Access in Brief: Rural and Urban Health Care

Individuals living in rural areas are more likely to be covered by Medicaid than those living in urban areas (NCHS 2017). In general, rural residents tend to be older, poorer, and sicker than urban residents (NACRHHS 2015). They may have to travel long distances to access health care services, particularly specialist services. They may also lack reliable transportation to see providers, and have poor health literacy (RHIH 2018). In addition, there are fewer primary care physicians in rural areas than in urban areas (Clawar et al. 2018). On the other hand, physicians in rural areas are more likely than those in urban areas to accept new Medicaid patients, and about as likely to accept new patients with Medicaid coverage as they are patients with private coverage (NCHS 2017).

Using data combined from the 2013–2015 National Health Interview Surveys, this brief examines characteristics of individuals with Medicaid coverage—children and adults—in rural areas, as well as their access to care and use of services, comparing their experience to their privately insured and uninsured counterparts. We also compare access and use between Medicaid beneficiaries in urban and rural areas, and by disability. We find that from 2013–2015:

- adults and children with Medicaid coverage in both rural and urban areas are more likely than those with private coverage and less likely than their uninsured counterparts to report barriers to care or unmet need;
- the differences in access to care and use of services between adults with Medicaid and private coverage are greater than the differences between children with Medicaid or State Children's Health Insurance Program (CHIP) and private coverage;
- adults with Medicaid, regardless of whether they live in rural or urban areas, have more difficulty accessing eyeglasses, prescription drugs, and maintaining a usual source of care compared to those with private coverage, but on average, use some services—such as emergency departments— more frequently; and
- Medicaid beneficiaries in urban areas and those in rural areas show few differences on measures related to their difficulty accessing care or use of services.

We note limitations to this analysis. The access and utilization measures presented here are broad based, and although there do not appear to be large differences between rural and urban areas, certain services such as home- and community-based services or substance use disorder treatment may be more difficult to obtain in rural areas. Survey responses may also affect differences in perceptions across geographic areas. For example, in rural areas, people may expect to travel farther or wait longer for services and may not report these as problems.

Characteristics of Individuals by Coverage Source

Below we describe characteristics of children and adults with Medicaid or private coverage, or who are uninsured, in both urban and rural areas. Findings are consistent for children and adults on several measures such as race, duration of coverage, and health status. Findings on income and health status are consistent with previous research findings.

Children

In both urban and rural areas, children with Medicaid or CHIP are less likely to be non-Hispanic white and more likely to be Hispanic or non-Hispanic black than their privately insured counterparts (Table 1). In comparing children with Medicaid or CHIP in urban areas to those in rural areas, we find that rural children are more likely to be non-Hispanic white (63 percent), than other races, whereas urban children are more likely to be Hispanic (Table 1). This difference likely reflects general demographics differences of residents in rural and urban areas (Parker et al. 2018).

In both urban and rural areas, children with Medicaid or CHIP are more likely to have lower income compared to children with private insurance. About 42 percent of urban children and almost 40 percent of rural children who are uninsured have income less than or equal to 138 percent of the federal poverty level (FPL). We note these children are eligible for Medicaid on the basis of income.

Nearly all children in urban and rural areas report having coverage for a full year, regardless of coverage source. However among urban children, those with Medicaid or CHIP are slightly less likely to have full-year coverage than those with private coverage. Among children with Medicaid or CHIP, those in rural areas are more likely to have full-year coverage than their counterparts in urban areas.

In general, relatively high proportions of urban and rural children report excellent or very good health status, but children with private insurance are more likely to report this than those with Medicaid or CHIP. When we compare children with Medicaid or CHIP in urban areas and to those in rural areas, we find no differences in health status.

