Increasing Transplant Medication Knowledge Through Implementation of a Medication Education Intervention Algorithm

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INTRODUCTION

- Limited health literacy is associated with increased disease burden, worse clinical outcomes, and overall greater annual healthcare costs. [1,2]
- Kidney transplant recipients with low health literacy are at a 14% increased risk of medication nonadherence.[3]
- Medication nonadherence is one of the largest threats to allograft function.[4]
- Identifying patients with limited health literacy allows for opportunities to provide tailored interventions to help patients become more active participants in their care and to improve post-transplant outcomes.

OBJECTIVES

The goal of this project is to **identify kidney transplant recipients with limited health literacy and improve transplant medication knowledge through the implementation of a medication education intervention algorithm**.

METHODS

AIM 1:
Develop a Medication Education Intervention Algorithm

Selection of assessment tools:

- Newest Vital Sign (NVS)
- Self-Efficacy for Appropriate Medication Use (SEAMS)
- Transplant Pharmacy Medication Quiz

Medication education interventions:

- Printed MedAction Plan
- Medication education with teach back
- Mock Pillbox filling

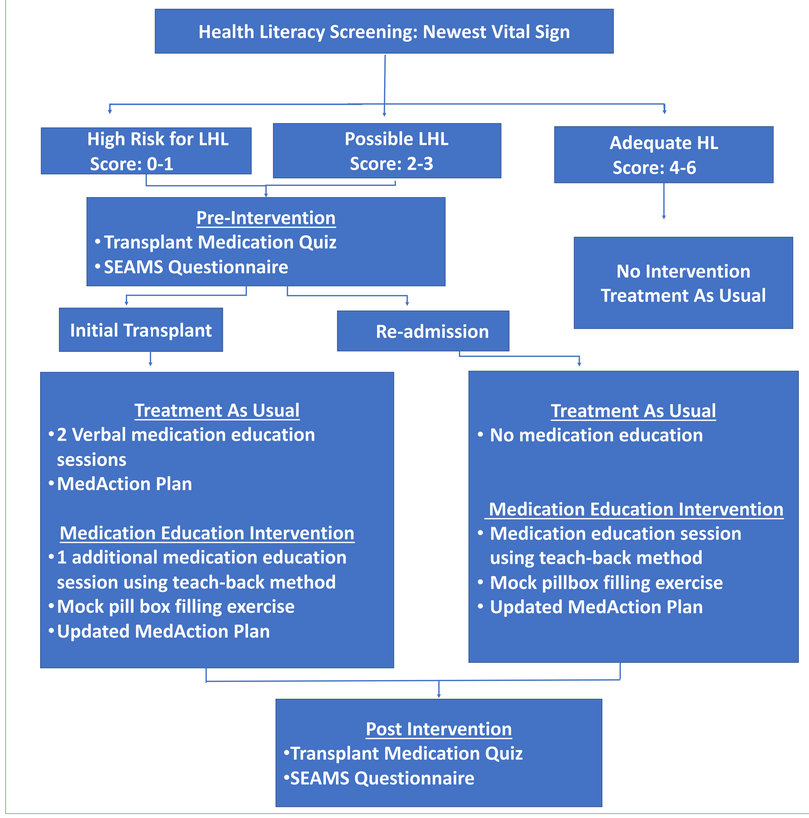
AIM 2:
Implementation and Evaluation of Medication Education Intervention Algorithm

- Convenience sampling
- Metrics: pre-test/post-test method
- Descriptive statistical analysis, Chi-Square test, and ANOVAs

AIM 3:
Project Scalability and Sustainability

- Expand training to include multidisciplinary staff
- Implement algorithm into current workflow
- Collaborate with other transplant centers

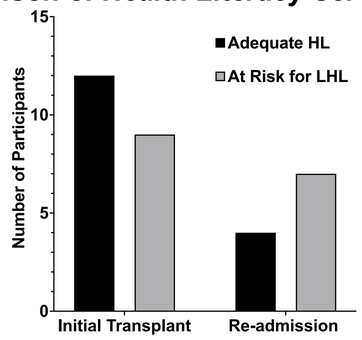
Medication Education Intervention Algorithm



