



UGA Pediatric Psychology Lab



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Medication Adherence Pre- to Post-Transfer to Adult Healthcare Settings Among Pediatric Solid Organ Transplant Recipients: Associations with Transfer Success

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Introduction

- Given increased survivorship rates, adolescent and young adult (AYA) transplant recipients are increasingly transitioning to adult healthcare settings.¹
- However, the period of transition is associated with poor medication adherence and medical outcomes.^{2,3}
- Data on post-transfer adherence to multiple aspects of the medical regimen (e.g., medication adherence, clinic attendance) among AYA transplant recipients remains limited.
- This study examines adherence to immunosuppression medications during the period of transition and relations to transfer success.

Methods

- Participants
 - 49 heart, kidney, or liver transplant recipients recently transferred from pediatric to adult healthcare.
- Medical Chart Review
 - Medication Level Variability Index (MLVI)⁴ = objective measure of tacrolimus medication adherence, collected in the year pre-transfer and two years post-transfer. Adherent is considered < 2.5 SD.
 - Transfer success = first adult transplant clinic visit within one year of the last pediatric transplant clinic visit.

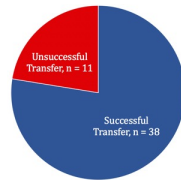
Analyses

- Independent samples t-tests assessed differences in MLVI and transfer characteristics between participants who transferred successfully versus unsuccessfully.
- Chi-square and Fisher's Exact analyses examined relations in adherence status pre- to post-transfer.

Results

Establishing adult care within one year of transfer is associated with greater medication adherence in young adulthood. Additionally, pre-transfer nonadherence appears to persist into adult settings.

Transfer Success

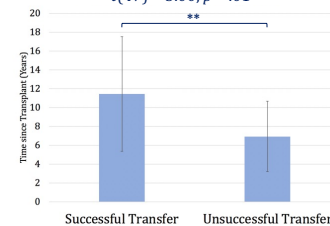


Sample Demographics (N=49)

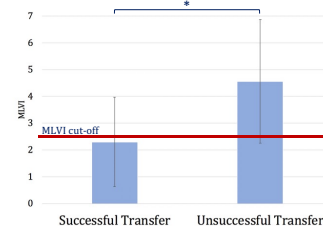
	M(SD)
AYA Age at transfer	20.62(0.52)
Years since transplant	10.42(5.92)
N(%)	
Organ group	
Kidney	22 (45%)
Liver	17 (35%)
Heart	10 (20%)
AYA Gender	
Male	27 (55%)
Female	22 (45%)
AYA Race/Ethnicity	
White	24 (49%)
Black	15 (31%)
Hispanic	4 (8%)
Asian	3 (6%)
Biracial	3 (6%)
Family Income	
\$0-\$9,999	5 (10%)
\$10,000-\$24,999	9 (18%)
\$25,000-\$49,999	13 (27%)
\$50,000-\$74,999	3 (6%)
\$75,000-\$99,999	3 (6%)
\$100,000 or greater	161 (22%)
Not provided	5 (10%)

Independent Samples t-test: Transfer Success and Age at Transfer
 $t(47) = 1.99, p = .052$

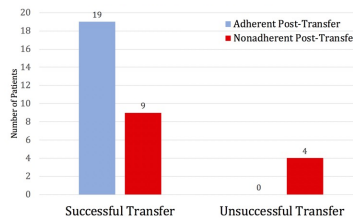
Transfer Success and Time Since Transplant
 $t(47) = 3.00, p < .01^{**}$



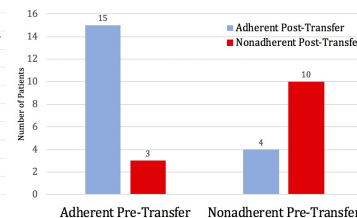
Independent Samples t-test: Transfer Success and Post-Transfer MLVI
 $t(27) = 2.39, p = .02^{*}$



Fisher's Exact test: Transfer Success and Medication Adherence (MLVI < 2.5 SD)
Fisher's Exact test, $p = .02^{*}$



Chi Square test: Medication Adherence (MLVI < 2.5 SD) Pre- and Post-Transfer
 $\chi^2(1, N = 29) = 7.54, p < .01^{**}$



Note. Only n=32 participants taking tacrolimus and thus appropriate to calculate MLVI. * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

- The majority of AYAs successfully transferred to adult healthcare; however, among those who were unsuccessful, medication level variability and nonadherence was significantly higher.
- Additionally, without intervention, pre-transfer medication non-adherence persists into post-transfer adult healthcare settings.
- Findings suggest the importance of continuing attention to medication adherence in adult healthcare, as nonadherence patterns appear to persist into adult settings.
- Certain characteristics of patients not modifiable through intervention (i.e., patient age, time since transplant) remain important to consider during transition.

Future Directions

- Future research should test the feasibility of identifying patients at-risk for nonadherence via those known to demonstrate nonadherence or adherence barriers before the transition
- Future research should also assess continuing pediatric non-adherence interventions after transfer and examine post-transfer medical and psychosocial factors related to transfer success and adherence.

Acknowledgements & References

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