



HEALTH ECONOMICS PROGRAM AND OFFICE OF RURAL HEALTH & PRIMARY CARE

Health care access in rural Minnesota

RESULTS FROM THE MINNESOTA HEALTH ACCESS SURVEY

Since the Affordable Care Act (ACA) became law in 2010, Minnesota has experienced historic increases in the number of residents covered by health insurance. What is less known is how rural Minnesota has fared within those statewide changes, not only in terms of insurance coverage but also across aspects of health care access such as affordability, service availability and use of medical care. Examining rural access in particular is important, as it often reveals barriers and differences that can be masked in statewide trends that may be more reflective of larger urban areas.

This issue brief provides a before-and-after look at rural Minnesota health access as key provisions of ACA were implemented in 2014. The brief uses data from the Minnesota Health Access Surveys (MNHA).

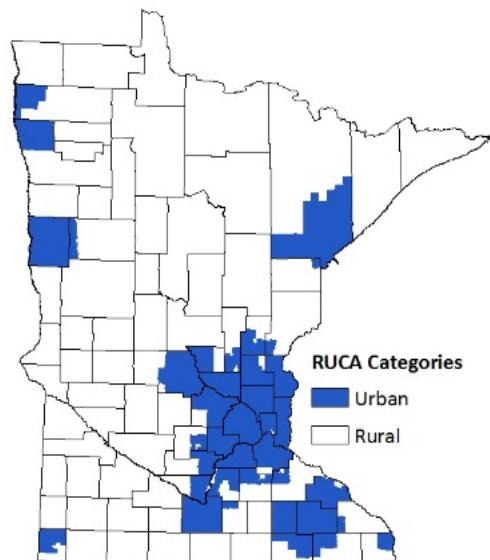
The analysis focuses specifically on results for nonelderly Minnesotans (age 0 to 64) and defines rural parts of the state based on rural-urban commuting area (RUCA) codes, as shown in Figure 1. (See Technical Notes at end of brief for additional information on RUCA codes and the MNHA surveys.) Had the elderly population been included in the analysis, rates of coverage would be higher, as most Minnesotans over 65 have Medicare coverage.

Companion briefs covering trends in enrollment and hospital finances, covering the period that overlaps with implementation of the ACA, are also available.¹

Key findings

- The uninsurance rate dropped dramatically in rural Minnesota between 2013 and 2015.
- While insurance coverage disparities across racial groups and between rural-urban areas diminished, disparities within rural Minnesota based on income and education persisted.
- Dental uninsurance rates were higher in rural than in urban areas.
- Despite higher rates of health insurance, affordability and access issues remained in rural parts of the state.

Figure 1: Rural-urban areas of Minnesota



Data Source: Economic Research Service, U.S. Department of Agriculture. 2010 Rural-Urban Commuting Area (RUCA) Codes, based on U.S. Census Bureau population data for census tracts and commuting flows.

Demographics

Demographic and socioeconomic characteristics are important context for – and contributors to – health care access.²³ Compared to urban areas, rural Minnesota has:

- A smaller proportion of people of color and American Indians (13 percent vs 23 percent in urban areas). This percent increased in rural areas and remained steady in urban areas.
- A higher proportion of low- and moderate-income residents (32 percent and 34 percent, respectively) compared to urban areas (26 percent and 30 percent, respectively).⁴
- A higher proportion of residents whose highest level of education was high school or less (34 percent vs 26 percent in urban areas) and a lower share with a bachelor's degree or higher (30 percent vs 44 percent in urban areas).

