

# Trends in Risk of Financial Distress among Rural Hospitals from 2015 to 2019

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### KEY FINDINGS

- The proportion of rural hospitals predicted to be at high risk of financial distress has increased from 7.1% in 2015 to 9.2% in 2019.
- The South Census region in particular saw large increases in the percentage of rural hospitals predicted to be at high risk of financial distress in years 2015 to 2019.
- Prospective Payment System hospitals have surpassed Medicare Dependent Hospitals with the highest proportion of rural hospitals in financial distress, climbing 7.2 percentage points since 2015.

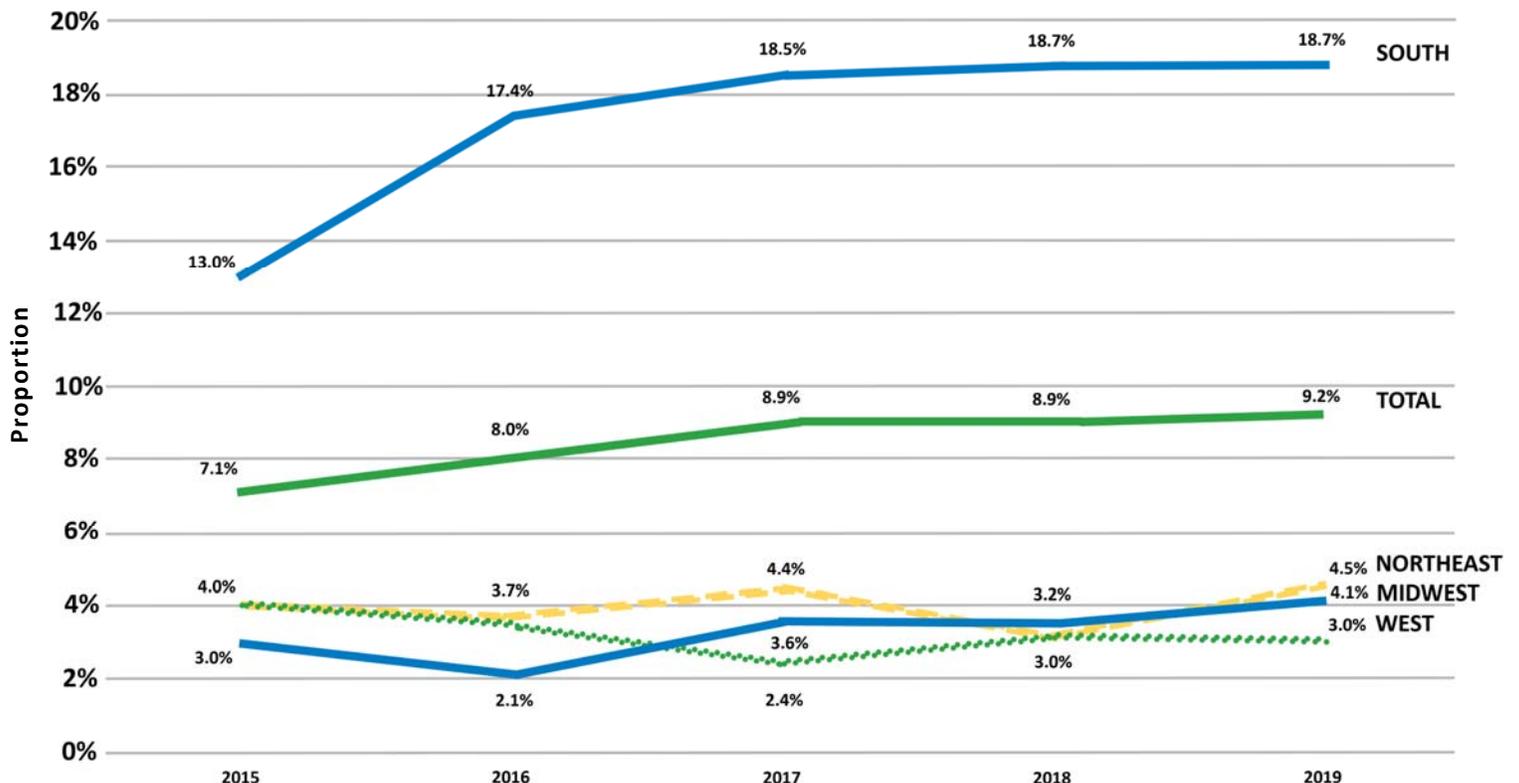
### OVERVIEW

In 2017 article, we presented the Financial Distress Index (FDI).<sup>1</sup> 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.<sup>2</sup> In a previous findings brief, we found the proportion of rural hospitals predicted to be at high risk of financial distress increased over time, with the largest increases in the South and Northeast Census regions, and for Medicare Dependent Hospitals (MDH) and Rural Referral Centers (RRC).<sup>3</sup> The purpose of this brief is to use updated results from the FDI to describe the trends in risk of financial distress among rural hospitals, by Census region and by Medicare reimbursement type.

