

# Differences in\* Insurance-Negotiated Prices in Rural Hospitals

Lindsey R. Hammerslag PhD, Jeffery Talbert PhD

Rural & Underserved Health Research Center; Institute for Biomedical Informatics, College of Medicine  
University of Kentucky, Lexington, KY, USA

Abstract title: “Lower Insurance-Negotiated Prices in Rural Hospitals”

## Background

Until recently, hospitals were not required to provide third party negotiated pricing information, so it was challenging to determine if negotiated pricing differed in rural hospitals compared to urban hospitals. However, the Centers for Medicare and Medicaid Services recently passed the Hospital Price Transparency Final Rule, requiring that hospitals post machine-readable files with payer-specific negotiated pricing as well as de-identified minimum and maximum prices.<sup>1</sup> Given that rural hospitals are typically smaller and offer fewer services compared to urban hospitals,<sup>2</sup> we hypothesize that they will negotiate different prices with insurance companies.

## Objective

To examine insurance-negotiated pricing for common services and procedures in rural and urban hospitals.

## Data Source

Using the 2020 UNC U.S. Hospital List<sup>3</sup>, we identified hospitals in 12 states that were open as of January 1, 2020. Data was collected between 12/2021 and 8/2022.

Urbanization was defined using the 2010 RUCA code<sup>3</sup>:

- Urban: Primary RUCA of 1-3
- Rural: Primary RUCA of 4+

The size of the hospital, determined by the number of beds, was used to perform randomized proportional to size sampling within each state, with 5 hospitals identified for sampling in each state.

If a machine-readable third party negotiated pricing file was not found within 8 clicks, then we sampled the next hospital. Files were harmonized to a single format before processing with R and harmonization is ongoing.

## Procedures of Interest

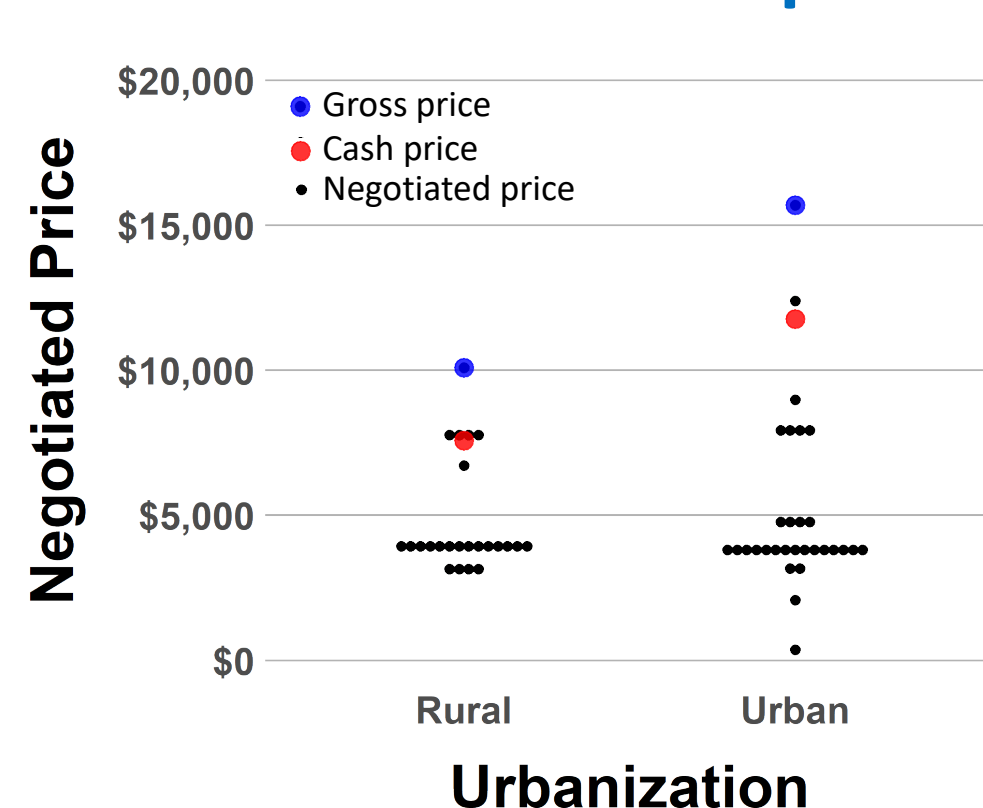
We examined 8 common procedures and services, including office and ER visits, imaging, and childbirth (Table 2).

