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Factors Associated with Length of Stay and Transfer Rates in the Pediatric Urgent Care Setting: 2017 OUCH Data

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Authors have nothing to disclose

Purpose

- This is the third annual national survey of pediatric urgent care centers.
- The survey was used to explore factors associated with patient length of stay (LOS) and disposition including ownership, scope of care, throughput, and annual volume.

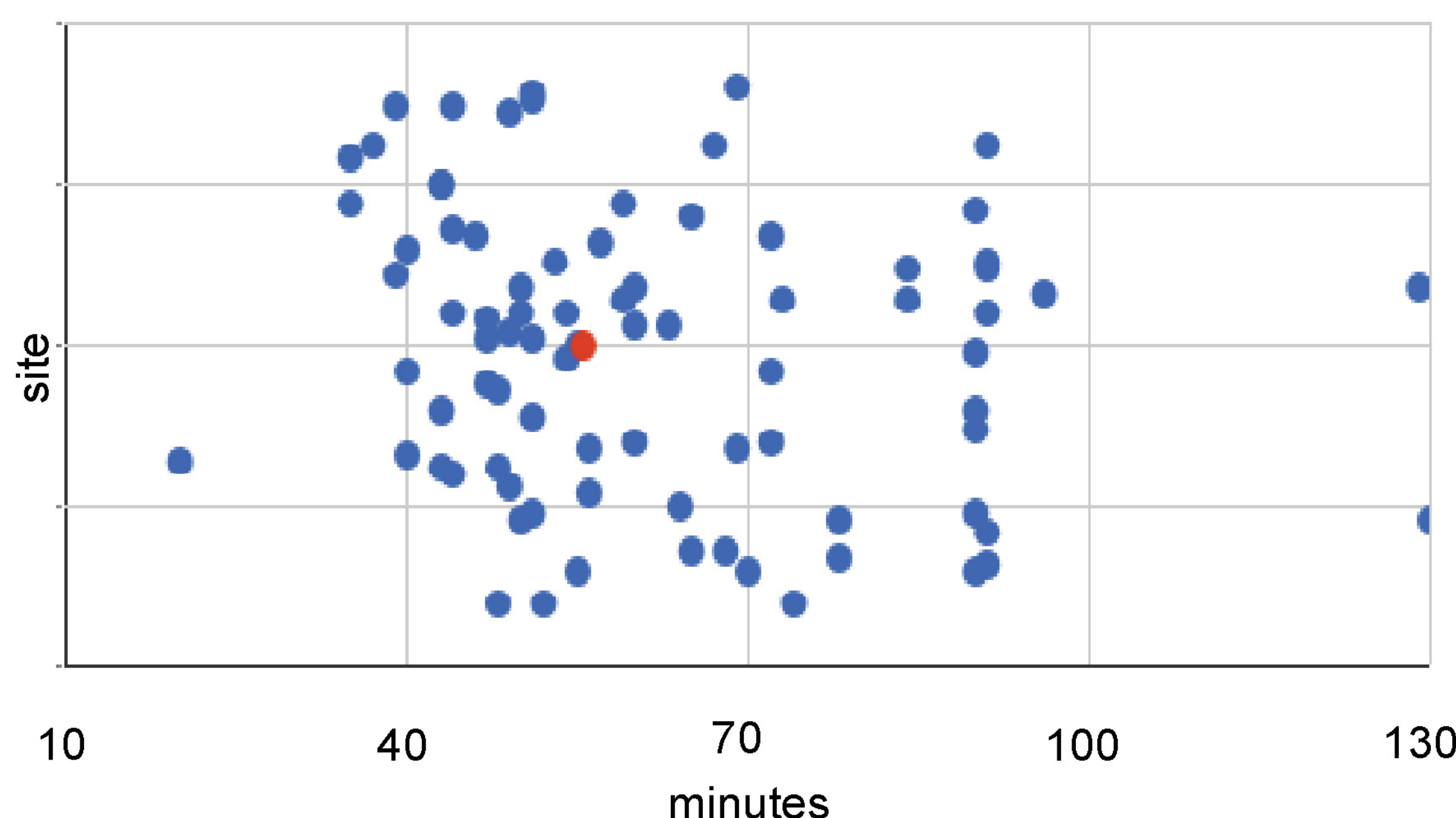
Methods

- An electronic survey was sent to 188 pediatric urgent care centers via email invitation.
- The survey was endorsed by the Society of Pediatric Urgent Care and the American Academy of Pediatrics Subcommittee on Urgent Care.
- Data was collected via a HIPAA-compliant electronic data capture tool (REDCap).
- Data included demographic, operational, and outcome metrics.
- Non-parametric distributions in LOS, transfer rates, and throughput were compared between private vs. hospital sites using the Mann-Whitney U Test
- Spearman's correlation was used to describe the dependency of variables with LOS
- The project was deemed non-human subjects by the IRB at Children's Mercy.