TABLE 1. Sociodemographic Characteristics of Children Age 0–18 in Urban and Rural Areas by Insurance Status, 2013–2015

Measure	Total	Urban			Rural		
		Medicaid or CHIP	Private	Uninsured	Medicaid or CHIP	Private	Uninsured
Age							
0–5	30.9%	35.5%	28.5%*	20.5%*	36.2%	25.5%*	29.1%*
6–11	31.6	33.1	30.9*	28.8*	32.0	32.7	22.1*
12–18	37.5	31.4	40.5*	50.7*	31.8	41.8*	48.8*

TABLE 1. (continued)

Measure	Total	Urban			Rural		
		Medicaid or CHIP	Private	Uninsured	Medicaid or CHIP	Private	Uninsured
Race							
Hispanic	24.4%	41.1%	14.6%*	47.0%*	16.3%^	7.7%*	21.9%*
White, non-Hispanic	54.2	29.7	66.8*	35.5*	62.9^	85.2*	62.8
Black, non-Hispanic	14.6	23.6	10.3*	11.4*	16.5^	3.8*	5.6*
Other non-white, non-Hispanic	6.9	5.6	8.4*	6.2	4.4	3.4	9.7*
Income							
Less than or equal to 138 percent FPL	32.2	66.1	7.4*	42.2*	69.8^	11.4*	39.8*
Less than 100 percent FPL	22.5	48.5	4.0*	27.2*	51.5	5.5*	21.8*
100–199 percent FPL	22.6	35.2	11.5*	36.4	33.0	18.0*	39.2*
200–399 percent FPL	28.0	14.0	36.1*	29.3*	13.9	47.3*	29.4*
400 percent FPL or higher	27.0	2.4	48.5*	7.2*	1.6^	29.2*	9.6*
Duration of coverage							
Full year	91.1	94.4	97.3*	–	96.0^	97.0	–
Part year	5.7	5.6	2.8*	39.5*	4.0^	3.0	45.4*
No coverage during year	3.2	–	–	60.5	–	–	54.6
Health status and disability							
Excellent or very good	84.2	76.2	90.2*	78.3	76.5	88.3*	81.7*
Good	13.9	20.3	8.9*	19.6	20.7	10.8*	17.4
Fair or poor	1.9	3.5	0.9*	2.1*	2.8	0.9*	†

Notes: FPL is federal poverty level.
* Difference from Medicaid, within the same geographic area, is statistically significant at the 0.05 level.
^ Difference from urban Medicaid beneficiaries is statistically significant at the 0.05 level.
† Estimate is unreliable due to relative standard error equal to or greater than 30 percent.
– Indicates an amount less than 0.05%.
Source: MACPAC, 2018, analysis of the 2013–2015 National Health Interview Surveys.

Adults

There are significant differences in the racial makeup of adults with Medicaid and those with private insurance in urban and rural areas. In both urban and rural areas, adults with Medicaid are less likely to be non-Hispanic white and more likely to be Hispanic or non-Hispanic black than their privately insured counterparts (Table 2). Over 77 percent of adults in rural areas with Medicaid are non-Hispanic white compared to 38 percent of adult Medicaid beneficiaries in urban areas. Urban adults with Medicaid are more likely to identify as Hispanic; non-Hispanic black; or other non-Hispanic non-white, than their rural counterparts.

As with children, in both urban and rural areas adults with Medicaid are more likely to have low incomes compared to adults with private insurance. Adults with Medicaid who live in rural areas are more likely to report having lower incomes than adult Medicaid beneficiaries who live in urban areas. This finding is consistent with other research.

Most adults in rural and urban areas with Medicaid or private coverage report having coverage for a full year. However, more adults with private coverage report full-year coverage compared to those with Medicaid regardless of if they live in an urban or a rural area. There is no difference in duration of coverage between Medicaid beneficiaries in rural and urban areas.

Because having a disability can confer Medicaid eligibility, adults with Medicaid age 19–64 years report higher rates of disability in both rural and urban areas than adults with private insurance or no insurance (Table 2). Compared to urban residents with Medicaid, more rural residents reported having a disability or being limited in their ability to work due to a health problem, consistent with previous findings that rural residents have poorer health status than urban residents.

TABLE 2. Sociodemographic Characteristics of Adults Age 19–64 in Urban and Rural Areas by Insurance Status, 2013–2015

Measure	Total	Urban			Rural		
		Medicaid	Private	Uninsured	Medicaid	Private	Uninsured
Age							
19–25	15.6%	23.3%	14.6%*	19.3%*	22.0%	11.9%*	21.3%
26–44	40.9	46.0	40.7*	49.5*	44.9	36.1*	42.2
45–54	22.6	17.4	23.7*	18.5	19.3	25.9*	21.8
55–64	20.9	13.3	20.9*	12.7	13.9	26.1*	14.8
Race							
Hispanic	16.9	28.8	12.4*	38.9*	6.5^	5.6	15.0*
White, non-Hispanic	63.5	38.0	68.9*	40.1	77.3^	85.9*	69.0*
Black, non-Hispanic	12.6	25.2	10.5*	15.1*	11.3^	6.1*	11.4
Other non-white, non-Hispanic	7.0	8.0	8.2	5.8*	5.0^	2.5*	4.6

