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Community Characteristics and Financial and Operational Performance of Rural Health Clinics in the United States: A Chartbook

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Community Characteristics and Financial and Operational Performance of Rural Health Clinics in the United States

A CHARTBOOK

May 2022



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A CHARTBOOK

May 2022

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EXECUTIVE SUMMARY

The Rural Health Clinic (RHC) Program, established in December 1977 by the Rural Health Clinic Services Act, P.L. 95-210, is one of the nation's oldest rural health support programs.¹ RHCs were developed to address geographic primary care access barriers experienced by Medicare and Medicaid populations living in rural underserved areas.¹ RHCs are an important source of primary care services in rural areas with 4,888 RHCs serving the residents of 45 states as of September 2021.² Based on the most recent Medicare Utilization and Payment Statistics posted by the Centers for Medicare & Medicaid Services (CMS), 4,482 RHCs served 2,171,211 individual Medicare beneficiaries in 2019 for a total of 9,706,419 visits.³

An ongoing challenge has been the lack of up-to-date data on RHCs, their operations, the patients they serve, the services they provide, and the extent to which they serve vulnerable rural populations including Medicare and Medicaid enrollees.¹ Previous surveys and studies by the Maine Rural Health Research Center (MRHRC) were conducted to address this gap in information (Appendix B). While surveys can be a useful data collection tool, they are not without certain drawbacks, the most significant of which are the costs of conducting surveys and the challenge of obtaining an adequate response rate. As an alternative to surveying RHCs, we used secondary data to provide insight into key RHC issues:

- CMS's Provider of Services file to describe RHC locations, distribution, and ownership status
- Medicare Cost Reports for data on RHC costs, staffing patterns, hours of operation, visits, and provision of specialty services, as well as to calculate RHC efficiency and productivity measures
- Robert Wood Johnson Foundation's County Health Rankings data to understand the health and economic vulnerabilities of the counties in which RHCs are located

This chartbook provides an overview of RHC characteristics and issues using these data and will be useful to policymakers and others interested in the performance of RHCs nationally. It can also be useful to RHC administrators to benchmark staffing patterns, productivity, and efficiency. Finally, it provides a discussion of the challenges related to collection and reporting of RHC quality data.

CHARTBOOK SUMMARY

This chartbook provides a detailed look at the status of RHCs in the United States, including:

- A brief introduction
- A review of the program history and background
- An overview of the legislative history
- Data on:
 - The number, type, and distribution of RHCs in the United States (Section 1)
 - RHC operating hours and the percentage of RHCs offering behavioral health and other services (Section 2)
 - Demographic, socioeconomic, and health context of counties served by RHCs (Section 3)
 - RHC average costs per visit by RHC type, size, ownership, and payment limit status (Section 4)
 - RHC cost performance including direct and overhead costs (Section 5)
 - RHC staffing patterns and productivity (Section 6)
 - RHC efficiency measures (Section 7)
 - Quality measurement challenges (Section 8)
- Definitions and cost report references for the productivity and efficiency measures (Appendix A)
- An inventory of Maine Rural Health Research Center RHC Publications (2003-2020) (Appendix B)

KEY FINDINGS

Distribution and characteristics of RHCs

- The RHC Program continued to grow with 4,888 RHCs serving rural residents in 45 states.
- The distribution of independent versus provider-based RHC shifted dramatically since our 2003 Chartbook (52 vs. 48 percent respectively) compared to 2021 (34 vs. 66 percent respectively).
- RHCs were most heavily concentrated in the South (2,100) and Midwest (1,797) census regions and accounted for close to 80 percent of all RHCs in the country.
- There was little overlap in terms of the number of RHCs serving individual zip codes.
 - Among zip codes that contain RHCs, 75 percent were served by one RHC, 21 percent were served by two to three RHCs, and 4 percent were served by four to eleven RHCs.
- Seventy-six percent (2,458) of provider-based RHCs were exempt from Medicare payment limits. Eighty-five percent of these provider-based RHCs were owned by Critical Access Hospitals (CAHs).*
- In terms of terms of other essential services:
 - 8.3 percent of independent and 7.2 percent of provider-based RHCs employed licensed clinical social workers.
 - 7.2 percent of independent and 3 percent of provider-based RHCs employed doctoral-level psychologists.
 - 5.4 percent of independent and 10 percent of provider-based RHCs offered pharmacy services.
 - 1.4 percent of independent and 0.6 percent of provider-based RHCs employed dental staff.

Demographic, Economic, and Health Context of Counties Served by RHCs

- Although counties with RHCs were similar demographically and economically to those without, RHC counties may be more vulnerable economically with small but statistically significant higher rates of unemployment and children in poverty.
 - Large rural, medium/small rural, and urban RHC counties had greater health problems with small but statistically higher rates of individuals reporting fair/poor health and greater numbers of poor physical and mental health days.
 - These counties also had higher rates of premature deaths per 100,000 residents.

RHC Adjusted Costs Per Visit (ACPV)

- Independent RHCs had lower ACPVs (\$123.64) than provider-based RHCs (\$201.49) with the payment limit accounting for 67 percent of the average ACPV for independent RHCs and 41 percent for provider-based RHCs subject to the payment limit.
- When analyzed by volume of visits, small and very-large RHCs of both types had higher average ACPVs than medium and large RHCs.
 - For small RHCs, this likely reflects the diminished economies of scale associated with offering a low-volume service.

* Critical Access Hospital (CAH) is a designation given to eligible rural hospitals by CMS. To obtain CAH designation, eligible hospitals must meet the following conditions: (1) have 25 or fewer acute care inpatient beds; (2) be located more than 35 miles from another hospital (exceptions may apply); maintain an annual average length of stay of 96 hours or less for acute care patients; and provide 24/7 emergency care services.

- For very large RHCs, the higher average ACPV is likely a function of the bureaucratic costs involved with operating larger, more complex organizations.
- Independent RHCs reported lower direct costs of provider RHC services (\$70.91 per visit) and lower overhead costs (\$55.92) than provider-based RHCs (\$108.69 and \$98.59 respectively).
- Independent RHCs had lower costs for health care staff (\$59.92) than provider-based RHCs (\$88.91).
- Physician costs per visit increased and NP/PA costs per visit declined as the clinic size (measured by volume of visits) increased for both types of clinics.

RHC Cost Performance

- Independent RHCs had lower total allowable costs of providing RHC services than provider-based RHCs.
 - The average total allowable costs of providing RHC services for independent RHCs was \$969,925 which included facility health care staff costs of \$830,326, costs under agreement of \$22,215, and other health care costs of \$117,383.
 - The average total allowable costs of providing RHC services for provider-based RHCs was \$1,269,518 which included facility health care staff costs of \$1,024,528, costs under agreement of \$120,019, and other health care costs of \$124,970.
- Independent RHCs had lower overhead costs (\$684,123) than provider-based RHCs (\$1,110,896).

RHC Staffing Patterns and Productivity

- Staffing patterns were comparable across independent and provider-based RHCs with independent RHCs having slightly higher staffing patterns for physicians, PAs, and NPs than provider-based RHCs.
- Physicians, PAs, and NPs in independent RHCs were more productive than those in provider-based clinics.
 - In independent RHCs, physicians saw an average of an additional 467 annual visits per FTE, PAs saw an additional 1,220 annual visits per FTE, and NPs saw an additional 764 annual visits per FTE than their peers in provider-based RHCs.

INTRODUCTION

The Rural Health Clinic (RHC) Program, established in December 1977 by the Rural Health Clinic Services Act, P.L. 95-210, is one of the nation's oldest rural health support programs.¹ The RHC Program was designed to address geographic primary care access barriers experienced by Medicare and Medicaid populations living in rural underserved areas.¹ RHCs are an important source of primary care services in rural areas with 4,888 RHCs serving the residents of 45 states[†] as of September 2021.² Based on the most recent Medicare Utilization and Payment Statistics posted by the Centers for Medicare & Medicaid Services (CMS), 4,482 RHCs served 2,171,211 individual Medicare beneficiaries in 2019 for a total of 9,706,419 visits.³

An ongoing challenge has been the lack of up-to-date data on RHCs, their operations, the patients they serve, the services they provide, and the extent to which they serve vulnerable rural populations including Medicare and Medicaid enrollees.¹ These concerns date back to the early years of the program. Previous work by the Maine Rural Health Research Center (MRHRC) includes surveys and studies to address this gap in information (Appendix B). While surveys can be a useful data collection tool, they are not without certain drawbacks, the most significant of which are the costs of conducting surveys and the challenge of obtaining an adequate response rate.

As an alternative to surveying RHCs, we used secondary data to provide insight into key RHC issues:

- CMS's Provider of Services file for data on RHC location, distribution, and ownership status
- Medicare Cost Reports for information on RHC costs, staffing patterns, hours of operation, visits, and provision of specialty services, as well as to calculate RHC efficiency and productivity measures
- Robert Wood Johnson Foundation's County Health Rankings data to provide data on the health and economic vulnerabilities of counties in which RHCs are located

This chartbook summarizes the results of this work and provides an overview of RHC characteristics and issues. It provides useful information for policymakers and others interested in data on the performance of RHCs nationally. It also provides the following data that can be used to benchmark RHC staffing patterns, productivity, and efficiency:

- RHC staffing patterns and productivity (Section 6)
- RHC efficiency measures (Section 7)
- Definitions and cost report references for the productivity and efficiency measures (Appendix A)
- An inventory of Maine Rural Health Research Center RHC Publications (2003-2020) (Appendix B)

Section 8 provides a brief discussion of challenges related to the collection and reporting of RHC quality data. Although RHCs are exempt from mandatory participation in CMS quality payment programs such as the Merit-Based Incentive Payment System (MIPS), this is an important and needed area of focus for RHCs. Although no national data currently exists on the quality of care provided by RHCs, this section will provide context on RHC quality reporting issues and discuss options to encourage RHCs to collect and report quality data.

[†] As of September 2021, Alaska, Connecticut, Delaware, New Jersey, and Rhode Island had no RHCs.

Program History and Background

The Rural Health Clinic Services Act, P.L. 95-210, established the RHC Program in December 1977 with the goal of improving access to healthcare services for rural residents living in designated shortage areas.¹ The Act established RHCs as a category of Medicare providers and introduced criteria to certify RHCs, expanded the use of physician assistants (PAs) and nurse practitioners (NPs) to improve access to primary care in rural communities, and established enhanced reimbursement for RHCs under Medicare and Medicaid.¹ This enhanced reimbursement methodology reimbursed RHCs for the lower of the allowable costs of providing services to Medicare and Medicaid enrollees or an established payment limit that applied to independent RHCs (and was extended to provider-based RHCs associated with hospitals of 50 or more beds in 1997 and all new provider-based RHCs certified after December 30, 2020). The enhanced reimbursement rate provided to RHCs was intended to address the inadequacy of Medicare and Medicaid fee schedules for these low-volume rural providers, although the per visit payment limit meant that not all RHCs received their full costs for serving Medicare beneficiaries.

To be certified as an RHC, a clinic must:

- Be in a nonurbanized area as defined by the United States Census Bureau
- Be in an area designated as a geographic or population-based Health Professional Shortage Area (HPSA), Medically Underserved Area (MUA), or Governor-Designated Shortage Area (GDSA)
- Be engaged primarily in providing outpatient primary medical care
- Employ at least one PA, NP, or certified nurse midwife (CNM) at least 50 percent of the time the clinic is open
- Comply with all applicable federal, state, and local requirements
- Meet Medicare and Medicaid health and safety requirements
- Receive medical direction from a physician who periodically reviews the services provided by the PAs, NPs, and/or CNMs, provides general medical supervision, and is present on-site at least once every two weeks⁴

The Rural Health Clinic Services Act authorized Medicare and Medicaid enhanced reimbursement to certified RHCs for a defined set of core RHC primary care services and established reimbursement for the services of PAs, NPs, and CNMs in RHCs, even if delivered in the absence of a physician. RHC services defined by the Act and subsequent amendments as eligible for Medicare enhanced reimbursement include: (1) professional services provided by a physician, PA, NP, CNM, and/or nurse; (2) other services and supplies provided during a clinic visit; (3) visiting nurse services to the homebound; (4) clinical psychologist and social worker services; and (5) services and supplies incident to the provision of care.⁴

RHCs can either be independent or provider-based. An independent RHC is a freestanding clinic or office-based practice. A provider-based RHC must be a subordinate part of a hospital, skilled nursing facility, or home health agency participating in the Medicare program, and operated with other departments of that provider under common licensure, governance, and professional supervision. Although less common, independent RHCs may also be owned and/or operated by hospitals or health systems.

Participation during the early years of the program lagged Congress's initial expectations.⁵⁻⁷ During 1977 testimony in support of the proposed legislation, the Congressional Budget Office estimated that over 600 RHCs would be certified by December 1979.⁵ As of that date, 431 RHCs had been certified and 72 had relinquished their certification, leaving 359 RHCs in operation. As of September 30, 1981, 598 RHCs had been certified and 176 had relinquished their certification, leaving 422 RHCs in operation.⁵

Congress expected that the number of RHCs would grow to 2,000 or more by 1990, however, only 581 RHCs were operating as of October 1990.⁷⁻⁸ The reasons for the program's slow initial growth included the

perception that early RHC reimbursement rates, which were capped at a maximum cost per visit, were too low; a lack of knowledge about the program; conflicting state laws limiting the utilization of PAs, NPs, and CNMs; and concerns that the cost reporting and certification processes were too complex.⁷⁻⁹ To improve participation, Congress passed amendments to increase reimbursement rates, ease the administrative burden, and promote technical assistance and awareness of the program during the 1980s and early 1990s.¹⁰ States also addressed barriers to the scope of practice of PAs, NPs, and CNMs.⁹⁻¹¹ Declining reimbursement from third party fee-for-service reimbursement systems, including the implementation of Medicare's resource based relative value system in 1992, increased the attractiveness of the RHC program to many rural providers.¹²

After these changes, the number of RHCs grew quickly. From October 1990 through October 1995, the number of RHCs grew by 650 percent.¹³ As of September 2021, 4,888 RHCs were in operation. The dramatic growth in the number of RHCs was accompanied by a rapid increase in program costs. This growth triggered greater scrutiny of the RHC program. Studies by the General Accounting Office (GAO) and the Office of the Inspector General (OIG) questioned the degree to which the objectives of the RHC Program were being met.¹³⁻¹⁴ The OIG stated that it was unable to ascertain whether the growth in RHCs represented a positive development, in terms of opening access to care, or a negative one, in terms of cost or excess capacity.¹³ For example, it found that RHCs increased access to care in some areas but not in others. The OIG also raised concerns that the RHC cost-based payment methodology provided little incentive for efficiency and created opportunities for inflated and inappropriate payments. It further noted that the reimbursement methodology was complex as well as difficult and expensive to oversee.

The conclusions of these studies, however, were not always based on the intent of P.L. 95-210. For example, the GAO criticized the program for not being focused on improving care in isolated rural areas. The Rural Health Clinic Services Act did not specifically target isolated rural areas; rather, it established a standard (requiring clinics to be in non-urbanized areas of 49,999 or fewer people) that covered a broad array of rural areas across the country. In addition, their concerns had less to do with the RHC Program and more to do with the existing shortage area designation process used to certify clinics for participation in the program. As a result, the conclusions reached by these earlier studies should be evaluated in the context of the goals of the enabling legislation.

The lack of consistent data on RHC performance is a problem for RHCs and has made it difficult to refute concerns raised by these studies. It also makes it more challenging to develop legislative and policy support for this important rural primary care program.¹⁵ This chartbook is an effort to address the lack of data on the operations and performance of RHCs using secondary data to better inform policymakers about the role RHCs play.

Legislative History

The RHC Program made two important contributions to the field of rural health policy. The first involved development of an enhanced cost-based Medicare and Medicaid reimbursement mechanism appropriate to the needs of low-volume rural providers in rural underserved areas. Cost-based reimbursement, which covers the allowable costs of providing services to Medicare and Medicaid enrollees, is important to low-volume providers that have difficulty recovering their higher fixed costs under Medicare and Medicaid fee schedules. The concept of volume-appropriate reimbursement has since been incorporated into the Montana Medical Assistance Facility, the Essential Access Community Hospital/Rural Primary Care Hospital, and the Frontier Community Health Integration Program demonstrations. It has also been used to reimburse providers such as Federally Qualified Health Centers (FQHCs) (until replaced by a prospective payment system in 2014), Critical Access Hospitals (CAHs),[‡] and CAH-owned Emergency Medical Services (EMS) located 35 miles or more from another EMS provider.

The second contribution involved development of team-based care through expanded coverage for services provided by PAs and NPs. Prior to the RHC Program, PAs and NPs were ineligible for third-party reimbursement.¹⁶ The Program has been credited for demonstrating the value of PAs and NPs in expanding the rural primary care workforce. The Balanced Budget Act of 1997 (BBA 97) expanded flexibility for PAs and authorized direct reimbursement for NPs. In recognition of its contribution to expanding the use of PAs in the healthcare workforce, the Rural Health Clinic Services Act of 1977 was identified as one of 18 significant federal initiatives that contributed to the growth of the profession.¹⁷

P.L. 95-210 established Medicare and Medicaid cost-based reimbursement using a bundled all-inclusive rate (AIR), expressed as a calculated average adjusted cost per visit (ACPV) up to a defined payment limit.⁴ Originally, this limit applied only to independent RHCs in response to concerns about cost growth potentially associated with cost-based reimbursement. Significant growth in the number of RHCs during the early to mid-1990s triggered concerns about the rising costs of the program. In response, BBA 97 extended the payment limit to provider-based RHCs attached to rural hospitals with 50 or more beds.^{1,16,18} Provider-based RHCs owned by hospitals with 49 beds or fewer, most of which are CAHs, remained exempt from this payment limit. The Consolidated Appropriations Act of 2021, extended the payment limit to provider-based RHCs certified (or that had applied for certification as an RHC) after December 31, 2020.¹⁹ Under the cost-based reimbursement formula established by P.L. 95-210, productivity standards are used to determine the ACPV for Medicare reimbursement of physicians, PAs, NPs, and CNMs in RHCs.⁴

In response to concerns about the adequacy of the RHC payment limit, Congress twice increased the limit prior to 1987, and the Omnibus Budget Reconciliation Act of 1987 tied annual increases to the Medicare Economic Index (MEI).^{16,18,20} Congress also passed amendments to modify the productivity standards used to calculate RHC ACPV rates (1989 and 1990); added the services of doctoral psychologists (1987), CNMs (1989), and clinical social workers (1989) to the package of RHC core services; excluded diagnostic tests (except selected laboratory services) from the all-inclusive reimbursement rate (1992); eased administrative and regulatory burdens; promoted technical assistance; and increased awareness of the program.^{1,19} States also addressed scope of practice barriers to expand the use of PAs, NPs, and CNMs.⁸

As discussed earlier, these changes prompted growth in the number of entities applying for certification as RHCs. In response to concerns about program growth from policymakers, BBA 97 adopted language to decertify RHCs located in areas no longer classified as rural or shortage areas.¹ The Department of Health and Human Services attempted to address these concerns through rulemaking, but the provisions were never finalized and there has been no Congressional or stakeholder pressure to revisit the issue.²¹

[‡] Critical Access Hospital (CAH) is a designation given to eligible rural hospitals by CMS. To obtain CAH designation, eligible hospitals must meet the following conditions: (1) have 25 or fewer acute care inpatient beds; (2) be located more than 35 miles from another hospital (exceptions may apply); maintain an annual average length of stay of 96 hours or less for acute care patients; and provide 24/7 emergency care services.

