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Health Care Access Among Self-Employed Workers in Nonmetropolitan Counties

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Abstract

Access to health care involves affordability, which is often tied to health insurance coverage, as well as availability of health care facilities and providers. Self-employed workers are less likely to have access to employer-sponsored health insurance plans, and rural areas may have fewer options for local health care. Through the lens of availability and affordability, this report studies health care access for self-employed individuals, their families, and their households in nonmetropolitan (nonmetro) counties, using data collected between 2014 and 2020. The results indicate that health insurance coverage rates and sources differ more by age and whether workers are self-employed than by whether they live in a metro or nonmetro location. Self-employed workers ages 26 to 64 are more likely to be uninsured than those employed by government or private industry, but more of these working-age adults are insured through employer-based plans than any other insurance source. Few self-employed workers over age 65 are uninsured, and more of them are insured by public plans than any other source of insurance. Family medical expenditures differ more by age and source of health insurance coverage than by whether a family member is self-employed or lives in a metro or nonmetro location. The availability of health care facilities and services varies among U.S. counties by region, metro status, and whether a large share of workers are self-employed. Uninsured rates were higher for all workers at the beginning of the Coronavirus (COVID-19) pandemic in April and May of 2020 than in 2018 and continued to increase through the pandemic in 2020, mainly due to a decline in coverage from employer-sponsored plans.

Keywords: health care access, health insurance, health care costs, self-employed, nonmetro, United States, COVID-19 pandemic, Household Pulse Survey, Current Population Survey, Area Health Resource File, farm households

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Contents

Tables and Figures in Health Care Access Among Self-Employed Workers in Nonmetropolitan Counties

Contents (cont.)

Contents (cont.)

USDA Economic Research Service
U.S. DEPARTMENT OF AGRICULTURE

A report summary from the Economic Research Service *May 2022*

Health Care Access Among Self-Employed Workers in Nonmetropolitan Counties

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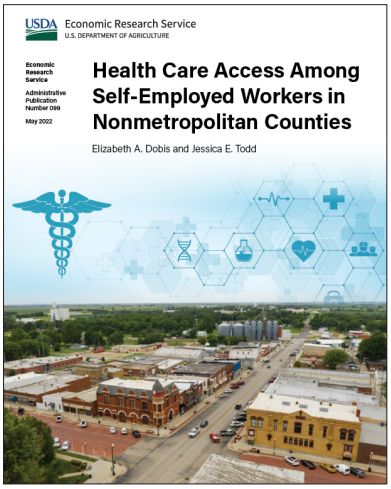
What Is the Issue?



Access to health care involves affordability, which is often tied to health insurance coverage, along with availability of health care facilities and providers. Self-employed workers are less likely to have access to health insurance plans than workers employed by government or private firms, and rural areas may have fewer health care facilities or face other barriers to accessing care. We compared health insurance coverage and medical expenditures between self-employed workers and workers employed by private industry and governments, as well as their households and families, in metropolitan (metro) and nonmetropolitan (nonmetro) counties between 2018 and 2020. We also compared facility and provider availability by the share of self-employed workers in a county among different localities for the 2014 to 2019 period.

What Did the Study Find?

Health insurance coverage rates and sources differed more by age and by whether workers were self-employed than by whether workers lived in a metro or nonmetro location. In 2018, self-employed working-age adults were more likely to be uninsured than those employed by government or other employers. However, a household with both self-employed and private- or government-employed workers was nearly three times less likely to be completely uninsured than one solely self-employed.

More nonmetro self-employed working-age adults were insured through employer-based (group) plans than any other insurance source, likely because they were covered by another household member's employer-based plan. However, direct-purchase plans covered more self-employed working-age adults than those employed in government or private industry. In addition, the share of nonmetro self-employed working-age adults with public insurance (e.g., Medicaid, Medicare) was twice that of those employed by government or private industry.

Retirement-age adults, including those who were self-employed, and their households were less likely to be uninsured than working-age adults. These adults and households were also more likely to be covered by public insurance and have multiple sources of health insurance coverage.

In 2018, family medical expenditures differed more by age and source of health insurance coverage than by metro status or whether family members were self-employed. About half of medical expenditures went to insurance premiums, while the other half went to out-of-pocket spending on deductibles, copays, and over-the-counter products. Families with direct-purchase plans paid the most in per person premiums, on average, while families with public plans paid the least. These spending patterns were consistent across age, whether family members were self-employed, and whether the family lived in a metro area. Families with retirement-age adults had higher per person medical expenditures, on average, than those with no retirement-age adults.

Availability of health care facilities and providers was highly variable across Census regions and metro and nonmetro locations in the United States. In 2017, more counties in the Northeast had hospitals and skilled nursing facilities than in any other region, with the South having the fewest counties with such facilities. In addition, health professional shortage areas completely covered more counties with a high share of self-employed workers than other counties in 2019.

Regional and metropolitan patterns of the availability of hospital beds, physicians, and dentists per 10,000 residents varied more than the number of medical facilities in 2017. The lowest rates of primary care physicians and dentists were in counties with high shares of self-employed workers in the South and Midwest, while the Northeast generally had the highest rates, regardless of the county's worker composition. For facility beds, availability rates were usually higher in nonmetro than metro counties, but no major patterns existed between counties with differing worker compositions.

Differences in uninsured rates between self-employed working-age adults and those employed by government or private industry persisted throughout the COVID-19 pandemic in 2020, but uninsured rates were higher at the beginning of the pandemic in April and May of 2020 than in 2018. Between April 23 and July 21 of 2020, the percentage of people who reported having no health insurance coverage was higher in nonmetro than metro counties but lower among workers who were not self-employed. The percentage of people who were uninsured increased between August 19 and December 21, 2020, due mainly to a decrease in coverage from employer-based health insurance plans.

How Was the Study Conducted?

We defined rural communities as nonmetro counties, where the urban core is less than 50,000 residents and there are not strong commuting ties to an urban core of at least 50,000 residents, and all other areas as metro. Estimates of the self-employed population, their health insurance coverage (and that of their households), and their family medical expenditures in 2018 were obtained from the 2019 Current Population Survey Annual Social and Economic Supplement. County health care facility and provider data were obtained from the 2018–19 Area Health Resource File and were supplemented using data on the share of self-employed workers from the 2014–18 American Community Survey. Data from the U.S. Bureau of the Census' experimental Household Pulse Survey collected from April 23 to December 21, 2020, were used to study changes in employment, income, health insurance coverage, and self-reported health status during the COVID-19 pandemic in 2020.

Health Care Access Among Self-Employed Workers in Nonmetropolitan Counties

Introduction

Self-employed adults are a group of particular interest in analyzing access to affordable health care. While most Americans have health insurance coverage through their employer's group plan, self-employed adults typically lack access to such plans. Instead, they must purchase health insurance directly through an insurance company or the health insurance marketplace, generally resulting in higher premiums. Self-employed individuals may also obtain coverage from a publicly subsidized insurance plan or through a family member's employer-based plan.

Along with affordability, the availability of medical services is also important in analyzing health care access. There may not be enough health care professionals, sufficiently large facilities, or specialized services to provide adequate care to the residents of an area. Rural residents may also need to drive longer distances to medical facilities for health care than those living in urban locations. As a larger share of rural workers are self-employed than urban workers, the factors of affordability and availability may coalesce to make health care access particularly difficult for those individuals.

In this report, we examine health insurance coverage among self-employed individuals and their households in metropolitan (metro) and nonmetropolitan (nonmetro) U.S. counties. Statistics on family medical expenditures, the availability of health care providers and facilities, and changes to health care access during 2020 due to the Coronavirus (COVID-19) pandemic are also analyzed. The types of services included in health insurance plans and the quality of medical care received by patients, although important, are generally not captured in survey data that also identify whether someone is self-employed. Thus, health care quality could not be incorporated in this study.

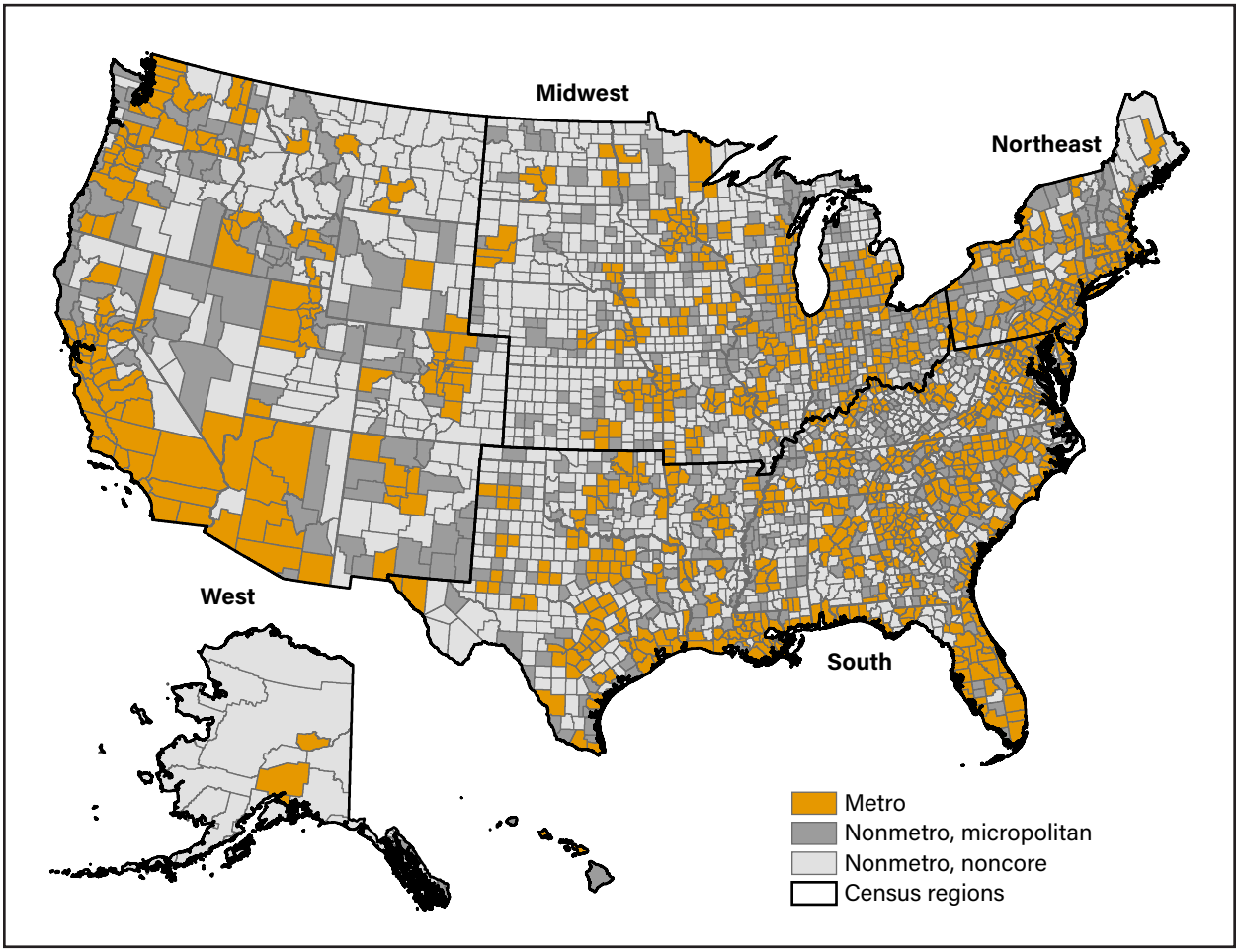
What Is Rural?

For this report, we consider rural communities to be nonmetropolitan counties (or county-equivalents such as parishes or boroughs), as defined by the Office of Management and Budget's (OMB) 2013 classifications. County of residence was the smallest geographic unit available in the data but can obscure the fact that counties often include both relatively denser urban centers and less densely settled land with farms, forests, and other natural features. However, an advantage of using the OMB classification is that counties incorporate local community resources that residents may access.

Metro areas are composed of central core counties with an urban area of at least 50,000 residents and outlying counties that are economically tied to the core counties. In outlying counties, at least 25 percent of the residential labor force commutes into the core counties or at least 25 percent of the labor force employed in the outlying county comes from the core counties. Nonmetro counties are not part of a metro area and can be further subdivided into micropolitan (micro) counties and noncore counties. Micro areas include nonmetro core counties with urban areas of 10,000 to 49,999 residents and any outlying counties in which 25 percent or more of the residential labor force commutes into the core county or at least 25 percent of the labor force comes from a core county. Noncore counties consist of all the remaining nonmetro counties.

Figure 1 displays the metropolitan classification of counties in the United States. In 2013, there were 1,335 noncore and 640 micro counties for a total of 1,975 nonmetro counties, while 1,166 metro counties were spread across 381 metro areas. In 2018, there were 18,809,719 people (5.7 percent) living in noncore counties, 27,290,505 people (8.3 percent) living in micro counties, and 281,067,210 people (85.9 percent) living in metro counties (USDA, ERS, 2020).

Figure 1
U.S. county metropolitan classifications and regional boundaries, 2013



Notes: Metropolitan counties are either: (1) Central counties with an urban area of at least 50,000 residents or (2) outlying counties with at least 25 percent of residents commuting to a nearby central county or with 25 percent of employees commuting from a nearby central county. Micropolitan counties are central counties with an urban area of between 10,000 and 49,999 residents and their outlying counties tied to them through commuting. Noncore counties are all remaining counties.

Source: USDA, Economic Research Service visualization of 2013 Office of Management and Budget's Core-Based Statistical Area (CBSA) definitions and U.S. Department of the Commerce, Bureau of the Census' regional definitions.

How Is Health Care Accessed?

There are three main aspects of health care access: availability, affordability, and willingness. Availability refers to the physical infrastructure of the health care system. The location of facilities and providers, the services that are available, and the ability to access those services within a reasonable amount of time are all inherent to the availability of health care. We use information on health care facilities, providers, and shortage areas to describe the availability of health care in the United States.

Affordability refers to whether people can pay for preventative, elective, and emergency medical care, as well as whether those costs are a burden. Health insurance is the best-known aspect of this facet of care, alleviating costs through negotiated service rates and providing a safety net in the case of medical catastrophes. We use information on health insurance coverage and out-of-pocket medical expenditures to depict the affordability of health care in the United States.

Recent efforts to expand the affordability of U.S. health care include the Affordable Care Act (ACA), which was enacted in March 2010 and went into full effect in January 2014. The ACA primarily focused on expanding access to the direct-purchase health insurance market (also called the individual insurance market) for individuals with preexisting conditions or financial constraints and ensuring access to a minimum level of health care services (e.g., preventive care, mental health, or reproductive concerns). The coverage for child dependency (permitting coverage on a parent's plan) was extended through age 25. Along with expanded access, the ACA instituted an individual mandate requiring all adults to purchase health insurance coverage or pay a fine.[1] Subsidies were provided to those below a certain income threshold to reduce the cost of purchasing coverage. Paired with these provisions were incentives for States to expand eligibility to Medicaid.

The ACA's changes to the health insurance market required providers (e.g., insurance companies), subsidizers (e.g., employers and governments), and consumers (e.g., individuals) to adjust over the course of a few years. Many researchers have documented that the ACA reduced the uninsured population and attributed this reduction to: (1) Medicaid expansion and greater enrollment of eligible individuals, even in States that did not expand Medicaid; (2) the individual mandate; (3) subsidies that reduced costs for Americans who were at 100 to 400 percent of the Federal poverty line; and (4) extension of the maximum age for dependents on their parents' plans (Corlette et al., 2020; Sommers, 2020). However, despite these changes, some Americans remained uninsured, falling into gaps in the legislation or opting not to purchase insurance. The share of those remaining uninsured differed throughout the country in part due to variations in State laws, including the implementation of Medicaid expansion.

Since individuals under 26 years old can either hold their own insurance policy or continue coverage under their parents' plan, we restrict our analysis to individuals age 26 and older. We differentiate between individuals ages 26 to 64 (henceforth, "working-age adults") and those 65 and older (henceforth, "retirement-age adults"), as the latter group are eligible to receive basic insurance through Medicare.

Willingness to utilize medical services is the final facet of health care access. Personal opinions such as distrust of medical providers or societal opinions like the stigma associated with mental health care may prevent people from seeking care (Wrigley et al., 2005; Jacobs et al., 2006; Mascarenhas et al., 2006). This aspect of health care access is largely intangible, making it difficult to measure. Therefore, while acknowledging that it affects access, we do not explicitly analyze willingness to seek medical care. Ultimately, whether individuals choose to access health care depends on the medical services available in their communities, the cost of those services, and whether they think it worthwhile given personal and social perceptions.

[1]The individual mandate was repealed in December 2017, and the change in this legislation went into effect in 2019.

Who Are Self-Employed Workers?

Self-employed workers are individuals who work for themselves rather than for a private company, a government (Federal, State, or local), or as an unpaid family worker. In this report, we follow the U.S. Bureau of Labor Statistics' (BLS) definition and only consider workers of unincorporated businesses to be self-employed. This is because "incorporated self-employed workers are paid employees of their corporation" and are considered employed by a private company (BLS, 2020).

Because most self-employed workers do not have access to group health insurance plans, they must either directly purchase a plan from an insurance company or join a group plan through a social organization (e.g., a production cooperative) if they do not have public insurance (such as Medicare or Medicaid) or are not covered as a dependent by another household member's plan or a plan from another job. Therefore, to understand the dynamics of insurance coverage for self-employed individuals, we analyze insurance coverage both for individuals and households.

Previous Research

There is limited previous research documenting medical insurance coverage and access to care among self-employed workers in rural areas. Using the 1998 Medical Expenditure Panel Survey, Ziller et al. (2003) found that, while a similar proportion of employed individuals were self-employed in metro and nonmetro U.S. counties (about 12 percent), self-employed people in nonmetro counties were less likely to be insured (67 percent) than their counterparts in metro counties (76 percent). Accordingly, a larger share of uninsured individuals in nonmetro counties were self-employed (21 percent) compared to those in metro counties (17 percent).

Larson and Hill (2005) also found that self-employment in the United States is correlated with lower health insurance coverage using pooled 1996–98 Medical Expenditure Panel Survey data. Other studies have highlighted the important contribution of insurance coverage (or lack thereof) among self-employed workers to changes in the share of the overall population covered by insurance during the 2000s, when self-employment and employment in small firms was increasing (Holahan and Cook, 2008; Peake and Marshall, 2012).

