

# Orthopedic Surgery Pricing Analysis

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# Data Included

All data presented here is taken from the Vermont Health Care Uniform Reporting and Evaluation System (VHCURES), September 2015 Extract. The following filters were applied to the data:

- Commercial Insurance only (secondary coverage excluded)
- Patient is a Vermont resident, less than age 65

Orthopedic surgery episodes were defined as all claims for a the patient with the first service date equal to the day of the surgery. This includes professional claims for the surgeon, assistant surgeon (if billing), anesthesiologist, and radiologist if images were taken on the day of the surgery, as well as the full facility claim originating on the day of the surgery. This excludes rehabilitation costs as well as pre-surgery and follow-up visits. The following CPT codes were used to identify surgeries:

- CPT 27447 = Total Knee Replacement
- CPT 29827 = Rotator Cuff Repair

Surgeries were filtered to allow only events with facility costs greater than \$ 5,000 and surgeon's costs greater than \$ 1,000.

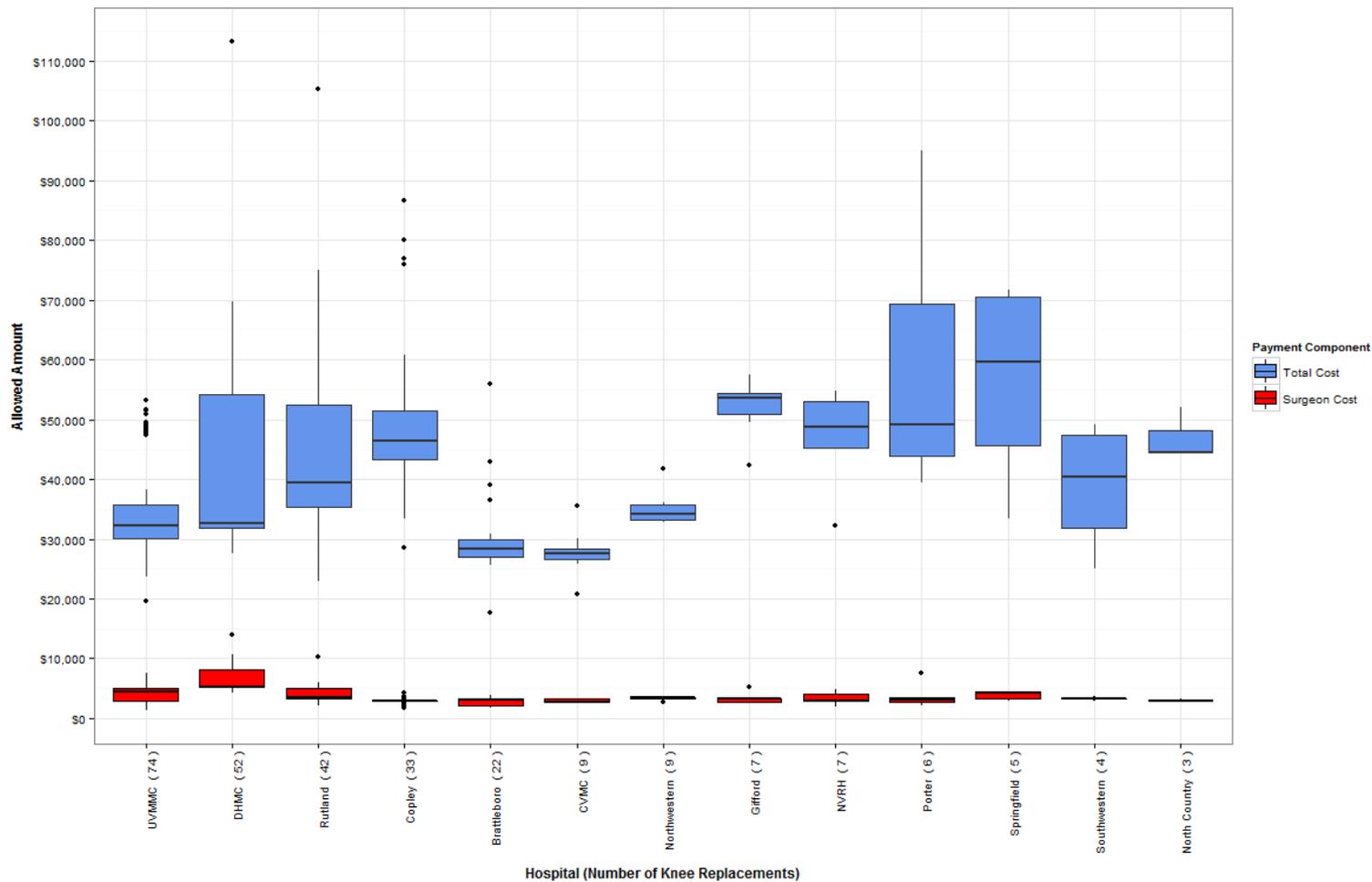
Spending is grouped into the following categories:

- Surgeon Cost is all costs for the orthopedic surgeon as well as all other professional costs for the primary surgical CPT. This captures spending for an assistant surgeon, usually a Physician Assistant.
- Primary CPT is the cost of the primary code (29827) for shoulder surgeries. This amount is included in the total surgeon cost as well.
- Hospital Cost is all cost where the service provider is a hospital. This is the facility component.
- Other Costs are other professional fees. These includes the anesthesiologist and radiologist claims when they exist.

# Total Cost of Knee Replacements

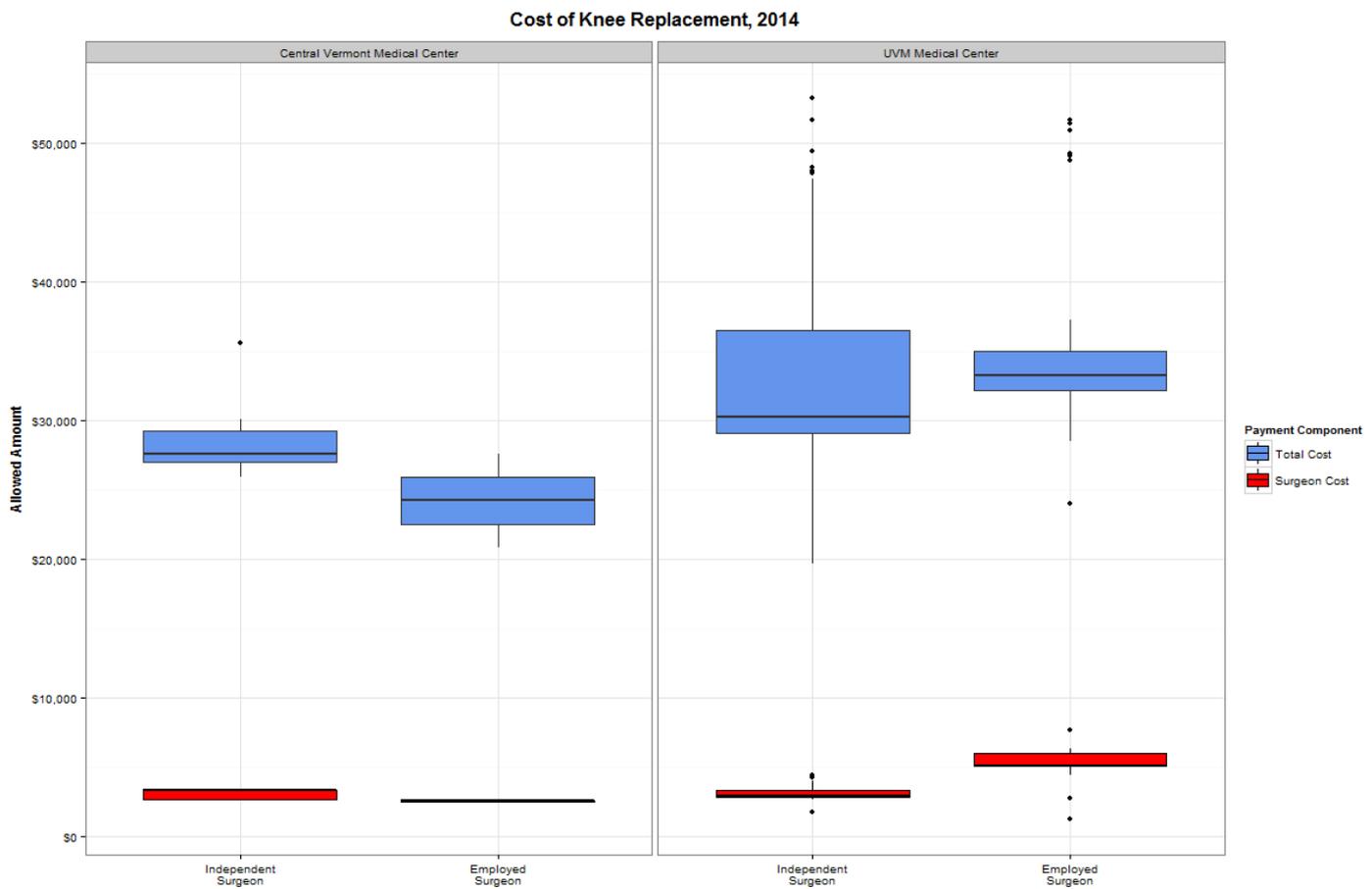
## Patients with Commercial Insurance

Cost of Knee Replacement, 2014



# Comparison of Knee Replacements

## Employed and Independent Surgeons



**NOTE: CVMC had two knee replacements performed by an employed surgeon in 2014 for patients with commercial insurance.**

# Summary Statistics for Knee Replacements at UVM Medical Center, 2014

## Surgeon is Hospital-Employed

Category	Min.	1st Quartile	Median	Mean	3rd Quartile	Max.
<b>Total Cost</b>	<b>\$ 24,040</b>	<b>\$ 32,170</b>	<b>\$ 33,260</b>	<b>\$ 35,620</b>	<b>\$ 34,980</b>	<b>\$ 51,690</b>
Hospital Cost	\$ 20,040	\$ 25,340	\$ 25,430	\$ 28,470	\$ 27,780	\$ 41,550
Surgeon Cost	\$ 1,271	\$ 5,083	\$ 5,083	\$ 5,219	\$ 6,036	\$ 7,624
Other Costs	\$ 1,216	\$ 1,736	\$ 1,854	\$ 1,926	\$ 2,000	\$ 3,064

## Surgeon is Independent

Category	Min.	1st Quartile	Median	Mean	3rd Quartile	Max.
<b>Total Cost</b>	<b>\$ 19,660</b>	<b>\$ 29,050</b>	<b>\$ 30,300</b>	<b>\$ 33,870</b>	<b>\$ 36,490</b>	<b>\$ 53,270</b>
Hospital Cost	\$ 17,490	\$ 24,610	\$ 25,340	\$ 28,890	\$ 31,660	\$ 46,500
Surgeon Cost	\$ 1,723	\$ 2,849	\$ 2,913	\$ 3,158	\$ 3,310	\$ 4,426
Other Costs	\$ 446	\$ 1,587	\$ 1,814	\$ 1,824	\$ 1,985	\$ 2,966