The Benefits Improvement and Protection Act of 2000 dramatically changed the way state Medicaid programs reimburse RHCs.²² In lieu of cost-based reimbursement, Medicaid must now pay RHCs using either a prospective payment system (PPS) methodology, or an alternative payment methodology provided individual RHCs agree to the payment method and are reimbursed at a rate no less than would be paid under the PPS methodology.

Most recently, Section 130 – Rural Health Clinic Payment Modernization of the Consolidated Appropriations Act of 2021 (H.R. 133) enacted a comprehensive reform of the Medicare RHC payment in response to renewed RHC concerns about the adequacy of the Medicare per visit payment limit.^{19,20} Under Section 130, the per visit payment limit was increased to \$100 beginning April 1, 2021 (from the initial 2021 rate of \$87.52) and will increase to \$190 by 2028 for independent RHCs, provider-based RHCs owned by hospitals with 50 or more beds, and all provider-based RHCs certified after December 31, 2020 (with the exception of those that submitted an 855A or PECOS application for certification as an RHC on or prior to December 31, 2020). After 2028, the payment limit per visit will be increased annually at a rate equal to the MEI. Under Section 130, existing provider-based RHCs owned by hospitals with 49 or fewer beds are “grandfathered” into an individual upper payment limit (effective April 1, 2021) that is the greater of:

- The RHC’s all-inclusive rate for services provided in 2020, increased by the percentage increase in the MEI applicable to primary care services as of January 1, 2021 (1.4 percent); or
- The payment limit applied to independent RHCs, provider-based RHCs attached to hospitals with 50 or more beds, and all new provider-based RHCs certified after December 31, 2020 (\$100).²⁰

For subsequent years (after 2021), these exempted RHCs will be reimbursed at the greater of:

- The per visit payment limit established for the previous year, increased by the percentage increase in MEI applicable to primary care services furnished as of January 1st of the subsequent year; or
- The payment limit applicable to each year for non-grandfathered RHCs.

On April 14, 2021, Congress enacted H.R. 1868 to fix issues with the RHC payment modernization law enacted under the Consolidated Appropriations Act of 2021. H.R. 1868 extended the grandfathering date for exempt provider-based RHCs from December 31, 2019 to December 31, 2020 and allowed “new” hospitals with 49 or fewer beds that submitted an 855A or PECOS application for certification as an RHC on or before December 31, 2020 to fall under the grandfathering provisions and be exempted from the new Medicare per visit payment limit.^{20,23} It also established a provision that grandfathered provider-based RHCs will lose their grandfathered status if the parent hospital does not continue to operate fewer than 50 beds. It further established a methodology to establish an upper payment limit for grandfathered RHCs that did not have an AIR established for services furnished in 2020.

SECTION 1: Overview and Distribution of Rural Health Clinics

This section provides an overview of the number and distribution (by state, degree of rurality, and U.S. census region) and characteristics (e.g., type and ownership characteristics) of RHCs as of September 2021.

Distribution of Rural Health Clinics by State (Figures 1-3)

- As of September 2021, 4,888 RHCs were in operation nationally in 45 states (Figure 1). Alaska, Connecticut, Delaware, New Jersey, and Rhode Island had no RHCs.
 - The five states with the greatest number of RHCs included: Missouri (330), Texas (318), Kentucky (298), California (265), and Illinois (249).
 - The states with the greatest number of independent clinics included: Kentucky (199), Tennessee (146), Florida (125), Texas (113), and California (106).
 - The states with the greatest number of provider-based clinics included: Missouri (233), Texas (205), Iowa (185), Illinois (165), California (159), and Kansas (159) (Figure 3).

Figure 1. Total RHCs by State (n = 4,888)

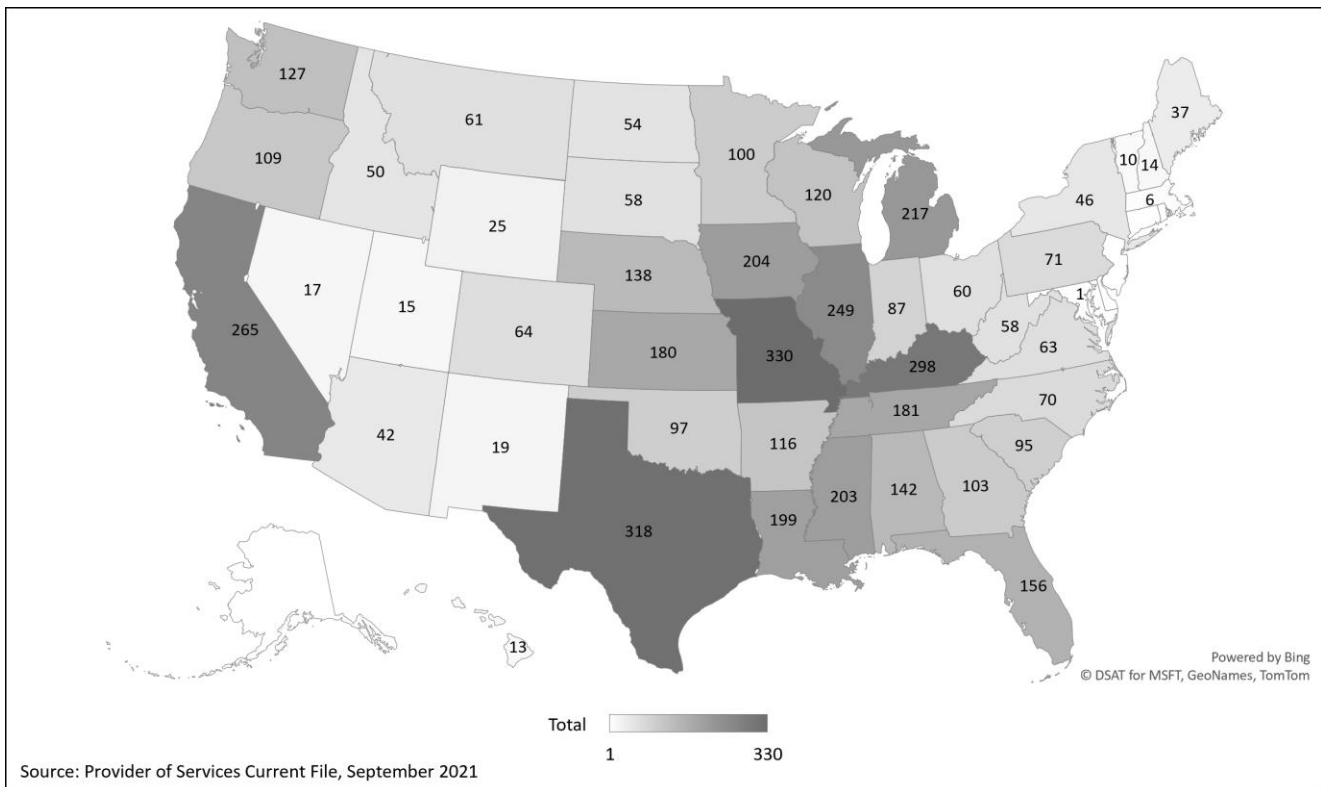


Figure 2. Independent RHCs by State (n = 1,652)

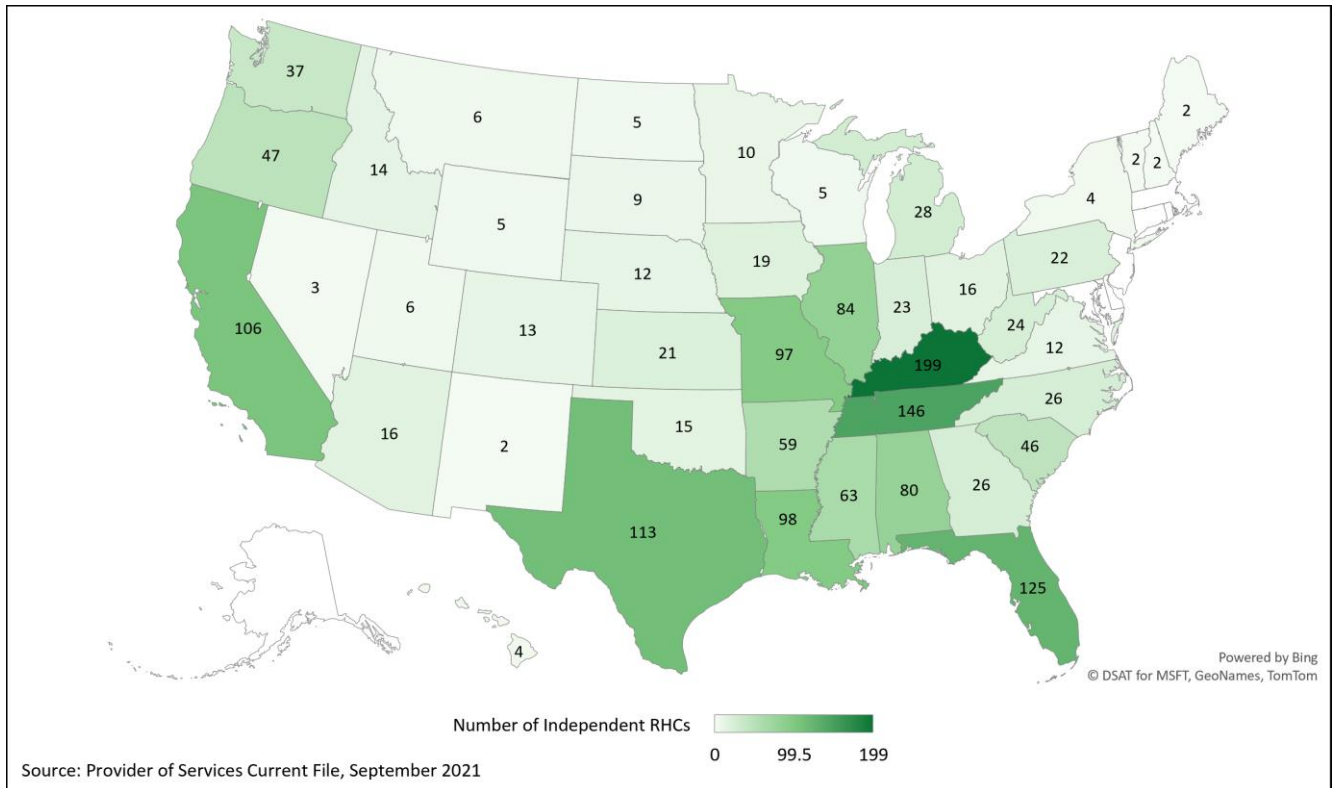
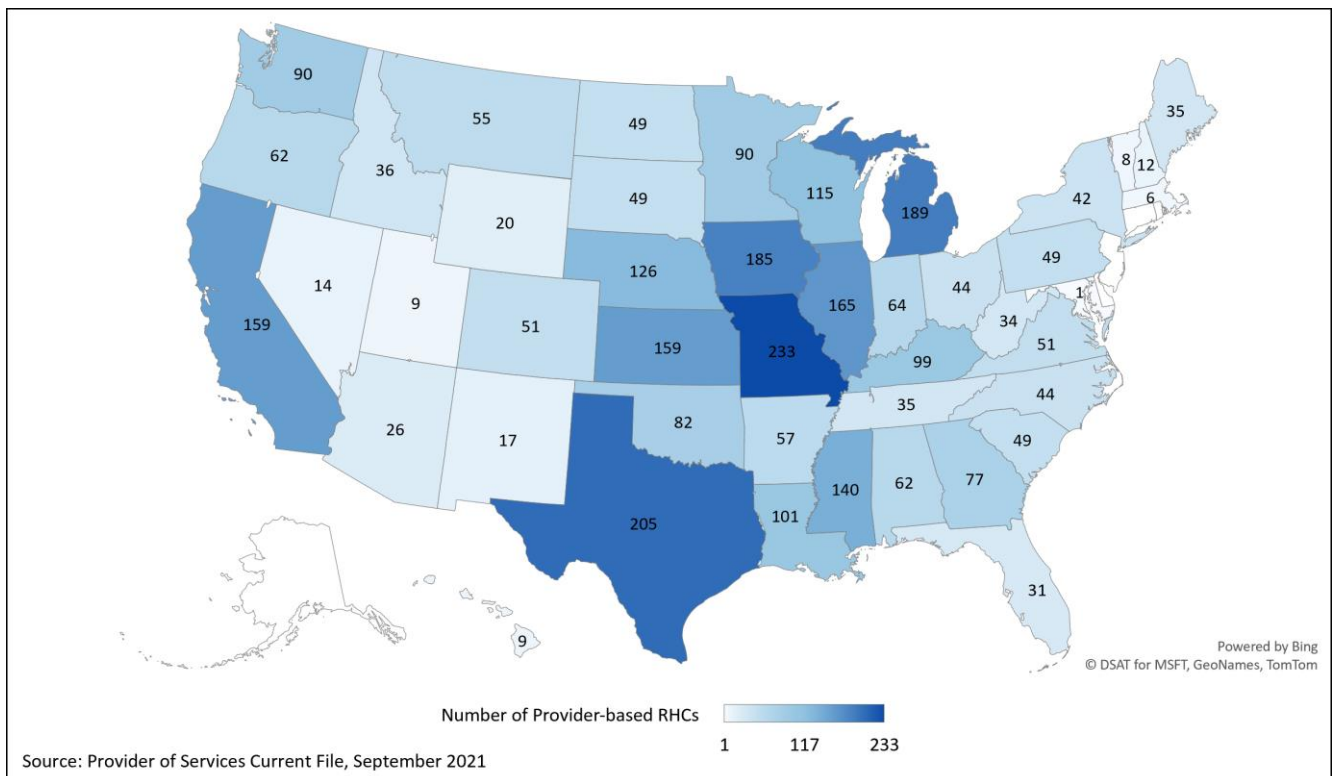


Figure 3. Provider-based RHCs by State (n = 3,236)

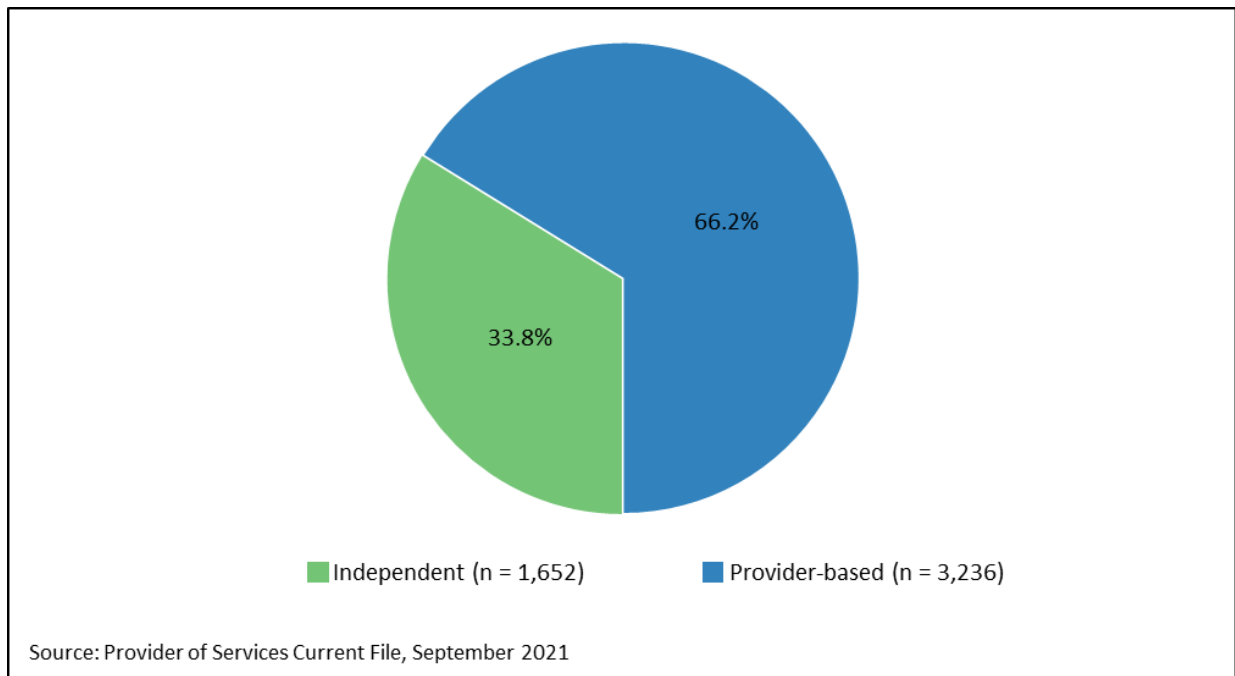


RHCs can be either *independent* or *provider-based*. An independent RHC is a freestanding clinic or office-based practice. A provider-based RHC must be a subordinate part of a larger health care organization such as a hospital, skilled nursing facility, or home health agency. It is possible for a hospital to own an independent RHC if it chooses not to pursue provider-based status.