Results

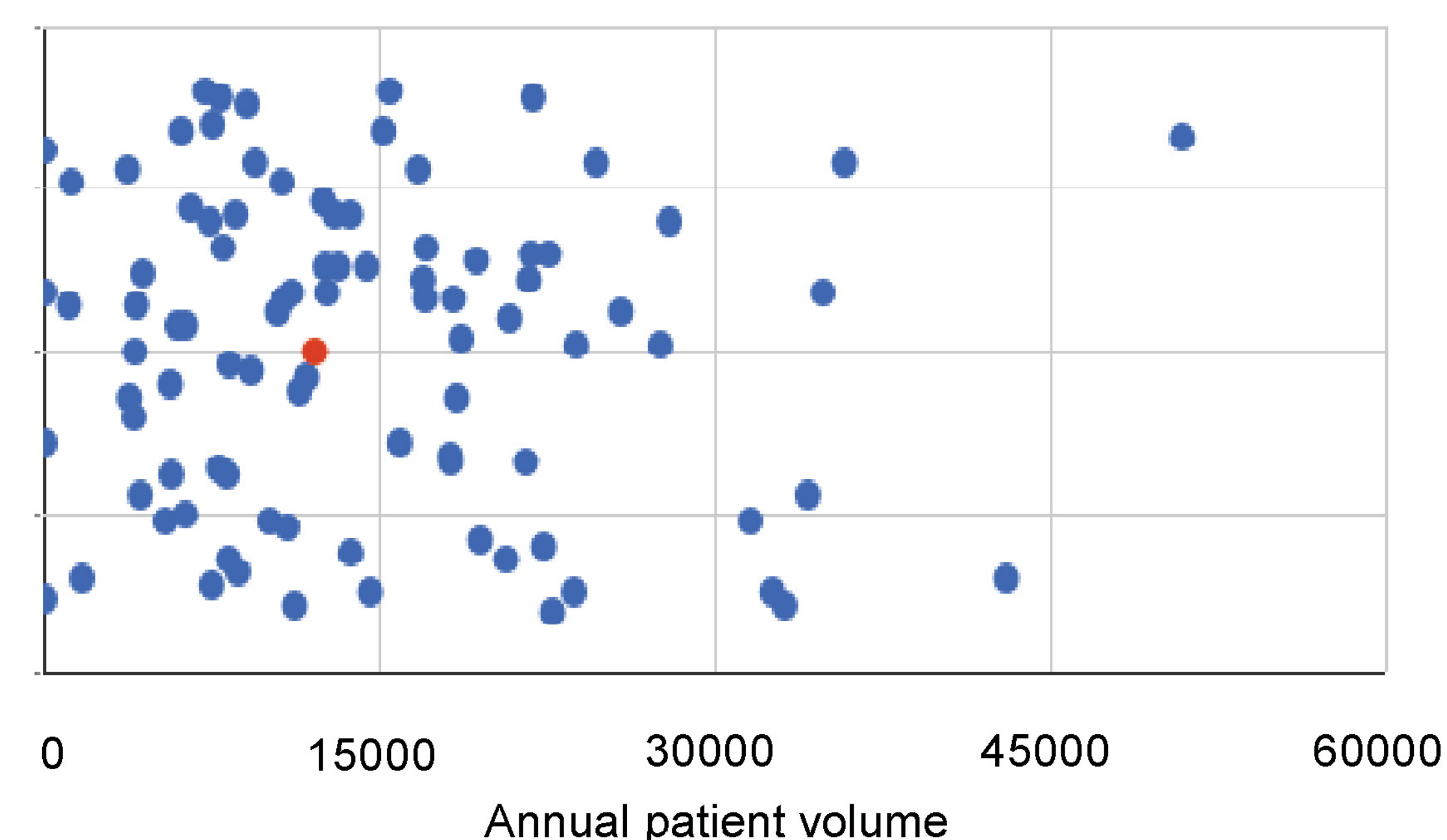
- 125 (66%) completed surveys from 21 different institutions in 22 states.
- Ownership: 55% hospital based; 45% are privately owned.

