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Research

Rural Relevance 2017: Assessing the State of Rural Healthcare in America

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Foreword

The 2017 Rural Relevance Study arrives at a time of great uncertainty for all healthcare providers. Congress has taken the first step toward dismantling the Patient Protection and Affordable Care Act (ACA) and House Republicans have put forward legislation to replace it with The American Health Care Act (AHCA), a hybrid model that seeks to maintain some features of the ACA while repealing others. Key elements of this proposed legislation would impact rural providers either directly or indirectly, including:

- **Reversal of ACA's cuts in federal disproportionate share hospital (DSH) Medicaid payments:** The proposed legislation reverses cuts to DSH payments, a funding stream that supports hospitals which treat an unusually large share of uninsured patients and patients covered under Medicaid. Many rural hospitals are reliant on Medicaid DSH payments as a source of revenue and will benefit from stabilization in funding.
- **An increase in the uninsured:** Several provisions from the ACA may be impacted, including the repeal of the individual mandate and, more importantly, changes to the premium support for individuals purchasing coverage on the non-group market. The Congressional Budget Office (CBO) estimates that as a result, 24 million more people may be uninsured by 2026 – a projection criticized by HHS Secretary Price. However, most believe that the number of uninsured is likely to increase and believe that under the proposed legislation, poorer, older adults would be the most impacted as they are expected to have a harder time qualifying for tax credits. Additionally, the new legislation would enable higher premium variance by age, moving from a 3:1 allowable age-based premium difference to a 5:1 differential. With a disproportionately older percentage of the population living in rural areas and fewer able to afford health coverage under the AHCA, this would ultimately increase the burden on rural providers.
- **Rolling-back Medicaid expansion and potential long-term funding constraints through Medicaid restructuring:** States may choose to maintain current funding associated with Medicaid expansion through 2020 (capped at 2016 rates). However, the CBO projects some states will consider dropping the expansion as federal dollars "dry up" under the AHCA. As a result, some rural populations will learn how far their coverage can stretch as federal dollars are first capped and then frozen.

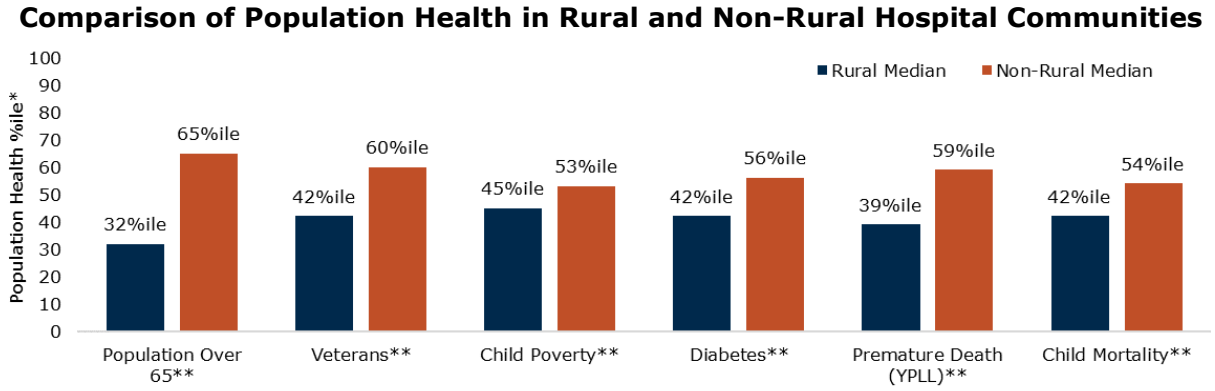
The uncertainty surrounding the future of the ACA/AHCA will likely continue to be unsettling for rural providers – especially when the potential for changes in legislation threatens financial viability and stability. The Chartis Center for Rural Health (CCRH) and iVantage Health Analytics have devoted significant resources to evaluating the state of the rural health safety net and modeling the impact of potential policy changes on rural providers. In this state of uncertainty, the Rural Relevance Study offers a unique lens into the state of rural healthcare, the value the safety net provides, and the opportunities for the future.

The State of Rural Healthcare

Rural Populations Suffer Many Health Disparities

As part of the 2017 study, CCRH explored the intersection of rural provider performance and the socioeconomic challenges and health disparities faced by rural communities. Our population health assessment measures the health status of rural populations by evaluating health outcomes, quality of care, access to care, health behaviors, and social, economic, and environmental determinants of health. Using nearly 70 metrics, the CCRH quantified the health status of each rural provider's community.

Our research validates the hypothesis that rural healthcare providers serve populations which are not only socioeconomically disadvantaged but also suffer from numerous health disparities and poorer outcomes than non-rural communities (Figure 1).



