



## Rural Women's Health

### Introduction

The National Rural Health Association (NRHA) is a 22,000 member nonprofit organization which is the leading advocate for improved health care for rural America. Formal organization policy is considered and adopted by the member-driven Rural Health Congress and Board of Trustees.

This policy paper is an update to an existing NRHA policy paper developed and approved in November 2005. This policy paper updates the state of Women's Health, how recent legislation and national trends affect women's health, and adds specific NRHA policy positions.

### Background

Rural populations in the United States have higher rates of chronic illness and poor overall health when compared to urban populations. They are older with fewer physicians and specialists available to care for them. In addition, fewer rural adults have health insurance coverage. Barriers exist due to geographic distance or terrain or a lack of transportation.

More than 28 million women 18 and older live in Rural or Frontier America who need access to quality health care services.<sup>1</sup> An estimated 5 million rural adult women are 65 years and older, more than 4 million are identified as having a disability.<sup>1,2</sup> Health insurance is a barrier as 14% of all rural adult women do not have health insurance.<sup>3</sup> Other factors that impact women's access to health care services include: 4% of the female civilian labor force 16 years and older is unemployed,<sup>4</sup> and those who are employed consistently earn less than their urban counterparts and may not receive health insurance as a benefit. While more women living in rural America are likely to have a high school diploma when compared to urban women they are less likely to have a college degree or higher.<sup>5</sup>

Disparities are well documented regarding lower health status and higher rates of chronic illness among minority populations in the United States. Many rural women are part of an ethnic minority group; according to USDA statistics, rural America is home to more than 3.7 million women who self-identify as African-American, Hispanic/Latino or American Indian.<sup>6</sup>

All women in rural and frontier areas are affected by access issues, specifically the lack of primary and specialty care. The latter has a major impact on rural women as specialty care includes OB/GYN services. Rural areas also tend to have higher rates of chronic disease, including heart disease, diabetes and cancer.

This policy brief outlines the health care needs of rural women as well as the barriers they face with a number of contexts: Chronic Disease and Prevention, Maternal and Child Health/Perinatal Care, Elderly/Aging Issues and Mental Health. Policy recommendations will follow that are intended to recognize these emerging needs and improve the access to health care services for rural and frontier women.

## CHRONIC DISEASE AND PREVENTION

Diseases of the cardiopulmonary systems, diabetes, and cancer are the leading causes of adult morbidity and mortality in the United States (US). Over 20% of the population currently experiences at least two chronic medical conditions.<sup>7</sup> Rural areas contain about 20% of the population but are poorer, older, and have higher dependency ratios than more urban areas. Poverty increases the risk for complications of chronic disease and lower levels of health insurance coverage. Occupations common in rural areas have higher injury rates. There is a geographic maldistribution of health providers and greater travel distances to access care increases out-of-pocket costs for rural residents. Data from the National Health Interview Survey demonstrate that adults who don't live in a metropolitan statistical area (MSA) have higher rates of hearing difficulty, vision trouble, or absence of all natural teeth than adults living in larger MSAs. These non-MSA adults are also more likely to have feelings of nervousness, report poorer health status, and were less likely to report meeting current guidelines for physical activity. These same adults are more likely to be obese and less likely to have ever been tested for HIV.<sup>8</sup>

Rural areas experience a 17% higher diabetes prevalence rate than urban areas.<sup>9</sup> Rurality influences obesity rates much more for women than for men.<sup>10</sup> Obesity rates for women in rural areas (23%) are higher than women in large metropolitan areas (16%). Rural residents also experience a higher mortality rate for cardiac disease. Ahluwalia and colleagues<sup>11</sup> found that women in rural areas who suffer from hypertension, hypercholesterolemia, and diabetes are often undertreated or not treated at all. Awareness of the symptoms and signs of stroke, where women seem to have less favorable outcomes than men, are more important for rural residents,<sup>12</sup> especially where there is less access to acute medical care, or where access is limited by geography. Women seem to have poorer pre-stroke functionality and the management of risk by patients and their health care providers is different than for men. Women who have had a stroke are less likely to undergo extensive investigations and interventions. Despite a higher incidence of these conditions rural women are also less likely to have received preventive health screenings than urban women.<sup>13</sup>