Median LOS



• 56 minutes [IQR 48, 73]

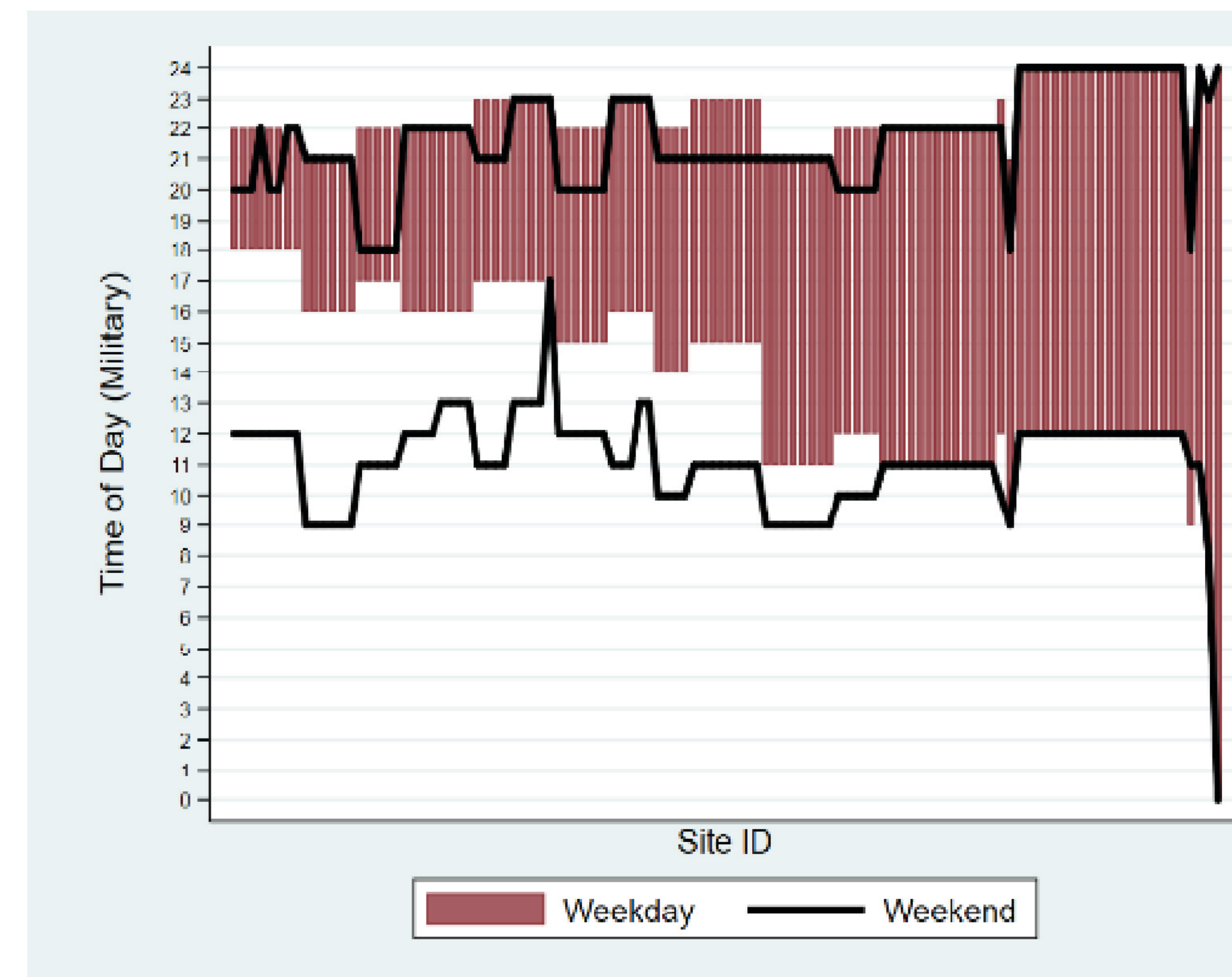
Median Annual Volume



• 12,594 patients [IQR 7719, 20702]

