



How Many Hospitals Might Convert to a Rural Emergency Hospital (REH)?

George H. Pink, PhD; Kristie W. Thompson, MA; H. Ann Howard, BS; G. Mark Holmes, PhD

OVERVIEW

The Consolidated Appropriations Act of 2021 establishes a Rural Emergency Hospital (REH) designation under the Medicare program. It is difficult to predict rural hospital interest in conversion to REH because conditions of participation through rulemaking and guidance have yet to be established by the Centers for Medicare & Medicaid Services (CMS). However, some first estimates of the number and type of rural hospitals that might convert to REHs will assist policy makers as they prepare for implementation of the REH model. In this study, we used three measures to predict the number of rural hospitals with 50 beds or less that are likely to consider conversion to an REH: 1) three years negative total margin; 2) average daily census (ADC) (acute + swing) less than three; and 3) net patient revenue less than \$20 million.

KEY FINDINGS

- ◆ Using one set of predictors for conversion, 68 rural hospitals are predicted to consider conversion to REHs (“REH converters”) in comparison to 1,605 hospitals not predicted to consider conversion (“non-converters”).
- ◆ In comparison to non-converters, a higher percentage of REH converters are predicted to be government-owned, Critical Access Hospitals (CAHs), and located in the North West Central Census division, and a lower percentage are predicted to be system-affiliated.
- ◆ Almost half of REH converters are located in four states: Kansas, Texas, Nebraska, and Oklahoma.
- ◆ In comparison to non-converters, REH converters are in counties with a higher median percentage of unemployed and a lower population density.
- ◆ The predicted number of REH converters (68) is based on what is currently known about the REH and is an estimate only: different selection criteria would result in a different set of potential REH converters.

BACKGROUND

Currently, a facility can receive Medicare payment for emergency department (ED) and hospital outpatient services only if it is certified by Medicare as a hospital, and the provision of inpatient acute care is required for such certification. This limitation has presented challenges for rural communities where there may not be sufficient patient volume or resources to support the provision of inpatient services, but where access to emergency services and higher-level outpatient services is still necessary.¹

On December 21, 2020, Congress passed the Consolidated Appropriations Act (CAA) of 2021, which established Rural Emergency Hospitals (REHs). Effective January 1, 2023, hospitals that meet specified criteria will be eligible to convert to an REH. Although conditions of participation (CoPs) through rulemaking and sub-regulatory guidance have yet to be established by the Centers for Medicare & Medicaid Services (CMS), in accordance with the CAA, REHs will provide outpatient hospital and ED services without providing acute care inpatient services. REHs will be eligible for Medicare reimbursement for some services at rates higher than rates that would otherwise apply to services furnished in a hospital, and REHs will also receive a facility payment (see Table 1).

Because REHs are a new Medicare provider type, **the number of rural hospitals that might consider converting to an REH is unknown**. The purpose of this findings brief is to estimate, using one set of criteria, how many rural hospitals might convert to an REH. Developing a model to make this estimate involves several assumptions based on available data and comparisons to see which data points have been associated with the closure of a hospital. Ultimately, decisions about conversion to a new provider type may be driven by more than data or the immediate financial

considerations. As the REH designation regulations are finalized, the methodology for it may evolve, which may change the underlying assumptions in our model.

The REH Model Provisions in the CAA of 2021

Hospital eligibility to become an REH. Eligible hospitals include CAHs and hospitals with 50 beds or less that are located in a county (or equivalent unit of local government) that is in a rural area defined using the Office of Management and Budget (OMB) designation of non-metropolitan statistical area (MSA), or a hospital with 50 beds or less that is re-classified by CMS as rural.

Application to become an REH. To apply for certification as an REH, a hospital or CAH must submit: 1) an action plan for initiating REH services, including a transition plan that specifies what services will be retained, modified, added, or discontinued; 2) a list of services that will be provided, such as primary and pediatric care; and 3) information about how the additional facility payment will be used, including a description of the services covered. States must approve the licensure of REHs.

REH requirements. REHs must: 1) not exceed an annual per patient average length of stay of 24 hours; 2) be staffed 24 hours-a-day, seven days-a-week by a physician, nurse practitioner, clinical nurse specialist, or physician assistant; 3) meet the licensure requirements and staffing responsibilities of an ED; 4) have a transfer agreement in place with a level I or II trauma center; 5) meet conditions of participation applicable to CAH emergency services and hospital EDs (as determined applicable by the Secretary of the Department of Health and Human Services); 6) meet the distinct part unit (DPU) requirements if the REH has a skilled nursing facility (SNF) DPU.

