

Implementing a structured transition from pediatric to adult care can impact clinical outcomes in young adult kidney transplant recipients.

Brian Coburn MD, Clarkson Crane MD, Elizabeth Ingulli MD
 Department of Pediatric Nephrology, Rady Children’s Hospital San Diego

Introduction

- The transition period between pediatric and adult care is a challenging time marked with high risk and vulnerability.
- This is especially true in adolescent patients with a transplanted kidney, which is described as the period with the highest rate of graft loss.
- Studies demonstrate that 83% of young adult with special health care needs (SHCN) and 86% of young adults without SHCN do not meet the national health care transition (HCT) measures published in a clinical report authored by the AAP in collaboration with the AAFP and ACP.
- Studies demonstrate that there are adverse effects associated with a lack of structured HCT interventions including medical complications, limitations in health and well-being, problems with treatment and medication adherence, discontinuity of care, patient dissatisfaction, higher emergency department use, and higher costs of care.
- Data are limited regarding HCT outcomes, but studies in the US and internationally demonstrate improvements in quality of care, terms of service use, and patient and family experience with a structured transition protocol.

Description of the Project

- Our project aims to assess how well patients transition from pediatric kidney transplant clinic at Rady Children’s Hospital in San Diego (RCHSD) to adult kidney transplant clinic at UC San Diego Health (UCSD).
- A retrospective chart review of patients who transitioned from RCHSD to UCSD transplant clinic from the years 2020-2023 is currently being performed to examine metrics such as change in creatinine, blood pressure, rates of infection, and episodes of rejection during this period of transition.
- Additionally, we are looking at the time elapsed between patients’ last visit at RCHSD and first visit at UCSD and time between labs to assess for possible areas of improvement.
- We will look at outcomes associated with our current transitions program which includes structured transition-specific visits to assess and address individual areas of need before they transition.

Lessons learned

- Our initial study population consists of 24 patients, 12 of which are female and 12 male.
- The median age of transition is 21.5 years old
- The median time from last clinic visit to RCHSD is 29.5 days with a max of 89 days and minimum of 1 day.
- The median time between last set of labs at RCHSD and first set of labs at UCSD is 48 days with a max of 92 days.
- The data show a weak positive correlation between days from last RCHSD clinic visit and first UCSD clinic visit and blood pressure elevation that is not statistically significant ($\rho=0.393$, $p=0.0707$). (Figure 1)
- The data show a weak positive correlation with an increase in the number of days between last RCHSD clinic visit and first UCSD visit and increasing creatinine which is not statistically significant ($\rho=0.399$, $p=0.0729$). (Figure 2)
- There is a trend toward more days between visits and rate of acute rejection with a mean of 35 days vs 47 days ($p=0.71$) (Figure 3)