TABLE 2. (continued)

Measure	Total	Urban			Rural		
		Medicaid	Private	Uninsured	Medicaid	Private	Uninsured
Income							
Less than or equal to 138 percent FPL	21.2%	65.2%	7.7%*	41.7%*	73.5%^	9.9%*	47.3%*
Less than 100 percent FPL	14.2	48.3	4.5*	28.4*	57.1^	5.0*	31.6*
100–199 percent FPL	17.6	32.9	10.0*	32.0	29.7	15.3*	34.8*
200–399 percent FPL	28.6	15.0	29.8*	29.2*	11.2^	38.9*	26.1*
400 percent FPL or higher	39.6	3.8	55.6*	10.5*	2.0^	40.8*	7.6*
Duration of coverage							
Full year	78.5	84.3	94.7*	–	82.3	93.9*	–
Part year	9.1	15.7	5.3*	21.6*	17.7	6.1*	23.6*
No coverage during year	12.4	–	–	78.4	–	–	76.4
Disability							
Any basic action difficulty	24.5	39.7	17.8*	23.1*	53.6^	22.4*	28.9*
Any complex activity limitation	12.2	28.9	5.6*	9.0*	40.7^	7.0*	12.6*
Either one	26.2	43.7	18.8*	24.6*	59.5^	23.4*	30.2*
Unable to work now due to health problem	7.4	20.1	2.2*	4.3*	29.2^	3.0*	6.6*
Limited in amount or kind of work due to health	10.3	26.1	4.2*	7.0*	36.4^	5.4*	9.5*

Notes: FPL is federal poverty level.
* Difference from Medicaid, within the same geographic area, is statistically significant at the 0.05 level.
^ Difference from urban Medicaid beneficiaries is statistically significant at the 0.05 level.
– Indicates an amount less than 0.05%.
Source: MACPAC, 2018, analysis of the 2013–2015 National Health Interview Surveys.

Difficulties Obtaining Needed Medical Care, by Insurance Status

In this analysis we find some differences between coverage sources in the degree of difficulty that individuals in urban and rural areas experience when they seek needed medical care (e.g. difficulty getting an appointment or finding a general doctor), but few differences when comparing Medicaid beneficiaries' experiences in rural areas to those in urban areas.

Children

Nearly all rural and urban children with Medicaid or CHIP or private coverage report having a usual source care (Table 3). In rural areas, children with Medicaid or CHIP are equally as likely as those with private coverage to have a usual source of care. In urban areas, children with private coverage are more likely to report having a usual source of care than children with Medicaid or CHIP, but the difference is small. Uninsured children are significantly more likely to lack a usual source care compared to those with Medicaid or CHIP or private coverage in both rural and urban areas.

Between urban or rural areas, there are differences in access to services between children with Medicaid or CHIP and privately insured children, though these differences are small (Table 3). For example, in both urban and rural areas, children with Medicaid or CHIP coverage are more likely to report difficulty getting an appointment, finding a general doctor, or finding a doctor that accepts their insurance than those with private insurance. In rural areas, children with Medicaid or CHIP are equally as likely to report having unmet need for specialty care and eyeglasses as their privately insured counterparts. In both rural and urban areas, uninsured children face greater access barriers; they are significantly more likely than Medicaid or privately insured children to have unmet need due to cost.

There are few differences in reported unmet need or barriers to care for children with Medicaid or CHIP in rural areas compared to those in urban areas. For example, children with Medicaid or CHIP in rural areas are less likely to report unmet need for eyeglasses, difficulty finding a doctor that accepts their insurance, or being unable to get through on the telephone than those living in urban areas (Table 3).