Breast cancer in rural women is diagnosed at a later stage compared to urban women.<sup>14</sup> Rural women also have lower rates of mammography screening. Lower screening rates may be attributable to lack of insurance, geographic maldistribution of screening facilities, and poor health literacy. Specialized cancer care may also be located at some distance from the woman's place of residence. Invasive cervical cancer (ICC) incidence and mortality varies by region with disproportionately high rates along the US-Mexico border, the Deep South, and Appalachia.<sup>15</sup> Cervical cancer screening services are underutilized. Poverty, lack of insurance, cultural beliefs and perceptions all contribute to lower screening rates. In addition, fear, embarrassment, and health illiteracy may contribute to lack of screening. Campbell and colleagues<sup>15</sup> found that ICC incidence and mortality was higher among white women in Appalachian counties of Ohio than among non-Appalachian counties, indicating that ethnicity is not a significant factor.

Rural areas face challenges when it comes to screening for human immunodeficiency virus infection and diagnosing acquired immune deficiency syndrome (HIV/AIDS).<sup>16</sup> Rural women are subjected to lack of privacy. Conservative social values stigmatize the diagnosis of HIV/AIDS more so in rural areas. Rural women report more social stigma, shame, or fear of being stigmatized due to HIV/AIDS than do men with HIV/AIDS. Women are more often perceived as intravenous drug users, prostitutes, or having had multiple sexual partners. Phillips

and colleagues<sup>17</sup> find that the rate of HIV/AIDS is growing rapidly in the Deep South, especially among women of African American and Hispanic descent. Persons living with HIV/AIDS in rural areas are less likely to receive care from providers experienced with HIV/AIDS treatment.

According to Warner and colleagues<sup>18</sup> poisoning is the leading cause of death due to injury in 30 states. Between 1980 and 2008 the number of poisoning death increase six-fold and the number of deaths due to opioids increased more than three times. In 2008, opioid analgesics were involved in more than 40% of all drug poisoning deaths. Darnall and Stacey<sup>19</sup> found that women are at greater risk of being misprescribed opioids for conditions where alternative non-opioid treatments are available. They also found that opioids are more likely to be prescribed to women, and at higher doses, than men. If opioids are involved in a drug-related fatality in a woman, she is more than twice as likely as men to have received prescriptions from five or more clinicians in the year prior to the fatal event.

## **MATERNAL AND CHILD HEALTH**

Rural women face many hurdles during their reproductive years. Surveys have shown that maternal, infant, and child health rank as a top ten concern by rural health experts.<sup>20</sup> Rural women are particularly susceptible to poor prenatal care due to fewer resources available to them. Obstetrics providers, in particular, are in short supply in rural areas; urban counties average nearly 35 obstetricians per 1,000 residents, while rural counties average less than 2 per 1,000 residents.<sup>21</sup> Lack of access to such care has been linked with poorer outcomes among women.<sup>22</sup> Rural women rely upon Family Medicine Physicians to provide this care, but the proportion providing these services, even in rural areas, has declined significantly over the past decades.<sup>23</sup>

The evidence is mixed in regards to receipt of prenatal care. Several studies have indicated that rural women are more likely to initiate prenatal care late, and to subsequently have poorer outcomes.<sup>24-26</sup> A study of Oregon women, however, did not find a rural disparity in initiation of prenatal care, but did find that rural pregnancies were more likely to be in younger, unmarried women and to be unplanned.<sup>27</sup> Lower education, unplanned pregnancy, and inadequate transportation to a provider have all been associated with untimely prenatal care.<sup>28</sup> Rural women also face barriers in delivery; many rural hospitals do not offer obstetric services, while those that do report shortages of providers and trained staff.<sup>29,30</sup>

Rural African American women insured by Medicaid are more likely to experience poor outcomes than women with private insurance, although this disparity may ameliorate with proper risk adjustment.<sup>31,32</sup> Medicaid managed care often did not fare better, particularly for non-white patients.<sup>33,34</sup>