Health insurance

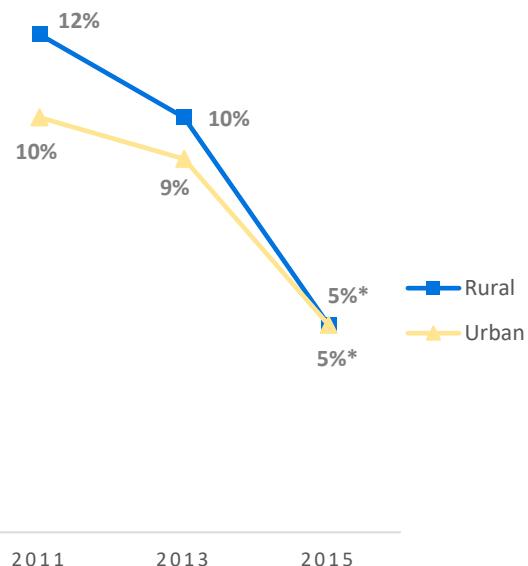
Many factors can act as barriers to accessing appropriate and timely health care. Absence of health insurance coverage is a major one.

Uninsured individuals are more likely to go without needed care and to suffer both health and economic consequences.⁵

Uninsurance

In 2015, 5 percent of rural nonelderly Minnesotans were uninsured, which was the same as the urban rate that year (Figure 2). This marked a dramatic decrease from 2013.⁶

Figure 2: Uninsurance rates for nonelderly Minnesotans, 2011-2015



Percentages rounded to the nearest whole number. *Indicates statistically significant difference from previous year shown at the 95% level. Source: Minnesota Health Access Survey, 2011, 2013, 2015.

Importantly, certain coverage rate disparities between rural and urban Minnesota receded by 2015.

- Rural children (ages 0-17) no longer had significantly higher uninsurance rates than their urban counterparts. In 2015, 3 percent of both rural and urban kids were uninsured.
- Urban and rural residents of color and American Indians were uninsured at similar rates.

Dental uninsurance rates also declined significantly, but remained much higher in rural than in urban parts of the state (Figure 3). More than 1 in 4 rural residents lacked dental insurance in 2015.⁷

There was also a reduction in disparities within rural populations, where the uninsurance rate for people of color and American Indians fell significantly (from 32 percent in 2013 to 7

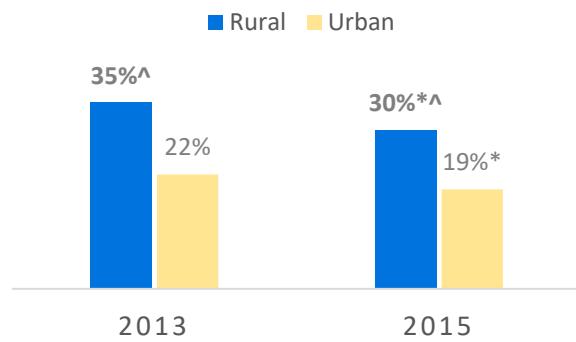
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percent in 2015). This eliminated the disparity with rural white Minnesotans (8 percent and 5 percent in 2013 and 2015, respectively).

Despite widespread decreases in uninsurance rates, coverage disparities within rural Minnesota persisted.

- Low-income rural Minnesotans remained more likely to be uninsured than those with moderate- to high-incomes (9 percent vs less than 4 percent).
- Rural Minnesotans with a high school education or less schooling had higher rates of uninsurance (9 percent) than those with some college (less than 4 percent).

Figure 3: Dental uninsurance rates for nonelderly Minnesotans, 2013-2015



Percentages rounded to the nearest whole number. *Indicates statistically significant difference from previous year shown at the 95% level. ^ Indicates statistically significant difference from urban at the 95% level. Source: Minnesota Health Access Survey, 2013, 2015.