Payment for REHs. Table 1 summarizes the payment provisions included in the CAA for an REH. CMS will propose and finalize how these provisions are operationalized through rulemaking.

Table 1: Payment Provisions in the CAA of 2021 for an REH

Type of Payment	Method Used to Calculate Funding
Monthly Additional Facility Payments	Calculated as 1/12th of the excess of (if there is any): Total amount that was paid for Medicare beneficiaries to all CAHs in 2019; minus the estimated total amount that would have been paid for Medicare beneficiaries to all CAHs in 2019 if payment had been made for inpatient hospital, outpatient hospital, and SNF services under the applicable Prospective Payment System (PPS); divided by the total number of CAHs in 2019
Outpatient	Current Outpatient Prospective Payment System (OPPS) X 1.05
Outpatient copayment	Based on current OPPS
SNF DPU	Current SNF PPS
Ambulance	Current ambulance fee schedule
Rural Health Clinic (RHC)	Same rate as <50 bed hospital (payment limit exception for grandfathered RHCs)

In 2024 and later, the Additional Facility Payment is the previous year amount updated by the hospital market basket percentage increase. Facilities must keep track of and report how the Additional Facility Payment is used.

Quality metrics and evaluation reports. Beginning in 2023, in accordance with the CAA, REHs will be required to submit data for quality measurement. In selecting those measures, the Secretary shall take into consideration ways to account for REHs that lack sufficient case volume to ensure that the performance rates for such measures are reliable. Quality measures will be made public and will be posted on the CMS website. Reports will be conducted to evaluate the impact of REHs on the availability of health care and health outcomes in rural areas after four years, seven years, and 10 years of enactment.

METHOD

Hypothesis. Financial and operational measures of closed hospitals are predictive of rural hospitals that are likely to consider conversion to REH.

Selection of closed and open hospitals. Data were assembled for all rural hospitals less than or equal to 50 beds that closed between 2011 and 2020.² Hospital rural status was defined using the definition outlined by the Federal Office of Rural Health Policy.³ A hospital was defined as closed if it ceased to provide acute inpatient care, consistent with the Medicare definition of a hospital. Closed hospitals consist of two sub-groups: complete closures are defined as facilities that no longer provide health care services, and converted closures consist of facilities that no longer provide in-patient care, but continue to provide some health care services (e.g., primary care, skilled nursing care, rehabilitation). A hospital was considered as open if it was included in the 2020 U.S. Hospital List compiled by the NC Rural Health Research program.⁴

Financial comparison of closed and open hospitals. Financial and operational measures of complete closures and converted closures in the year before they closed were compared to 2019-2020 measures of open hospitals. Financial and statistical study data were taken from publicly available CMS files. We used hospital facility and financial data reported in the CMS Healthcare Cost Report Information System (HCRIS) files between 2011 and 2020.⁵ Each year, Medicare-certified provider institutions submit data regarding facility characteristics, utilization, costs and charges, Medicare settlements, and financial statements to the Medicare Administrative Contractor for the HCRIS.⁶ Measures that differed the most between closed and open hospitals were identified.

Survey of people knowledgeable about rural hospitals. At the May 12, 2021 National Rural Health Resource Center's Technical Assistance and Services Center (TASC) 90 Webinar entitled "Supporting New Models of Payment and Delivery",⁷ participants (State Office of Rural Health Directors, Flex Program Coordinators, and supporting staff) were consulted about rural hospitals that might convert to an REH. After a brief presentation on the REH model, participants were asked the following question: "Given what is known about the REH model to date, what types of rural hospitals are most likely to be interested in conversion to an REH?" Participants typed their answers in the chat box, and the full text was copied for tabulation.

Selection of prediction criteria. Based on the financial analysis and survey undertaken at the TASC 90 webinar, three prediction criteria were selected: long-term unprofitability, average acute and swing daily census less than three, and net patient revenue less than \$20 million. Long-term unprofitability was defined as three consecutive years of negative total margin.

Identification and description of rural hospitals that met the prediction criteria. All rural hospitals that satisfied the three prediction criteria were identified and designated as potential "REH converters". (Of course, it is impossible to know at this time whether these hospitals will ultimately choose to convert to REHs.) Financial and operational summary measures of the REH converters and non-converters were compiled.