Adequate access to family planning services would serve to reduce the likelihood of unplanned pregnancies. Family planning and sexual health was identified as one of the top 20 priorities for rural residents.<sup>20</sup> The availability of family planning services has been linked to a decrease in unplanned pregnancies; decreasing unplanned pregnancies leads to fewer infants born with low-birth-weights, incidences of late onset or complete lack of prenatal care, as well as fewer infant and neonatal deaths and fewer abortions.<sup>35</sup> Publicly funded agencies, such as community health center public health departments, hospitals, and women's health clinics almost universally offer contraceptive services to women.<sup>36,37</sup> Since community health centers serve low income and other underserved communities, the potential for service to rural women are high. However,

there continues to be insufficient health research focused on rural women's use of family planning.

## **ELDERLY/AGING ISSUES**

On average, women tend to live longer than men. The result is that women make up a disproportionately large fraction of seniors. The ratio of women to men increases with age.<sup>38</sup> Over four in ten seniors (43%) live on incomes below 200 percent of the Federal Poverty Line, with higher rates among women, older seniors, and racial/ethnic minorities.<sup>39</sup>

Rural senior women are more likely to be disabled, widowed, older and poorer than urban or suburban senior women. They also lack access to many of the human services available to their urban and suburban counterparts. This can impair the care, well-being, independence and quality of life of older rural women. For example, senior women experience more health issues that affect their ability to drive than men.<sup>40</sup> Rural areas often have limited public transportation, and residents must travel greater distances to access health care, social opportunities, healthy food options, and other necessities. Hence, the inability to drive can seriously hamper the mobility of rural senior women, compromising their quality of life. Other challenges faced by older rural women include lack of nearby younger family members, lack of knowledge of available services, and lack of needed services in or near the community. These issues force many rural seniors to move to locations with more human services or to enter a nursing home earlier.<sup>41</sup>

Diseases such as age-related macular degeneration, some types of cancer and Alzheimer's disease occur most frequently in adult and aging women. Rural areas lack many social and health services to care for older women such as primary care physicians trained in gerontology and geriatrics, geriatricians and other specialists, social workers, nurse managers and caseworkers.<sup>41</sup> The result is that rural senior women receive fewer health services, such as screening for age-related cancers, than their urban counterparts.<sup>42</sup> This situation is compounded by the economic state of many rural communities, where the lack of economies of scale and/or a small tax base can make it difficult to fund adequate services. In-home social services (adult day care, respite care, meals on wheels) are much less likely to be available in rural areas.<sup>41</sup>

Medicare beneficiaries account for 14 percent of the total U.S. population and a wide ranging share of state populations, from 9 percent in Alaska to 21 percent in West Virginia. 24 percent of all Medicare beneficiaries live in rural areas, and rural beneficiaries account for more than 50 percent of the Medicare population in Montana, Nebraska, North Dakota, Ohio, South Dakota, Vermont and Wyoming. The Medicare population is demographically diverse and includes significant numbers of individuals who are financially and medically vulnerable, especially in rural areas. Beneficiaries are predominantly white (78 percent) and female (56 percent). Those over age 85 account for 12 percent of Medicare beneficiaries.<sup>39</sup>

Rural residents are more likely to have Medicare supplemental insurance (Medigap) policies; 32 percent of Medigap policyholders live in rural areas,<sup>43</sup> compared to 24 percent of Medicare

beneficiaries who live in rural areas. Many of these rural Medigap policyholders have limited incomes; 60 percent have an annual income of \$30,000 or less.<sup>43</sup> In recent years, Medigap premiums have increased, resulting in higher out-of-pocket spending by beneficiaries. Starting in 2012, some of these out-of-pocket expenses will be reduced under the 2010 Patient Protection and Affordable Care Act (ACA); Medicare beneficiaries who reach the Part D coverage gap will receive discounts on prescription drugs, and the coverage gap will continue to be reduced until 2020 when it will be completely eliminated. Additionally, annual wellness visits, which can include preventive screenings for some age-related diseases, will now be offered to all Medicare beneficiaries for free.<sup>44</sup> The ACA will also modify some Medigap plans to include cost sharing for some services starting in 2015, but the effects of these changes on premiums and enrollment in these plans remain to be seen.<sup>43</sup>

In addition to Medicare, the federal government also provides a wide variety of home and community-based programs and services for seniors through the Administration on Aging.<sup>45</sup> These services include outreach and education, which are an important avenue for reaching seniors in rural and frontier communities.