Distribution of Rural Health Clinics by Type (Figure 4)

- Close to 34 percent of all RHCs (n=1,652) operated as independent RHCs and slightly over 66 percent (n=3,236) operated as provider-based RHCs (Figure 4).
 - This reflects an upward trend in the proportion of RHCs operating as provider-based clinics. In our 2003 Chartbook, 52 percent of RHCs were classified as independent and 48 percent as provider-based. This change reflects the ongoing trend away from private practice models for primary care to hospital-owned practices.²³

Figure 4. Distribution of RHCs by Clinic Type, 2021



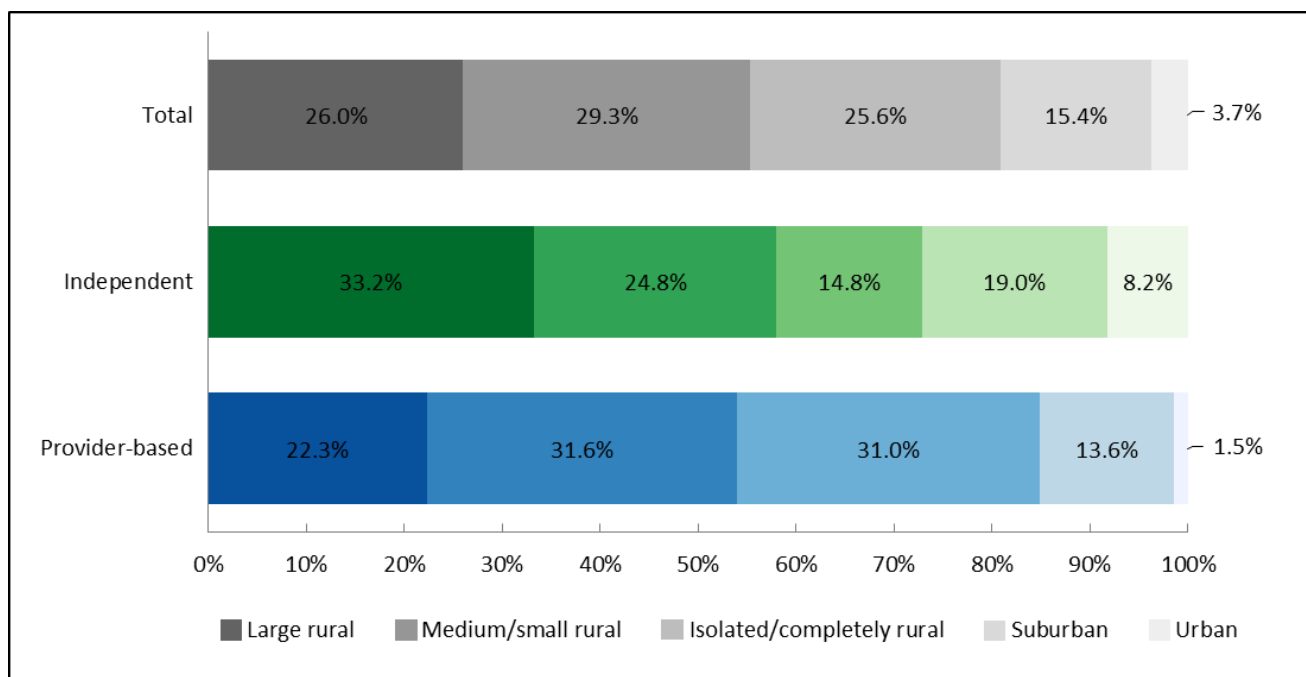
Classification of RHCs by Degree of Rurality (Figure 5)

As described in the Methods section of this chartbook, we used the 2010 Rural-Urban Commuting Area (RUCA) zip code approximation file to describe the rurality of RHCs based on the zip code listed in the CMS Provider of Services (POS) file. We used a five-tier consolidation of the RUCAs as follows:

- Large rural** (RUCA codes 4.0, 4.1, 5.0, 5.1, and 6.0) – Micropolitan areas (10,000 to 49,999 people);
 - Medium/small rural** (RUCA codes 7.0, 7.1, 7.2, 8.0, 8.1, 8.2, and 9.0) – Small town (2,500 to 9,999 people);
 - Isolated/completely rural** (RUCA codes 10.0, 10.1, 10.2, and 10.3) – Areas with fewer than 2,500 people;
 - Suburban** (RUCA codes 2.0, 2.1, and 3.0) – Metropolitan areas with low (under 30 percent) or high (30 percent or higher) commuting flows to an urbanized area; and
 - Urban** (RUCA codes 1.0 and 1.1) – Metropolitan areas (with a core urban area of 50,000 or more people)²⁵
- 26 percent of all RHCs were located in large rural areas, 29.3 percent in medium/small rural areas, 25.6 percent in isolated/completely rural areas, 15.4 percent in suburban areas, and 3.7 percent in urban areas (Figure 5).

 - 33.2 percent of independent RHCs were located in large rural areas, 24.8 percent in medium/small rural areas, 14.8 percent in isolated/completely rural areas, 19 percent in suburban areas, and 8.2 percent in urban areas.
 - 22.3 percent of provider-based clinics were located in large rural areas, 31.6 percent in medium/small rural areas, 31 percent in isolated/completely rural areas, 13.6 percent in suburban areas, and 1.5 percent in urban areas.

Figure 5. Distribution of RHCs by Rurality, 2021



Sources: Provider of Services Current File, September 2021; Rural-Urban Commuting Area zip code approximation file, 2010

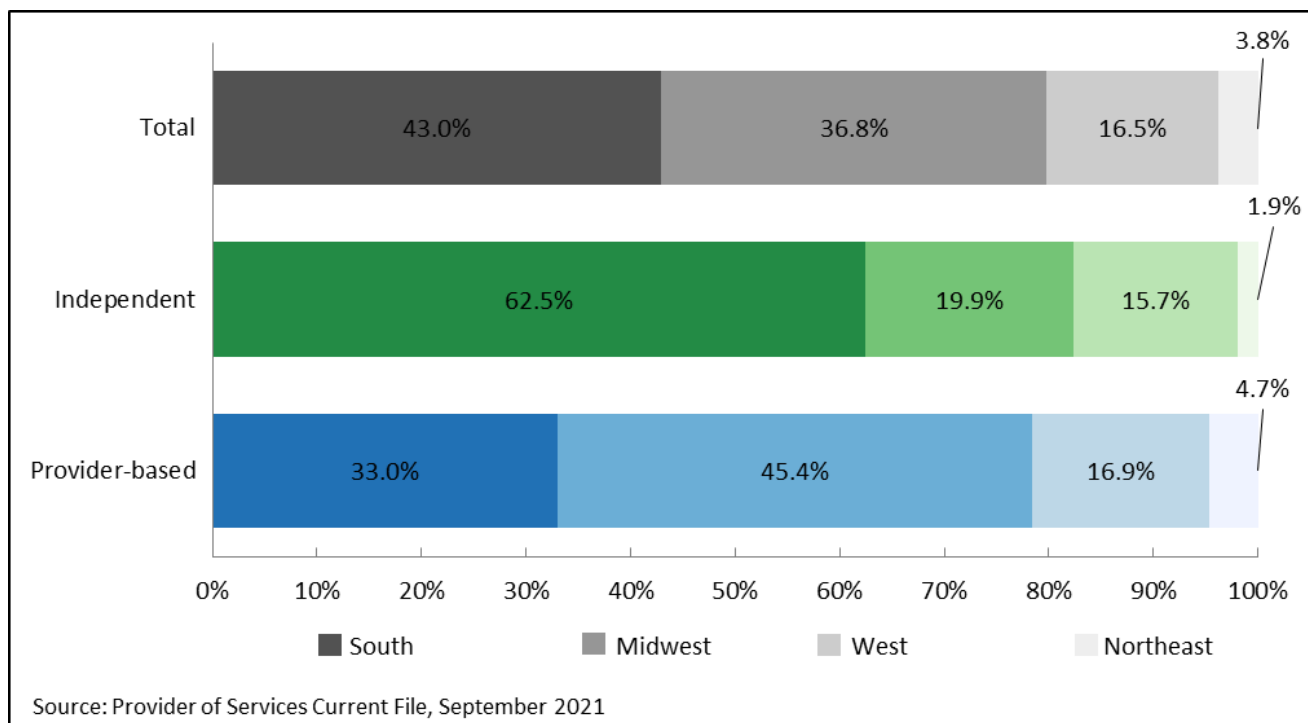
Although the criteria for RHC certification requires a facility to be in a non-urbanized area (49,999 people or fewer), some RHCs are in areas which are no longer designated as non-urbanized due to underlying demographic shifts that have caused a reclassification of these areas with succeeding decennial censuses. In other cases, RHCs are located in U.S. Census Bureau defined non-urbanized areas that other rural-urban classification systems define as urban.

Using the RUCAs, this chartbook sought to assess the rurality of the communities served by RHCs. In assessing this policy question, it is important to understand that there are multiple rural classification systems based on census tracts (like those used by the Census Bureau or the RUCAs) or counties (like the Office of Management and Budget or the Rural-Urban Continuum Codes). These different classification systems do not always align and, as a result, may yield different results. It is also important to note that some RHCs have maintained their designation status even as the population of the areas they are in have grown and are no longer classified as rural by the Census Bureau.

Distribution of RHCs by Census Bureau Region (Figure 6)

- The South census region had the greatest concentration of RHCs with 2,100 clinics closely followed by the Midwest with 1,797 (Figure 6). These two regions contained close to 80 percent of all RHCs in the country. The West and Northeast regions had fewer clinics at 807 and 184 respectively.
 - The South had the greatest number of independent RHCs at 62.5 percent, followed by the Midwest at 19.9 percent, the West at 15.7 percent, and the Northeast at 1.9 percent.
 - The Midwest had the highest number of provider-based RHCs at 45.4 percent of all provider-based clinics, followed by the South at 33 percent, the West at 16.9 percent, and the Northeast at 4.7 percent.

Figure 6. Distribution of RHCs by U.S. Census Bureau Region, 2021



Distribution of RHCs by Zip Code and Proximity to Other RHCs (Table 1)

- 3,452 zip codes had one or more RHCs located within their boundaries.
 - 74.9 percent of these 3,452 zip codes had only one RHC located within their boundaries.
 - 25.1 percent (868) had two or more RHCs located within their boundaries.
 - The mean number of RHCs in these 868 zip codes was 2.7 with a range of 2 to 11 clinics.
 - 21.1 percent (728) of these 3,452 zip codes had 2 to 3 RHCs within their boundaries.
 - 4.1 percent (140) had four to eleven RHCs within their boundaries.

Table 1. Distribution of RHCs by Zip Code With At Least One RHC Within Their Boundaries, 2021

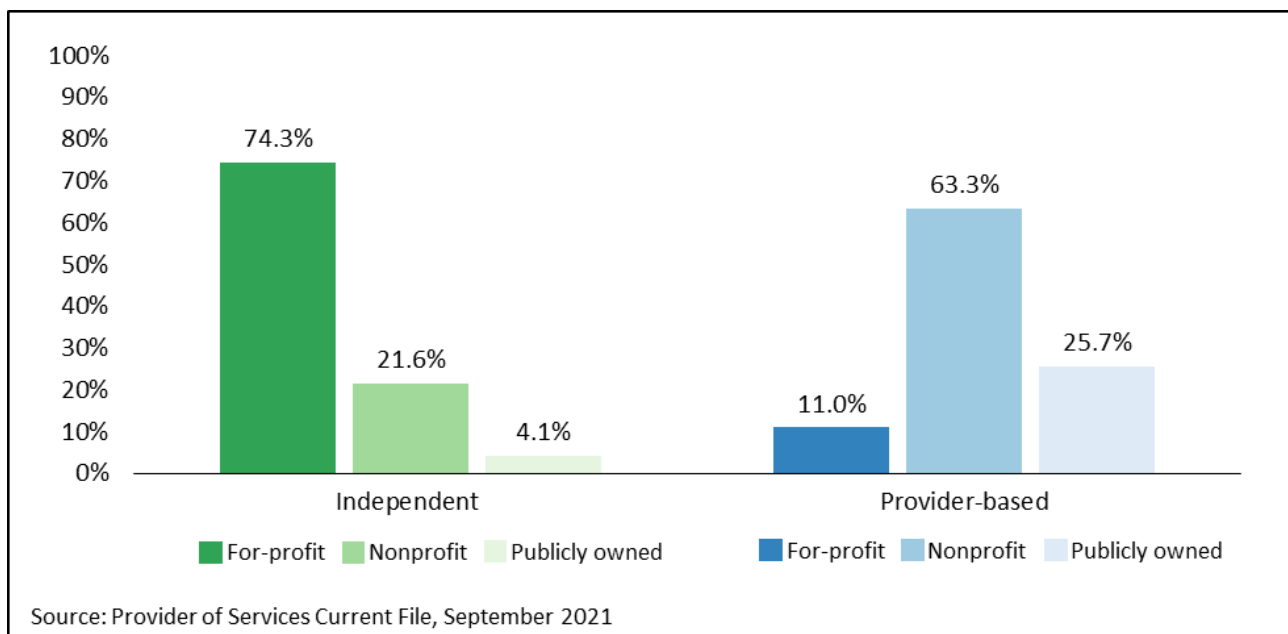
	Statistic	Sample Size (n)
Percent of zip codes with only one RHC	74.9%	2,584
Percent of zip codes with multiple RHCs (range – 2 to 11 clinics)	25.1%	868
Percent of zip codes with two RHCs	15.9%	549
Percent of zip codes with three RHCs	5.2%	179
Percent of zip codes with four RHCs	2.2%	76
Percent of zip codes with five to eleven RHCs	1.9%	64
Mean number of RHCs in zip codes with more than one RHC	2.7%	868

Source: Provider of Services Current File, September 2021

Ownership Status of RHCs (Figure 7)

- Among independent clinics, 74.3 percent were for-profit entities, 21.6 percent were non-profit, and 4.1 percent were publicly owned (Figure 7).
- Among provider-based clinics, 63.3 percent were non-profit, 25.7 percent were publicly owned, and 11 percent were for-profit. This distribution is not surprising given the small number of for-profit hospitals in the United States.

Figure 7. Distribution of RHCs by Ownership Status, 2021



Provider-Based RHCs Subject to the RHC Per Visit Payment Limit (Figures 8 - 9)

As discussed earlier, independent RHCs and provider-based RHCs attached to hospitals with 50 or more beds are subject to a per visit payment limit. These clinics are paid at the lesser of their AIR (which represents the adjusted cost per visit) or the per visit payment limit. Provider-based RHCs owned by hospitals with 49 or fewer beds are exempt from the payment limit. The Consolidated Appropriations Act of 2021 and related legislation updated the payment rates and policies for RHCs effective April 1, 2021 (See the previous discussion under Legislative History).²⁰⁻²²

- 76 percent of provider-based RHCs were exempt from the payment limit, the remaining 24 percent were subject to the limit on their per visit reimbursement rate (Figure 8).
- Among the 2,458 provider-based RHCs exempt from the payment limit, 84.9 percent were owned by CAHs, and 15.1 percent were owned by hospitals reimbursed under the Medicare prospective payment system (Figure 9).

Figure 8. Percent of Provider-based RHCs Subject to the Per Visit Payment Limits, 2021

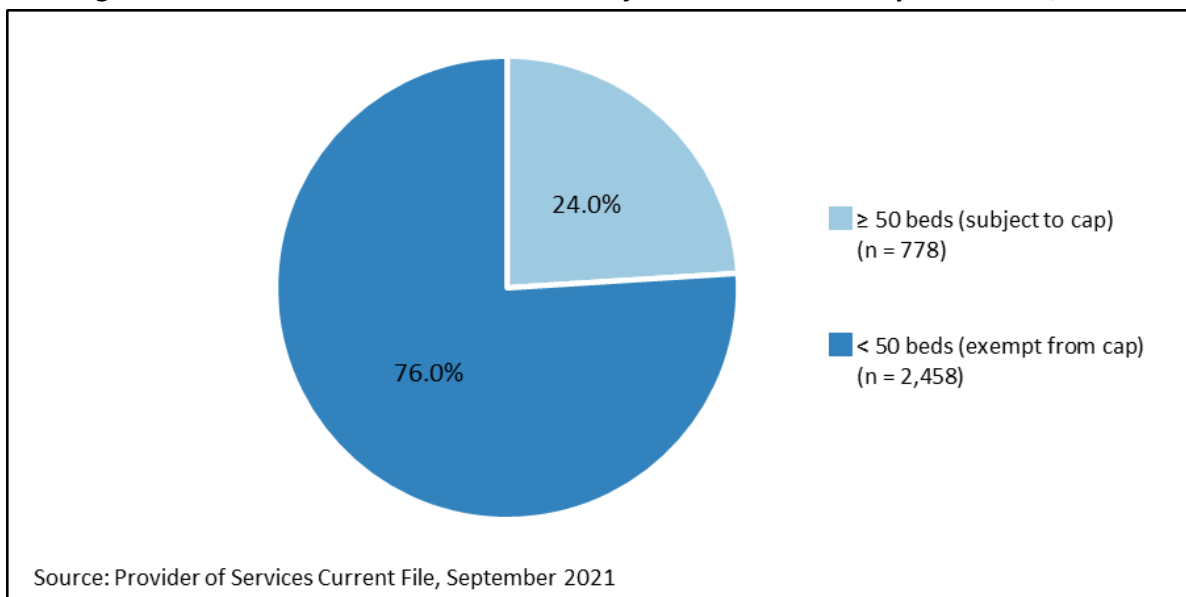
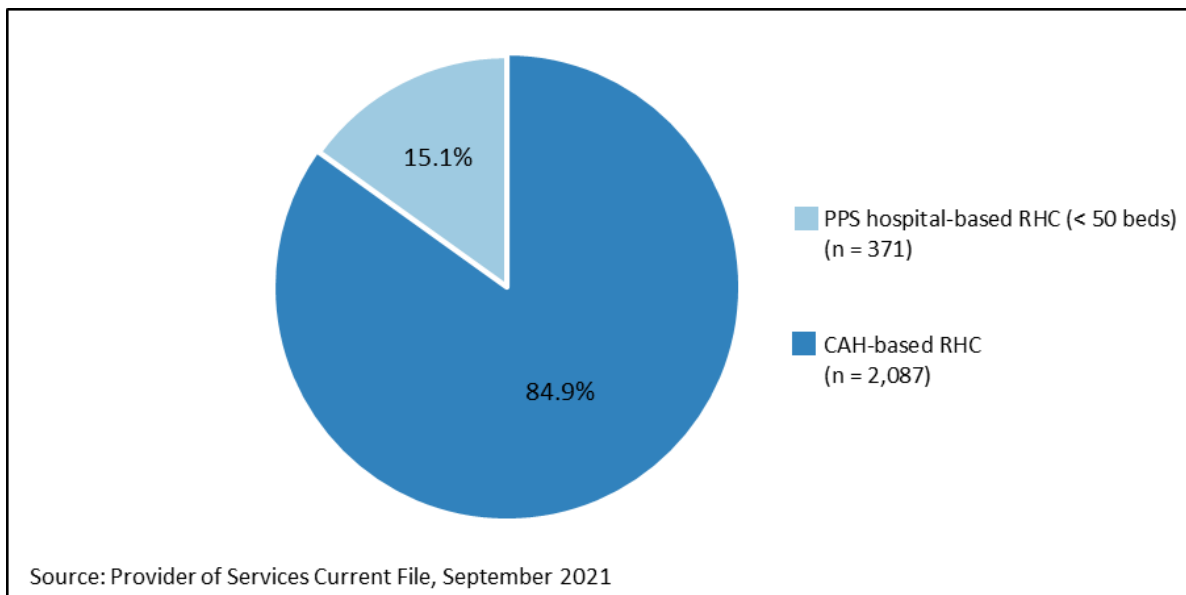


Figure 9. Percent of Exempt Provider-based RHCs Operated by Critical Access Hospitals, 2021



SECTION 2: Clinic Characteristics

This section provides a discussion of select clinic characteristics including the hours of operation for RHCs, the percentage of RHCs offering behavioral health services by either a licensed clinical social worker or doctoral level psychologist, and the percentage of RHCs offering non-RHC services (i.e., services not covered by Medicare cost-based reimbursement) including optometry, pharmacy, and dental services.