## Analysis

Pricing varied by payor, as illustrated by example payor-level data for vaginal delivery (DRG 807) in two hospitals owned by Baptist Health in KY (Figure 1). Several features of pricing were collected, including mean pricing, averaged across negotiated prices.

When a hospital provided multiple records for a single procedure, we used revenue code, description, and setting to choose one set of prices.

### Prices in Two KY Hospitals

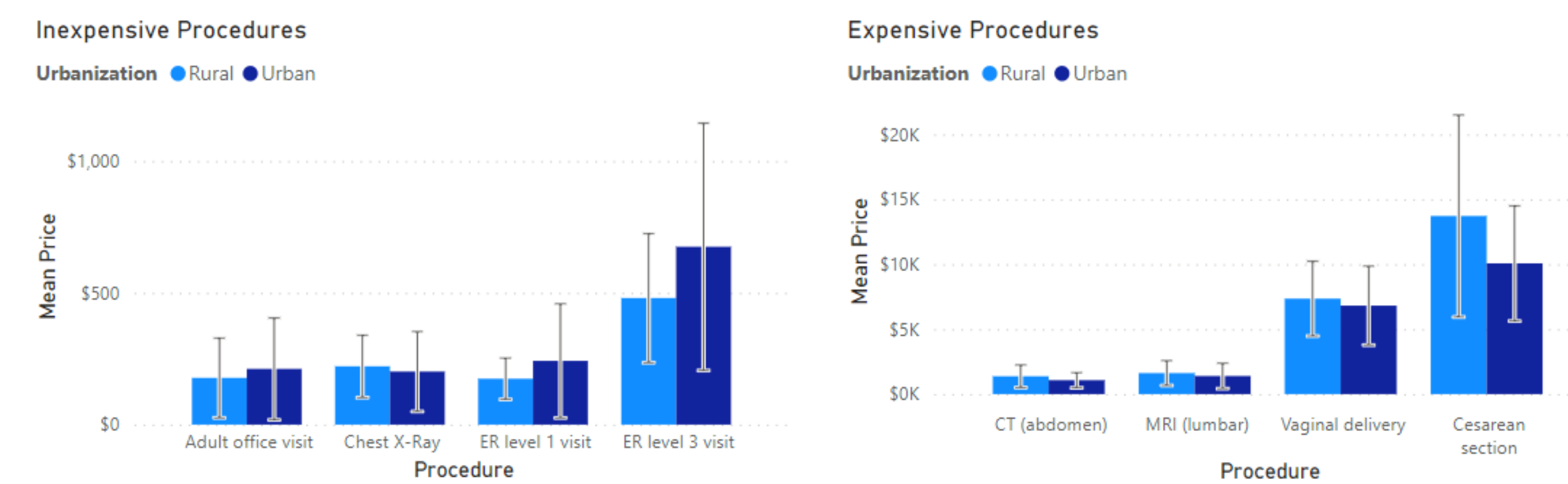


Rural hospital: Baptist Health Madisonville, KY  
Urban hospital: Baptist Health Lexington, KY

