases ‘health care disparities in the USA,’ ‘inequalities in health care in the USA,’ ‘health care in rural USA’ and ‘access to health care in rural USA’ in order to ensure the

comprehensive nature of the search. Particular emphasis was placed on articles dealing with cancer, cardiovascular disease, diabetes, HIV and AIDS, mental health, musculoskeletal disease, respiratory disease and services, including maternal and child health, lifestyle modification, functional status preservation and rehabilitation, and supportive and palliative care. These categories are used in the USA National Health Qualities and Disparities report as indices in monitoring the quality of health care.⁴

Only studies focusing on disparities in access to health care or differences in health care-seeking behavior in urban and rural areas in the United States were selected by the authors. Articles focusing on quality, funding, use of technology and alternative medicines without investigating their relationship to health care access or health-seeking behaviors were excluded. The search yielded 34 articles, each of which was integrated into this review in order to determine whether barriers in access to rural health care significantly impact patient outcomes and in order to understand how rural and urban cultural differences affect health-seeking behavior and health service provision among patients and health care professionals.

Results

Cultural perceptions that affect access to health care

Patients in rural areas are concerned about stigma, discrimination and the extent to which their clinical information is kept confidential. They often regard their health care providers as friends and neighbors rather than practicing professionals.^{13,16,22–26} These concerns are prohibitive in terms of consultation and treatment-seeking behavior — it is difficult to discuss embarrassing medical problems with the same people with whom one shops, goes to church, or walks in the park.¹⁶

Cully et al. studied veterans living in rural and urban areas who were newly diagnosed with depression, anxiety or post-traumatic stress disorder, in order to determine whether there were differences in those seeking psychotherapy.²³ He found that urban veterans are twice as likely to regularly attend psychotherapy treatments during the 12 months after initial diagnosis, i.e. they participated in four or more sessions. It should be noted that in this study the rural veterans were on average two years older than urban veterans and had a mean income of \$31,909 per year compared to urban veterans' \$46,401, possibly confounding the study since age and socio-economic status also affect health care-seeking behavior.²³

There is evidence that rural residents are wary of health interventions, especially in mental health. Willging et al. studied rural lesbian, gay, bisexual and transgender populations seeking mental health care.²² He conducted a series of interviews with patients to determine whether barriers to care based on the stigma associated with mental health exist in an already stigmatized population. This notion was confirmed, with one interviewee saying, 'We have our ways. We're from a ranch We don't use medical. We fix ourselves here.'²²

Some patients feel that they are the victims of the prejudice of their health care providers.²⁷ In South Carolina, Vyvaharkar et al. studied the quality of life of HIV patients in the rural Southeast.²⁵ Predominantly minority (African-American) patients were interviewed about barriers to seeking care. One patient complained,

I mean they put on gloves to take my blood pressure after I told them I was HIV-positive. Some of them walk around like we got

*the plague, you know what I mean? They treat people who are living with HIV like they are in a different class of illness than they treat other people.*²⁵

Minorities and vulnerable populations (the poor and unemployed, in particular) suffer the most. In their review of HIV in the USA, Pellowski et al. observed that 'poverty, discrimination, inequality and other social conditions' were facilitators of HIV transmission and incidence, as well as 'an individual's risk behaviors,' describing an 'HIV sub-epidemic' occurring in the rural USA.²⁸

Getting to the doctor

Simply getting to the doctor may present an obstacle to accessing health care.^{11,29–33} In some areas, there is almost no way to get to a doctor.^{34–36} Arcury et al. investigated how patients in 12 rural counties in North Carolina travel to their doctor for regular checkups and follow-up appointments.²⁹ While possession of a vehicle in itself did not significantly affect attendance, he found that patients in possession of a driver's license were at least twice as likely to attend appointments than patients without a driver's license.²⁹

Patients are less likely to travel to see the doctor if they live far away. Pathman et al. showed that increased travel time and the perceived difficulty in traveling to see the doctor are prohibitive.³⁰ These populations routinely fail to vaccinate against influenza. No mention was made of mitigating services provided by allied health professionals living closer to rural residents. More recently, as reports of measles cases increased across the USA, physicians serving rural communities have made an increased effort to disseminate the message of the importance of vaccination.³⁷

Schroen et al. discovered that breast cancer patients are more likely to have radical surgery for cancer if they live far from a radiotherapy facility.³⁴ Over the course of the study, within a 15-mile radius from newly built radiotherapy facilities, mastectomy rates decreased by 16% in rural settings, as radiotherapy became available as an alternative to surgery for patients.