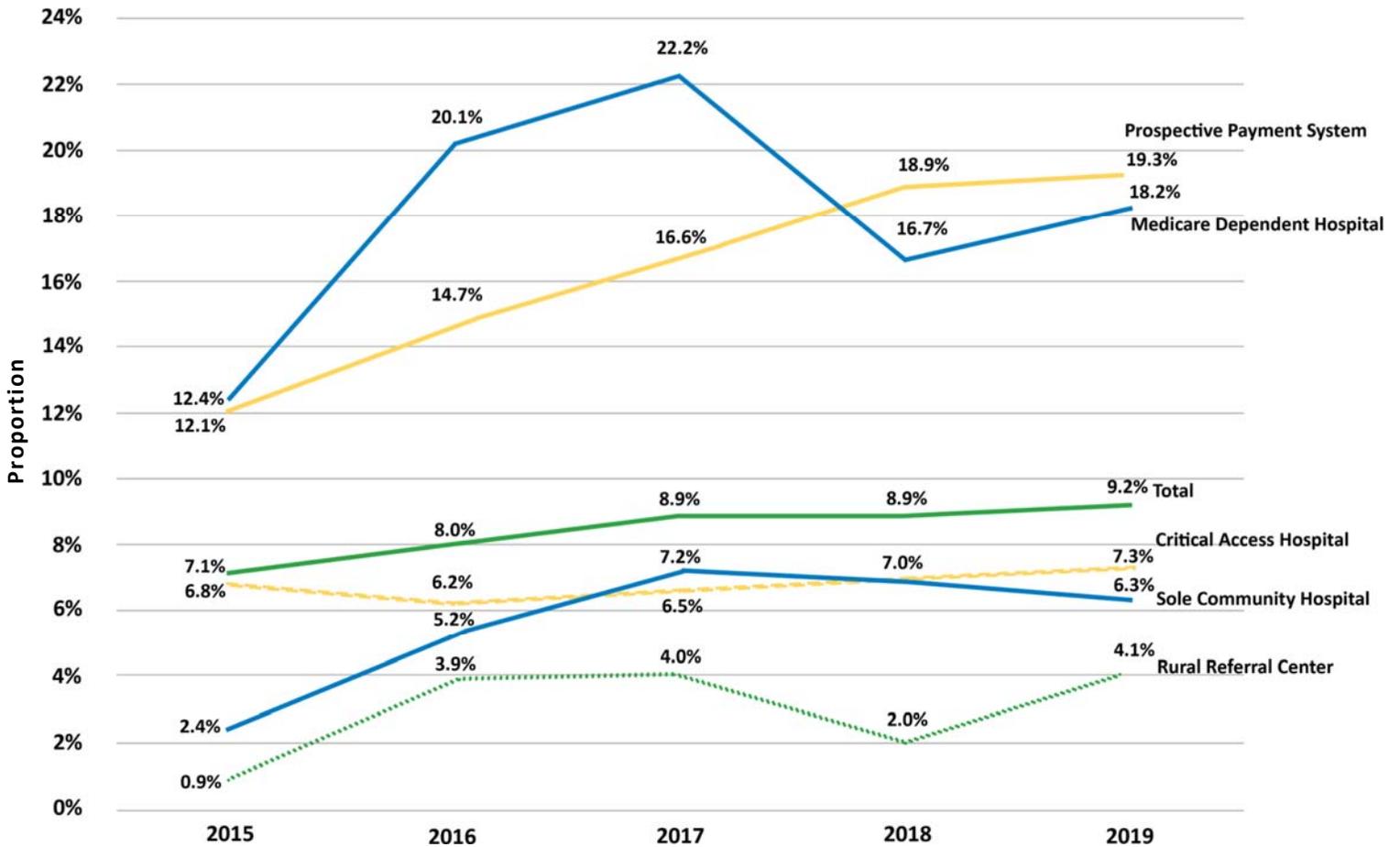
### RESULTS

For 2019, the FDI model classified 2,129 rural hospitals; 196 (9.2%) were predicted to be at high risk of financial distress, with 361 (17.0%) predicted to be at mid-high risk of financial distress, while 934 (43.9%) were predicted to be at mid-low risk of financial distress, and 638 (30.0%) were predicted to be at low risk of financial distress.

Figure 1: Proportion of Rural Hospitals Predicted to be at High Risk of Financial Distress by Census Region



**Figure 2: Proportion of Rural Hospitals Predicted to be at High Risk of Financial Distress by CMS Reimbursement Type\***



\* CAHs are reimbursed at 99% of Medicare allowable costs and must have 25 or fewer beds, be located at least 15 miles by secondary road and 35 miles by primary road from the nearest hospital, or be declared a “necessary provider” by the state — 61% of rural hospitals are CAHs.  
 SCHs must be located at least 35 miles from the nearest like hospital (excluding CAHs) or meet other federal criteria for being deemed a community’s sole source of care — 17% of rural hospitals are SCHs.  
 MDHs must have at least 60% of inpatient days or discharges attributable to Medicare patients — 8% of rural hospitals are MDHs.  
 PPS rural hospitals are the only subset of rural hospitals reimbursed in the traditional prospective payment system.

Figure 1 shows the trends in the proportion of rural hospitals predicted to be at high risk of financial distress by Census region and by year. The percentage of rural hospitals predicted to be at high risk of financial distress increased from 7.1% in 2015 to 9.2% in 2019. Increases were seen in the Northeast of 0.1 percentage points, in the Midwest of 1.1 percentage points, and in the South of 5.7 percentage points. The West saw a 1.0 percentage point decrease from 2015 to 2019.

The proportion of rural hospitals predicted to be at high risk of financial distress also varies by the Centers for Medicare & Medicaid Services (CMS) reimbursement type as seen in Figure 2. While the rate remained stable for Critical Access Hospitals (CAHs) at approximately 7.0%, the rate increased from 0.9% to 4.1% for RRCs, 2.4% to 6.3% for Sole Community Hospitals (SCHs), 12.4% to 18.2% for MDHs, and 12.1% to 19.3% for Prospective Payment System (PPS) rural hospitals over the period 2015 to 2019.