Research has also focused on the overall difference in health care insurance and expenditures between urban and rural areas. Jones et al. (2009) used multiple datasets[2] to explore health insurance coverage and access to care among nonmetro and metro residents prior to the ACA and did not find that health insurance coverage differed by metro status. Once the ACA was implemented, health insurance coverage increased nationally, with a slightly larger increase in rural areas than urban areas, although this trend varied by region (Min and Hudson, 2019). Jones et al. (2009) did not find differences in medical expenditures by metro status prior to the ACA but did find that nonmetro residents spent a larger share of their income on health care because their income was generally lower than households in metro counties.

There is little research regarding the link between self-employed individuals and the availability of medical facilities and providers. However, researchers have studied availability in rural areas. Jones et al. (2009) found that health care resources were less accessible the less dense and more remote an area was. They found that median per capita measures of the number of doctors, dentists, and mental health professionals were lower in micropolitan and noncore nonmetro counties than in metro counties. Furthermore, a greater share of households in nonmetro counties were in health professional shortage areas than in metro areas. The authors found that smaller patient volumes in rural areas resulted in fewer specialists, leading to rural residents from more remote areas incurring higher financial and travel-time costs when seeking specialized care.

Jones et al. (2009) also found that the more rural the county, the lower the median hospital beds per 10,000 residents, while skilled nursing facility beds per 10,000 residents were higher. The authors note that this pattern reflects a switch to skilled nursing facilities (which are lower-cost inpatient facilities) in rural areas as hospitals closed. Rural hospital closures not only decrease the number of beds available to rural residents, they are also associated with long-term declines in primary-care physicians and many types of specialized physicians (Germack et al., 2019). Lindrooth et al. (2018) found that expanding Medicaid eligibility to childless adults prior to 2014, which increased overall health insurance coverage and reduced expenditures for the uninsured, reduced the probability that rural Critical Access Hospitals would close between 2008 and 2016, especially in counties with more uninsured adults prior to expansion.

[2]The datasets Jones et al. (2009) used are: Agricultural Resource Management Survey (ARMS), American Community Survey (ACS), Current Population Survey (CPS), Medical Expenditure Panel Survey (MEPS), National Health Interview Survey (NHIS), and Area Resources File (ARF).

Data Sources

We use multiple data sources to explore access to health care among the self-employed in nonmetro counties, as no single dataset provides the variety of information needed to explore both the availability and affordability of health care. The sources refer to time periods that are close to each other but do not overlap. However, the sources do provide a snapshot of health care access in 2017 and 2018 when the ACA was in full effect, as well as information on how health care access may have during 2020 after the COVID-19 pandemic started.

Health Insurance Coverage, Sources, and Costs for Self-Employed Workers

Data on the health insurance coverage, sources, and costs of self-employed workers[3] are from the 2019 Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS). The CPS is a monthly survey conducted jointly by the U.S. Bureau of Labor Statistics and the U.S. Bureau of the Census that primarily collects data on the employment, earnings, and personal characteristics of the respondents. In March, the ASEC is administered to respondents to collect additional information about the previous year's health insurance and medical expenditures, migration, sources of income, and taxes. The ASEC does not observe the level of medical services covered by each health insurance plan, only the source of coverage (e.g., private, public, or direct purchase).

The ASEC collects data on individuals, families, and households. Our sample is restricted to individuals age 26 and older. Information on each individual's worker classification for their primary occupation, health insurance sources, and whether the individual is the policyholder or a dependent of their insurance plan is then aggregated to the household and family level and linked to the family and household data.[4] This allows us to characterize the mix of worker classifications among adults age 26 and older in each household and family. The resulting household health insurance coverage data and family medical expenditure data contain information on the entire household or family unit, including members under age 26, differentiated by the work characteristics of working- and retirement-age members.

Household worker classifications include: (1) Self-employed, in which all employed adults were self-employed; (2) Mixed-employment, in which some employed adults were self-employed and some were employed in the private or government sectors; and (3) Other-employed, in which all employed adults were employed in the private or government sectors. We further differentiate between "working-age" households and families, where all adult members are age 26 to 64, and "retirement-age" households and families, where at least one adult member is age 65 or older.

Medical Facilities and Providers

Data on the county-level location of medical facilities, practitioners, and shortage areas are from the 2018–19 Area Health Resource File (AHRF). The AHRF is a compilation of information on health care resources and county characteristics from multiple sources, including the American Medical Association, American Dental Association, American Hospital Association, and the Centers for Medicare and Medicaid Services, released by the U.S. Health Resources and Services Administration's Bureau of Health Workforce. The data used in our

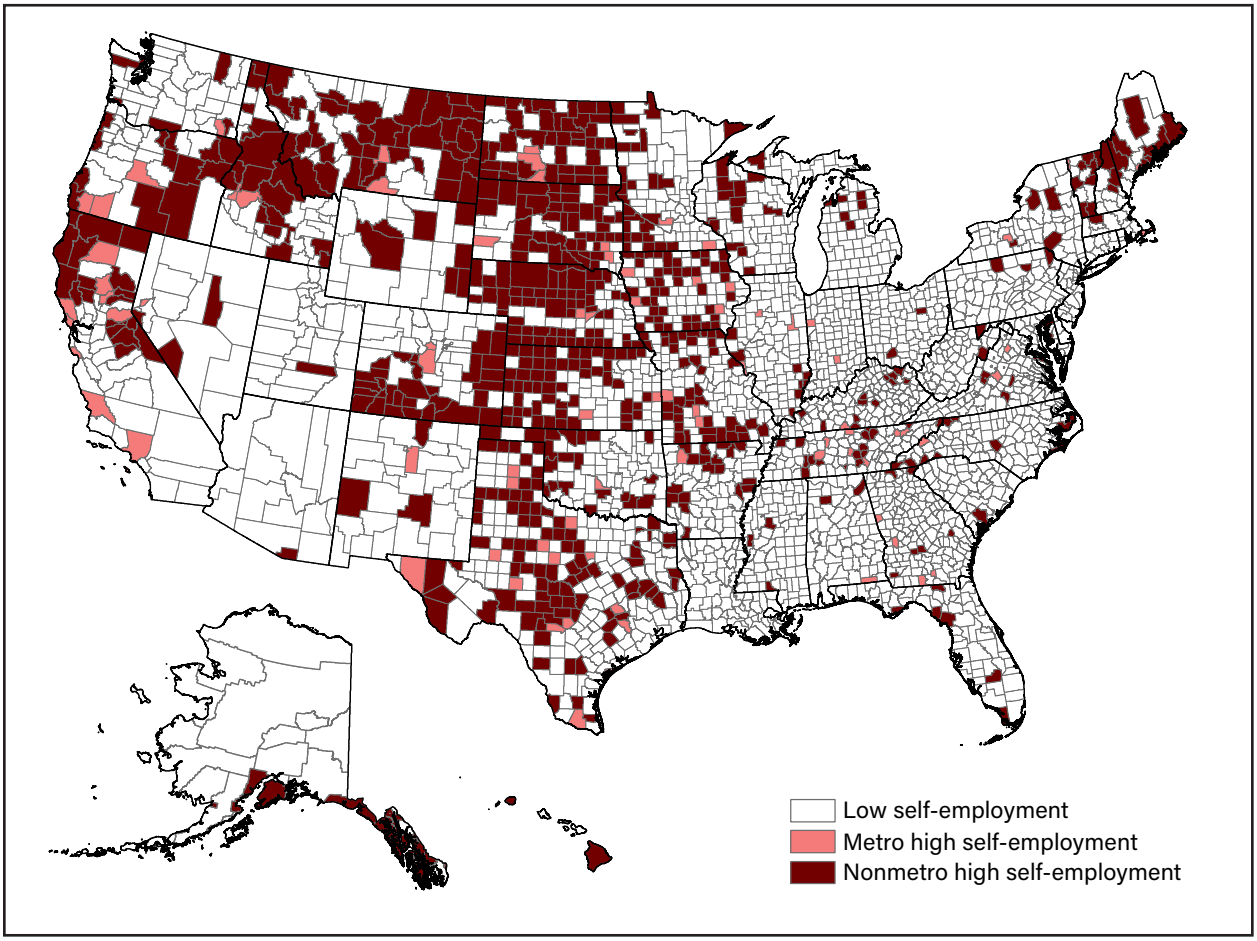
[3]Whether workers are considered self-employed depends on their primary occupation, using the BLS definition discussed in the section "Who Are Self-Employed Workers?" Any workers with multiple jobs are classified solely by their primary occupation, so workers may be employed by private industry or government in a secondary capacity.

[4]Individual, household, and family characteristics (e.g., age, worker classification, place of residence) were observed at the time of the interview in 2019, while health insurance and medical expenditure information was observed for the 2018 calendar year.

analysis include both self-supported facilities and facilities that receive support from the Federal Government to prevent facility closures and a decline of medical services in rural areas, such as Critical Access Hospitals.

To incorporate self-employed workers into our analysis on the availability of medical facilities and providers, county-level workforce data from the U.S. Bureau of the Census' 2014–18 American Community Survey (ACS) were used to classify counties with respect to their share of self-employed workers. Counties in the highest quartile (top 25 percent) by share of self-employed workers are considered to have a high level of self-employment compared to other counties in the United States, with between 9.1 and 36.7 percent of workers self-employed. Figure 2 maps the locations of high self-employment counties. There are 786 high self-employment counties (84 metro and 702 nonmetro), accounting for 7.4 percent of the U.S. population. Isolating high self-employment counties allows us to analyze how access to medical facilities and providers may be different in locations with larger proportions of self-employed workers.

Figure 2
High self-employment counties in the U.S. by metro status, 2014–18



Notes: Workers are individuals age 16 and older. Self-employed workers are individuals that work for themselves and have not incorporated their business. Counties with a proportion of self-employed workers in the highest quartile (top 25 percent) are classified as high self-employment counties. There are 786 high self-employment counties, 84 in metro areas and 702 in nonmetro areas. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, American Community Survey 2018 5-year data.

Household Outcomes During the COVID-19 Pandemic

To assess the experience of U.S. households during the COVID-19 pandemic in near real time, the U.S. Bureau of the Census partnered with other Federal agencies to design and implement the Household Pulse Survey (HPS). This experimental survey asked a variety of questions related to how households were impacted by the pandemic. Topics included employment, income, health care utilization and insurance coverage, and access to food and education. Phase 1 was collected between April 23 and July 21, 2020, with data released in 12 "weekly" files,[5] Phase 2 contained 5 data releases covering August 19 to October 26, 2020, and Phase 3 contained 10 data releases collected between October 28, 2020 and March 29, 2021. Data collection continued through 2021 and at the time of this publication was scheduled to conclude in February 2022. Respondents were age 18 or older.

We limit our analysis of the HPS to the year 2020 and use data from all three phases, up through the fourth release of Phase 3, which ended on December 21, 2020. For analysis, Phase 1 data are grouped into 3 periods, weeks 1–4, 5–8, and 9–12, while all of Phase 2 data are grouped as a fourth time period and all of Phase 3 through December 21, 2020 is the fifth time period. Estimates are obtained using the survey weights and survey design, with weights adjusted to account for the number of weeks pooled into an estimate.

[5] There were 12 Phase 1 datasets, referred to as "weeks," which covered between 6 to 13 days each. Later phase datasets covered close to 2 weeks each.

Self-Employed Workers in the United States

In 2019, 4.1 percent of U.S. adults age 26 and over were self-employed (table 1). For working-age adults, the percentage who were self-employed was slightly larger at 4.5 percent, whereas the opposite was true for retirement-age adults, as only 2.8 percent were self-employed. While there was a greater number of self-employed workers in metro counties (7,343,528) than nonmetro counties (1,548,293), self-employed workers were overrepresented in nonmetro counties as 17.4 percent of all self-employed workers lived in nonmetro counties, but only 13.5 percent of all workers lived in nonmetro counties. While this pattern held for both age subgroups, the proportion of self-employed individuals in nonmetro counties was particularly large for retirement-age adults at 24.0 percent.

Regionally, the largest number of self-employed workers was in the South (3,097,371), but only the West had a larger share of self-employed workers (29.5 percent) than the national share of workers in the region (23.8 percent) (table 1). This trend persisted across age categories, implying that there was relatively more self-employment in the West than in other regions. However, in the Midwest, the proportion of self-employed retirement-age adults was larger than the national share of retirement-age adults living in that region (22.8 percent versus 21.0 percent). Figure 3, which maps county-level data from the 2014–18 ACS, shows that the nonmetro counties with the highest proportion of self-employed workers were in the Great Plains and upper Mountain States.

Next, we discuss the major industrial sectors in which self-employed individuals work, as well as differences by residential metro status. Table 2 shows that the distribution of self-employed workers across industries was very different in metro and nonmetro counties. In metro counties, the majority of self-employed workers were engaged in professional and business activities (23.2 percent) and construction (18.0 percent). These 2 industries were part of the top 3 industries for self-employed workers in nonmetro counties as well, at 15.2 percent and 16.0 percent, respectively. However, in nonmetro counties, the majority of self-employed workers were employed in agriculture, forestry, fishing, and hunting (25.4 percent), which is more than 7 times the national nonmetro share of workers in this industry. Similarly, although only 3.8 percent of metro self-employed workers were employed in agriculture, forestry, fishing, and hunting, this is more than 6 times the national metro share employed in the industry.

Shifting the focus to households with self-employed members, we find that self-employed workers can be part of a self-employed, mixed-employment, or other-employed household. Any of these households may also include members that are unemployed or not in the labor force due to retirement, disability, or for other reasons. Self-employed households were 3.3 percent of all U.S. households, while those with a mix of self- and other employment were 3.5 percent of all U.S. households in 2019 (table 3).

Self-employed and mixed-employment households were overrepresented in nonmetro counties. While 14.0 percent of all U.S. households lived in nonmetro counties, 18.3 percent of self-employed households and 15.7 percent of mixed-employment households were in nonmetro counties. Both self-employed and mixed-employment households had their largest numbers in the South but their largest shares in the West (30.1 percent and 28.1 percent, respectively). Overall, we found the same patterns across metro status and regions in both people and households.

Table 1

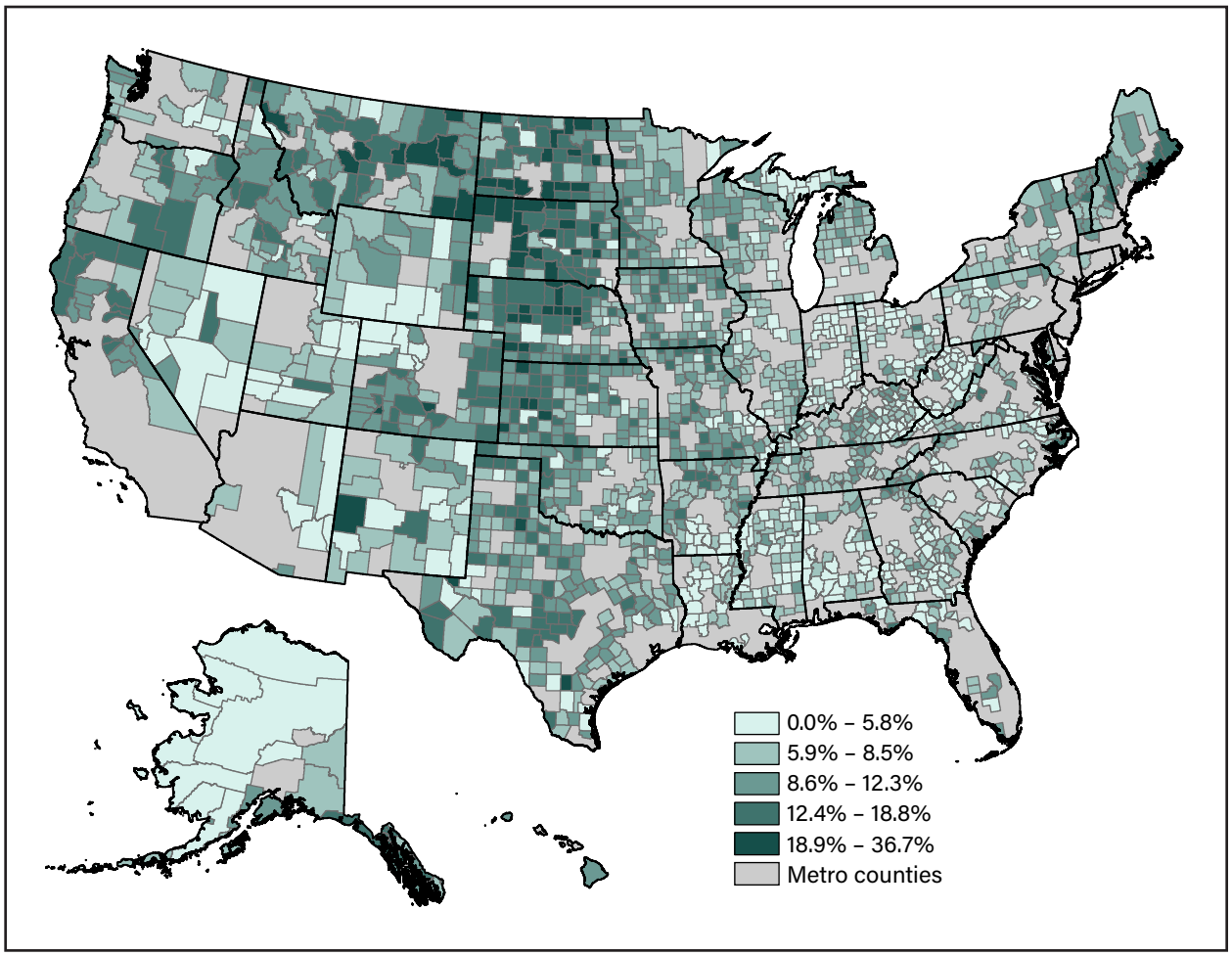
Job classification of adults age 26 and older by age, region, and metro status, 2019

	Total (%)	Self-employed (%)	Other-employed (%)	Unemployed (%)	Not in the labor force (%)
All adults age 26 and older					
United States	100.0	4.1	57.7	2.0	35.9
Metropolitan classification					
Metro	86.5	82.6	88.3	87.4	83.8
Nonmetro	13.5	17.4	11.7	12.6	16.2
Total	100.0	100.0	100.0	100.0	100.0
Census region					
Midwest	20.8	19.6	21.5	21.9	19.8
Northeast	17.4	16.1	17.7	16.6	17.3
South	38.0	34.8	37.4	34.0	39.3
West	23.8	29.5	23.4	27.5	23.6
Total	100.0	100.0	100.0	100.0	100.0
Working-age adults					
United States	100.0	4.5	70.8	2.4	21.9
Metropolitan classification					
Metro	87.4	83.9	88.5	87.1	84.7
Nonmetro	12.6	16.1	11.5	12.9	15.3
Total	100.0	100.0	100.0	100.0	100.0
Census region					
Midwest	20.7	18.9	21.6	22.1	18.5
Northeast	17.2	16.1	17.5	16.7	16.9
South	37.9	34.9	37.3	33.6	40.5
West	24.1	30.1	23.6	27.7	24.1
Total	100.0	100.0	100.0	100.0	100.0
Retirement-age adults					
United States	100.0	2.8	17.0	0.7	79.5
Metropolitan classification					
Metro	83.5	76.0	86.2	91.4	83.1
Nonmetro	16.5	24.0	13.8	8.6	16.9
Total	100.0	100.0	100.0	100.0	100.0
Census region					
Midwest	21.0	22.8	21.2	19.5	20.9
Northeast	18.0	16.4	20.1	15.8	17.6
South	38.2	34.5	38.0	38.6	38.4
West	22.8	26.3	20.7	26.0	23.1
Total	100.0	100.0	100.0	100.0	100.0

Notes: "Working-age" adults are individuals ages 26 to 64, while "retirement-age" adults are individuals age 65 and older. "Self-employed" individuals work for themselves and have not incorporated their business. "Other-employed" individuals work for a private firm, government, or without pay. The classification for individuals serving in the Armed Forces ("not in the universe") is excluded from the table but is included when calculating the population shares across job classifications. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Figure 3
Proportion of workers who were self-employed in nonmetro U.S. counties, 2014–18



Notes: Workers are individuals age 16 and older. Self-employed workers are individuals that work for themselves and have not incorporated their business. Lighter hues indicate a lower proportion of workers that are self-employed in the county, while darker hues indicate a higher proportion. Proportions of self-employed workers for metro counties are not shown. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, American Community Survey 2018 5-year data.