Nevertheless, patients do try to overcome transportation difficulties. Collins et al. suggested in his study of the provision of prescription drugs for the elderly in West Texas, that distance is a mitigating factor for people receiving care.³¹ He mentions, however, that patients will substitute a trip to the pharmacy (and any ancillary care provided there, such as consultation with a pharmacist, blood pressure reading, etc.) with mail-order pharmaceuticals. Buchanan et al. studied the health care of Multiple Sclerosis (MS) patients, and found that many patients who lived considerable distances from specialist services were seeking MS care from general practitioners.³⁵ In some instances, the healthcare providers offered to provide travel services to patients in need.¹⁶

The absence of services

To add to the problem of the shortage of practitioners and specialist facilities, there is also a chronic scarcity of hospitals and clinics in rural areas.^{10,13,16,24,34,38–49} Community health centers offer comprehensive primary care services regardless

of the ability to pay. There may be a sliding scale for the payment of fees. Rust et al. found that when these primary care services are available, the rate of uninsured emergency department visits for routine primary care problems is significantly lower.⁴² He writes, 'Non-[Community health center] counties had a higher rate of all types of ED visits compared with [Community health center] counties They have a 33% greater rate of all emergency room visits (RR 1.33, 95% CI 1.11–1.59), and a 37% greater risk of [ambulatory care sensitive condition] visits (RR 1.37, 95% CI 1.11–1.70).'⁴² Smith-Cambell et al. conducted a similar study on a federally qualified health center in an undisclosed rural area that also offered payment based on a sliding scale.⁴⁶ Although results fluctuated throughout the study, she stated, 'Initial results suggest the [Federally Qualified Health Center] had an influence on Medicaid and uninsured ED visits.'⁴⁶ She found that trauma center closures unfairly affected rural patients, so that currently only 24% of the rural population has a trauma center within a ten mile radius (compared to 71% in urban populations).⁴⁵ The findings suggest that these closures are a result of financial pressures, and that the hospitals are encouraged to focus on the most profitable specialties, which are not necessarily those that are most needed.⁴⁵

In terms of mental health services, Ziller et al. found that, for patients with similar socio-economic standing, insurance status and demographic characteristics, rural patients had less access to mental health services compared to urban populations.²⁴ Ziller et al. hypothesized that this was due to the 'well-documented and longstanding problems of mental health provider supply' for rural populations.²⁴

Residential and nursing care for the elderly in rural areas is also poorly resourced. In his study of residential care for the elderly in rural areas, Hawes et al. found that across 34 states, three-quarters of assisted living facilities (ALFs) for the elderly are located in urban rather than rural areas.⁴⁹ This means that elderly patients from rural areas have to relocate to urban centers for ALFs. Furthermore, 26% of patients aged over 75 in the United States, those most in need of long term care, are from rural areas. This means that the elderly are more likely to live out their lives away from their families and are removed from where they grew up or spent most of their lives.⁴⁹

Online services

Digital health technologies have revolutionized health care delivery across the USA and in other parts of the world.⁵⁰ Since the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, applications within health facilities in terms of information storage and retrieval have grown exponentially and most urban public and private health facilities claim to be digitalized.^{51,52} The implications for the provision of health services, from essential health education and information to making appointments and checking the results of investigations online, have made telemedicine an attractive proposition in rural health and across long distances. Successful programs include rural telehealth with information sharing and improved communication between health providers, policy makers and rural communities, innovations in women's health and antenatal care and videolink consultations.^{53–55} Existing health

disparities, especially those in terms of health information and language, have been addressed by digitalized patient records and information technology with some success, as have social media and patient support websites.^{56,57}

The further potential for improvements in rural medical communication is obvious. Yet, one quarter of households in the USA still do not have access to the Internet, fewer than one-third of the population over the age of 65 access the Internet for health information, and among those with low levels of literacy, less than 10% are able to search for health information online.^{58,59} According to the 2013 congressional report of Broadband Internet Access and the Digital Divide: Federal Assistance Programs, 'Of the 19 million Americans who live where fixed broadband is unavailable, 14.5 million live in rural areas.'^{60,61}

Financial burden

The financial burden is greatly increased for patients and doctors in rural areas. It has been shown that there is disparity in insurance policy coverage between rural and urban areas,^{24,42,45,62} greater poverty in rural areas,^{13,16} and that this has led to inefficient coping mechanisms by rural residents.^{31,39,40,63}