*Population Health metrics are percentile ranked for all acute care rural and non-rural providers by hospital service area such that **lower ranks indicate greater population challenges**.
**Lower percentile scores indicate higher density (i.e. providers serving a greater proportion of individuals over 65 receive lower scores).

Figure 1. Rural hospitals serve populations that suffer from various health disparities and poorer outcomes than non-rural providers.

While rural populations are equally challenged with baseline disparities, there are significant variations by region, state and even within communities in the same state. Highlighting these variations at a state level and then searching exceptions creates an opportunity to learn more about the unique health status of each community and provides valuable information to target services and funding to meet the highest needs of each population.

Two Distinct and Overlapping Populations Drive Up Demand

Seniors

According to the US Census Bureau, **adults in rural areas are older** than those living in non-rural areas, with a median age of 51, compared to age 45 in non-rural areas. Hospitalization rates and lengths of stay increase with age among adults, peaking for those over 65.[1] This creates increased demand for healthcare in rural areas. As a result, the majority of rural providers serve a greater proportion of patients over the age of 65 than two-thirds of all U.S. acute care hospitals.

The number of Americans over 65 is expected to increase from nearly 50 million to more than 80 million by 2050, largely driven by baby boomers.[2] In fact, seniors are expected to outnumber children under 5 for the first time in history by 2020.[3] Given the healthcare consumption, complexity of care needed, and associated costliness of healthcare services, this aging of the population will exert increasing operational, clinical and financial pressures on rural providers.[4]

Veterans

A disproportionate number of the nation's veterans live in rural and non-metropolitan counties. Nearly three-quarters of rural hospitals **serve a greater proportion of military veterans than the median non-rural provider**. Veterans living in these rural areas may need to travel greater distances to access a VHA facility, so rural hospitals are often called upon to fill a local access void. Of the 5.3 million veterans residing in rural America, 41 percent struggle with service-related disabilities, making access to quality healthcare imperative for these individuals.[5] Rural veterans utilize inpatient, emergency department, physician office visit and behavior health services at higher rates than non-veterans and more than urban veterans.[6]

Prevalence of Disease Combined with Less Access to Care

This year's research into rural healthcare revealed that rural communities have a higher burden of disease (including preventative diseases) and yet the supply of physicians and therefore access to healthcare is lower than in non-rural communities. This combination of a higher disease rate and lower access to care isn't surprising given the geographic distribution of populations across rural America. It is, however, an alarming trend and one that could be contributing to the higher premature death rates and child mortality rates in rural communities.

Rural hospitals **serve communities with greater rates of diabetes**, the seventh-leading cause of death in the nation.[7] Several factors contributing to diabetes such as obesity, physical inactivity, and a lack of exercise are more prevalent in rural communities, according to research.[8] The American Diabetes

[1] Agency for Healthcare Research and Quality, 2012.
[2] U.S. Census Bureau, 2014.
[3] U.S. Census Bureau, 2016.
[4] Department of Health and Human Services, 2011.
[5] National Rural Health Association, 2017.
[6] Variation in Utilization of Health Care Services for Rural VA Enrollees with Mental Health-Related Diagnoses, 2015.
[7] Center for Disease Control and Prevention, 2016.
[8] Robert Wood Johnson Foundation, 2013.

Association estimates the total cost of diabetes has risen from $174 billion in 2007 to $245 billion in 2012, a 41 percent increase. Patients with diagnosed diabetes incur average medical expenditures of about $13,700 per year. Particularly prevalent in rural America, rural hospitals are on the frontline in providing diabetic screening and care for populations which may not have access to primary or specialty care.

America is in the midst of **an opioid epidemic** that affects all income levels, educational backgrounds and geographies. However, specific demographic and socioeconomic conditions can lead to increased risk behaviors, especially opioid and other drug abuse. While this is more common among the uninsured and impoverished, the research shows significant variation.

According to the Centers for Disease Control and Prevention (CDC), the rate of death from opioid-related overdoses is 45 percent higher in **nonmetropolitan counties**.[1] Many rural emergency services may lack the resources to respond quickly and effectively. Rarely are highly-trained paramedics the first responders in rural communities. In addition, distances in rural geographies may mean longer wait times for critical interventions such as injectable antidotes like Naloxone.[2]

Rural communities are also generally isolated from treatment facilities and addiction counseling. Nationwide, only 11 percent of patients seeking addiction treatment receive care. Further, the distribution of this treatment is uneven. In those states which expanded Medicaid (a disproportionately important source of health coverage for rural populations), a higher proportion of buprenorphine prescriptions (an important therapy to wean patients off opioids) is covered, compared to those states which did not expand Medicaid.[3]