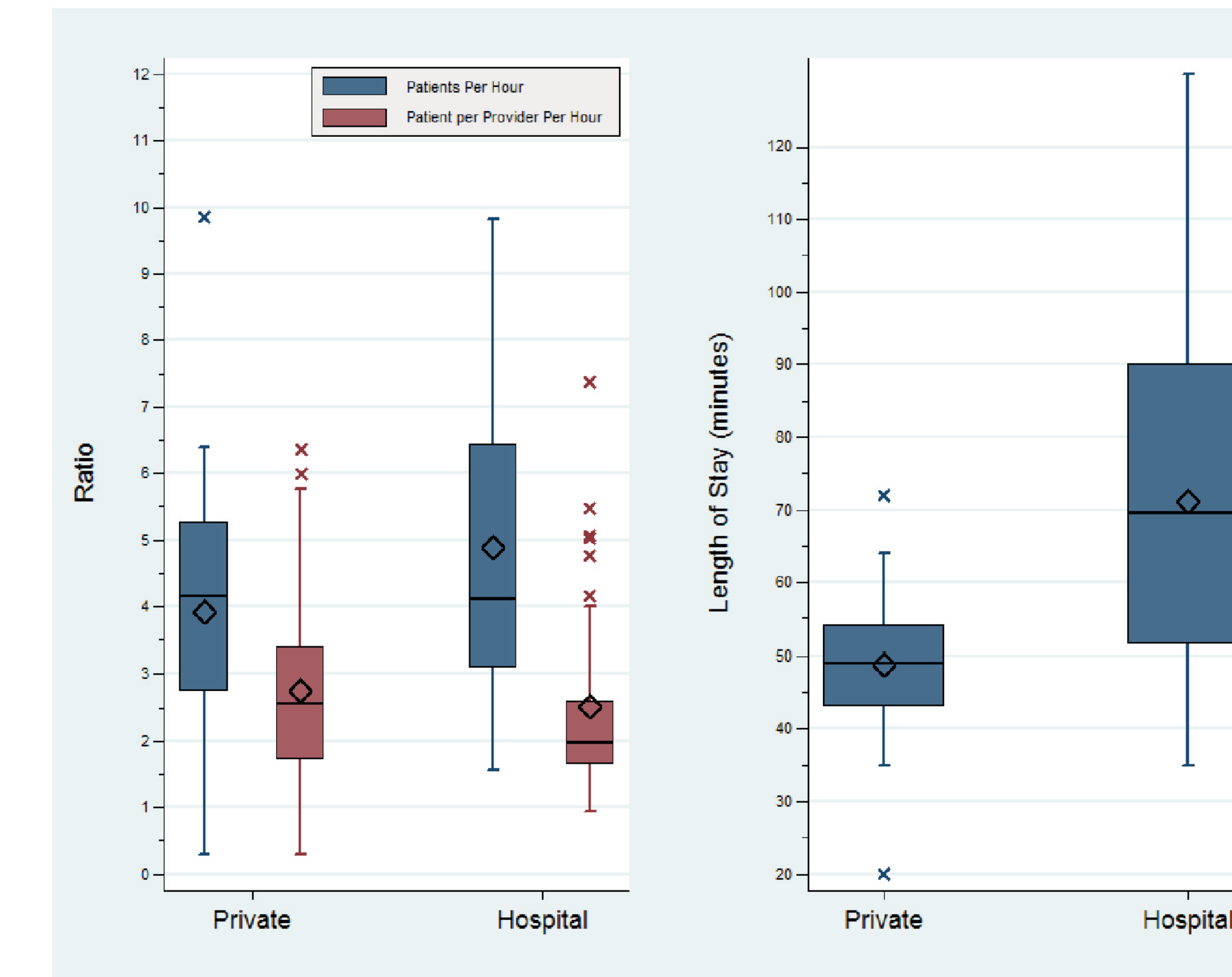
Results, cont.