Analysis of Daily RHC Operating Hours (Figure 10)

Figure 10 provides an overview of the average RHC operating hours for only those RHCs that reported operating hours on a given day. Table 2 provides a detailed analysis of the average RHC operating hours reported by RHCs, the number and percentage of RHCs reporting hours by day, and the range of hours reported by these clinics. It should be noted that a significant percentage of RHCs did not report hours on any given day of the week (33 to 35 percent for independent RHCs and 19 to 20 percent for provider-based RHCs). As including these clinics in the calculation would reduce the average hours of operation per day, we report the averages excluding the “zero” values. Table 2 provides data on the number of RHCs operating each day of the week.

- Monday through Friday, both independent and provider-based RHCs offered similar operating hours (approximately nine hours per day). Both types of RHCs reported slightly reduced operating hours on Fridays (8.7 and 8.4 hours respectively) compared to Monday through Thursday.
- Of the 1,505 independent RHCs in our sample, 12.3 percent (185) offered Saturday hours and close to 3 percent (44) offered Sunday hours.
- Of the 2,341 provider-based RHCs, 16.4 percent (385) offered Saturday hours and 5 percent (117) offered Sunday hours.
- On Saturdays, independent RHCs were open an average of 5.6 hours and provider-based RHCs were open an average of 5.5 Hours.
- On Sundays, independent RHCs were open an average of 6.8 hours and provider-based RHCs were open an average of 7.2 hours.

Although few RHCs offered extended operating hours during the week and on weekends, extended hours represent an important opportunity to improve access to services for patients that may have limited ability to access care during a normal work week. Extended operating hours are also an important consideration for RHCs seeking recognition as patient-centered medical homes or that are participating in accountable care organizations or other value-based payment arrangements in which the availability of extended hours can help to reduce unnecessary emergency department use as well as reduce delays in seeking care for acute medical conditions.

Figure 10. Average Daily RHC Operating Hours by Clinic Type, 2017

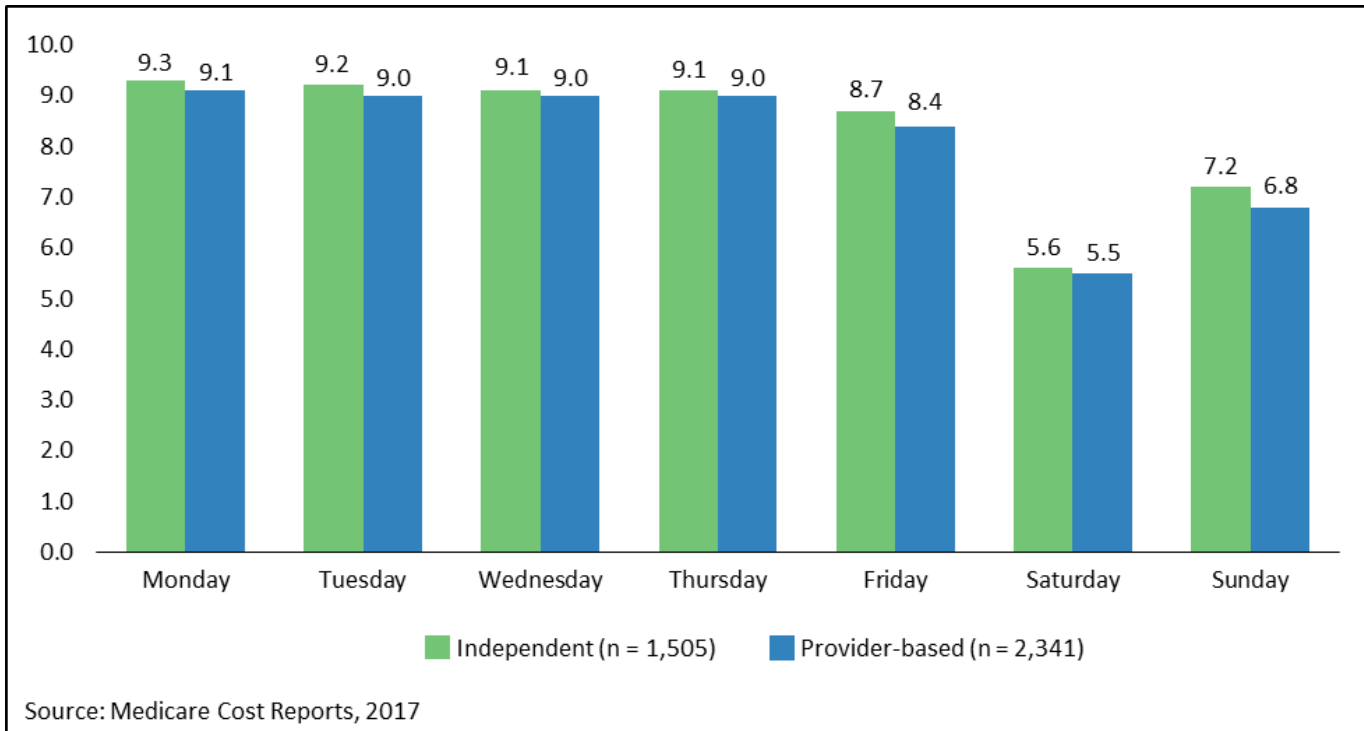


Table 2. Analysis of Average Daily RHC Operating Hours

Independent RHCs	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of RHCs with Daily Operating Hours (% of all independent RHCs)	1,015 (67.4%)	1,012 (67.2%)	1,001 (66.5%)	1,009 (67.0%)	970 (64.5%)	185 (12.3%)	44 (2.9%)
Average Daily Operating Hours*	9.1	9.0	9.0	9.0	8.4	5.5	6.8
Range of Hours*	2 - 14	2 - 17	2 - 17	2 - 14	2.5 - 14	2 - 14	2 - 13
Provider-based RHCs	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of RHCs with Daily Operating Hours (% of all provider-based RHCs)	1,905 (81.4%)	1,880 (80.3%)	1,907 (81.5%)	1,906 (81.4%)	1,856 (79.3%)	385 (16.4%)	117 (5.0%)
Average Daily Operating Hours*	9.2	9.2	9.1	9.1	8.7	5.6	7.2
Range of Hours*	3 - 13.5	3 - 13.5	2 - 13.5	2 - 13.5	2.5 - 13.5	2 - 12	3 - 12

Source: Medicare Cost Reports, 2017

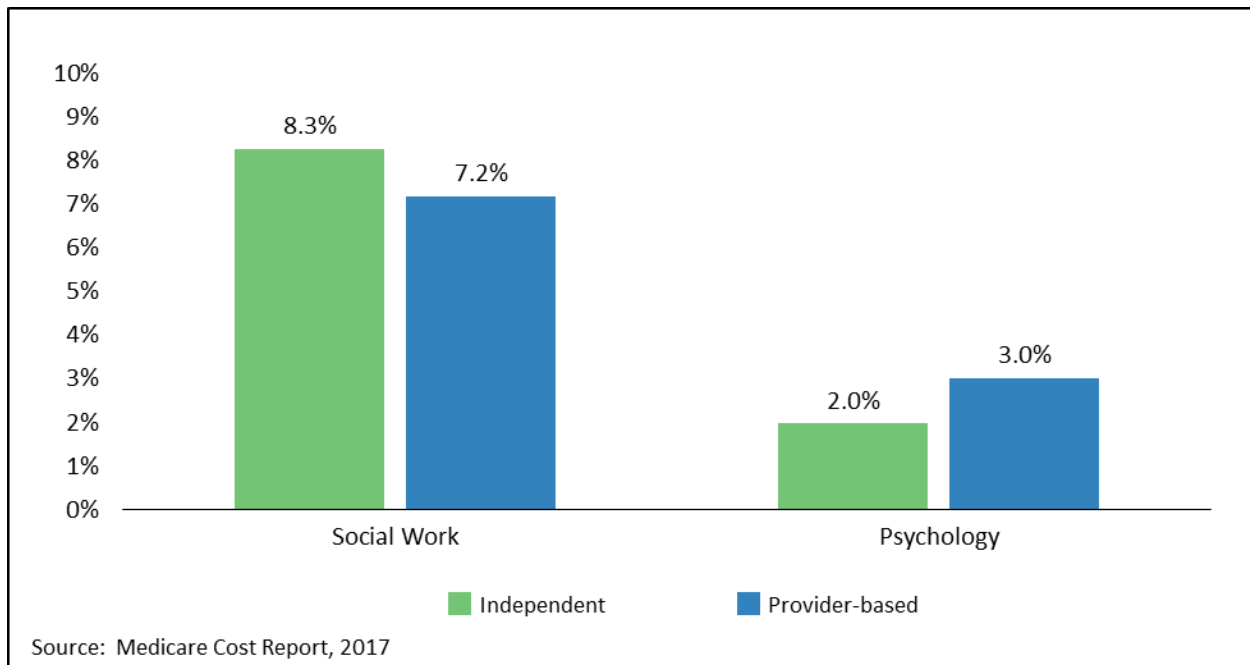
* Applies to RHCs that are open on any given day

Percent of RHCs Offering Behavioral Health Services (Figure 11)

As discussed in the introduction, behavioral health services provided by licensed clinical social workers (LCSWs) and doctoral level psychologists are considered part of the RHC benefit by Medicare and are reimbursed on a cost basis.

- 7.6 percent of all RHCs reported that they employed an LCSW (data not shown).
 - 8.3 percent of independent RHCs and 7.2 percent of provider-based RHCs employed an LCSW (Figure 11).
- 2.7 percent of all RHCs employed a doctoral-level psychologist (data not shown).
 - 2.0 percent of independent and 3.0 percent of provider-based RHCs employed a doctoral-level psychologist (Figure 11).

Figure 11. Percent of RHCs Offering Behavioral Health Services, 2017

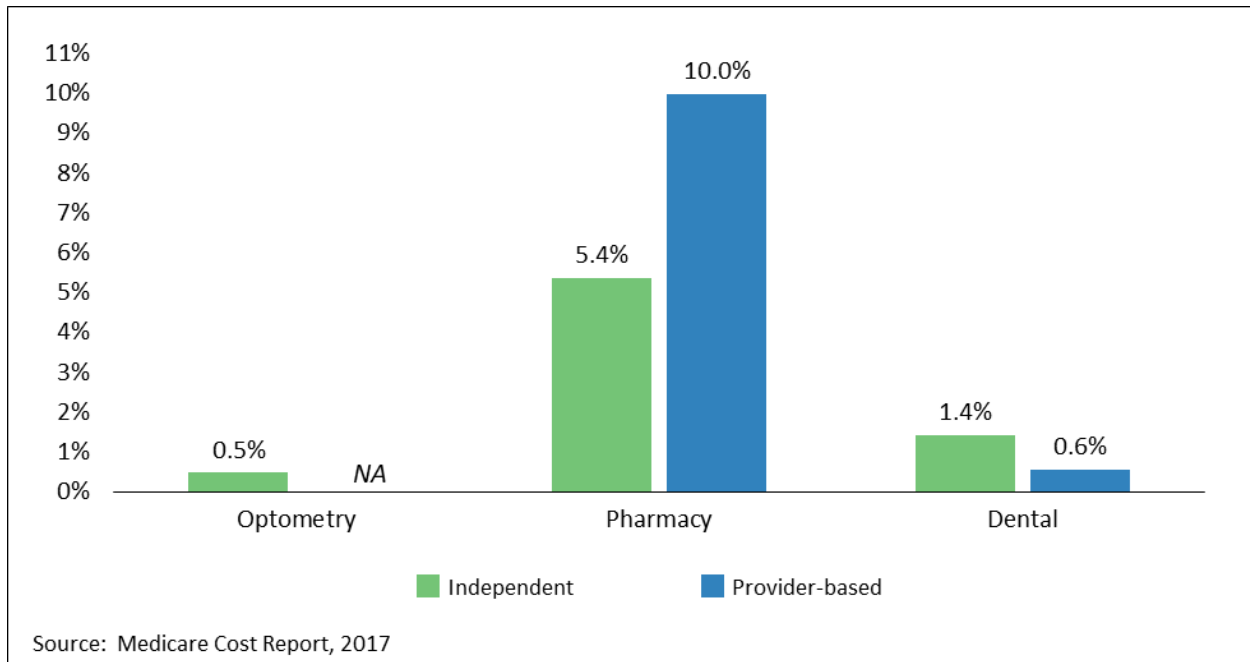


Percent of RHCs Offering Optometry, Pharmacy, and Dental Services (Figure 12)

A limited number of RHCs reported offering optometry, pharmacy, or dental services (Figure 12). These services are not reimbursed on a cost basis in RHCs by Medicare as they are not considered part of the RHC benefit.⁴ Certain state Medicaid programs, such as California’s Medi-Cal program, reimburse RHCs for the provision of dental and other optional services.²⁷ These services are reported as “other than RHC services” on Medicare cost reports.

- One-half percent of independent RHCs reported costs related to the provision of optometry services. No provider-based RHCs reported costs for optometry services.
- The most common “other than RHC” cost was for pharmacy services (5.4 percent of independent and 10.0 percent of provider-based RHCs).
- Costs for dental services were reported by 1.4 percent of independent and 0.6 percent of provider-based RHCs.

Figure 12. Percent of RHCs Offering Optometry, Pharmacy, and Dental Services, 2017



SECTION 3: Service Area Context

This section uses county-level data from the Robert Wood Johnson Foundation's 2021 list of *County Health Rankings* measures and the *Rural-Urban Continuum Codes* (RUCCs) to provide a comparison of the counties in which RHCs are located to similar counties without RHCs. The goal was to understand the extent to which RHCs may be serving counties that are more vulnerable based on various demographic, socioeconomic, and health indicators. As discussed in the methods section of this chartbook, we used the county-level RUCCs to classify the rurality of RHC versus non-RHC counties to facilitate this comparison. The benefit of using the county-based RUCCs for rural-urban classification is that it allows linkage to a wide variety of demographic, socioeconomic, and health disparities data that is typically available only at a county level. The downside is that the over-bounding issues inherent in using counties as the unit of analysis creates challenges in accurately classifying rural-urban areas.^{25,28} It should be noted that metro areas are defined at the county level but typically encompass a mix of urban and rural areas.²⁹

Although the use of the RUCCs facilitates a comparison of counties in which RHCs are located to counties without RHCs based on degree of rurality (i.e., urban, large rural, medium/small rural, and isolated/completely rural), a more accurate classification of the rurality of RHCs is presented in *Section 1: Overview and Distribution of Rural Health Clinics*, based on the Rural-Urban Commuting Areas (RUCA) codes. It is important to acknowledge that the Census Bureau definition of non-urbanized areas used to certify RHCs is broader than the county-based RUCCs or census tract-based RUCAs and can contribute to the classification of some RHCs as urban. In certain cases, the areas in which some RHCs are located have experienced demographic shifts over time that re-classify these areas as urban. In other cases, the areas in which RHCs are located have always been classified as metro or urban using these other rural-urban classification systems while simultaneously being classified as non-urbanized by the Census Bureau. There is currently no process in place to revoke a clinic's RHC certification based on changes to the area in which it is located.

Demographic Characteristics of RHC and Non-RHC Counties (Table 3)

Across the four categories of urban and rural counties, RHC counties were similar demographically to non-RHC counties with minor differences, many of which were not statistically significant.

- Urban RHC counties had a higher percentage of their populations classified as rural than non-RHC urban counties. (See the above discussion of the differences between non-urbanized areas and the RUCCs.)
- The bigger demographic differences are observed across categories of rurality rather than between RHC and non-RHC counties with slightly higher percentages of 65 and older, White, and American Indian/Native Alaskan populations and slightly lower percentages of Hispanic, Black, and Asian populations in isolated/completely rural counties.