Last, the cost of providing lifesaving injectable antidote drugs such as Naloxone have skyrocketed, putting rural providers in the difficult position of providing more expensive therapies in the hands of EMS with little opportunity to recoup that cost, given the lack of commercial insurance or even Medicaid coverage in many rural communities.[4]

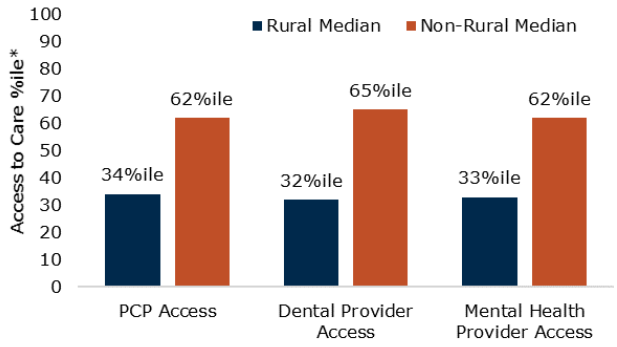
Thus, the lack of expedient access to advanced Emergency Medical Services, the lack of appropriate behavioral health/addiction treatment services, and the role Medicaid payments play in these interventions, combined with the skyrocketing costs of important life-saving and treatment therapies, places rural populations in the crosshairs of the opioid epidemic.

The burden of disease on rural communities is not being met with the **appropriate level of access** (Figure 2). Plagued by a physician workforce shortage, rural communities struggle to receive primary care, dental care and behavioral healthcare. This is exacerbated by geographic isolation, limited public transportation, fewer employment opportunities and limited health insurance coverage.[5] The patient-to-primary care physician ratio in rural areas is 39.8 physicians per 100,000 people, compared to 53.3 physicians per 100,000 in non-rural areas. Eighty-five percent of rural counties are designated as primary care Health Professional Shortage Areas (HPSAs), some with persistent whole county shortages.[6] This uneven distribution of physicians has an impact on the health of a population, as they lack access to preventative care as well as other types of ambulatory care. Further straining these rural access trends is

[1] Center for Disease Control and Prevention, 2015.
[2] Rural Health Information Hub, The Rural Monitor, May 18, 2016.
[3] Use of Opioid Recovery Medications, Sept, 2016.
[4] Patients get hooked on opioid overdose antidote, then prices skyrocket, Kaiser Health News, 2017.
[5] National Rural Health Association, 2017.
[6] Persistent Primary Care Health Professional Shortage Areas (HPSAs) and Health Care Access in Rural America, 2009.

the uneven aging of the provider workforce, where there are a greater proportion of providers nearing retirement.[1]

Access to Healthcare in Rural Hospital Communities



*Population Health metrics are percentile ranked for all acute care rural and non-rural providers by hospital service area such that **lower ranks indicate greater population challenges**.

Figure 2. Communities served by rural providers have less access to healthcare than non-rural areas. At the median, rural hospital communities rank in the bottom third with respect to primary, dental and mental healthcare access when compared to all acute care hospitals nationally on a 0-100 percentile scale.

Population Health Chart Book: National maps for each of the population health indicators explored in the study, as well as some state versus state comparisons are available at iVantageINDEX.com. View the population health chart book here.

The Rural Health Safety Net Remains Under Financial Pressure

The closure of 80 rural hospitals since 2010 underscores the challenges faced by rural providers, and research indicates that many more are struggling to stay open.[2] This is an indication that the rural health safety net continues to unravel, putting the mission to care for rural populations in jeopardy in a number of states.

Forty-one percent of rural hospitals operate at a negative margin. Figure 3 visualizes those facilities operating at negative margins in two cohorts (i.e. <3 percent and <0 percent), overlaid with rural providers which are achieving positive margins.

[1] The Aging of the Primary Care Physician Workforce, 2009.
[2] UNC Cecil G. Sheps Center for Health Services Research.

Rural Hospital Operating Margins

Figure 3. Each rural hospital across the country is point located in green if having a positive 2015 operating profit margin, orange if having a negative operating profit margin not exceeding -3 percent, and in red if having an operating profit margin below -3 percent.

Research Note: Rural hospital operating margins in Medicaid expansion states are statistically higher than rural hospitals in states that did not expand Medicaid. Contact CCRH for detailed metrics on your state.

