

Tailored Education to Increase Living Kidney Donor Referrals at a Single Center in New York

Gloria Rothenberg, APRN, FNP-BC

DNP Candidate

Vanderbilt University School of Nursing

Introduction

- ▶ In the United States (US) there are approximately 100,000 people waiting to receive a kidney transplant (OPTN, 2019).
- ▶ The waiting time for a donor kidney in NYC is 5-8 years versus 3-5 years nationally (SRTR)
- ▶ Living donor kidney transplant (LDKT) is an ESRD patient's best option. It is superior to deceased donor kidney transplants (DDKT).

Background

- ▶ Patients with ESRD on the national kidney transplant waitlist would benefit from finding a suitable living kidney donor.

- ▶ Montefiore Medical Center's Transplant Center should increase its rate of LDKT to meet benchmark standards.
 - Montefiore: 22% of 2019 transplants were LDKTs
 - US: 29% of 2019 transplants were LDKTs
 - NYC region: 38% of 2019 transplants were LDKTs

Problem Statement

- ▶ ESRD patients waiting for a kidney lack motivation or lack skills to identify a living kidney donor.
- ▶ An educational approach should be tailored to patients' individual levels of readiness towards taking action to find a living donor based on their stage of change.
- ▶ Montefiore should complete more LDKTs to better treat its ESRD patients.
- ▶ *Will a tailored educational intervention increase ESRD patients' level of readiness towards taking action to find a living kidney donor as measured by survey responses?*

Purpose and Objectives

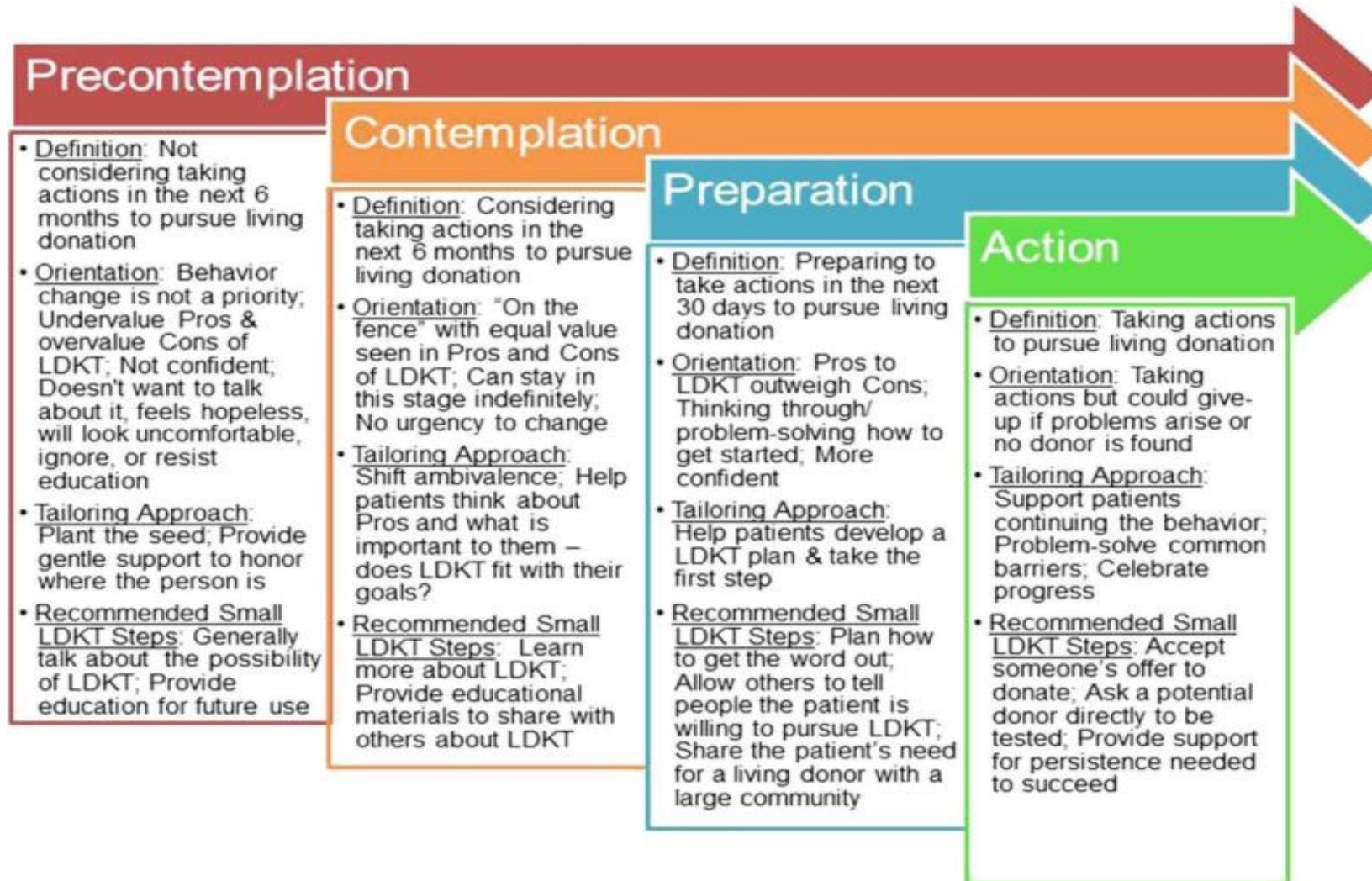
- ▶ **Purpose (AKA: Aim/Goal):**
- ▶ The purpose of this quality improvement study is to use a tailored educational intervention to increase ESRD patients' readiness towards taking action to find a living kidney donor.

