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Review Article

Women's Health in Rural American Communities

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Abstract:

Limited data have been published on the status of women's health in rural areas, particularly pertaining to women of color and rural women in the United States. The aim of this review is to briefly describe the trends in women's health in rural areas, the factors contributing to poor health outcomes and potential ways to focus improvements most effectively. To provide this overview, approximately 310 articles were screened by full text on the database Pubmed. Of these, 27 articles are described in more detail in this piece. Data focus on women's health in the United States and include information bulletin reports and individual studies centered around the topic of interest. The literature clearly illustrates that living in rural areas comes with certain limitations, lifestyle accommodations and behaviors that can lead to negative health outcomes for women in the rural United States.

Keywords: rural health; women's health; rural women's health; rural mental health; rural obstetrics and gynecology; healthcare access; Montana women's health

Introduction

Women living in rural areas report higher incidences of negative health outcomes across socioeconomic status and diverse health conditions [1]. Numerous factors contribute to poor health outcomes including limited access to healthcare providers and facilities, fewer specialized physicians available, less access to preventive screenings, need to travel long distances for healthcare, lack of insurance, and limited navigational support through medical system processes [2]. Moreover, living in a rural area increases the likelihood of intersection of different adverse socioeconomic factors such as loneliness, drug abuse, homelessness, and mental health problems, thus potentially amplifying the overall health risk that rural women may shoulder [3-4]. Here, we briefly describe the unique conditions women may face in rural communities and how those conditions may impact their health.

Demographics and general healthcare limitations

In order to begin to illustrate the healthcare challenges of women living in rural areas, it is important to first look at the general demographics of women in rural communities. Two data sources that provide detailed information focused on rural communities are the USDA (United States Department of Agriculture) and the Federal Reserve [5-6]. According to USDA reports, the rural population in America has seen an increase of approximately a 0.25% from mid-2020 through mid-2022 [5]. This increase in population, albeit slight, brought about some changes in the economy as well. While some rural counties in the United States saw an increase in employment, others experienced higher rates of poverty [5]. According to the 2023 USDA information bulletin report, non-urban annual employment grew by 0.5%in 2022. By the first quarter of 2023, total employment recovered to 99% of pre-pandemic levels [5]. At the same time, the unemployment rate declined from 11.3 in 2020 to 3.8 % in 2022. Yet, poverty rates rose in 13% in all rural counties [5]. Meanwhile, jobs in key rural sectors such as agriculture, mining and manufacturing decreased more than 15% over the last two decades suggesting that a long-term transition in jobs in rural communities is well underway and may be challenging for many [6]. Underemployment is directly linked to poverty and can contribute to negative health outcomes with poor living conditions. For instance, low-income renters are at times confined to living in overcrowded housing units that lack a full kitchen or plumbing facilities, which poses greater health and safety risks [1]. Housing insecurity represents a particularly acute problem for American Indian, Alaska Native (AIAN) and Hispanic households [1].

Additional factors that affect many rural residents more than their urban counterparts may also include the lack of health insurance, heavy reliance on Medicaid and Medicare, the need to travel long distances to receive care or to access a range of medical, dental, and mental health specialty services, intermittent homelessness and increased isolation [7-10]. Rural women in particular experience higher rates of unintentional injury, motor vehicle-related deaths, cardiovascular disease deaths, suicide, cigarette smoking, obesity, difficulty with basic physical and mental actions, limitation of complex activities and incidence of cervical cancer [7-11].

A sample of 37,026 women of reproductive age from the Medical Expenditure Panel Survey (2010–2015) linked to the Area Health Resource

File indicated that rural women had lower past-year obstetrician-gynecologist visit rates than urban women (23.3% vs. 26.6%), and higher visit rates with family medicine physicians (24.3% vs. 20.9%) and nurse practitioners/physician assistants (NPs/PAs) (24.6% vs. 16.1%) [3]. Lower OB-GYN availability in rural counties also correlated with a 9% greater probability of severe maternal morbidity and mortality and a 6% to 20% higher rate of infant mortality [3]. In addition, proportionately fewer rural women received recommended preventive screening services for breast and cervical cancer across all ethnic groups [2-3]. Clearly, the lack of availability of healthcare professionals and specialty services that provide care for women in rural zones reduces their ability to receive regular checkups, ultimately increasing the incidence of morbidity and mortality.