Numerous factors are at play in each state which may have an impact on rural operating margins. These factors include:

- Payor mix and percentage of uninsured population
- Allowable cost-based Medicare reimbursement
- State expanded Medicaid as part of the ACA*
- Prevalence of competition and the rate of out-migration of patients seeking care in non-rural settings

- Employment rate and related availability of employer-sponsored commercial insurance
- Payor negotiated rates
- Availability of primary care
- Underlying population health and health disparities

Additionally, the healthcare industry's transition from volume to value has put increased pressure on hospital margins for many providers and a renewed focus on cost management to maintain positive margins. Jamie Orlikoff, a health governance expert, recommends that the industry work to take 5-6 percent of costs out of the system and reach a five-year target of 25-30 percent cost reduction.[1]

Cost containment is particularly challenging for Critical Access Hospitals (CAHs), currently receiving special cost-based reimbursement from Medicare. This system of reimbursement was created to ensure access to crucial services in rural communities despite not having the patient volumes to support those services in a market-based environment. This reimbursement policy has been successful in helping preserve access to care in rural America but changes to it could dramatically shift the current state.

While all hospitals strive to provide the best clinical care at the lowest cost, rural hospitals with cost-based reimbursements are not incentivized to focus on cost management. Nonetheless, benchmarks from the top performing rural hospitals reveal substantially lower cost positions when compared to their rural health peers nationally. The study offers a detailed examination of top hospital performance for Critical Access Hospitals and Rural and Community Hospitals.

Alternative payment models including Accountable Care Organizations (ACOs), which many providers now participate, make it difficult for CAHs as it introduces competing incentives. In capitated payment environments, it can become challenging to work across the continuum of care for rural providers that may have inflated cost structures to maintain access to low volume services. For ACOs that need to better manage costs across the continuum of care, patients may be redirected away from rural access points. Conversely, many types of care should be provided locally to offer a better patient experience at a lower cost, which is an area of intense focus for ACOs that include rural providers. These dynamics are driving questions about what is the right care model for covered lives within rural communities. The answer to this question is a critical one and the opportunities for innovation are exciting but the economics of new care models could very well put additional financial pressure on rural providers.

The consumer market is also adding pressure for hospitals to reduce costs as high-deductible plans shift the first out-of-pocket dollars to the consumer. Rural patients with high-deductible plans are becoming more price sensitive and showing a willingness to travel greater distances to reduce their healthcare costs. Rural hospitals therefore need to focus on improving their efficiency as lower volumes often equate to higher variable costs.

Additionally, employers are partnering with payors to form narrow networks of preferred providers. These providers are preferred by the market because they offer exceptional value and deliver quality care at the lowest cost. Rural hospitals must strive to be relevant and gain in-network status by defending and reducing their costs while continuously improving the quality of care in the face of these and other market forces.

[1] Presentation at American Hospital Association Rural Health Care Leadership Conference, February 7, 2015.

Policy Changes Impact Rural Providers

In addition to the current market forces that effect rural health operating margins, there are a number of policy changes already impacting the financial health of rural providers and a few which remain in question given the new administration in Washington. For this study, we analyzed seven current and proposed policies and their impact on rural providers, including: Sequestration, Bad Debt, CAH Reimbursement, PPS Coding Offset, Value-Based Purchasing, Medicaid Expansion, and Alternative Care Models. The methodology for the impact calculations below is available here.

State Snapshots: What's the impact of policies on rural healthcare and communities in your state? Snapshots for all states are available on our web site.

Rural Pressure Point: Sequestration

In March 2013, a range of Federal spending cuts went into effect. The cuts, commonly referred to as sequestration, included a planned two percent cut in almost all Medicare spending. The Congressional Budget Office projected that the cuts would total $123 billion over a 10-year period.

The estimated community impact of the sequestration over 10 years, based upon 2015 cost report data is:

- **$3.5 billion** in lost Medicare reimbursement among rural hospitals
- **153,000 jobs lost** in rural hospitals and communities
- **$18.0 billion** GDP loss

While the impact of sequestration impacts all hospitals with reimbursements for Medicare beneficiaries, the cuts are disproportionately harmful to rural providers. First, rural providers receive significantly more government reimbursement (Medicare and Medicaid) than non-rural counterparts, and these reimbursements tend to yield lower payments per case when compared with commercial payors. Second, rural hospitals' razor-thin or negative margins leave little room to absorb any reduction in revenues. The state-by-state impact is not evenly distributed - as is the case with many policy changes (see map on page 7).

Rural Pressure Point: Bad Debt

The Middle-Class Tax Relief and Job Creation Act[1] instituted "bad debt" cuts as a means for paying for the program. Between 2012 and 2015, rural hospitals have absorbed a reduction in reimbursable bad debt, dropping from 100 percent to 65 percent.

This 35 percent decrease for what is often referred to as charity care, has been one of the key factors negatively impacting the financial performance of rural providers. This analysis into bad debt and its ramifications on the rural health safety net estimates the 10-year impact of these cuts using 2015 Cost Report data.