Table 2

Industry classification of adults age 26 and older in metro and nonmetro counties, 2019

	Metro counties				Nonmetro counties			
	U.S. Total (%)	Self-employed (%)	Other-employed (%)	Unemployed (%)	U.S. Total (%)	Self-employed (%)	Other-employed (%)	Unemployed (%)
Agriculture, forestry, fishing, & hunting	0.6	3.8	0.7	2.9	3.4	25.4	3.8	5.5
Mining	0.3	0.2	0.4	0.3	0.8	0.2	1.5	2.4
Construction	4.7	18.0	6.5	10.4	4.5	16.0	6.6	16.1
Manufacturing	6.5	2.3	10.5	7.9	8.3	2.8	16.0	8.4
Wholesale & retail trade	7.6	7.6	11.7	12.9	6.8	7.6	12.1	12.6
Transportation & utilities	3.9	6.2	5.9	6.5	3.3	4.4	5.8	8.9
Information	1.2	1.1	2.0	1.8	0.6	0.5	1.0	1.5
Financial activities	4.9	8.0	7.6	6.3	2.3	4.0	4.2	1.7
Professional & business activities	9.0	23.2	13.1	15.6	4.2	15.2	6.3	11.6
Education & health services	15.5	12.1	24.8	14.9	13.8	6.8	26.5	8.9
Leisure & hospitality	4.8	7.5	7.1	10.6	3.8	5.8	6.6	12.7
Other services	3.2	9.8	4.5	4.6	2.5	11.2	3.7	4.0
Public administration	3.2	0.0	5.3	2.6	3.1	0.0	6.0	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Only persons in the labor force are included in the table, but members of the Armed Forces were included when calculating the percentages. Industries are classified using the 2-digit North America Industry Classification System (NAICS) codes. "Self-employed" individuals work for themselves and have not incorporated their business. "Other-employed" individuals work for a private firm, government, or without pay. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Table 3

Worker classification in households by member age, region, and metro status, 2019

	Total (%)	Only self-employed (%)	Mixed self- and other-employed (%)	Only other-employed (%)	All other combinations (%)
All households					
United States	100.0	3.3	3.5	66.6	26.5
Metropolitan classification					
Metro	86.0	81.7	84.3	87.9	81.8
Nonmetro	14.0	18.3	15.7	12.1	18.2
Total	100.0	100.0	100.0	100.0	100.0
Census region					
Midwest	21.5	16.8	22.2	21.6	21.6
Northeast	17.3	16.2	16.7	17.4	17.4
South	38.5	36.9	33.0	38.4	39.7
West	22.7	30.1	28.1	22.5	21.3
Total	100.0	100.0	100.0	100.0	100.0
Households without retirement-age adults					
United States	100.0	3.4	4.2	81.5	10.9
Metropolitan classification					
Metro	87.0	82.7	84.8	88.1	81.1
Nonmetro	13.0	17.3	15.2	11.9	18.9
Total	100.0	100.0	100.0	100.0	100.0
Census region					
Midwest	21.6	16.0	21.8	21.9	21.2
Northeast	17.0	16.1	16.6	17.0	17.2
South	38.7	37.0	33.4	38.6	41.8
West	22.7	31.0	28.2	22.5	19.8
Total	100.0	100.0	100.0	100.0	100.0
Households with retirement-age adults					
United States	100.0	3.2	2.1	34.9	59.8
Metropolitan classification					
Metro	83.6	79.3	81.9	86.9	82.0
Nonmetro	16.4	20.7	18.1	13.1	18.0
Total	100.0	100.0	100.0	100.0	100.0
Census region					
Midwest	21.2	18.7	24.2	20.2	21.8
Northeast	18.1	16.7	16.9	19.4	17.5
South	38.2	36.8	31.5	37.6	38.9
West	22.5	27.9	27.4	22.8	21.9
Total	100.0	100.0	100.0	100.0	100.0

Notes: Only households with at least one member age 26 or older are included in this table. "Working-age" adults are members ages 26 to 64, while "retirement-age" adults are members age 65 and older. Household worker classifications are constructed using the worker classifications of members 26 years old or older. "Self-employed" members work for themselves and have not incorporated their business. "Other-employed" members work for a private firm, government, or without pay. Households where all adults are looking for their first job or are not in the labor force (e.g., retired, Armed Forces) are "all other combinations." Households with at least one retirement-age adult are considered "households with retirement-age adults." County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Affordability of Health Care Services

While being insured does not guarantee that health care services will be affordable, it can reduce costs for many services. This section explores health insurance coverage and medical expenditures among self-employed individuals in the United States prior to the pandemic, providing statistics for self-employed workers and their households and families while focusing on those in nonmetro areas.

Because many farm households have operators who are self-employed in farming or in a nonfarm business, policymakers may also be interested in health insurance coverage among farm households. Health insurance coverage among households of the principal operators on U.S. family farms is presented in the box, "Health Insurance Coverage Among Farm Households."

Health Insurance Coverage and Sources Among Workers

We use the 2019 CPS ASEC data on health insurance status and coverage in 2018 to analyze the affordability of health care services among U.S. self-employed workers, focusing on individuals living in nonmetro areas. We found that 15.7 percent of nonmetro self-employed adults age 26 and older had no health insurance in 2018, nearly twice the national rate (see appendix table A1). The uninsured rate was even higher among nonmetro self-employed working-age adults at 20.4 percent (figure 4). This rate was lower than the uninsured rate among metro self-employed working-age adults (21.5 percent, a statistically significant difference; see appendix table A5), the only worker classification for which this was true. In metro counties, self-employed working-age adults had a higher uninsured rate than unemployed working-age adults (20.3 percent). These high rates of uninsurance among self-employed working-age adults are consistent with previous research. However, among nonmetro retirement-age adults, barely any self-employed workers were uninsured.[6]

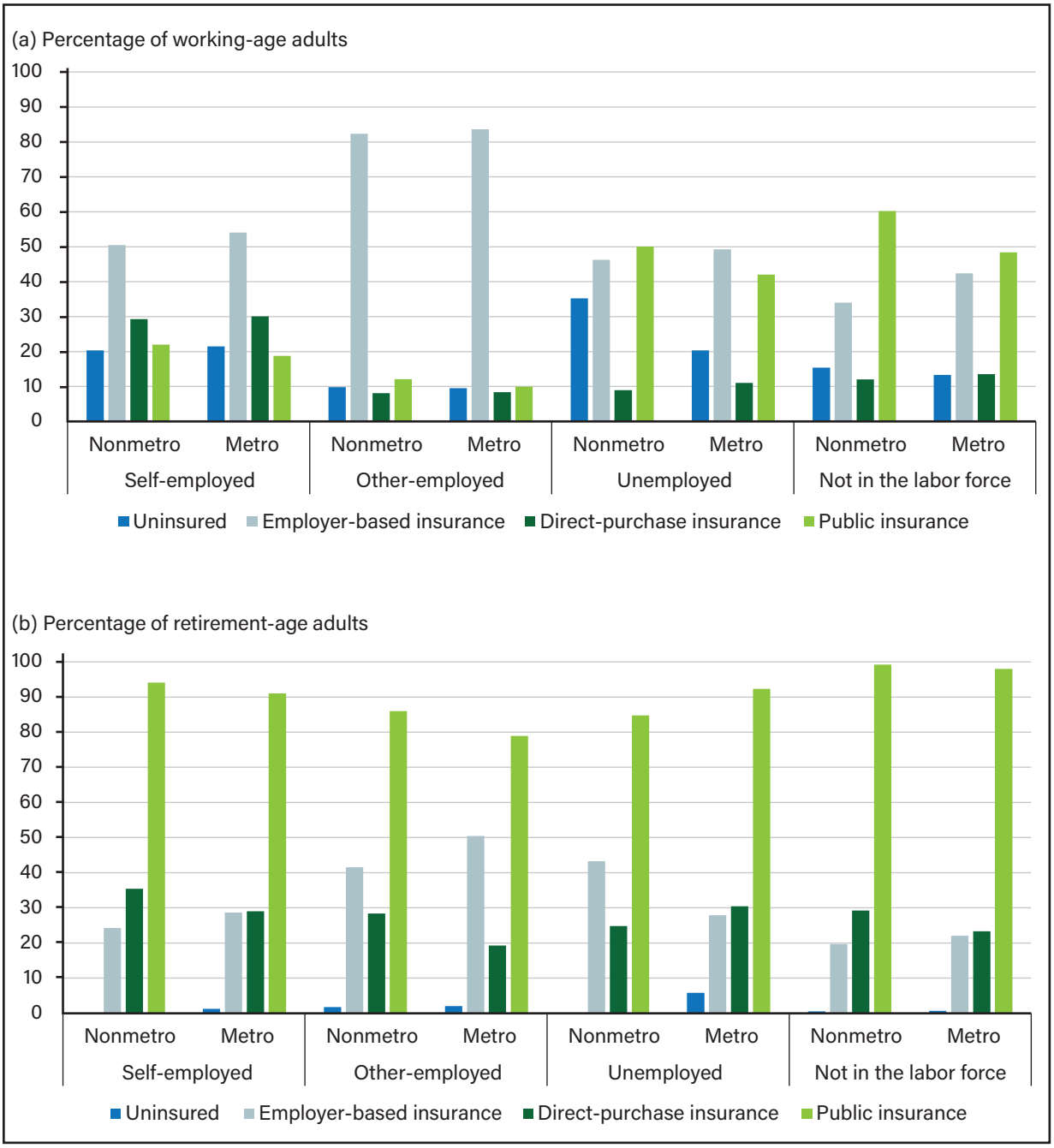
Of the nonmetro self-employed working-age adults with health insurance, the majority (50.5 percent) were covered by employer-based (group) insurance plans (figure 4). However, they also had the greatest percentage of individuals covered by plans purchased directly from insurance companies (29.3 percent) when compared to nonmetro working-age adults that were other-employed, unemployed, or outside the labor force. The percentage of nonmetro self-employed working-age adults insured through public insurance policies, such as Medicaid, was nearly twice the rate of those who were employed through private companies or governments. While the percentage of self-employed working-age adults insured through private plans (employer-based or direct-purchase) was greater in metro counties than in nonmetro counties, the percentage of working-age adults with public health insurance was greater in nonmetro counties than in metro counties (with statistically significant differences).

However, health insurance sources are different among retirement-age self-employed individuals. Over 94 percent of nonmetro self-employed retirement-age adults had public insurance, with 24.3 percent and 35.5 percent holding employer-based and direct-purchase plans, respectively (figure 4). These numbers reflect the high proportion of adults who had additional plans to supplement their Medicare coverage. Among nonmetro self-employed retirement-age adults, 59.4 percent had concurrent coverage through multiple plans (table 4). Conversely, only 3.8 percent of nonmetro working-age self-employed adults had concurrent coverage through multiple health insurance plans.

[6]The CPS ASEC sample does not have any uninsured self-employed retirement-age adults. However, as there are a few uninsured retirement-age adults in other job classifications, it seems unlikely that every self-employed Medicare-eligible adult in the United States would be insured. Therefore, although the data indicate that 0.0 percent of nonmetro retirement-age adults are uninsured, we instead say that barely any were uninsured.

Figure 4

Health insurance coverage of adults age 26 and older by age, worker classification, metro status, and source of coverage, 2018



Notes: "Working-age" adults are individuals ages 26 to 64, while "retirement-age" adults are individuals age 65 and older. "Self-employed" individuals work for themselves and have not incorporated their business. "Other-employed" individuals work for a private firm, government, or without pay. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data. See appendix A, table A1.

Table 4

Percentage of adults age 26 and older with multiple health insurance policies by age, worker classification, and metro status, 2018

	Total (%)	Self-employed (%)	Other-employed (%)	Unemployed (%)	Not in the labor force (%)
All adults age 26 and older					
Total	18.6	14.3	7.1	10.7	37.5
Metro	17.7	13.3	6.8	10.4	36.6
Nonmetro	24.2	19.0	9.1	13.0	42.2
Working-age adults					
Total	5.4	4.0	3.2	5.4	12.9
Metro	5.1	4.0	3.1	5.1	12.2
Nonmetro	7.4	3.8	4.0	8.1	16.8
Retirement-age adults					
Total	55.4	55.1	53.4	57.4	55.8
Metro	54.6	53.7	52.3	56.7	55.1
Nonmetro	59.3	59.4	59.9	64.2	59.1

Notes: "Working-age" adults are individuals ages 26 to 64, while "retirement-age" adults are individuals age 65 and older. "Self-employed" individuals work for themselves and have not incorporated their business. "Other-employed" individuals work for a private firm, government, or without pay. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Health Insurance Coverage and Sources Among Households

Because people can be insured through plans held by other individuals, a household-level analysis is important to understand the dynamics of insuring self-employed workers and their household members of all ages. We use the 2019 CPS ASEC data on health insurance status and coverage from 2018 to analyze the affordability of health care services among U.S. households with self-employed workers, focusing on households in nonmetro areas. We differentiate among households by their mix of self-employed and other-employed members, as well as by whether they have working-age and retirement-age members.

We found that the share of working-age households with no health insurance varied by household worker classification. The rate of nonmetro self-employed working-age households who were completely uninsured in 2018 was slightly larger than for nonmetro self-employed working-age individuals—22.0 percent versus 20.4 percent (figure 5; also see appendix tables A1 and A2). However, the uninsured rate was more than 15 percentage points lower among nonmetro mixed-employment households (5.5 percent). Nonmetro other-employed households had a similarly low uninsured rate at 6.1 percent.

Self-employed individuals in nonmetro mixed-employment working-age households were more frequently covered by the employer-based health insurance of another household member (i.e., a dependent) than those in self-employed households (58.5 percent versus 20.1 percent, a statistically significant difference; see appendix table A2). Household coverage through employer-based plans in these mixed-employment households was slightly lower than in other-employed households (72.0 percent versus 80.4 percent, a statistically significant difference; see figure 5). However, the share of households insured through employer-based plans in mixed-employment working-age households was larger in metro counties than in nonmetro counties (79.3 percent versus 72.0 percent, a statistically significant difference).

Nonmetro self-employed working-age households had the highest rate of coverage through direct-purchase plans at 35.2 percent, while only 17.8 percent of mixed-employment households and 10.1 percent of other-employed households had a direct-purchase policy (figure 5). However, in working-age households with a self-employed member, that individual was usually the policyholder of the direct-purchase plan, at 90.0 percent for self-employed households and 66.8 percent for mixed-employment households (appendix table A2).