Disparities in insurance policy between urban and rural populations

Kilmer et al. asked residents in Arkansas the following questions: 'Do you have any kind of health insurance coverage for eye care?' 'When was the last time you had an eye exam in which the pupils were dilated?' 'What is the main reason you have not visited an eye care professional in the past 12 months?'⁶² He found that rural residents had less comprehensive insurance coverage and, as a result, were less likely to seek and receive eyecare in order to avoid paying out-of-pocket expenses.⁶²

Ziller et al. showed that there is greater mental health out-of-pocket expenditure for rural rather than for urban residents.²⁴ He suggests that this is because insurance coverage is less comprehensive in rural areas. Shen et al. suggests that underinsurance contributes to financial pressures resulting in closure of rural trauma centers.⁴⁵

Since the implementation of the Affordable Care Act, evidence is emerging that urban and rural areas are likely to be affected differently in terms of health insurance. In their study of these differences, Newkirk et al. summarize:

*The populations of rural areas have different demographics, health needs and insurance coverage profiles than their urban counterparts, which means that Medicaid and Marketplace coverage reforms in the Affordable Care Act (ACA) may affect the two populations differently. In particular, rural populations tend to have high shares of low-to-moderate-income individuals, those who are in the target population for ACA coverage reforms. However, nearly two-thirds of uninsured people in rural areas live in a state that is not currently implementing the Medicaid expansion, meaning they are disproportionately affected by state decisions about ACA implementation. As a result, uninsured rural individuals may have fewer affordable coverage options moving forward.*⁶⁴

This would be a further irony in the moves to redress inequalities in health coverage.

Greater poverty in rural areas

According to data from the 2010 US Census, 16.1% of those living in non-metropolitan areas were living in poverty, compared to the national level of 14.5%, with the uninsured rate for those living in rural areas at 12.9% or 6.1 million persons. This affects minorities, women, and the elderly more severely.^{65,66} Rural populations are poorer, earn less at work, and work in industries with lower levels of employer sponsored health care insurance coverage. Though the Affordable Care Act substantially extended Medicaid coverage in rural areas, subsequent legislation has seen this expansion curtailed in a number of states.⁶⁴

Goins et al. found that cost was a consistent barrier to seeking and accessing health care among the rural elderly. He writes, 'Financial constraints posed considerable barriers to accessing needed health care among study participants, including issues related to health care expense, inadequate health care coverage, income ineligibility for Medicaid, and the high cost of prescription medications.' The study focused particularly on the cost of prescription medications, and many people said there were times when they were faced with the dilemma of having to decide whether to purchase medicine or food.¹³

Coping mechanisms for rural residents

Solutions such as increased Medicare and Medicaid will only assuage the crisis temporarily. Gunderson et al. showed that the financial burden on the providers is changing the face of rural health care. She surveyed 1262 rural physicians in Florida, receiving 539 responses. Fifty-five percent stated that they experienced reduced or discontinued services in the previous year (2005), with almost all stating that the difficulty in finding and paying for medical liability insurance played 'a lot' or 'some' role in the decision. Doctors who served a high volume of Medicare patients were more likely to suspend services than doctors who served a low volume of such patients (66% compared to 44%).³⁹

In addition to Ziller et al.'s assertion that patients are foregoing mental health care in response to increased out-of-pocket expenditure, Weeks et al. agreed that Medicare patients forego mental health services because of the 50% copay, and add that they may be more likely to wait as long as possible, and use emergency care as a substitute for routine care.^{9,63} Collins et al. state that distance to pharmaceutical services combined with inability to pay causes elderly patients to forego medications.³¹ Goins et al. show that the rural elderly reduce the dosage of their drugs, substitute home remedies, or go without food or indoor heating in order to meet the costs of prescription medications.¹³

Discussion

There is clear evidence for the continued existence of inequalities in health care services and for differences in health-seeking behavior between urban and rural populations in the USA. In the literature reviewed, however, the definition of

Table 1 – Patient demographics studied.