The community impact of bad debt cuts over a 10-year period:

- **$1.4 billion** in lost Medicare reimbursement among rural hospitals
- **62,000 jobs lost** in rural hospitals and communities
- **$7.3 billion** GDP loss

The impact has been most severe in states which have chosen not to expand Medicaid under the ACA. In states that have expanded Medicaid, many of the charity care services previously offered are now offered to citizens newly insured under the ACA. However, for rural providers in states that did *not* expand Medicaid, the same level of charity care continues to be provided but without the ability to seek reimbursement for uncompensated services.

Further exacerbating these cuts is the emergence of commercial bad debt. Unlike charity care, which typically involves uninsured patients, commercial bad debt is associated with insured patients unable to pay for medical services due to high deductible plans which can be as much as $5,000. Anecdotes gathered from rural hospitals indicate that many providers are finding it difficult to collect full payments in a timely manner, if at all.

Rural Pressure Point: CAH Reimbursement

The Balanced Budget Act (BBA) of 1997 authorized the creation of the Critical Access Hospital (CAH) with special conditions of participation and special reimbursements intended to maintain access to critical care in rural areas with low volumes of patients. Cost-based reimbursement created an annual settlement, whereby Medicare pays the hospital 101 percent of allowable costs filed on their cost report. This program has been helpful in maintaining rural access to care and as a counter to the unintended consequences associated with the development of the Prospective Payment System. The CAH system is largely viewed as a life raft for the fragile rural health safety net.

The impact of recommended CAH Reimbursement cuts over a 10-year period:

- **$1.2 billion** in lost Medicare reimbursement among CAHs
- **52,000 jobs lost** in CAH hospitals and communities
- **$6.1 billion** GDP loss

[1] Pub.L. 112–96, H.R. 3630, 126 Stat. 156, enacted February 22, 2012.

States primarily in the Midwest would suffer the greatest losses in Critical Access Hospital revenue and see the most job loss as a result of these reimbursement cuts. In large part, this is driven by the rural nature of these states and the large number of hospitals spread out across relatively agrarian counties (see Rural Relevance Chart Book, Chapter 2, Policy Impact).

Rural Pressure Point: PPS Coding Offset

Under the American Taxpayer Relief Act (ATRA),[1] Congress required CMS to recoup "excessive" payments from 2008-2013 under the prospective payment system (PPS). Additionally, the legislation authorized further coding offset for increases seen during this period. This cut was proposed by CMS and then withdrawn, but policymakers continue to include it as part of deficit reduction and cost containment policy.

As coding changes evolve, some higher fee services have been collapsed under one lower cost code based upon CMS evaluation of physician practices that offer similar services, often at lower cost. This reflects a pain point for rural hospitals treating numerous ambulatory conditions in their outpatient clinics. In rural communities, these hospital-based clinics may be the only places to receive such interventions, and yet may carry a higher cost burden given the nature of hospital overhead structure.

The community impact of a PPS Coding Offset over a 10-year period:

- **$359 million** in lost Medicare reimbursement among rural hospitals
- **16,000 jobs lost** in rural hospitals and communities
- **$1.8 billion** GDP loss

Individual states could see losses exceeding $20 million in hospital revenue (such as California) and over $100 million in GDP (such as North Carolina) (see Rural Relevance Chart Book, Chapter 2, Policy Impact).

Value-based Purchasing (VBP)

The smallest rural hospitals, typically CAHs, can't participate in the CMS Value Based Purchasing Program (VBP), also called Pay for Performance, which withholds a percentage (two percent) of Medicare inpatient payments and puts them into a pool for bonus (and penalty) payments. Hospitals that achieve a benchmark of value will see these monies remitted and may earn additional payments if they exceed the benchmark. Hospitals that do not meet the benchmark will forfeit these payments. In this way, CMS is providing incentives (and penalties) for hospitals to chase the value curve in defined areas of Quality, Outcomes, Patient Satisfaction and Efficiency.

The 2017 Rural Relevance Study models the CMS 2018 Value Based Purchasing (VBP) rules and applies these to the rural and CAHs to empirically evaluate how well the rural safety net functions. If the 2018 CMS VBP program were in effect today and applied to all rural hospitals, it would create an inflow of nearly $207 million to these providers.

Based on the current performance of rural healthcare, CAHs should welcome value-based purchasing incentives. If 2018 rules were currently in effect, CAHs could expect to earn $23 million in bonus payments nationally based on current performance.

[1] Pub.L. 112–240, H.R. 8, 126 Stat. 2313, enacted January 2, 2013.

- Using the 2018 rules, CAHs would receive $22.8 million in value-based reimbursements, preserving over 1,000 jobs and $124 million in GDP in 2018. There would be potential to secure another $52.3 million with performance increases, which would preserve an additional 2,000 jobs and $261 million in GDP.
- The average CAH is expected to realize $17,000 in bonus payments, with the opportunity to capture an additional $38,000 with performance increases.
- CAHs outperform their rural PPS peers. Rural PPS hospitals can expect to see an overall loss of nearly $21 million from their withholding amounts nationally.
- Nearly $270 million in bonus dollars would be available for the rural PPS hospitals with performance increases.