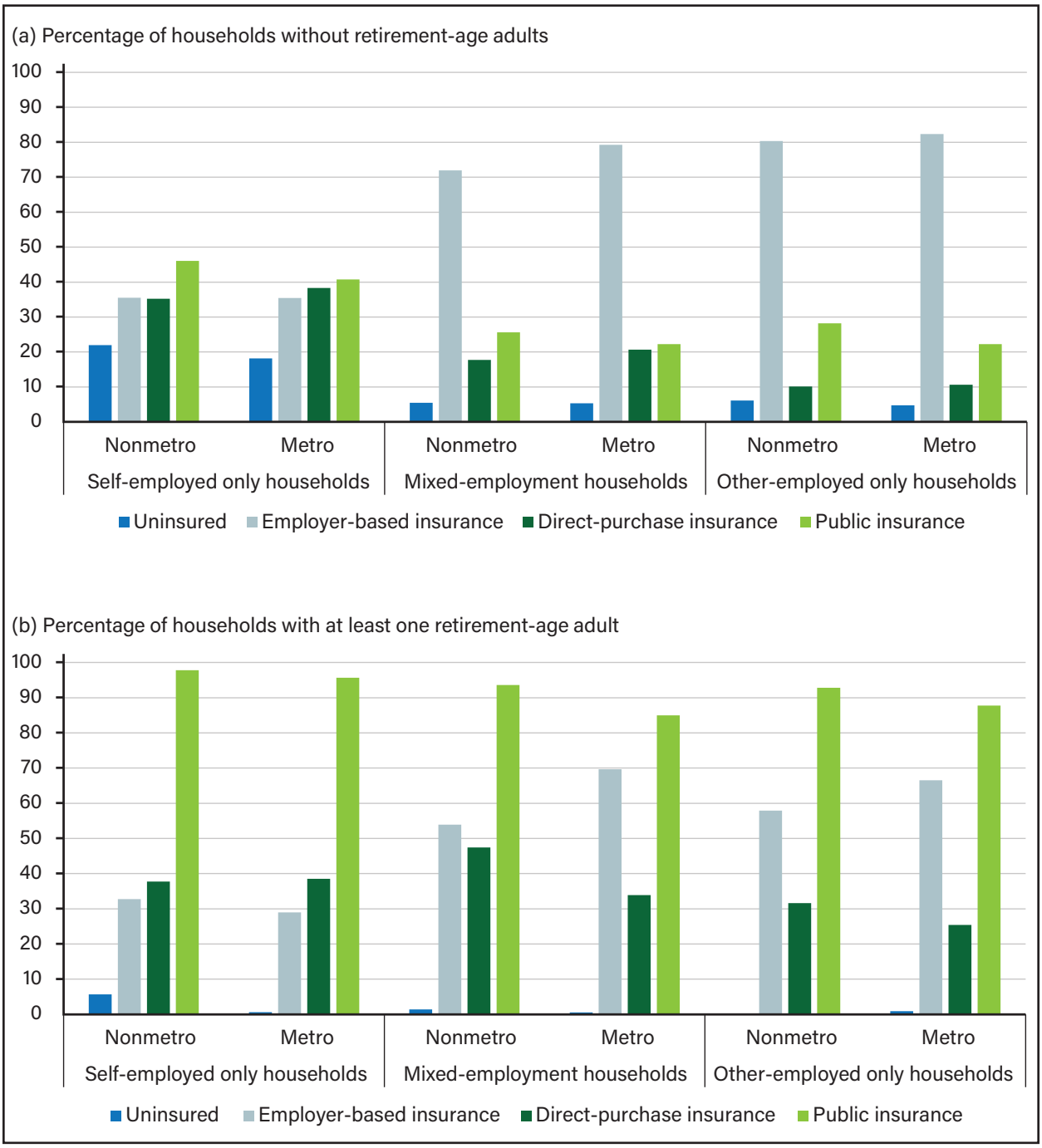
A larger share of working-age households was insured through public insurance in nonmetro counties than in metro counties (36.8 percent versus 27.6 percent, a statistically significant difference; see figure 5). Public insurance covered a larger share of self-employed households in nonmetro counties (46.0 percent) than any other insurance source and any other household worker composition. This rate was more than 1.5 times the share of mixed-employment or other-employed households who were covered through public plans.

More than 95 percent of nonmetro households with at least one retirement-age adult had public insurance (appendix table A2). The rate of employer-based insurance (32.7 percent versus 35.5 percent, a statistically significant difference) and direct-purchase insurance (37.7 percent versus 35.2 percent, statistically significant) among self-employed retirement-age households was similar to the rate among working-age households (figure 5). However, among mixed-employment retirement-age households, there was more direct-purchase coverage (47.5 percent versus 17.8 percent, statistically significant) and less employer-based coverage (53.9 percent versus 72.0 percent, statistically significant) than in working-age households.

Overall, despite the differences in coverage across household worker composition and member ages, households in metro counties had a greater rate of health insurance coverage through employer-based policies, while households in nonmetro counties had a greater rate of coverage through direct-purchase and public policies.

Figure 5

Health insurance coverage in households with self-employed members by member age, worker classification, source of coverage, and metro status, 2018



Notes: Only households with at least one member age 26 or older are included in this table, though members of all ages are included in the calculations. "Working-age" adults are members ages 26 to 64, while "retirement-age" adults are members age 65 and older. Household worker classifications are constructed using the worker classifications of members 26 years old or older. "Self-employed" members work for themselves and have not incorporated their business. "Other-employed" members work for a private firm, government, or without pay. Households where all members age 26 or older are looking for their first job or not in the labor force are excluded. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

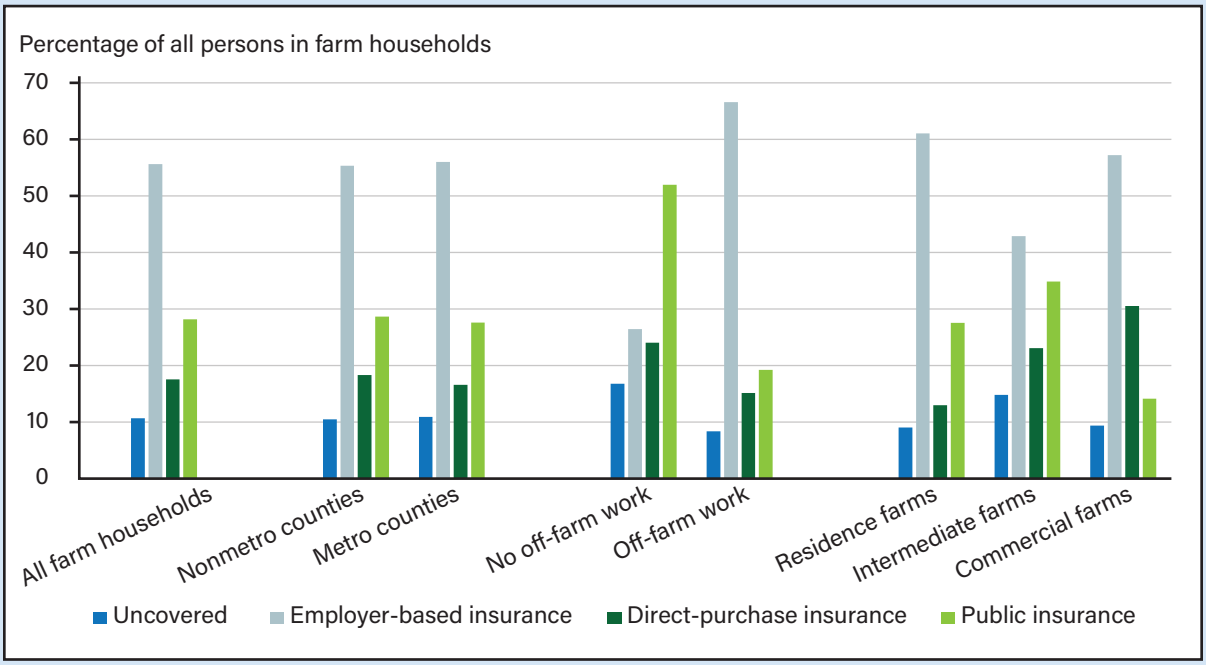
Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data. See appendix A, table A2.

Health Insurance Coverage Among Farm Households

Most farms (98 percent) in the United States are family farms, which are those where more than half of all farm assets are owned by an operator and their extended family. USDA collects data on a sample of farms each year, including information about the principal operator's household, through the Agricultural Resource Management Survey (ARMS). Nearly all principal farm operators (the person most responsible for making decisions on the farm) are self-employed in farming, as about 2 percent of all family farms are organized or incorporated as C corporations (MacDonald et al., 2019). However, many operators report that farming is not their main occupation. As such, not all farm operators would report that they are self-employed at their primary occupation in a national employment survey, such as the CPS.

Periodically, the ARMS collects information about health insurance coverage of the principal operator and their household members by age group (65 or older, for adults 18 to 64 years old, and for children under age 18). The last time these data were collected was when the ACA was in full effect was in 2015. In that year, 43.6 percent of farm households lived in a metro county, 69.2 percent of primary operators or their spouses had an off-farm job, and 10.7 percent of all people in farm households were uninsured (see figure "Health insurance coverage in farm households by insurance source, metro status, off-farm employment of operator and spouse, and type of farm, 2015").

Health insurance coverage in farm households by insurance source, metro status, off-farm employment of operator and spouse, and type of farm, 2015



Notes: "No off-farm work" means that neither the principal operator nor spouse reported working off the farm. "Off-farm work" means that either the principal operator or spouse reported working off the farm. Residence farms are small farms (less than $350,000 gross cash farm income (GCFI)), where the principal operator reported either being retired from farming or having a main occupation other than farming. Intermediate farms are small farms where the principal operator reported farming as the main occupation. Commercial farms are farms with a GCFI of $350,000 or more per year. All individuals in farm households, regardless of age, are included in these tabulations. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

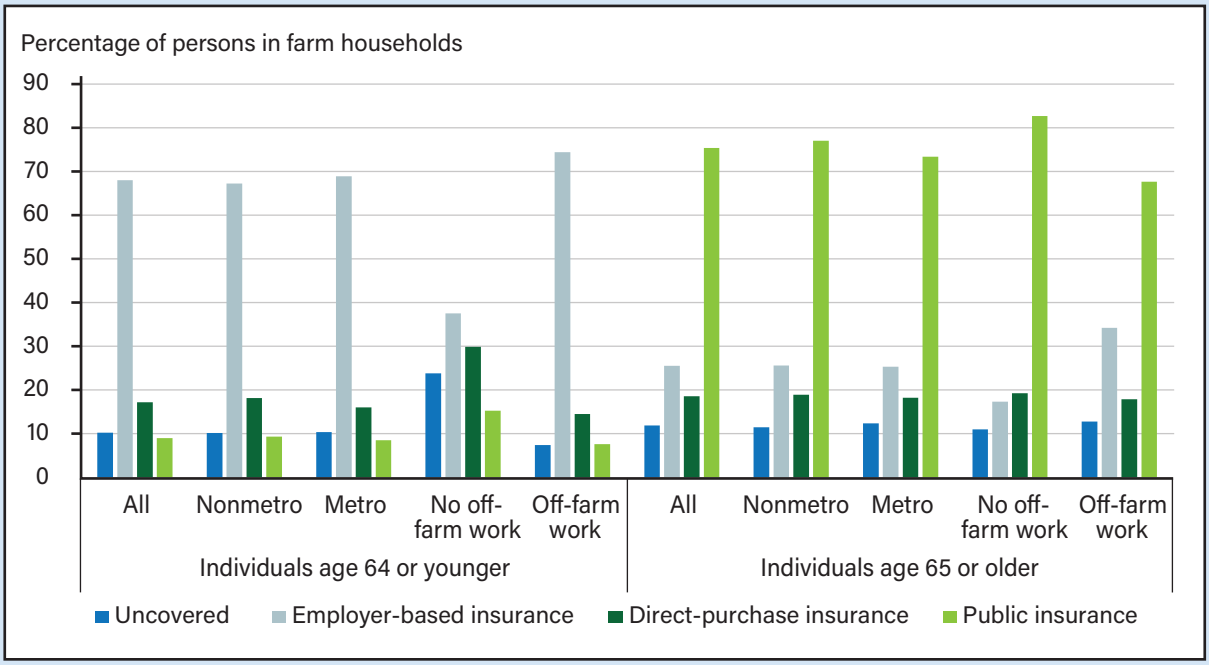
Source: USDA, Economic Research Service using USDA, National Agricultural Statistics Service and USDA, Economic Research Service, 2015 Agricultural Resource Management Survey data. See appendix B, table B1.

There were no differences in the share of uninsured persons across households in metro and nonmetro counties, but a larger share of household members were uninsured when the operator and spouse did not have an off-farm job (16.8 percent) as compared to when either or both worked off the farm (8.4 percent). Over half of all people in farm households (55.6 percent) had health insurance through an employer-based plan, but coverage varied depending on whether the operator or spouse had an off-farm job. Sixty-seven percent had coverage through an employer-based plan when the operator or spouse worked off the farm, while only 26.5 percent did when neither the operator nor spouse worked off the farm. Correspondingly, coverage through public insurance or direct-purchase plans was greater for people in households where the operator and spouse did not work off the farm (52.0 percent and 24.1 percent, respectively), compared to those where the operator or spouse had an off-farm job (19.2 percent and 15.1 percent, respectively). These findings are consistent with those of Ahearn et al. (2013), who found that (in 2010) farm households with an off-farm job were more likely to have health insurance than those who did not.

The source of health insurance coverage also varied across households operating different types of farms (residence, intermediate, and commercial). Households within each farm type rely on a mix of health insurance sources for coverage. Some have access to employer-based plans, and many also rely on direct-purchase plans. Across all 3 farm types, employer-based coverage was the most common source of health insurance: 61.1 percent had this coverage in households operating residence farms, while 42.9 percent of those in intermediate farm households and 57.2 percent of those living in households operating commercial farms had coverage from employer-based plans. The percentage of individuals covered by direct-purchase plans was highest among those in households operating commercial farms, while households operating intermediate farms had the largest share of individuals covered by public insurance plans, as well as the largest share of uninsured individuals.

The share of individuals with any health insurance coverage did not vary by whether the individual was age 65 or older (see figure "Health insurance coverage in farm households by age category, insurance source, metro status, and off-farm employment of operator and spouse, 2015"). However, individuals under age 65 were more likely to be insured through employer-based plans (67.9 percent versus 25.5 percent), while retirement-age individuals were more likely to be covered by public insurance (75.4 percent versus 8.9 percent). These patterns held despite metro or off-farm work status. However, the uninsured rate was much larger for individuals under age 65 in households where the operator and spouse did not work off the farm (23.8 percent) than for any other group.

Health insurance coverage in farm households by age category, insurance source, metro status, and off-farm employment of operator and spouse, 2015



Notes: All individuals in farm households are included in these tabulations, so the age 64-and-younger group includes adults under age 26 and all children. "No off-farm work" means that neither the principal operator nor spouse reported working off the farm. "Off-farm work" means that either the principal operator or spouse (or both) reported working off the farm. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using USDA, National Agricultural Statistics Service and USDA, Economic Research Service, 2015 Agricultural Resource Management Survey data. See appendix B, table B1.

Medical Service Expenditures Among Families

Health insurance coverage is only one aspect of health care affordability. Overall out-of-pocket medical service expenditures also affect whether families can afford medical care. We use the 2019 CPS ASEC data on medical expenditures in 2018 to analyze the affordability of health care services among U.S. families with self-employed workers, focusing on families living in nonmetro areas. We differentiate among families by their mix of self-employed and other-employed members, as well as their mix of working-age and retirement-age members.

In 2018, nonmetro families paid an average of $2,130 in medical expenses per person (table 5). About half of this expenditure ($1,144) went to health insurance premiums, $815 went to out-of-pocket health care costs (e.g., deductibles and co-pays), and $171 was paid for over-the-counter items. Differences in expenditures for medical services between families in metro and nonmetro counties were less than $100, no matter the insurance source or family age structure.[7] This finding is consistent with previous findings for an earlier period, using a different dataset (Jones et al., 2009).

Nonmetro retirement-age families paid slightly more in medical expenditures per person in 2018 at $2,234 on average, compared with $2,016 spent on average by nonmetro working-age families (a statistically significant difference; table 5). While nonmetro retirement-age families spent less on premiums than working-age families, they paid more out-of-pocket for medical services and over-the-counter items (statistically significant differences). The same patterns exist in comparing retirement-age and working-age families in metro counties, as well as for the United States as a whole. The higher spending among retirement-age families (compared to working-age families) likely reflects age-related health problems, resulting in greater use of health care services.

The lower average per person health insurance premiums (out-of-pocket) among retirement-age families may be attributed to the subsidized insurance coverage that retirement-age adults can receive through Medicare. Many retirement-age adults also hold supplemental insurance (through employer-based or direct-purchase plans) to expand the range of medical services covered by their insurance. Consequently, 54.5 percent of nonmetro retirement-age families had more than one source of health insurance, while only 14.2 percent of nonmetro working-age families did (table 5). In addition, families with a mix of retirement-age and younger members likely also hold insurance plans from multiple sources, as Medicare-eligible and Medicare-ineligible individuals may need to be covered separately. However, there is an additional cost to having multiple sources of insurance coverage, as it generally takes more time and effort to manage multiple policies than it does one policy.

There were much larger differences in per-person medical expenditures when the sample was divided by insurance source and worker composition (table 5). In nonmetro counties, families with direct-purchase plans spent the most on premiums ($1,832 per person on average), while those with employer-based group plans spent slightly less ($1,496 per person), and families with public insurance spent even less on premiums ($793 per person). These differences are consistent with previous research (Mishra et al., 2012) and are not surprising given that premiums for direct-purchase plans are generally not subsidized by employers (i.e., employer-based plans) or the government (i.e., public plans).[8] Families with direct-purchase insurance also were most likely to have more than one insurance source in 2018 (79.2 percent for nonmetro families).

[7] In addition to being small, these differences were statistically insignificant for all insured families for all expenditure types except premiums.

[8] Exceptions are subsidized plans purchased through the Health Insurance Marketplace, which are subsidized by the Federal Government through tax credits.

Table 5

Mean medical expenditures per family member for families by metro status, member age, and source of health insurance coverage, 2018

	All families			Families without retirement-age adults			Families with retirement-age adults		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro	Total	Metro	Nonmetro
All health insurance sources									
Out-of-pocket health insurance premiums ($)	1,193	1,200	1,144	1,250	1,260	1,181	1,065	1,062	1,081
Out-of-pocket health care spending ($)	798	795	815	686	686	691	1,046	1,050	1,025
Over-the-counter expenditures ($)	176	176	171	154	156	143	223	224	218
Total medical expenses ($)	2,167	2,172	2,130	2,091	2,101	2,016	2,335	2,337	2,324
Multiple policy sources (%)	24.9	24.2	29.2	12.0	11.6	14.2	53.5	53.3	54.5
Employer-based insurance (private, group)									
Out-of-pocket health insurance premiums ($)	1,466	1,462	1,496	1,448	1,445	1,470	1,546	1,538	1,593
Out-of-pocket health care spending ($)	840	840	846	769	765	798	1,159	1,180	1,025
Over-the-counter expenditures ($)	175	176	169	163	165	153	228	227	230
Total medical expenses ($)	2,481	2,477	2,511	2,380	2,374	2,421	2,932	2,946	2,848
Multiple policy sources (%)	28.1	27.2	34.0	14.4	13.9	18.3	88.6	88.0	92.8
Direct-purchase insurance (private, non-group)									
Out-of-pocket health insurance premiums ($)	1,876	1,885	1,832	2,036	2,033	2,059	1,725	1,731	1,700
Out-of-pocket health care spending ($)	1,163	1,162	1,171	927	918	996	1,387	1,415	1,272
Over-the-counter expenditures ($)	233	232	241	202	201	209	263	264	259
Total medical expenses ($)	3,272	3,278	3,243	3,165	3,152	3,264	3,375	3,409	3,231
Multiple policy sources (%)	70.6	69.0	79.2	41.8	41.4	44.4	98.0	97.7	99.2
Public insurance									
Out-of-pocket health insurance premiums ($)	773	769	793	366	369	355	1,028	1,021	1,064
Out-of-pocket health care spending ($)	789	788	796	375	365	425	1,048	1,053	1,025
Over-the-counter expenditures ($)	181	181	178	115	115	114	222	222	218
Total medical expenses ($)	1,743	1,738	1,768	857	850	894	2,298	2,296	2,307
Multiple policy sources (%)	47.6	47.7	47.2	34.1	34.3	33.4	56.0	56.1	55.8
Uninsured									
Out-of-pocket health insurance premiums ($)	34	37	15	35	38	16	0	0	0
Out-of-pocket health care spending ($)	430	412	534	418	408	476	754	519	2,007
Over-the-counter expenditures ($)	126	130	100	128	133	99	80	74	109
Total medical expenses ($)	589	579	649	580	579	591	833	593	2,116

Notes: Expenditures are nominal, given in 2018 U.S. dollars. Only families with at least 1 member age 26 or older are included in the table, though members of all ages are included in the calculations. "Working-age" adults are members ages 26 to 64, while "retirement-age" adults are members age 65 and older. Families with at least one retirement-age member are considered "families with retirement-age adults." County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Nonmetro mixed-employment families paid the most in medical expenses, $2,586 per person on average, while self-employed families paid about $300 less on average (a statistically significant difference; table 6). Nonmetro mixed-employment families also paid the most in total family medical expenditures: $6,923 versus $4,311 for self-employed families and $4,844 for other-employed families (appendix table A3). The higher total family medical expenditure was primarily due to larger average family sizes among mixed-employment families (3.3 members per family versus 2.1 for self-employed families and 2.5 for other-employed families). However, the higher level of spending per person in mixed-employment families was also partially due to greater spending on premiums.

