



# Patient Experience: Modes of Transportation and Perceived Transportation Barriers for Patients Scheduled for Elective Ambulatory Surgery at a Children's Hospital

Jonathan M. Tan MD MPH<sup>1,2,3</sup>, Mallika Kodavatiganti<sup>4</sup>, Jorge A. Galvez MD MBI<sup>1,2</sup>, Allan F. Simpao MD MBI<sup>1,2</sup>, Scott R. Dubow MD<sup>1</sup>

<sup>1</sup>Department of Anesthesiology and Critical Care Medicine, <sup>2</sup> Department of Biomedical and Health Informatics, <sup>3</sup>Senior Fellow, The Leonard Davis Institute for Health Economics and The Center for Public Health Initiatives, <sup>4</sup>College of Arts and Sciences, Drexel University,

The Children's Hospital of Philadelphia and the Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA



## BACKGROUND

- Access to pediatric health care is complex and can be limited by socioeconomic, demographic, medical and location-based factors.
- Barriers to care can cause late or missed appointments and have a cascading impact on patient health and decrease the efficiency of a health care system.<sup>1</sup>
- Transportation barriers can lead to late and missed appointments.<sup>2</sup>
- Current literature is limited to primary care settings and minority populations and do not describe transportation modalities used to access pediatric surgical care and patient perceived transportation barriers.<sup>3,4</sup>

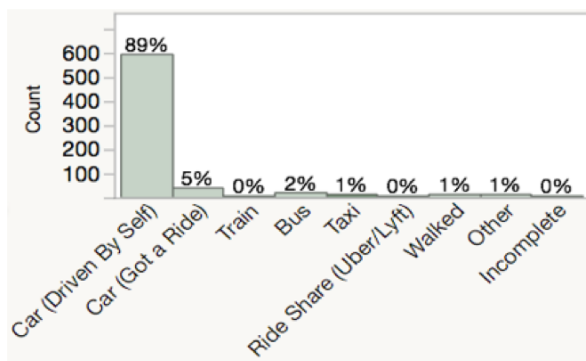
## OBJECTIVE

- To determine the modes of transportation and perceived transportation barriers for patients scheduled for elective ambulatory surgery at a large academic children's hospital.

## METHODS

- A survey tool was created and administered to parents or legal caretakers of children presenting for elective ambulatory surgery at The Children's Hospital of Philadelphia as part of the pre-operative evaluation in May 2016.
- The survey tool had **quantitative and qualitative assessments** of transportation modes and perceived transportation barriers surrounding their child's surgical care.
- Statistical Analysis was conducted using SAS and JMP (SAS, Version 9.4 and JMP, Version 12.1.0, SAS Institute, Inc., Cary, NC, 1989-2015).

Table 1: Mode of Transportation for Getting to Hospital for Elective Surgery (n = 664)



## Results

- A total of 664 unique patient surveys were completed
- Mean age of patients was 7.6 years (SD ± 7.7) with 59.5% male and 40.5% female.
- The most common method was for the family/caretaker to drive themselves to the hospital (89%), followed by obtaining a ride from someone else (5%).
- Planned transportation modes for going home following elective ambulatory pediatric surgery were different for 20% (134/664) of patients when compared to their actual arrival mode.

## Results

- Overall, **12% (77/664) of patient surveys self-reported arriving late**, as compared to their expected time of arrival, and cited traffic as the main reason for their delay including (in rank order):
  - **Unexpected Traffic**
  - **Poor Directions**
  - **Weather Conditions**

## DISCUSSION

- Transportation modes and perceived barriers to transportation have been studied in the pediatric primary care setting but not in a pediatric surgical population.
- Our study is the first to describe transportation modes and perceived barriers in children scheduled for elective surgery.
- Understanding the patient experience and social determinants of health are important factors toward improving access for pediatric care and subsequent improvements in health.

## References

- <sup>1</sup> Grant R, Johnson D, Borders S, et al. The Health Transportation Shortage Index: the development and validation of a new tool to identify underserved communities. Children's Health Fund. 2012.
- <sup>2</sup> Grant R, Gracy D, Goldsmith G, et al. Transportation Barriers to Child Health Care Access Remain After Health Reform. JAMA Pediatrics. 2014; 168: 385-386.
- <sup>3</sup> Yang S, Zarr RL, Kass-Hout TA, et al. Transportation barriers to accessing health care for urban children. Journal of Health Care for the Poor and Underserved. 2006;17:928-943.
- <sup>4</sup> Crain EF, Kerckmar C, Weiss KB, et al. Reported difficulties in access to quality care for children with asthma in the inner city. Archives of Pediatrics and Adolescent Medicine. 1998;152:333-339

## Acknowledgements

The authors would like to thank the wonderful NPs and RNs at the CHOP Anesthesia Resource Center for their incredible work in collecting the data for this study from the patients and their families. Without their collaboration this study would not be possible. We would like to especially acknowledge Aileen Levine, NP who helped to coordinate all of their efforts.