Hours of Operation



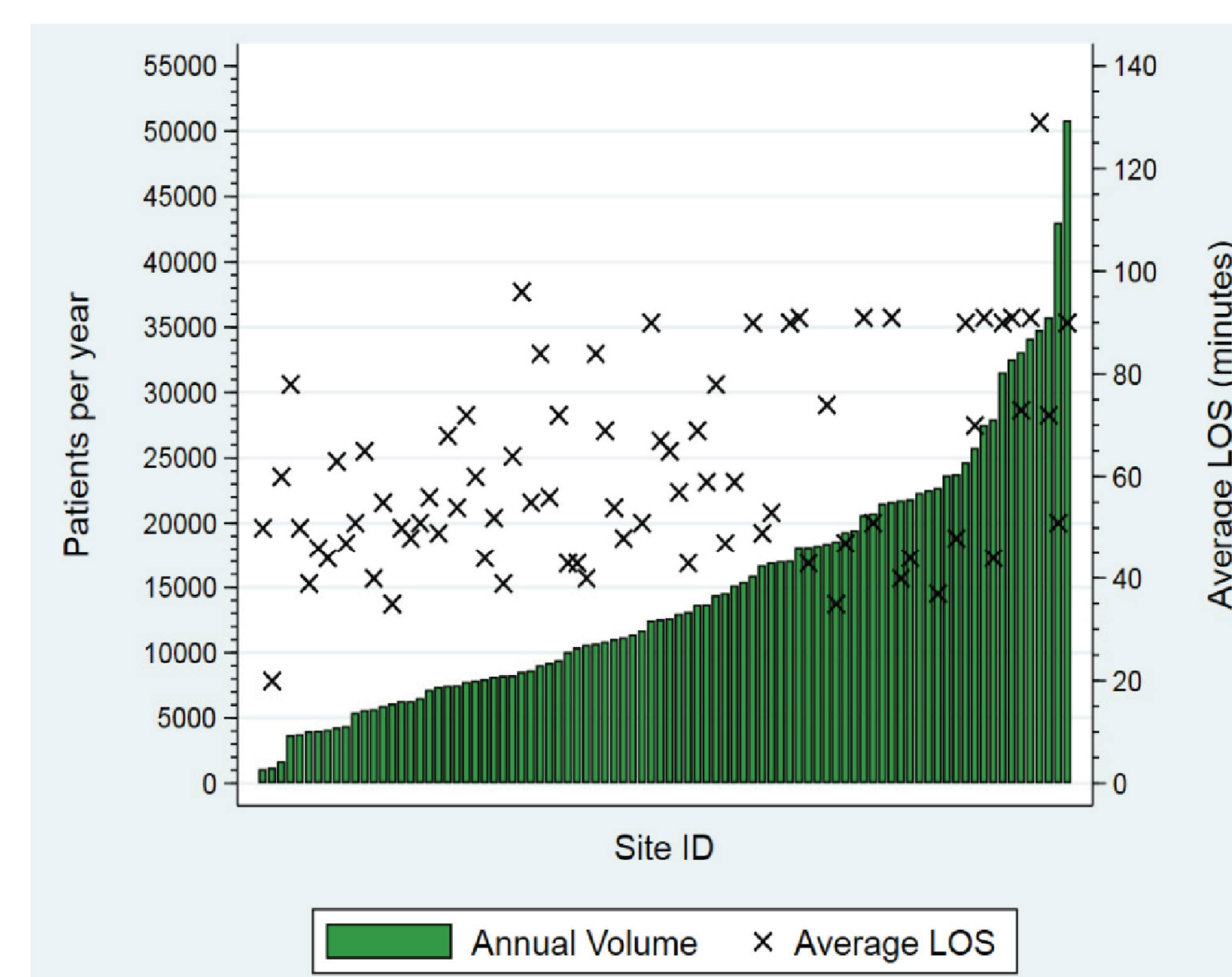
Weekday hours in the evenings and expanded weekend hours are the norm in pediatric UC