It is important to note that the current VBP program is *inpatient* focused and is not the best fit with small rural hospitals with low inpatient volumes as CAHs see an average of 74.4 percent of their patient volume as outpatients.[1] To address this, CMS has requested the development of a candidate rural-relevant VBP measure set by the National Quality Forum (NQF). This candidate measure set has been promulgated and awaits trial in the field. A key recommendation of the NQF is the inclusion of bonus payments for high performing rural safety net facilities, but not penalties such as those that exist for larger, less rural hospitals.

Policy Impact Chart Book: A detailed impact review of the policies highlighted in the study is available at iVantageINDEX.com. View the policy impact chart book here.

[1] Flex Monitoring Team Data Summary Report No. 16, October, 2014.

Disparities in Operating Margin Among Rural Providers: Medicaid Expansion

Medicaid expansion has proven to be a key driver of the implementation of provisions under the Affordable Care Act (ACA). The expanded coverage of individuals previously uninsured is one of the key provisions made optional in the U.S. Supreme Court case challenging the constitutionality of the ACA in National Federation of Independent Business (NFIB) v. Sebelius[1]. In the decision, the mandate to have insurance was deemed constitutional but not the "coercive" mechanism where states would either accept the expansion or risk losing existing Medicaid coverage. Thus, there has been uneven expansion of this key provision that has offered (or denied) millions of rural Americans health insurance coverage. Rural providers serving these populations have been directly impacted through enhanced payment resulting from increased insurance coverage for populations previously uninsured. This has been particularly noteworthy since bad debt cuts went into full effect (35 percent reduction) in 2015.

The 2017 Study finds that the expansion states have higher median rural hospital operating margins than non-expansion states. Additionally, the study notes variation by state and region explored next (see map on page 7).

Graves-Loebsack Save Rural Hospitals Act: An Alternative Model

Our exploration of operating margins led us to consider possible paths forward toward stability and sustainability. The Graves-Loebsack Save Rural Hospitals Act (HR 3225) includes provisions to both redress some of the policies/cuts explored in this study for the last six years as well as pave a way forward to codify into law new models for providing access to care in rural settings, borrowing from pilots that have been offered around the country. Under the proposed Save Rural Hospitals Act, Community Outpatient Hospital status preserves emergency and outpatient care for rural communities. The research shows that this conversion would financially benefit 97 percent of eligible hospitals currently operating at a loss.

This act, if passed, could preserve for communities the following over a 10-year period:

- **$5.4 billion** in lost Medicare reimbursement among rural hospitals
- **237,000 jobs lost** in rural hospitals and communities
- **$27.9 billion** GDP loss

This model is based upon the following elements of the Community Outpatient Hospital reimbursement structure. Note that this model is not inclusive of grant funding.

- 105 percent of reasonable costs reimbursed
- 100 percent of bad debt reimbursed
- Exemption from two-percent sequestration

[1] (567 U.S. ___ (2012), 183 L. Ed. 2d 450, 132 S. Ct. 2566

The 2017 Study finds that **rural hospital revenues may be impacted by a conversion to a new Outpatient/Emergency Hospital model with reductions in payment cuts and enhancements in reimbursements.** Please contact CCRH to model current performance under new models of reimbursement to better understand hospital performance under alternative models of service.

Rural Leaders Show the Way

The 2017 Top 100 Rural Providers

Across the spectrum of performance indicators, the Top 100 Rural and Community Hospitals and the Top 100 CAHs, as measured by the Hospital Strength INDEX (INDEX), are writing the blueprint for success as providers in rural America. Our research shows that these leaders share key attributes that dovetail with the vision articulated by the Triple Aim: better health for populations, better outcomes for patients and doing so at lower cost.[1]

Using the INDEX, characteristics of this year's top performing rural providers are compared to one another by the applicable peer group. By comparing the Top 100 cohorts of CAHs (see Rural Relevance Chart Book, Chapter 3, Value Leaders) and Rural and Community hospitals (see Rural Relevance Chart Book, Chapter 3, Value Leaders) to their respective counterparts across the U.S., the analysis highlights the areas of strength of top performers while at the same time establishing benchmarks for all other providers.