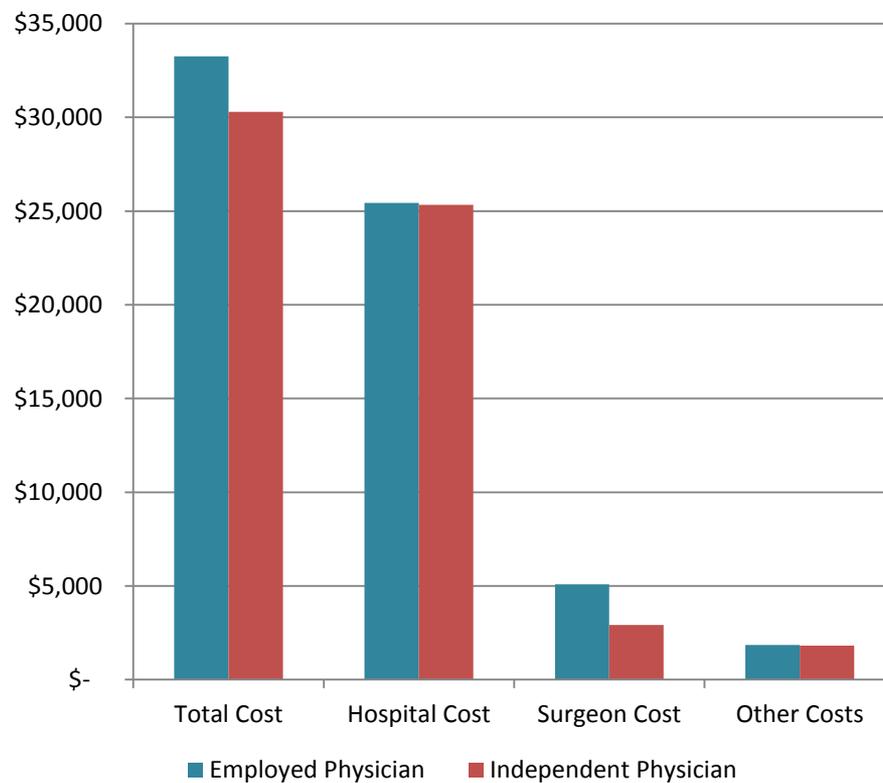
**NOTE:** Summary Statistics are calculated by individual category: the surgery with the median cost does not necessarily contain the median cost for any given component. Because of this, the total cost at a given percentile may