Some of the differences in spending across family worker composition (and sources of insurance plans) may also be related to the level of coverage. The CPS ASEC data do not indicate the type or amount of medical services covered by the insurance policy. High-deductible plans that do not cover non-preventative care until a large out-of-pocket deductible has been met, high-premium "Cadillac" plans that generally cover a large variety of medical services with little out-of-pocket spending, and plans that only cover medical care for catastrophic events all provide different services at different costs. Families may choose their plans on cost as much as coverage.

Table 6

Mean medical expenditures per family member for families by worker classification, metro status, and source of health insurance coverage, 2018

	Only self-employed			Mixed self- and other-employed			Only other-employed		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro	Total	Metro	Nonmetro
All health insurance sources									
Out-of-pocket health insurance premiums ($)	1,409	1,444	1,244	1,475	1,453	1,585	1,326	1,329	1,300
Out-of-pocket health care spending ($)	910	924	844	868	874	836	749	745	774
Over-the-counter expenditures ($)	199	200	192	176	178	164	165	166	152
Total medical expenses ($)	2,518	2,568	2,281	2,519	2,505	2,586	2,239	2,241	2,227
Multiple policy sources (%)	27.0	26.3	30.1	27.3	26.6	30.7	20.4	19.8	24.6
Employer-based insurance (private, group)									
Out-of-pocket health insurance premiums ($)	1,624	1,651	1,493	1,489	1,480	1,543	1,454	1,454	1,452
Out-of-pocket health care spending ($)	988	956	1,145	895	908	816	798	796	815
Over-the-counter expenditures ($)	199	187	254	170	175	143	169	171	158
Total medical expenses ($)	2,811	2,794	2,892	2,554	2,563	2,503	2,421	2,421	2,425
Multiple policy sources (%)	42.1	41.7	43.7	28.5	28.3	29.5	21.9	21.3	26.5
Direct-purchase insurance (private, non-group)									
Out-of-pocket health insurance premiums ($)	2,420	2,451	2,257	2,132	2,031	2,569	1,913	1,921	1,854
Out-of-pocket health care spending ($)	1,214	1,283	850	982	953	1,109	987	970	1,101
Over-the-counter expenditures ($)	254	265	194	213	210	230	207	205	218
Total medical expenses ($)	3,888	3,999	3,301	3,327	3,193	3,908	3,106	3,097	3,173
Multiple policy sources (%)	45.0	42.5	58.5	63.5	62.5	67.8	61.0	60.1	67.2
Public insurance									
Out-of-pocket health insurance premiums ($)	809	794	869	975	977	966	818	819	813
Out-of-pocket health care spending ($)	849	858	815	733	748	677	655	651	679
Over-the-counter expenditures ($)	180	177	190	164	166	155	156	158	147
Total medical expenses ($)	1,838	1,829	1,875	1,872	1,891	1,799	1,629	1,627	1,639
Multiple policy sources (%)	43.2	43.3	42.8	71.0	70.6	72.5	59.0	58.7	61.2
Uninsured									
Out-of-pocket health insurance premiums ($)	43	47	23	5	6	0	31	33	21
Out-of-pocket health care spending ($)	593	636	373	847	990	339	417	403	517
Over-the-counter expenditures ($)	116	120	94	230	244	181	137	141	110
Total medical expenses ($)	751	802	490	1,081	1,240	520	586	577	649

Notes: Expenditures are nominal, given in 2018 U.S. dollars. Only families with at least 1 member age 26 or older are included in the table, though members of all ages are included in the calculations. Family worker classifications are constructed using the worker classifications of members 26 years old or older. "Self-employed" members work for themselves and have not incorporated their business. "Other-employed" members work for a private firm, government, or without pay. Families where all members age 26 and older are looking for their first job or are not in the labor force are excluded. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Availability of Health Care Services

While the availability of health care services does not mean they will be affordable, reduced availability may prevent patients receiving timely medical care. We use data from the 2018–19 AHRF to assess the availability of U.S. medical facilities and health professionals in 2017 and shortage areas in 2019. The data provide statistics for micropolitan and noncore nonmetro counties, as well as metro counties, in the four Census regions of the United States. We also use data from the 2014–18 ACS to determine counties with a high proportion of self-employed workers and compare those counties to other counties in each geographical area.

When Are Available Health Care Resources Adequate?

Health care facilities and providers are not spread evenly throughout the United States, with differences persisting among metropolitan classifications and regions. In fact, not every county needs—or has the population to support—a hospital or skilled nursing facility.[9] In addition, not all hospitals employ physicians for every specialty, further dispersing the medical services available to patients. All these factors lead to geographic variations in health care facilities, even within metropolitan classifications. However, no matter how comprehensive the services provided by a hospital or other medical facility, the farther away patients live, the more difficult it may be to access care. The effect of distance on medical care disproportionately affects nonmetro residents, as 35 times more of them live in counties with the highest (top quintile) distance to a hospital with an intensive care unit (ICU) than metro residents (Cromartie et al., 2020).

Geographic location and variation of medical facilities is not the only measure of the availability of health care services. The number of hospital beds, skilled nursing facility beds,[10] physicians, and dentists per 10,000 residents indicates the level of health care services available in a county. The optimal physician rate in a location depends on how frequently patients use those services, which can be influenced by the age and sex distribution of the population as well as the insurance status and source (DHHS, HRSA, 2008). Based on the age distribution of the population in the United States in 2000, the Health Resources and Services Administration's (HRSA) Bureau of Health Professions estimated that the Nation needed a total of 25.3 physicians, including 9.5 primary care physicians, per 10,000 residents to provide adequate medical care to all people.

Hospitals generally define optimal occupancy as 85 percent of bed capacity (Green, 2002/2003). Occupancy targets do not account for seasonal and daily fluctuations in the use or availability of beds in special units such as an ICU, potentially leading to short-term shortages. In addition, population characteristics (such as age and sex) affect medical care use and, thus, admission rates and lengths of stay. These factors, in turn, influence the capacity necessary to accommodate the residents of the area the hospital serves (Ravaghi et al., 2020). The variability in utilization makes it difficult to rely on a fixed hospital bed rate requirement to determine an adequate capacity.

Counties with too few practitioners to care for residents are considered to have a health professional shortage. The HRSA's Bureau of Health Workforce identifies health professional shortage areas for primary care physicians, dentists, and mental health professionals using minimum provider-to-population ratios. An area has a shortage of primary care physicians if the rate per 10,000 residents is at or below 2.9, while a shortage of dentists occurs at or below a rate of 2.0 and a shortage of mental health professionals occurs at or below a rate

[9]Hospitals are classified by the length of stay (short-term or long-term) and the specialization of care (general or non-general). Short-term general hospitals provide general medical and surgical care to patients that usually stay less than 30 days. Skilled nursing facilities provide inpatient medical, nursing, or rehabilitative care at a level below that of a hospital.

[10]Skilled nursing facility bed statistics only include Medicare-certified beds.

of 0.3 (DHHS, HRSA, 2021).[11] In addition to the provider-to-population ratio, the HRSA considers population characteristics such as poverty and age distribution (as well as distance to the nearest provider) when determining shortage areas (DHHS, HRSA, 2020). Therefore, areas that exceed the minimum provider-to-population threshold may still be classified as having a health professional shortage if they have certain population or location characteristics.

Availability of Medical Facilities

Nationally, in 2017, a smaller share of noncore counties had a short-term general hospital (71.2 percent) or skilled nursing facility (83.1 percent) than micro or metro counties (table 7). By comparison, 88.8 percent of micro counties and 80.5 percent of metro counties had a short-term general hospital, while 94.8 percent of micro and 96.1 percent of metro counties had a skilled nursing facility. This pattern may be due to residents in noncore counties without medical facilities being served by nearby metro or micro counties. Regionally, the Northeast had the highest share of counties with hospitals, short-term general hospitals, and nursing facilities, while the South had the lowest share of counties with such facilities, overall and across metro and nonmetro counties.

Table 8 shows the mean beds per 10,000 residents by medical facility type and county self-employment status. The rate of short-term general hospital beds in metro and micro high self-employment counties (15.2 and 20.8 per 10,000 people, respectively) was comparable to that in other counties, while the rate in noncore high self-employment counties (40.5 per 10,000 people) was higher than in other noncore counties. However, the rate of short-term general hospital beds was particularly low in metro high self-employment counties in the Northeast and South (4.1 and 9.5, respectively), as well as in micro high self-employment counties in the West (11.5 per 10,000 people). Nationally, metro counties had the lowest average number of beds per 10,000 people across all medical facilities, while noncore counties had the highest number.

The low proportion of noncore counties with medical facilities coupled with the high number of beds per 10,000 residents in medical facilities suggests that in noncore areas health care supply is concentrated in counties with facilities. Those counties with medical facilities may have the capacity to serve nearby counties that lack facilities. However, high self-employment metro and micro counties in the Northeast and South had lower capacity than all other counties, and residents in these counties may have less medical care available to them.

[11]The HRSA gives shortage thresholds as a provider-to-population ratio. If a population area's ratio is equal to or exceeds the threshold, the area is considered to have a shortage. The standard ratio for primary care physicians is 1:3,500; for dentists, 1:5,000; and for mental health professionals, 1:30,000. However, areas with high community needs have ratios of 1:3,000; 1:4,000; and 1:20,000, respectively.

Table 7

Percentage of U.S. counties with medical facilities and proportion of facilities by region and metro status, 2017

	Share of counties			Share of facilities		
	Hospital (%)	Short-term general hospital (%)	Skilled nursing facility (%)	Hospital (%)	Short-term general hospital (%)	Skilled nursing facility (%)
United States						
Metro	82.1	80.5	96.1	67.4	59.0	72.2
Micro	88.9	88.8	94.8	13.9	16.7	13.8
Noncore	72.2	71.2	83.1	18.6	24.3	14.0
All	79.3	78.3	90.3	100.0	100.0	100.0
Midwest						
Metro	84.1	83.1	99.3	54.5	46.7	60.9
Micro	87.5	87.5	95.3	17.6	19.8	19.0
Noncore	75.6	75.0	87.3	27.8	33.5	20.1
All	80.7	80.1	92.5	100.0	100.0	100.0
Northeast						
Metro	94.6	93.8	98.5	82.7	76.6	87.4
Micro	93.5	93.5	97.8	10.6	14.1	8.1
Noncore	85.4	85.4	97.6	6.7	9.4	4.4
All	92.6	92.2	98.2	100.0	100.0	100.0
South						
Metro	76.7	74.5	95.4	69.5	59.7	69.9
Micro	87.4	87.0	95.4	12.9	15.7	13.8
Noncore	67.8	67.5	88.6	17.6	24.7	16.3
All	75.1	74.0	92.7	100.0	100.0	100.0
West						
Metro	88.7	88.0	89.4	71.2	65.3	84.9
Micro	94.1	94.1	91.1	13.0	15.6	8.7
Noncore	73.0	69.1	54.4	15.8	19.1	6.4
All	82.8	80.8	73.9	100.0	100.0	100.0

Notes: For counties, each percentage represents the share of counties within each group (e.g., noncore United States) with the specified medical facility. For facilities, each percentage represents the group share of the specified facility within a geographic unit (e.g., share of Midwestern hospitals in micro-Midwestern counties). Short-term general hospitals provide general medical and surgical care to patients that usually stay less than 30 days. Skilled nursing facilities provide inpatient medical, nursing, or rehabilitative nursing care at a level below that of a hospital. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, 2018–19 Area Health Resources File data.

Table 8

Mean medical facility beds per 10,000 residents by county self-employment status, region, and metro status, 2017

	All counties			High self-employment counties			All other counties		
	Hospital	Short-term general hospital	Skilled nursing facility	Hospital	Short-term general hospital	Skilled nursing facility	Hospital	Short-term general hospital	Skilled nursing facility
United States									
Metro	25.0	20.2	58.2	18.1	15.2	76.8	25.6	20.6	56.8
Micro	27.8	24.5	75.8	21.4	20.8	66.6	28.8	25.1	77.3
Noncore	35.2	32.7	96.1	42.6	40.5	105.2	28.8	26.0	88.4
All	29.9	26.4	77.9	37.6	35.6	97.8	27.3	23.3	71.3
Midwest									
Metro	24.0	20.8	75.8	23.8	23.3	132.0	24.0	20.6	70.7
Micro	27.5	25.4	93.9	32.0	32.0	88.7	26.9	24.6	94.6
Noncore	43.2	40.2	117.6	53.7	52.1	127.2	27.9	23.0	103.7
All	34.2	31.4	100.4	50.1	48.6	124.7	26.1	22.5	87.9
Northeast									
Metro	30.6	23.8	64.6	23.8	4.1	47.8	30.8	24.4	65.2
Micro	29.3	26.9	74.0	14.6	14.6	63.0	32.0	29.1	76.0
Noncore	21.6	20.5	68.1	23.3	22.1	61.8	19.7	18.7	75.3
All	28.6	23.9	67.3	21.5	18.4	60.4	29.9	24.8	68.5
South									
Metro	25.1	19.6	54.9	12.0	9.5	69.1	25.9	20.2	54.0
Micro	31.7	27.0	75.1	22.1	20.7	76.8	32.9	27.7	74.9
Noncore	26.8	25.8	98.1	22.6	21.8	115.1	28.5	27.4	91.3
All	27.0	23.4	75.9	21.0	19.8	103.2	28.1	24.1	70.7
West									
Metro	21.8	18.1	28.9	20.3	17.0	28.9	22.1	18.3	28.9
Micro	17.7	15.2	37.4	12.0	11.5	33.9	19.6	16.4	38.6
Noncore	40.7	35.3	40.6	44.9	39.5	42.6	34.5	29.1	37.7
All	29.5	25.3	36.1	36.7	32.3	39.5	25.1	21.0	34.1

Notes: Short-term general hospitals provide general medical and surgical care to patients that usually stay less than 30 days. Skilled nursing facilities provide inpatient medical, nursing, or rehabilitative nursing care at a level below that of a hospital. Only Medicare-certified skilled nursing facility beds are included in the table. Self-employed workers are individuals that work for themselves and have not incorporated their business. Counties with a proportion of self-employed workers in the highest quartile (top 25 percent) are classified as high self-employment counties. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Sources: USDA, Economic Research Service using U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, 2018–19 Area Health Resources File; and U.S. Department of Commerce, Bureau of the Census, American Community Survey 2018 5-year data.

Availability of Health Professionals

The average numbers of total physicians,[12] primary care physicians,[13] and dentists per 10,000 residents are reported by region and metropolitan classification in table 9. On average in 2017, there were 6.1 primary care physicians per 10,000 residents in metro counties, 5.4 in micro counties, and 4.4 in noncore counties. These rates are well below the adequate supply rate suggested by the HRSA for the Nation as a whole,[14] though well above the threshold for shortage areas. Counties in the Northeast had higher average total and primary care physicians per 10,000 residents than most other regions of the country across all metropolitan classifications, while the highest average rates for dentists were in metro and micro counties of the West.

Nationally, the rates of all three categories of practitioners were generally the same or smaller in high self-employment counties than in other counties. The one exception was in noncore counties, where the numbers of total and primary care physicians per 10,000 residents were slightly higher (table 9). Among high self-employment counties, the smallest average number of providers per 10,000 residents was in the Midwest, with 4.6 total physicians and 2.8 primary care physicians per 10,000 residents in metro counties, and 1.8 dentists per 10,000 residents in micro counties. This suggests a shortage of health professionals in these counties, based on HRSA's thresholds.

The HRSA's health professional shortage area ratings are based on data in sub-county geographic units, which mean shortage areas could be contained within a county or could cross county borders. Accordingly, counties can be completely, partially, or not at all part of a health professional shortage area. Our discussion focuses on high self-employment counties whose whole area is designated as having a shortage. In 2019, the proportion of these counties that were completely within a health professional shortage area was about 1.5 times larger than the proportion in other counties (table 10). The share of high self-employment counties with dentist shortages was smallest at 20.7 percent, while 36.0 percent of these counties had a primary care shortage; the proportion of these counties with mental health shortages was largest at 78.9 percent. Across metropolitan classifications, however, there are some exceptions to this trend. A smaller share of high self-employment noncore counties had a shortage of primary care physicians and dentists than other noncore counties, while a smaller share of high self-employment micro counties had a shortage of mental health professionals than other micro counties.

[12]Physicians include both Doctors of Medicine (MDs) and Doctors of Osteopathy (DOs).

[13]Primary care physicians include MDs and DOs specializing in general family medicine, general practice, general internal medicine, and general pediatrics. The HRSA also includes physicians specializing in obstetrics and gynecology in their definition of primary care physicians when determining shortage areas.