Sources of health insurance

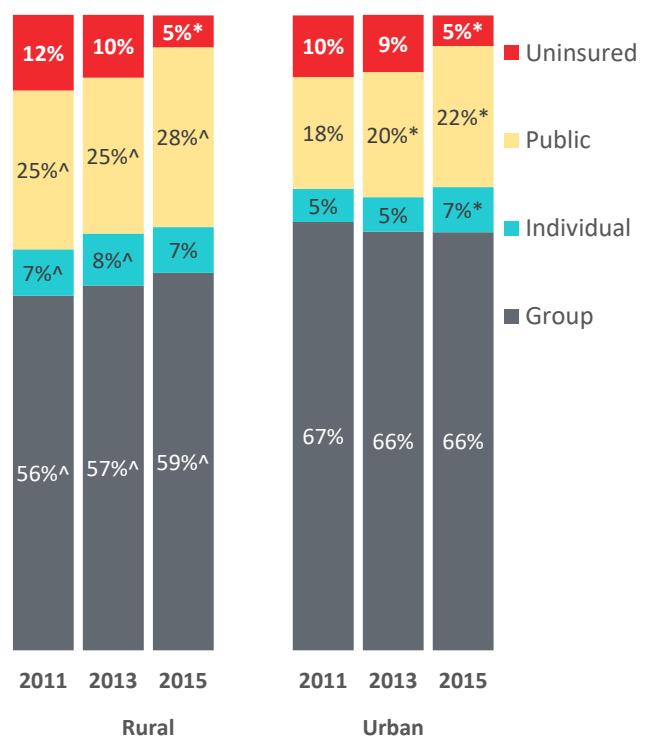
The two most common sources of health insurance in both urban and rural Minnesota were employer-based (group) insurance and public insurance (Figure 4).⁸ Enrollment in these types of insurance vary between urban and rural areas. In 2015, rural areas compared to urban areas had:

- A greater proportion with public insurance.

- A lower proportion with group insurance.

Urban and rural Minnesota had similar proportions of residents with individual insurance (7 percent).⁹ However, individual insurance enrollment differed within rural parts of the state. Rural areas with larger populations had smaller proportions of individual enrollees (5 percent) and isolated rural areas had higher proportions (9 percent).

Figure 4: Sources of insurance for nonelderly Minnesotans, 2011-2015



Percentages rounded to the nearest whole number. *Indicates statistically significant difference from previous year shown at the 95% level. ^ Indicates statistically significant difference from urban at the 95% level. Source: Minnesota Health Access Survey, 2011, 2013, 2015.

Notably, the 2015 rates of individual insurance coverage represent a change from 2013, when rural Minnesota had greater proportions of individual insurance than urban. By 2015, urban rates of individual insurance increased, coming into alignment with the rural rate.

As in urban parts of the state, most of those who remained uninsured in rural Minnesota in

2015 were potentially eligible for some form of subsidized health coverage.

- 55 percent were eligible for public programs.¹⁰
- 27 percent were eligible for group coverage.
- 26 percent were eligible for Advanced Premium Tax Credits (APTCs) through MNsure.¹¹

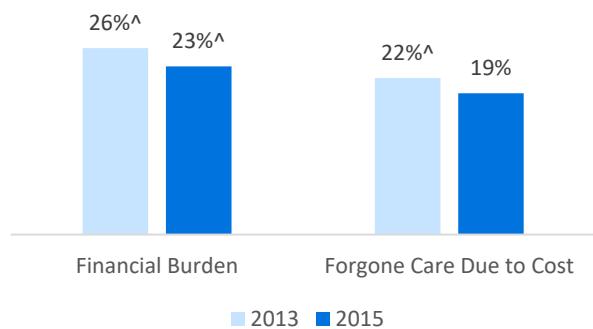
Between 2013 and 2015, the share of rural Minnesotans who had a pathway to some kind of subsidized insurance grew, from 82 percent to 90 percent. In urban areas, this percentage also increased, and did not significantly differ from the rural rate in either year.

Affordability

Another key measure of health care access is the affordability of care. National studies have found rural residents to be more likely than their urban counterparts to face cost barriers in accessing health care, even when covered by private health insurance.¹²

In 2015, 23 percent of rural Minnesotans had difficulties paying medical bills and 19 percent had forgone care due to cost – that is, they did not get needed health services due to cost (Figure 5).