## **DOMESTIC VIOLENCE/INTIMATE PARTNER VIOLENCE (IPV)**

Research is limited and resources are few regarding domestic violence, also called intimate partner violence (IPV) in rural America; however, what current research there is identifies IPV as prevalent in rural communities. In fact, some studies have shown rural American women are experiencing higher rates of IPV with greater frequency and severity of abuse than their urban counterparts.<sup>46,47</sup> Rural areas face challenges such as higher poverty and lower rates of health insurance coverage limiting the ability of an IPV victim to access health care services. Primary care providers are crucial to serving rural women who are facing IPV. Victims may be receiving care from service providers who work with limited resources, are inadequately funded and who may function in multiple roles when working with clients.<sup>48</sup> This situation is aggravated with the scant availability of IPV resources and the greater distances to those resources in small rural and isolated areas.<sup>46</sup> Several studies have suggested that social and geographic isolation found more commonly in rural areas may significantly affect the rates and severity of IPV.<sup>46,47,49</sup> Victims of IPV can experience a variety of additional difficulties related to transportation, housing, employment, and safety to worsen the problem. Incidences of IPV affect not only the victims but their families, employers, and their communities.

## **MENTAL HEALTH**

Women are twice as likely as men to suffer from depression. A recent national study estimated that 14% of women suffer from depression and that 2.7% experienced severe psychological distress.<sup>50</sup> Women who are older, less educated, unmarried, unemployed, or have a low income are at higher risk,<sup>51</sup> and rural women may be especially vulnerable. One study of a community health center in the rural South estimated that 44.3% of female clients suffered from major

depressive episodes.<sup>52</sup> These findings are similar to the findings of a study at a rural community health center in Central Virginia, which found that 41% of female clients were suffering from depression, compared to the typical urban prevalence rates of 13-20 percent.<sup>53</sup> Suicide rates are also higher in non-metropolitan areas; a recent study estimated that suicide rates among rural residents are “37% higher than the rate among suburban residents.”<sup>54</sup>

One of the reasons for these disparities is that rural residents are far less likely to receive mental health treatment.<sup>55</sup> A variety of barriers keeps people from seeking and receiving mental health care, including the cost of treatment, lack of awareness of mental illness, not believing that treatment is necessary, lack of time, not knowing where to go for services, and stigma surrounding mental illness.<sup>50,53,56</sup> Some of these barriers are amplified in rural and frontier communities due to the lack of anonymity in rural communities,<sup>57,58</sup> the distance and time to services, and the fact that rural residents are more likely to be uninsured and poorer than their urban counterparts.<sup>59</sup>

Some aspects of rural residence may help protect women’s mental health. One study showed that women living on farms scored higher than average on mental health assessments.<sup>60</sup> Additionally, residents of the rural Midwest may experience fewer depressive symptoms than non-rural residents.<sup>61</sup>

## **POLICY RECOMMENDATIONS**

### **Support programs that increase and strengthen the rural health workforce. These include:**

- Programs providing continuing education opportunities to rural doctors focused on particular populations, such as pregnant and nursing women, the elderly, patients with chronic pain, patients with substance use problems, victims of intimate partner violence and the mentally ill.
- Maintenance or Expansion of the National Health Service Corps scholarship and loan repayment programs.
- Support of Rural Training Tracks within health education programs, particularly those training primary care, geriatric, women’s health, and mental health providers.
- Maintenance or expansion of enhanced reimbursement programs for rural hospitals and primary care providers.
- Reforms to the medical liability system that should result in lower, affordable premiums for providers, including obstetricians.