**DISCUSSION**

The percentage of rural hospitals predicted to be at high risk of financial distress is growing, particularly in the South and among MDHs and PPS hospitals. This is consistent with a previous study that found rural PPS hospitals with 26 to 50 acute care beds and MDHs had the lowest profitability compared to other hospitals.<sup>4</sup>

Aside from the financial and non-financial measures included in the FDI, there may be other factors, such as labor costs, payor mix, and state and federal policies that could be contributing to the growing percentage of rural hospitals predicted to be at high risk of financial distress. Reductions in Medicare reimbursement due to sequestration in addition to reductions in bad debt payments largely impact the financial profitability of rural hospitals.<sup>5</sup> Rural hospitals typically

serve older, poorer, more dependent on public insurance, and in worse health than do urban hospitals.<sup>6-8</sup> MDHs have at least 60% of inpatient discharges consisting of Medicare beneficiaries, making them particularly vulnerable to higher levels of financial distress than other rural hospitals due to their sensitivity to policy changes impacting Medicare reimbursement, restricting profitability.<sup>4</sup> The Northeast and the South have a similar percentage of MDHs, 12% vs. 10%, respectively for 2017. Conversely, only 10% of the MDHs in the Northeast are predicted to be at high risk of financial distress compared to over 25% in the South.<sup>9</sup>

These disparate trends in financial distress should be of concern to policy makers for two reasons: first, the probability of closure and reduction of services is significantly greater for rural hospitals predicted to be at high risk of financial distress.<sup>10</sup> Although the rate of rural hospital closures somewhat decreased in 2017, the recent increase in 2018 is consistent with the trends observed in our study. Second, rural hospitals predicted to be at high risk of financial distress serve communities with social conditions that could further worsen the already poor health status.<sup>11</sup>

## METHODS

Rural hospital financial performance, government reimbursement, organizational characteristics, and county-level data were obtained from the Centers for Medicare & Medicaid Services (CMS) Hospital Cost Report Information System (“Medicare Cost Reports”), Provider of Services, Hospital Service Area File, County Health Rankings, and Nielsen-Claritas Pop-Facts data. Using data through 2017, we predict the 2015 to 2019 FDI values for rural hospitals. Our FDI model assigns rural hospitals to high, mid-high, mid-low or low risk of financial distress levels.

Hospital-specific market areas were composed using Medicare discharge counts by ZIP code from the CMS Hospital Service Area File. A ZIP code is included in the market if: when sorted on descending number of that hospital’s Medicare discharges, it is among those that comprise 75 percent of that hospital’s Medicare discharges; or if it contributes at least three percent of that hospital’s Medicare admissions for the year. Except for hospitals in Alaska and Hawaii, ZIP codes more than 150 miles from the hospital are disqualified from being in its market. Hospital-specific markets were used to define communities to assess demographic and socio-economic variables. As health outcome data is not available at the hospital-specific market level, the county where the hospital is located was used to assign health outcomes data.

We identified hospitals as rural based on location outside Metropolitan Core Based Statistical Areas or within Metropolitan areas but in Rural-Urban Commuting Area codes (RUCA) of four or greater (the definition used by the Federal Office of Rural Health Policy). Characteristics of communities served by rural hospitals predicted to be at high risk of financial distress were compared to communities served by rural hospitals that are predicted to not be at high risk of financial distress using bivariate analyses.

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**Appendix: Historical Data used in the FDI: Number of Hospitals<sup>a</sup> by Year<sup>b</sup>**

Data Year	2013	2014	2015	2016	2017
<b>REGION</b>					
Northeast	167	162	159	158	155
Midwest	826	852	837	855	844
South	816	801	801	785	763
West	362	374	373	368	366
Total	2,171	2,189	2,170	2,166	2,128
<b>MEDICARE PAYMENT</b>					
CAH	1,246	1,257	1,253	1,268	1,255
PPS	297	300	295	286	275
SCH	280	282	274	275	259
MDH	136	137	133	121	125
RRC	212	213	215	216	214
<b>TOTAL</b>	<b>2,171</b>	<b>2,189</b>	<b>2,170</b>	<b>2,166</b>	<b>2,128</b>

a. A valid financial distress index score is produced for rural hospitals with at least 360 days or more of reported Medicare Cost Report data and non-missing values for hospital financial and market variables.

b. Note that our financial distress index model previous data years to predict financial distress in the future. A 2019 financial distress index score is calculated using 2017 data.

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