Figure 5: Financial burden and forgone care for rural nonelderly Minnesotans, 2013-2015



*Note: Percentages rounded to the nearest whole number. *Indicates statistically significant difference from previous year shown at the 95% level. ^ Indicates statistically significant difference from urban at the 95% level. Source: Minnesota Health Access Survey, 2013, 2015.*

Minnesotans in rural areas were significantly more likely than those in urban areas to have difficulty paying such bills. However, there was no rural-urban difference in rates of forgone care due to cost.

Services

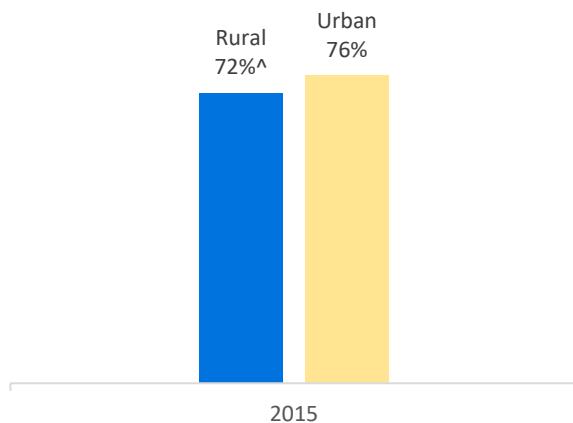
Health insurance and affordability are only part of health care access; individuals must also have timely access to health services.

This can be especially difficult in rural areas, which often face a shortage of health care providers and facilities and can require long travels.¹³

Appointment availability

Most rural Minnesotans in 2015 were very confident they could get the health care they needed. Nonetheless, confidence was higher in urban areas, as was true in 2013 (Figure 6).

Figure 6: Confidence in getting needed care for rural nonelderly Minnesotans, 2015



Percentages rounded to the nearest whole number. ^ Indicates statistically significant difference from urban at the 95% level. Source: Minnesota Health Access Survey, 2015.

Similarly, the majority of rural Minnesotans reported being able to get health care appointments in 2015.

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- Only 4 percent said their provider was not accepting new patients. This was similar to the urban rate overall.
- In rural Minnesota, over half of those encountering a provider not accepting new patients experienced this with a dental provider.
- A smaller percentage (3 percent) of rural respondents were told a provider did not accept their health insurance, and this was significantly lower than the urban rate (5 percent).

While rural residents were generally able to find providers, 13 percent were not able to get an appointment as *soon* as they thought it was needed – an increase from 8 percent in 2013. Urban areas saw similar increases.

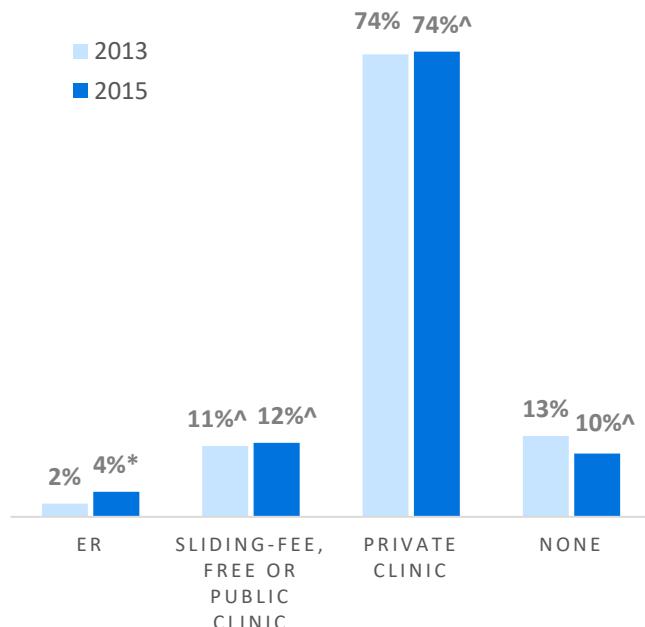
The challenge of getting a timely appointment was particularly common with primary care providers. In 2015, 65 percent of rural Minnesotans who were unable to get a timely appointment experienced this problem with a primary care provider. This was significantly higher than in urban areas (51 percent).