Comparison of Complete Closures, Converted Closures, and Open Hospitals

Table 2 compares complete closures, converted closures and open hospitals by financial measure, operational measure, Medicare payment type, and Census division. Among financial measures, the table shows that in comparison to open hospitals, a higher percentage of complete closed and converted closed hospitals had: three consecutive years of a negative total margin; three consecutive years of negative operating margin; average daily census (acute + swing) of less than three; and net patient revenue less than \$20 million.

Among operational measures, the table shows that in comparison to open hospitals, a lower percentage of complete closed and converted closed hospitals had RHCs and were government-owned. Among Medicare payment types, the table shows that in comparison to open hospitals, a higher percentage of complete closed and converted closed hospitals were PPS and Medicare Dependent Hospital (MDH), and a lower percentage of complete closed and converted closed hospitals were CAHs. Among Census divisions, the table shows that in comparison to open hospitals, a higher percentage of complete closed and converted closed hospitals was in the West South Central, East South Central and South Atlantic Census divisions.

Table 2: Number and Percent of Complete Closures, Converted Closures, and Open Hospitals by Financial Measures, Operational Measures, Medicare Payment Type, and Census Division

	≤ 50 beds hospitals Complete closures 2011-2020 n=40		≤ 50 beds hospitals Converted closures 2011-2020 n=53		≤ 50 beds hospitals Open hospitals 2019-2020 cost report n=1,673		
	Number	Percent	Number	Percent	Number	Percent	
Financial measures:							
3 years total margin < 0%	13	33%	25	47%	289	17%	
3 years operating margin < 0%	13	33%	21	40%	468	28%	
ADC acute + swing < 3	19	48%	20	38%	420	25%	
ADC acute < 1	10	25%	10	19%	323	19%	
Net patient revenue < \$20 million	27	68%	51	96%	723	43%	
Operational measures:							
Have Rural Health Clinic (RHC)	18	45%	26	49%	1100	66%	
Have Long Term Care (LTC)	10	25%	5	9%	333	20%	
Government owned	11	28%	15	28%	637	38%	
System affiliated	17	43%	21	40%	683	41%	
Medicare payment type:							
PPS	Prospective Payment System	14	35%	14	26%	141	8%
CAH	Critical Access Hospital	13	33%	21	40%	1235	74%
MDH	Medicare Dependent Hospital	10	25%	13	25%	93	6%
SCH	Sole Community Hospital	3	8%	5	9%	180	11%
RRC	Rural Referral Center	0	0%	0	0%	7	0%
SCH/RRC	SCH/RRC	0	0%	0	0%	14	1%
MDH/RRC	MDH/RRC	0	0%	0	0%	2	0%
EAC	Extended Acute Care	0	0%	0	0%	1	0%
Census division:							
1	New England	3	8%	0	0%	49	3%
2	Middle Atlantic	2	5%	1	2%	50	3%
3	East North Central	3	8%	1	2%	263	16%
4	West North Central	6	15%	7	13%	459	27%
5	South Atlantic	8	20%	9	17%	121	7%
6	East South Central	7	18%	16	30%	148	9%
7	West South Central	9	23%	15	28%	257	15%
8	Mountain	0	0%	2	4%	197	12%
9	Pacific	2	5%	2	4%	129	8%

Table 3 shows median values of complete closures, converted closures, and open hospitals by selected financial and operational measures. The table shows that in comparison to open hospitals, complete closed and converted closed hospitals had lower medians on total margin, operating margin, net patient revenue, Medicare outpatient payer mix, and distance to nearest hospitals. The table also shows that in comparison to open hospitals, complete closed and converted closed hospitals had higher medians on uncompensated care to total expenses and Medicaid payer mix.

Table 3: Median Values of Complete Closures, Converted Closures, and Open Hospitals by Selected Financial and Operational Measures

	≤ 50 beds hospitals Complete closures 2011-2020 n=40	≤ 50 beds hospitals Converted closures 2011-2020 n=53	≤ 50 beds hospitals Open hospitals 2019-2020 cost report n=1,673
Total margin	-10.9%	-11.3%	3.0%
Operating margin	-10.9%	-9.4%	1.4%
ADC acute	2.1	2.8	3.3
ADC swing	0.0	0.5	1.2
Net patient revenue	\$9,680,079	\$8,808,091	\$23,493,513
Outpatient / total revenue	75.8%	72.1%	79.2%
Medicare inpatient payer mix	61.1%	65.7%	62.1%
Medicare outpatient payer mix	27.7%	27.0%	33.2%
Uncompensated care / total expense	6.8%	6.8%	3.9%
Medicaid payer mix	17.3%	15.6%	13.9%
Distance to closest hospital	14.0	15.0	18.7

What Might Predict Whether a Rural Hospital Converts to an REH?