### Current Sample Size

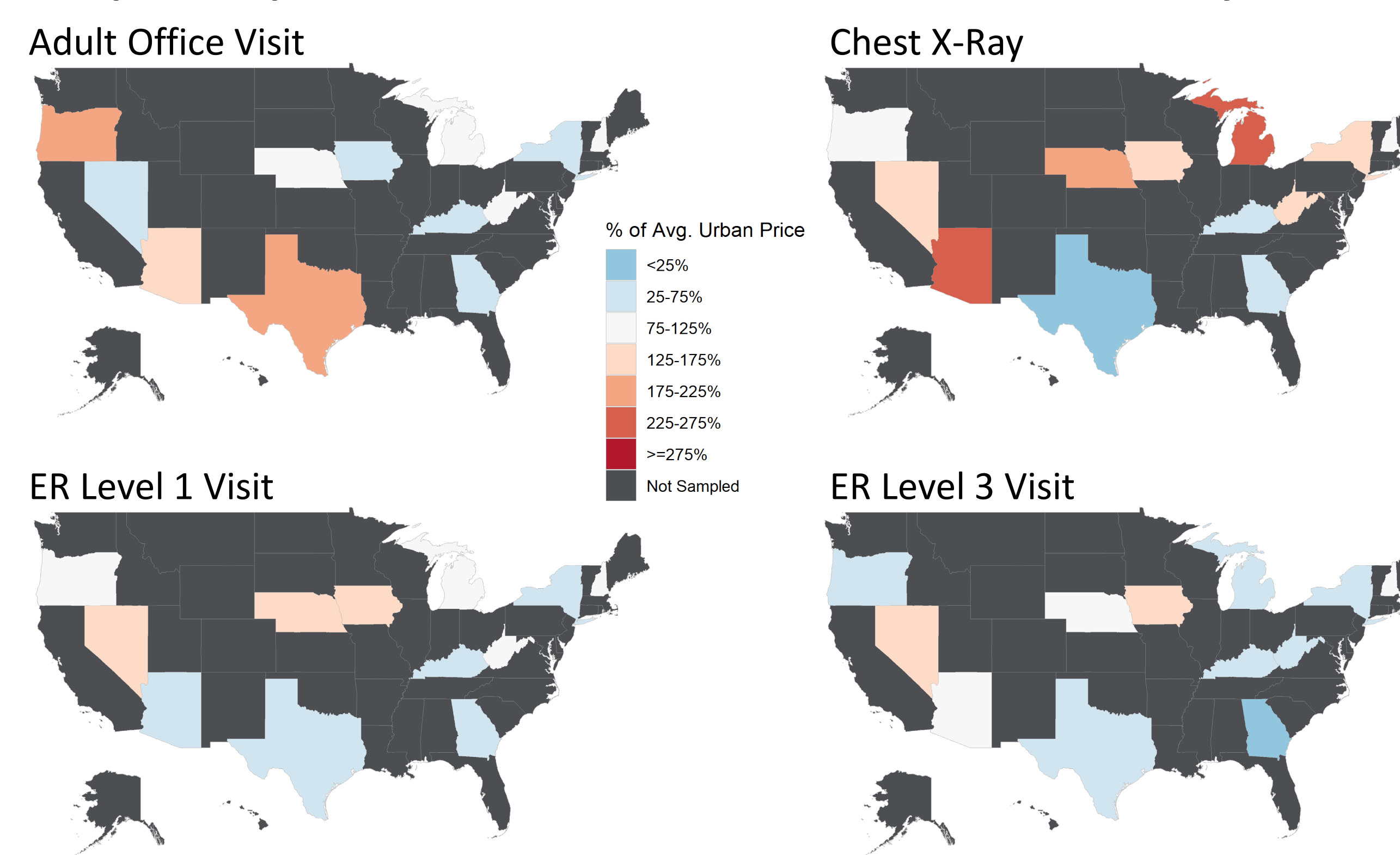
State	Urban Hospitals	Rural Hospitals
Arizona	2	5
Georgia	3	4
Iowa	2	3
Kentucky	5	5
Michigan	2	1
Nebraska	5	2
New Hampshire	3	4
Nevada	2	4
New York	4	2
Oregon	1	3
Texas	1	2
West Virginia	5	4
Total	35	39