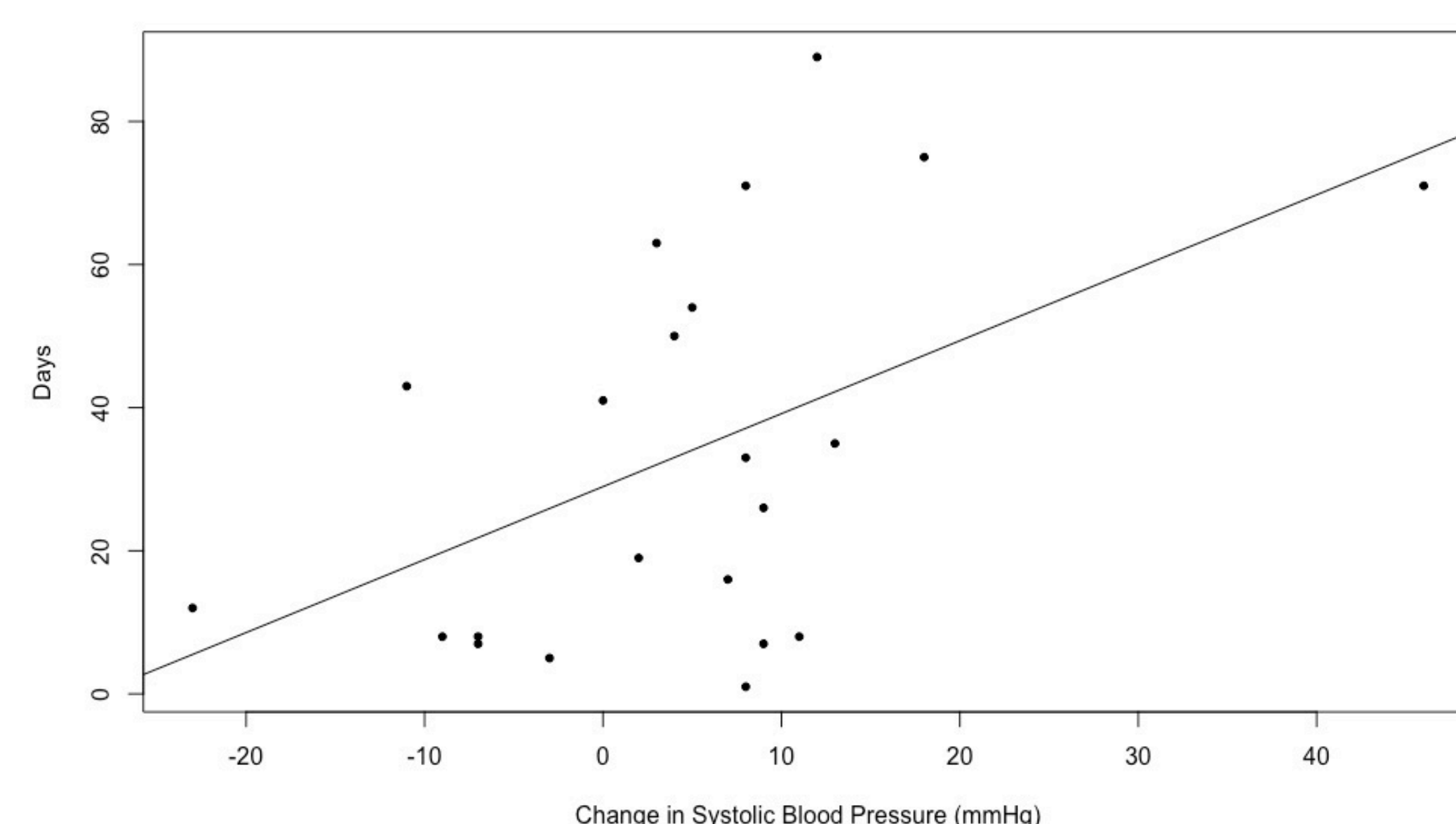


Figure 1: Number of days between last RCHSD visit and 1st UCSD visit and change in blood pressure.