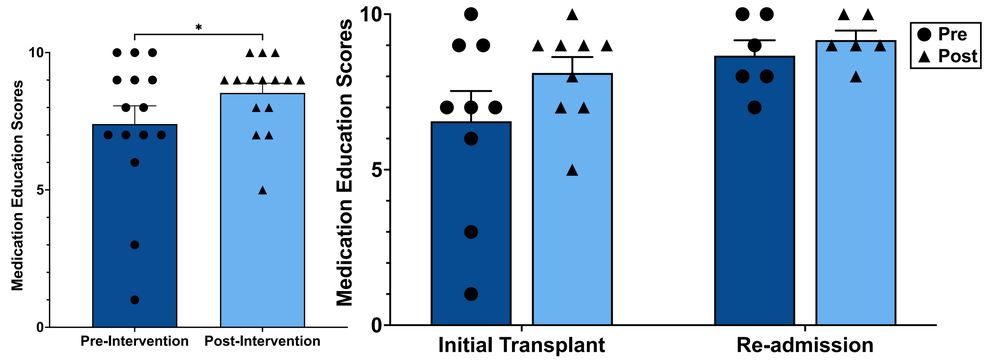
RESULTS

	Overall (n= 31)	Initial Transplant (n= 21)	Re-Admission (n= 10)
Age, y	51.2	53.6	46.4
Race, n (%)			
Black	8 (25.8 %)	4 (19%)	4 (40%)
White	13 (41.9 %)	9 (42.9%)	4 (40%)
Other	10 (32.3 %)	8 (38.1%)	2 (20%)
NVS, score +/- SD	3.2	3.47	2.9
Received Intervention, n (%)	15 (48.4%)	9 (60%)	6 (40%)
Pre-Intervention Medication Education Quiz, score +/- SD	7.4	6.5	8.6
Pre-Intervention SEAMS, score +/- SD	35.7	35.4	36.2
Post-Intervention Medication Education Quiz, score +/- SD	8.5	8.1	9.2
Post-Intervention SEAMS, score +/- SD	38.2	38	38.5

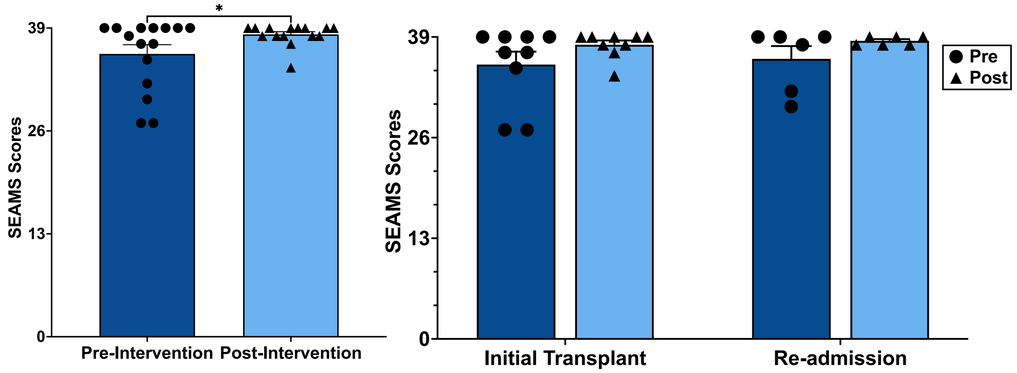
Comparison of Health Literacy Screening Results



Comparing Pre- vs Post-Intervention Medication Education Scores: Admission Type



Comparing Pre- vs Post-SEAMS Assessment Scores: Admission Type



SUMMARY

- Limited health literacy has profound implications for people who have undergone kidney transplantation.
- This DNP Project found 50% of all participants screened were found to be at risk for LHL, and a significant difference in overall transplant medication education scores and SEAMS assessments scores between pre- and post-intervention.
- The medication education intervention algorithm is a practical and cost-efficient way to identify patients at risk for LHL.

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