At the May 12, 2021 TASC 90 meeting, participants were consulted about rural hospitals that might convert to an REH. Results are summarized below:

<u>Rural hospitals that:</u>	<u>Number of responses</u>
Are financially distressed	12
Have low net patient revenue	3
Have low acute and swing ADC	2
Have no system affiliation	1
Have a system affiliation	1
Are for-profit	1
Are in a remote location	1

Based on these results and conversations with other people knowledgeable about rural hospitals, long-term unprofitability (defined as three years of negative total margin), low net patient revenue (defined as less than \$20 million), and low acute and swing ADC (defined as less than three) were selected as predictors of REH conversion.

We label hospitals that meet all three tests (and thus potentially converting to an REH) as “REH converters” and all remaining hospitals as “non-converters.” Figures 1-3 show boxplots of 2019-2020 total margin, ADC acute + swing, and net patient revenue for REH converters and non-converters. The figures compare the REH converters (with the total margin, ADC acute + swing and net patient revenue criteria) and the non-converters. The boxes in the figures are the 25th to 75th percentiles for each of the three variables. In general, the figures show the effect of imposing the total margin, ADC acute + swing, and net patient revenue criteria: the distributions for REH converters are substantially below the distributions for converters.

Figure 1: 2019-2020 Total Margin of REH Converters and Non-converters

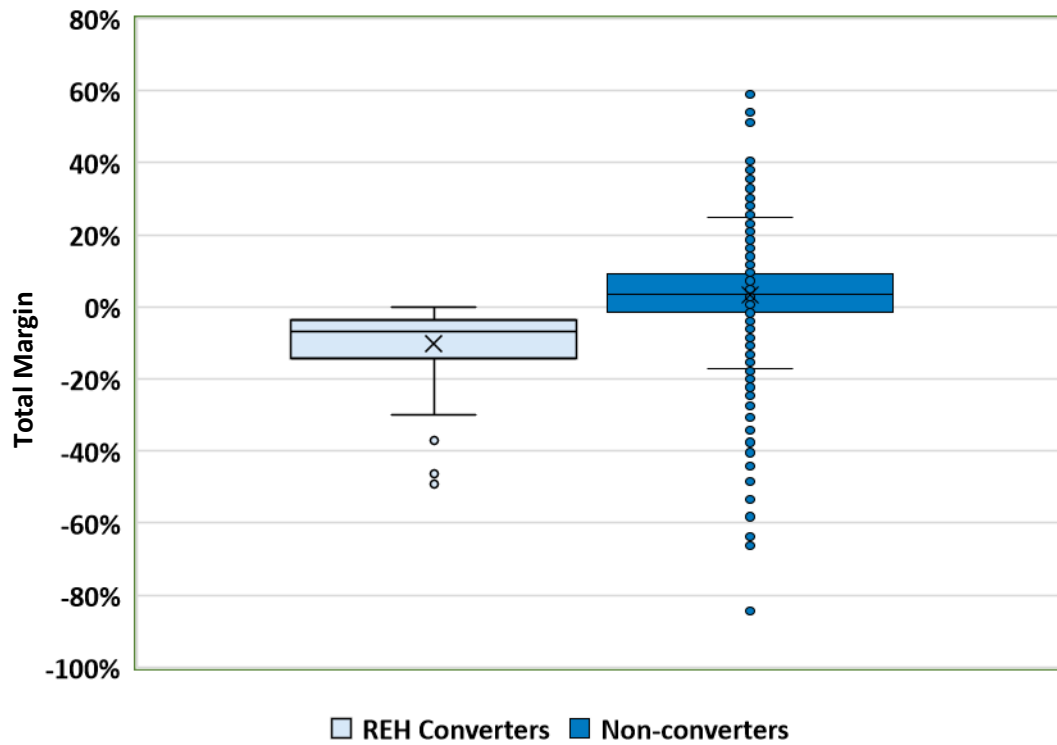


Figure 2: 2019-2020 Average Daily Census (Acute + Swing) of REH Converters and Non-converters