not equal the sum of the components at that percentile.

# Comparison of Median Costs

## Commercially Insured Knee Replacements

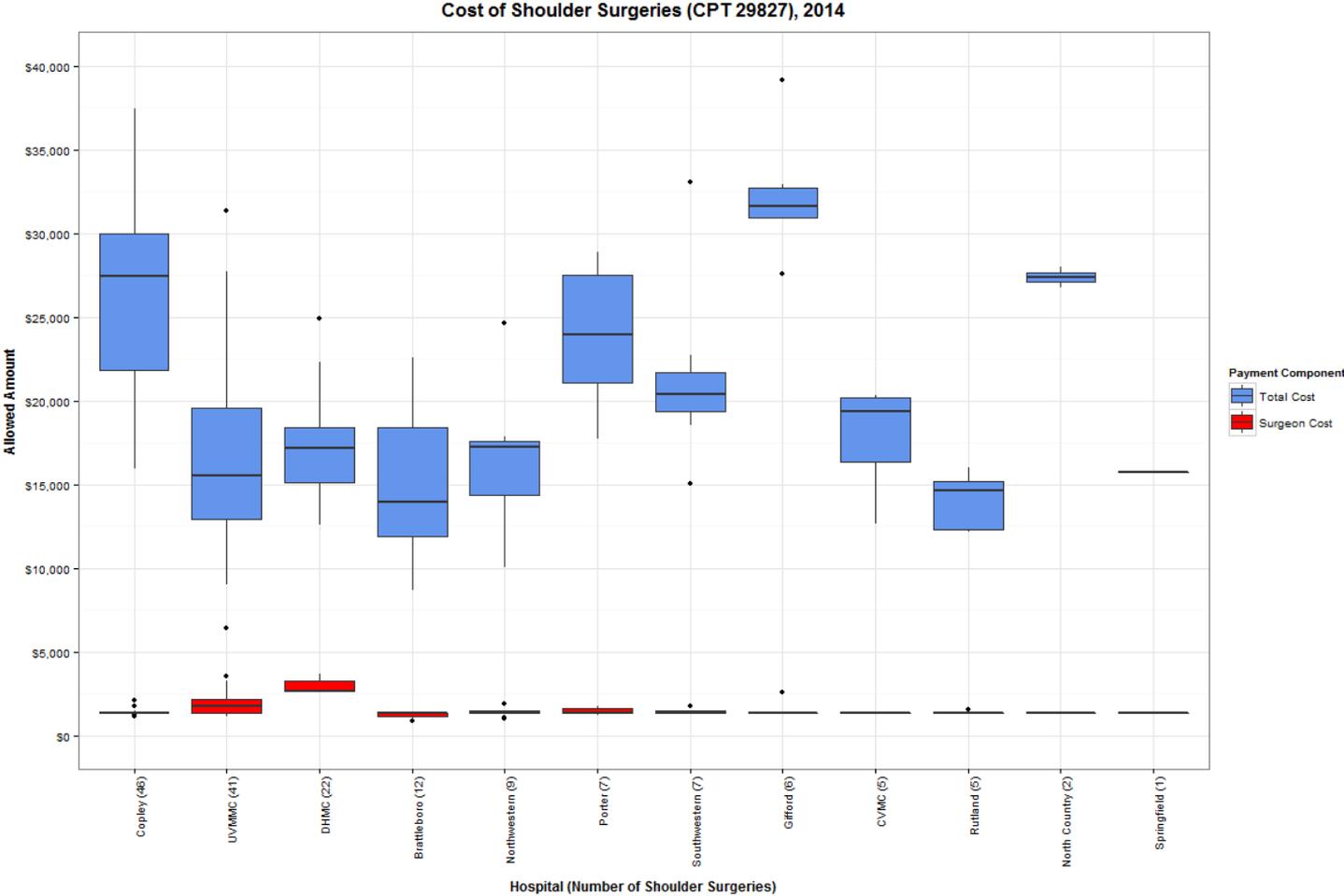
Category	Difference in Cost
Total Cost	9.8%
Hospital Cost	0.4%
Surgeon Cost	74.5%
Other Costs	2.2%