- ▶ **Objectives:**
- ▶ Assess baseline level of readiness in order to provide tailored education to ESRD patients eligible for kidney transplantation*
- ▶ Re-assess level of readiness to evaluate effectiveness of the tailored education intervention
- ▶ Evaluate feasibility of implementation based on rate of exposure

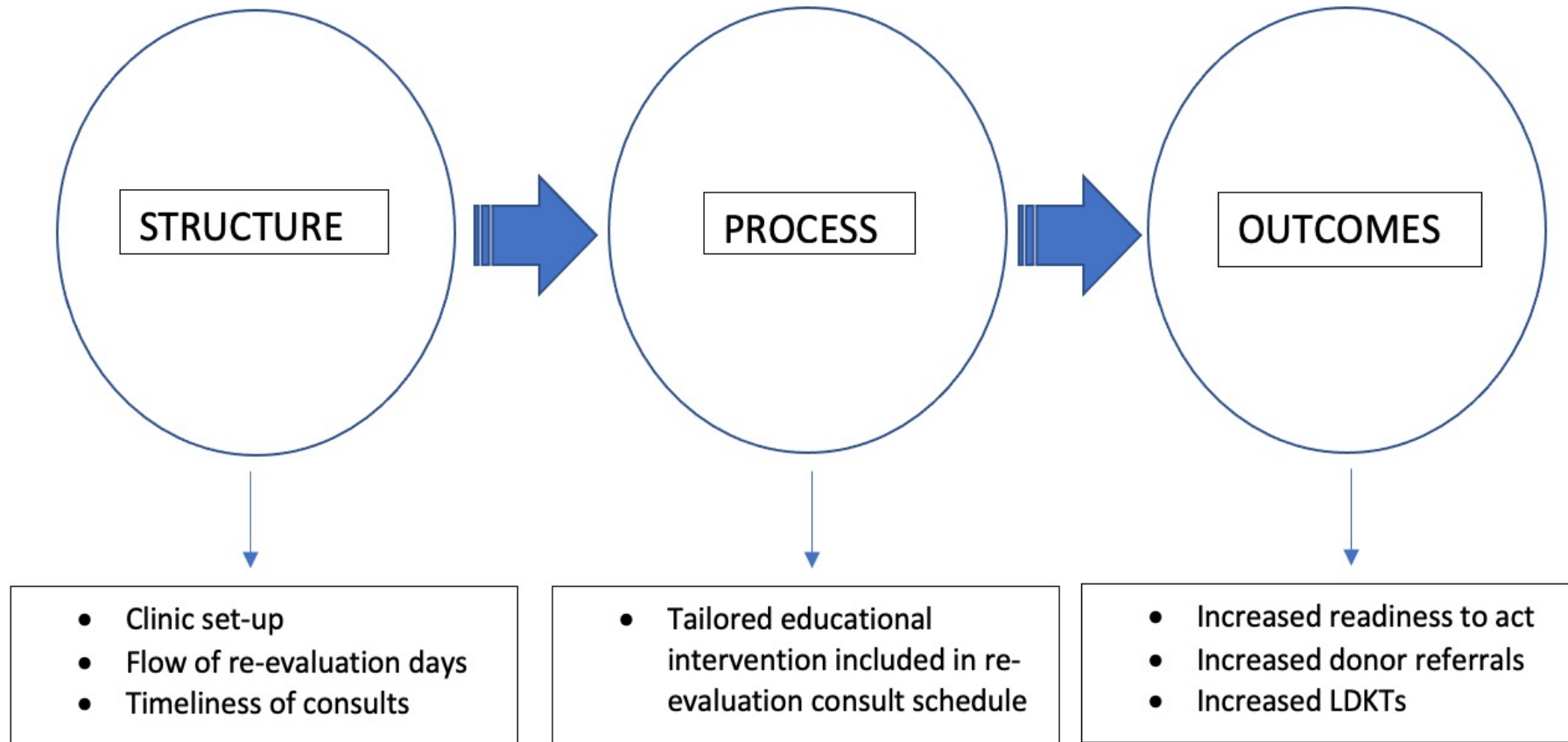
Concepts

- ▶ Living donor kidney transplantation
- ▶ Stage of change/level of readiness
- ▶ Health behavior change
- ▶ Tailored education
- ▶ Re-evaluation

Dr. Waterman's TTM Tailored Education Tool



Donabedian Model of Quality



PubMed Search

Search terms: “live donor kidney transplant” and “patient education”

413 results identified.

Filtered for full text and peer reviewed.
103 results identified

Filtered for English language.
99 results identified

Filtered for last five years

39 articles identified

This project will enhance the existing evidence by offering a specific plan detailing how to implement the education to patients.

SMALL STEPS TO PURSUE LDKT (Source: UCLA/URI)

Now I am going to give you a **list of actions** people sometimes take related to getting a living donor transplant. For each action, tell me if you have: already done this, are planning to do this, or don't plan to do this. Do you plan to...

- A. Read information/watch videos about getting a living donor transplant
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- B. Share education materials about living donation with people in your life
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- C. Generally talk to people you trust about whether to get a living donor transplant
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- D. Make a list of people who might be a living donor for you
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- E. Ask another person to tell others about your need for a living donor transplant
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- F. Ask potential donors to be tested
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- G. Give potential living donors the transplant center phone number
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- H. Share my need for a living donor with a large community (e.g., Facebook, Twitter, etc.)?
 - Already done this
 - Are planning to do this
 - Don't plan to do this or Don't Know
- I. Are there any other actions that you are planning to do or already did that I didn't mention?
 - Yes; What other action are you planning to do? _____
 - No

LDKT READINESS (Source: UCLA)

Now I'm going to ask you a question about your readiness to get a living donor transplant. Given the following options, today, how ready are you to take actions to pursue living donation? (Mark only 1)

- _____ I **am not** considering taking actions in the next six months to pursue living donation
- _____ I **am considering** taking actions in the next six months to pursue living donation
- _____ I **am preparing** to take actions in the next 30 days to pursue living donation
- _____ I **am taking actions** to pursue living donation