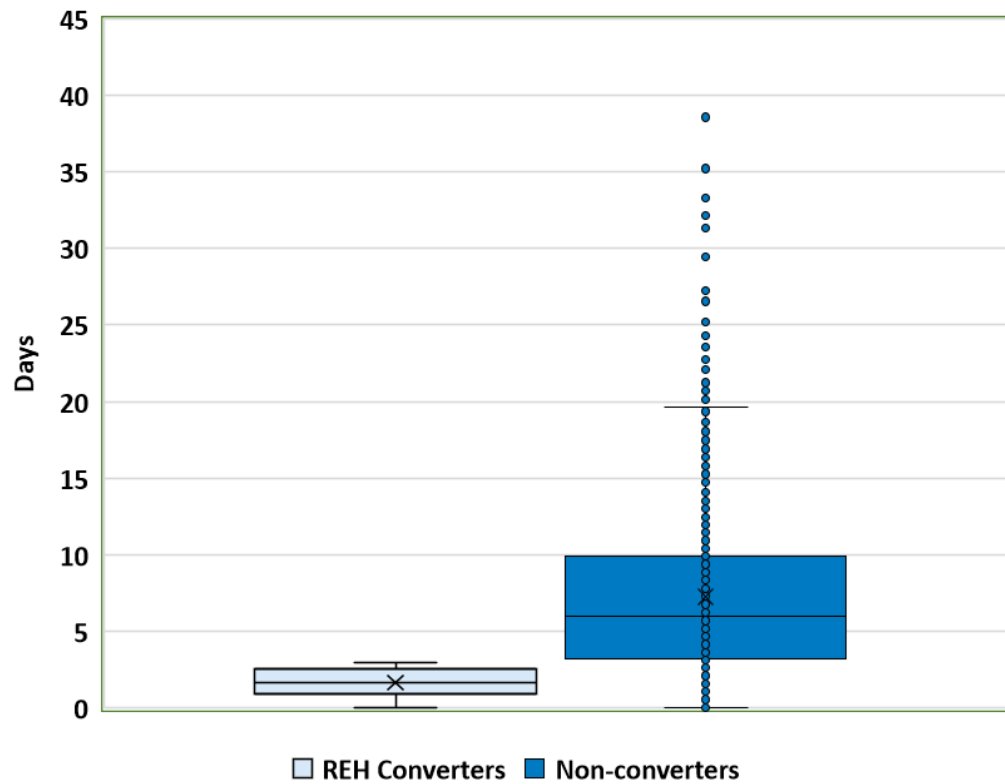
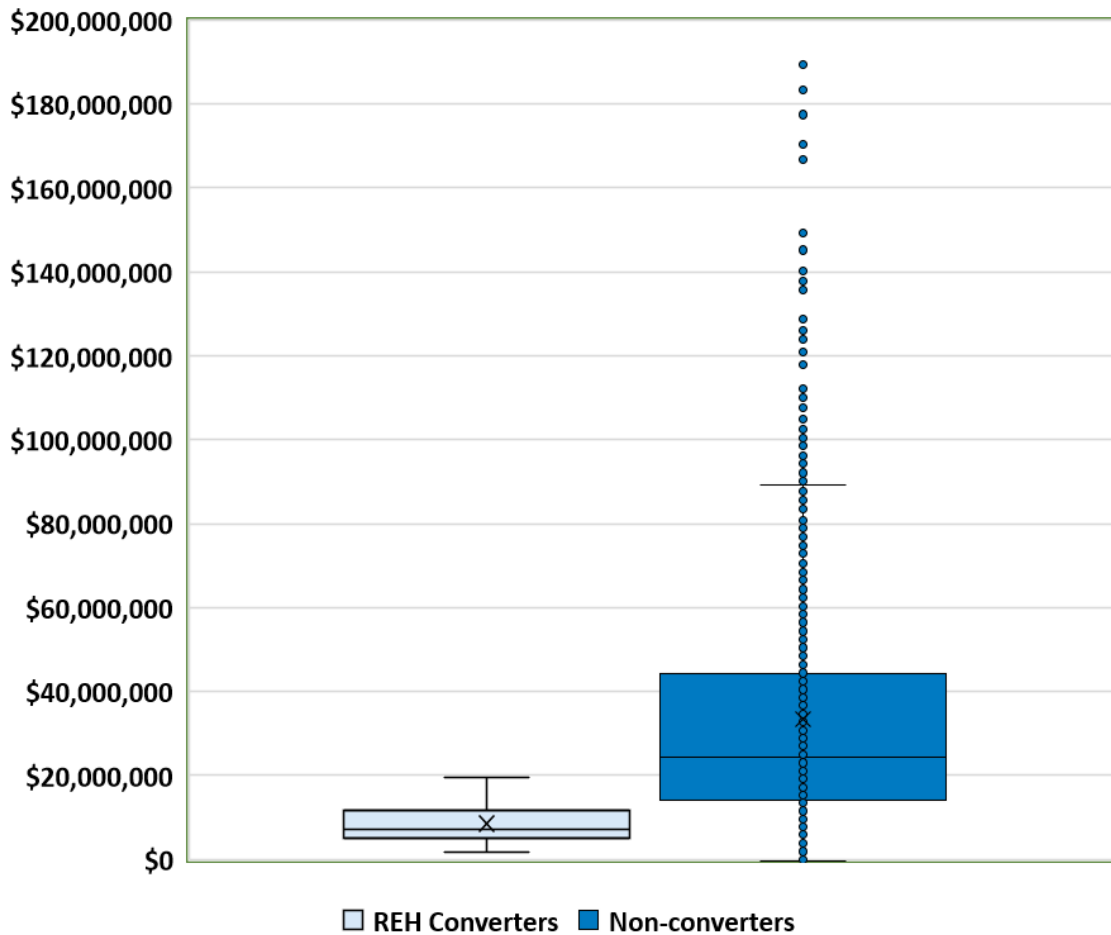