[14]The HRSA thresholds are based on the population characteristics of the entire United States. Variations in the demographic characteristics of the population across metro classifications and among regions would lead to differing thresholds necessary to provide adequate care. However, without this information, the national thresholds serve as a rough estimate.

Table 9

Mean physicians and dentists per 10,000 residents by county self-employment status, region, and metro status, 2017

	All counties			High self-employment counties			All other counties		
	Total physicians	Primary care physicians	Dentists	Total physicians	Primary care physicians	Dentists	Total physicians	Primary care physicians	Dentists
United States									
Metro	21.2	6.1	4.1	9.7	4.1	2.7	22.1	6.2	4.2
Micro	13.8	5.4	3.6	13.3	5.4	3.3	13.9	5.4	3.6
Noncore	7.1	4.4	2.5	7.3	4.7	2.5	7.0	4.1	2.5
All	13.7	5.2	3.3	8.2	4.7	2.6	15.5	5.4	3.5
Midwest									
Metro	20.3	6.0	4.0	4.6	2.8	2.3	21.7	6.3	4.2
Micro	13.0	5.4	3.7	6.7	3.9	1.8	13.8	5.6	3.9
Noncore	7.2	4.7	2.8	6.6	4.7	2.6	8.1	4.7	3.0
All	12.2	5.2	3.3	6.4	4.5	2.6	15.2	5.6	3.7
Northeast									
Metro	33.8	8.1	5.5	20.3	6.6	3.9	34.2	8.2	5.5
Micro	21.5	6.6	4.0	20.2	7.4	4.4	21.7	6.5	3.9
Noncore	13.1	5.9	3.0	16.9	7.4	3.3	8.8	4.0	2.5
All	27.3	7.4	4.7	18.0	7.3	3.6	29.0	7.4	4.9
South									
Metro	18.7	5.4	3.6	6.1	2.8	1.5	19.5	5.6	3.7
Micro	12.2	4.7	3.0	13.1	5.0	3.1	12.1	4.7	3.0
Noncore	6.0	3.5	2.1	5.6	3.3	1.9	6.1	3.5	2.1
All	12.4	4.5	2.9	6.6	3.5	2.0	13.5	4.7	3.0
West									
Metro	22.1	6.9	5.2	19.5	7.1	4.8	22.6	6.9	5.3
Micro	16.1	6.3	4.6	18.4	6.8	4.8	15.4	6.1	4.5
Noncore	9.1	5.6	3.0	9.8	5.9	2.9	8.1	5.2	3.0
All	14.8	6.2	4.0	12.3	6.2	3.5	16.3	6.2	4.4

Notes: Physicians include both Doctors of Medicine (MDs) and Doctors of Osteopathy (DOs). Primary care physicians include MDs and DOs specializing in general family medicine, general practice, general internal medicine, and general pediatrics. Self-employed workers are individuals that work for themselves and have not incorporated their business. Counties with a proportion of self-employed workers in the highest quartile (top 25 percent) are classified as high self-employment counties. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Sources: USDA, Economic Research Service using U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, 2018–19 Area Health Resources File; and U.S. Department of Commerce, Bureau of the Census, American Community Survey 2018 5-year data.

Table 10

Percentage of U.S. counties with a health professional shortage by provider type, self-employment status, and metro status, 2019

	All counties			High self-employment counties			All other counties		
	Whole (%)	Part (%)	None (%)	Whole (%)	Part (%)	None (%)	Whole (%)	Part (%)	None (%)
Primary care HPSA									
Metro	16.3	69.8	13.9	38.6	53.0	8.4	14.6	71.1	14.3
Micro	16.8	71.9	11.2	23.3	62.8	14.0	15.9	73.3	10.8
Noncore	40.4	52.3	7.3	37.4	54.9	7.7	43.0	50.1	6.9
All	26.7	62.8	10.5	36.0	55.5	8.5	23.6	65.2	11.2
Dental HPSA									
Metro	7.5	71.7	20.8	18.1	56.6	25.3	6.6	72.9	20.5
Micro	10.8	70.5	18.7	11.6	59.3	29.1	10.6	72.3	17.1
Noncore	24.0	59.2	16.9	22.4	55.4	22.2	25.3	62.4	12.4
All	15.1	66.1	18.7	20.7	55.9	23.3	13.3	69.5	17.2
Mental health HPSA									
Metro	36.0	50.3	13.7	60.2	26.5	13.3	34.2	52.1	13.8
Micro	70.0	25.6	4.4	68.6	29.1	2.3	70.3	25.0	4.7
Noncore	80.6	17.8	1.6	82.9	15.8	1.3	78.7	19.5	1.8
All	61.9	31.4	6.7	78.9	18.4	2.7	56.3	35.7	7.9

Whole = a county's entire area is part of an HPSA. Part = part, but not all, of the county is considered to be in an HPSA. None = none of a county's area is part of an HPSA.

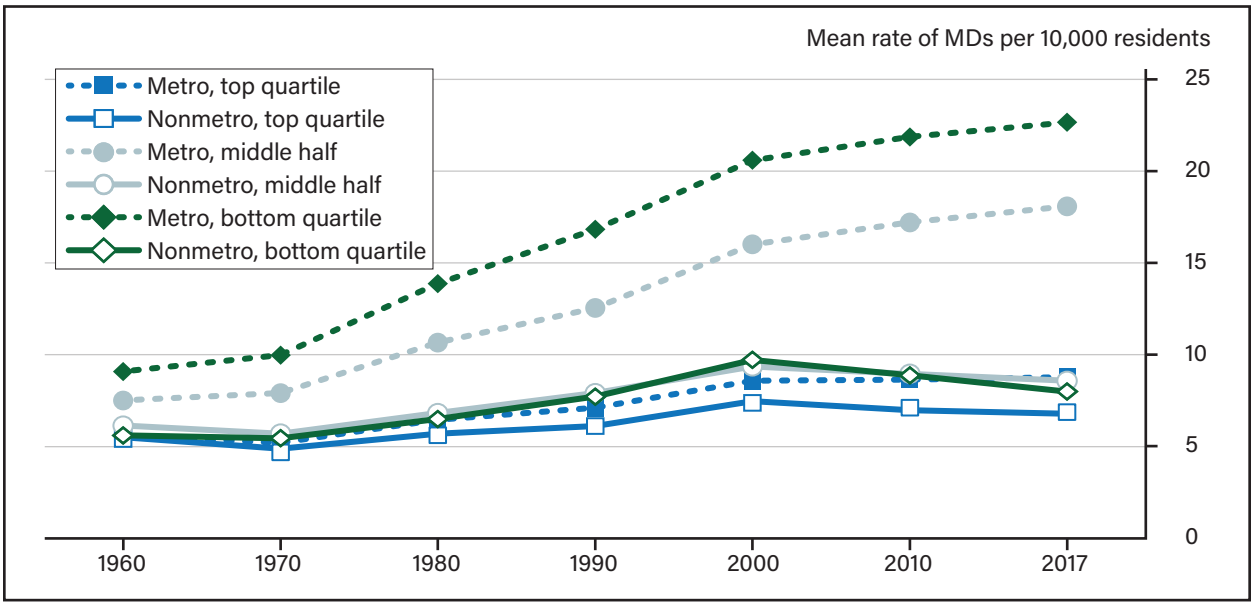
Notes: Health professional shortage areas (HPSAs) can be defined at a subcounty level using minor civil divisions (e.g., townships) or census tracts. Primary care health professionals include physicians specializing in family and general medicine, general internal medicine, general pediatrics, and obstetrics and gynecology. Self-employed workers are individuals that work for themselves and have not incorporated their business. Counties with a proportion of self-employed workers in the highest quartile (top 25 percent) are classified as high self-employment counties. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Sources: USDA, Economic Research Service using U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, 2018–19 Area Health Resources File; and U.S. Department of Commerce, Bureau of the Census, American Community Survey 2018 5-year data.

Health professional shortages are naturally affected by changes in the number of medical professionals in an area. Figure 6 shows the trends in the mean rate of Doctors of Medicine (MDs) in high self-employment (top quartile) counties from 1960 to 2017. Between 1970 and 2000, the average rate of MDs increased in metro and nonmetro counties for both high self-employment and all other counties. However, the average rate of MDs started decreasing in nonmetro counties after 2000. Concurrently, the growth in the average rate of MDs in all metro counties started slowing. This suggests that given stable populations, the proportion of all counties with shortage areas may increase in the future.

The mean rate of MDs in metro areas was higher than in nonmetro areas within each self-employment rate quartile group. However, the mean rates of MDs in high self-employment counties were smaller than all other counties (both metro and nonmetro) until 2017, when the mean rate metro high self-employment counties surpassed the mean rates all nonmetro county quartile groups. This is another indicator that people living in counties with a higher proportion of self-employed workers generally have less access to health care services.

Figure 6
Mean rate of MDs per 10,000 residents in U.S. counties by self-employment quartile and metro status, 1960 to 2017



MD = Doctor of Medicine.

Notes: Self-employed workers are individuals that work for themselves and have not incorporated their business. Counties are divided into quartiles by the proportion of workers classified as self-employed. The top quartile contains the 25 percent of counties with the highest percentage of self-employed workers, the middle half contains the middle 50 percent, and the bottom quartile contains the 25 percent of counties with the lowest percentage of self-employed workers. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Sources: USDA, Economic Research Service using U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, 2018–19 Area Health Resources File; and U.S. Department of Commerce, Bureau of the Census, American Community Survey 2018 5-year data.

Changes in Work, Income, Access to Health Care, and Health Status During 2020

We now have a good picture of health insurance coverage among nonmetro self-employed workers and their households in 2018, but the COVID-19 pandemic may have since affected these outcomes. Due to mandatory shutdowns of businesses or a drop in customers and profits, many U.S. residents lost their jobs or experienced a loss in income. Since 60.1 percent of U.S. residents have group-based health insurance plans, most of which are linked to employment, job losses may affect coverage and affordability (see appendix table A1). However, in 2018, only 48.2 percent of self-employed workers had employer-based insurance plans, so there may be less disruption in health care access among this group. We used data from the Household Pulse Survey to explore whether changes in measures of employment, income, health insurance coverage, use of health care, and self-reported health status differed across metro and nonmetro counties and by self-employment status between April 23 and December 21, 2020.

Changes in Work and Income

An assessment of how the COVID-19 pandemic has affected work and income in the United States is relevant to assessing the pandemic's effect on access to health care, as losing income or health insurance coverage affects health care affordability. Between April 23 and May 26, 2020, the share of people who reported having any work in the past week was similar in metro and nonmetro counties (52.4 percent versus 50.8 percent). Among those who worked in the past week, the share who reported that they were self-employed was also similar in metro and nonmetro counties (10.4 percent versus 11.2 percent) (table 11).

The proportion of respondents reporting they worked in the past week increased to 58.5 percent and 57.9 percent in metro and nonmetro counties, respectively, between August 19 and October 26, 2020. The proportions then fell slightly at the end of the year to 57.3 percent and 55.7 percent. The share of individuals who reported being self-employed (among all those employed) increased about 2 percentage points between the April 23–May 26, 2020 and October 28–December 21, 2020 periods in both metro and nonmetro counties.

Throughout the entire period covered by the Household Pulse Survey in 2020, individuals in metro counties were more likely to report that they or someone in their household had experienced a loss of employment income since March 13, 2020, due to COVID-19 (ranging from 46.3 to 50.8 percent) compared to those in nonmetro counties (ranging from 41.3 to 45.0 percent) (table 11). Self-employed individuals were more likely to report lost employment income in their household than those otherwise employed (54.7 percent versus 40.7 percent in metro counties and 52.8 percent versus 37.8 percent in nonmetro counties) during the April 23–May 26, 2020 period (figure 7, tables 12 and 13).

While this trend persisted throughout the pandemic in 2020, the changes in this outcome varied across self-employment status. Among self-employed individuals in both metro and nonmetro counties, the percentage reporting that their household had lost income since the start of the pandemic rose through July 21, 2020 and then fell slightly through the end of the year. However, for those not self-employed, the percentage increased through July 21, 2020 and remained at that higher level at the end of the year (46.3 percent in metro counties and 44.2 percent in nonmetro counties).

Table 11

Changes in work, income, health insurance coverage, and use of health services by metro status, April 23 to December 21, 2020

Variable	All Metro					All Nonmetro				
	Apr 23–May 26	May 28–Jun 23	Jun 25–Jul 21	Aug 19–Oct 26	Oct 28–Dec 21	Apr 23–May 26	May 28–Jun 23	Jun 25–Jul 21	Aug 19–Oct 26	Oct 28–Dec 21
Work and income (%)										
Worked at all in past 7 days	52.4	53.8	53.0	58.5	57.3	50.8	52.4	51.5	57.9	55.7
Reports being self-employed	10.4	10.3	11.2	12.0	11.8	11.2	11.1	13.5	12.5	13.1
Anyone in HH experienced a loss of employment income since March 13, 2020	48.4	48.5	50.8	46.3	48.8	43.9	45.0	44.9	41.3	43.6
Expect anyone to lose employment income in next 4 weeks due to coronavirus	37.4	32.7	35.8	25.2	30.1	32.8	28.2	29.8	20.9	26.4
Health insurance coverage (%)										
Uncovered (reporting no health insurance)	19.4	19.7	19.2	27.9	29.2	19.0	20.7	19.0	27.5	28.6
Employer-based insurance	55.0	55.2	54.7	50.2	47.9	50.6	49.6	51.6	46.7	44.6
Direct-purchase insurance	19.0	20.0	20.5	19.1	18.0	20.0	21.0	21.8	20.3	19.4
Medicare insurance	19.7	20.5	21.1	19.0	19.0	23.7	23.6	24.7	22.0	22.1
Medicaid or other public insurance for low-income people	13.2	13.5	14.6	11.3	11.8	15.4	15.2	15.9	12.7	13.5
Insurance through military, VA, Indian Health Services, & other	10.5	10.7	11.0	10.5	10.2	12.1	12.7	12.4	12.6	11.9
Use of health services and health status (%)										
Delayed medical care in last 4 weeks due to pandemic	40.3	41.2	40.7	33.2	33.5	40.3	40.0	39.4	30.1	32.1
Did not get needed care due to pandemic in past 4 weeks	32.8	32.6	32.3	24.3	25.1	32.6	32.6	32.1	23.1	24.7
Health status reported as:										
Excellent	19.4	18.8	16.9	18.1	16.4	15.6	16.4	13.8	15.6	13.5
Very good	34.8	33.5	32.2	32.6	31.8	34.3	31.6	30.4	31.4	29.8
Good	29.3	29.8	30.9	30.2	30.9	31.8	30.8	32.7	31.6	33.2
Fair	13.5	14.6	16.0	15.6	16.7	15.0	16.5	18.3	17.0	18.2
Poor	3.1	3.4	4.1	3.6	4.1	3.3	4.7	4.9	4.3	5.3

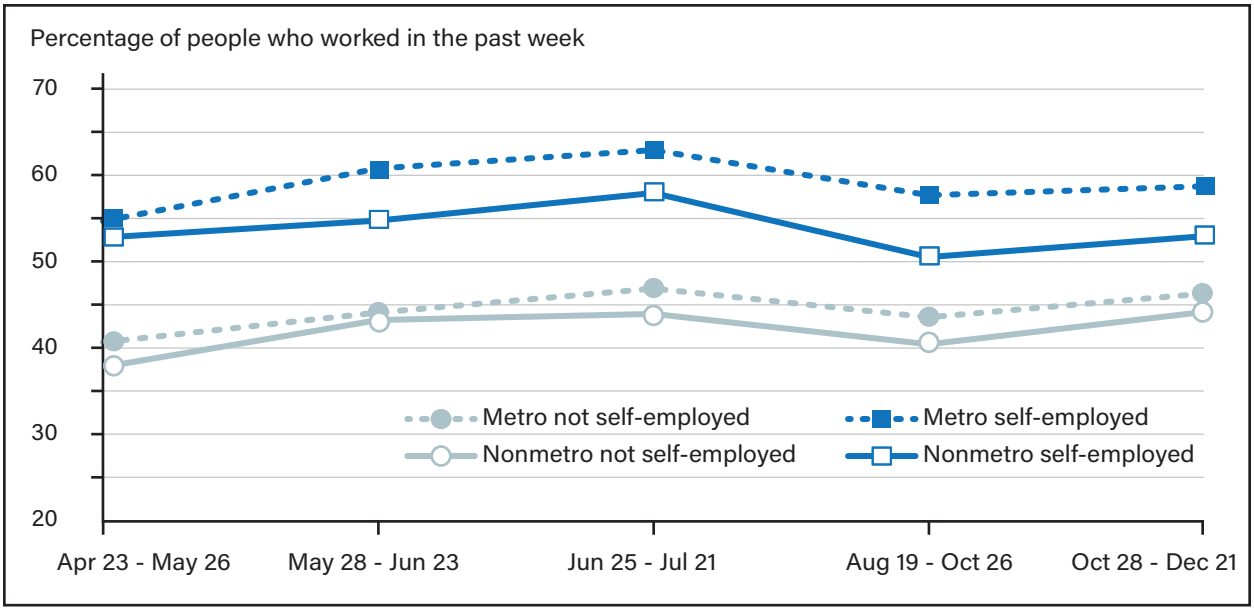
HH = household. VA = Veterans Affairs.

Notes: There were 12 Phase 1 datasets, referred to as "weeks," which covered between 6 to 13 days each. April 23–July 21 are Phase 1 grouped into three 4-week periods, August 19–October 26 is all releases of Phase 2 pooled, and October 28–December 21 is the first four releases of Phase 3 pooled. Self-employed workers are individuals that work for themselves and have not incorporated their business. Self-employment status is only reported for those who reported working in the past week. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, Household Pulse Survey, Phases 1, 2, and 3 data. Data Review Board approval numbers CBDRB-FY21-010 and CBDRB-FY21-POP001-0082.

Figure 7

People who worked in the past week whose households experienced a loss of employment income due to COVID-19 by metro and self-employment status, April 23 to December 21, 2020



Notes: Self-employed workers are individuals that work for themselves and have not incorporated their business. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, Household Pulse Survey, Phases 1, 2, and 3 up through December 21, 2020. Data Review Board approval numbers CBDRB-FY21-010 and CBDRB-FY21-POP001-0082.