Methods

- ▶ **Project Design**

- Quality Improvement Initiative

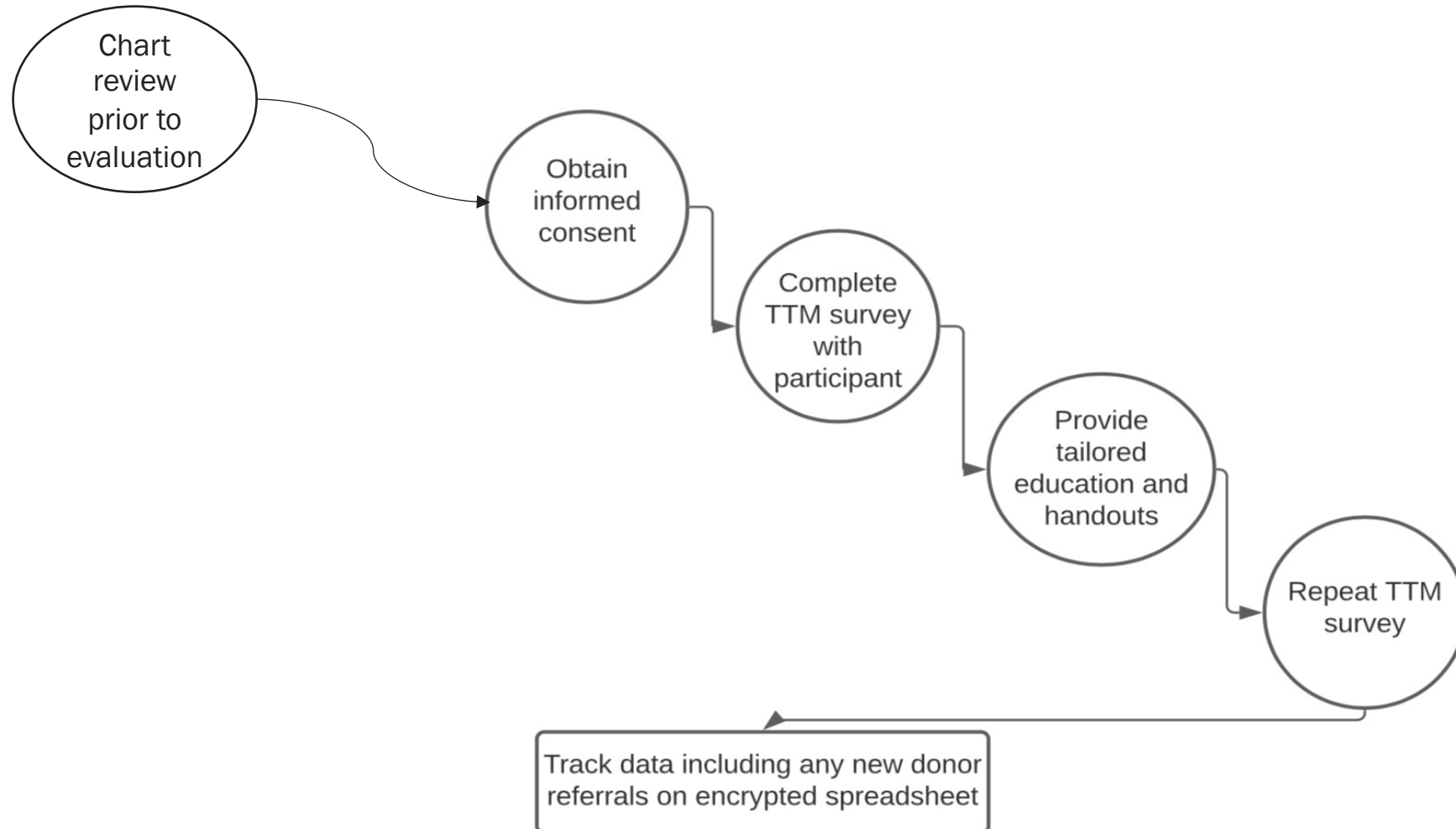
- ▶ **Setting**

- The Kidney Transplant Center at Montefiore Medical Center, which is a non-profit health system located in the Bronx, New York.

- ▶ **Participants**

- A convenience sample of ESRD patients who have qualified for Montefiore's adult kidney transplant waitlist
 - Who do not have any potential living kidney donors

Methods



Timeline of Project



IRB APPROVAL



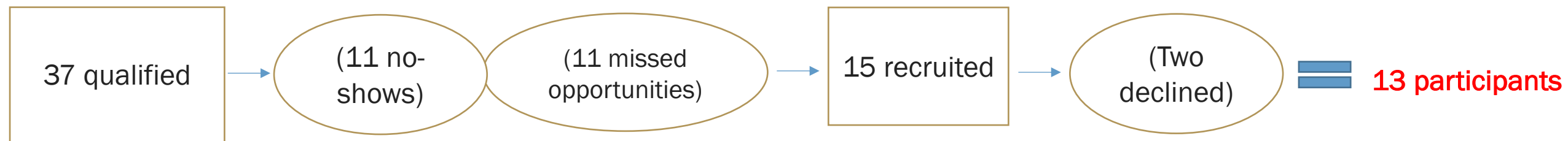
IMPLEMENTATION



FOLLOW-UP*

Results

- ▶ Rate of exposure to the intervention





Results

- ▶ Sample demographic and individual characteristics (descriptive statistics)

N=13	n/13 (%)
Male	11 (84.6)
Female	2 (15.4)
Black/AA	6 (46.1)
Caucasian	7 (53.9)
Graduated HS or GES	9 (69.2)
Some HS	1 (0.8)
College or Advanced	2 (15.4)
Some College	1 (0.8)

Results

- Eight out of thirteen participants progressed from an earlier SOC to a later SOC
- Pre-intervention → 3 participants in preparation or action
- Post-Intervention → 7 participants in preparation or action

Key:
Precontemplation = 1
Contemplation = 2
Preparation = 3
Action = 4

SOC Pre-Intervention	SOC Post-Intervention
1	2
2	3
1	2
4	4
1	2
3	4
1	3
4	4
2	3
1	2
3	3

Results

- ▶ Eight out of the thirteen participants, or 61.54%, progressed from an earlier stage of change to a later stage of change immediately following the education intervention.
- ▶ One participant progressed ahead by two stages of change following the education intervention.
- ▶ Five of the 13 participants remained at the same stage of change before and after the education.