Figure 3: 2019-2020 Net Patient Revenue of REH Converters and Non-converters



Potential Number of Hospitals that Might Convert to an REH

Table 4 compares REH converters and non-converters by financial measure, operational measure, Medicare payment type, and Census division. Among financial measures, the table shows that, by definition, 100 percent of REH converters have three consecutive years of a negative total margin, average daily census (acute + swing) of less than three, and net patient revenue less than \$20 million. The percentages of non-converters that satisfy each of these criteria are much lower.

Among operational measures, the table shows that in comparison to non-converters, a higher percentage of REH converters are government-owned, and a lower percentage are system-affiliated. Among Medicare payment types, the table shows a higher percentage of converters are CAHs. Among Census divisions, the table shows that in comparison to non-converters, a higher percentage of REH converters are in the North West Central division.

Table 4: Number and Percent of REH Converters and Non-converters by Financial Measure, Operational Measure, Medicare Payment Type, and Census Division

		≤ 50 beds hospitals Open hospitals REH converters 2019-2020 cost report n=68		≤ 50 beds hospitals Open hospitals Non-converters 2019-2020 cost report n=1,605	
		Number	Percent	Number	Percent
REH prediction measures:					
3 years total margin < 0%		68	100%	221	14%
ADC acute + swing < 3		68	100%	352	22%
Net patient revenue < \$20 million		68	100%	659	41%
Operational measures:					
Have RHC		45	66%	1,055	66%
Have LTC		15	22%	318	20%
Government owned		35	51%	602	38%
System affiliated		17	25%	666	41%
Medicare payment type:					
PPS	Prospective Payment System	4	6%	137	9%
CAH	Critical Access Hospital	56	82%	1,179	73%
MDH	Medicare Dependent Hospital	2	3%	91	6%
SCH	Sole Community Hospital	6	9%	174	11%
RRC	Rural Referral Center	0	0%	7	0%
SCH/RRC	SCH/RRC	0	0%	14	1%
MDH/RRC	MDH/RRC	0	0%	2	0%
EAC	Extended Acute Care	0	0%	1	0%
Census division:					
1	New England	0	0%	49	3%
2	Middle Atlantic	3	4%	47	3%
3	East North Central	3	4%	260	16%
4	West North Central	30	44%	429	27%
5	South Atlantic	4	6%	117	7%
6	East South Central	4	6%	144	9%
7	West South Central	12	18%	245	15%
8	Mountain	7	10%	190	12%
9	Pacific	5	7%	124	8%

Table 5 shows median values of REH converters and non-converters by financial and operational measures. The table shows that in comparison to non-converters, REH converters had lower medians on total margin, operating margin, ADC acute, ADC swing, net patient revenue, and Medicaid payer mix. The table also shows that REH converters had higher medians on Medicare inpatient payer mix, and that the differences on other variables were relatively small, although converters are slightly more isolated (more distant from closest hospital).