Expectations of future losses also differed across metro and nonmetro counties and within each county type across self-employed and other-employed individuals. At the beginning of the pandemic (April 23–May 26, 2020), 37.4 percent of those in metro counties reported they expected someone in their household to lose employment income in the next 4 weeks, while 32.8 percent in nonmetro counties thought this might occur (table 11). Self-employed workers were much more likely to report expecting a loss of employment income compared to other-employed workers (47.0 percent versus 30.7 percent in metro counties (table 12), and 41.5 percent versus 27.8 percent in nonmetro counties) at the beginning of the pandemic (table 13). Between April 23–May 26, 2020 and October 28–December 21, 2020, the percentage of people who reported they expected to lose employment income fell between 5 and 8 percentage points among all groups (tables 11, 12, and 13).

Table 12

Changes in work, income, health insurance coverage, and use of health services by self-employment status, metro counties, April 23 to December 21, 2020

Variable	Other-employed					Self-employed				
	Apr 23–May 26	May 28–Jun 23	Jun 25–Jul 21	Aug 19–Oct 26	Oct 28–Dec 21	Apr 23–May 26	May 28–Jun 23	Jun 25–Jul 21	Aug 19–Oct 26	Oct 28–Dec 21
Work and income (%)										
Anyone in HH experienced a loss of employment income since March 13, 2020	40.7	44.1	46.9	43.6	46.3	54.7	60.8	62.9	57.7	58.7
Expect anyone to lose employment income in next 4 weeks due to coronavirus	30.7	27.1	29.9	19.8	25.3	47.0	41.9	48.1	33.9	39.0
Health insurance coverage (%)										
Uncovered (reporting no health insurance)	15.4	16.1	15.7	24.8	26.6	23.6	24.5	24.7	32.5	33.6
Employer-based insurance	74.3	73.2	72.4	64.9	62.8	38.0	40.3	39.3	36.2	35.0
Direct-purchase insurance	15.0	16.7	17.3	16.3	14.9	33.0	32.3	31.6	30.2	28.1
Medicare insurance	6.7	7.4	7.6	6.8	6.6	16.0	16.1	19.2	16.5	16.3
Medicaid or other public insurance for low-income people	7.6	7.9	8.6	7.0	7.1	13.1	14.6	14.3	11.8	11.4
Insurance through military, VA, Indian Health Services, & other	8.6	9.3	9.4	9.2	8.5	10.6	9.2	11.2	9.6	9.2
Use of health services and health status (%)										
Delayed medical care in last 4 weeks due to pandemic	40.1	41.1	41.0	33.0	33.2	40.6	42.2	41.8	33.3	32.6
Did not get needed care due to pandemic in past 4 weeks	31.5	31.2	31.3	23.1	23.6	32.9	33.3	31.5	24.0	25.2
Health status reported as:										
Excellent	23.2	22.4	20.4	21.1	19.3	27.4	25.1	22.6	24.0	22.5
Very good	39.2	37.0	35.9	36.0	35.7	34.9	35.4	35.0	34.0	34.6
Good	27.7	28.9	30.5	29.8	30.5	25.1	27.3	27.6	27.4	27.6
Fair	8.7	10.3	11.4	11.4	12.5	9.8	10.4	13.1	12.2	13.0
Poor	1.2	1.5	1.8	1.7	2.1	2.7	1.8	1.8	2.4	2.3

HH = household. VA = Veterans Affairs.

Notes: There were 12 Phase 1 datasets, referred to as "weeks," which covered between 6 to 13 days each. April 23–July 21 are Phase 1 grouped into three 4-week periods, August 19–October 26 is all releases of Phase 2 pooled, and October 28–December 21 is the first four releases of Phase 3 pooled. Self-employed workers are individuals that work for themselves and have not incorporated their business. Self-employment status is only reported for those who reported working in the past week. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, Household Pulse Survey, Phases 1, 2, and 3 data. Data Review Board approval numbers CBDRB-FY21-010 and CBDRB-FY21-POP001-0082.

Table 13

Changes in work, income, health insurance coverage, and use of health services by self-employment status, nonmetro counties, April 23 to December 21, 2020

Variable	Other-employed					Self-employed				
	Apr 23–May 26	May 28–Jun 23	Jun 25–Jul 21	Aug 19–Oct 26	Oct 28–Dec 21	Apr 23–May 26	May 28–Jun 23	Jun 25–Jul 21	Aug 19–Oct 26	Oct 28–Dec 21
Work and income (%)										
Anyone in HH experienced a loss of employment income since March 13, 2020	37.8	43.2	44.0	40.4	44.2	52.8	54.8	58.0	50.5	53.0
Expect anyone to lose employment income in next 4 weeks due to coronavirus	27.8	24.1	27.4	16.9	23.0	41.5	35.7	39.2	25.6	35.2
Health insurance coverage (%)										
Uncovered (reporting no health insurance)	15.7	18.4	17.0	25.6	27.1	27.7	23.5	24.6	33.7	33.5
Employer-based insurance	69.9	67.3	68.9	62.1	60.3	33.5	38.4	38.1	32.9	30.9
Direct-purchase insurance	17.0	18.6	19.4	16.7	16.7	29.7	32.0	30.0	29.5	28.5
Medicare insurance	7.7	7.5	8.6	7.8	6.7	19.3	20.9	19.0	17.8	18.0
Medicaid or other public insurance for low-income people	10.9	9.4	9.9	8.4	8.8	13.8	15.8	16.8	12.2	13.9
Insurance through military, VA, Indian Health Services, & other	10.9	10.5	10.2	11.2	9.8	12.3	10.8	11.3	10.8	10.1
Use of health services and health status (%)										
Delayed medical care in last 4 weeks due to pandemic	39.4	39.1	39.7	29.8	31.0	38.9	43.1	38.4	30.0	31.7
Did not get needed care due to pandemic in past 4 weeks	30.6	31.2	31.4	22.1	23.2	33.4	36.3	32.5	21.5	23.1
Health status reported as:										
Excellent	19.4	20.0	16.8	18.3	16.6	25.3	21.8	17.9	23.6	19.1
Very good	38.5	36.5	34.7	34.7	34.7	39.3	33.6	36.7	34.2	35.0
Good	30.5	30.9	33.1	32.2	32.9	26.9	29.9	30.4	31.2	30.3
Fair	10.7	11.2	13.5	13.0	14.0	7.9	11.8	13.0	9.8	12.0
Poor	1.0	1.5	1.9	1.9	2.0	0.6	2.9	2.0	1.3	3.6

HH = household. VA = Veterans Affairs.

Notes: There were 12 Phase 1 datasets, referred to as "weeks," which covered between 6 to 13 days each. April 23–July 21 are Phase 1 grouped into three 4-week periods, August 19–October 26 is all releases of Phase 2 pooled, and October 28–December 21 is the first four releases of Phase 3 pooled. Self-employed workers are individuals that work for themselves and have not incorporated their business. Self-employment status is only reported for those who reported working in the past week. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, Household Pulse Survey, Phases 1, 2, and 3 data. Data Review Board approval numbers CBDRB-FY21-010 and CBDRB-FY21-POP001-0082.

Changes to Health Insurance Coverage During the Pandemic

From the beginning of the pandemic through July 21, 2020, the percentage of people who reported being uninsured was higher among self-employed workers (around 24 to 28 percent in both metro and nonmetro counties) than among those other-employed (around 15 to 18 percent) (figure 8). This insurance gap between self-employed and other-employed workers remained through the remainder of the year. At the same time, the percentage of respondents reporting themselves uninsured increased among all groups between August 19 and December 21, 2020 (around 33 to 34 percent among self-employed workers and 25 to 27 percent among other-employed workers).

This increase in the uninsured rate corresponds to a decrease in coverage through employer-based plans (figure 8) and some small declines in coverage through direct-purchase plans among the self-employed (tables 11, 12, and 13). More generally, the share of workers covered by each insurance source and the differences between self-employed and other-employed individuals is consistent with the reports in the CPS ASEC, with a smaller share of self-employed workers having coverage through an employer-based plan and a larger share having direct-purchase or public insurance plans than those who were other-employed.

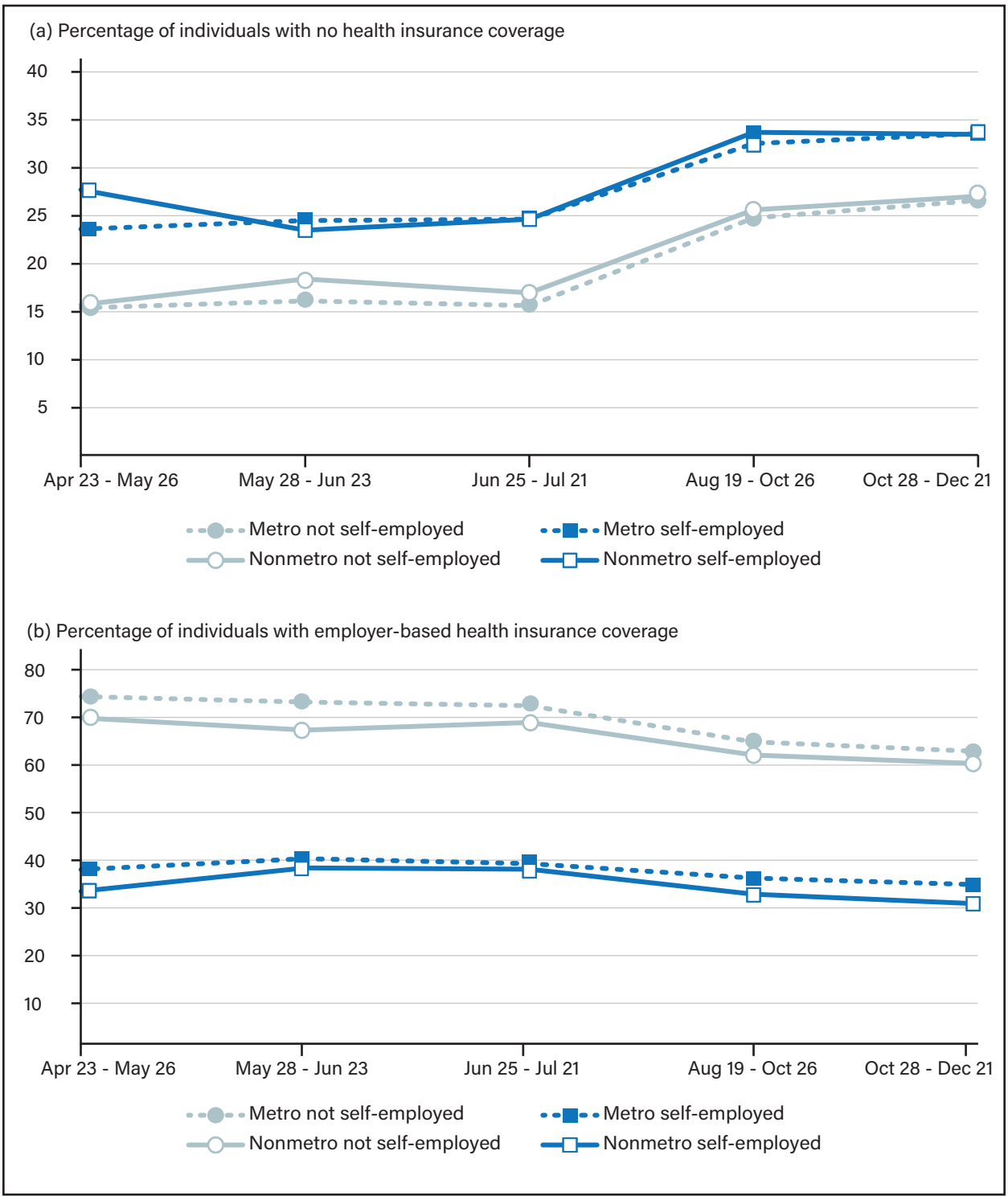
Medical Care Use and Changes in Self-Reported Health Status During the Pandemic

Despite differences in health insurance coverage over the course of the pandemic in 2020, there was a decrease in the percentage of individuals who reported that they either delayed getting medical care (down from about 40 percent to around 30 to 33 percent) or did not get needed medical care (from about 31 to 33 percent to around 23 to 25 percent) in the previous 4 weeks due to the pandemic (tables 11, 12, and 13). Many non-urgent health care facilities were closed by mandate at the start of the pandemic but were able to reopen over time, which may explain part of this change. Individuals may also have become more willing to get the care they needed as they became more familiar and comfortable with the protocols in place for limiting the virus spread, such as masking and social distancing.

Self-reported health status also changed throughout 2020. Individuals in metro areas were more likely to report having excellent or very good health and less likely to report having fair or poor health compared to those in nonmetro areas (table 11). Between April 23 and May 26, 2020, self-employed workers in nonmetro counties were more likely to report excellent or very good health (64.6 percent) than other-employed workers (57.9 percent), but there was no difference between self-employed and other-employed workers in metro counties (about 62 percent for both) (appendix table A4). There were declines in reports of excellent and very good health and increases in reports of poor or fair health among all groups between the April 23–May 26, 2020 and October 28–December 21, 2020 periods, with most of the decline occurring between April and July 2020.

Figure 8

Lack of health insurance coverage and coverage through an employer-based plan among those who worked in the past week, by metropolitan and self-employment status, April 23 to December 21, 2020



Notes: Self-employed workers are individuals that work for themselves and have not incorporated their business. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, Household Pulse Survey, Phases 1, 2, and 3 up through December 21, 2020. Data Review Board approval numbers CBDRB-FY21-010 and CBDRB-FY21-POP001-0082.

Discussion

U.S. health care access depends on the availability and affordability of medical services and whether people are willing to seek medical attention. Legislation regulating health insurance markets like the ACA—and Government-supported medical facilities such as Critical Access Hospitals—are meant to improve access to health care. Greater health care access is subsequently meant to improve the overall health of U.S. residents, along with their quality of life. This report provides a snapshot of tangible measures of the affordability and availability of health care among self-employed individuals and their households and families in nonmetro areas between 2014 and 2020, using various data sources. The data from 2020 provide information on how health care access changed during the COVID-19 pandemic in 2020.

Self-employed adults are a group of particular interest in analyzing access to affordable health care. While most U.S. workers have health insurance coverage through their employer, self-employed adults generally do not have access to such plans. Instead, they must purchase health insurance coverage directly through an insurance company or the health insurance marketplace, obtain coverage from a publicly subsidized insurance plan, or obtain coverage through a family member's employer-based plan. A primary focus of the ACA was expanding access to health insurance by lowering the cost of direct-purchase plans. However, though health insurance coverage expanded under the ACA, a number of people remained uninsured.

In 2019, a greater share of all workers in nonmetro counties were self-employed than in metro counties. We found that health insurance coverage rates and sources in the previous year (2018) differed more by age and whether workers are self-employed than by whether workers lived in a metro or nonmetro county, that self-employed working-age adults were more likely to be uninsured than those employed by government or other employers, and that a household with both self-employed and other-employed workers was more likely to be insured than one where all workers were self-employed.

More nonmetro self-employed working-age adults were insured through employer-based plans than any other health insurance source, likely because they were covered by another household member's employer-based plan. However, direct-purchase plans and public insurance covered more self-employed working-age adults than other-employed adults. Not surprisingly, self-employed retirement-age adults were more likely to be covered by public insurance plans than any other source of health insurance.

We also found that family medical expenditures in 2018 differed more by age and source of health insurance coverage than by whether a family member was self-employed or lived in a metro or nonmetro county. Families with direct-purchase plans paid the most per person for health care (on average), while families with public plans paid the least, regardless of age. The difference was primarily due to premiums, as direct-purchase plan premiums are generally not subsidized by either the government or an employer (a prominent exception being subsidized Health Insurance Marketplace plans). However, families of retirement-age adults had higher per person medical expenditures (on average) than those without retirement-age adults due to higher out-of-pocket medical expenditures and spending on over-the-counter items. This difference likely reflects the greater need for and greater use of medical services among older adults.

Availability of health care facilities and providers varied across U.S. regions and metro and nonmetro counties. Although the average capacity of medical services per 10,000 residents is frequently higher in nonmetro counties, nonmetro residents may need to travel longer distances to receive medical care if there is no facility offering the medical services they need nearby. Noncore counties were less likely to have medical facilities than metro counties or micropolitan counties in 2017, and counties with a high share of self-employed workers were more likely to be identified as having a health professional shortage than other counties in 2019.

In 2017, the mean numbers of total physicians and primary care physicians per capita in the United States were below the rates projected as necessary to provide adequate medical care, based on the population characteristics of the Nation in 2000. Along with the decline in the mean rate of MDs in nonmetro counties over the last 20 years, this indicates that shortages in physicians, particularly in nonmetro areas, may increase in the future. The counties with the lowest number of primary care physicians and dentists per capita (on average) were high self-employment counties in the South and Midwest. In contrast, counties in the Northeast generally had the highest number of providers per capita, regardless of worker composition.

Overall, while differences in affordability of health care between metro and nonmetro counties were small during the time period this report covers, nonmetro areas had a larger proportion of self-employed individuals than metro areas. These populations were more likely to be uninsured and more frequently had health insurance coverage through slightly more expensive direct-purchase plans, which suggests health care may be less affordable for a larger share of nonmetro residents. In addition, accessing health care may have been more difficult in nonmetro counties and those counties with high shares of self-employed workers, as these counties tended to have fewer medical facilities and lower numbers of medical professionals per capita. This finding suggests that self-employed workers in rural areas may experience more challenges to accessing health care than other workers.

The data used in this report describe health care costs, insurance coverage, professionals, and facilities between 2014 and 2018, while the ACA was in full effect. Since then, the conditions that influence the availability and affordability of health care have changed. The repeal of the individual mandate of the ACA went into effect in 2019, altering the conditions affecting health insurance decisions. The COVID-19 pandemic further affected health care access starting in 2020. Temporary closures of non-urgent-care facilities (and fewer hospital beds for non-COVID patients) decreased the availability of non-COVID care. Job losses, related loss of employer-based health insurance plans, and reduced income could have decreased the affordability of obtaining care. The pandemic likely also increased overall willingness to defer medical care.

Becot et al. (2020) suggest that the pandemic is exacerbating issues with access to health care, and we found that decreased access to care due to COVID-19 was not limited to nonmetro areas or self-employed households. With changing health care policies and a recovery from the pandemic, health care access for self-employed workers in nonmetro areas may have changed from the snapshot presented in this report and will likely continue to change as policies and perceptions evolve.