**UVMHC Median Costs, 2014**  
Comparison of Cost Components



# Total Cost of Shoulder Surgeries

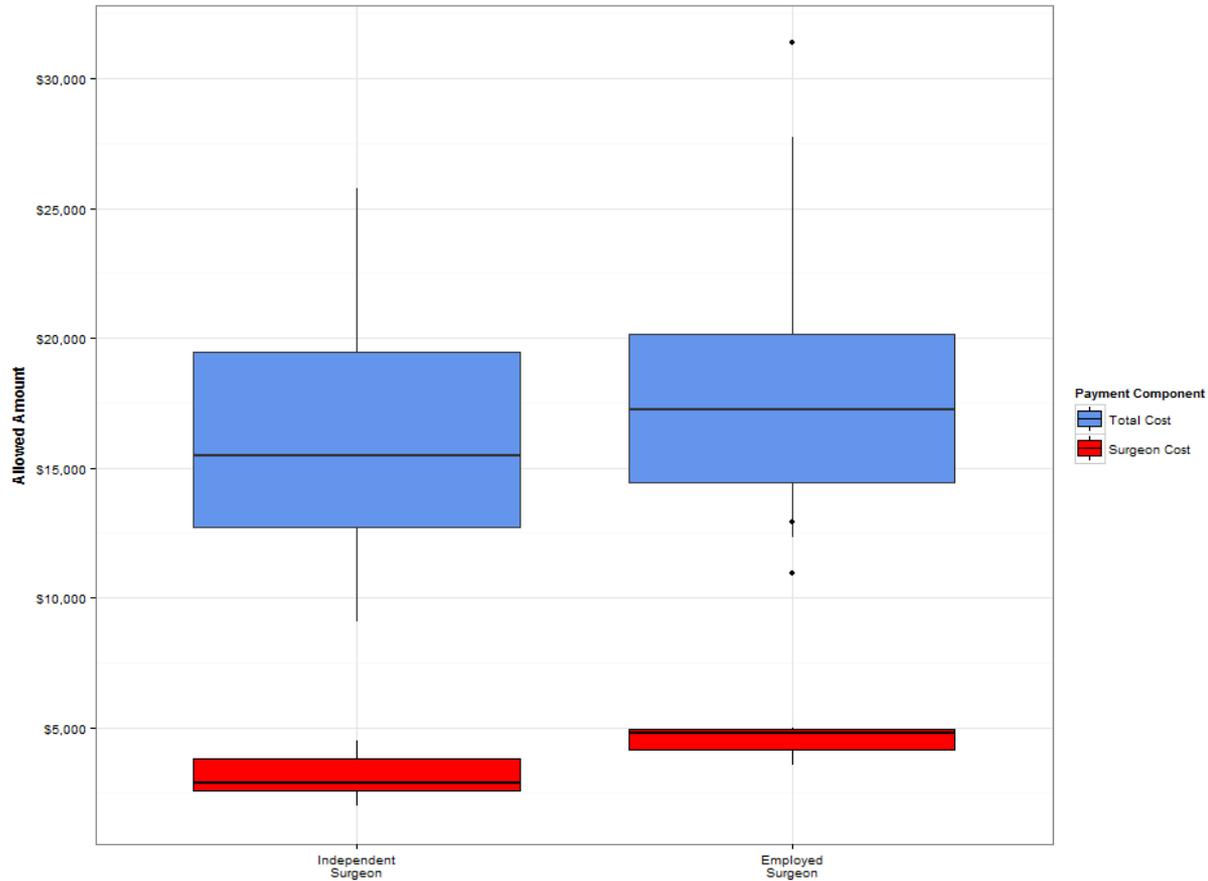
## Patients with Commercial Insurance



# Comparison of Shoulder Surgeries

## Employed and Independent Surgeons

Cost of Shoulder Surgery (CPT 29827)  
UVM Medical Center, 2014



# Summary Statistics for Shoulder Surgeries

at UVM Medical Center, 2014

## Surgeon is Hospital-Employed

Category	Min.	1st Quartile	Median	Mean	3rd Quartile	Max.
<b>Total Costs</b>	<b>\$ 12,320</b>	<b>\$ 14,470</b>	<b>\$ 17,240</b>	<b>\$ 18,780</b>	<b>\$ 20,140</b>	<b>\$ 31,360 *</b>
Surgeon Cost	\$ 3,555	\$ 4,172	\$ 4,783	\$ 5,887	\$ 4,945	\$ 12,930 *
<i>Primary CPT</i>	\$ 3,288	\$ 3,555	\$ 3,555	\$ 4,110	\$ 3,555	\$ 6,463
Hospital Cost	\$ 7,144	\$ 8,428	\$ 11,010	\$ 11,530	\$ 14,660	\$ 16,980
Other Costs	\$ 991	\$ 1,182	\$ 1,379	\$ 1,363	\$ 1,451	\$ 1,788

## Surgeon is Independent

Category	Min.	1st Quartile	Median	Mean	3rd Quartile	Max.
<b>Total Costs</b>	<b>\$ 9,055</b>	<b>\$ 12,700</b>	<b>\$ 15,470</b>	<b>\$ 16,430</b>	<b>\$ 19,480</b>	<b>\$ 25,760</b>