### **Support programs that provide outreach and education. These include:**

- Programs designed to improve health literacy of rural and frontier populations.
- Programs that improve provider and patient education regarding the proper use of opiate analgesics for the treatment of acute and chronic pain.

- Programs that provide resources and support intervention services in rural communities to help victims of intimate partner violence.
- Programs that provide outreach and education to rural women to increase their awareness of the signs of and treatments for mental illness.
- Programs that provide outreach to seniors through the Administration on Aging (AoA) National Center for Benefits Outreach and Enrollment to ensure that seniors understand the Medicare benefits they are entitled to under the ACA.
- Activities of the NRHA that inform and educate the offices of women's health in all of the various Federal agencies to keep rural as a priority population within these entities, *or to elevate rural to a priority population if it is not so*. NRHA will encourage the HHS Office of Women's Health to appoint a rural liaison and to implement and coordinate services and activities across the government to ensure awareness of the health needs of rural women.
- Efforts of the offices of women's health in all of the various Federal agencies to provide health educational materials regarding family planning, perinatal care, and birth outcomes.

**Support treatments and services that include:**

- Programs that expand access to both abstinence-based and medication-assisted opiate addiction treatment.
- Efforts of the state Medicaid programs to provide maternal and child health services.
- Programs that provide transportation to health services and/or home and community-based health services to rural residents, including the elderly, disabled, and the poor who lack access to or cannot afford transportation to the health care they need.
- Programs that increase access to recommended disease prevention and screening procedures.
- Programs that improve access to screening, diagnosis, and treatment of Human Immunodeficiency Virus infection.
- Programs that support Family Planning Services:
  - The continuation and adequate funding of the services provided by Title X of the Public Health Service Act with a specific emphasis on reducing unplanned pregnancies among rural women, particularly among those under the age of 18;
  - The continuation and expansion of family planning funding and services within the state Medicaid programs, and;
  - The expansion of family planning funding and services to Federally Qualified Health Centers and Rural Health Clinics, commensurate with community need.

## Support funding for research in the following areas:

- Studies identifying rural women's overall health status and their access to and use of health care services available to in rural and frontier areas, including:
  - Appropriate health screenings;
  - Primary care;
  - Prenatal care;
  - Family planning services;
  - Oral care;
  - Vision and eye health services; and
  - Mental health care.
  
- The development of models for improvement of screening and care of intimate partner violence that is appropriate for rural populations and dissemination of these models.
  
- Continued evaluation of Medicaid managed care program and its impact upon perinatal care and outcomes.
  
- Programs and models for mental health care that are effective in rural and frontier areas.

## REFERENCES

1. US Census Bureau. 2007-2011 American Community Survey 5-year estimates, Table DP05. American FactFinder website. <http://factfinder2.census.gov>. Accessed April 11, 2013.
2. US Census Bureau. 2009-2011 American Community Survey 3-year estimates, Table B18101. American FactFinder website. <http://factfinder2.census.gov>. Accessed April 11, 2013.
3. US Census Bureau. 2009-2011 American Community Survey 3-year estimates, Table B27001. American FactFinder website. <http://factfinder2.census.gov>. Accessed April 11, 2013.
4. US Census Bureau. 2007-2011 American Community Survey 3-year estimates, Table B23001. American FactFinder website. <http://factfinder2.census.gov>. Accessed April 11, 2013.
5. US Department of Health and Human Services, Health Resources and Services Administration. Women's Health USA 2011. Maternal and Child Health Bureau website. <http://www.mchb.hrsa.gov/whusa11>. Accessed June 15, 2012.
6. US Department of Agriculture. Rural Income, Poverty, and Welfare: Poverty Demographics. Economic Research Service website. <http://webarchives.cdlib.org/sw1rf5mh0k/http://www.ers.usda.gov/Briefing/IncomePovertyWelfare/PovertyDemographics.htm>. Accessed June 15, 2012.