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Appendix A: Detailed Data Tables on Self-Employed Workers and Their Families and Households

Table A1

Percentage of adults ages 26 and older by age, source of health insurance coverage, worker classification, and metro status, 2018

	All adults age 26 and older			Working-age adults			Retirement-age adults		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro	Total	Metro	Nonmetro
All persons									
Uninsured (%)	8.7	8.7	9.0	11.3	11.1	12.5	0.9	1.0	0.7
Insured									
Employer-based (%)	60.1	61.2	53.0	72.2	72.9	67.2	26.5	27.2	23.1
Direct-purchase (%)	13.9	13.5	16.4	10.3	10.3	10.2	23.9	22.8	29.3
Public (%)	39.6	38.1	48.7	19.7	18.9	25.6	94.9	94.5	97.1
Self-employed persons									
Uninsured (%)	17.9	18.4	15.7	21.3	21.5	20.4	0.9	1.2	0.0
Insured									
Employer-based (%)	48.2	49.3	43.3	53.5	54.1	50.5	27.6	28.6	24.3
Direct-purchase (%)	30.1	29.9	31.0	29.9	30.1	29.3	30.6	29.0	35.5
Public (%)	33.9	32.2	41.7	19.3	18.7	22.0	91.8	91.0	94.1
Other-employed persons									
Uninsured (%)	9.0	9.0	9.1	9.6	9.6	9.8	2.0	2.1	1.8
Insured									
Employer-based (%)	80.8	81.1	78.6	83.5	83.6	82.4	49.2	50.4	41.5
Direct-purchase (%)	9.3	9.2	9.9	8.4	8.4	8.1	20.5	19.3	28.4
Public (%)	15.6	15.1	18.9	10.2	9.9	12.1	79.9	79.0	86.0
Unemployed persons									
Uninsured (%)	20.8	19.1	33.2	22.3	20.3	35.2	5.3	5.8	0.0
Insured									
Employer-based (%)	46.9	47.1	46.0	48.9	49.3	46.2	29.3	27.9	43.2
Direct-purchase (%)	12.7	13.0	10.3	10.8	11.0	8.9	29.9	30.4	24.8
Public (%)	47.8	47.2	53.1	42.9	42.0	50.1	91.6	92.3	84.8
Persons not in the labor force									
Uninsured (%)	6.6	6.6	7.1	13.6	13.3	15.4	0.7	0.7	0.6
Insured									
Employer-based (%)	30.0	30.8	25.4	41.1	42.4	34.0	21.6	22.0	19.7
Direct-purchase (%)	19.6	19.1	22.4	13.3	13.5	12.0	24.3	23.3	29.2
Public (%)	77.7	76.6	83.6	50.2	48.4	60.2	98.2	98.0	99.2

Notes: "Working-age" adults are individuals ages 26 to 64, while "retirement-age" adults are individuals age 65 and older. "Self-employed persons" work for themselves and have not incorporated their business. "Other-employed persons" work for a private firm, government, or without pay. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Table A2

Percentage of households with self-employed members by member age, source of health insurance, worker classification, and metro status, 2018

	All households			Households without retirement-age adults			Households with retirement-age dults		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro	Total	Metro	Nonmetro
All Households									
Uninsured (%)	4.1	4.0	4.9	5.8	5.6	7.4	0.6	0.6	0.6
Insured									
Employer-based (%)	62.5	63.8	54.7	74.4	75.1	69.0	38.6	39.9	32.1
Policyholder is self-employed	2.3	2.2	2.8	2.2	2.2	2.6	2.7	2.6	3.4
Self-employed is a dependent	2.6	2.5	3.3	2.8	2.7	3.5	1.8	1.6	2.6
Direct-purchase (%)	17.2	16.9	19.3	12.2	12.3	11.5	27.3	26.5	31.7
Policyholder is self-employed	8.8	8.6	10.1	12.8	12.3	16.0	5.3	4.9	6.8
Self-employed is a dependent	1.7	1.7	2.2	2.8	2.6	4.6	0.7	0.7	0.7
Public (%)	50.6	49.1	60.3	28.7	27.6	36.8	95.0	94.5	97.4
Only self-employed									
Uninsured (%)	13.5	12.9	16.1	18.8	18.1	22.0	1.7	0.6	5.6
Insured									
Employer-based (%)	33.5	33.3	34.4	35.5	35.5	35.5	29.7	29.0	32.7
Policyholder is self-employed	68.7	69.6	64.7	70.4	71.8	63.3	65.0	64.4	66.9
Self-employed is a dependent	20.2	19.4	23.6	17.0	16.4	20.1	27.3	26.7	29.3
Direct-purchase (%)	38.0	38.4	36.2	37.8	38.3	35.2	38.4	38.5	37.7
Policyholder is self-employed	86.1	85.6	88.9	88.8	88.5	90.0	81.3	79.8	87.3
Self-employed is a dependent	12.2	11.5	15.5	13.9	12.3	23.0	9.1	10.1	5.1
Public (%)	60.7	59.3	66.9	41.6	40.8	46.0	96.1	95.7	97.8
Mix of self-employed and other-employed									
Uninsured (%)	4.5	4.5	4.6	5.4	5.3	5.5	0.7	0.5	1.4
Insured									
Employer-based (%)	76.0	77.5	67.9	78.2	79.3	72.0	66.8	69.6	53.9
Policyholder is self-employed	27.2	27.8	23.4	26.6	26.8	25.1	30.2	32.7	15.7
Self-employed is a dependent	50.1	49.4	54.5	54.5	53.9	58.5	29.0	27.7	36.1
Direct-purchase (%)	23.3	23.2	24.4	20.2	20.6	17.8	36.3	33.9	47.5
Policyholder is self-employed	63.7	62.4	70.4	65.6	65.4	66.8	59.5	54.7	75.2
Self-employed is a dependent	18.6	18.6	18.5	21.4	21.3	21.7	12.2	11.6	14.3
Public (%)	35.2	34.2	40.8	22.8	22.3	25.6	86.6	85.0	93.6
Only other-employed									
Uninsured (%)	4.2	4.1	5.0	4.9	4.8	6.1	0.8	0.9	0.0
Insured									
Employer-based (%)	79.2	79.6	76.1	82.1	82.3	80.4	65.4	66.5	57.9
Direct-purchase (%)	13.3	13.2	14.2	10.6	10.6	10.1	26.2	25.4	31.6
Public (%)	34.3	33.4	40.5	22.9	22.2	28.2	88.4	87.8	92.8

Notes: Only households with at least one member age 26 or older are included in this table, though members of all ages are included in the calculations. "Working-age" adults are members ages 26 to 64, while "retirement-age" adults are members age 65 and older. Household worker classifications are constructed using the worker classifications of members 26 years old or older. "Self-employed" members work for themselves and have not incorporated their business. "Other-employed" members work for a private firm, government, or without pay. Households where all members age 26 and older are looking for their first job or are not in the labor force are excluded. Households with at least one retirement-age member are considered "households with retirement-age adults." County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Table A3

Mean total family medical expenditures for families by worker classification, metro status, and source of health insurance coverage, 2018

	Only self-employed			Mixed self- and other-employed			Only other-employed		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro	Total	Metro	Nonmetro
All health insurance sources									
Out-of-pocket health insurance premiums ($)	2,489	2,527	2,308	4,245	4,255	4,198	2,885	2,896	2,799
Out-of-pocket health care spending ($)	1,643	1,648	1,618	2,542	2,597	2,265	1,668	1,663	1,704
Over-the-counter expenditures ($)	371	367	386	523	535	461	364	367	341
Total medical expenses ($)	4,503	4,543	4,311	7,310	7,387	6,923	4,917	4,926	4,844
Employer-based insurance (private, group)									
Out-of-pocket health insurance premiums ($)	3,240	3,299	2,956	4,370	4,408	4,152	3,213	3,223	3,132
Out-of-pocket health care spending ($)	1,968	1,913	2,232	2,673	2,746	2,251	1,817	1,813	1,841
Over-the-counter expenditures ($)	424	407	508	514	532	408	378	380	361
Total medical expenses ($)	5,632	5,618	5,696	7,556	7,686	6,810	5,407	5,417	5,334
Direct-purchase insurance (private, non-group)									
Out-of-pocket health insurance premiums ($)	4,191	4,195	4,166	6,018	5,887	6,582	4,163	4,175	4,075
Out-of-pocket health care spending ($)	2,221	2,305	1,773	2,750	2,747	2,765	2,134	2,113	2,278
Over-the-counter expenditures ($)	443	448	419	633	642	595	461	457	487
Total medical expenses ($)	6,855	6,948	6,358	9,401	9,276	9,942	6,757	6,745	6,840
Public insurance									
Out-of-pocket health insurance premiums ($)	1,559	1,554	1,580	2,853	2,958	2,443	1,971	1,984	1,893
Out-of-pocket health care spending ($)	1,566	1,564	1,577	2,094	2,156	1,853	1,526	1,529	1,510
Over-the-counter expenditures ($)	349	341	383	485	497	435	371	377	339
Total medical expenses ($)	3,475	3,459	3,540	5,432	5,611	4,731	3,868	3,889	3,742
Uninsured									
Out-of-pocket health insurance premiums ($)	46	51	23	23	29	0	59	59	59
Out-of-pocket health care spending ($)	919	978	623	2,405	2,658	1,508	717	682	959
Over-the-counter expenditures ($)	180	172	219	630	631	627	209	211	195
Total medical expenses ($)	1,146	1,200	865	3,058	3,318	2,135	985	952	1,213

Notes: Expenditures are nominal, given in 2018 U.S. dollars. Only families with at least one member age 26 or older are included in the table, though members of all ages are included in the calculations. Family worker classifications are constructed using the worker classifications of members 26 years old or older. "Self-employed" members work for themselves and have not incorporated their business. "Other-employed" members work for a private firm, government, or without pay. Families where all members age 26 and older are looking for their first job or are not in the labor force are excluded. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Table A3

Mean total family medical expenditures for families by worker classification, metro status, and source of health insurance coverage, 2018 (continued)

	All families		
	Total	Metro	Nonmetro
All health insurance sources			
Out-of-pocket health insurance premiums ($)	2,463	2,492	2,280
Out-of-pocket health care spending ($)	1,604	1,608	1,582
Over-the-counter expenditures ($)	352	355	329
Total medical expenses ($)	4,418	4,455	4,191
Employer-based insurance (private, group)			
Out-of-pocket health insurance premiums ($)	3,178	3,187	3,117
Out-of-pocket health care spending ($)	1,856	1,859	1,835
Over-the-counter expenditures ($)	382	384	368
Total medical expenses ($)	5,416	5,430	5,319
Direct-purchase insurance (private, non-group)			
Out-of-pocket health insurance premiums ($)	3,642	3,671	3,484
Out-of-pocket health care spending ($)	2,159	2,159	2,163
Over-the-counter expenditures ($)	444	443	452
Total medical expenses ($)	6,245	6,272	6,099
Public insurance			
Out-of-pocket health insurance premiums ($)	1,539	1,551	1,480
Out-of-pocket health care spending ($)	1,450	1,458	1,413
Over-the-counter expenditures ($)	338	342	315
Total medical expenses ($)	3,327	3,351	3,208
Uninsured			
Out-of-pocket health insurance premiums ($)	67	72	38
Out-of-pocket health care spending ($)	715	685	890
Over-the-counter expenditures ($)	196	198	185
Total medical expenses ($)	978	955	1,112

Notes: Expenditures are nominal, given in 2018 U.S. dollars. Only families with at least one member age 26 or older are included in the table, though members of all ages are included in the calculations. Family worker classifications are constructed using the worker classifications of members 26 years old or older. "Self-employed" members work for themselves and have not incorporated their business. "Other-employed" members work for a private firm, government, or without pay. Families where all members age 26 and older are looking for their first job or are not in the labor force are excluded. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Table A4

Percentage of people who worked last week reporting excellent or good and fair or poor health status by metro and self-employment status, April 23 to December 21, 2020

	Apr 23–May 26	May 28–Jun 23	Jun 25–Jul 21	Aug 19–Oct 26	Oct 28–Dec 21
Metro					
Not self-employed					
Excellent/very good (%)	62.4	59.4	56.3	57.1	55.0
Fair/poor (%)	9.9	11.7	13.1	13.1	14.6
Self-employed					
Excellent/very good (%)	62.3	60.5	57.6	58.0	57.1
Fair/poor (%)	12.6	12.2	14.8	14.6	15.3
Nonmetro					
Not self-employed					
Excellent/very good (%)	57.9	56.5	51.5	52.9	51.2
Fair/poor (%)	11.6	12.6	15.4	14.9	15.9
Self-employed					
Excellent/very good (%)	64.6	55.5	54.6	57.7	54.1
Fair/poor (%)	8.5	14.6	15.0	11.1	15.6

Notes: The percentage of people reporting their health to be "excellent" and "good" were summed, as were the percentage of people reporting health to be "fair" or "poor." The percentage of people reporting their health to be "good" was excluded. Self-employed people work for themselves and have not incorporated their business. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, Household Pulse Survey, Phases 1, 2, and 3 data. Data Review Board approval numbers CBDRB-FY21-010 and CBDRB-FY21-POP001-0082.

Table A5

Select comparisons of statistical significance among indicators

Base population	Indicator 1	Indicator 2	Indicator values		Difference (1) - (2)
			(1)	(2)	
Persons: Shares (%)					
age 26 plus, self-employed, uninsured	metro	nonmetro	18.4	15.7	2.7***
working-age, self-employed, uninsured	metro	nonmetro	21.5	20.4	1.1***
working-age, self-employed, employer-based insurance	metro	nonmetro	54.1	50.5	3.6***
working-age, self-employed, direct-purchase insurance	metro	nonmetro	30.1	29.3	0.8***
working-age, self-employed, public insurance	metro	nonmetro	18.7	22.0	-3.3***
nonmetro, self-employed, concurrent insurance coverage	working-age	retirement-age	3.8	59.4	-55.6***
Households: Shares (%)					
working-age, nonmetro, dependent of employer-based insurance	self-employed	mixed-employment	20.1	58.5	-38.4***
working-age, nonmetro, employer-based insurance	mixed-employment	other-employed	72.0	80.4	-8.4***
working age, mixed-employment, employer-based insurance	metro	nonmetro	79.3	72.0	7.3***
working age, mixed-employment, public insurance	metro	nonmetro	27.6	36.8	-9.2***
nonmetro, only self-employed, employer-based insurance	working-age	retirement-age	35.5	32.7	2.8***
nonmetro, only self-employed, direct-purchase insurance	working-age	retirement-age	35.2	37.7	-2.5***
nonmetro, mixed-employment, employer-based insurance	working-age	retirement-age	72.0	53.9	18.1***
nonmetro, mixed-employment, direct-purchase insurance	working-age	retirement-age	17.8	47.5	-29.7***
Families: Weighted Means ($)					
age 26 plus, all worker classes, insured, total medical expenses, per person	metro	nonmetro	2,172	2,130	42
age 26 plus, all worker classes, insured, out-of-pocket premiums, per person	metro	nonmetro	1,200	1,144	56***
age 26 plus, all worker classes, insured, out-of-pocket spending, per person	metro	nonmetro	795	815	-20
age 26 plus, all worker classes, insured, over-the-counter expenses, per person	metro	nonmetro	176	171	5
nonmetro, all worker classes, insured, total medical expenses, per person	working-age	retirement-age	2,016	2,324	-308***
nonmetro, all worker classes, insured, out-of-pocket premiums, per person	working-age	retirement-age	1,181	1,081	-101***
nonmetro, all worker classes, insured, out-of-pocket spending, per person	working-age	retirement-age	691	1,025	334***
nonmetro, all worker classes, insured, over-the-counter expenses, per person	working-age	retirement-age	143	218	75***
age 26 plus, nonmetro, insured, total medical expenses, per person	self-employed	mixed-employment	2,281	2,586	-305*
age 26 plus, nonmetro, insured, total medical expenses	self-employed	mixed-employment	4,311	6,923	-2,612***
age 26 plus, nonmetro, insured, total medical expenses	mixed-employment	other-employed	6,923	4,844	2,079***

Notes: Two-proportion z-tests were used to determine statistically significant differences for shares, while weighted ordinary least squares (OLS) regressions were used for weighted means. Statistical significance levels: '*' 10%, '**' 5%, '***' 1%.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2019 March Current Population Survey Annual Social and Economic Supplement data.

Appendix B: Farm Household Data Table

Table B1

Percentage of people in farm households by health insurance source, age category, metro status, and whether the principal operator or spouse worked off-farm, 2015

	Uninsured (%)	Employer-based insurance (%)	Direct-purchase insurance (%)	Public insurance (%)
All farm household members				
All persons	10.7	55.6	17.6	28.2
< 65 years old	10.2	67.9	17.2	8.9
≥ 65 years old	11.8	25.5	18.5	75.4
Residence farms	9.1	61.1	13.0	27.5
Intermediate farms	14.8	42.9	23.1	34.9
Commercial farms	9.4	57.2	30.5	14.1
Metro				
All persons	10.9	56.0	16.6	27.6
< 65 years old	10.3	68.9	16.0	8.5
≥ 65 years old	12.3	25.3	18.2	73.3
Nonmetro				
All persons	10.5	55.3	18.3	28.6
< 65 years old	10.1	67.2	18.1	9.3
≥ 65 years old	11.4	25.6	18.9	77.0
Off-farm work				
All persons	8.4	66.6	15.1	19.2
< 65 years old	7.3	74.4	14.5	7.6
≥ 65 years old	12.8	34.2	17.8	67.6
No off-farm work				
All persons	16.8	26.5	24.1	52.0
< 65 years old	23.8	37.5	29.9	15.2
≥ 65 years old	11.0	17.3	19.2	82.7

Notes: All people in farm households are included, regardless of age. "No off-farm work" means that neither the principal operator or their spouse reporting working off the farm. "Off-farm work" means that either the principal operator or their spouse reported working off the farm. Residence farms are small farms (less than $350,000 gross cash farm income (GCFI)) and the principal operator reports that they are either retired from farming or their main occupation is something other than farming. Intermediate farms are farms small farms where the principal operator reports that farming is their main occupation. Commercial farms are farms with a GCFI of $350,000 or more per year. County metro status is from the Office of Management and Budget's 2013 Core-Based Statistical Area classifications.

Source: USDA, Economic Research Service using USDA, National Agricultural Statistics Service and USDA, Economic Research Service, 2015 Agricultural Resource Management Survey data.