- Top performing CAHs boast a median overall percentile rank of 95.0 versus the all-CAH median of 51.6 on the Hospital Strength INDEX.
- The median Top 100 Rural and Community facility performs in the 94.4 percentile compared to a national median of 46.5.
- Top 100 CAHs capture more Medicare IP business than 84.3 percent of all other rural hospitals and greater Medicare OP market share than 91.8 percent of all other rural hospitals within a defined PSA.
- When looking at Outcomes, top CAHs excel at keeping readmission and mortality rates low.
- Top rural and community hospitals produce consistently better outcomes at much lower average case-weight and wage-rate adjusted Medicare IP and OP costs.
- Finally, this cohort analysis reveals significant distinction in Financial Stability (measured by Capital Efficiency [Net Income/Total Revenue]), whereas Top 100 CAHs score higher than two-thirds of all other providers in the study.

[1] Institute for Healthcare Improvement, 2017.

While top performing CAHs and rural and community hospitals perform significantly better compared to their peers, there are differences in areas of relative strength when compared against one another (see Rural Relevance Chart Book, Chapter 3, Value Leaders). When looking at value, for example, Top 100 CAHs show stronger performance as compared to Top 100 Rural and Community hospitals in the Medicare Process of Care measures that comprise the Quality Pillar, as well as the Patient Satisfaction Pillar comprised of HCAHPS scores.

Across the nation, there is a wide range of performance among rural providers. The INDEX provides an analysis of the value of the safety net performance nationally and cascades this analysis to states, regions, etc. Numerous states subscribe to the INDEX to offer a hospital-by-hospital analysis of performance and to direct resources for performance improvement. The following section compares performance characteristics of the rural hospitals across the nation to non-rural providers.

Where does your facility stand in 2017? Contact CCRH to assess individual hospital performance and learn what it takes to become a Top 100 Rural Hospital.

Rural Provider Performance Compared with Non-Rural Provider Performance

Quality, Outcomes and Patient Satisfaction

- **Quality**: Rural providers score better in emergency department (ED) Arrival to Admission Times for Admitted ED Patients (rural 220 min to non-rural 311 min), ED Arrival to Departure Times for Discharged ED patients (rural 117 min to non-rural 161), Median time from ED arrival to provider contact (rural 21 min to non-rural 30 min), and Median Time to Pain Management (rural 49 min to non-rural 56 min).
- **Outcomes**: Rural providers perform better than their non-rural counterparts for Heart Failure (HF) Readmission (rural 21.8 to non-rural 22), pneumonia (PN) Readmission (rural 16.9 to non-rural 17.3) and hospital-wide readmission (rural 15.5 to non-rural 15.7).
- **Patient Satisfaction:** Rural providers outperform non-rural in overall ranking – receiving a 9 out of 10, as well as in eight individual categories including nurse communication, doctor communication, pain control, medication explanation and discharge instructions.

Costs and Charges

Costs and charges are important to consider in rural health. Even though they don't reflect the ultimate consumer price, they do influence the final payment or settlement. Costs are important because they set the floor below which hospitals will lose money. Rural hospital costs are also important because they establish the basis for a Medicare settlement for cost-based reimbursements to help keep low volume

rural safety net providers "whole." Charges, on the other hand, are set by the hospital and may serve as the basis for negotiated payments by commercial insurance companies that reimburse hospitals at a premium compared with Medicare in 96 percent of inpatient services[1]. Charges may vary widely by hospital for the same services and final payments show wide variation for the same services observed.[2] However, as noted earlier, rural hospitals receive most payments from government payors that pay on a fee schedule.

Rural providers are concerned that their cost and charge structure will become misaligned with the wider market in such a way that ultimately undermines the attractiveness of the safety net. The 2017 study examined costs and charges in inpatient areas (based upon Diagnostic Resource Group volumes (DRGs) and outpatient service areas) with the highest volumes (see Rural Relevance Chart Book, Chapter 3, Value Leaders).

- Rural hospitals charge far less than their non-rural counterparts on a case-mix and wage adjusted basis. This difference is especially apparent in the inpatient setting, but also holds true among outpatients. Rural hospital charges are particularly low for common inpatient stays such as pneumonia, kidney and urinary tract infection, heart failure and COPD when wage and case-mix adjusted.
- Non-rural hospitals outperform rural facilities with respect to outpatient Medicare costs, sustaining lower costs across many common procedures when case-mix and wage adjusted. However, rural hospitals perform just as well with respect to inpatient costs among Medicare patients.

Value Leaders Chart Book: Detailed analysis of top performing rural hospitals, as well as a review of rural provider performance versus non-rural providers is available at iVantageINDEX.com. View the value leaders chart book here.

[1] National Comparisons of Commercial and Medicare Fee-For-Service Payments to Hospitals, 2016.
[2] The Dramatic Difference: What a Hospital Charges vs. What Medicare Pays. Kaiser Family News, 2013.