Discussion

▶ Objectives:

- *Assess baseline level of readiness in order to provide tailored education to ESRD patients eligible for kidney transplantation**
- *Re-assess level of readiness to evaluate effectiveness of the tailored education intervention*
- *Evaluate feasibility of implementation based on rate of exposure*

▶ Findings:

- Readiness assessments: Majority of participants progressed from an earlier SOC to a later SOC following the tailored education intervention
- The TTM is an appropriate behavior change model to use in the context of ESRD patients seeking living donors
- Regarding feasibility, the rate of exposure was approx. 35% - difficult to compare to literature to to nature of convenience sampling with no formal recruitment on phone or in mail

Discussion

- ▶ Strengths:
 - Integration of the literature and the existing evidence into the study design
 - Strong buy-in and support offered from leadership, study personnel, staff
 - Participant engagement

Discussion

- ▶ Weaknesses:
 - Small sample size
 - Discrepancies between study implementers' styles (ie: language, tone, body language)
 - Missed opportunities which ultimately limit patient participation

Conclusion

- ▶ Tailored education was shown to increase the level of readiness towards taking action to find a living donor among this sample of ESRD patients from a single transplant center in the Bronx, NY.
- ▶ Findings are consistent with literature
- ▶ Transplant centers across the country should continue to utilize and assess the effects tailored education has on ESRD patients' readiness to seek a living kidney donor.
- ▶ Future studies should aim to include a broader more diverse sample.

References

Boulware, L. E., Hill-Briggs, F., Kraus, E. S., Melancon, J. K., Falcone, B., Ephraim, P. L. ... & Powe, N. R. (2013). Effectiveness of educational and social worker interventions to activate patients' discussion and pursuit of preemptive living donor kidney transplantation: a randomized controlled trial. *American journal of Kidney Diseases: The Official Journal of the National Kidney Foundation*, 61(3), 476–486. <https://doi.org/10.1053/j.ajkd.2012.08.039>

Data Reports [<https://optn.transplant.hrsa.gov/data/view-data-reports/>]. 2019.

Hashemzadeh, M., Rahimi, A., Zare-Farashbandi, F., Alavi-Naeini, A.M., & Daei, A. (2019). Transtheoretical Model of Health Behavioral Change: A Systematic Review. *Iranian journal of nursing and midwifery research*, 24(2), 83-90.

Kidney Disease: Improving Global Outcomes (KDIGO) Living Kidney Donor Work Group. KDIGO Clinical Practice Guideline on the Evaluation and Care of Living Kidney Donors. *Transplantation*. 2017;101(Suppl 8S):S1–S109.

Kidney transplant. National Institute of Diabetes and Digestive and Kidney Diseases. <https://www.niddk.nih.gov/health-information/kidney-disease/kidney-failure/kidney-transplant>. Accessed April 28, 2019.

McDonald, K. M., Sundaram, V., Bravata, D. M., Lewis, R., Lin, N., Kraft, S. A., McKinnon, M., Paguntalan, H., & Owens, D. K. (2007). Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies (Vol. 7: Care Coordination). Agency for Healthcare Research and Quality (US).

Nemati, E., Einollahi, B., Lesan Pezeshki, M., Porfarziani, V., & Fattahi, M. R. (2014). Does kidney transplantation with deceased or living donor affect graft survival? *Nephro-urology monthly*, 6(4), e12182. <https://doi.org/10.5812/numonthly.12182>

Organ Procurement and Transplantation Network (OPTN), Scientific Registry of Transplant Recipients (SRTR). 2020.

Waterman, A. D., Robbins, M. L., Paiva, A. L., Peipert, J. D., Kynard-Amerson, C. S., Goalby, C. J., ... & Brick, L. A. (2014). Your Path to Transplant: a randomized controlled trial of a tailored computer education intervention to increase living donor kidney transplant. *BMC nephrology*, 15, 166. <https://doi.org/10.1186/1471-2369-15-166>

Waterman, A. D., Robbins, M. L., & Peipert, J. D. (2016). Educating Prospective Kidney Transplant Recipients and Living Donors about Living Donation: Practical and Theoretical Recommendations for Increasing Living Donation Rates. *Current transplantation reports*, 3(1), 1–9. <https://doi.org/10.1007/s40472-016-0090-0>