Table 5: Median Values of REH Converters and Non-converters by Financial and Operational Measures

	≤ 50 beds hospitals Open hospitals REH converters 2019-2020 cost report n=68	≤ 50 beds hospitals Open hospitals Non-converters 2019-2020 cost report n=1,605
Total margin	-6.9%	3.5%
Operating margin	-12.8%	1.9%
ADC acute	0.6	3.5
ADC swing	0.8	1.2
ADC acute + swing	1.6	6.0
Net patient revenue	\$7,287,555	\$24,335,477
Outpatient / total revenue	77.8%	79.3%
Medicare inpatient payer mix	80.6%	61.6%
Medicare outpatient payer mix	35.9%	32.9%
Uncompensated care / total expense	3.8%	3.9%
Medicaid payer mix	9.0%	13.9%
Distance to closest hospital	21.9	18.5

In a 2017 article, we presented the Financial Distress Index (FDI).⁸ The FDI is an algorithm that uses historical data about hospital financial performance, government reimbursement, organizational characteristics, and market characteristics to predict the current risk of financial distress. The model assigns every rural hospital to one of four financial risk categories: high, mid-high, mid-low, or low.⁹ Table 6 shows the risk of financial distress of REH converters and non-converters by risk category. Among hospitals with available risk of financial distress data,¹⁰ the table shows that in comparison to non-converters, REH converters had a higher percentage of hospitals at high and mid-high risk of financial distress.

Table 6: Risk of Financial Distress of REH Converters and Non-converters

	≤ 50 beds hospitals Open hospitals REH converters 2019-2020 cost report n=68		≤ 50 beds hospitals Open hospitals Non-converters 2019-2020 cost report n=1,605	
	Number	Percent	Number	Percent
2021 Risk of financial distress:				
High	8	27%	64	8%
Mid-high	13	43%	136	18%
Mid-low	9	30%	347	46%
Low	0	0%	211	28%
Totals:				
Nonmissing	30	100%	758	100%
Missing	38		847	

Table 7 shows the state location of REH converters. Almost half of REH converters are located in four states: Kansas, Texas, Nebraska, and Oklahoma. These results are consistent with another study that found a high number of rural hospitals at high risk of financial distress in these states.¹¹

Table 7: State Location of Converters

State	Number
KS	16
TX	7
NE	5
OK	4
IA	3
MT	3
ND	3
HI	2
MN	2
NY	2
OH	2
TN	2
WA	2
WY	2
AK	1
AL	1
CO	1
FL	1
LA	1
MS	1
NC	1
PA	1
SD	1
UT	1
VA	1
WI	1
WV	1
Total	68

Figure 4 shows four socio-economic characteristics of the counties of location of REH converters and non-converters. The figure shows that in comparison to non-converters, REH converters are in counties with a higher median percentage of unemployed. Differences on other variables are relatively small.

Figure 4: Median Percent of County Population Characteristics of REH Converters and Non-converters