## Average pricing, collapsed across state



## Average prices in rural vs urban hospitals, by state

### Inexpensive procedures – office visits, ER visits, and chest x-rays



### Expensive procedures – MRI scans, CT scans, and childbirth

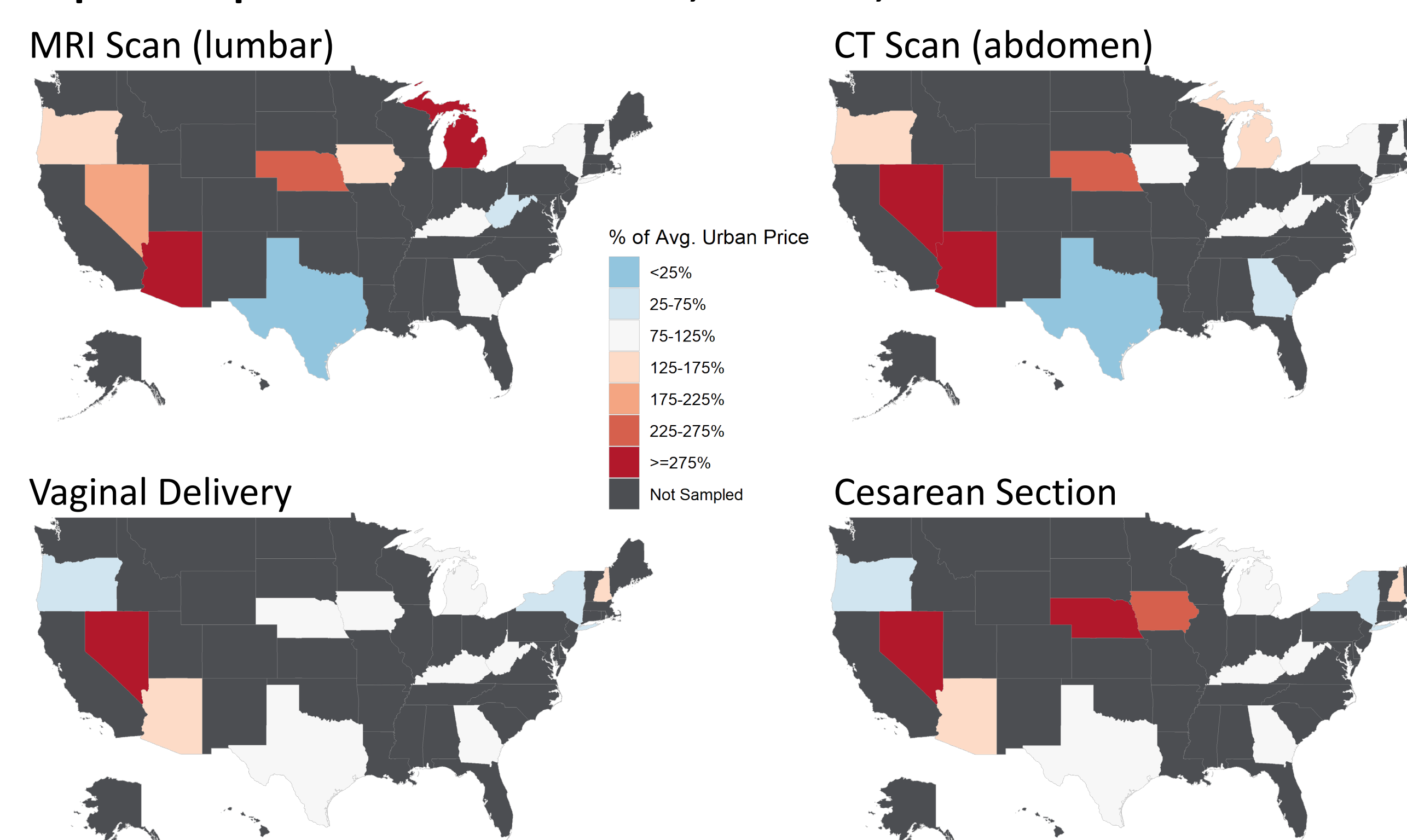


Table 2. Codes with approximate Medicare prices

Category	Procedure	Code type	Code	Comparable Approx. Medicare Price
Office and ER visits	Adult office visit	CPT	99213	\$64-70 <sup>3</sup>
	ER level 1 visit	CPT	99281	\$21-23 <sup>3</sup>
	ER level 3 visit	CPT	99283	\$70-77 <sup>3</sup>
Imaging	Chest X-Ray	CPT	71046	\$31-34 <sup>4</sup>
	CT (abdomen)	CPT	74160	\$229-249 <sup>4</sup>
	MRI (lumbar)	CPT	72148	\$187-204 <sup>4</sup>
Childbirth	Cesarean section	DRG	788	\$5,226 <sup>5</sup>
	Vaginal delivery	DRG	807	\$3,777 <sup>5</sup>

## Conclusions and Implications

- Negotiated prices are extremely variable, even when just considering different payors in a single hospital system.
- Variation in prices across rural versus urban areas was observed, but the direction of variation depended on the state and type of procedure being considered.
- Consumers may benefit from the newly available price information – especially rural residents who may be more likely than urban residents to travel away from their local hospital<sup>2,7</sup> – but accessing this information is challenging.
- CMS required hospitals to provide<sup>8</sup> 1) prices for at least 300 consumer-friendly shoppable services and 2) machine-readable files including gross, cash, payer-specific, and de-identified minimum and maximum prices.
  - In our experience, the machine-readable files were often incomplete and difficult to navigate, even for researchers. Files were often posted in less accessible formats or with formatting issues that affected quality.
  - Shoppable service prices were rarely presented in a simple format, accessing this information often requires inputting insurance information, which can add a barrier to accessing information.

## Limitations

Our sample does not include hospitals with data that was unsuitable for analysis (e.g., no negotiated prices; n = 32) or who posted data in .json format (n = 22). Efforts to replace and/or extract this data are ongoing.

## References

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