The Chartis Group
Chartis Center for Rural Health

iVantage
Health Analytics

# Impact of Proposed Medicaid Cuts on Rural Hospitals *Methodology*

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## *Methodology*

Under the House-approved H.R.1628 - American Health Care Act of 2017 (AHCA), the Congressional Budget Office (CBO) estimates a reduction of $834B in Medicaid funding over ten years. Under the proposed Senate version of this legislation H.R. 1628, Better Care Reconciliation Act of 2017 (BCRA) the CBO estimates a reduction of $772B in Medicaid funding over 10 years.

In this study, the Chartis Center for Rural Health (CCRH) seeks to model the potential financial impact to rural hospitals and subsequent declines in unemployment and GDP. While the House-approved ACHA and the Senate-proposed Better Care Reconciliation Act of 2017 (BCRA) have different schedules for the implementation of Medicaid cuts over ten years, CCRH models the proposed cuts assuming an even distribution year over year to estimate the impact within the first year of this legislation.

The impact of the proposed Medicaid cuts to acute care hospitals is computed based upon the ratio of total annual Medicaid hospital reimbursements to total annual Medicaid spend. This model assumes no change in the ratio of hospital spend to total Medicaid spend. We assume a 1:1 ratio of Medicaid spending to hospital Medicaid revenue. That is, it is assumed that a one-dollar cut in Medicaid hospital spend results in a one-dollar reduction in hospital revenue.

CCRH has applied these ratios to the rural health safety net (2,131 rural hospitals evaluated in this study) to cascade this analysis to the individual hospital-level. The modeled total first-year reduction in hospital Medicaid reimbursement is multiplied by each hospital's total Medicaid revenue as a percent of total Medicaid hospital spend.

To estimate rural hospital job loss, average hospital salary is computed by dividing total gross hospital salaries by total hospital FTEs (Source: HCRIS). Average salary outliers outside 1.5x the interquartile range are replaced with the median rural hospital average salary by state. For each hospital, first-year estimated Medicaid revenue loss is divided by average salary to estimate the hospital jobs lost if these providers offset these reimbursement cuts by reducing staff. Community job loss is modeled as 0.339x hospital job loss (Source: National Center for Rural Health Works, 2016). Therefore, total projected job loss is computed as the sum of modeled hospital and community job loss (1.339x hospital job loss).

GDP impact is calculated utilizing 2017 The World Bank ratios.

Rural hospital operating profit margin is computed using ratios defined by the Flex Monitoring Team utilizing HCRIS data. To model rural hospital operating profit margin after the first year of the proposed budget cuts, estimated Medicaid revenue loss was subtracted from total revenue for each hospital and margin was recalculated.

## *Sources and Calculations:*

- Total Annual Medicaid Spend (Source: Center for Medicare and Medicaid Services, 2017): $545.1B
- Total Annual Acute Care Hospital Medicaid Reimbursement (Source: HCRIS): $94.7B (17.4% of total spend)
- AHCA Proposed Cuts:
  - Estimated Total Annual Medicaid Cuts (based on $834B proposed 10-year cuts, Source: Congressional Budget Office, May 2017): $834B / 10 years = $83.4B
  - Estimated Total Annual Cuts to Hospitals: $83.4B x 17.4% = $14.5B
  - Estimated Total Annual Cuts to Rural Hospitals (2,131 facilities in total): $1.4B. CCRH defines "Rural Hospitals" as all Critical Access Hospitals as well as all acute care facilities located in areas designated as rural by the Federal Office of Rural Health Policy with no more than 200 beds.
  - Annual Cut per Hospital = Total Annual Cuts to Hospitals ($14.5B) * [Individual Hospital Medicaid Revenue] / [All-Hospital Medicaid Reimbursement ($94.7B)] (Source: HCRIS)
- BCRA Proposed Cuts:
  - Estimated Total Annual Medicaid Cuts (based on $772B proposed 10-year cuts, Source: Congressional Budget Office, May 2017): $772B / 10 years = $77.2B
  - Estimated Total Annual Cuts to Hospitals: $77.2B x 17.4% = $13.4B
  - Estimated Total Annual Cuts to Rural Hospitals (2,131 facilities in total): $1.3B.
  - Annual Cut per Hospital = Total Annual Cuts to Hospitals ($13.4B) * [Individual Hospital Medicaid Revenue] / [All-Hospital Medicaid Reimbursement ($94.7B)] (Source: HCRIS)
- GDP loss reflects $111,712x total projected job loss (The World Bank, 2017).
- Operating profit margin = ([TotalRevenue] + [MiscRevenue] + [OtherRevenue] - [TotalOperatingExpenses]) / ([TotalRevenue] + [MiscRevenue] + [OtherRevenue])

**Note:** Additional research on this topic can be found in the 2017 Rural Relevance Study, available for download at http://www.ivantageindex.com/2017-rural-relevance-study/.

## *Research and Analytic Team*

### KEN GROSS, PHD, THE CHARTIS GROUP

*Chief Data Scientist*

Ken Gross has over 15 years of experience as a thought leader for advanced analytic techniques and solution development across the healthcare provider industry. At Chartis, he serves as a senior advisor and industry expert to healthcare providers, aiming to advance their analytic capabilities and methods, and leading the development of new analytic methodologies and algorithms that support Chartis' consulting practices.

Prior to joining Chartis, Dr. Gross was founder and Principal of Quantitative Innovations, a data strategy consulting practice, where he advised hospital systems and ACOs on implementation of population health data analytic strategies. He also served as the Director of Research and Evaluation for the Camden Coalition of Healthcare Providers, where he developed innovative quantitative and spatial analytic methods for understanding and addressing the needs of high utilization patients. Prior to his work with the Camden Coalition, Dr. Gross held positions as a Senior Associate at The Reinvestment Fund, and an Epidemiologist for the City of Philadelphia, Division of Maternal and Child Health.

Dr. Gross holds a PhD in Policy Research, Evaluation and Measurement from the University of Pennsylvania, where he also served as an Institute for Educational Sciences Pre-Doctoral Fellow. He earned a Master of Public Health from Drexel University and a Bachelor of Arts degree from Washington University in St. Louis.

### AMANDA HOWARD, THE CHARTIS CENTER FOR RURAL HEALTH

*SENIOR ANALYST*

Amanda Howard joined iVantage Health Analytics in 2015. She works closely with hospital executives to build organizational understanding and support their achievement of their financial, clinical and operational improvement goals. Amanda works with a wide spectrum of iVantage clients, from independent rural and community hospitals to national systems and their affiliates to leverage performance benchmarking and contract optimization solutions, assist with strategic planning and help them attain improved performance.

In addition, Amanda contributes to rural research studies conducted by iVantage, optimizing the Hospital Strength INDEX, the industry's leading performance rating system for rural and Critical Access Hospitals to analyze and assess performance and the impact of current population and regulatory challenges.

Amanda received her bachelor's degree in chemistry with neurochemical concentration and Spanish from Bowdoin College.