| Patient demographic | Type of medical care | | | | | | | Total |
|---|---|----------------------|---|--|---------------------------|-------------------|----------|-------|
| | All | Mental care | Chronic care (cancer, assisted living, MS care, HIV) | ED, trauma centers and hospital visits | Pharmacy and vaccinations | Medicare provided | Eye care | |
| Not Specified according to following groups | (7) Arcury, Pathman, Hill, Hall, Su, Gadzinski, Singh | (2) Ziller, Larrison | (7) Schroen, Buchanan, Adams, Vyvaharkar, Lin, Charkraborty, Anderson | (4) Rust, Probst, Smith-Campbell, Shen | (1) Bennett | (1) Kilmer | 22 | |
| Children | (1) Devove | (1) Cully | | | (1) Bhatta | (1) Weeks | 2 | |
| Veterans | (1) Brems | | | | | (1) Gunderson | 2 | |
| Healthcare Providers | (1) Goins | (1) Willging | (1) Hawes | (1) Basu | (1) Collins | | 4 | |
| Elderly | | | | | | | 1 | |
| Lesbian, Gay, Bisexual, Transgender | | | (1) Williams | | | | 1 | |
| Minorities | | | | | | | | |
| Total | 10 | 4 | 9 | 5 | 3 | 2 | 1 | |

'rural' communities is not uniform, and at least five of the papers have no real urban control.^{13,29,30,40,42} Since rural areas are in themselves heterogeneous, and, at least ten studies are either multi state or broad surveys of rural areas, uniformity is almost impossible to achieve.^{23–25,30,35,41,43,45,49,63} 'Rural Health care' was also arbitrarily defined, with some studies choosing to study only physicians while others studied health care professionals in general. It is also clear from the literature that more consistent definitions for rural areas should be established.

Fig. 1 shows that there are many rural and underserved areas in the center of the country that have not yet served as a focus for study. Table 1 shows the populations studied in our review. Fig. 2 shows the geographic distribution of all the studies in the literature reviewed. Notably absent are the central states in the USA. It is likely that the rural populations in the center of the country suffer from similar disparities and that our findings are likely to be valid in these areas. Moving from one article to the next, it is difficult to fully comprehend the vast scope of problems that patients encounter. As the National Health care Qualities & Disparities Report states, no single national health care database collects comprehensive data, so all studies were scrutinized in order to analyze in detail barriers to health care access.⁴ In spite of this, however,

our epidemiological and clinical findings contribute to a universal understanding of the scale of the problem and the challenges faced at the community, state and federal level in order to meet rural health needs.

The barriers in accessing and seeking health care result in real consequences to the health of rural residents. Cultural attitudes, difficulty in getting to the doctor, the absence of services, lack of career progression opportunities for physicians and the increased financial burden for rural health care provision all conspire to ensure that rural residents receive poor or inappropriate care.

Patients receive poor or inappropriate care

In a qualitative study performed by Goins et al., one participant said,

When I had my stroke, it took me two days to convince my doctor that I was having a stroke. I drove into town and asked him, 'Is there any way that you can tell?' He said, 'Well, no. I don't see the symptoms that you are describing to me.' So, I had to go home. The next day when I woke up and I saw that my mouth was already drooped and my speech was slurred, I got back in the car and drove into town and showed him. Then, he [the doctor] said,