Surgeon Cost	\$ 1,991	\$ 2,594	\$ 2,861	\$ 3,085	\$ 3,811	\$ 4,495
<i>Primary CPT</i>	\$ 1,163	\$ 1,351	\$ 1,473	\$ 1,576	\$ 1,775	\$ 2,210
Hospital Cost	\$ 6,199	\$ 8,777	\$ 11,570	\$ 11,820	\$ 14,340	\$ 20,210
Other Costs	\$ 332	\$ 1,198	\$ 1,417	\$ 1,521	\$ 1,637	\$ 3,243

\* Hospital Employed Surgery statistics contain one high-cost outlier in surgeon's cost that may be erroneous: an assistant surgeon was paid the same rate as the primary surgeon. If this was an error, the maximum total cost will drop to \$27,717, and the maximum surgeon cost will be \$10,973. No other data in these tables will be affected by this error.

**NOTE: Summary Statistics are calculated by individual category: the surgery with the median cost does not necessarily contain the median cost for any given component. Because of this, the total cost at a given percentile may not equal the sum of the components at that percentile.**

# Comparison of Median Costs

## Commercially Insured Shoulder Surgeries

Category	Difference in Cost
<b>Total Cost</b>	<b>11.4%</b>
Surgeon Cost	67.2%
<i>Primary CPT</i>	<i>141.3%</i>
Hospital Cost	-4.8%
Other Costs	-2.7%

