

Friends and Extended Family Donate Kidneys Less: Evidence from the Living Donor Collective for Intervention Planning

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Introduction

The Living Donor Collective (LDC) was established to track living donor candidates from evaluation to donation nationally to study long-term outcomes, and barriers to and opportunities for greater access to living donation. The potential for a transplant increases when patients' friends and more distant relatives are invited to consider becoming living donors.

There may be opportunities to increase living donation if we can better understand how actual living donation rates differ by relationship to potential recipient.

Methods

2,049 living donor candidates were evaluated for kidney donation between June 1, 2018, and Sept 28, 2023, at 10 US transplant centers. Donation status was assessed using data from the LDC's Scientific Registry for Transplant Recipients (SRTR) database. Donors' relationship with their intended recipients was grouped into 4 categories:

- **Nuclear family** (blood-related parents, children, and siblings)
- **Spouses/life partners**
- **Extended family members** (other blood-related)
- **Friends**

We excluded nondirected and paired donation candidates due to not being able to identify their relationship with their recipients.

We conducted chi-square tests to evaluate significance and defined statistical significance to be at $P < 0.05$.

Results

Table 1. Donors Candidates' General characteristics by relationship

Group	Nuclear Family	Spouse	Extended Family	Friends
Total	1008	309	242	490
Sex				
Male	416 (41.3)	110 (35.6)	79 (32.6)	186 (38.0)
Female	592 (58.7)	199 (64.4)	163 (67.4)	304 (62.0)
Age				
18-34	332 (32.9)	44 (14.2)	79 (32.6)	96 (19.6)
35-49	359 (35.6)	93 (30.1)	89 (36.8)	200 (40.8)
50-64	266 (26.4)	132 (42.7)	62 (25.6)	156 (31.8)
65+	51 (5.1)	40 (12.9)	12 (5.0)	38 (7.8)
Race/Ethnicity				
White	623 (61.8)	181 (58.6)	171 (70.7)	415 (84.7)
Hispanic	28 (2.8)	16 (5.2)	5 (2.1)	9 (1.8)
Black	182 (18.1)	46 (14.9)	39 (16.1)	22 (4.5)
Asian	64 (6.3)	35 (11.3)	11 (4.5)	12 (2.4)
Multi./Other	111 (11.0)	31 (10.0)	16 (6.6)	32 (6.5)
Education				
Grade school (0-8)	19 (1.9)	4 (1.3)	0 (0.0)	7 (1.4)
Grade 9-12/GED	194 (19.2)	58 (18.8)	38 (15.7)	72 (14.7)
Some College	214 (21.2)	65 (21.0)	46 (19.0)	103 (21.0)
College Degree	334 (33.1)	100 (32.4)	93 (38.4)	186 (38.0)
Post-Secondary Degree	162 (16.1)	69 (22.3)	43 (17.8)	106 (21.6)

Spouses/partners (52%) and nuclear family members (47%) complete donation at higher rates than extended family (41%) or friends (38%).

- Extended family and friends who are evaluated as potential donors are more likely to be:
- **Younger** (69% of extended family age <50 years, 60% of friends <50 years)
 - **White** (71% of extended family, 85% of friends)
 - **Employed** (84% of extended family, 84% of friends)

Conclusion

Future research should explore:

- Potential causes for why extended family and friends may be more likely to not donate, potentially for being less motivated to lose weight or quit smoking, or deferring to other donors when multiple candidates are available.
- How to increase donation rates for distant relatives and friends, especially when all core family members are medically ineligible.

