**CAN LAWS SUCCESSFULLY INCREASE ORGAN DONATION?**

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### Abstract

- Organ transplantation saves lives. Once considered a last resort for critically ill patients, it is now a practical treatment for giving patients dying from heart, liver, lung and kidney disease a second chance for life. Unfortunately, the number of human organs available for transplant has never been sufficient to meet the need. Laws have attempted to increase organ donation without changing the U.S. system of voluntary donation. This study examines the 2006 Uniform Anatomical Gift Act (UAGA). Thirty-three states and the District of Columbia adopted this law by 2008. A quantitative analysis using a paired t-test compared the number of organ transplants for the early adopters at the base year of 2006 and at 2012 to see if these states experienced an increase in transplants that may be attributable to the law. The results revealed that there was no statistical difference between the early adopting states in 2006 and in 2012. This suggests that the 2006 UAGA has not achieved its goal of increasing the number of organ transplants.

- Conclusion: Other ways of increasing the number of organs available for transplantation need to be considered, including those that would more fundamentally change the U.S. system of voluntary donation.

### Background

- Organ donation is governed primarily by state law. To aid the states, the Uniform Law Commission drafts model laws that states are encouraged to adopt. There have been three Uniform Anatomical Gift Acts (UAGA) - 1968, 1987, 2006.
- The 2006 UAGA was designed to alleviate the growing shortage of organs. It includes a strong focus on First Person Consent. This is permits the organs of individual who registers to be an organ donor to be donated for transplant without the consent of the family.

### Goal

To see if state adoption of the 2006 UAGA has lead to an increase in the number of organ transplants.

### Methods

- The 50 states and the District of Columbia were divided into two groups based on the year they adopted the 2006 UAGA. The 33 states that adopted the model law by 2008 were grouped together as the Early Adopters.
- Null Hypothesis = There is no statistical difference in the per capita rate of transplants for the Early Adopting States between 2006 and 2012.
- Statistical Analysis: Two tailed paired t-test with p < 0.05

### Results

- No statistically significant difference in the per capita rate of transplants for the Early Adopting States between 2006 and 2012.
- Failed to reject the null hypothesis

### Conclusion

2006 UAGA has not been successful in increasing organ transplants:
- Not enough time has elapsed
- Passed but not implemented
  - First Person Consent – reliance on a valid document of gift from the deceased without family concurrence - not being followed because:
    - Continuation of past practice due to lack of training
    - Burden to the grieving family
    - Fear of litigation despite immunity

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**Descriptive Statistics**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Early Adopters</th>
<th>Late and Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Number of Organs</td>
<td>246 (0.0000640)</td>
<td>332 (0.0000721)</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>235</td>
<td>249</td>
</tr>
</tbody>
</table>

**P-values are for Two Tailed t-test**

- Two Tailed T Test, Late and Non-Adopters = 0.642
- Two Tailed T Test, Early Adopters = 0.669

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**Percent Change in Number of Transplants for Early Adopting States between 2006 and 2012**

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**Number of Transplants Nationally 1988 to 2012**

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**Diagrams**

To access data and for further information see www.UNOS.com