Table 3. Demographic Characteristics of RHC and non-RHC Counties, 2021

Measure	Large rural		Medium/ small rural		Isolated/ completely rural		Urban	
	RHC (n = 182)	non-RHC (n = 122)	RHC (n = 790)	non-RHC (n = 228)	RHC (n = 428)	non-RHC (n = 199)	RHC (n = 442)	non-RHC (n = 684)
% White, non-Hispanic	73.7	77.4	76.5	76.6	83.8**	77.1	74.6**	72.1
% Black, non-Hispanic	8.7	7.9	8.8	8.9	4.8	8.6*	10.2	11.7***
% Hispanic	12.2	10.0	10.4	9.6	6.5	8.5	10.3***	10.3
% Asian	1.3	1.5	0.8	1.0***	0.6	0.6	1.9	3.1***
% American Indian/Alaska Native	2.4	1.5	2.3	2.7	3.1	4.1	1.3***	1.0
% Native Hawaiian/Other Pacific Islander	0.2	0.2	0.1	0.1*	0.1	0.1	0.2	0.2
% Rural	41.2	42.1	60.9	59.0	99.4*	99.0	50.5***	33.2
% Female	50.1	50.3	49.6	49.4	49.4	48.9	50.2	50.7***
% Age 65 or older	18.4	18.7	20.4	20.2	23.3	23.8	18.3***	17.3

Sources: Provider of Services Current File, September 2021; County Health Rankings, 2021

Differences between RHC and non-RHC counties significant at *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001

Note: Excludes counties in states without RHCs in 2021 (AK, CT, DE, NJ, and RI) and the District of Columbia.

Socioeconomic Characteristics of RHC and Non-RHC Counties (Table 4)

Across the rural-urban continuum, RHC and non-RHC counties exhibited minor differences across the four socioeconomic measures. The differences for the percentage of residents graduating from high school and with income inequality were mostly small and not statistically significant across the two types of counties.

- Among large rural, medium/small rural, and urban counties, counties with RHCs showed small but statistically significant higher rates of unemployment and children in poverty, suggesting slightly higher socioeconomic vulnerability for residents of those counties.

Table 4. Socioeconomic Characteristics of RHC and non-RHC Counties, 2021

Measure	Large rural		Medium/ small rural		Isolated/ completely rural		Urban	
	RHC (n = 182)	non-RHC (n = 122)	RHC (n = 790)	non-RHC (n = 228)	RHC (n = 428)	non-RHC (n = 199)	RHC (n = 442)	non-RHC (n = 684)
% Unemployed	4.3**	3.8	4.2*	4.0	4.0	4.1	4.0***	3.6
% Graduated high school	86.7	87.0	88.5	88.0	89.5	87.5	88.0	87.8
% Children in poverty	21.3**	18.6	22.7***	20.1	21.8	23.3	18.4***	16.1
Income inequality	4.7*	4.5	4.6	4.5	4.5	4.4	4.5	4.4

Sources: Provider of Services Current File, September 2021; County Health Rankings, 2021
 Differences between RHC and non-RHC counties significant at *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001
 Note: Excludes counties in states without RHCs in 2021 (AK, CT, DE, NJ, and RI) and the District of Columbia.

Health Context and Outcomes of RHC and Non-RHC Counties (Table 5)

Counties with RHCs in large rural, medium/small rural, and urban counties exhibited slightly higher rates than similar non-RHC counties for health context and outcome measures, suggesting a small but higher level of vulnerability.

- Large rural, medium/small rural, and urban RHC counties have small but statistically significant higher rates of individuals with fair/poor health and a greater number of poor physical and mental health days.
- These counties have statistically significant higher rates of premature death per 100,000 residents than non-RHC counties with differences of 683, 762, and 612 additional deaths per 100,000 residents, respectively.

Table 5. Health Context and Outcomes of RHC and non-RHC Counties, 2021

Measure	Large rural		Medium/ small rural		Isolated/ completely rural		Urban	
	RHC (n = 182)	non-RHC (n = 122)	RHC (n = 790)	non-RHC (n = 228)	RHC (n = 428)	non-RHC (n = 199)	RHC (n = 442)	non-RHC (n = 684)
% Uninsured	11.3	10.7	12.3*	11.3	12.5	13.3	10.8**	10.1
% Fair/poor health	21.0***	19.2	22.0***	20.3	20.1	20.8	19.8***	18.1
Poor physical health days	4.6***	4.3	4.7***	4.4	4.4	4.4	4.4***	4.1
Poor mental health days	4.8*	4.6	4.9***	4.6	4.6	4.6	4.7***	4.5
Preventable hospital stays (per 1k Medicare beneficiaries)	4,529	4,480	4,824	4,488	4,767*	4,372	4,598	4,436
Premature death (per 100k residents)	8,825**	8,063	9,121***	8,509	8,908	9,657	8,196***	7,513

Sources: Provider of Services Current File, September 2021; County Health Rankings, 2021

Differences between RHC and non-RHC counties significant at *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001

Note: Excludes counties in states without RHCs in 2021 (AK, CT, DE, NJ, and RI) and the District of Columbia.

SECTION 4: Rural Health Clinic Average Adjusted Cost Per Visit and Cost Analysis

This section provides a detailed analysis of the average adjusted cost per visit (ACPV) and the component costs that comprise the ACPV across different RHC types (independent vs. provider-based), sizes (small, medium, large, and very large), ownership status (private/for-profit vs. non-profit/publicly owned), and payment limit status (provider-based RHCs subject to the payment limit compared to those exempt from the limit). Our grouping of RHCs by size is based on the following visit levels: small (1 – 4,740 visits); medium (4,741 – 10,188 visits); large (10,189 – 31,162 visits); and very large (31,163 or more visits). Please refer to the methods section for a more detailed explanation of how these visit levels were established.

Comparison of the Average ACPV Across Different Types and Sizes of RHCs (Table 6)

Across our categories of analysis, RHCs subject to the payment limit consistently reported average ACPVs that exceeded the 2017 payment limit of \$82.30 per visit.

- Overall, independent RHCs reported lower average ACPVs (\$123.64) than did their provider-based counterparts (\$201.49).
- Among independent RHCs, the payment limit accounted for 59 percent of the average ACPV for small RHCs, 70 percent for medium-sized RHCs, 71 percent for large RHCs, and 66 percent for very large RHCs.
- Private/for-profit independent RHCs reported lower average ACPVs (\$115.88) than did nonprofit/publicly owned independent RHCs (\$144.95).
- Among provider-based RHCs, the payment limit accounted for 38 percent of the average ACPV reported by small RHCs, 43 percent for medium-sized RHCs, 42 percent for large RHCs, and 38 percent for very large RHCs.
- Among provider-based RHCs, clinics subject to the payment limit reported lower average ACPVs (\$189.56) than did those exempt from the payment limit (\$205.20). The payment limit accounted for 43 percent of the average ACPV for applicable provider-based RHCs.
- When analyzed by the volume of visits, we observed consistent patterns in the average ACPV across different sizes of independent and provider-based RHCs. Small and very large RHCs of both types had the highest average ACPVs compared to medium and large RHCs.
 - For small RHCs, the average higher ACPVs likely reflected the diminished economies of scale associated with offering a low-volume service.
 - For very large RHCs, the average higher ACPVs were likely a function of the additional bureaucratic costs involved with operating larger, more complex organizations.

Table 6. Average Medicare Adjusted Costs Per Visit by Clinic Size, Ownership, and Payment Limit Status, 2017

		Sample Size	Total Adjusted Visits	Adjusted Cost per Visit (ACPV)	Difference Between ACPV and 2017 Payment Limit of \$82.30	ACPV Covered by the 2017 Payment Limit
		(n)	(n)	(\$)	(\$)	(%)
Independent RHCs (All)		1,064	12,944	\$123.64	\$41.34	67%
Size	Small (1–4,740 visits)	304	2,989	\$138.47	\$56.17	59%
	Medium (4,741–10,188 visits)	344	7,024	\$116.85	\$34.55	70%
	Large (10,189–31,162 visits)	331	16,955	\$116.63	\$34.33	71%
	Very large (over 31,162 visits)	85	56,888	\$125.40	\$43.10	66%
Ownership	Private/for profit	780	12,875	\$115.88	\$33.58	71%
	Non-profit/publicly owned	284	13,135	\$144.95	\$62.65	57%
Provider-Based RHCs		2,155	11,511	\$201.49	\$119.19	41%
Size	Small (1–4,740 visits)	685	2,582	\$214.80	\$132.50	38%
	Medium (4,741–10,188 visits)	655	7,079	\$192.76	\$110.46	43%
	Large (10,189–31,162 visits)	676	17,096	\$193.69	\$111.39	42%
	Very large (over 31,162 visits)	139	49,231	\$214.96	\$132.66	38%
Payment Limit Status	≥ 50 beds (subject to limit)	511	12,978	\$189.56	\$107.26	43%
	< 50 beds (exempt from limit)	1,644	11,055	\$205.20	NA	NA
Source: Medicare Cost Reports, 2017						

Average Costs Per Visit by Major RHC Cost Centers (Table 7)

This section analyzes the major RHC cost centers that make up the total ACPV. The *total costs of RHC services (excluding overhead)* include health care staffing, contracted staff, and related operating costs such as medical supplies, depreciation of medical equipment, and/or professional liability coverage. The *total overhead costs applicable to RHC services* include facility (e.g., rent, heat, utilities), staffing (e.g., salaries, benefits), office supplies, equipment, and insurances.

Overall, independent clinics reported lower direct costs of providing RHC services (\$70.91 per visit) than provider-based clinics (\$108.69 per visit), as well as lower overhead costs applicable to RHC services (\$55.92 per visit) than provider-based clinics (\$98.59 per visit). The differences in the average ACPVs for independent and provider-based RHCs appear to be a function of:

- Lower staffing costs (\$59.92 versus \$88.91), provider costs under agreement (\$2.42 versus \$8.59), and other health care costs (\$9.33 versus \$11.19) for independent RHCs.
- Lower total overhead costs for independent RHCs (\$55.92 versus \$98.59). It is difficult to compare the component parts of overhead across independent and provider-based RHCs as the schedules for the cost reporting process differ. Independent RHCs report the component parts of their overhead on Worksheet A while provider-based RHCs report a more limited set of facility and administrative overhead data on Worksheet M-1 and include the portion of the parent provider's overhead attributed to the RHC as a lump sum on Worksheet M-2.
- Among independent clinics, very large RHCs reported the highest per visit direct costs of providing RHC services (\$83.28) compared to small (\$71.03), medium (\$68.64), and large RHCs (\$69.98), while small RHCs reported the highest overhead costs (\$70.64) compared to their medium (\$51.03), large (\$49.90), and very large peers (\$46.50).
- A similar pattern held true for provider-based RHCs with very large clinics reporting the highest per visit direct costs of providing RHC services (\$119.75) compared to small (\$112.86), medium (\$103.43), and large (\$107.27) RHCs. Small RHCs reported the highest total overhead costs applicable to RHC services (\$107.91) compared to medium (\$95.16), large (\$91.78), and very large (\$101.94) RHCs.

Table 7. Average Medicare Costs Per Visit for Cost Centers by Clinic Size, Ownership, and Payment Limit Status, 2017

		Total Adjusted Visits	Adjusted Cost per Visit (ACPV)	Health Care Staff Costs	Provider Costs Under Agreement	Other Health Care Costs	Total Costs of RHC Services Excluding Overhead	Facility Overhead Costs	Facility Administrative Overhead Costs	Parent Provider Overhead Attributed to the Facility	Total Overhead Costs Applicable to RHC Services*	Less: Per Visit Vaccine Costs†
Independent RHCs		12,944	\$123.64	\$59.92	\$2.42	\$9.33	\$70.91	\$11.32	\$49.24	NA	\$55.92	-\$3.19
Size	Small (1–4,740 visits)	2,989	\$138.47	\$59.18	\$3.10	\$11.37	\$71.03	\$13.92	\$64.84	NA	\$70.64	-\$3.19
	Medium (4,741–10,188 visits)	7,024	\$116.85	\$58.09	\$2.35	\$8.20	\$68.64	\$11.15	\$43.44	NA	\$51.03	-\$2.83
	Large (10,189–31,162 visits)	16,955	\$116.63	\$59.07	\$2.21	\$8.72	\$69.98	\$9.65	\$43.13	NA	\$49.90	-\$3.25
	Very large (over 31,162 visits)	56,888	\$125.40	\$73.26	\$1.04	\$8.99	\$83.28	\$9.18	\$40.72	NA	\$46.50	-\$4.39
Ownership	Private/for profit	12,875	\$115.88	\$55.60	\$2.02	\$8.08	\$65.71	\$9.85	\$45.02	NA	\$52.74	-\$2.56
	Non-profit/publicly owned	13,135	\$144.95	\$71.77	\$3.49	\$12.75	\$85.20	\$15.34	\$60.84	NA	\$64.67	-\$4.92
Provider-Based RHCs		11,511	\$201.49	\$88.91	\$8.59	\$11.19	\$108.69	\$5.80	-\$1.04	\$74.53	\$98.59	-\$5.78
Size	Small (1–4,740 visits)	2,582	\$214.80	\$92.74	\$7.15	\$12.97	\$112.86	\$9.41	-\$2.62	\$78.76	\$107.91	-\$5.97
	Medium (4,741–10,188 visits)	7,079	\$192.76	\$85.12	\$8.43	\$9.88	\$103.43	\$4.60	-\$0.12	\$72.27	\$95.16	-\$5.83
	Large (10,189–31,162 visits)	17,096	\$193.69	\$87.83	\$9.11	\$10.33	\$107.27	\$3.87	-\$0.59	\$71.33	\$91.78	-\$5.36
	Very large (over 31,162 visits)	49,231	\$214.96	\$93.10	\$13.90	\$12.75	\$119.75	\$3.07	\$0.19	\$79.90	\$101.94	-\$6.73
Payment Limit Status	≥ 50 beds (subject to limit)	12,978	\$189.56	\$74.73	\$9.52	\$11.42	\$95.67	\$6.50	-\$2.44	\$73.64	\$99.30	-\$5.40
	< 50 beds (exempt from limit)	11,055	\$205.20	\$93.31	\$8.30	\$11.11	\$112.73	\$5.58	-\$0.61	\$74.81	\$98.37	-\$5.90

Source: Medicare Cost Reports, 2017

* The sum of Facility Overhead Costs and Facility Administrative Overhead Costs (which combined represent the total overhead costs) do not equal the Total Overhead Costs Applicable to RHC Services. This is due to a step-down process used to allocate the portion of the total overhead costs that are applicable only to RHC services for purposes of calculating the Medicare ACPV.

† ACPV is the sum of the Total Costs of RHC Services Excluding Overhead and Total Overhead Costs Applicable to RHC Services less Per Visit Vaccine Costs.

‡ Due to rounding, numbers presented in this table may not add precisely to the totals indicated.

Variations in RHC Healthcare Staffing Costs (Table 8)

In this section, we explore the average per visit staffing costs for the different providers employed by RHCs including net expenses for physicians, PAs and NPs, psychologists and social workers, visiting nurses and other nursing staff, laboratory technologists, and other healthcare staff.

- As discussed above, independent RHCs reported lower staff costs for physicians, PAs and NPs, visiting and other nurses, laboratory technicians, and other health care staff than did provider-based RHCs.
- Physician costs per visit were higher than PA and NP costs across all sizes of RHCs, regardless of provider type, except for small and medium independent RHCs and small provider-based RHCs.
 - Small independent and provider-based RHCs reported higher PA and NP costs per visit (\$30.18 and \$39.41 respectively) than physician costs per visit (\$11.99 and \$23.04 respectively), suggesting that these small RHCs depend more heavily on PAs and NPs than physicians to provide services.
 - Physician costs per visit increased and PA and NP costs per visit decreased as clinic size increased for both independent and provider-based RHCs.
 - Physician costs (\$21.45) and PA and NP (\$21.59) costs for medium sized independent RHCs were comparable.
- Non-profit/publicly owned independent RHCs reported higher staffing costs than their private/for-profit counterparts.
- Provider-based RHCs exempt from the payment limit reported higher staffing costs than those subject to the payment limit, particularly for physicians, PAs, NPs, visiting and other nurses, and other healthcare staff.

Table 8. Rural Health Clinic Mean Medicare Costs per Visit by Staffing Cost Category, 2017

		Total Adjusted Visits	Health Care Staff Costs	Physician Net Expenses	PA and NP Net Expenses	Psychologist and Social Worker Net Expenses	Visiting Nurse and Other Nurse Net Expenses	Lab Tech Net Expenses	Other Healthcare Staff Net Expenses
Independent RHCs		12,944	\$59.92	\$21.89	\$22.38	\$0.42	\$10.79	\$0.20	\$4.25
Size	Small (1–4,740 visits)	2,989	\$59.18	\$11.99	\$30.18	\$0.20	\$11.84	\$0.18	\$4.80
	Medium (4,741–10,188 visits)	7,024	\$58.09	\$21.45	\$21.59	\$0.59	\$10.55	\$0.32	\$3.60
	Large (10,189–31,162 visits)	16,955	\$59.07	\$26.94	\$17.95	\$0.39	\$9.50	\$0.11	\$4.18
	Very large (over 31,162 visits)	56,888	\$73.26	\$39.38	\$14.94	\$0.62	\$13.02	\$0.13	\$5.17
Ownership	Private/for profit	12,875	\$55.60	\$20.85	\$20.81	\$0.46	\$9.33	\$0.12	\$4.04
	Non-profit/publicly owned	13,135	\$71.77	\$24.75	\$26.68	\$0.31	\$14.79	\$0.41	\$4.83
Provider-Based RHCs		11,511	\$88.91	\$34.56	\$27.16	\$0.38	\$14.94	\$0.31	\$11.56
Size	Small (1–4,740 visits)	2,582	\$92.74	\$23.04	\$39.41	\$0.21	\$17.02	\$0.42	\$12.63
	Medium (4,741–10,188 visits)	7,079	\$85.12	\$35.20	\$24.80	\$0.26	\$13.96	\$0.29	\$10.61
	Large (10,189–31,162 visits)	17,096	\$87.83	\$42.62	\$18.98	\$0.54	\$14.09	\$0.25	\$11.35
	Very large (over 31,162 visits)	49,231	\$93.10	\$49.08	\$17.69	\$0.92	\$13.47	\$0.11	\$11.84
Payment Limit Status	≥ 50 beds (subject to limit)	12,978	\$74.73	\$27.51	\$23.37	\$0.49	\$12.38	\$0.68	\$10.29
	50 beds (exempt from limit)	11,055	\$93.31	\$36.75	\$28.34	\$0.34	\$15.74	\$0.19	\$11.96

Source: Medicare Cost Reports, 2017

* Due to rounding, numbers presented in this table may not add precisely to the totals indicated.