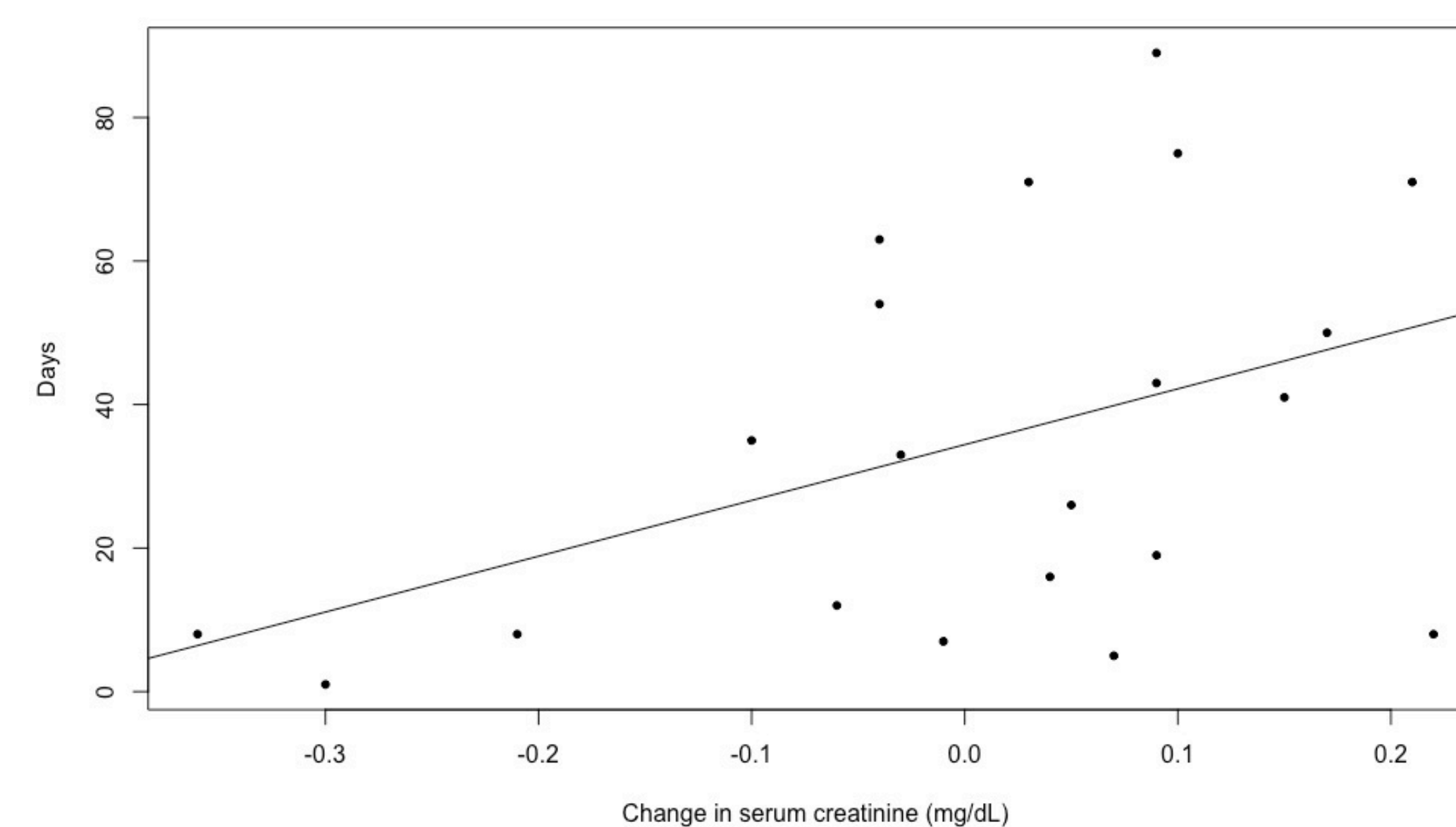


Figure 2: Number of days between last RCHSD visit and 1st UCSD visit and change in creatinine