Usual source of care

Having a usual source of care - a place a person generally visits with health problems requiring a clinician's attention - is a key indicator of access to services and whether a person is likely to have continuity of care.^{14 15}

As in past years, the majority of rural Minnesotans obtained care through a private clinic in 2015. Another 12 percent used public clinics that were free or on a sliding-fee scale, and 10 percent had *no* usual source of medical care (Figure 7).¹⁶ The remaining residents (4 percent) used an emergency room or urgent care – a significant increase from 2013.

Figure 7: Usual source of care for rural nonelderly Minnesotans, 2013-2015



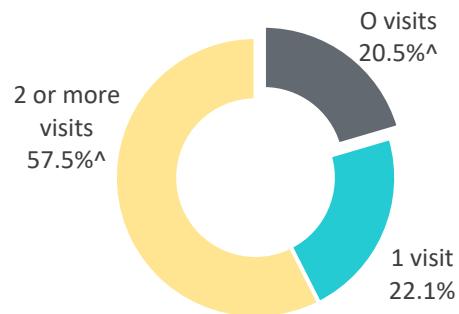
Percentages rounded to the nearest whole number. *Indicates statistically significant difference from previous year shown at the 95% level. ^ Indicates difference from urban at the 95% level. Source: Minnesota Health Access Survey, 2013, 2015.

Although changes in the usual source of care for rural residents were not substantial between 2013 and 2015, rural Minnesota differed from urban areas in two ways. First, rural areas generally had a higher percentage of residents using sliding-fee scale, free or public health clinics. Secondly, in 2015 they had a lower percentage of people *without* a usual source of care.

Health care use

In 2015, 80 percent of rural Minnesotans made a visit to a doctor's office or clinic at least once, and over half went at least twice. One in five had not seen a doctor at all for at least 12 months (Figure 8).

Figure 8: Visits to doctor for rural nonelderly Minnesotans in past 12 months, 2015



[^] Indicates statistically significant difference from urban at the 95% level. Source: Minnesota Health Access Survey, 2015.

Further, 20 percent of rural residents visited an emergency room at least once in 2015 and approximately 8 percent were admitted to a hospital for at least one night.

Use of these provider types – physician, emergency room and hospital – were consistent in both 2013 and 2015. However, they varied significantly from urban areas in a few key areas:

- Rural respondents had fewer doctor's visits than their urban counterparts.
- Rural residents were more likely to have gone without any doctor's visit in the past 12 months (20 percent vs 17 percent in urban).

Discussion

Perhaps the most important finding is that following implementation of the ACA's major coverage provisions in 2014 - as was true for the state overall - rural Minnesota experienced a dramatic drop in the share of its residents under 65 who were uninsured.¹⁷

Furthermore, rural areas saw significant reductions in coverage disparities across racial groups compared to urban areas. However, disparities based on income and educational

levels persisted, even with the ACA's coverage changes and related health reforms. This underscores how powerfully these socioeconomic factors affect health issues and the continued importance of addressing them – including through initiatives outside of the health care system – to achieve health equity.

Another noteworthy finding is how many – 90 percent – of the remaining rural uninsured potentially had access to subsidized coverage of some kind, either through public insurance programs, an employer, or the tax credits available via MNsure. While it is encouraging that such a high proportion of rural Minnesotans may have a source of insurance, it raises important questions about why they nevertheless remain uninsured and how that gap could be addressed.

Rural-urban differences are also noteworthy, including aspects of access that are directly affected by public policy.

- The share of rural nonelderly residents receiving coverage through public insurance continues to grow,¹⁸ a reflection of many factors, including higher rates of poverty, self-employment and small employers in rural communities. These programs, particularly Medical Assistance and MinnesotaCare, now cover about 1 in 4 rural Minnesotans.¹⁹
- Similarly, the higher share of rural compared to urban residents relying on sliding-fee or free clinics as their usual source of care suggests that cuts to safety-net providers could be especially harmful to rural parts of the state.
- Although the rate of rural dental uninsurance declined, it remains much higher than in urban areas. Additionally, rural access to dental services even for those with insurance appears increasingly inadequate.