SECTION 5: Rural Health Clinic Cost Performance

Section 5 provides a high-level analysis of the average costs reported by independent and provider-based RHCs within each major cost center. Because we report the dollar value for each cost center (rather than the ACPV as reported in Section 4), it is not appropriate to make direct comparisons between types of RHCs. Rather, these tables present a snapshot of the average reported costs for independent and provider-based RHCs within each of the primary cost centers. Table 9 details the total costs of RHC services excluding overhead and includes staffing costs by type of clinician, staffing costs under agreement, and other health care costs. Table 10 covers the total overhead costs applicable to RHC services including facility overhead, administrative overhead, and parent provider overhead allocated to provider-based RHCs, as well as costs for other than RHC services and non-reimbursable costs. Table 11 summarizes the average allowable costs applicable to RHC services.

Provider-based RHCs are more dependent on contracting for clinical staff (i.e., costs under agreement) than independent RHCs (Table 9). Staffing costs under agreement represent 10.5 percent of the overall staffing costs for provider-based RHCs ($\$120,019.45 / (\$120,019.45 + \$1,024,527.77)$) compared to just 2.6 percent of overall staffing costs for independent RHCs ($\$22,215.49 / (\$22,215.49 + \$830,326.17)$).

- It may be more difficult to interpret overhead costs (Table 10) for provider-based RHCs as they do not report the same level of detail on Worksheet M-1. As a result, total overhead costs for provider-based RHCs ($\$263,739.10$) appears less than for independent RHCs ($\$684,123.22$). Rather, the parent provider allocates a portion of its overhead to its RHC(s) on Worksheet M-2. The average overhead allocated from parent hospitals to their provider-based RHCs is $\$846,895.66$ (Table 11). As a result, the total average overhead for provider-based RHCs is $\$1,110,634.76$ ($\$263,739.10 + \$846,895.66$).
- Overall, the average total allowable cost across all independent RHCs is $\$1,606,485.76$. The average total allowable cost across all provider-based RHCs is $\$2,370,059.84$ (Table 11).

Table 9. Average Costs of Providing RHC Services Excluding Overhead, 2017

	Independent (n = 1,064)	Provider-based (n = 2,155)
Provider Staffing Costs		
Physician	\$387,457.94	\$480,590.98
Physician Assistant	\$66,993.67	\$84,892.34
Nurse Practitioner	\$166,727.50	\$152,818.08
Visiting Nurse	\$667.76	\$2,111.34
Other Nurse	\$145,382.75	\$159,933.08
Clinical Psychologist	\$1,547.34	\$1,986.12
Clinical Social Worker	\$5,552.28	\$5,521.65
Laboratory Technician/Radiologist	\$2,199.41	\$2,718.92
Other Staff	\$53,797.52	\$133,955.27
Subtotal - Facility Health Care Staff Costs	\$830,326.17	\$1,024,527.77
Costs Under Agreement		
Physician services under agreement	\$12,448.91	\$104,333.64
Physician supervision under agreement	\$7,059.50	\$3,580.02
Other costs under agreement	\$2,707.08	\$12,105.79
Subtotal under agreement	\$22,215.49	\$120,019.45
Other Health Care Costs		
Medical supplies	\$75,615.41	\$56,434.16
Transportation (health care staff)	\$2,211.26	\$1,770.47
Depreciation - Medical equipment	\$1,620.57	\$2,683.56
Professional liability insurance	\$15,840.18	\$5,952.77
Allowable GME pass through costs	\$3,091.03	-
Other	\$19,004.69	\$58,129.33
Subtotal - Other health care costs	\$117,383.14	\$124,970.29
Total cost of services	\$969,924.79	\$1,269,517.51
Source: Medicare Cost Reports, 2017		
Note: Data are from Worksheet A, Form 222-92 for independent RHCs and Worksheet M-1, Form 2552-10 for provider-based RHCs		

Table 10. Average Overhead, Non-RHC, and Non-Reimbursable Costs, 2017

	Independent (n = 1,064)	Provider-based (n = 2,155)
Facility Overhead Costs		
Rent	\$50,595.26	-
Insurance	\$4,038.93	-
Interest on Mortgage or Loans	\$4,592.56	-
Utilities	\$14,922.67	-
Depreciation-Buildings and Fixtures	\$9,324.89	-
Depreciation-Equipment	\$4,260.50	-
Housekeeping and Maintenance	\$21,538.36	-
Property Tax	\$4,211.43	-
Other	\$15,559.58	-
Subtotal-Facility Costs	\$129,044.17	-
Administrative Overhead Costs*		
Office Salaries	\$231,749.75	-
Depreciation-Office Equipment	\$3,533.32	-
Office Supplies	\$29,838.86	-
Legal	\$2,591.23	-
Accounting	\$12,235.21	-
Insurance	\$4,804.10	-
Telephone	\$11,970.48	-
Fringe Benefits and Payroll Taxes	\$117,057.41	-
Other	\$141,298.70	-
Subtotal-Administrative Cost	\$555,079.05	-
Facility Costs	-	\$47,257.54
Administrative Costs	-	\$216,481.56
Parent provider overhead allocated to facility	-	\$846,895.66
Total Overhead	\$684,123.22	\$1,110,895.66
Costs for Other Than RHC/FQHC Services		
Pharmacy	\$3,358.71	\$4,997.58
Dental	\$3,183.54	\$2,543.40
Optometry	\$48.59	-\$0.48
Telehealth	-	\$350.69
Chronic care management	-	\$461.15
Non-allowable GME pass through costs	-	-
Other	\$43,095.16	\$2,729.40
Subtotal-Cost	\$49,685.99	\$11,081.73
Non-Reimbursable Costs		
Subtotal non-reimbursable costs	\$32,267.80	-
Total Costs	\$1,736,001.80	\$1,544,338.34
Source: Medicare Cost Reports, 2017		
Note: Data are from Worksheet A, Form 222-92 for independent RHCs and Worksheet M-1, Form 2552-10 for provider-based RHCs		

Table 11. Average Allowable Costs Applicable to RHC Services, 2017

	Independent (n = 1,064)	Provider-based (n = 2,155)
Determination of Allowable Costs Applicable to RHC Services		
Cost of RHC Services	\$966,833.76	\$1,269,517.51
Cost of other than RHC services	\$81,953.79	\$11,081.73
Cost of all services	\$1,048,787.55	\$1,280,599.24
Ratio of RHC Services	\$0.95	\$0.99
Total facility overhead	\$684,123.22	\$263,739.10
Parent provider overhead allocated to facility	-	\$846,895.66
Total overhead	\$684,123.22	\$1,110,634.76
Net Facility Overhead Costs	\$684,123.22	\$1,110,634.76
Overhead applicable to RHC/FQHC services	\$639,652.01	\$1,100,542.33
Total allowable cost of RHC/FQHC services	\$1,606,485.76	\$2,370,059.84
Source: Medicare Cost Reports, 2017		
Note: Data are from Worksheet B, Form 222-92 for independent RHCs and Worksheet M-2, Form 2552-10 for provider-based RHCs		

SECTION 6: Staffing Patterns and Productivity

This section examines staffing and productivity patterns across independent and provider-based RHCs. We examined the data in two ways. Table 12 provides a high-level picture of the staffing patterns across all independent and provider-based RHCs in our analytic file (as explained in our methods section) and includes responses from the full sample of RHCs pulled from the 2017 Medicare cost reports, regardless of whether they reported a positive number or a “zero” for each type of staff. Although this approach has the effect of reducing the average staffing patterns, it provides an overview for RHCs nationally and allows us to reconcile and align the data with the individual cost report schedules.

Table 13 presents similar data elements using a different analytic strategy. Rather than calculate the average staffing patterns and visits per FTE (productivity) for all RHCs, we calculated these figures only for those RHCs that employed a clinician in each category by eliminating all RHCs reporting “zero” for any given provider type. While this resulted in a different “n” for each provider line, it allows readers to use these data as benchmarks to evaluate the staffing and productivity performance of their own clinics.

CMS uses productivity standards to determine the average cost per visit for Medicare reimbursement in RHCs (4,200 visits for FTE physicians and 2,100 visits for FTE PAs, NPs, and CNMs).²⁹ When reporting FTE staffing levels on Worksheet B1 for independent clinics and on Worksheet M2 for provider-based clinics, RHCs are directed to report only those hours in which providers are seeing patients and not the percentage of their time spent on administrative activities, trainings, vacation/leave time, and/or non-direct patient care activities. If the primary care team for a given RHC (physicians, PAs, and/or NPs) does not meet the productivity standards based on their combined visits per FTE, the higher of their actual productivity or the calculated productivity standard based on the RHC’s FTE staffing pattern is used to calculate the ACPV as part of the end of year cost settlement. For RHCs that do not meet the combined productivity standards, the use of the higher combined expected number of visits as the denominator in the payment calculation has the effect of lowering their ACPV.

The formulas for the calculation of visits per FTE by clinician type can be found in Appendix A along with the appropriate worksheet, row, and column references for those interested in comparing the performance of their clinical staff to these benchmarks.

Please note that productivity levels for physicians providing services in an RHC under agreement (Line 9, Worksheet B, Part 1 for independent RHCs and Line 9, Worksheet M-2 for provider-based RHCs) are not included in Tables 12 and 13 as FTE staffing levels are not reported for their work.

Full Time Equivalent Staffing Levels and Productivity for All RHCs (Table 12)

- Across all RHCs in our analytic file, the average staffing patterns were similar with the primary difference that independent RHCs employed slightly fewer physicians than provider-based RHCs (1.3 FTEs compared to 1.4 FTEs respectively) and slightly more NPs (1.4 FTEs compared to 1.1 FTEs respectively).
- Clinical staff at both types of RHCs were comparable in terms of productivity (average number of visits per FTE) across provider categories with limited exceptions.
 - PAs in independent RHCs appeared to be slightly more productive than those in provider-based RHCs as they generated an additional 211 visits per FTE.
 - NPs in independent RHCs appeared to be more productive than those in provider-based RHCs as they generated an additional 715 visits per FTE.

Table 12. Average Staffing and Productivity for All RHCs, 2017

	Independent (n = 1,064)	Provider-based (n = 2,155)
Average Number of FTEs (by type of clinician)*		
Physician	1.3	1.4
Physician Assistant	0.5	0.5
Nurse Practitioner	1.4	1.1
Visiting Nurse	0.01	0.02
Clinical Psychologist	0.02	0.02
Clinical Social Worker	0.06	0.05
Total Staff	3.3	3.1
Average Number of Visits per FTE (by type of clinician)		
Physician	3,561	3,572
Physician Assistant	1,890	1,679
Nurse Practitioner	3,236	2,521
Visiting Nurse	16	8
Clinical Psychologist	33	60
Clinical Social Worker	168	137
Source: Medicare Cost Reports, 2017		
Note: Data are from Worksheet B, Form 222-92 for Independent RHCs and Worksheet M-2, Form 2552-10 for Provider-		
† Averaged across all clinics regardless of whether each type of clinician was on staff		
‡ Columns may not total 100 percent due to rounding		

Full Time Equivalent Staff Levels and Productivity Based on Individual RHC Staffing Patterns (Table 13)

The results in Table 13 were calculated based on individual RHC staffing patterns. Only RHCs that employed a specific type of clinician were included in the denominators for each staffing category. As discussed in the previous section, including the “zeros” provides a high-level overview of staffing patterns and productivity across all RHCs but is less useful for benchmarking purposes as the “zeros” pull down the averages for each staffing category. Excluding the “zeros” provides more accurate data for benchmarking clinic performance. RHC stakeholders can use these tables to compare the productivity of their own providers to the average productivity for RHCs nationally.

- Staffing patterns were relatively consistent across independent and provider-based RHCs with independent RHCs having slightly higher staffing patterns for physicians, PAs, and NPs. Provider-based RHCs had slightly higher staffing for visiting nurses.
- As expected, variances in the patterns of productivity across independent and provider-based RHCs were more pronounced when based on actual staffing patterns than when examined for all RHCs in the sample.
 - In terms of productivity (average number of visits per FTE), clinicians in independent RHCs were more productive than those in provider-based clinics, particularly for physicians (an additional 467 visits per FTE), PAs (an additional 1,220 visits per FTE), and NPs (an additional 764 visits per FTE). It is difficult to explain these differences in productivity based solely on cost report data. It is likely that variations in productivity can be attributed to different reporting and administrative responsibilities for independent and provider-based RHCs.
 - On average, fewer physicians met their productivity standards (4,200 patient visits per FTE) than did either PAs or NPs (2,100 patient visits per FTE).
 - A greater percentage of physicians in independent RHCs (51.2 percent) met the productivity standard of 4,200 visits per FTE than did their peers in provider-based RHCs (38.2 percent).
 - Similarly, a greater percentage of NPs in independent RHCs (81.6 percent) met the expected productivity standards than did NPs in provider-based RHCs (76.1 percent).

Table 13. Average RHC Staffing, Visits, and Productivity, 2017

	Independent		Provider-based	
	Average	Sample Size (n)	Average	Sample Size (n)
Average Number of FTEs (by type of clinician)				
Physician	1.7	814	1.6	1,846
Physician Assistant	1.3	445	1.1	1,118
Nurse Practitioner	1.6	890	1.3	1,760
Visiting Nurse	1.9	6	2.3	33
Clinical Psychologist	0.8	21	0.8	65
Clinical Social Worker	0.8	88	0.8	155
Average Number of Visits per FTE (by type of clinician)				
Physician	4,655	814	4,188	1,838
Physician Assistant	4,519	445	3,299	1,097
Nurse Practitioner	3,869	890	3,105	1,750
Visiting Nurse	2,773	6	999	18
Clinical Psychologist	1,662	21	2,020	64
Clinical Social Worker	2,028	88	2,002	148
Comparison to Productivity Standards (by type of clinician)*				
Physicians	51.2%	417	38.2%	696
Physician Assistant	82.0%	365	80.0%	874
Nurse Practitioner	81.6%	726	76.1%	1,324
Source: Medicare Cost Reports, 2017				
Note: Data are from Worksheet B, Form 222-92 for Independent RHCs and Worksheet M-2, Form 2552-10 for Provider-based RHCs				
* Only physicians, physician assistants, and nurse practitioners are subject to productivity standards				
† Averaged across clinics with each type of clinician on staff				

SECTION 7: Efficiency Measures

As with Section 6, we present the data on RHC efficiency in two ways. For purposes of this section, RHC efficiency was assessed by calculating the average cost per visit by cost center and the average cost per FTE staff category. These calculations provide comparative data for clinics to assess the efficiency of their operations under the assumption that clinics with lower average costs per visit and/or lower average cost per FTE staff category are operating more efficiently.

Tables 14 and 16 present a high-level view of the average cost per visit by cost center and average cost per FTE, respectively, for all RHCs with valid financial data in our sample (1,064 independent RHCs and 2,155 provider-based RHCs). In calculating these high-level efficiency measures for RHCs, we included the data for each clinic in our analytic sample. For example, when calculating average cost per visit for social workers, we used the net costs for social workers (reported on worksheet A for independent RHCs and worksheet M1 for provider-based RHCs) as the numerator and the total visits for each clinic (worksheet B1 for independent and worksheet M2 for provider-based RHCs) as the denominator. Since comparatively few RHCs hire social workers (see Section 2), this formula has the effect of reducing the average cost per visit for social workers across the RHC program. This information will be most useful to policymakers and others interested in data on the performance of the RHC Program as a whole.

While the previous approach is helpful for policymakers and RHC stakeholders interested in overall program performance, it is less helpful for RHC administrators and staff in benchmarking their clinic's performance. Tables 15 and 17 present a more detailed analysis that can be used for benchmarking individual RHC performance. In calculating these measures, we eliminated any RHCs with zeros in a cost, visit, or staffing category. That is, we used the same formula to calculate the average cost per visit for social workers, but only included data for those RHCs that employ a social worker. This has the effect of reducing the numerators and denominators for these calculations but provides a more accurate sense of the costs per visit for those RHCs that employ a social worker.

The formulas used to calculate the measures for this section (as well as Section 6) are provided in Appendix A. These formulas can be used by RHC administrators and stakeholders who wish to calculate these measures for their own clinics.

Average Cost Per Visit

To calculate the average cost per visit, we used the total visits for each RHC for the denominator. This allows for a consistent calculation of the cost per visit across all RHC cost centers. Please note that we used the total actual visits reported by each RHC in the denominator, rather than the adjusted visits used during the year end settlement process (as discussed in Section 6). This allows for a more accurate picture of the actual, rather than adjusted, costs.

- Consistent with the analysis of the adjusted cost per visit as discussed in Section 4, the average costs per visit for independent RHCs were lower than for provider-based RHCs (Tables 14 and 15).
 - This pattern was observed regardless of the calculation method (all RHCs versus the subset of RHCs based on staffing patterns).
 - As expected, average costs per visit were higher for independent and provider-based RHCs based on actual staffing patterns than for the entire population of RHCs in our analytic file.
- Staffing patterns vary from clinic to clinic. While RHCs typically employ physicians directly to provide services, physicians may provide patient care or medical direction and supervision under a contractual agreement. There is no specific FTE percentage or employed/contracted agreement required for physicians under agreement in an RHC unless individual states have additional compliance standards.