TABLE 3. Children's Difficulties Accessing Care in Urban and Rural Areas by Insurance Status, 2013–2015

State	Urban			Rural		
	Medicaid	Private	Uninsured	Medicaid	Private	Uninsured
Usual source of care						
Has a usual source of care	95.9%	97.6%*	69.0%*	96.7%	97.2%	77.1%*
Unmet need due to cost in the past 12 months						
Medical care	1.3	0.8*	12.9*	1.1	†	8.7*
Specialist care	1.3	0.8*	7.1*	1.0	0.7	†
Eyeglasses	2.5	1.1*	9.2*	1.4^	1.2	7.9*
Follow-up care	1.2	0.6*	7.8*	1.0	†	†
Prescription drugs	2.0	1.0*	7.7*	2.0	1.1*	6.2*

TABLE 3. (continued)

State	Urban			Rural		
	Medicaid	Private	Uninsured	Medicaid	Private	Uninsured
Reason for delay in seeking medical care in the past 12 months						
Could not get appointment soon enough	5.4%	2.7%*	3.6%*	4.4%	2.3%*	4.3%
Trouble finding a general doctor	2.0	1.0*	3.3*	1.5	0.7*	†
Doctor does not accept health insurance	3.9	1.1*	2.6*	2.6^	0.6*	2.5
Could not get through on phone	2.0	0.9*	1.5	1.4^	0.8	†
Not open when you could go	2.7	1.9*	2.9	2.4	1.8	3.0
No transportation	3.6	0.2*	2.7	3.7	†	1.6*

Notes:
* Difference from Medicaid, within the same geographic area, is statistically significant at the 0.05 level.
^ Difference from urban Medicaid beneficiaries is statistically significant at the 0.05 level.
† Estimate is unreliable due to relative standard error equal to or greater than 30 percent.
Source: MACPAC, 2018, analysis of the 2013–2015 National Health Interview Surveys.

Adults

In both urban and rural areas, adult Medicaid beneficiaries are more likely to report having difficulty obtaining needed care than their privately insured counterparts (Table 4). For example, urban and rural Medicaid beneficiaries are more likely to report having unmet need due to cost and difficulty seeing a health professional than those with private insurance. The differences between Medicaid and privately insured adults are greatest on measures of access to eyeglasses, prescription drugs, and transportation to appointments. Privately insured adults in rural areas are more likely to worry about paying medical bills than those with Medicaid.

In both urban and rural areas, adults with Medicaid are more likely to have a usual source of care, and less likely to report unmet need due to cost or being worried about paying medical bills compared to adults with no insurance (Table 4). However, adults with Medicaid in urban and rural areas report more difficulty than uninsured adults in getting an appointment soon enough or finding a doctor to accept their insurance.

There are few differences between adults with Medicaid residing in rural areas and those in urban areas. Adult Medicaid beneficiaries in rural areas are more likely to report having unmet need for eyeglasses and prescription drugs, and difficulty accessing transportation than those in urban areas (Table 4). Adult Medicaid beneficiaries in rural areas are less likely than those in urban areas to be worried about paying medical bills and to have had trouble getting through to a provider on the phone.

TABLE 4. Adults' Difficulties Accessing Care in Urban and Rural Areas by Insurance Status, 2013–2015

State	Urban			Rural		
	Medicaid	Private	Uninsured	Medicaid	Private	Uninsured
Usual source of care						
Has a usual source of care	86.1%	88.9%*	46.0%*	85.7%	89.8%*	53.8%*
Unmet need due to cost in the past 12 months						
Medical care	7.9	3.7*	24.4*	8.9	4.6*	26.0*
Specialist care	6.5	2.5*	13.9*	7.9	2.4*	13.2*
Eyeglasses	11.3	3.7*	16.4*	14.5^	4.8*	18.9*
Follow up care	5.1	1.9*	13.6*	6.2	2.4*	12.7*
Prescription drugs	10.1	4.0*	18.7*	15.1^	4.9*	21.0*
Cost concerns						
Get sick or have accident, worried about paying medical bills	49.5	44.9*	82.8*	44.9^	48.3*	79.4*
Reason for delay in getting care in the past 12 months						
Could not get appointment soon enough	8.4	5.2*	4.3*	9.1	4.5*	5.0*
Could not get through on phone	4.7	1.8*	2.3*	3.4^	1.7*	2.2
Not open when you could go	3.4	2.6*	2.6*	3.8	3.2	2.8
No transportation	5.5	0.5*	2.4*	8.8^	0.4*	3.3*
Finding a doctor in the past 12 months						
Trouble finding a general doctor	5.4	2.1*	5.7	6.3	1.9*	5.8
Doctor does not accept health insurance	7.4	2.4*	3.3*	7.0	1.3*	2.9*

Notes:
* Difference from Medicaid, within the same geographic area,is statistically significant at the 0.05 level.
^ Difference from urban Medicaid beneficiaries is statistically significant at the 0.05 level.
Source: MACPAC, 2018, analysis of the 2013–2015 National Health Interview Surveys.