7. Artnak KE, McGraw RM, Stanley VF. Health care accessibility for chronic illness management and end-of-life care: a view from rural America. *J of Law, Medicine, & Ethics*. 2011;39(2):140–155.
8. Schiller JS, Lucas JW, Ward BW, Peregoy JA. *Summary health statistics for U.S. adults: National Health Interview Survey, 2010*. Vital Health Statistics 10;252. [http://www.cdc.gov/nchs/data/series/sr\\_10/sr10\\_252.pdf](http://www.cdc.gov/nchs/data/series/sr_10/sr10_252.pdf). Published in 2012. Accessed May 29, 2012.
9. Massey CN, Appel SJ, Buchanan KI, Cherrington AL. Improving diabetes care in rural communities: an overview off current initiatives and a call for renewed efforts. *Clin Diabetes*. 2010;24(1):20–27.
10. Fohs PS, Kalman M. Matters of the heart: cardiovascular disease and rural nursing. *Annu Rev Nurs Res*. 2008;26:41–84.
11. Ahluwalia IB, Tessaro I, Greenlund KJ, Ford ES. Factors associated with control of hypertension, hypercholesterolemia, and diabetes among low-income women in West Virginia. *J Womens Health*. 2010;19(3):417–424.
12. Arkady MG, Tower LE. The effect of rurality and gender in the stroke awareness of adults in West Virginia. *J of Health Human Serv Adm*. 2010;33(1):63–93.
13. Hageman PA, Pullen CH, Walker SN, Boeckner LS. Blood pressure, fitness, and lipid profiles of rural women in the Wellness for Women Project. *Cardiopulm Phys Ther J*. 2010;21(3):27–34.
14. Rayman KM, Edwards J. Rural primary care providers’ perceptions of their role in the breast cancer care continuum. *J Rural Health*. 2010;26:189–195.
15. Campbell CMP, Menezes LJ, Paskett ED, Giuliano AR. Prevention of invasive cervical cancer in the US: past, present, and future. *Cancer Epidemiol Biomarkers Prev*. 2012;21(9):1402-1408.
16. Gonzalez A, Miller CT, Solomon SE, Bunn JY, Cassidy DG. Size matters: community size, HIV stigma, & gender differences. *AIDS Behav*. 2009;12:1205–1212.
17. Phillips KD, Moneyham L, Thomas SP, Gunther M, Vyavaharkar M. Social context of rural women with HIV/AIDS. *Issues Ment Health Nurs*. 2011;32:374–381.
18. Warner M, Chin LH, Makuc DM, Anderson RN, Miniño AM. *Drug Poisoning Deaths in the United States, 1980-2008*. National Center for Health Statistics Data Brief 81. <http://www.cdc.gov/nchs/data/databriefs/db81.pdf>. Published December 2011. Accessed May 29, 2012.

19. Darnall B, Stacey BR. Sex differences in long-term opioid use: cautionary notes for prescribing in women. *Arch Intern Med.* 2012;172(5):431–432.
20. Bolin JN, Bellamy G. *Rural Healthy People 2020.*  
<http://www.srph.tamhsc.edu/centers/srhrc/images/rhp2020#rhp2020>. Accessed May 2012.
21. Health Resources and Services Administration. *Area Resource File (ARF) 2011-2012.* Rockville, MD: US Department of Health and Human Services, Health Resources and Services Administration; 2012.
22. Nesbitt TS, Larson EH, Rosenblatt RA, Hart LG. Access to maternity care in rural Washington: its effect on neonatal outcomes and resource use. *Am J Public Health.* 1997;87(1):85–90.
23. Cohen D, Coco A. Declining trends in the provision of prenatal care visits by family physicians. *Ann Fam Med.* 2009;7(2):128–133.
24. Larson EH, Hart LG, Rosenblatt RA. Is non-metropolitan residence a risk factor for poor birth outcome in the U.S.? *Soc Sci Med.* 1997;45(2):171–188.
25. Lishner DM, Larson EH, Rosenblatt RA, Clark SJ. Rural Maternal and Perinatal Health. In: Ricketts TC, ed. *Rural Health in the United States.* New York, NY: Oxford University Press; 1999:134–149.
26. Peck J, Alexander K. Maternal, infant, and child health in rural areas: a literature review. In: Gamm L, Hutchinson L, Dabney B, Dorsey A, eds. *Rural Healthy People 2010: A Companion Document to Healthy People 2010, Volume 2.*  
<http://srph.tamhsc.edu/centers/rhp2010/Volume2.pdf>. Published in 2003. Accessed May 2012.
27. Epstein B, Grant T, Schiff M, Kasehagen L. Does rural residence affect access to prenatal care in Oregon? *J Rural Health.* 2009;25:150–157.
28. Braveman P, Marchi K, Egerter S, Pearl M, Neuhaus J. Barriers to timely prenatal care among women with insurance: the importance of prepregnancy factors. *Obstet Gynecol.* 2000;95(6):874–880.
29. MacDowell M, Glasser M, Fitts M, Nielsen K, Hunsaker M. A national view of rural health workforce issues in the USA. *Rural Remote Health.* 2010;10(3):1531.
30. Zhao L. *Why Are Fewer Hospitals in the Delivery Business?* Working Paper 2007-04.  
<http://www.norc.org/PDFs/Publications/DecliningAccessToHospitalbasedObstetricServicesinRuralCounties.pdf>. Published April 2007. Accessed May 2012.
31. Anum EA, Retchin SM, Garland SL, Strauss JFI. Medicaid and preterm birth and low birth weight: the last two decades. *J Womens Health.* 2010;19(3):443–451.