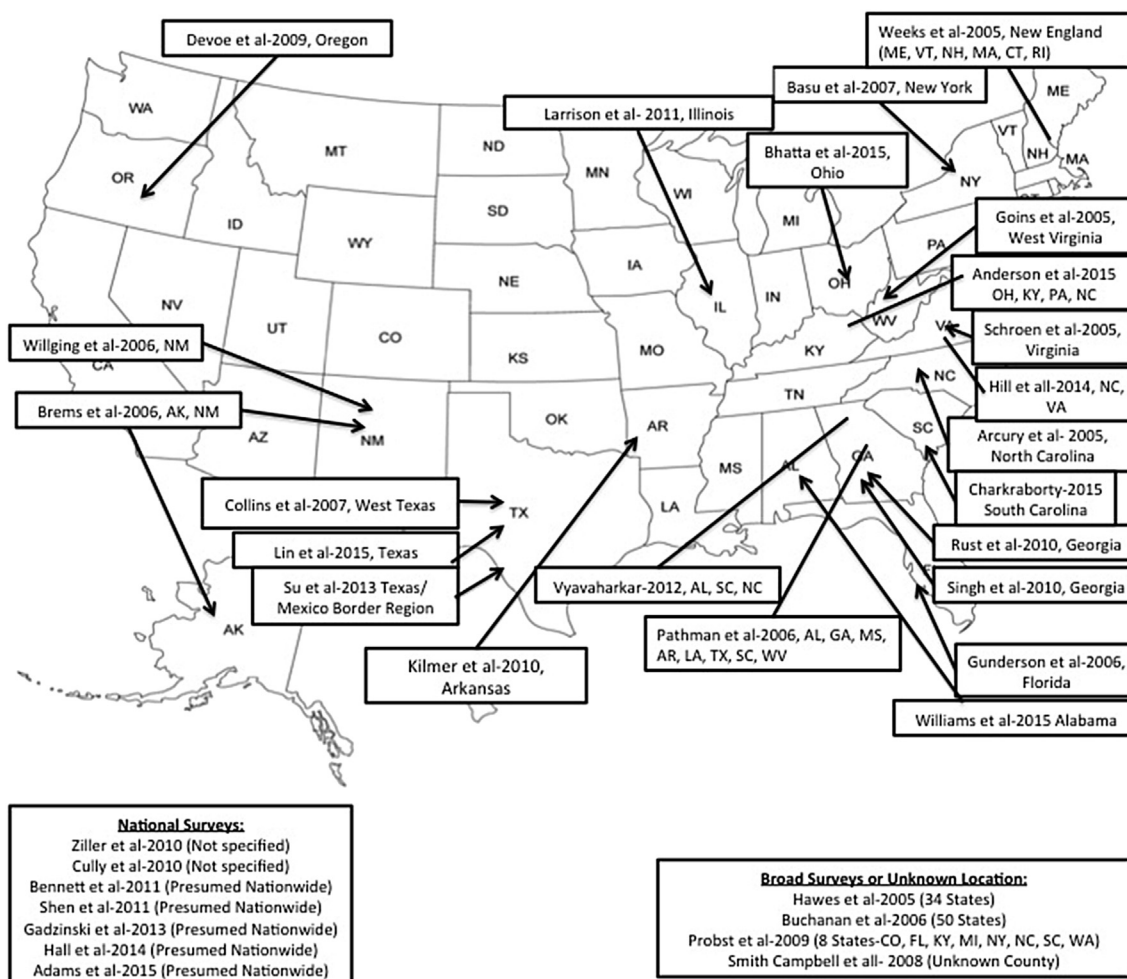


Fig. 2 – Patient population studied.

‘Okay, go across the mountain and I’ll have a neurologist meet you because we don’t have a neurologist here.’ It’s just one of those situations where, because we choose to live where we do, we have to make certain choices, and one of those is the health-care providers that are here.¹³

Barriers to accessing and seeking care may result in deleterious substitutions in care for rural patients. Weeks et al. showed that among veterans in New England ‘the rural population may substitute emergency room care for routine [clinic] visits—a costly, and perhaps less effective, substitution.’⁶³ Probst et al., in his research from eight states across the country, found that rural residents without access to community health centers are more likely to be hospitalized for conditions in which ‘primary care of acceptable quality can reduce the frequency of hospitalization.’⁴¹ Schroen et al. found that access to a treatment center for chronic illness may reduce drastic surgical interventions such as mastectomy where radiotherapy is unavailable.³⁴

Rural areas do not attract the best doctors and lack opportunities for career progression

Many rural doctors find themselves ‘overburdened and underpaid’ when compared to their urban counterparts.¹⁶ This hinders further training for doctors, whose careers may fail to progress and who are then unable to improve or update the care they provide for their patients.^{67,68} Gunderson et al. showed that many rural doctors in Florida with a high volume of Medicare patients are more likely to reduce or discontinue mental health services, vaccination and Pap smears when compared to their colleagues with fewer Medicare patients.³⁹ This raises the question as to whether poorly supported doctors are able to offer the service they believe their patients deserve.

Conclusion

Barriers in access to health care significantly impact the health outcomes of rural patients. Rural populations are culturally heterogeneous, are spread broadly across large geographical expanses throughout the United States, and have different demographics. Because of these difficulties, improvements must be specifically tailored to the needs of individual rural populations. Health care reform needs to encompass the provision of health services and appropriate rural infrastructure, as well as address the recruitment, training and development of rural health care professionals. Reformers must partner with local communities to create just and reasonable health insurance coverage and culturally acceptable innovations.

Since the implementation of the Patient Protection and Affordable Care Act, some disparities in rural health care have been addressed, but evidence is emerging that measures to redress inequalities are being curtailed in some states.⁶⁹ State acceptance of Medicaid coverage that maximizes benefits to rural residents must be reviewed.

In order to maintain actual and consistent improvements in rural health care, interventions must involve local community leaders and rural populations for the provision of

culturally appropriate patient and family-centered care that is effective, efficient and fair. The needs of rural communities must be better represented at state and national levels.^{70,71} The disparities highlighted in this paper are a call to action for policy makers and health providers to work with local communities to deliver equitable and quality health care.

Author statements

Ethical approval

Ethics approval was not required as this research was based on a review of literature with no research subjects and no data collection.

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Competing interests

There are no competing interests.

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