Adults with disabilities

Individuals with disabilities often have health care needs stemming from their disability, from an underlying condition, or co-occurring conditions, and typically have greater need for both general and specialty care than adults without disabilities.

Our analysis finds that adults with disabilities with Medicaid in both urban and rural areas are more likely than those with private coverage and less likely than those who are uninsured to have unmet need or experience barriers to care (Table 5). For example, compared to those with private insurance, Medicaid beneficiaries with disabilities are more likely to have unmet need for specialist care, eyeglasses, and prescription drugs in both urban and rural areas. They also are more likely to report having trouble with transportation or finding a doctor.

Adults with disabilities in rural and urban areas who are uninsured are significantly less likely to have a usual source of care and more likely to have unmet health care needs than those with Medicaid (Table 5). For example, among rural uninsured adults with disabilities, 46 percent had unmet needs for medical care compared to 11 percent of those with Medicaid. Among urban adults with disabilities, 43 percent had such unmet need compared to 12 percent of those with Medicaid.

We found few differences in access to care when comparing adults with disabilities with Medicaid coverage living in rural areas to those in urban areas. Rural residents with disabilities and Medicaid coverage are less likely to have trouble finding a doctor that accepts their insurance or have trouble getting through to a provider by telephone compared to those in urban areas.

TABLE 5. Access to Health Care among Adults Age 19–64 with a Disability in Urban and Rural Areas by Insurance Status, 2013–2015

Measure	Urban			Rural		
	Medicaid	Private	Uninsured	Medicaid	Private	Uninsured
Usual source of care						
Has a usual source of care	87.7%	91.5%*	52.7%*	86.80%	93.8%*	60.7%*
Unmet need due to cost in the past 12 months						
Medical care	11.8	9.5*	43.3*	11.4	10.4	46.2*
Specialist care	11.3	7.1*	31.8*	10.8	6.9*	29.2*
Eyeglasses	17.9	10.1*	35.4*	18.3	13.0*	38.1*
Follow up care	8.7	5.8*	29.1*	8.1	6.1	27.3*
Prescription drugs	16.8	10.8*	38.3*	20.0	12.5*	41.6*
Cost concerns						
Get sick or have accident, worried about paying medical bills	48.9	56.5*	89.1*	46.7	60.7*	87.0*
Reason for delay in seeking medical care in the past 12 months						
Could not get appointment soon enough	12.6	10.8*	9.7*	10.4	9.7	10.8
Could not get through on phone	8.2	3.9*	4.7*	3.6^	4.2	4.3
Not open when you could go	5.3	5.1	6.0	4.5	6.3	5.3
No transportation	10.2	1.6*	5.7*	12.8	1.5*	7.2*
Finding a doctor in the past 12 months						
Trouble finding a general doctor	8.7%	4.1%*	12.2%*	6.6%	3.8%*	10.9%*
Doctor does not accept health insurance	11.2	4.9*	6.3*	7.1^	2.2*	5.0

Notes:
* Difference from Medicaid, within the same geographic area, is statistically significant at the 0.05 level.
^ Difference from urban Medicaid beneficiaries is statistically significant at the 0.05 level.
Source: MACPAC, 2018, analysis of the 2013–2015 National Health Interview Surveys.

Use of Services by Insurance Status

The findings from our analysis comparing the use of services by individuals in rural areas to those in urban areas are mixed, consistent with past studies (NCHS 2017, Doescher et al. 2008, Leung et al. 2014, Stensland et al. 2013). Medicaid beneficiaries regardless of urbanicity are less likely to use certain services but more likely to use others compared to those with private coverage. However, there are few differences in use of services for rural Medicaid beneficiaries compared to urban Medicaid beneficiaries.