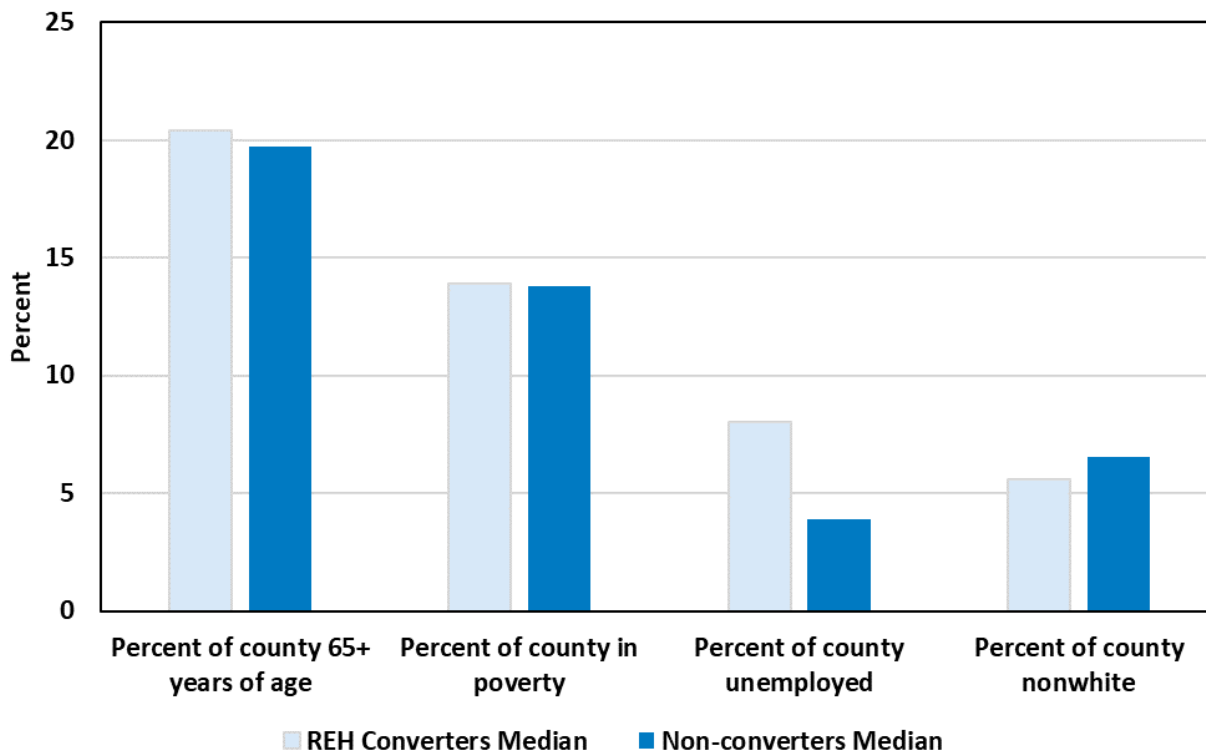
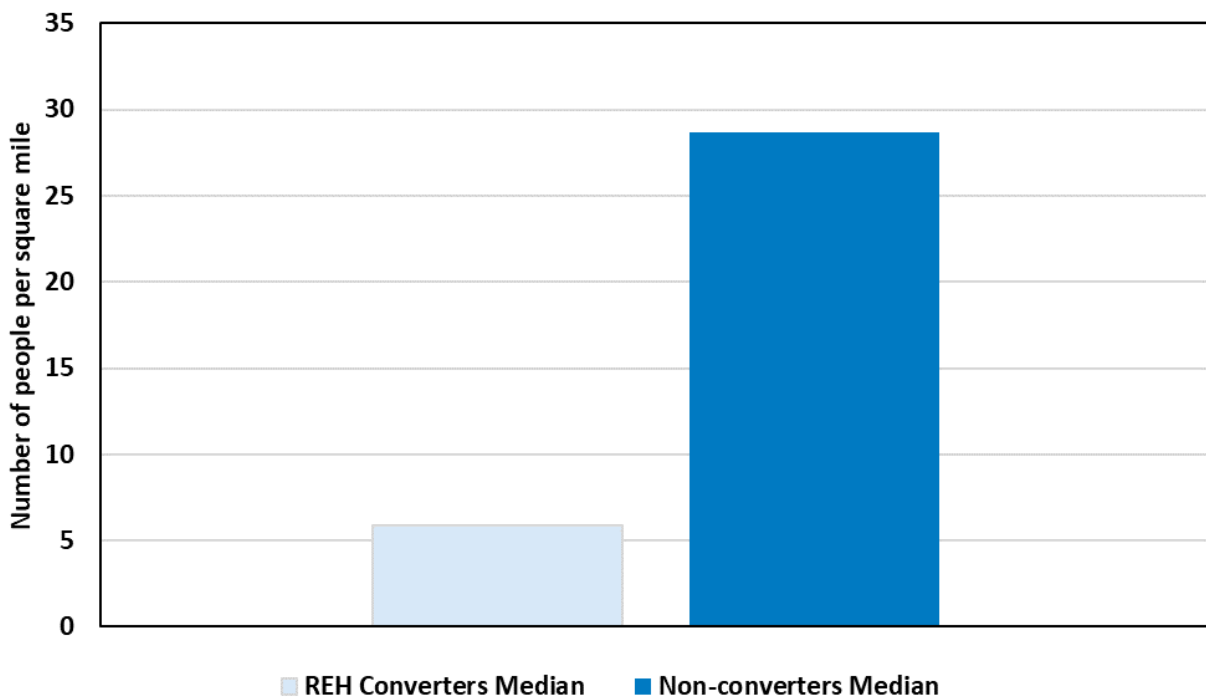


Figure 5 shows population density of the counties of location of REH converters and non-converters. The figure shows that in comparison to non-converters, REH converters are in counties with a lower number of people per square mile.

Figure 5: Median Population Density per Square Mile



CONCLUSION

Using three criteria of long-term unprofitability, low net patient revenue, and low acute and swing ADC, we estimate 68 rural hospitals could be interested in conversion to an REH. Among the 68 converters, almost half are in four states: Kansas, Texas, Nebraska, and Oklahoma. Of course, these variables may not prove to be predictive of conversion, but as a first approximation to what REHs might “look like,” it provides some early data.

The Rural Emergency Hospital could be an important step for preserving access to emergency and outpatient services in rural areas, particularly in communities that face the risk of rural hospital closures. However, details about the requirements for operating as an REH remain subject to future rulemaking and guidance. Therefore, it will be important for CMS to engage with interested hospitals to ensure that the REH regulations and guidance facilitate adoption and implementation of REHs to serve the health care needs of rural communities.

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