

# Estimating the Costs of Operating Room Time at Trauma Center Hospitals

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## Background

- Healthcare industry has begun to assess new clinical practices and innovations based on their ability to not only improve patient outcomes, but also to contain or reduce the costs of healthcare delivery, as the industry shifts from volume-based to value-based care practices.
- The U.S. Department of Defense’s Surgical Critical Care Initiative (SC2i)—whose mission is to develop biomarker-driven personalized clinical decision support tools for trauma patients—sought to assess the financial impact of its tools. To do so, SC2i needed an estimate of operative costs in the United States.
- Past estimates of operating room (OR) costs are poorly defined and none specifically targeted those costs for critical care patients.

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## Methods

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|---------------------------|---|
| <b>OBJECTIVE</b>          | ESTIMATE THE MEAN COST FOR <b>1 MINUTE OF OR TIME</b> FOR PATIENTS WITH TRAUMATIC INJURIES AT TRAUMA CENTERS AND ANY COST DIFFERENCES BASED ON EDUCATIONAL MISSION AND OWNERSHIP  |
| <b>COST DEFINED</b>       | HOSPITAL CHARGES, TO AVOID THE COMPLICATING IMPACT OF NEGOTIATED RATES ON REIMBURSEMENTS  |
| <b>METHOD</b>             | PRICE LIST SURVEY OF ALL OHIO HOSPITALS FROM 2016-2019 (n=264)  |
| <b>INCLUSION CRITERIA</b> | <ul style="list-style-type: none"><li>• HOSPITALS LISTED AS TRAUMA CENTERS IN THE AMERICAN HOSPITAL DIRECTORY</li><li>• PATIENT CARE CHARGES CATEGORIZED IN THE TOP TIERS OF OR CARE</li><li>• PATIENT CARE CHARGES CATEGORIZED AS “MAJOR,” “COMPLEX,” “CRITICAL-CARE RELATED,” OR “TRAUMA RELATED”</li></ul> |
| <b>EXCLUSION CRITERIA</b> | <ul style="list-style-type: none"><li>• HOSPITALS THAT DO NOT PROVIDE OR SERVICES / DID NOT PROVIDE THEIR OR COSTS</li><li>• HOSPITALS THAT HAVE OVERRIDING SPECIALTY MISSIONS (BEHAVIORAL, CHILDREN’S, REHABILITATION, ETC.)</li></ul>   |



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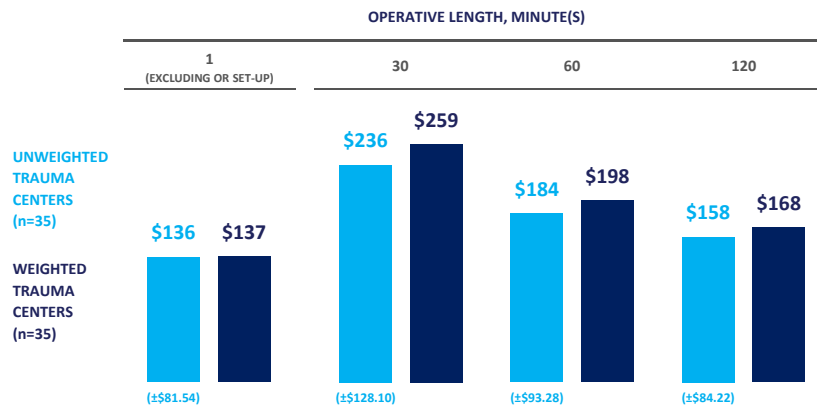
## Methods