Children

There are differences in use of services between children with Medicaid or CHIP and those with private coverage regardless of urbanicity (Table 6). In both urban and rural areas, children with Medicaid or CHIP are less likely than their counterparts with private coverage to have seen a specialist or eye doctor but more likely to see a mental health professional or have an emergency room visit. Among urban residents, children with Medicaid or CHIP are also less likely than children with private insurance to see a general doctor, general provider, or dentist. While children with Medicaid are slightly less likely to have a well-child checkup than those with private coverage in urban areas, they are more likely to have a well-child checkup in rural areas. Uninsured children are less likely to use health services than children with Medicaid, in both urban and rural areas.

When comparing use of services by urban children with Medicaid or CHIP to those in rural areas, we found few differences. However, those in rural areas are more likely to see a medical specialist or eye doctor and had more emergency room visits (Table 6). In addition, children with Medicaid or CHIP in rural areas are less likely than those in urban areas to see a general doctor or to have had a well-child checkup.

TABLE 6. Utilization of Services by Children Age 0–18, in and Urban and Rural Areas by Insurance Status, 2013–2015

Measure	Urban			Rural		
	Medicaid/CHIP	Private	Uninsured	Medicaid/CHIP	Private	Uninsured
Number of office-based visits (doctor or other health professional), excluding dental visits and inpatient hospital stays						
None	8.4%	7.2%*	29.6%*	9.6%	11.1%	30.0%*
At least 1	91.6	92.8*	70.4*	90.4	88.9	70.0*
1	23.7	24.8	28.1*	19.5^	22.5*	22.3
2 to 3	38.0	38.5	27.3*	34.1^	35.6	26.0*
4 or more	30.0	29.5	15.0*	36.8^	30.8*	21.7*
Saw selected health professionals in an office-based or clinic setting						
General doctor	84.1	86.0*	57.0*	81.0^	80.5	59.9*
General doctor, nurse practitioner, physician assistant, midwife, OB/GYN	85.0	87.3*	59.6*	83.7	84.0	64.2*

TABLE 6. (continued)

Measure	Urban			Rural		
	Medicaid/CHIP	Private	Uninsured	Medicaid/CHIP	Private	Uninsured
Number of office-based visits (doctor or other health professional), excluding dental visits and inpatient hospital stays						
Medical specialist	11.9	15.8*	6.5*	13.9^	16.2*	10.2
Eye doctor	21.9	27.0*	16.3*	26.7^	31.5*	21.5
Mental health professional	9.5	7.0*	3.2*	9.5	6.2*	4.4*
Doctor, for emotional or behavioral problem	6.9	3.7*	2.9*	7.9	3.6*	1.9*
Dentist	79.0	83.7*	55.2*	78.1	80.8	55.8*
Any health professional, excluding dental	88.4	91.0*	66.2	87.3	89.4	71.2*
Any health professional, including dental	95.8	97.9*	79.8*	95.4	97.2*	83.7*
Had at least 1 overnight hospital stay	5.8	4.7*	2.7*	6.1	5.0	2.6*
Had well-child checkup	85.0	86.9*	55.7*	82.0^	75.5*	53.2*
Had more than 15 office or clinic visits	2.2	2.1	0.5*	2.1	2.7	1.0
Number of emergency room visits						
None	77.4	87.3*	85.2*	72.7^	85.1*	86.8*
At least 1	22.6	12.7*	14.8*	27.3^	14.9*	13.2*
1	14.2	9.6*	9.5*	16.2^	11.1*	9.3*
2 to 3	6.5	2.5*	3.7*	8.4^	3.3*	3.0*
4 or more	2.0	0.5*	1.6	2.7	0.5*	0.8*

Notes:
* Difference from Medicaid, within the same geographic area, is statistically significant at the 0.05 level.
^ Difference from urban Medicaid beneficiaries is statistically significant at the 0.05 level.
Source: MACPAC, 2018, analysis of the 2013–2015 National Health Interview Surveys.

Adults

Adult Medicaid beneficiaries in both urban and rural areas are more likely to use all services compared to those who are uninsured, but compared to privately insured adults, their experience was mixed. For example, adults with Medicaid are more likely to have an emergency room visit or see a behavioral health professional than privately insured adults. They are less likely, however, to have seen an eye doctor or dentist in the past 12 month period. Compared to adults with Medicaid, uninsured adults in both rural and urban areas are less likely to have any visits to a general doctor, the dentist, or the emergency room.