Additional findings underscore the importance of access considerations that go beyond whether one has health insurance.

- While it is encouraging that rural rates of forgone care and financial burden decreased slightly and the urban-rural disparity in forgone care receded, nearly a quarter of rural Minnesotans are still struggling with paying medical bills and 1 in 5 are not getting needed health services because of cost.
- Even in 2015, compared to urban residents, rural respondents had lower levels of confidence in getting needed health care and were more likely to have gone without a doctor's visit in at least 12 months.
- The findings regarding availability of services in rural Minnesota also bear on growing rural health workforce shortages. Minnesota's elderly residents are disproportionately located in rural communities, which affects both demand for and supply of care, particularly as health workers exit the workforce faster than they can be replaced. In both rural and urban areas, the percentage of patients not able to get a timely appointment suggests that access to care may already be tightening. It may also explain why the share of rural Minnesotans using an emergency room or urgent care as their "usual source of care" increased.

Overall, the findings in this analysis suggest that even as rural Minnesota has seen significant improvements in key measures of health care access – particularly those related to insurance coverage in the wake of ACA provisions implemented in 2014 – disparities remain compared to urban areas, as do vulnerabilities around the availability, cost and use of health services. As policymakers consider additional health reform, these

differences hold important implications for potentially disproportionate impacts in rural communities.

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Technical Notes

Minnesota Health Access Survey

The Minnesota Health Access (MNHA) survey is a biennial state population telephone survey, conducted in a partnership between the Minnesota Department of Health and the State Health Access Data Assistance Center at the University of Minnesota. The MNHA surveys are stratified random digit dial telephone surveys, designed to produce stable estimates for regions of the state and the most population demographic groups. In 2015, landline and cell phone interviews were completed with 11,178 respondents (cell phones have been part of our sample since 2009). In 2015, prepaid cell phones were oversampled to ensure appropriate generalizability of our findings.

Consistent with national trends, the MNHA response and cooperation rates have decreased over time, with the response rate at 34.6 percent and the cooperation rate at 36.2 percent in 2015. Each year, interviews were conducted in English and Spanish; in addition, interviews were conducted in Hmong in 2001 and 2004, and Somali in 2001.

As in previous years, statistical weights were used to ensure that survey results are representative of the state's population. The 2015 data were weighted to be representative of the state's population distribution based on age, race/ethnicity, education, region, home-ownership, nativity and household size. Additionally, the data were weighted to represent what is known to date about the prevalence of cell phone households and the distribution of usage by service type. Estimates presented here for 2004, 2007, 2009, 2011 and 2013 may differ slightly from previously published results, as historical data may have been reweighted to ensure comparability over time.

Rural-Urban Classification

This brief defines rural and urban areas of Minnesota based on zip code approximations of the rural-urban commuting area (RUCA) codes developed by the U.S. Health Resources and Services Administration, Office of Rural Health Policy in partnership with the U.S. Agriculture Department's Economic Research Service and the WWAMI Rural Health Research Center at the University of Washington.

RUCAs classify U.S. census tracts using measures of population density, urbanization and daily commuting. The most recent RUCA codes are based on data from the 2010 decennial census and the 2006-2010 American Community Survey. RUCA codes 1-10 delineate metropolitan, micropolitan, small town and rural commuting areas based on the size and direction of the primary (largest) commuting flows.

This brief combines RUCA codes 1-3 to delineate urban parts of Minnesota and codes 4-10 to define rural. More information about this classification system is available from the U.S. Department of Agriculture's Economic Research Service website: <https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes.aspx>.