The lack of access to Ob-Gyn services is escalating in severity

According to a 2019 article published in Health Affairs [12], 179 rural counties lost obstetric services between 2004 and 2014, while another 898 rural counties never had hospital-based obstetric care in the same period [12]. This lack of services is correlated with increased rates of preterm births, out-of-hospital births, births in hospitals without obstetric units, and overall higher morbidity and mortality compared to urban residents [12-15]. Additionally, counties that lacked hospitals with obstetric services had fewer family physicians per 10,000 residents, had higher percentages of women ages 15 to 44 who were non-Hispanic black, lower median household incomes, and higher percentages of residents in poverty [1-4]. Non-Hispanic black, American Indian/Alaska Native (AIAN), Hispanic, and Asian residents of both rural and urban areas had at least a 33% increased odds of severe maternal morbidity and mortality compared to non-Hispanic white residents, and Medicaid beneficiaries or patients with no insurance at delivery had at least 30% increased odds compared to those with private health insurance [1-4]. These observations support the idea that multiple detrimental factors can accumulate to raise the odds of poor health outcomes for rural women. Moreover, data revealed an upward trend in the difference in maternal mortality and morbidity between rural and urban residents from 0.08% in 2007 to 0.11% in 2015 and a predicted 0.14% in 2021. Further analysis also found that rural residents had higher prevalences of substance use disorder and depression [11].

Metabolic disease

Despite the fact that premature coronary artery disease (CAD) rates have declined over time, premature CAD mortality remains consistently higher in the rural versus urban United States, especially for women. Data indicate an increase in CAD mortality rates in 55 to 64 year olds since 2010, in the 45 to 54 year-old group uninterrupted since 1999, in white women beginning in 2009 [16-17]. Stratification by race shows higher CAD mortality rates for black patients throughout the entire period.

An additional factor affecting rural patients is obesity [18]. An analysis of 2016 Behavioral Risk Factor Surveillance System (BRFSS) data by the CDC found that the prevalence of obesity was 34.2% among adults living in rural counties in the United States compared to 28.7% among those living in metropolitan counties. These data are in alignment with previous data suggesting that adults living in nonmetropolitan counties of the United States were less physically active and less likely to meet physical activity recommendations than their metropolitan counterparts, less likely to have access to healthier food retailers, and more likely to experience several social determinants of health that are risk factors for obesity, such as persistent poverty [18]. Solutions that include an awareness and self-efficacy of exercise, including walking, are under-utilized [19-20].

Relieving the barriers to navigation

Beyond access, additional barriers can interfere with rural women's ability to receive quality care. Patient navigation shows promise in assisting women in navigating their healthcare in the context of cancer treatment. Patient navigation uses trained personnel to identify the financial, cultural, logistical, and educational obstacles patients face in health care, then mitigates these barriers to facilitate complete and timely access to health services [21]. This approach has been helpful to increase access to screening, shorten time to diagnostic resolution, and improve cancer outcomes in health disparity populations, such as women of color, rural populations, and poor women [21].

In an analysis of the multi-site Patient Navigation Research Program [22], participants with an abnormal cancer screening test were allocated to either navigation or control groups. Ten research centers across the United States recruited patients from community health centers or outpatient practice settings within or outside of safety-net hospitals, specifically targeting low income, uninsured or publicly insured, racially and ethnically diverse patients. Women made up 89% of the 7514-patient sample. A major finding was that patient navigation had its greatest impact for Black patients who had the longest delays in care. Navigated participants were more likely to be Hispanic, uninsured, and speak a language other than English compared to participants in the control arm [22].

Addressing the barriers to colorectal cancer screening

In 2010, seventeen primary care physicians practicing in rural central Pennsylvania were interviewed as part of the Rural Women's Health Project [23]. The purpose of the interviews was to identify current limitations preventing women's access to colorectal cancer screening and address ways for improvement. Several barriers to colorectal cancer screening for women in rural communities were identified including physician's preference for colonoscopy over fecal occult blood test, patient's belief that colorectal cancer affects men more, embarrassment of knowing people at the endoscopy center, prioritization of family issues over personal health, low health literacy, high likelihood of being under or uninsured, lack of effective reminder systems, resources, personnel and time [23]. Suggested improvements included advertising campaigns, hospital outreach programs, health fairs, medical extenders discussing screening with patients, use of educational materials within rural practices, greater financial support from hospitals or the government to help overcome the cost barrier for patients who were under or uninsured [23].