32. Anum EA, Retchin SM, Garland SL, Strauss JFI. Medicaid and preterm births in Virginia: an analysis of recent outcomes. *J Womens Health*. 2010;19(11):1969–1975.
33. Brandon GD, Adeniyi-Jones S, Kirkby S, et al. Are outcomes and care processes for preterm neonates influenced by health insurance status? *Pediatrics*. 2009;124(1):122–127.
34. Laditka SB, Laditka JN, Bennett KJ, Probst JC. Delivery complications associated with prenatal care access for Medicaid-insured mothers in rural and urban hospitals. *J Rural Health*. 2005;21(2):158–166.
35. Dobie SA, Gober L, Rosenblatt RA. Family planning service provision in rural areas: a survey in Washington State. *Fam Plann Perspect*. 1998;30(3):139–147.
36. Lindberg LD, Frost JJ, Sten C, Dailard C. The provision and funding of contraceptive services at publicly funded family planning agencies: 1995-2003. *Perspect Sex Reprod Health*. 2006;38(1):37–45.
37. Finer LB, Darroch JE, Frost JJ. U.S. agencies providing publicly funded contraceptive services in 1999. *Perspect Sex Reprod Health*. 2002;34(1):15–24.
38. US Census Bureau. Profile of General Population and Housing Characteristics: 2010, Table DP-1. *American FactFinder website*. <http://factfinder2.census.gov>. Accessed June 7, 2012.
39. Cubanski J, Huang J, Damico A, Jacobson G, Neuman T. *Medicare Chartbook 2010*. 4th ed. Report 8103. <http://www.kff.org/medicare/upload/8103.pdf>. Published 2010. Accessed July 17, 2012
40. Hough JA, Cao X, Handy SL. Exploring travel behavior of elderly women in rural and small urban North Dakota: an ecological modeling approach. *Transportation Res Rec*. 2008;2082:125–131.
41. National Advisory Committee on Rural Health and Human Services. *2010 Report to the Secretary: Rural Health and Human Service Issues*. <http://www.hrsa.gov/advisorycommittees/rural/2010secretaryreport.pdf>. Published May 2010. Accessed July 17, 2012
42. Fan L, Mohile S, Zhang N, Fiscella K, Noyes K. Self-reported cancer screening among elderly Medicare beneficiaries: a rural-urban comparison. *J Rural Health*. 2012;28(3):312–319.
43. America’s Health Insurance Plans Center for Policy and Research. *Low-Income & Rural Beneficiaries with Medigap Coverage, 2010*. <https://www.ahip.org/MedigapLowIncomeRuralReport2012/>. Accessed September 26, 2012.
44. Office of the Legislative Counsel. *Compilation of Patient Protection and Affordable Care Act of 2010: As Amended Through May 1, 2010, Including Patient Protection and Affordable Care Act Health-Related Portions of the Health Care and Education Reconciliation Act of 2010*.