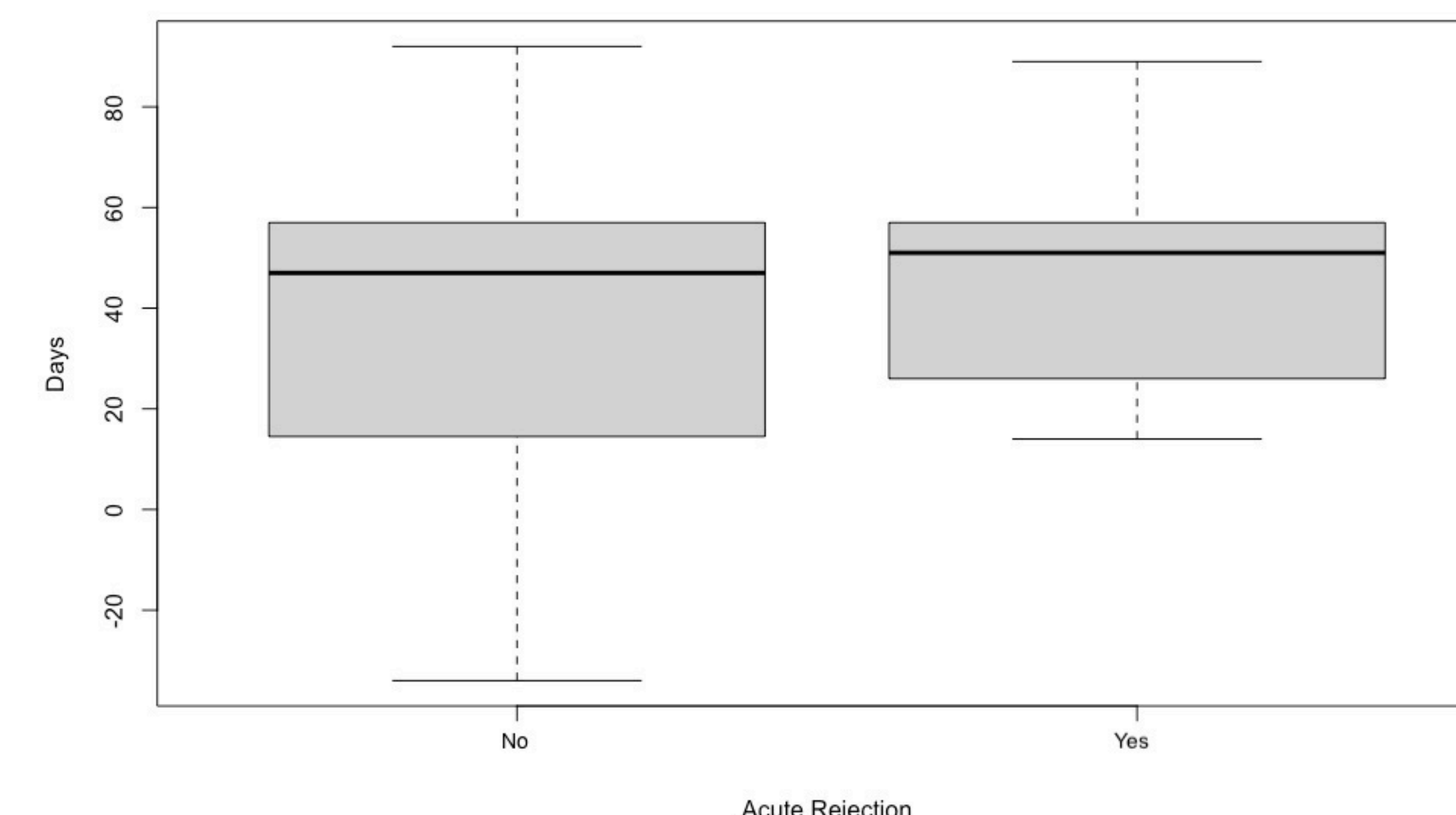


Figure 3: Number of days between last RCHSD visit and 1st UCSD visit and episode of rejection.

Next Steps

- The next step for this project is to continue to collect additional data as more patients graduate from the pediatric kidney transplant clinic at Rady Children’s hospital to adult kidney transplant clinic at UC San Diego to further increase our sample size and better reflect possible trends in our initial data.
- Continue for a goal transition by 21 years of age. The median age in our study was 21.5, likely reflective of the COVID pandemic when transitions did no occur or where delayed.
- Additionally, we will further expand upon this project and assess for similar trends across other areas of transition within nephrology to find ways to improve the transitions process in these areas as well.

References

[1] P.H. White, C Cooley, Transitions Clinical Report Authoring Group, AAP, AAFP, ACP, “Supporting the Health Care Transition from Adolescence to adulthood in the Medical Home,” Pediatrics, Volume 142, Number 5, November 2018.

[2] H Fernandez, B Foster, “Long-Term Care of Pediatric Kidney Transplant Recipient,” CJASN, Volume 17, 236-304, February 2022.

[3] J Kiberd, P Acott, B.A. Kiberd, “Kidney Transplant Survival in Pediatric and Young Adults, BMC Nephrology, 12:54, 2011.