Table 14. Average Cost per Visit for all RHCs by Cost Center, 2017

	Independent (n = 1,064)	Provider-based (n = 2,155)
Physicians	\$23.97	\$38.35
Physician Assistants	\$6.70	\$10.27
Nurse Practitioners	\$18.55	\$19.92
Psychologists	\$0.12	\$0.11
Social Workers	\$0.31	\$0.28
Visiting Nurses	\$0.08	\$0.23
Physician Services Under Agreement	\$1.19	\$7.75
Total Healthcare Provider Costs	\$67.82	\$105.92
Total Physician Costs Under Agreement	\$2.69	\$9.17
Other Health Care Costs	\$12.05	\$12.27
Total Direct Costs of Providing Medical Services	\$81.37	\$119.62
Facility Overhead	\$16.75	\$6.60
Administrative Overhead	\$63.04	-\$1.10
Parent Provider Overhead Allocated	-	\$83.06
Total Overhead	\$79.79	\$27.64
Total Allowable RHC Costs per Actual Encounter	\$151.39	\$223.09

Source: Medicare Cost Reports, 2017
Note: Rates reflect costs across all RHCs (missing values are set to zero)

Table 15. Average Cost per Visit based on Actual Staffing Patterns, 2017

	Independent		Provider-based	
	Cost/Visit (\$)	Sample Size (n)	Cost/Visit (\$)	Sample Size (n)
Physicians	\$31.33	814	\$46.64	1,772
Physician Assistants	\$16.02	445	\$22.20	997
Nurse Practitioners	\$22.18	890	\$26.24	1,636
Psychologists	\$5.99	21	\$6.36	38
Social Workers	\$3.74	88	\$4.46	137
Visiting Nurses	\$13.38	6	\$18.01	28
Physician Services Under Agreement	\$11.87	107	\$29.40	568

Source: Medicare Cost Reports, 2017
Note: Rates reflect costs for RHCs with each provider type (missing values are excluded)

Average Cost Per FTE

Table 16 provides an overview of the average cost per FTE clinician staffing category across all RHCs. As shown in Appendix A, the formula uses direct net costs for each staffing category from Worksheets A for independent RHCs and M1 for provider-based RHCs as the numerator, and the total FTEs for each staffing category from Worksheets B1 for independent RHCs and M2 for provider-based RHCs as the denominator.

- The average costs per FTE for physicians, PAs, and NPs were lower for independent than for provider-based RHCs when calculated across all RHCs (Table 16) as well as for the subset of RHCs based on staffing patterns (Table 17).
- Visiting nurses were an exception to this pattern as independent RHCs reported a higher average cost per FTE than did provider-based RHCs both as an overall rate (\$858 versus \$548) (Table 16) and based on actual staffing patterns (\$152,214 versus \$131,225) (Table 17).
- Independent RHCs reported higher average overall costs for social workers than did provider-based RHCs (\$9,905 versus \$7,306) (Table 16); however, when based on actual staffing patterns, provider-based RHCs reported higher average social worker costs than independent RHCs (\$164,009 versus \$119,765) (Table 17).

Table 16. Average Cost per FTE for all RHCs (by type of clinician), 2017

	Independent (n = 1,064)	Provider-based (n = 2,155)
Physicians	\$245,875	\$324,310
Physician Assistants	\$67,317	\$132,781
Nurse Practitioners	\$114,561	\$146,433
Psychologists	\$2,495	\$2,850
Social Workers	\$9,905	\$7,306
Visiting Nurses	\$858	\$548

Source: Medicare Cost Reports, 2017
Note: Rates reflect costs across all RHCs

Table 17. Average Cost per FTE based on Actual Staffing Patterns, 2017

	Independent		Provider-based	
	Cost/FTE (\$)	Sample Size (n)	Cost/FTE (\$)	Sample Size (n)
Physicians	\$321,390	814	\$410,869	1,701
Physician Assistants	\$160,956	445	\$303,761	942
Nurse Practitioners	\$136,958	890	\$198,592	1,589
Psychologists	\$126,393	21	\$236,246	26
Social Workers	\$119,765	88	\$164,009	96
Visiting Nurses	\$152,214	6	\$131,225	9

Source: Medicare Cost Reports, 2017
Note: Rates reflect costs for RHCs employing each type of clinician

Medicare Operating Statistics

Table 18 provides data on two important Medicare operating indicators for RHCs. The first assesses the extent to which RHCs are serving Medicare beneficiaries (as a percentage of total visits). Unfortunately, the cost reports do not capture data on the extent to which RHCs serve patients covered by Medicaid and other third-party payers. The second measure assesses the level of Medicare non-reimbursable bad debt incurred by RHCs. Medicare reimburses RHCs for 65 percent of allowable bad debt claimed on their cost reports, provided that RHCs can document reasonable efforts to collect allowable bad debt. Allowable bad debt includes deductibles and co-payments due from patients for services provided under the RHC benefit. Reimbursement for allowable bad debt occurs during the cost report settlement process. This measure assesses the level of non-reimbursable bad debt incurred by RHCs resulting from their provision of services to Medicare beneficiaries.

- Independent RHCs served a lower percentage of Medicare beneficiaries (23.3 percent) than did provider-based RHCs (26.1 percent).
- Both independent and provider-based RHCs incurred little Medicare non-reimbursable bad debt at 0.3 percent each.

Table 18. Medicare Operating Statistics, 2017

	Independent (n = 1,064)	Provider-based (n = 2,155)
Medicare Visits (as percent of total visits)	23.3%	26.1%
Medicare Non-Reimbursable Bad Debt (as percent of total Medicare charges)	0.3%	0.3%
Source: Medicare Cost Reports, 2017		

SECTION 8: Rural Health Clinic Quality Reporting Challenges

Despite the growing emphasis on quality reporting by third party payers, RHCs have largely been underrepresented in quality reporting programs and, as a result, relatively little information is available on the quality of RHC services.³¹ The primary reason for underrepresentation of RHCs in quality reporting programs is that RHCs were ineligible to participate in CMS quality reporting programs such as the Physician Quality Reporting System and the Electronic Health Record Incentive Payment Program and were exempted from mandatory participation in the Merit-Based Incentive Payment System (MIPS).³¹ The exclusion of RHCs from CMS's quality reporting programs may unintentionally create a perception that RHCs are unable to meet the requirements of these initiatives and are providing lesser quality care than larger, urban-based clinicians.³¹

Although exempt from mandatory participation in MIPS, RHCs may participate on a voluntary basis under CMS's 2016 final rules for MIPS and Alternative Payment Models incentives under the Medicare Physician Fee Schedule. To date, few have chosen to do so. RHCs, however, have been more likely to participate in Medicare's Shared Savings Program Accountable Care Organizations (SSP ACOs). In January 2018, CMS announced that 1,210 RHCs were participating in SSP ACOs.³² Since that time, the number of SSP ACOs with an RHC presence has grown rapidly with 1,643 RHCs participating in SSP ACOs as of January 2022.³³

The primary reasons for low RHC participation in MIPS include the following: (1) MIPS focuses on Medicare Part B/Physician Fee Schedule services (rather than Part A RHC payment methodology); (2) RHCs are not eligible for payment incentives (or subject to penalties) for voluntary participation in MIPS; and (3) CMS did not release guidance on how RHCs could effectively participate in MIPS.³¹ An additional factor is that the RHC payment methodology does not identify the component professional services and procedures provided during an RHC encounter. In response, CMS changed RHC billing procedures (effective April 2016) to require RHCs to report the appropriate HCPCS and procedure codes for each service rendered on their UB-04 claim forms along with the revenue and other required billing codes. As these additional codes do not currently influence RHC reimbursement, questions have been raised about the validity of RHC claims data for use by MIPS. Still, these codes could facilitate RHC participation in MIPS and allow for development of RHC claims-based quality measures. Moving forward, CMS could explore ways for these data to be linked to MIPS reporting and improve the accuracy of RHC coding.

Medicaid programs and other private sector payers are also rapidly implementing quality reporting, value-based purchasing, and advanced payment models. State Medicaid managed care programs, in particular, often have significant quality measurement requirements.³⁴⁻³⁶ Similarly, private payers, quality organizations, accountable care organizations, states, and CMS are implementing their own quality reporting and value-based payment models.³¹ Given the volume of Medicaid enrollees and commercially-insured patients served by RHCs, this is a rapidly growing area of activity that will drive RHC quality reporting in the future.³¹ RHCs should prepare to participate in these programs and demonstrate the quality and value of their care.

Opportunities to support RHC participation in quality reporting and value-based payment models include identification of a set of core RHC-relevant quality measures as well as the development of targeted technical assistance and program support.³¹ The development of a core set of RHC quality measures for use by existing quality reporting and value-based payment models would facilitate RHC participation in different programs, improve RHC data collection, and allow comparison across RHCs. For example, these measures could be used in MIPS and Medicaid quality reporting programs as well as incorporated into the Medicare Beneficiary Quality Improvement Program for use by CAH-owned RHCs.³⁷

METHODOLOGY

Data Sources: This study used the September 2021 CMS Provider of Services (POS) file and Medicare cost reports for independent (Form CMS 222-92) and provider-based (Form CMS 2552-10, Worksheet M) RHCs for fiscal year 2017 (with fiscal year dates between October 1, 2016 through September 30, 2017). We linked the POS file to the 2010 Rural-Urban Commuting Area (RUCA) zip code approximation file to determine the overall distribution and level of rurality of RHCs. We also linked the POS file to the Robert Wood Johnson Foundation’s 2021 County Health Rankings (CHR) data to identify county-level demographic, socioeconomic, and health characteristics as well as the 2013 Rural Urban Continuum Codes (RUCCs) to categorize counties with and without RHCs by county-level rurality. Additionally, we linked the cost report data to the September 2021 POS file to obtain information on ownership type (i.e., private/for-profit, non-profit/publicly owned) for independent clinics and certified bed counts for provider-based clinics’ parent hospitals.

Our goal was to maximize the available data for every stage of the analysis. Reflecting this goal, we used different data sources and subsets of cost report data where appropriate. As a result, sample sizes vary across different sections of the chartbook (Table 19). Specifically, Section 1 relies upon the POS file for the quarter ending September 20, 2021, which includes data for 4,888 (1,652 independent and 3,236 provider-based) RHCs.

Section 3 also uses the September 2021 POS file, linked with the 2020 and 2021 CHR data, to identify and describe county-level demographic, socioeconomic, and health characteristics of the 3,075 counties with and without RHCs in 2021. Sections 2, 4, 5, 6, and 7 use Fiscal Year 2017 Medicare cost report data to describe the operational and financial characteristics of 3,219 RHCs that reported valid financial and staffing data. A primary reason for the lower number of RHCs reflected in the financial data from the 2017 Medicare cost reports is due to an optional filing process that allows RHC systems, either independent or provider-based, with multiple clinics operating under single ownership, to file a consolidated cost report.

Table 19. Data Sources and Sample Sizes for each Section of the Chartbook

Chartbook Section	Data Source(s)	Sample Size
1: Overview and Distribution of RHCs	Provider of Services File, Sept. 2021 2010 Rural-Urban Commuting Area zip code approximation file	4,888 RHCs 3,452 Zip Codes with RHCs
2: Clinic Characteristics	Medicare Cost Reports, 2017	3,846 RHCs (reporting operating hours) 3,219 RHCs (offering behavioral health and non-RHC services)
3: Service Area Context	Provider of Services File, Sept. 2021 County Health Rankings, 2020 and 2021 2013 Rural-Urban Continuum Codes	3,075 Counties (with/without RHCs)
4: Average Adjusted Cost Per Visit and Cost Analysis	Medicare Cost Reports, 2017	3,219 RHCs
5: Cost Performance	Medicare Cost Reports, 2017	3,219 RHCs
6: Staffing and Productivity	Medicare Cost Reports, 2017	3,219 RHCs
7: Efficiency Measures	Medicare Cost Reports, 2017	3,219 RHCs

The benefit of the consolidated reporting process is that it allows RHC systems to combine visits for comparison to productivity standards and minimizes the need to allocate costs to individual clinics operating under single ownership. RHCs electing to file consolidated cost reports are instructed to report a single set of combined financial, staffing, and productivity data for their “parent” location and all subsidiary clinics. They are also instructed to report data on other characteristics (e.g., location, hours of operation) for each clinic under the consolidated filing on Worksheet S. As a result, our sub-analyses of average daily RHC and non-RHC operating hours for all RHCs (Section 2) includes a larger sample of 3,846 RHCs (1,505 independent and 2,341 hospital-based clinics).

Rationale for the Use of 2017 Cost Report Files and Plans for Revisions/Updates: The original draft of this chartbook was organized around the 2017 cost reports. As we were working on the chartbook, the 2018 cost report data started to become available. Although we would have preferred to use the later data set, we were challenged by the fact that the Centers for Medicare and Medicaid Services (CMS) amended the cost report format for independent (freestanding) RHCs mid-way through the 2018 cost reporting cycle.

Effective for cost reporting periods ending on or after September 30, 2018, independent RHCs are required to report their costs using form CMS-222-17. For cost reporting periods ending before September 30, 2018 (and all earlier cost reporting cycles including cost reporting year 2017), RHCs must report their costs using form CMS-222-92. The two forms capture similar, but not perfectly aligned, information. Form CMS-222-17 also captures information not currently captured by form CMS-222-92 or the form used to collect cost data from provider-based RHCs (CMS 2552-10). The fact that independent RHCs represented in the 2018 cost report data would be using one of two different forms precluded our use of the 2018 cost reports.

Phasing in the new form (CMS-222-17) mid-way through the 2018 cost reporting year created two challenges for our analysis. First, as noted above, data for independent RHCs (depending on their fiscal year ending dates) was reported using two separate forms that are not perfectly aligned. Second, our experience suggests the potential for data quality issues during the initial use of a new cost-reporting form. As a result, we determined that the use of the 2018 cost report files would be problematic.

We also explored the possibility of using the 2019 cost report files but rejected this idea as, at the time of production, the total number of cleared cost reports was small given the submission dates and turnaround time for clearance. RHCs are required to submit their cost reports electronically no later than five months after the close of their fiscal years. As a result, we were concerned about sample size and decided to use the 2017 data files to balance data accuracy and sample size.

We currently plan to release an abbreviated policy brief focusing on the financial measures presented in Sections 4 through 7 using the 2020 Medicare cost reports for independent and provider-based RHCs. This brief will be released in the early summer of 2022.

Classifying RHCs by degree of rurality: Classifying RHCs by degree of rurality presents a challenge, as the definition of rurality used to qualify for certification as an RHC does not align well with other standard rural classification systems such as the county-based RUCCs and the census tract-based RUCAs. To qualify for RHC designation, a clinic must be in a U.S. Census Bureau-defined non-urbanized area.⁵ Based on the CMS State Operations Manual, Appendix G – Guidance for Surveyors: Rural Health Clinics (RHCs), § 491.5(c) Criteria for Designation of Rural Areas, rural (i.e., non-urbanized) areas are those areas that were not delineated as urbanized in the last census conducted by the Census Bureau.²⁶

⁵ The Census Bureau defines two types of urban areas: (1) urban areas of 50,000 or more people and (2) urban clusters of at least 2,500 and less than 50,000 people. For Census Bureau purposes, “rural” encompasses all population, housing, and territory not included within an urbanized area or an urban cluster.³⁸ For the purpose of certifying RHCs, urban clusters are considered “rural” by CMS even though the Census Bureau classifies them as urban.

Excluded from this rural area classification are:

- i. Central cities of 50,000 inhabitants or more
- ii. Cities with at least 25,000 inhabitants which, together with contiguous areas having stipulated population density, have combined populations of 50,000 and constitute, for general economic and social purposes, single communities
- iii. Closely settled territories surrounding cities and specifically designated by the Census Bureau as urban²⁵

There are two challenges with using the Census Bureau definition of rural (non-urbanized) areas for this chartbook. First, the Census Bureau's definition provides for urbanized areas, urban cores, and non-urbanized areas and, as such, does not allow the classification of areas by a more precise degree of rurality.²⁷ Second, it also does not provide an option to link to other data sets to describe the demographic and/or economic context of the areas where RHCs are located, which are typically available at the county level. County- and census tract-based rural classification systems do not align with the Census Bureau's classification system, which does not use counties as its unit of analysis.²⁷ Further, the Census Bureau clarifies that "nonmetro" is not synonymous with rural.²⁷⁻²⁸ Although metro areas are defined at the county level, the Census Bureau notes that most counties have a mix of urban and rural areas.²⁸

To address these challenges, we used two rural-urban classification systems for this chartbook as discussed above. For Section 1: Overview and Distribution of RHCs, we used the 2010 RUCA codes which classify U.S. census tracts using measures of population density, urbanization, and daily commuting, and are based on the 2010 decennial census and the 2006-2010 American Community Survey. A second dataset applies 2010 RUCA classifications to zip code areas by transferring RUCA values from the census tracts that comprise them. We used this zip code approximation file (last updated August 17, 2020) to link the September 2021 POS file on RHC zip codes and categorize clinic locations by degree of rurality. The RUCA classification system contains two levels. Whole numbers (1-10) are used to distinguish metropolitan, micropolitan, small town, and rural commuting areas based on the size and direction of the primary commuting flows. These 10 codes are further subdivided based on secondary commuting flows, providing flexibility in combining levels to meet different definitional needs and preferences. To combine these codes into five levels (i.e., urban, suburban, large rural, medium/small rural, and isolated/completely rural), we used a modified consolidation formula developed by the Washington State Department of Health to support their community health assessment activities.²⁵ The use of the RUCA codes allowed us to address the over-bounding challenges of county-based rural classification systems identified by the Census Bureau, and to provide a more accurate description of the rurality of RHCs.

Unfortunately, little demographic, economic, and health status data are available at either the census tract or zip code level. To address this limitation, we linked the POS analytic file to the 2013 RUCCs and CHR data to facilitate a more detailed description of the context of counties in which RHCs do and do not operate (Section 3).