Conclusion

In summary, the rural health safety net serves a population that is older, poorer and sicker with less access to care than their non-rural counterparts. This population has a higher proportional demand for healthcare given baseline health disparities. The rural health safety net is anchored by rural hospitals that offer critical access to quality care. Through federal and state polices and rural-relevant reimbursements, this safety net has been designed to provide access to populations which are geographically dispersed and often underserved. Yet this safety net continues to be threatened by potential policy changes at both state and federal levels.

Rural healthcare providers serve to support not only the health of their population, but also the health of the local economy and, by extension, the communities served. The shift from local rural access to non-rural centers of care may not offer savings, but shifts the spend from rural to non-rural, often with negative consequences in terms of access, care and cost. As cost savings initiatives are considered, care must be taken so that the industry doesn't *"trip over a dollar to save a dime"* as is typically the case when considering the overall cost of supporting local access to care for rural populations.

While there is no question that non-rural providers provide more sophisticated interventions for the sickest patients, the study confirms that rural providers offer quality care with good outcomes and high levels of patient satisfaction at the median as compared to more non-rural counterparts for the care they offer.

Preserving access to all types of care, especially inpatient care, may be out of the reach of the smallest providers. But rural providers have a critical role to play in developing alternative care models for a geographically dispersed, heterogeneous populations, leading the way toward answering the key question around the care models of the future for rural America.

Against this context, rural providers should act now to prepare for changes ahead. Developing a comprehensive understanding of an organization's current performance, position and exposure is critical, as is aligning leadership around the most likely scenarios ahead. As has been the case for the last six years, the Rural Relevance Study offers a snapshot into the state of rural healthcare, the value the safety net provides and the challenges and opportunities for the future.

About the Hospital Strength INDEX®

The Hospital Strength INDEX is rural healthcare's most comprehensive and objective assessment of rural providers. By assessing performance across more than 50 individual indicators and eight pillars of performance, INDEX brings a rural-relevant perspective to healthcare leaders making strategic and operational decisions. The INDEX is the foundation for many of rural healthcare's most prominent awards (e.g. Top 100 Critical Access Hospitals, NOSORH Performance Excellence Awards) and is used by organizations such as the National Rural Health Association in support of its advocacy and legislative initiatives.

Since its inception, the INDEX has helped more than 750 rural and Critical Access Hospitals integrate sophisticated analytics for benchmarking performance, and has also been used by more than 25 state agencies, state hospital associations, federal grant programs and both the National Rural Health Association (NRHA) and the National Organization of State Offices of Rural Health (NOSORH). INDEX analytics have also informed healthcare industry policy, research and thought leadership.

Study Note

The total number of rural hospitals included in the analysis is 2,157, which includes hospitals designated as rural by the Office of Rural Health Policy (ORHP), a division of the Health Resources & Services Administration (HRSA) and excludes hospitals with more than 200 beds.

The methodology behind INDEX uses publicly available hospital level data to (a) identify the variables that statistically contribute to the measures of cost, quality, outcomes and patient perspective and (b) score each hospital on each measure based on the weighting of each variable as determined by a principal components analysis. The use of publicly available hospital data comes with the inherent problem of missing data for some hospitals. To address this issues, INDEX uses a multiple imputation approach to provide estimates of missing variables based on available data.

All available data are included. Statistical sampling and data projection methodologies are employed only when necessary. Each INDEX release is based on the most recently available data for each indicator source. All information included in this release (version 7.0) represents the most recently available data as of December, 2016.

INDEX is based on a composite measure of eight pillars:

- Inpatient Market Share
- Quality
- Patient Perspective
- Charges
- Outpatient Market Share
- Outcomes
- Cost
- Financial Stability

The methodology is reviewed and revised as necessary each year to ensure it provides a current and relevant analysis of rural hospital performance. The current methodology is available online at www.iVantageINDEX.com.

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Michael specializes in rural health network development and benchmarking for performance improvement consulting. He has established himself as a resource for rural providers, health systems and networks leveraging diverse data sets – both public and private – to support rural-relevant benchmarking, research and advocacy. Michael has been instrumental in shaping the annual *Rural Relevance: Vulnerability to Value* study which explores the state of rural healthcare in America and is widely used by rural providers, advocacy groups, policy makers and the media.

The Chartis Center for Rural Health (CCRH) builds upon the commitment of The Chartis Group and iVantage Health Analytics to deliver expertise, performance management solutions, advisory services and research to the system-supported rural facilities, community hospitals, and Critical Access Hospitals which provide care to more than 60 million Americans.

Pairing iVantage's extensive knowledge of rural healthcare, research and solution portfolio with the healthcare expertise and resources of The Chartis Group, CCRH creates an unparalleled value proposition for rural health leaders and those advocating on their behalf. The Chartis Center for Rural Health provides insight, perspective, analysis and solutions to this important healthcare segment in order to address the biggest challenges and drive performance improvement.