<http://housedocs.house.gov/energycommerce/ppacacon.pdf>. Published June 9, 2010. Accessed September 26, 2012.

45. Administration on Aging. AoA Programs. *Administration on Aging Website*. [http://www.aoa.gov/AoARoot/AoA\\_Programs/index.aspx](http://www.aoa.gov/AoARoot/AoA_Programs/index.aspx). Accessed September 26, 2012.

46. Peek-ASA C, Wallis A, Harland K, Beyer K, Dickey P, Saftlas A. Rural disparity in domestic violence prevalence. *J Womens Health*. 2011; 20 (11):1743-1749.

47. Breiding MJ, Ziemroski JS, Black MC. Prevalence of rural intimate partner violence in 16 US states, 2005. *J Rural Health*. 2009; 25(3):240-246.

48. Eastman BJ, Bunch SG. Providing services to survivors of domestic violence: a comparison of rural and urban service provider perceptions. *J Interpers Violence*. 2007; 22(4):465-473.

49. Lanier, C, Nayne MO. Intimate partner violence and social isolation across the rural/urban divide. *Violence Against Women*. 2009; 15(11):1311-1330. <http://vaw.sagepub.com/content/15/11/1311.full.pdf>. Published September 15, 2009. Accessed October 8, 2012.

50. Substance Abuse and Mental Health Service Administration. Prevalence and treatment of mental health problems. In: *2006 National Survey on Drug Use & Health: National Results*. Rockville, MD: Office of Applied Studies, US Department of Health and Human Services; 2007:83-96.

51. Farr SL, Bitsko RH, Hayes DK, Dietz PM. Mental health and access to services among US women of reproductive age. *Am J Obstet Gynecol*. 2010;203(6):542.e1-542.e9.

52. Hauenstein EJ, Peddada SD. Prevalence of major depressive episodes in rural women using primary care. *J Health Care Poor Underserved*. 2007;18(1):185-202.

53. Mulder PL, Shellenberger S, Streiegel R, et al. *The Behavioral Health Care Needs of Rural Women*. <http://www.apa.org/pubs/info/reports/rural-women.pdf>. Accessed July 9, 2012.

54. Eberhardt MS, Pamuk ER. The importance of place of residence: examining health in rural and nonrural areas. *Am J Public Health*. 2004;94(10). <http://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.94.10.1682>. Accessed June 29, 2012.

55. Hoge MA, Morris JA, Daniels AS, et al. An Action Plan for Behavioral Health Workforce Development: A Framework for Discussion. Rockville, MD: US Department of Health and Human Services; 2007.

56. Ward EC, Clark LO, Heidrich S. African American Women's Beliefs, Coping Behaviors, and Barriers to Seeking Mental Health Services. *Qual Health Res*. 2009;19(11):1589-1601.

57. Frontier Education Center. *Frontier Communities: Leading the Way With Innovative Approaches to Behavioral Health*. <http://www.frontierus.org/documents/innovativeapps.pdf>. Published February 2003. Accessed July 5, 2012.
58. New Freedom Commission on Mental Health. *Subcommittee on Rural Issues: Background Paper*. No. SMA-04-3890. Rockville, MD: US Department of Health and Human Services; 2004.
59. Ziller EC, Coburn AF, Loux SL, Hoffman C, McBride TD. *Health Insurance Coverage in Rural America*. Chartbook. <http://www.kff.org/uninsured/upload/Health-Insurance-Coverage-in-Rural-America-PDF.pdf>. Published September 2003. Accessed July 5, 2012.
60. Hillemeier MM, Weisman CS, Chase GA, Dyer A. Mental health status among rural women of reproductive age: findings from the central pennsylvania women's health study. *Am J Public Health*. 2008;98(7):1271–1279.
61. Ziembroski JS, Hauck EL. *The Cumulative Effect of Rural and Regional Residence Upon the Health of Older Adults*. Working Paper 04-07. <http://www.rupri.org/Forms/WP0407.pdf>. Published August 2004. Accessed June 29, 2012.

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