Ownership

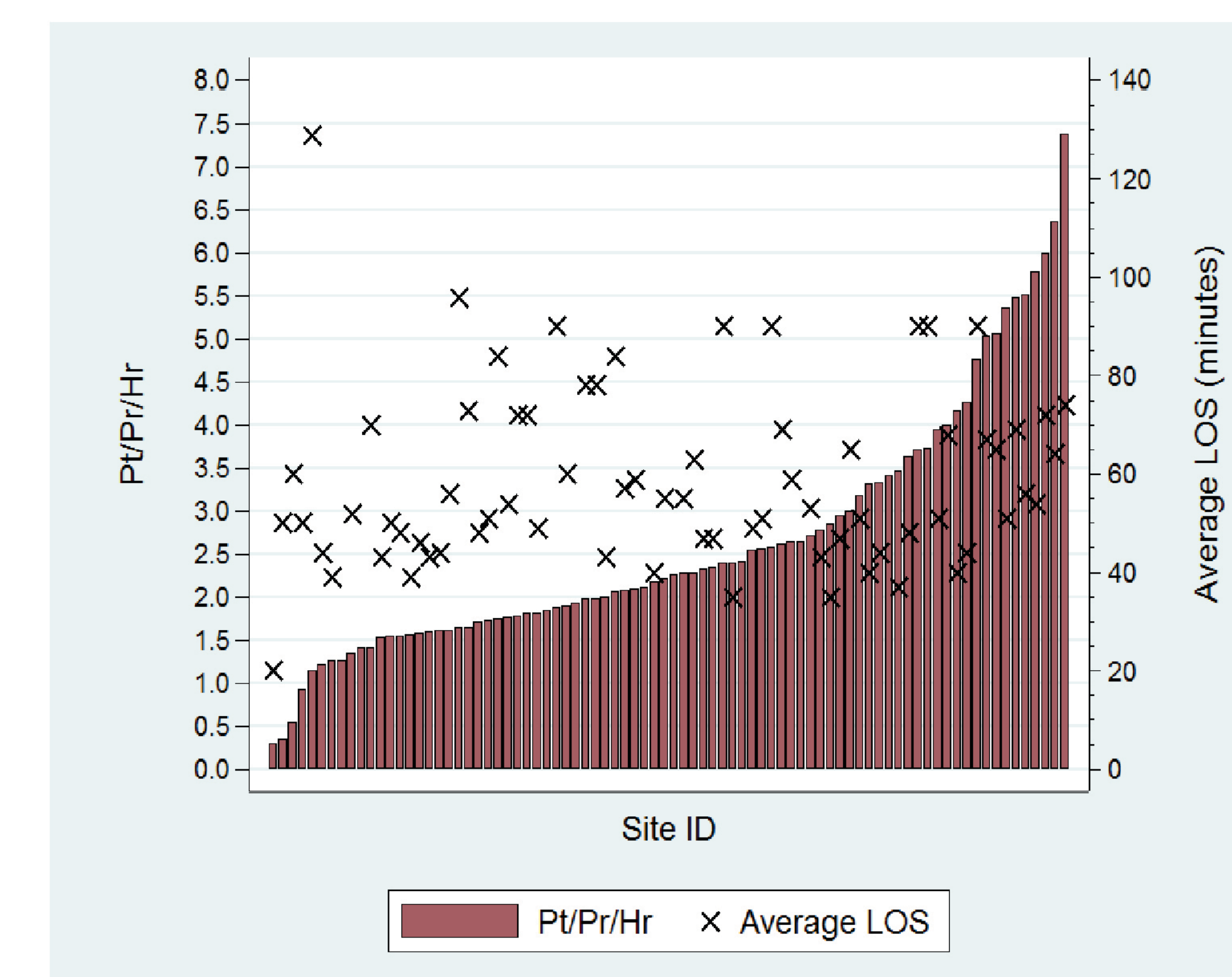


While throughput not statistically significant, LOS ($p < 0.0001$) was significantly different between hospital and private UCs.

Throughput



No clinically significant correlation ($r=0.28$, $p=0.01$) between LOS and annual volume



No correlation ($r=0.12$, $p=0.31$) between LOS and patients by provider per hour