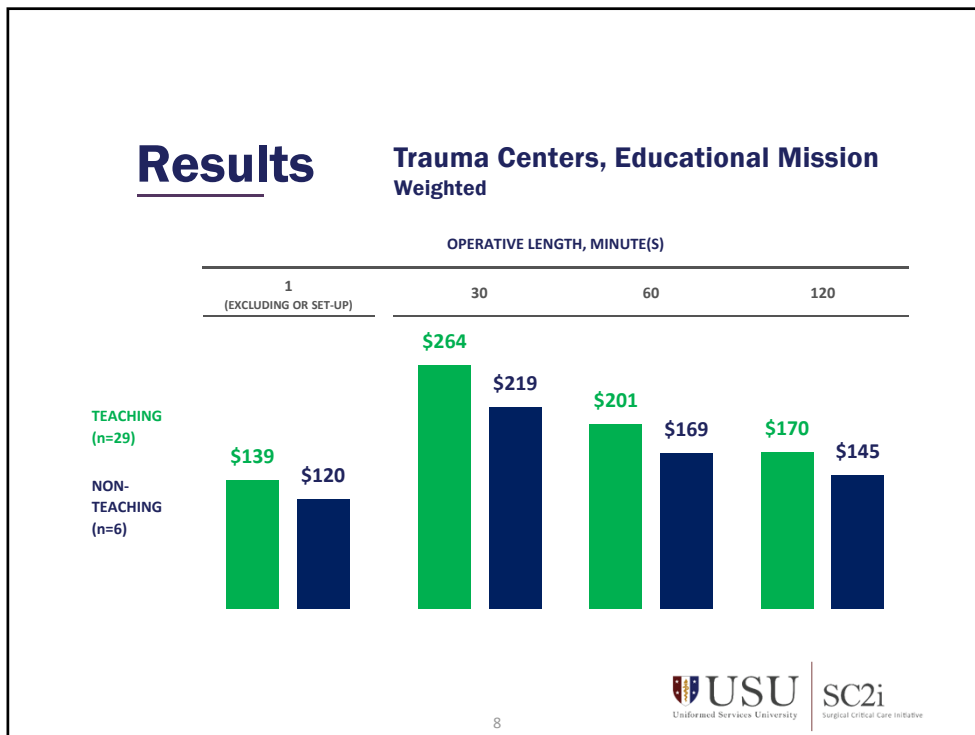
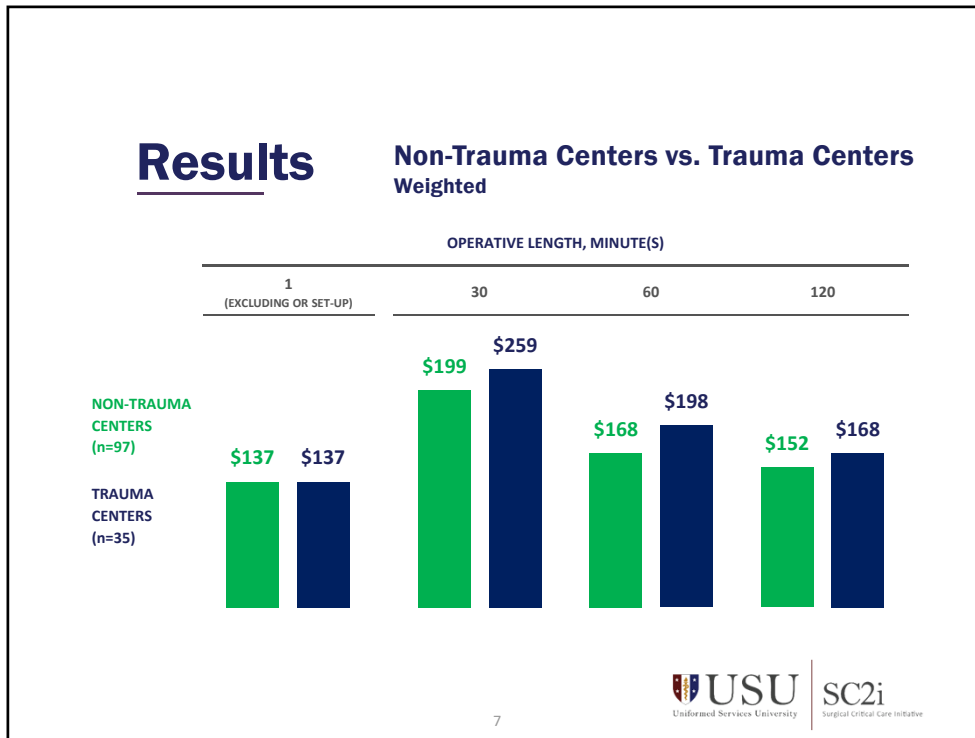
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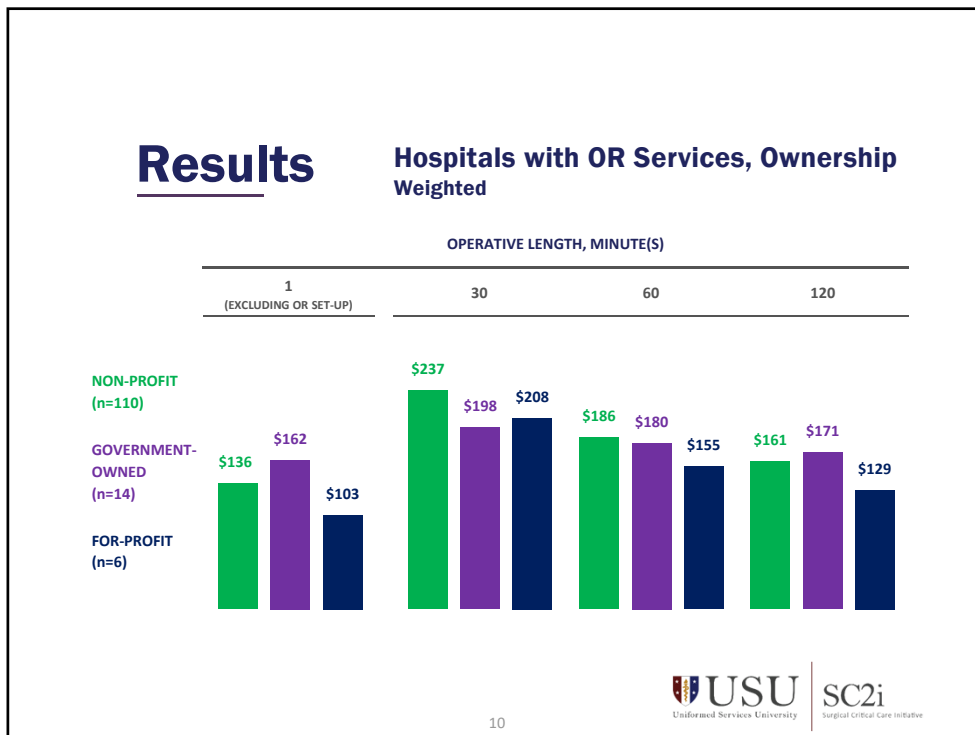
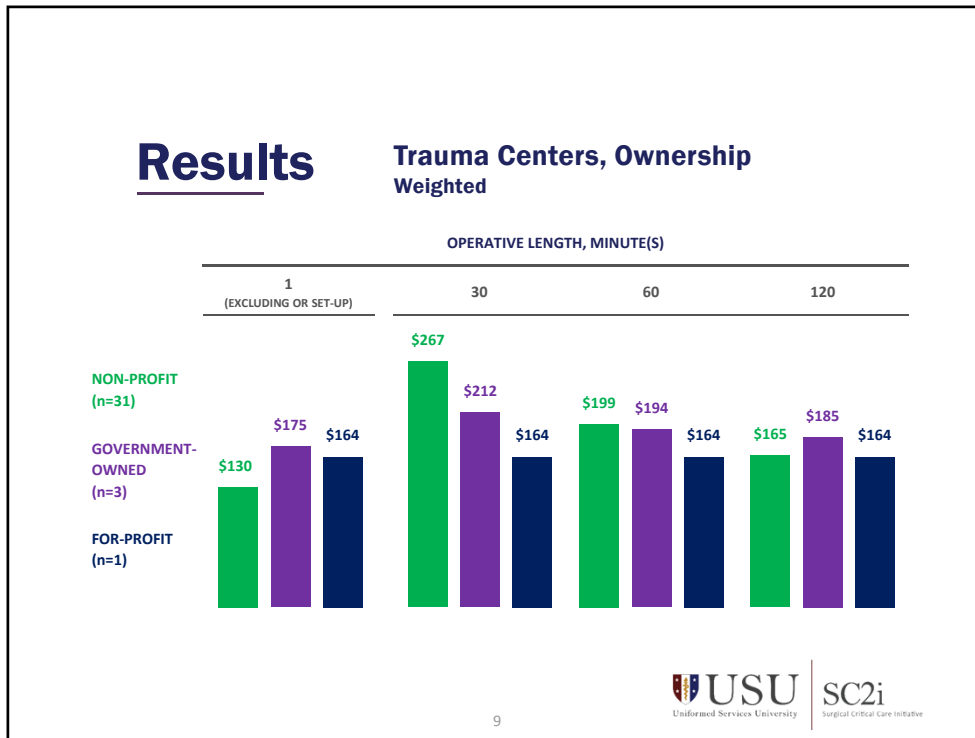
## Results

### Trauma Centers Unweighted vs. Weighted



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## Take-Aways

- When weighted by patient discharges, the per-minute OR cost for patients with traumatic injuries is roughly \$137
- Operating room set-up charges have an outsized impact on the per-minute costs for most operative procedures
- Wide variation in per-minute OR costs suggests that additional operational improvement gains are possible, though the degree to which reimbursement management influences hospital pricing is unknown
- Ultimately, financial assessments such as this one provide a useful foundation for a wide array of medical research, advocacy, and education efforts in the new era of value-based healthcare