When comparing adult Medicaid beneficiaries in urban areas to those in rural areas, there are few differences (Table 7). Among Medicaid beneficiaries, rural residents are more likely to visit the emergency department or any health professional, but less likely to visit an OB/GYN or dentist than urban residents.

TABLE 7. Utilization of Services by Adults age 19–64, in Urban and Rural Areas by Insurance Status, 2013–2015

Measure	Urban			Rural		
	Medicaid	Private	Uninsured	Medicaid	Private	Uninsured
Number of office-based visits (doctor or other health professional), excluding dental visits and inpatient hospital stays						
None	17.4%	16.2%	49.7%*	15.4%	17.3%	48.8%*
At least 1	82.6	83.8	50.3*	84.6	82.8	51.2*
1	15.6	21.6*	18.9	11.5^	21.4*	16.0*
2 to 3	24.0	30.0*	16.3*	18.5^	28.8*	16.9
4 or more	43.0	32.1*	15.2*	54.6^	32.5*	18.3*
Saw selected health professionals in an office-based or clinic setting						
General doctor	70.1	69.6	36.6*	69.3	68.5	38.6*
General doctor, nurse practitioner, physician assistant, midwife, OB/GYN	78.1	77.9	43.4*	82.3^	77.8*	47.7*
OB/GYN	46.5	52.3*	24.7*	42.1^	40.3	21.7*
Medical specialist	22.8	24.5*	7.9*	22.9	22.5	8.8*
Eye doctor	26.6	39.7*	14.7*	25.9	40.3*	16.6*
Mental health professional	14.8	7.2*	4.6*	16.0	4.7*	4.5*
Dentist	50.8	73.3*	32.7*	42.9^	65.2*	30.0*
Any health professional, excluding dental	82.9	85.5*	52.5*	86.5^	85.6	57.9*
Any health professional, including dental	89.4	93.6*	63.7*	91.6^	92.6	67.9*
Had at least 1 overnight hospital stay	14.1	5.7*	5.1*	17.0	6.2*	6.4*
Had more than 15 office or clinic visits	8.5	4.5*	1.8*	11.4	3.5*	2.0*
Number of emergency room visits						
None	66.0	86.3*	83.0*	56.5^	85.1*	76.9*
At least 1	34.0	13.7*	17.0*	43.5^	14.9*	23.1*
1	16.8	10.1*	10.3*	20.3^	10.2*	13.6*
2 to 3	11.3	2.7*	5.1*	15.5^	3.4*	6.2*
4 or more	5.9	0.9*	1.7*	7.7	1.3*	3.2*

Notes:
* Difference from Medicaid, within the same geographic area, is statistically significant at the 0.05 level.
^ Difference from urban Medicaid beneficiaries is statistically significant at the 0.05 level.
Source: MACPAC, 2018, analysis of the 2013–2015 National Health Interview Surveys.

Data and Methods

All differences discussed in the text of this report were computed using Z-tests and are significant at the 0.05 level.

Data sources

Data for this report comes from the NHIS and the Household Component of the Medical Expenditures Panel Survey (MEPS-HC). The NHIS collects information about the health and health care of the U.S. civilian non-institutionalized population. Interviews are conducted at respondents' homes, and follow-up interviews may be conducted by phone. The MEPS-HC is a nationally representative longitudinal survey that collects detailed information on health care use and expenditures, health insurance, and health status, as well as on a wide variety of social, demographic, and economic characteristics for the U.S. civilian non-institutionalized population.

For more information on the NHIS, see http://www.cdc.gov/nchs/nhis/about_nhis.htm. For more information on the MEPS-HC, see http://www.meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp.

Insurance coverage

The following hierarchy was used to assign individuals with multiple coverage sources to a primary source: Medicare, private, Medicaid, other, uninsured for the past 12 months. Not separately shown are the estimates for those covered by any type of military health plan or other government-sponsored program. Coverage source is defined as of the time of the survey interview. Because an individual may have multiple coverage sources and because sources of coverage may change over time, responses to survey questions may reflect characteristics or experiences associated with a coverage source other than the one assigned in this report. Private health insurance coverage excludes plans that cover only one type of service, such as accident or dental insurance. The Medicaid category also includes persons covered by other state-sponsored health plans. Individuals are defined as uninsured if they did not have any private health insurance, Medicaid, CHIP, Medicare, state- or other government-sponsored health plan, or military plan during the past year. Individuals were also defined as uninsured if they only had Indian Health Service coverage or only had a private plan that paid for one type of service, such as accident or dental coverage only.