Cost Report data cleaning: As discussed above, our initial download of 2017 RHC cost reports contained records for 3,898 clinics. Due to data quality issues, 679 records were excluded from our analyses of financial and staffing data. Of these 679 records, 627 were excluded because they reported zero patient visits or zero adjusted costs per visit during the cost reporting period or had other data quality issues (such as missing or inappropriate negative values). An additional 52 records with duplicate CMS Certification Numbers were excluded from our analyses. This resulted in a final analytic file representing 3,219 (3,898-679) RHCs (1,064 independent and 2,155 hospital-based clinics) with analyzable financial and staffing data.

Analyses: We used the 2021 POS file linked with the 2010 RUCA zip code file to analyze the overall number and distribution of RHCs by clinic type, ownership status, region, and level of rurality (Section 1). We also linked the POS file to the CHR data and 2013 RUCCs to compare the demographic characteristics, socioeconomic characteristics, health status, and health outcomes of counties with RHCs to counties without RHCs, using Wilcoxon Rank Sum tests for nonparametric data and two-sample t-tests for parametric data (Section 3). Only those counties in the 45 states with RHCs in 2021 were included for purposes of these analyses.

We used the 2017 Medicare cost reports to analyze RHC characteristics including hours and days of operation, provision of behavioral health services, provision of non-RHC services (pharmacy, dental, and optometry) (Section 2), staffing patterns and visits by type of full-time employee (e.g., physicians, nurse practitioners, physician assistants), and provider performance relative to Medicare productivity standards (Section 6).

Using the same approach as our 2019 study on RHC costs and Medicare reimbursement, we used the 2017 Medicare cost report data linked with the 2017 POS file to analyze the ACPV and related cost centers across RHC provider types (independent vs. provider-based clinics).³⁰ This approach reflects differences in organizational operations, oversight, and overhead allocation between independent and provider-based clinics. We also analyzed the ACPV across different sized clinics (i.e., small, medium, large, and very large) based on visit volume,^{**} and by ownership type (private/for-profit vs. non-profit/publicly owned) for independent RHCs and whether they are subject to the payment limit for provider-based RHCs (Section 4).

In addition to calculating the average ACPV based on clinic volume, we compared the average overall facility health care staff, overhead, and non-RHC costs for independent and provider-based RHCs by cost center (Section 5) and produced overall measures of efficiency for independent and provider-based RHCs (Section 7).

Limitations: The total number of RHCs in the fiscal year 2017 cost report data is smaller than the universe of operating clinics as identified in the December 2017 POS file for several reasons. As discussed above, 679 records were eliminated as they reported zero patient visits or zero adjusted costs per visit during the cost reporting period or had other data quality issues. Additionally, some RHCs may file for an extension on their cost reports, further limiting the sample size.

Another possible limitation is due to our treatment of the financial information for RHC systems that file a consolidated report, which complicates the interpretation of the mean financial data reported by RHCs. As we cannot accurately reallocate the financial information across the system clinics, we treated the financial information for each consolidated cost report as a single record. Among independent RHCs, 115 filed consolidated reports representing 350 clinics. Among provider-based RHCs, 147 filed consolidated reports representing 518 clinics. To calculate mean financial data across RHCs, we included the primary reporting clinic for each RHC filing a consolidated report (115 independent RHCs and 147 provider-based RHCs) in the denominator for our calculations and did not include the additional clinics (235 independent RHCs and 371 provider-based RHCs) in the denominator. Finally, another potential limitation results from accounting errors in the self-reported raw data that may affect our results. Although we conducted data quality checks to identify outliers and ensure that the data were calculated correctly, we were unable to determine the appropriateness of the data entered in any given field.

^{**} To divide clinics into size categories and identify outliers, we used Tukey's method of leveraging the Interquartile Range.³⁹ We established fences at the values located at $Q1-1.5(Q3-Q1)$ and $Q3+1.5(Q3-Q1)$ to categorize clinics as small, medium, and large. We identified 224 outlier clinics with exceptionally large numbers of visits. To avoid skewing the results, we created a separate very large size category for our analysis. The following is our grouping of clinics by number of visits: small (1 – 4,740 visits); medium (4,741 – 10,188 visits); large (10,189 – 31,162 visits); and very large (31,163 or more visits).

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APPENDIX A. Definitions of Rural Health Clinic Productivity and Efficiency Measures

RHC Measures	Independent RHCs	Provider-Based RHCs
	Form CMS-222-92: W = Worksheet; R = Row; C = Column	Form CMS-2552-10: W = Worksheet; R = Row; C = Column
Productivity Indicators	Formula	Formula
Average Number of Visits Per Full Time Employee (FTE): These measures track provider productivity to facilitate comparison across RHCs. Visit and FTE data are drawn from the Visits and Productivity schedules of WB1-Visits and Overhead Cost for RHC/FQHC Services (independent) and WM2-Allocation of Overhead to RHC/FQHC Services (provider-based).		
Physicians (MD & DO)	$\frac{\text{MD \& DO Visits (WB1,R1,C2)}}{\text{MD \& DO FTEs (WB1,R1,C1)}}$	$\frac{\text{MD \& DO Visits (WM2,R1,C2)}}{\text{MD \& DO FTEs (WM2,R1,C1)}}$
Physician Assistants (PA)	$\frac{\text{PA Visits (WB1,R2,C2)}}{\text{PA FTEs (WB1,R2,C1)}}$	$\frac{\text{PA Visits (WM2,R2,C2)}}{\text{PA FTEs (WM2,R2,C1)}}$
Nurse Practitioners (NP)	$\frac{\text{NP Visits (WB1,R3,C2)}}{\text{NP FTEs (WB1,R3,C1)}}$	$\frac{\text{NP Visits (WM2,R3,C2)}}{\text{NP FTEs (WM2,R3,C1)}}$
Subtotal Primary Care Providers (PCP)	$\frac{\text{Subtotal PCP Visits (WB1,R4,C2)}}{\text{Subtotal PCP FTEs (WB1,R4,C1)}}$	$\frac{\text{Subtotal PCP Visits (WM2,R4,C2)}}{\text{Subtotal PCP FTEs (WM2,R4,C1)}}$
Visiting Nurses (VN)	$\frac{\text{VN Visits (WB1,R5,C2)}}{\text{VN FTEs (WB1,R5,C1)}}$	$\frac{\text{VN Visits (WM2,R5,C2)}}{\text{VN FTEs (WM2,R5,C1)}}$
Clinical Psychologist (CP)	$\frac{\text{CP Visits (WB1,R6,C2)}}{\text{CP FTEs (WB1,R6,C1)}}$	$\frac{\text{CP Visits (WM2,R6,C2)}}{\text{CP FTEs (WM2,R6,C1)}}$
Social Worker (SW)	$\frac{\text{SW Visits (WB1,R7,C2)}}{\text{SW FTEs (WB1,R7,C1)}}$	$\frac{\text{SW Visits (WM2,R7,C2)}}{\text{SW FTEs (WM2,R7,C1)}}$
Operating Indicators	Formula	Formula
Average Cost Per Visit by Cost Center: These measures track the costs per visit for clinical staff and other allowable RHC costs to facilitate comparison across RHCs. Cost data are drawn from WA-Reclassification and Adjustment of Trial Balance of Expenses (independent) and WM1-Analysis of Hospital-Based RHC/FQHC Costs (provider-based). Visit data are drawn from the Visits and Productivity schedules of WB1-Visits and Overhead Cost for RHC/FQHC Services (independent) and WM2-Allocation of Overhead to RHC/FQHC Services (provider-based).		
Physician (MD/DO)	$\frac{\text{MD \& DO Costs (WA,R1,C7)}}{\text{Total Visits (WB1,R8+R9,C2)}}$	$\frac{\text{MD \& DO Costs (WM1,R1,C7)}}{\text{Total Visits (WB1,R8+R9,C2)}}$
Physician Assistant (PA)	$\frac{\text{PA Costs (WA,R2,C7)}}{\text{Total Visits (WB1,R8+R9,C2)}}$	$\frac{\text{PA Costs (WM1,R2,C7)}}{\text{Total Visits (WB1,R8+R9,C2)}}$
Nurse Practitioner (NP)	$\frac{\text{NP (WA,R3,C7)}}{\text{Total Visits (WB1,R8+R9,C2)}}$	$\frac{\text{NP Costs (WM1,R3,C7)}}{\text{Total Visits (WB1,R8+R9,C2)}}$

Visiting Nurse (VN)	<u>VN Costs (WA,R4,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>VN Costs (WM1,R1,C7)</u> Total Visits (WB1,R8+R9,C2)
Clinical Psychologist (CP)	<u>CP Costs (WA,R6,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>CP Costs (WM1,R6,C7)</u> Total Visits (WB1,R8+R9,C2)
Social Worker (SW)	<u>SW Costs (WA,R7,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>SW Costs (WM1,R7,C7)</u> Total Visits (WB1,R8+R9,C2)
Physician Services Under Agreement Costs (PSUA)	<u>PSUA Costs (WA,R13,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>PSUA Costs (WM1,R11,C7)</u> Total Visits (WB1,R8+R9,C2)
Total Health Care (HC) Provider Costs (includes PSUA)	<u>Total HC Provider Costs (WA,R12+R13,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>Total HC Provider Costs (WM1,R10+R11,C7)</u> Total Visits (WM2,R8+R9,C2)
Total Physician Costs Under Agreement (PCUA) (includes all physicians under agreement)	<u>Total PCUA (WA,R16,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>Total PCUA (M1,R14,C7)</u> Total Visits (WM2,R8+R9,C2)
Other Health Care Costs (medical supplies, professional liability, etc.)	<u>Other Health Care Costs (WA,R24,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>Other Health Care Costs (WM1,R21,C7)</u> Total Visits (WM2,R8+R9,C2)
Total Direct Costs of Providing Medical Services (less overhead and other RHC services)	<u>Total Cost of Services (WA,R25,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>Total Cost of Services (WM1,R22,C7)</u> Total Visits (WM2,R8+R9,C2)
Facility Overhead Costs (office building)	<u>Facility Overhead (WA,R37,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>Facility Overhead (WM1,R29,C7)</u> Total Visits (WM2,R8+R9,C2)
Administrative Overhead Costs (office staff, equipment, etc.)	<u>Administrative Overhead (WA,R49,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>Administrative Overhead (WM1,R30,C7)</u> Total Visits (WM2,R8+R9,C2)
Parent Provider Overhead Costs Allocated to RHC (from the hospital that owns the provider-based clinic)	Not Applicable	<u>Parent Provider Overhead (WM2,R15,C1)</u> Total Visits (WM2,R8+R9,C2)
Total Overhead Costs	<u>Total Overhead (WA,R50,C7)</u> Total Visits (WB1,R8+R9,C2)	<u>Total Overhead (WM1,R31,C7)</u> Total Visits (WM2,R8+R9,C2)
Total Allowable RHC Costs per Actual Visit (allowable RHC costs, less vaccine costs)	<u>Total Allowable Costs (WC1,R3,C1)</u> Total Visits (WB1,R8+R9,C2)	<u>Total Allowable Costs (WM3,R3,C1)</u> Total Visits (WM2,R8+R9,C2)
Average Cost Per Full Time Employee (FTE): These measures analyze RHC FTE staffing costs to facilitate comparison across RHCs. Cost data are drawn from WA-Reclassification and Adjustment of Trial Balance of Expenses (independent) and WM1-Analysis of Hospital-Based RHC Costs (provider-based). FTE data are drawn from the Visits and Productivity schedules of WB1-Visits and Overhead Cost for RHC/FQHC Services (independent) and WM2-Allocation of Overhead to RHC/FQHC Services (provider-based). Provider costs are calculated using the FTE data for each provider type.		
Physician (MD & DO)	<u>MD & DO Costs (WA,R1,C7)</u> MD & DO FTEs (WB1,R1,C1)	<u>MD & DO Costs (WM1,R1,C7)</u> MD & DO FTEs (WM2,R1,C1)
Physician Assistant (PA)	<u>PA Costs (WA,R2,C7)</u> PA FTEs (WB1,R2,C1)	<u>PA Costs (WM1,R2,C7)</u> PA FTEs (WM2,R2,C1)
Nurse Practitioner (NP)	<u>NP Costs (WA,R3,C7)</u> NP FTEs (WB1,R3,C1)	<u>NP Costs (WM1,R3,C7)</u> NP FTEs (WM2,R3,C1)

Visiting Nurse (VN)	<u>VN Costs (WA,R5,C7)</u> VN FTEs (WB1,R5,C1)	<u>VN Costs (WM1,R4,C7)</u> VN FTEs (WM2,R5,C1)
Clinical Psychologist (CP)	<u>CP Costs (WA,R6,C7)</u> CP FTEs (WB1,R6,C1)	<u>CP Costs (WM1,R6,C7)</u> CP FTEs (WM2,R6,C1)
Social Worker (SW)	<u>SW Costs (WA,R7,C7)</u> SW FTEs (WB1,R7,C1)	<u>SW Costs (WM1,R7,C7)</u> SW FTEs (WM2,R7,C1)
Total Healthcare (HC) Provider Costs (Excludes PSUA)	<u>Total HC Provider Costs (WA,R12,C7)</u> Total HC Staff FTEs (WB1,R8,C1)	<u>Total HC Provider Costs (WM1,R10,C7)</u> Total HC Staff FTEs (WM2,R8,C1)
Medicare Operating Statistics: This category measures important operating factors that do not fit into the above categories. Data on Medicare visits, charges, and bad debt are from the Determination of Total Payment schedule of WC2–Determination of Medicare Payment (independent) and the Calculation of Settlement schedule of WM3–Calculation of Reimbursement Settlement for RHC/FQHC Services (provider-based). Visit data are from the Visits and Productivity schedules of WB1-Visits and Overhead Cost for RHC/FQHC Services (independent) and WM2-Allocation of Overhead to RHC/FQHC Services (provider-based).		
Medicare Visits as a Percent of Total Visits	<u>Medicare Visits (WC2,R11+R13,C3)</u> Total Visits (WB1,R8+R9,C2)	<u>Medicare Visits (WM3,R10+R12,C1+C2)</u> Total Visits (WM2,R8+R9,C2)
Medicare Non-Reimbursable Bad Debt (excludes preventive care charges not subject to co-pays or deductibles)	Medicare Non-Reimbursable Bad Debt <u>(WC2,R24-R24.10,C3)</u> Medicare Charges (WC2,R18.01-R18.02,C3)	Medicare Non-Reimbursable Bad Debt <u>(WM3,R23-R23.01,C2)</u> Medicare Charges (WM3,R16.01-R16.02,C2)

APPENDIX B. MRHRC Rural Health Clinic Publications, 2003-2020

The Maine Rural Health Research Center (MRHRC) focuses on barriers to health access for rural residents and related topics, including insurance coverage, Medicaid, behavioral health, long-term services and supports, and challenges faced by rural providers (Rural Health Clinics and Critical Access Hospitals) in delivering and sustaining services.

2020 RHC Publications:

[Provision of Mental Health Services by Critical Access Hospital-Based Rural Health Clinics](#), John A. Gale MS; Zachariah T. Croll MPH; Nathan First LCSW, MSW, MA; and Sara Kahn-Troster MPH

2019 RHC Publications:

[Rural Health Clinic Costs and Medicare Reimbursement](#), John A. Gale MS, Zachariah T. Croll MPH, and Andrew F. Coburn PhD

2018 RHC Publications:

[Rural Health Clinic Participation in the Merit-Based Incentive System and Other Quality Reporting Initiatives: Challenges and Opportunities](#), John A. Gale MS, Zachariah T. Croll MPH, and Andrew F. Coburn PhD

2016 RHC Publications:

[Pilot testing a Rural Health Clinic quality measurement reporting system](#), John A. Gale MS; Anush Yousefian Hansen, MS, MA; David Hartley PhD, MHA; and Andrew F. Coburn PhD

2015 RHC Publications:

[Adoption and Use of Electronic Health Records by Rural Health Clinics: Results of a National Survey \[Working Paper\]](#), John A. Gale MS; Zachariah T. Croll MPH; and David Hartley PhD, MHA

[Adoption and Use of Electronic Health Records by Rural Health Clinics: Results of a National Survey \[Policy Brief\]](#), John A. Gale MS; Zachariah T. Croll MPH; and David Hartley PhD, MHA

[Rural Health Clinic Readiness for Patient-Centered Medical Home Recognition: Preparing for the Evolving Healthcare Marketplace \[Working Paper\]](#), John A. Gale MS; Zachariah T. Croll MPH; and David Hartley PhD, MHA

[Rural Health Clinic Readiness for Patient-Centered Medical Home Recognition: Preparing for the Evolving Healthcare Marketplace \[Policy Brief\]](#), John A. Gale MS; Zachariah T. Croll MPH; David Hartley PhD, MHA; and Andrew F. Coburn PhD

2014 RHC Publications:

[Meaningful Use of Electronic Health Record by Rural Health Clinics \[Working Paper\]](#), John A. Gale MS; David Hartley PhD, MHA; and Zachariah T. Croll MPH

[Meaningful Use of Electronic Health Record by Rural Health Clinics \[Policy Brief\]](#), John A. Gale MS; David Hartley PhD, MHA; and Zachariah T. Croll MPH

2010 RHC Publications:

[Are Rural Health Clinics Part of the Rural Safety Net?](#), David Hartley PhD, MHA; John A. Gale MS; Al Leighton BA; and Stuart Bratesman MPP

[Safety Net Activities of Independent Rural Health Clinics](#), David Hartley PhD, MHA; John A. Gale MS; Al Leighton BA; and Stuart Bratesman MPP

[Encouraging Rural Health Clinics to Provide Mental Health Services: What are the options?](#), John A. Gale MS; Stephanie L. Loux MS; Barbara Shaw JD; and David Hartley PhD, MHA

[The Provision of Mental Health Services by Rural Health Clinics](#), John A. Gale MS; Stephanie L. Loux MS; Barbara Shaw JD; and David Hartley PhD, MHA

2003 RHC Publications:

[The Characteristics and Roles of Rural Health Clinics in the United States: A Chartbook](#), John A. Gale MS and Andrew F. Coburn PhD