

# Engaging Registered Nurses in Interventional Research to Improve Outcomes in a Vulnerable Population

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# Disclosures

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We do not have any relevant relationships to disclose.



# Objectives

- › Identify opportunities to engage registered nurses in clinical research to improve care outcomes in vulnerable populations.
- › Compare and contrast risk factors and causes for early readmissions post-kidney transplant between a transplant center in the Southern U.S. and national U.S. findings.
- › Describe a multimodal educational intervention to improve understanding of and adherence to a post-kidney transplant plan of care.
- › Discuss implications of culturally and linguistically appropriate strategies to reduce post-kidney transplant readmissions.



# Hispanic Americans

- › Largest minority population in the United States
- › 56.5 million people of Hispanic heritage living in the U.S.
  - 10.7 million currently reside in Texas





# Influences on Hispanic Health

- › Cultural barriers
- › Language barriers
- › Health literacy levels
- › Lack of insurance
- › Lack of access to preventive healthcare services



# Academic-Practice Partnership

- › Partnership:
  - University of the Incarnate Word
  - Methodist Specialty & Transplant Center
- › Established in 2014
- › Purpose: to facilitate registered nurses' involvement and improvement in care outcomes
  - Evidence-based Practice
    - › CAUTI, CLABSI
  - Research
    - › Kidney Transplant
    - › Liver Transplant
    - › Nurse Retention





# Hospital Readmissions

Subsequent hospitalization (at any acute care hospital) for any reason within 30 days after discharge from the index hospitalization

- › Indicator of healthcare quality<sup>1</sup>
- › Increases healthcare costs
- › 2013 all-cause Medicare 30-day readmission rate 17.3/100<sup>2</sup>
- › Centers for Medicare and Medicaid Services tracks and reduces hospital Inpatient Prospective Payment System payments for excess readmissions in select diagnoses
- › Average cost of readmission: \$10,500<sup>3</sup>
- › Readmissions correlate with worse outcomes<sup>1</sup>



# Setting

- › 250+ licensed bed tertiary care hospital in South Texas
- › Growing transplant program





# Kidney Transplantation Readmissions within 30 Days post Discharge

## SOUTHERN U.S. HOSPITAL

- › 30-Day Readmission Risk factors:
  - Female
  - Hispanic
  - Married
  - Diabetes mellitus and/or Hypertension
  - BMI 26+
  - Education High School or Lower
  - Distance from transplant center
  - Within 14 days of transplantation



# Purpose

To determine whether 30-day readmissions post kidney transplant for adults 18 years of age and older in a predominately Hispanic Southern U.S. population are reduced by using a new method of delivering patient education as compared to the current education intervention.



# Nurse-Driven Multi-modal Education Intervention

- › Abbreviated handouts
  - One page summarizing critical information
  - Medication poster
  - Written at a 2.6 grade level
  - Patient's preferred language (English/Spanish)
- › Approaches
  - Repetition of content out-patient preop/in-patient postop
  - Inpatient clinical teaching pathway
- › Key concepts to attain/maintain health post-transplant



# Intervention

## ABBREVIATED HANDOUT

Patient Name: \_\_\_\_\_ Kidney Doctor: \_\_\_\_\_

Medications			
Medication Name	I take medication for:	How to take the medication	Possible side effects
Prograf	Anti-rejection	Take 2 times a day, every 12 hours Do not eat for 1 hour before or 1 hour after taking.	↑ creatinine, headache, high blood pressure, ↑ blood sugar, hair loss
Cellcept	Anti-rejection	Take 2 times a day, every 12 hours Do not eat for 1 hour before or 1 hour after taking.	Nausea, diarrhea, anemia, mouth sores
Bactrim	Anti-bacterial	Take with food in the morning on Mondays, Wednesdays, and Friday	Upset stomach, diarrhea
Valcyte	Anti-viral	Take with food in the morning	Upset stomach, diarrhea, tremors
Prednisone	Immunosuppression	Take with food in the morning	Mood swings, ↑ blood sugar, ↑ appetite, puffy cheeks, retain fluid

Home Care and Prevention		
Prevent Infection	Wound Care	Week 1 to 8: Avoid These Activities
<ul style="list-style-type: none"> <li>Good hand washing</li> <li>Avoid sick people</li> <li>Do not share food or drink</li> <li>Cook all food thoroughly</li> <li>Do not clean cat litter, bird cages, fish tanks</li> <li>Wear a mask around children or someone who may be sick</li> </ul>	<ul style="list-style-type: none"> <li>Showers only, no baths</li> <li>No swimming, no hot tubs</li> <li>Wash incision with soap/water</li> <li>Pat incision dry</li> <li>Check incision for redness, warmth, or swelling from incision</li> <li>May cover incision with clean gauze if clothes rub or drainage</li> <li>Do not use cream, ointment, or powder on incision</li> </ul>	<ul style="list-style-type: none"> <li>Hard exercise</li> <li>Too much bending at hip</li> <li>Too much twisting</li> <li>Sexual activity</li> <li>Driving (if using pain medication)</li> <li>Lifting more than 10 pounds</li> <li>Too much stair climbing</li> </ul>

**At home write down in a notebook:**

- Daily amount of urine
- Daily blood pressure (if indicated by your doctor)
- Daily blood glucose (if indicated by your doctor)

## MEDICATION POSTER





# Methods

- › Single center, correlational, interventional study with retrospective data collection
- › Medical record review of all adult kidney transplant recipients
  - Inclusion
    - › Adults 18 and older
    - › Transplant surgery occurred between February 18, 2017 and February 17, 2018
    - › Consented to allow in-depth medical record review
  - Exclusion
    - › Simultaneous multi-organ transplant recipients



# Sample

- › 271 adult kidney transplant recipients participated in education
- › 254 recipients consented to allow MR review
  - Mean age 48.5 years (range 22 – 80 years)
  - Mean BMI 28.8 (range 17.1 – 43.5)



# Results

› Readmission rate:

	<b>2016-2017 Readmit rate</b>	<b>2017 – 2018 Readmit Rate</b>
Cadaveric donor recipient	26.6%	20.5%
Living donor Recipient (non-exchange)	18.8%	19.8%
Living donor transplant exchange recipients		29.2%
Total kidney Transplant recipients	22.2%	21.8%



# Other Results

## PATIENT SATISFACTION

- › Press Ganey Scores
  - Increase in Top Box score
  - Q1: Nurses explained medications in an understanding way
  - Q2: Nurses explained why new medications are ordered
  - Q3: Nurses describe medication side effects clearly.
- › Patients requested to take teaching materials home.

## NURSE ENGAGEMENT

- › Improved working relationships
  - Physicians
  - Clinic nurses
  - Inpatient educators
  - Transplant staff nurses
- › Greater satisfaction in work
  - Nurse & physician

Questions?





# References

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