Urban and rural classifications

To classify respondents' residence by level of urbanization, we used a typology created by the National Center for Health Statistics which separates out inner core cities from fringe suburbs. We present data at the urban and rural levels of urbanicity, referred to as urban and rural areas. The typology classifies each county into one of the following levels of urbanicity:

Urban. This level of urbanicity includes:

- **Large central metro.** Counties in metropolitan statistical areas (MSAs) of 1 million or more population that:
  - contain the entire population of the largest principal city of the MSA,
  - have their entire population contained in the largest principal city of the MSA, or
  - contain at least 250,000 inhabitants of any principal city of the MSA.

- **Large fringe metro.** Counties in MSAs of 1 million or more population that did not qualify as large central metro counties.
- **Medium metro.** Counties in MSAs of populations of 250,000 to 999,999.
- **Small metro.** Counties in MSAs of populations less than 250,000.

Rural. This level of urbanicity includes:

- **Micropolitan.** Counties in micropolitan statistical areas.
- **Non-core.** Rural counties that do not qualify as micropolitan.

All counties in the United States were assigned to one of the six levels based on: (1) their status under the Office of Management and Budget delineation of urban and micropolitan statistical areas, (2) the population size of MSAs, and (3) the location of principal city populations within the largest MSAs (i.e., 1 million or more in population). Micropolitan statistical areas are based on a county or counties with smaller population centers with 2,500–49,999 inhabitants (Ingram and Franco, 2013).

Disability

In the NHIS, an adult is classified as having any disability if, based on a series of questions, they reported any of the following:

- limitations or difficulties in movement (walking, standing, bending or kneeling, reaching overhead, or using the hands and fingers);
- sensory or emotional limitations (e.g., feelings that interfere with accomplishing daily activities);
- limitations in mental functioning that are associated with a health problem (e.g., confusion or difficulties remembering);
- self-care limitations;
- social limitations; or
- work limitations.

In the MEPS-HC, adults with activity disability are identified as receiving help or supervision with instrumental activities of daily living, receiving help or supervision with activities of daily living, or having difficulty in performing certain specific physical actions (called functional and activity limitations). Individuals who identified having a limitation in any of the pertinent rounds of questions were included as adults with a disability in our analysis.

Access questions

The following questions from the NHIS were used to assess difficulties in obtaining medical care:

- Is there a place that you USUALLY go to when you are sick or need advice about your health?
- If you get sick or have an accident, how worried are you that you will be able to pay your medical bills?

- DURING THE PAST 12 MONTHS, was there any time when you needed any of the following, but didn't get it because you couldn't afford it? (If yes, respondents were probed for specific types of providers or services they did not receive due to cost.)
- DURING THE PAST 12 MONTHS, did you have any trouble finding a general doctor or provider who would see you?
- DURING THE PAST 12 MONTHS, were you told by a doctor's office or clinic that they would not accept you as a new patient?
- DURING THE PAST 12 MONTHS, were you told by a doctor's office or clinic that they did not accept your health care coverage?
- There are many reasons people delay getting medical care. Have you delayed getting care for any of the following reasons in the PAST 12 MONTHS? (Responses included could not get through on telephone, couldn't get an appointment soon enough, cost of care, doctor's office was not open when you could get there, or lacked transportation).
- DURING THE PAST 12 MONTHS, [have you delayed seeking medical care/has medical care been delayed for anyone in the family] because of worry about the cost?

The following questions from the MEPS-HC were used to assess difficulties in obtaining medical care:

- In the last 12 months, did you or a doctor think [you/[PERSON]] needed to see a specialist?
- Persons with a yes response were asked, "In the last 12 months, how often was it easy to see a specialist that [you/[PERSON]] needed to see?"

The number of medical provider visits was computed based on quarterly reports made by respondents who recorded visits per survey instructions and subsequent follow-up inquiries to providers to confirm that visits were made.

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