Mental health

Finally, mental health is an important aspect of the rural women's health experience. A qualitative study explored social-cultural factors that affect treatment-seeking behaviors among depressed rural, low-income women in Appalachia, a region with high rates of depression and a shortage of mental health services [24]. In this qualitative study, 28 women were interviewed on their perceptions of depression and treatment seeking. Participants stressed that poor treatment quality, not just access to mental health services, limited their engagement in treatment and at times reinforced their depression. Moreover, participants indicated that their resistance to seek help was influenced by the expectation of women's self-reliance and the gendered taboo against negative thinking in rural communities, resulting in further isolation in an attempt to self-manage. Other factors including financial struggles, chronic stress, family care-giving responsibilities, and experiences of trauma can increase the incidence of depression and impair women's ability to seek treatment [24].

Montana as a rural test case

We would be remiss if we did not reference the healthcare in Montana, one of the least densely-populated states in the United States, and the state in which we reside. Note, that there are few comprehensive sources of public data for individual rural states especially Montana. The main source of data for Montana is the Montana women's health status data (KFF (Kaiser Family

Foundation), latest data published October 21, 2021 (https://www.kff.org/interactive/womens-health-profiles/montana/health-status/)) [25]. As of 2022, the state of Montana is home to approximately 316,300 women subdivided into 5% Hispanic, 5% American Indian/Alaska Native (AIAN), 1% Asian, 6% Other, and 83% White [25]. Even though women of color make up a small percentage of the total number of women in the state, they are often disproportionately affected by negative health outcomes [25]. For instance, the 2021 data show that 37% of Black women delivered via cesarean compared to 27% of White women and 28% of Hispanic women; similarly, 23% of women, who did not see a doctor in 2021, were Hispanic compared to 11% AIAN and 7% White women. Similarly, 17% of AIAN women reported not having a personal doctor compared to 15% Hispanic women and 11% White women [25]. Thus, there were substantial differences in healthcare utilization across rural women based on ethnicity. Conversely, there is less discrepancy when it comes to preventive screenings. In fact, of the 68% of Montana women, 40 and older, who reported receiving a mammogram between 2018 and 2020, 60% were AIAN, 64% were Asian and NHOPI (Native Hawaiian and Other Pacific Islanders), 68% were White, and 78% were Hispanic; likewise, of the 64% women who reported having a pap smear in that same period, there were no differences in utilization between Hispanic, White, Asian and NHOPI, and AIAN women [25]. And yet, women of color were more likely to report a poor health status overall: 21% of Hispanic women and 33% of AIAN women reported fair or poor health which is above the state's 18% average overall [25]. AIAN and Hispanic women also reported more poor mental health days in a month compared to the state average for women. In addition, AIAN women were twice as likely to be diagnosed with diabetes [25]. A persistent shortage of obstetrics and gynecological services was most acute in American Indian women in Montana [26].

In terms of financial status and poverty, 13% of Montana women live under the level of 100% of the federal poverty level (FDL), 17% live between 100-199% of the FPL, 33% find themselves between 200-399% of the FPL, and 37% are 400%+ FPL [25]. As of 2022, approximately 56% of women in Montana receive health insurance coverage from their employer, 20% rely on Medicaid and 10% are uninsured [25]. A 2022 KFF analysis of CDC data revealed that 13.2% of women in Montana are smokers [27], which is slightly above the national average of 11%, even though smoking has been decreasing locally and nationally. Conversely, data also indicate that the incidence of hypertension has been increasing both locally and nationally [28]. Montana women also saw an increase in hypertension but remarkably remain approximately 5% below the national average (~30% hypertension nationally compared to 25% in Montana women) [28].

Discussion

It is important to not only aim to increase access to healthcare but also to emphasize culturally competent care for diverse nonurban populations. The location of centers of medical education in rural communities and states is a promising step toward personalized care of rural women. Additional ways to improve rural women's health include the use of trained personnel to help patients navigate all aspects of their healthcare process, public health education campaigns to emphasize the importance of screenings and reduce stigma around certain conditions like mental health, and funding to increase available resources such as continued education for physicians or even just more efficient reminder systems. In summary, the opportunities to move the needle in a positive direction in rural women's health care are many in spite of challenges that remain on the horizon.

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