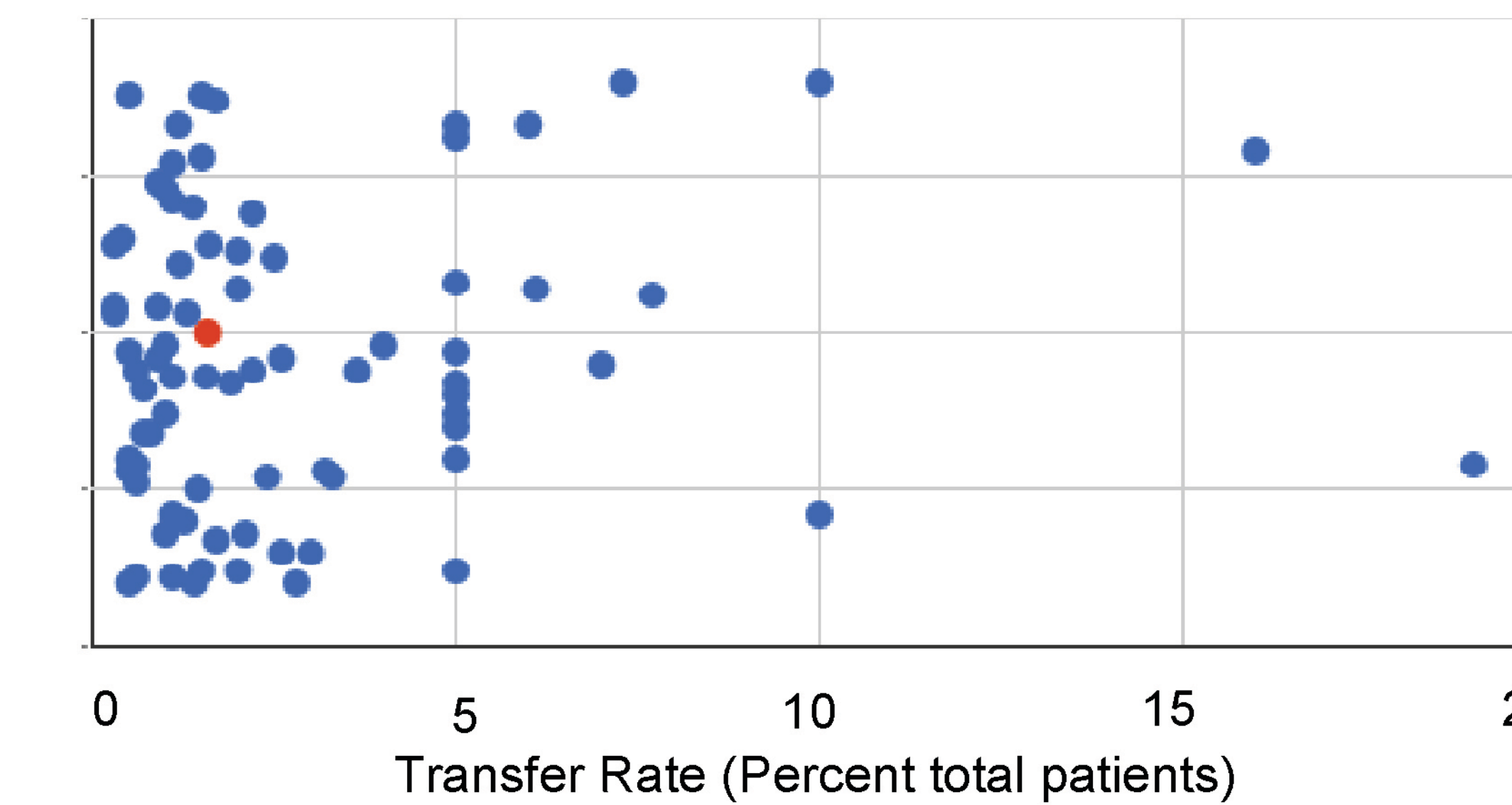
Results, cont.

Length of Stay and Scope of Care

- Having x-ray on site did not increase LOS ($p < 0.595$); however, having a person **credentialed** in reading X-rays onsite contributed to **decreased LOS** ($p < 0.011$).
- Ability to administer **IV fluids** onsite **decreased LOS** ($p < 0.032$).

Transfer Rates

- Throughput of number of patients per provider ($p=0.64$) and patients per hour ($p=0.41$) were **not** associated with increased transfer rates overall.
- LOS and transfer rates were positively correlated overall ($r=0.37$, $p=0.001$).
- There was significant difference in transfer rates between hospital based (2.8%) and privately owned (0.7%) pediatric urgent care centers ($p < 0.0001$).



Discussion

- This was the first national study of pediatric urgent cares to investigate factors associated with increased length of stay and transfer rates.
- No correlation** was found between patient **throughput** and **LOS**.
- Interestingly, facilities with **more advanced care** options (providers reading x-rays and IV fluid administration) had **decreased LOS**.
- Ownership (**hospital based**) was associated with **increased transfer rates**.
- Further studies on clinical outcomes and quality of care in relation to LOS and transfer rates are needed.

References

Paul A. Harris, Robert Taylor, Robert Thielke, Jonathon Payne, Nathaniel Gonzalez, Jose G. Conde. Research electronic data capture (REDCap) - A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009 Apr; 42(2):377-81.