

Challenges to Monitoring Living Donor Candidates Long Term: Understanding Mobility of Living Donors in the Living Donor Collective

Y. Ahn¹, A. Israni², W. McKinney², D. Schladt¹, C. Nystedt¹, C. Mejia³, A. Duarte⁴, A. Matas⁵, D. LaPointe Rudow⁶, E. McMahon⁷, M. Doshi⁸, P. Dean⁹, G. Katz-Greenberg¹⁰, J. Snyder¹¹, A. Waterman¹², K. Lentine¹³
¹SRTR, Minneapolis, MN; ²Hennepin Healthcare, Univ of MN, Minneapolis, MN; ³Johns Hopkins, Baltimore, MD; ⁴Northwestern, Chicago, IL; ⁵Univ of MN, Minneapolis, MN; ⁶Mount Sinai Hospital, New York, NY; ⁷Univ of Pittsburgh, Pittsburgh, PA; ⁸Univ of Michigan, Ann Arbor, MI; ⁹Mayo Clinic, Rochester, MN; ¹⁰Duke Univ, Durham, NC; ¹¹HHRI, Minneapolis, MN; ¹²Houston Methodist Hospital, Houston, TX; ¹³St Louis Univ, St Louis, MO

Purpose

- The Living Donor Collective (LDC) was established to track living donor (LD) candidates nationally to study long-term outcomes and barriers to living donation.
- We examined geographic mobility of LDC enrollees and its associated factors to assess challenges in monitoring LD candidates long term.

Methods

- LD candidates at 10 kidney and 6 liver transplant centers in the US were enrolled 06/01/2018-10/13/2022 and were linked with SRTR data to determine donation status.
- They were followed for 1 year after donation decision for changes in their addresses and if they moved to areas with more or less poverty/unemployment/social deprivation index (SDI) as assessed with US Census tract data and the Robert Graham Center's method on SDI.
- A logistic regression model was created to assess factors associated with change in address among LDs.

Results

- 662 LD candidates and 1,001 actual LDs were enrolled (mean age 44.2 [SD 12.4] years, 85.1% White, 66.3% female, 21.5% single). During follow-up, 301 (18.1%) moved to a different address, 96 (5.8%) changed email address, 110 (6.6%) changed contact phone number, and 10 (0.6%) changed both email and phone.
- Of the 301, 148 were LDs. A multivariable model predicting movement by only LDs showed younger age, unemployment, and White race were significantly associated with address change (Table 1).

Results (continued)

- Of the 148 LDs who moved, 127 could be linked to US Census tract data: 48 moved to less impoverished (based on poverty % in that tract), 10 moved to similar, and 69 moved to more impoverished neighborhoods (Table 2). Movement of LDs was similar to that of LD candidates who did not donate in terms of poverty % levels ($P=.47$) in their new neighborhoods.
- Similarly, 49 LDs moved to lower unemployment, 9 moved to comparable, and 69 moved to higher unemployment neighborhoods (Table 2). More LDs than nondonors moved to neighborhoods with higher unemployment ($P=.26$). The LDs moved an average of 202.0 miles (SD 428.2).

Table 1: Risk Factors Associated with Change in Address for Living Donors (moved N=148, not moved N=853)

Variables	Adjusted OR	Lower 95% CI	Upper 95% CI	P-value
Intercept	0.54	0.22	1.37	0.2
Male (ref=female)	1.15	0.79	1.68	0.47
Age (decrease per year of age)	1.04	1.02	1.05	<0.001
Marital status, single (ref=other)	1.48	0.94	2.34	0.09
Race, other (ref=White)	0.50	0.27	0.92	0.02
Education, attended college/technical school (ref= <= high school/Unknown)	1.49	0.81	2.73	
Education, associate/bachelor degree (ref= <= high school/unknown)	1.36	0.79	2.35	0.60
Education, post-college graduate school (ref= <= high school/Unknown)	1.31	0.73	2.37	
Health insurance, no/unknown (ref=yes)	1.21	0.61	2.40	0.59
working status, no/unknown (ref=yes)	1.75	1.1	2.79	0.02

This work was supported wholly or in part by HRSA contracts 75R60220C00011 and NIDDK R01DK137111. The content is the responsibility of the authors alone and does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

The authors of this publication have no relevant conflicts of interest to disclose.

Conclusion

- Young, White, and unemployed LDs had greater geographic mobility after donation.
- All LD candidates and LDs can be tracked long term. Considerable efforts by LDC staff will be needed to ensure they stay enrolled in the LDC registry.
- Using novel types of address tracking technologies, and for email addresses and phone numbers, may help with meeting these federal requirements.

Table 2: Mobility of Living Donors in Poverty and Unemployment Levels (N=127)

	Mobility Between Registration and 1-Year Follow-up		
	More Deprived	Apparently Equal Neighborhood	Less Deprived
Poverty Level	69	10	48
Unemployment Level	69	9	49

Figure: Mobility of Living Donors by Social Deprivation Index (N=127)