Endnotes

¹ Minnesota Department of Health, Office of Rural Health and Primary Care. Finance in rural and urban hospitals. April 2017. Available from: <http://www.health.state.mn.us/divs/orhpc/pubs/2017finances.pdf>. Minnesota Department of Health, Office of Rural Health and Primary Care. Public and individual health insurance trends in rural Minnesota: Enrollment during implementation of the Affordable Care Act. April 2017. Available from: <http://www.health.state.mn.us/divs/orhpc/pubs/2017enroll.pdf>.

²Institute of Medicine (US) Committee on Monitoring Access to Personal Health Care Services; Millman M, editor. Access to Health Care in America. Washington (DC): National Academies Press (US); 1993. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK235882/>.

³ The Henry J. Kaiser Family Foundation. Health Coverage by Race and Ethnicity: The Potential Impact of the Affordable Care Act; March 13, 2013. Available from: <http://kff.org/disparities-policy/issue-brief/health-coverage-by-race-and-ethnicity-the-potential-impact-of-the-affordable-care-act/>.

⁴ Low income = at or below 200 percent of Federal Poverty Guidelines (FPG); moderate income = 200-400 percent FPG; higher income = above 400 percent FPG.

⁵ Institute of Medicine. Coverage matters: Insurance and health care. Washington, DC: National Academy Press; 2001.

⁶ The statewide uninsurance rate for Minnesota was 4.3 percent in 2015. The rate cited here for nonelderly Minnesotans is slightly higher because fewer than 1 percent of elderly Minnesotans age 65 are uninsured.

⁷ Even with the ACA, most public insurance programs include only very limited dental benefits for non-pregnant adults, and the ACA did not mandate such benefits as it did for children.

⁸ Public health insurance includes Medical Assistance, MinnesotaCare, Veteran's Affairs and military coverage, and Medicare.

⁹ Also known as "non-group" insurance. These are private policies obtained through a broker or MNsure, or directly from an insurance company.

¹⁰ Based on income reported in the survey.

¹¹ Based on income reported in the survey.

¹² Ziller EC, Coburn AF, Yousefian AE. Out-of-Pocket Health Spending and the Rural Underinsured. *Health Affairs*. 2006; 25 (6):1688-1699. Madden JM, Graves AJ, Zhang F, et al. Cost-Related Medication Nonadherence and Spending on Basic Needs Following Implementation of Medicare Part D. *JAMA*. 2008; 299 (16):1922-1928. Ziller EC, Lenardson JD, Coburn AF. Rural adults delay, forego, and strategize to afford their pre-ACA health care. Maine Rural Health Research Center. PB-61 November 2015.

¹³ Rural Health Information Hub. Healthcare access in rural communities. Available at:

<https://www.ruralhealthinfo.org/topics/healthcare-access>. Ziller EC, Lenardson JD, Coburn AF. Maine Rural Health Research Center. Health care access and use among the rural uninsured; November 2011. Available at: <http://muskie.usm.maine.edu/Publications/rural/pb/Rural-Healthcare-Access-Use.pdf>.

¹⁴Healthy People.gov. Access to Health Services; 2012. Available at <https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services>.

¹⁵ Hartley D, Quam L, and Lurie N. Urban and Rural Differences in Health Insurance and Access to Care. *Journal of Rural Health* 10(2):98–108; 1994.

¹⁶ This category includes Indian Health Services and tribal health clinics, and Veterans Affairs facilities.

¹⁷ Minnesota Department of Health, Health Economics Program and University of Minnesota, School of Public Health. Health Insurance Coverage in Minnesota: Results from the 2015 Minnesota Health Access Survey. February 29, 2016. Available from: <http://www.health.state.mn.us/divs/hpsc/hep/publications/coverage/healthinscovmnhas2015brief.pdf>.

¹⁸ Public insurance here also includes Veterans Affairs and military health care, TRICARE or CHAMPUS, and people under 65 with Medicare.

¹⁹ A companion brief on trends in public insurance enrollment in rural Minnesota since implementation of the ACA is also available at: <http://www.health.state.mn.us/divs/orhpc/pubs/2017enroll.pdf>.